



## Using and installation guide

### THANK YOU FOR CHOICE OF CONVOY TRADE MARK!

Car alarm systems Convoy iGSM-005 and Convoy iGSM-005 CAN are high-tech electronic devices created with the latest advances in technology and using of modern electronic database. The systems are intended for decreasing the probability of carjacking, informing of car owner about its status and location.



### IMPORTANT!

Before installing and using the systems, please read carefully this manual. Operation and setting of GSM-systems differs essentially from operation and setting of 1-way and 2-way security systems. Remember, that these GSM-systems can be installed **only by qualified specialists**. Your safety while moving and reliability of operation of the system depends on it.

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## Introduction

Thank you for purchasing security and tracking GSM-system CONVOY iGSM-005 (CONVOY iGSM-005 CAN).

CONVOY iGSM-005 (CONVOY iGSM-005 CAN) is service-informational security system which allows controlling armed object (apartment, cottage, garage, car etc.) and operating its service devices throughout the coverage area of GSM network.

This system gives possibility to use GSM-network for:

- informing owner about events with the armed object (car), requiring his intervention
- remote engine lockout of the highjacked car
- remote control of different service car devices
- detecting armed car location
- providing monitoring mode of mobile armed object in real time

To inform the user GSM-system may use:

- SMS with description of alarming event;
- direct call, during which it will inform about the reason of call by voice message

System may store up to 5 phone numbers, users of which will be informed about alarming/service events by the system. For each of these phone numbers it can be determined in the system which way (call and/or SMS) and on what events it should be done. At unsuccessful call attempt system may repeat call attempt up to 5 times for each user.

System may work as independently as unanimously with security system or remote control unit of central lock. In this case control of unanimous work is performed by factory remote transmitter. Moreover you may independently arm and disarm the system at any moment using your cell-phone keyboard or sending SMS command.

To prevent car hijack system locks car engine start and work circuits from the moment of sending of alarming/service message to the moment of owner interference.

If to disconnect terminal of car main battery system can work for dozens of hours using reserve battery (option).

When system is disarmed, you may program it to perform notification (call or SMS) from the car to one phone number by pressing of alarm button «Call».

«Turbotimer» mode is foreseen in GSM-system for cars with turbocharging, it allows keeping ignition running during the programmed time.

As service functions system has additional timer channels allowing remotely (from phone keyboard during call or command SMS) or automatically (when arming/disarming, after ignition start/stop) controlling additional car devices. They may be: auto start system, engine warming system, climate-control system, or any other equipment which can be activated in the car.

Moreover using GSM-operator USSD services, system can detect approximate car location.

Electret microphone supplied in the set allows car cabin listening-in using cell-phone and if to connect speaker (option) and microphone together «Hands free» mod can be realized.

Using option GSM module and information transmitted by GSM-system to specialized server, you can activate monitoring (tracking) mode of mobile armed object.

User can see on the map current location of the object, its route, status of object in route point. All alarming and service events of GSM-system are registered in the event log in the server.

According to monitoring (tracking) data user can receive various statistical information as reports about the object for the period: the distance and duration of the route, time of stops, average speed on the route, geofence border crossing. Registered reports can be saved for further processing and analysis.

Thanks to CAN-bus adapter included into the set (only for model Convoy iGSM-005 CAN) it is possible to minimize incorrect outside interference to car electronics and to shorten time of installation and setting of GSM-system.

# 1 System general characteristics

## 1.1 System functional capabilities

### 1.1.1 User capabilities

- Work in GSM network 850/900/1800/1900
- Voice interface
- List up to 5 users to whom telephone numbers system can call and/or send SMS
- Setting alarm/service notifications (SMS/call) for each user from the list
- Setting the number of attempts of calls to each user
- Arming/disarming confirmation
- Disarming notification
- GSM-network signal failure and appearance notification
- Notification about opened object (car) when arming
- Notification about alarm source
- «Panic» mode
- Automatic rearming function
- Limited time of system operation in alarming mode (60 seconds)
- Possibility of remote deactivation of alarming mode without disarming
- System control using car regular remote transmitter
- GSM-system control using additional remote transmitter security system
- System control using cell phone keyboard during connection
- System control using SMS commands
- Protection by PIN-code of GSM-channel control
- Protection against PIN-code fitting and notification about attempt of its fitting
- Reserve power supply possibility
- Remote Top Up and check of system account
- Automatic current account check
- Possibility to detect car location using mobile operator
- Possibility to identify exact coordinates of car location using option GPS module
- Remote request of current system status
- Possibility to listen in armed object (car cabin)
- Possibility of "Hands free" mode using option speaker
- Alarm button for emergency call («Call» button)
- Possibility of passive engine lockout («Immobilizer» mode or two step disarming)
- Possibility of remote control of additional devices
- «Turbotimer» mode
- Service mode VALET
- Possibility of «silent» arming/disarming and system triggering
- Armed object monitoring (tracking) mode (when GPS-module is available)
- Possibility of work with additional auto start module
- Unsuccessful engine start notification
- Bypass of broken (opened) zone of armed object
- Sensors remote activating/deactivating
- Possibility of remote setting of inclination/motion sensor
- When main battery is disconnected

### 1.1.2 Installation features

- Possibility of connection to car CAN-bus (CAN-bus adapter is included into set of model Convoy iGSM-005 CAN)
- Nonvolatile system settings memory
- Built-in 2-stage shock sensor
- Built-in 3-axis inclination/motion sensor
- Possibility to program system using SMS or service button
- 8 universal inputs with possibility to choose their functions and parameters
- Arming indication input for connecting to additional remote transmitter security system
- Arming/disarming permission input
- Input for connection of reserve battery with its recharging circuits
- 6 outputs with possibility to choose their functions and parameters
- 2 universal timer outputs with adjustable parameters to implement system service functions
- Possibility of NC and NO lockouts
- Additional pager output
- Possibility to work with car regular horn

- Protection of system hardware-controlled settings against accidental changes
- Possibility to request current system hardware-controlled settings
- Programmable terminal switches scanning delay
- Low current consumption
- Protection of outputs against short circuit and overload

## 1.2 System main technical characteristics

- Radio channel frequency range, MHz .....850/900/1800/1900
- Range of coverage .....in the range of mobile operator network
- Way of notification .....using voice or SMS-messages
- Way of coding .....is determined by GSM network standards
- Way of security .....
- Power voltage of main unit, permanently, V .....9-15  
at engine start, V .....6-18  
during one hour, V .....not more than 18  
short time (up to one min), V .....not more than 24
- Reserve battery voltage, permanently, V .....12
- Average current consumption in arm mode, mA .....not more than 18
- Average current consumption in monitoring mode (at GPRS connection), mA .....not more than 35
- Low-voltage outputs current, mA .....not more than 300
- Power outputs current, A .....not more than 2
- Commutating voltage of output, V .....not more than 20
- Temperature range of main unit, C° .....from -40 to +85

### Note

*Current consumption in arm mode may be increased during connecting to GSM-network, for example, when transmitting SMS or having bad connection.*

## 1.3 Set list

- Main unit
- Car CAN-bus adapter Convoy UniCAN-420 (only for model Convoy iGSM-005 CAN)
- External GSM-antenna
- Two-color LED
- Electret microphone
- Siren
- Wire harness for main unit of GSM-system with fuses
- Wire harness for CAN-bus adapter (only for model Convoy iGSM-005 CAN)
- Service button
- Hood/trunk terminal switch
- Wire to connect service button
- System using and installation guide
- Warranty card
- Individual packing

It is possible to connect to GSM system (options):

- GPS-module Convoy GPSM-003
- Reserve battery Convoy GSM-001 (or analogic)
- Speaker Convoy GSM-001 (or analogic)
- External sensor/sensors

### Note

*Manufacturer has the right to change supplied set. This may be caused by product software change or its functional capabilities increasing.*

*All IMEI-codes of SIM-modules of GSM-system Convoy iGSM-005 and Convoy iGSM-005 CAN were officially registered in Ukrainian State Centre of Radio Frequencies (UCRF).*

## 2 Ways of system control

To operate GSM-system you may use:

- Signal of remote transmitter of car factory security system or regular remote control unit of car central lock
- Voice commands during call from cell phone or fixed location phone (in tone dialing mode)
- SMS sent from cell phone

### 2.1 System control using factory remote transmitter

To operate GSM-system press arm (central lock closing) or disarm (central lock opening) button of regular transmitter. GSM-system will activate or deactivate arm mode correspondently.

### 2.2 System control using cell phone keyboard during call

To quick system control using cell phone keyboard it is necessary to dial system phone number (or answer when system calling), af ter connection press four PIN-code digits on the keyboard and press «#» key.


Command structure is the following:

**xxxx #**

where **xxxx** – four PIN-code digits (every from 0 to 9)

If you have not managed to enter PIN-code, try again. You have only two attempts to enter PIN- code (or 40 seconds for whole procedure).

If PIN-code was correct, system will activate voice menu specifying control commands. Phone keys used during call:

Phone Key	Command
<b>1</b>	Arming (alarm signals deactivation)
<b>2</b>	Disarming (alarm signals deactivation)
<b>3</b>	Alarm mode activation («Panic» mode, engine lockout)
<b>4</b>	Service mode VALET activation
<b>5</b>	Universal timer channel №1 activation (auto start activation)
<b>6</b>	Universal timer channel №2 activation (auto start deactivation)
<b>7</b>	Cabin listening-in mode activation/deactivation
<b>8</b>	Programmable
<b>9</b>	Request of system current status, condition and location
<b>0</b>	Current system account status request
<b>#</b>	Selection of voice report about current system status and condition
<b>*</b>	End call (disconnection by system)
	End call (disconnection by user)

*If you know command number to control the system, you may press correspondent key as soon as system will enter voice menu.*

#### Note

*Entering wrong PIN-code during call system will recognize as PIN-code fitting and inform programmed users about it (see sub-item 6.1.4) with the help of correspondent SMS (see item 4.1 – 4.4).*

You can add control command as a contact to the phone book of your mobile phone, which helps not to enter it with PIN-code every time when you call to GSM-system.



**Example:**

Number of contact (variant) «Armed»:

**+380501234567p0000#1\***

where **+380501234567** – number of SIM-card of GSM-system

**p** – symbol of pause in number entering

**0000** – current PIN-code of the system

**1** – command of arm mode activation

**\*** – command of end call by the system

Modern mobile phones allow choosing some keys for automatic call to a number from their phone book (quick number dialing). Using this function and contacts-commands previously saved in the format described above, you can significantly simplify the control of GSM-system.

 **ATTENTION!**

*You should remember that the PIN-code of GSM-system will be available in case of stealing a mobile phone.*

## 2.3 System control using SMS

To operate system using SMS send it to number of SIM-card installed into GSM-system..

 **ATTENTION!**

*To avoid unauthorized system control any SMS sent to the system must start with the following command:*

**PIN:xxxx**

where **xxxx** – four PIN-code digits (every from 0 to 9)

Any message not including this text at the beginning will be deleted by the system without processing.

After receiving of SMS and command completion GSM-system will send report about command completion to the number from which this message was sent. If report was not received, this mean that there was a mistake in the text of SMS-command (wrong PIN-code, syntax error in command text or there are some problems with mobile operator's SMS-server).

If it is necessary to send SMS-report about this command completion to other phone number enter in the text of SMS (see item 2.3) with the required command:

**ECHO "+xxxxxxxxxxxxx"**

where **+xxxxxxxxxxxxx** – phone number in format (+380671234567)

**Example:**

**PIN: 0000 arm echo "+380671234567"**

In this case system will send SMS-report ARM OK to the number +380671234567.

 **ATTENTION!**

*In most cases in conditions of roaming or when sending SMS via Internet command "ECHO" is necessary for correct delivery of SMS-reports by the system.*

 **Note**

*Any SMS without PIN-code is deleted without its processing.*

*The receipt of SMS with wrong PIN-code will be accepted by system as PIN-code fitting about what it will inform with correspondent SMS (see item 4.1-4.4).*

*When system received SMS with wrong PIN-code it will delete all incoming SMS during 2 minutes without their processing*

Text of SMS commands

SMS-text	Command
<b>ARM</b>	Arming
<b>DISARM</b>	Disarming
<b>ALARM</b>	Alarm mode activation («Panic» mode)
<b>VALET</b>	Service mode VALET activation
<b>RUNCH1</b>	Universal timer channel № 1 activation
<b>RUNCH2</b>	Universal timer channel № 2 activation
<b>STATE?</b>	Current system status request
<b>LISTEN</b>	Callback with car cabin listening-in mode
<b>CALL ME</b>	GSM-system call mode activation upon request of user
<b>START</b>	Auto start activation
<b>STOP</b>	Auto start deactivation (engine stop without alarm mode activation)
<b>GPS?</b>	System GPS-location request

 **Note**

*SMS-text must be typed only in Latin. To separate commands in SMS-text use only space or comma symbols. Total quantity of symbols must not exceed quantity of symbols in single SMS. Total amount of symbols should not exceed amount of symbols in one SMS*

*If you use iPhone or smartphone on Android platform you may simplify system control installing special software application in your phone. SMS creating for system control will be automatic in this case when pressing correspondent icon of command on your phone sensor display (see item 8.2).*

## 3 System security functions

### 3.1 Arming

#### 3.1.1 Using car regular remote transmitter

If GSM-system is working together with car factory security system (central lock main unit), pressing Arm button (CL close) on regular remote transmitter leads to GSM-system Arm mode activation. Siren will chirp once, parking lights flash once, LED will start slow flashing with red light.

When arming mode is activated system will arm doors, hood, trunk, and activate built-in shock and inclination/motion sensors, external sensors (if such are installed) and engine start and work circuits lockouts.

#### 3.1.2 Using cell phone keyboard

To arm GSM-system using cell phone keyboard (see item 2.2.) during call press key **1**. System will activate Arm mode. Siren will chirp once. LED will start slow flashing with red light. Parking lights flash once.

In your phone speaker you will hear:

«System is armed»



#### Note

Built-in shock and inclination/motion sensor will be activated when system is armed after timer channels work completion (see sub-item 6.2.4) including terminal switches scanning delay (see sub-item 6.2.6).



#### ATTENTION!

If during arming one door or several doors, hood or trunk were not completely closed system will inform about it (using call or SMS, see item 4.1 – 4.4). Siren will chirp 5 times, parking lights flash 5 times.

If terminal switches scanning delay function is active (see sub-item 6.2.6.) mentioned siren and parking lights signals will be delayed for the time specified by this function.

#### 3.1.3 Using SMS

To arm system using SMS, enter the following command in text message (see item 2.3.):

#### ARM

After receipt SMS with this command, system will activate Arm mode. Siren will chirp once shortly, parking lights flash once. LED will start slow flashing with red light. After this system will send report with arming confirmation to the number from which this SMS was sent:

#### ARM OK



#### Note

At attempt to activate system arm mode when car ignition is started command will not be performed. System will send SMS:

#### ARM fail



#### ATTENTION!

If during arming one door or several doors, hood or trunk were not completely closed system will inform about it using call or SMS (see item 4.1 – 4.4), siren and parking lights (5 times signals).

If terminal switches scanning delay function is active (see sub-item 6.2.6.) mentioned siren and parking lights signals will be delayed for the time specified by this function.

### 3.2 Arming with sensors bypass

#### 3.2.1 Using car regular remote transmitter

If system is working together with car factory security system (central lock main unit), pressing Arm button (CL close) on regular remote transmitter leads to Arm mode activation (see sub-item 3.1.1). Repeated pressing CL close button (not earlier than in 2 seconds) after arming will deactivate alarm zones of system sensors for one cycle of arming. Siren will chirp once.

#### 3.2.2 Using cell phone keyboard

To deactivate sensors for one cycle of arming using cell phone keyboard (see item 2.2) in Arm mode during call press key **1**. In your phone speaker you will hear:

«System is armed»

**Note**

Long-term sensors deactivation (built-in and external) see sub-item 6.1.12.

### 3.3 Disarming

#### 3.3.1 Using car regular remote transmitter

If system is working together with car factory security system (central lock main unit), pressing Disarm button (CL open) on regular remote transmitter leads to GSM-system disarming. Siren will chirp twice, parking lights flash twice, LED will stop flashing.

**Note**

If auto rearming function is activated (see sub-item 6.2.5) LED will flash quickly with green light and in 30 seconds (if doors, hood or trunk were not opened) system will be rearmed.

If «Immobilizer» mode is programmed in system (see item 3.4), LED will be constantly lightening with red color until you press «disarm confirm» button.

#### 3.3.2 Using cell phone keyboard

To disarm system using cell phone keyboard (see item 2.2) during call press key **2**. In your phone speaker you will hear:

**«System is disarmed»**

System will deactivate arm mode, siren will chirp twice, parking lights flash twice, LED will stop flashing.

#### 3.3.3 Using SMS

To disarm system using SMS (see item 2.3) enter the following command in SMS text:

**DISARM**

After receipt of SMS with this command GSM-system will be disarmed. Siren will chirp twice, parking lights flash twice, LED will stop flashing. After this system will send report with disarming confirmation to the number from which this SMS was sent:

**DISARM OK**

#### 3.3.4 Emergency disarming

GSM-system can be emergently disarmed without using factory transmitter or phone. To do this:

1. Open car door. Alarm mode will be activated. Wait to the end of 60-second siren work cycle.
2. Start the ignition. LED will start slow flashing with green light. Count number of LED flashes which corresponds to the first PIN-code digit (if the digit is 0 count 10 flashes). Stop the ignition.
3. Start it again not later than in 2 seconds. LED starts slow flashing with green light. Count number of LED flashes which corresponds to the second PIN-code digit. Stop the ignition.
4. Start it again not later than in 2 seconds. LED starts slow flashing with green light. Count number of LED flashes which corresponds to the third PIN-code digit. Stop the ignition.
5. Start it again not later than in 2 seconds. LED starts slow flashing with green light. Count number of LED flashes which corresponds to the fourth PIN-code digit. Stop the ignition.

If entered PIN-code is correct system will be disarmed. Siren and parking lights will signal twice, LED will stop flashing.

**Note**

If «Immobilizer» mode is programmed in system (see item 3.4), LED will be constantly lightening with red color until you press «disarm confirm» button.

### 3.4 Engine passive lockout («Immobilizer» mode)

GSM-system has ability to continue locking out engine start and work circuits after disarming. System also waits 30 seconds for pressing «disarm confirm» button when the ignition is stopped. LED will be constantly lightening with red color.

If you press «disarm confirm» button (if input is programmed see sub-item 6.2.2) after disarming system will deactivate all engine start and work circuits. LED will stop flashing. Otherwise if cause 8 is indicated in alarm/service messages list, system will inform programmed users about disarming (see sub-item 6.1.4). Mode setting see sub-item 6.2.9.

### 3.5 Remote engine lockout

In case of your robbery or your car hijack, GSM-system is able to immobilize engine remotely via your cell phone command

#### 3.5.1 Using cell phone keyboard

To immobilize engine remotely using cell phone keyboard (see item 2.2) during call press key **3**. In your phone speaker you will hear:

##### «Alarm»

GSM-system will activate «rear lamps» (if correspondent connections and settings are performed – see sub-item 6.2.3) siren, parking lights for 5 seconds and immobilize engine.

LED will start flashing alternatively with green and red light. Siren will chirp, parking lights will be flashing during 60 sec.

#### 3.5.2 Using SMS

To immobilize engine remotely using SMS enter the following command in SMS-text (see item 2.3):

##### **ALARM**

After SMS-command receipt system will activate alarm mode for 60 seconds and will send report with mode activation confirmation to the number from which this SMS was sent:

##### **ALARM OK**

LED will start flashing alternatively with green and red light. Siren will chirp, parking lights will be flashing during 60 sec.

##### **Note**

*Early mode deactivation using car regular remote transmitter is impossible. After end of alarm mode system will pass to arm mode without terminal switches scanning delay (see sub-item 6.2.6).*

### 3.6 Alarm button «Call»

Using service button you may implement «Call» alarm button functions.

In arm mode press and hold for 3 sec. «Call» button (LED will flash once), system will call preprogrammed users (see sub-item 6.1.4) in accordance with alarm/service notifications list. As a result of call completion users will hear:

##### **«System is disarmed. Call button is pressed»**

During this you may control system without entering PIN-code. Or users will receive SMS:

##### **Call button is pressed**

### 3.7 Alarm mode («Panic» mode)

In some cases you need to activate alarm mode (siren and parking lights signals) or remotely immobilize engine (to prevent hijack).

#### 3.7.1 Mode activation using cell phone keyboard

To activate "Panic" mode using cell phone keyboard (see item 2.2) during call press key 3. In your phone speaker you will hear:

##### «Alarm»

LED will start flashing alternatively with green and red light. Siren will chirp, parking lights will be flashing during 60 sec.

#### 3.7.2 Mode activation using SMS

To activate "Panic" mode using SMS enter the following command in SMS-text (see item 2.3):

##### **ALARM**

After SMS-command receipt system will activate siren, parking lights and will send report with mode activation confirmation to the number from which this SMS was sent:

##### **ALARM OK**

LED will start flashing alternatively with green and red light. Siren will chirp, parking lights will be flashing during 60 sec.

### 3.7.3 Mode deactivation

For early «Panic» mode deactivation using cell phone keyboard (see item 2.2) during call press key **1**, **2** or **4**. GSM-system will activate/deactivate arm mode or activate service mode VALET correspondently depending on pressed key.

You also can send SMS with the correspondent command to GSM-system.

**Note**

*Early alarm mode deactivation using car regular remote transmitter is impossible.*

## 4 Indication of system status in different modes

Except of owner notification using GSM-network, system can also inform him (if connected) using LED, siren and parking lights (turn indicators) of the car.

### 4.1 System notifications during arming

At arming system will send SMS about this (if this function is programmed – see sub-item 6.1.4).

Siren (if connected) will chirp once (if all siren signals are activated – see sub-item 6.1.10), parking lights will flash once, LED will start flashing slowly with red light.

#### Note

*Built-in shock inclination/motion sensor will be activated after system arming upon timer channels work completion (see sub-item 6.2.4) including terminal switches scanning delay (see sub-item 6.2.6).*

If system will detect broken (opened) armed zones (doors, hood, trunk) siren will chirp 5 times, parking lights flash 5 times and system will inform programmed users (by means of SMS or call) about this fact (see sub-item 6.1.4).

#### Note

*If terminal switches scanning delay time is specified (see sub-item 6.2.6), signals about broken (opened) armed zones will appear after specified time run out.*

*Notification during arming (voice or SMS) consists of message about system current status (system is armed) plus one or several messages (if there are correspondent events for the moment of call starting or SMS sending):*

SMS-text	Voice message	Message cause
System is armed	System is armed	
Ignition on	Ignition on	The ignition is started during arming
Doors open	Doors open	During system arming terminal switch input of car cabin door is active
Drivers door open	Drivers door open	During system arming terminal switch input of driver's door is active
Hood open	Hood open	During system arming terminal switch input of car hood is active
Trunk open	Trunk open	During system arming terminal switch input of car trunk is active
Trunk or hood open	Trunk or hood open	During system arming terminal switch input of car hood and/or trunk is active
Siren triggering	Siren triggering	During system arming siren input is active
Universal terminal switch triggering	Universal terminal switch triggering	During system arming universal terminal switch input is active
Warning input is triggering	Warning input is triggering	During system arming warning zone of shock sensor is triggered
Shock sensor triggering	Shock sensor triggering	During system arming alarm zone of shock sensor is triggered
Motion sensor triggering	Motion sensor triggering	During system arming motion sensor is triggered
Inclination sensor triggering	Inclination sensor triggering	During system arming built-in inclination sensor is triggered
External sensor triggering	External sensor triggering	During system arming external sensor is triggered
"Call" button pressed	"Call" button pressed	During system arming alarm button «Call» is pressed

SMS-text	Voice message	Message cause
PIN-code fitting attempt from a number: xxxxxxxxxx		During system arming wrong PIN-code is entered
Network signal disappears:xx	Network signal disappears:xx	The level of GSM-network signal is lower than required
Battery disconnected	Battery disconnected	Car main battery is disconnected (if reserve battery is present)
Low battery	Low battery	During system arming main battery voltage is lower than 11 V.

## 4.2 System notifications in arm mode

In arm mode when GSM-network signal is lower than critical (level 5) system will send SMS about this event to programmed users (see sub-item 6.1.4).

SMS-text:

### Network-signal disappears: xx

where **xx** = (0-33) – is GSM-network signal level for the moment of SMS sending

When GSM-signal becomes higher than level 10, system will send SMS about signal level appearing to programmed users (see sub-item 6.1.4):

### Network-signal appeared: xx

where **xx** – is GSM-network signal level for the moment of SMS sending

System is checking the level of GSM-network signal one time per 1 minute.

### Note

*These SMS are sent to the users also for the moment of system arming.*

When main battery is disconnected in arm mode, GSM-system will inform programmed users (see sub-item 6.1.4) about this (by means of SMS or voice message) upon condition if reserve battery present (option – see sub-item 7.3.11):

### Battery is disconnected (SMS)

### «Battery is disconnected» (voice message)

If GSM-system is working with additional remote start module, after false engine start in arm mode system will send SMS to programmed users (see sub-item 6.1.4):

### System is armed. Remote engine start is failed

If system received SMS with wrong PIN-code (or entering wrong PIN-code during call) it will send SMS to programmed users (see sub-item 6.1.4):

### PIN-code fitting attempt from a number: xxxxxxxxxx

where **xxxxxxxxxx** – phone number from which SMS was sent or call was made with wrong PIN-code

After entering wrong PIN-code system is not processing SMS-text during 2 minutes.

### Note

*System can send this SMS also in case if data was sent it by mobile operator incorrectly (PIN-code entering during call to system) even if this data sent from the number of programmed user.*

## 4.3 System notifications in alarming mode

If in arm mode in case of trunk, hood or any of the doors opening, sensors triggering or ignition starting, system will activate alarm mode – siren and parking lights will be active during 60 seconds.

### ATTENTION!

*If system triggered after ignition start, work cycles of siren and parking lights will repeat until alarming mode deactivation or when car battery is low.*

Notification (voice or SMS) in alarm mode consists of message about current system status (alarm) and plus one or several alarm messages (for the moment of call/SMS sending).



SMS-text	Voice message	Message cause
Alarm	Alarm	
Ignition on	Ignition on	Ignition started
Doors open	Doors open	Cr cabin door terminal switch triggered
Drivers door open	Drivers door open	Driver's door terminal switch triggered
Hood open	Hood open	Car hood terminal switch triggered
Trunk open	Trunk open	Car trunk terminal switch triggered
Trunk or hood open	Trunk or hood open	Car hood and/or trunk terminal switch triggered
Siren triggering	Siren triggering	Siren input is active
Terminal switch triggering	Terminal switch triggering	Universal terminal switch is active
Warning input is triggering	Warning input is triggering	Warning zone of built-in shock sensor is active
Shock sensor triggering	Shock sensor triggering	Alarm zone of shock sensor is active
Motion sensor triggering	Motion sensor triggering	Motion sensor is active
Inclination sensor triggering	Inclination sensor triggering	Inclination sensor is active
External sensor triggering	External sensor triggering	External sensor is active
Glass break sensor triggering	Glass break sensor triggering	Glass brake sensor is active
"Call" button pressed	"Call" button pressed	"Call" button is pressed
Battery was disconnected	Battery was disconnected	Main battery was disconnected
Battery disconnected	Battery disconnected	Car main battery is disconnected (if reserve battery is present)
Low battery	Low battery	Main battery voltage is lower than 10 V.

If during one minute system was not disarmed when call was made, in one minute or after the this call completion, it will send SMS to all users phone numbers who have current alarm cause in their list of alarm/service notifications (SMS sending) (see sub-item 6.1.4).

If the user from the list does not answer the call more than 30 seconds, or cancel the call immediately, GSM-system will start to call another user from the list. System will stop call cycle when one of the users answers the call and press **\*** button on phone keyboard or when number of failed calls exceeds specified amount (see sub-item 6.1.5).



#### ATTENTION!

*After user answers the call system may be controlled only after current PIN-code entering. Calls to the users because of ignition start in arm mode will continue until account balance is zero or car low battery.*



#### Note

*Alarm events list stored in the system memory is updated immediately after alarm completion. After alarm completion system will be rearmed without including of time of terminal switches scanning delay (see sub-item 6.2.6) and with bypass of triggered (opened) armed zones.*

## 4.4 System notification during disarming

When disarming system is waiting for "disarm confirm" button pressing (if "Immobilizer" mode is activated – see item 3.4) during 30 seconds at stopped ignition. If this button is not pressed during this time system will inform programmed users about its disarming (see sub-item 6.1.4).

Notification (voice or SMS) during disarming consists of current system status message (system is disarmed) plus one or several messages (if there are correspondent events for the moment of call starting or SMS sending):

SMS-text	Voice message	Message cause
System is disarmed	System is disarmed	
Ignition on	Ignition on	The ignition is started during disarming
Doors open	Doors open	During system arming terminal switch input of car cabin door is active
Driver's door open	Driver's door open	During system arming terminal switch input of driver's door is active
Hood open	Hood open	During system arming terminal switch input of car hood is active
Trunk open	Trunk open	During system arming terminal switch input of car trunk is active
Trunk or hood open	Trunk or hood open	During system arming terminal switch input of car hood and/or trunk is active
Siren triggering	Siren triggering	During system arming siren input is active
"Call" button pressed	"Call" button pressed	During system disarming alarm button «Call» is pressed
Low battery	Low battery	During system disarming main battery voltage is lower than 11 V.

### 4.5 System current status request

In any moment of time you may request system current status (its current mode).

To receive voice information about current system status using cell phone keyboard during call (see item 2.2.) press # key.

To receive information about current system status as SMS during call to the system press key 9 or send SMS (see item 2.3.) with text:

#### STATE?

The list of messages about current system status and all possible events for the moment of call starting or SMS sending:

System status		System alarm/service messages	
SMS-text	Voice message	SMS-text	Voice message
System is armed	System is armed	Ignition on	Ignition on
System is disarmed	System is disarmed	Doors open	Doors open
Alarm	Alarm	Driver's door open	Driver's door open
Service mode VALET	Service mode	Hood open	Hood open
		Trunk open	Trunk open
		Trunk or hood open	Trunk or hood open
		Siren is active	Siren is active
		Universal terminal switch is triggered	Universal terminal switch is triggered
		Motion sensor triggering	Motion sensor triggering
		Motion sensor triggering	Motion sensor triggering
		Warning input triggering	Warning input triggering
		External sensor triggering	External sensor triggering
		Shock sensor triggering	Shock sensor triggering
		Glass break sensor triggering	Glass break sensor triggering
		Low battery	Low battery
		Accumulator is a power-off	Accumulator is a power-off
		Accumulator is discharged	Accumulator is discharged

System status		System alarm/service messages	
SMS-text	Voice message	SMS-text	Voice message
		Network signal disappears: xx	
		Network signal appeared: xx	
		PIN-code fitting attempt from a number xxxxxxxxxx	
		"Call" button is pressed	"Call" button is pressed
		Remote engine start is failed	Remote engine start is failed

#### 4.6 Reserve notification channel

At alarm mode activation or if GSM-network signal is lower than required in arm mode system will give intermittent signal at programmed as pager output (see sub-item 6.2.3). This signal may be used for additional pager control.

Pager signal transfer cycle duration is 60 seconds.

 **Note**

During arming and disarming signal is not transmitted to pager output. At GSM-network signal disappearance and appearance signals to siren and parking lights outputs are not transmitted.

#### 4.7 System signals

##### LED signals

LED operating mode	LED color	System status
OFF		System is disarmed
Slow blinking	Red	System is armed
Slow blinking	Green	PIN-code entering during emergency disarming/service mode VALET
Fast blinking	Red/Green alternatively	Alarming mode
Fast blinking	Green	Automatic rearming activated – 30 second countdown before system arming
Lightening constantly	Red	Engine passive lockout («Immobilizer» mode is active)/system – after forced auto start deactivation
1 flash	Red	Immediate call or SMS sending after «Call» button release

##### Siren signals

Signals	System status
1 short	Arm mode is on
2 short	Arm mode is off
5 short (some time after 1 short, see sub-item 6.2.6)	Arm mode is on. One or several armed zones are broken (opened). Low main battery
Constant or intermitted during 60 seconds	Alarm mode
No signals	System is armed, disarmed. Conforming siren signals are not active (see sub-item 6.1.10)

**Parking lights signals**

<b>Signal</b>	<b>System status</b>
1 flash	Arm mode is on
2 flashes	Arm mode is off
5 flashes (after 1 or 2 flashes)	System is armed or disarmed. One or several armed zones are broken (opened).
Series of flashes during 60 seconds	Alarm mode

## 5 System service functions

### 5.1 Service mode VALET

In this mode all system security functions are deactivated. This gives possibility to the owner, for example, to drive his car to service station or give his car another driver who does not know how to use GSM-system.

Service mode VALET can be activated or deactivated using SMS or call command.

During system operating in VALET mode LED will flash with green light (see item 4.7).

#### 5.1.1 Mode activation using cell phone keyboard

To activate service mode VALET using cell phone keyboard (see item 2.2) during call press key **4**. In your phone speaker you will hear:

«Service mode»

#### 5.1.2 Mode activation using SMS

To activate service mode VALET using SMS (see item 2.3) enter the following command in SMS-text:

**VALET**

After SMS-command receipt system will activate service mode VALET and will send report with mode activation confirmation to the number from which this SMS was sent:

**VALET OK**

#### 5.1.3 Mode deactivation using cell phone keyboard

To deactivate service mode VALET using cell phone keyboard (see item 2.2) during call press key **1** or **2**. After button **1** pressing, system will deactivate VALET mode and will be armed. After button **2** pressing, system will deactivate service mode VALET.

#### 5.1.4 Mode deactivation using SMS

To deactivate service mode VALET using SMS (see item 2.3) enter the following commands in SMS-text:

**ARM** or **DISARM**

After SMS receipt with command «ARM» system will deactivate service mode VALET, will be armed and send report with arm mode activation confirmation to the number from which this SMS was sent:

**ARM OK**

After SMS receipt with command «DISARM» system will deactivate service mode VALET, and send report to the number from which this SMS was sent:

**DISARM OK**

#### Note

*It is impossible to deactivate service mode VALET using remote transmitter.*

### 5.2 Remote engine start

If GSM-system is working together with engine auto start module (for example, Convoy ARS-300) it has possibility to start engine by command from cell phone keyboard or by sending SMS and also to control false start.

#### Note

*It is necessary to program functions of correspondent outputs – see sub-item 6.2.3.*

#### 5.2.1 Auto start using cell phone keyboard

To activate engine auto start using cell phone keyboard (see item 2.2) during call press key **5**. In your phone speaker you will hear:

«Auto start is activated»

#### 5.2.2 Auto start using SMS

To activate engine auto start using SMS (see item 2.3) enter the following commands in SMS-text:

**START**

After SMS-receipt with this command GSM-system will send signal of engine start to the programmed output and send report with auto start activation confirmation to the number from which this SMS was sent:

**START OK**

*Remote engine start is possible only in arm mode. In other case system will send SMS:*

### **START fail**

Engine work duration after auto start is limited up to 30 minutes. Before engine stop rear lamp will on for 10 seconds (if correspondent connections and settings are done – see sub-item 6.2.3).

### **ATTENTION!**

*In case of alarm mode activation caused by auto start module before engine stop, system will emergently stop the engine and activate its lockouts.*

#### **5.2.3 Forced engine stop using cell phone keyboard**

To stop engine forcedly using cell phone keyboard (see item 2.2) during call press key **6**. In your phone speaker you will hear:

**«System is armed»**

#### **5.2.4 Forced engine stop using SMS**

To stop engine forcedly without alarm signals using SMS (see item 2.3) enter the following command in SMS-text:

### **STOP**

After SMS-receipt with this command system send signal of engine stop to the programmed output, activate all lockouts and send report with engine stop confirmation to the number from which this SMS was sent:

**STOP OK**

#### **5.2.5 Failed engine start notification**

If during programmed time (see sub-item 6.2.7) engine was not started, system will send to the users (see sub-item 6.1.4) SMS with following text:

**Remote engine start is failed**

More detailed information about auto start mode functions you can see in the manual of correspondent auto start module.

### **5.3 «Turbotimer» mode**

This mode is used for cars with turbo engines and is activated automatically without any additional actions from the user.

To arm with running engine it is necessary to stop the ignition (car engine continues working), leave the car, close all the doors and arm the system. Siren will chirp once. Engine work time duration after ignition stop – see sub-item 6.2.8.

All sensors are deactivated in «Turbotimer» mode.

### **ATTENTION!**

*If any armed zone triggered after arming with running engine, system will immobilize engine and activate alarm mode.*

## **5.4 Additional service devices control**

### **5.4.1 Using cell phone keyboard**

If engine auto start is not programmed (or not used), you may activate timer channels of control of additional service devices on any system outputs (output functions settings – see sub-item 6.2.3). To activate channels using phone keyboard (see item 2.2) during call press key **5** or **6**.

In your phone speaker you will hear:

**«Channel 1 is activated» or «Channel 2 is activated»**

### **5.4.2 Using SMS**

To activate timer channels using SMS (see item 2.3) enter the following command in SMS-text:

**RUNCHx**

where **x** = {1,2} – number of timer channel of control of additional service device

After SMS-receipt with this command GSM-system will activate correspondent channel and send report with channel activation confirmation to the number from which this SMS was sent:

**RUNCHx OK**

**Note**

Timer channels setting see sub-item 6.2.4.

**5.5 Car cabin listening-in mode**

After connection with GSM-system you may listen what is happening inside car cabin. Listen time can be limited only by mobile operator demands.

**5.5.1 Using cell phone keyboard**

To activate cabin listening-in mode using cell phone keyboard (see item 2.2) during call press key **7**. To exist the mode press key **7** again. System will return to voice menu.

**Note**

During cabin listening-in (till exit from the mode) system is able to perform other commands from cell phone keyboard without PIN-code entering.

**5.5.2 Using SMS**

To activate cabin listening-in mode using SMS (see item 2.3.) enter the following command in SMS-text:

**LISTEN**

After SMS-receipt with command system will call to that phone number from which it has received the command. After answer the call, system will activate cabin listening-in mode. You may also control system from voice menu without PIN-code input. When control the system is not required, press key **\***, to end the call (otherwise the system will call preset amount of times – see sub-item 6.1.5).

**5.6 System account check****5.6.1 Using cell phone keyboard**

You may get information about GSM-account status as SMS using cell phone keyboard during call. To do this (see item 2.2) press key **0**. Do not disconnect with system until you hear in your phone speaker:

**«SMS is sent»**

System will send USSD-request to mobile operator and resend its SMS-report to that phone number from which it has received the call. Form of report with account check depends on mobile operator.

Example of report format of KYIVSTAR:

**NA VASHOMU RAHUNKU 50.00 GRN. INFO PRO BONUSY NA \*112# i \*119#.**

**Note**

Setting of account check number should be done in the system (see sub-item 6.1.2).

**5.6.2 Using SMS**

To check system account using SMS (see item 2.3), enter the following command in SMS-text:

**USSD \*xxx#**

where **xxx** – code to check system SIM-card balance

GSM-system will send USSD-request to mobile operator and resend its SMS-report to that phone number from which it has received the command.

Format of SMS-report with account check depends on mobile operator.

Example of report format of KYIVSTAR:

**NA VASHOMU RAHUNKU 50.00 GRN. INFO PRO BONUSY NA \*112# i \*119#.**

**5.6.3 Automatic system account check**

GSM-system is able to check account automatically and if balance is lower than critical, it will inform programmed users about it (see sub-item 6.1.4).

Account check is performed periodically in programmed period of time. (see sub-item 6.1.3) or in 10 minutes after system arming, if more time passed than programmed from last check, for example at power supply renewal or unsuccessful last check.

**5.7 System account Top Up**

To Top Up system account using SMS (see item 2.3) enter the following command in SMS-text:

**USSD \*xxx\*yyyyyyyyyyy#**

where **xxx** – code to Top Up account of the used operator

**yyyyyyyyyyy** – code of account Top Up voucher

**Codes of Top Up of some mobile operators of Ukraine:**

Kyivstar, Djvice, Life	<b>123</b>
MTC	<b>100</b>
Beeline	<b>101</b>
UTEL	<b>111</b>

 **Note**

*The balance of the system account, you can Top Up in any i-BOX, using Internet services or any other possible method.*

**5.8 Locating of system (car) location****5.8.1 Using mobile network operator**

Some GSM-operators allow requesting cell phone geographical location. This function can be used in order to determine GSM system (car) location.

To find GSM-system location using SMS (see item 2.3) enter the following command in SMS-text:

**USSD \*xxx\*1\*yyyyyyyyyyy#**

where **xxx** – location request code for mobile operator

**yyyyyyyyyyy** – phone number to which information about the coordinates of GSM-system should be sent

SMS with the name of the nearest to the car streets and WAP-link to the map fragment showing car's location will be sent to the specified phone number.

 **Note**

*If location of GSM-retransmitters in relation to the car does not allow determining exact car location, you will find on the map not point, but sector of car possible location.*

**5.8.2 Using option GPS-module**

If GPS-module Convoy GPSM-003 is used together with GSM-system you may detect car location using GPS-navigation. In this case GSM-system (car) location detection accuracy is much higher.

To find system GPS-location using SMS (see item 2.3) enter the following command in SMS-text:

**GPS?**

After receipt SMS with this command GSM-system will send SMS to the number from which it has received the request:

**GPS: a SAT = b; UTC: c, d h**

where **a = (A/NA)** – actuality/not actuality of information about coordinate point for this moment

**b** – satellites quantity, information from which was used

**c** – Greenwich time

**d** – date

**h** – Google maps link (<http://...>)

 **Note**

*If you cell phone supports GPRS-connection, you are able to see system location (point) on Google map online.*

*If you have installed navigation software (programs which have Google maps) in your cell phone, geographical coordinates of point received from GSM-system will be automatically transferred to this software.*

If GPS-module for the moment of request is not connected to the GSM-system (or modules power is off) system will send SMS to that phone number from which it has received the request:

**No GPS****5.9 System call by user request**

Sometimes it is required that GSM-system calls user not only because of alarm/service event. For this enter the following command in SMS-text (see item 2.3):

**CALLME**

After this SMS-receipt system will call current user. User can control system after connection (from voice menu) without PIN-code input.



## 5.10 Armed object monitoring (tracking) mode

Using option GPS-module Convoy GPRS-003 and information transmitted by GSM-system into specialized server «CONVOY Online», you can activate mobile armed object (car, boat) monitoring (tracking) mode.

The user can see on the map current location of the armed object, its route, status of GSM-system installed into the object in each route point. All alarm and service events, happened to GSM-system for chosen period of time, are registered in the event log on the server.

The user can receive various statistical information as reports about the object according to the monitoring data: the distance and duration of the route, time and number of stops during the route, average and maximum speed of the route, geofence entrance and exit. Object monitoring reports can be drawn for any period and on any date. The drawn report can be saved for further processing and analysis.

To activate monitoring (tracking) mode using SMS (see item 2.3) enter the following command in SMS-text:

### MONITOR x

where **x** = 0 – object monitoring (tracking) mode is deactivated

**x** = 1 – object monitoring (tracking) mode is activated

Default – 0 (monitoring is deactivated)

After receipt SMS with this command GSM-system will send report to the number from which it has received this SMS:

### MONITOR OFF or MONITOR ON

#### Note

Command without *x* also can be used for mode status request (ON/OFF).

To start using «CONVOY Online» service it is necessary to activate GSM-system GPRS-connection setting. To do this specify for GSM-system name of access point of mobile operator of its SIM-card using SMS. For this enter the following command in SMS-text (see item 2.3):

### APN "name1"

where **name1** – access point name (APN) of mobile operator of GSM-system SIM-card. Default – "Internet"

GSM-system report:

### APN name1

#### List of APN of some mobile operators of Ukraine:

MTC	<b>Internet hyper.net active smart.net smart.active</b>
Kyivstar	<b>Internet (contract) www.ab.kyivstar.net www.kyivstar.net</b>
Djuice	<b>www.djuice.com.ua</b>
Jeans	<b>Internet</b>
Beeline	<b>Internet.beeline.ua</b>
Life	<b>Internet</b>

WEB-name of «CONVOY Online» service server is specified for GSM-system by default (www.convoyonline.com)

In case of using other service of monitoring (tracking) or at changing of WEB-name of server «CONVOY Online» it is necessary to specify WEB-name of server for GSM-system using SMS.

To do this enter the following command in SMS-text (see item 2.3):

### IPNAME "name2"

where **name2** – new name of «CONVOY Online» server or other monitoring (tracking) service

After receipt SMS with this command GSM-system will send report to the number from which it has received this SMS:

### IPNAME name2

To request current status and current settings of monitoring (tracking) mode enter the following command in SMS-text (see item 2.3):

**GPRS?**

After receipt SMS with this command GSM-system will send report with settings:

**GPRS IMEI xxxx MONITOR y IPNAME "name2" APN "name1"**

where **xxxx** – IMEI-code of SIM-module of GSM-system

**y** = (OFF, ON) – monitoring (tracking) mode status. OFF – mode is deactivated, ON – mode is activated

**"name1"** – access point name (APN) of mobile operator of GSM-system SIM-card

**"name2"** – WEB-name of monitoring (tracking) service sever. Default: «www.convoyonline.com»

Information concerning your armed object with installed GSM-system iGSM-005 or iGSM-005 CAN, is available at the website: [www.convoyonline.com](http://www.convoyonline.com)

 **Note**

*You should activate GSM-system monitoring mode, specify its APN, register at the server website and create there your account.*

*While adding the armed object enter in account IMEI-code of SIM-module of system, indicated in its SMS-reply upon **GPRS?** request.*

## 6 System programming and setting

Programming and setting of GSM-system is performed using SMS or service button.

### 6.1 User settings

#### 6.1.1 PIN-code change

System factory PIN-code is «0000». To change PIN-code (see item 2.3) enter the following command in SMS text:

**NEWPIN xxxx**

where **xxxx** – four digits of new PIN-code (every from 0 to 9)

After receipt SMS with this command system will send report with PIN-code change confirmation:

**NEWPIN xxxx** or **NEWPIN fail** (if new PIN-code is incorrect)

#### 6.1.2 Setting phone number for system account check

To check system account status and automatic check using your cell phone keyboard, specify for GSM-system account check number of GSM-operator (whose SIM-card is installed into GSM-system). To do this enter the following command in SMS text:

**BALANS "\*xxx#"**

where **xxx** – number of USSD-request of mobile operator's account balance

##### **Balance request numbers of some mobile operators of Ukraine:**

Kyivstar, Djvice, Life, Beeline	<b>111</b>
MTC	<b>101</b>
UTEL	<b>100</b>

After SMS-receipt system will reply:

**BALANS \*xxx#**

#### 6.1.3 Setting account auto check

Automatic account check is performed in specified time using USSD-request to programmed number (see sub-item 6.1.2). After receipt of SMS report of operator system will process it: all symbols (not digits, including points and commas) will be deleted from reply and remaining digits will arrange one after another with spaces instead of deleted symbols.

Variant of report of KYIVSTAR operator about account balance:

**Na rahunku: 50.95grn. Info pro bonusy na \*112#, \*119#. Telefon vid 599 grn ta INTERNET BEZ MEZH! Info: 922\*922\***

Result of report processing by GSM-system:

**50 95 112 119 599 922 922**

Whole part of balance is account is "50" which is at the first position in report. To check account balance automatically enter the following command in SMS text (see item 2.3):

**AUTOCHECK a b c**

where **a** – position number of whole part in GSM-operator text of message with information about account status (1-10, 0 – automatic account check is of f)

**b** – critical money amount on system account (1-225, 10 – on default)

**c** – time period after which system will check account status (1-24 hours, 24 – by default)

System SMS report on this command:

**AUTOCHECK a,b,c**



#### Note

Command without a,b,c can be used for current settings request of automatic GSM-system account balance check.

#### 6.1.4 Users list programming

In alarm mode system will call and/or send SMS to phone numbers of 5 programmed users. Each user has two sets of alarm/service notifications which specify on which of them system will call and on which send SMS.

To program users list (see item 2.3) enter the following command in SMS text:

**USERx C a M b** or **USERx C a M b "+....."**

where **C, M** – latin letters

**x** = (1 – 5) – user order number

**a** = (0 – 9) – digits which correspond to alarm/service notifications on which system will call

**b** = (0 – 9) – digits which correspond to alarm/service notifications on which system will send SMS

**+.....** – user x phone number

**The list of system alarm/service notifications**

Alarm/service notification cause	Cause to call C (value a)	Cause to send SMS M (value b)
«Call» button is pressed	<b>0</b>	<b>0</b>
Ignition input is active. PIN-code fitting attempt. Power supply 12V disappeared	<b>1</b>	<b>1</b>
Door/hood/trunk terminal switch was triggered. External siren input is active	<b>2</b>	<b>2</b>
Additional/shock/motion/inclination/glass brake sensor was actuated	<b>3</b>	<b>3</b>
Universal terminal switch was actuated. Remote engine start is failed	<b>5</b>	<b>5</b>
Battery is low. System account balance is lower than critical		<b>6</b>
GSM-network signal is disappeared/appeared		<b>7</b>
System is disarmed	<b>8</b>	<b>8</b>
System is armed	<b>9</b>	<b>9</b>

If there is no letters C or M in command GSM-system will save previous list of alarm/service notifications for the users.

After receipt of SMS with this command system will send report with correspondent user (users) settings confirmation:

**USERx Call: a** and/or **SMS: b +.....**

where **x** = (1 – 5) – user order number

**a, b** – the list of alarm/service notifications on which system will call and/or send SMS to the user

**+.....** – user x phone number

By reason of ignition activation from the list of alarm/service notifications (1) call or SMS sending will be performed after one of alarm cycles until system disarming, low battery or when account balance is zero.

GSM-system will not call users on by reasons 6 and 7 from the list of alarm/service notifications even if these reasons are specified during programming of the users list (C67).

**Example:**

If SMS will have text: **«PIN:0000 USER1 C0123 M7»** this mean that system will call user 1 (from phone number of which SMS was sent) on the following causes:

**0** – «Call» alarm button is pressed

**1** – ignition is started, battery is disconnected, system power supply was disappeared

**2** – doors, hood, trunk open

**3** – sensor triggering

And send SMS on the following cause:

**7** – GSM-network signal is disappeared/appeared

During users list programming you are able to program several users simultaneously using one SMS, text of which includes not more than 120 symbols.

**Example:**

**PIN:0000 USER1 C0123 M7"+380671234567"**

**USER2 C123 M789"+380677654321" USER3 C123 M**

If you need to change only user's phone number without changing the list of his alarm/service events it is necessary to send SMS from the new phone number:

**USERx**

where **x** = (1–5) – user order number

When there is no user **x** phone number ("+/..») in command GSM–system will remember for him number from which this SMS was sent.

**6.1.5 Setting the number of attempts of calls to the user**

To set the number of attempts of calls to the programmed users on alarm/service notifications enter the following command in SMS text (see item 2.3):

**CALLCNT x**

where **x** = (1–10) – number of attempts of calls to the user (1 – on default)

GSM–system SMS–report format:

**CALLCNT x**

If the number of expected users of the system is not higher than 1–2, you can program different amount of calling attempts to these users concerning different events. To do this program several users with one phone number, but with different events in the list of alarm/service notifications.

**Example:**

**PIN: 0000 CALLCNT 1 User1 C01238 M USER2 C123 M User3 C1 M**

As a result of this SMS–receipt the system will call one time to the number from which it was sent, after pressing the «Call» button (event **0**) and disarming (**8**), it will call 2 times when terminal switches (**2**) and sensors (**3**) are activated, it will call 3 times when the ignition is started and the battery is discharged in the armed mode.

**6.1.6 Deleting the user form the list**

To delete the user from the list of alarm/service notifications enter the following command in SMS text (see item 2.3):

**USERx ""**

where **x** = (1 – 5) – user order number

""– double quotes

After receipt of SMS with this command system will send report with confirmation of deleting of user from the list:

**USERx null****6.1.7 User list request**

To identify the list of causes on which GSM–system calls/sends SMS to the programmed users enter the following command in SMS text (see item 2.3):

**USER?**

Format of SMS–report will be the following (example):

**USER1 CALL: 3210 SMS: 7 +380671234567**

**USER2 CALL: 321 SMS:987 +380677654321**

**USER3 null**

**USER4 null**

**USER5 null**

**6.1.8 Setting microphone sensitivity level**

System has 16 levels of microphone sensitivity setting (0–15. 0 – microphone is not active). The higher level is the higher microphone sensitivity. To adjust microphone sensitivity enter the following command in SMS text (see item 2.3):

**MIC x**

where **x** = (1–15) – level of microphone sensitivity

On default – 5

After receipt of SMS with this command system will send report with confirmation of microphone sensitivity setting:

**MIC x**

**Note**

Command without *x* sensitivity level specifying can be used for current microphone sensitivity request.

**6.1.9 Setting speaker volume level**

System has 101 levels of speaker volume setting (0 – 100. 0 – speaker is not active). The higher level is the higher speaker volume. To adjust speaker volume enter the following command in SMS text (see item 2.3):

**VOL x**

where **x** = [1–100] – level of speaker volume

On default – 50

After receipt of SMS with this command system will send report with confirmation of speaker volume setting:

**VOL x****Note**

Command without *x* volume level specifying can be also used for current speaker volume request.

**6.1.10 Setting siren signals**

To set siren signals enter the following command in SMS text (see item 2.3):

**SIREN x y**

where **x** = 0 – deactivate siren conforming signals during arming/disarming

**x** = 1 – activate siren conforming signals during arming/disarming

**x** = 2 – activate siren conforming signals during arming only

**y** = 0 – siren signals in alarm mode are absent

**y** = 1 – continuous siren signals in alarm mode (permanent output to siren)

**y** = {2, 3} – intermittent siren signals in alarm mode (impulse output to car horn)

On default: *x*-1, *y*-1

After receipt of SMS with this command system will send report with confirmation of siren signals setting:

**SIREN x,y****Note**

Command without *x*, *y* can be used for current siren signal settings request.

**6.1.11 Setting built-in shock sensor**

System has 256 levels of setting of built-in shock sensor warning/alarm zones (1 – 255). 1 – the highest sensitivity (senses light shocks), 255 – the lowest sensor sensitivity (shocks are practically not sensed), 0 – zone is deactivated.

To adjust shock sensor levels enter the following command in SMS text (see item 2.3):

**SHOCK A x W y**

where **A**, **W** – latin letters

**x** = [1 – 255] – alarm zone level

**y** = [1 – 255] – warning zone level

Default settings of sensor levels: warning zone – 18; alarm zone – 32

After receipt of SMS with this command GSM-system will send report with confirmation of warning and alarm zone levels setting:

**SHOCK A:x,W:y****Note**

If *A* *x* and *W* *y* missing in SMS system will leave previous sensor sensitivity level settings. Command without sensor sensitivity level specifying can be also used for current sensor sensitivity level request.

Built-in shock sensor is activated after system arming when timer channels work is completed (see sub-item 6.2.4) and including terminal switches scanning delay (see sub-item 6.2.6).

### 6.1.12 Setting built-in inclination/motion sensor

System has 10 levels of built-in inclination/motion sensor adjustment (1 – 9). 1 – the highest sensitivity (sense the smallest inclination angle), 9 – the lowest sensitivity (sense the biggest inclination angle). Default setting – 0 (inclination sensor is deactivated).

To adjust inclination sensor enter the following command in SMS text (see item 2.3):

#### SENSOR x y

where **x** = 0 – all sensors of system (shock, inclination/motion, external) are deactivated

**x** = 1 – all sensors of system are activated

**y** = (0–9) – inclination/motion sensor level. 0 – sensor is deactivated

Factory settings: x=1, y=0

After receipt of SMS with this command GSM-system will send report with confirmation of deactivation/activation of all sensors and inclination/motion sensors' level adjustment:

**SENSOR OFF, d.naklona y** or **SENSOR OFF, d.naklona OFF** or  
**SENSOR ON, d.naklona y** or **SENSOR ON, d.naklona OFF**

#### Note

Command without x,y specifying can be also used for request of current status of sensors and inclination sensor settings status.

## 6.2 System hardware-controlled settings using SMS

### ATTENTION!

In order to change hardware-controlled settings of GSM-system install safety jumper into main unit (see sub-item 7.4.1).

#### 6.2.1 Current hardware-controlled settings request

To request current system hardware settings enter the following command in SMS text (see item 2.3):

#### CONFIG?

After receipt of SMS with this command GSM-system will send report with the list of settings of inputs, outputs, universal timer channels, turbotimer parameters, etc:

**CONFIG: ...**

#### 6.2.2 Setting system inputs

System has 8 universal adjustable inputs.

Universal inputs can work both with normal closed and normal opened circuits (programmed) and also with circuits of any polarity (programmed).

When adjusting GSM-system universal inputs, specify input signal polarity, circuit type (closed on arming or opened). If input is used as alarm, specify type of car alarm circuit for determination of proper alarming cause notification. When connecting to impulse circuits specify also minimum close/open input time.

While adjusting the universal inputs of GSM-system first of all determine how the GSM-system will be controlled – by car regular central lock, additional security system, only by cell phone or using other method. If it necessary determine under the selected type of system control in the settings of the inputs IN1, IN2, IN3, IN4 and IN8 special functions (f = 0): arm, prohibition of arm, disarm, sign of arm or permission of arm/disarm. If it is necessary, you can also use the disarm prohibition input (blue (green) wire of 4-pin connector of system main unit (only for model Convoy iGSM-005 CAN – see sub-item 7.4.1)). Usually, there is no need to use all these inputs to control the system.

If it is planned to use in the system «Immobilizer» mode (see item 3.4), an exception of trunk terminal switch from the arm while remote opening of its lock and simultaneous work of the system with the additional engine auto start module (for example, Convoy ARS-300), it is also necessary to specify special functions (f = 0) for inputs IN5, IN6 and IN8.

Typical variants of connecting the system universal inputs with special functions – see sub-item 7.4.4, 7.4.5, 7.4.6.

## Performing of GSM–system arm and disarm

Input	Function of input	Description of input work
IN1 (green)	Arm	If input <b>IN1</b> has a signal and input <b>IN3</b> does not have a signal GSM–system will activate the arm mode. This signal in arm mode (no earlier than 2 seconds after the system is armed) will cause deactivation of all sensors – see sub–item 3.2.1. Input <b>IN1</b> should be connected to regular actuator (interface) of central lock of the car or to the channel of additional security system
IN4 (white–black)	Arm sign	Input <b>IN4</b> should be connected to output «arm sign» of additional security system. It allows both arming and disarming. Input condition does not depend on permission signals of input <b>IN8</b> , but it depends on prohibition signal of input <b>IN2</b>
IN3 (blue)	Disarm	If input <b>IN3</b> has a signal and input <b>IN1</b> does not have a signal GSM–system will deactivate the arm mode. Input <b>IN3</b> should be connected to regular actuator (interface) of central lock of the car or to the channel of additional security system
IN2 (green–red)	Arm prohibition	If input <b>IN2</b> has a signal system will ignore arm signals of <b>IN1</b> input (arm mode can be activated only through the phone). Input <b>IN2</b> , for example, can be connected to sensor of driver's presence in the car cabin
Blue (green) of 4–pin connector of additional sensor (only for iGSM–005)	Disarm prohibition	When signal (ground) appears in this input system ignores signal of arm of channel <b>IN1</b> , and signal of disarm of channel <b>IN3</b>
IN8 (blue–red)	Arm/disarm permission	If input <b>IN8</b> has a signal it is permitted through 2 seconds to arm and disarm system through inputs <b>IN1</b> and <b>IN3</b> . Input <b>IN8</b> should be connected, for example, to circuits of regular light indication of the car, signals of which confirm closing and opening of regular central lock
IN7 (yellow–black)	Disarm confirmation	If input <b>IN7</b> has a signal after GSM–system is disarmed, it deactivates all lockouts (if «Immobilizer» mode is activated – see item 3.4). Appearing of signal of this input during 30 seconds after disarming cancels notifying of the programmed users (see items 4.4, 6.1.4)

To adjust system universal input enter the following command in SMS text (see item 2.3):

**INx y z f m n**

where **x** = (1 – 8) – input number

**y** = (+/–) – input signal polarity

**z** = (1, 2) – input type (1 – input actuates when closing, 2 – when opening)

**f** = (0 – 12) – universal input function (0 – special function)

**m** = (1 – 100) – time to ignore input close on «ground» or +12V (1 = 0.1 sec; 2 – 0.2 sec...100 = 10 sec. On default – 0.1)

**n** = (10– 100) – time to ignore input open from «ground» or +12V (1 = 0.1 sec; 2 – 0.2 sec...100 = 10 sec. On default – 0.1)

 **Note**

Parameters *m, n* can miss. In this case system will setup default settings of these parameters.

After receipt of SMS with this command, GSM–system will send SMS report:

**INx y z,f,m,n**

Special functions list (f = 0) for system universal inputs:

**IN1** – arm

**IN2** – arm prohibition

**IN3** – disarm

**IN4** – arm sign

**IN5** – auto start control

**IN6** – trunk lock actuator

**IN7** – button conforming disarming

**IN8** – arm/disarm permission



The list of alarm functions (f = 1–12) for system universal inputs:

- 1** – door terminal switch
- 2** – driver's door terminal switch
- 3** – hood terminal switch
- 4** – trunk terminal switch
- 5** – hood/trunk terminal switch
- 6** – universal terminal switch
- 7** – siren of additional security system
- 8** – external sensor
- 9** – shock sensor
- 10** – motion sensor
- 11** – inclination sensor
- 12** – glass brake sensor

Depending on parameter value f (1–12) alarm notification text changes (SMS or voice) and also call group number to which this input will correspond will be changed. Input functions on default:

IN1 f=1	IN5 f=5
IN2 f=2	IN6 f=0
IN3 f=3	IN7 f=7
IN4 f=0	IN8 f=8

Type and polarity of inputs on default:

IN1 when closing “–”	IN5 when closing “–”
IN2 when closing “–”	IN6 when closing “+”
IN3 when closing “–”	IN7 when closing “–”
IN4 when closing “+”	IN8 when closing “–”

#### **Note**

*Universal system inputs settings for typical connection variants – see sub-items 7.4.4; 7.4.5; 7.4.6.*

### **6.2.3 Setting system outputs**

GSM–system has 6 outputs to control external devices or lockouts, two of which are power (average current 2A) and positive: OUT4; OUT6.

Outputs OUT1, OUT 2, OUT 3 and OUT5 are low–power (average current 0.3A) and negative. All outputs are protected from high current and short circuit.

At setting GSM–system outputs determine firstly what the GSM–system will control – if there is planned to use a siren and an additional pager in the system, if control of central lock and light indication of system is planned. It is also necessary to foresee amount of lockouts in system, if «Turbotimer» mode is necessary for the car (see sub–item 6.2.8), and control of additional auto start module. If there is foreseen to control system by any actuation devices of car using timer channels.

Depending on your configuration, specify the desired function for each output y = (1–11). To adjust system output enter the following command in SMS text (see item 2.3):

#### **OUTx y**

where **x** = (1 – 6) – system output number

**y** = (1 – 11) – output function

List of system output y functions:

- 1** – normal closed blocking
- 2** – universal timer channel № 1
- 3** – universal timer channel № 2
- 4** – light system indication (parking or turn lights)
- 5** – normal open blocking (see also sub–iyem 6.2.8)
- 6** – siren
- 7** – auto start activation (START)
- 8** – auto start deactivation (STOP)/«Rear lamp» in alarm mode

- 9** – turbotimer
- 10** – pager (GSM–signal control)
- 11** – START/STOP

After receipt of SMS with this command, GSM–system will send SMS report:

#### **OUTx y**

Default output settings:

- OUT1 y=1      OUT4 y=4
- OUT2 y=2      OUT5 y=1
- OUT3 y=3      OUT6 y=6

Polarity of outputs:

- OUT1, OUT2, OUT3, OUT5 «–»
- OUT4, OUT6 «+»

#### **Note**

System outputs settings for typical connection variants – see sub-items 7.4.4; 7.4.5; 7.4.6.

### **6.2.4 Setting system universal timer channels**

System has two independent universal timer channels: № 1 and № 2 which can be implemented on any system outputs.

To set universal timer channel enter the following command in SMS–text (see clause 2.3.):

#### **TIMERx My Pz Tw**

where **M, P, T** – latin letters

- x** = (1, 2) – universal timer channel number
- y** = (1 – 5) – event which causes timer channel activation
- z** = (0 – 255) – delay time in seconds between event y occurrence and current timer channel activation
- w** = (0 – 255) – channel operation time in seconds

#### **Note**

If SMS does not contain values of Pz and Tw system will specify zero pause between event y and channel activation moment, and also channel w operation time – 1 sec.

List of events y which can lead system to active timer channels:

- 1** – system arming
- 2** – system disarming
- 3** – ignition start
- 4** – ignition stop
- 5** – command from cell phone (see clause 5.4)

If you need to implement timer channel activation on several events SMS should contain several My Pz Tw groups for current channel.

After receipt SMS with this command GSM–system will send report:

#### **TIMERx My,Pz,Tw**

#### **ATTENTION!**

To activate timer channel on command from cell phone event 5 (command from cell phone – default setting) should be programmed for chosen channel.

### **6.2.5 Setting automatic rearming function**

If this function is activated then in 30 seconds after arm mode deactivation GSM–system will activate arm mode automatically if doors, hood, trunk have not been opened during this time. All this time LED indicator is often flashing with green light

To activate/deactivate function of automatic rearming enter the following command in SMS–text (see clause 2.3.):

#### **REARM x**

- where **x** = 0 – system automatic rearming function is off
- x** = 1 – system automatic rearming function is on

Function default setting – 0 (system automatic rearming is off).

After receipt SMS with this command GSM-system will send the following report with confirmation of activation/deactivation of system automatic rearming to number from which this SMS was sent:

**REARM OFF** or **REARM ON**

### Note

If this function is implemented regularly in car, then automatic rearming will be made regardless value  $x$  (only for model Convoy (GSM-005 CAN). If regular function is implemented within less than 30 seconds, then GSM-system automatic rearming will not be done (even when  $x=1$ ).

#### 6.2.6 Setting time of terminal switches scanning delay

Setting this function enables to implement system arming delay due to time when compartment lighting is on.

To specify time of terminal switches scanning delay (see clause 2.3) enter the following command:

**ARMTIMER x**

where  $x = [0 - 255]$  – time of terminal switches scanning delay in seconds.

Default setting – 15

After receipt SMS with this command GSM-system will send the following report:

**ARMTIMER x sec**

#### 6.2.7 Setting time of actual engine start check

Setting of this parameter enables to specify for system time interval after autostart activation and till system should check engine start. To set this time interval after entering PIN-code (see clause 2.3) enter the following command:

**STARTTIMER x**

where  $x = [1 - 1000]$  – delay time in seconds.

On default – 60

After receipt SMS with this command GSM-system will send the following report:

**STARTTIMER x sec**

### Note

Value  $x$  specified in command **STARTTIMER** should not exceed total time of all autostart attempts (plugs heating-up time, operation time of starter and pause between start attempts).

#### 6.2.8 Setting parameters of «Turbotimer» mode

If GSM-system is installed into car with turbo engine we recommend you to use «Turbotimer» mode and set its parameters. To set this mode parameters enter the following command in SMS-text (see clause 2.3):

**TURBOTIMER x y**

where  $x = [0 - 255]$  – time of ignition pick-up ( time of system operation in «Turbotimer» mode) in minutes.

$y = [0 - 255]$  – time of ignition start when lockout is active in seconds, to exclude possible mistakes of on-board computer. This parameter can be absent

Default settings  $x=0$  («Turbotimer» mode is of f),  $y=0$

After receipt SMS with this command GSM-system will send the following report:

**TURBOTIMER x min y sec**

### Note

If NO blocking is realized on any output (see sub-item 6.2.3) command **TURBOTIMER 02** ( $x=0, y=2$ ) allows avoiding on-board computer error while starting the engine in arming mode.

#### 6.2.9 Setting «Immobilizer» mode

To activate/deactivate «Immobilizer» mode enter the following command in SMS-text (see clause 2.3):

**AVFUN x**

where  $x = 0$  – deactivate passive lockout (deactivate «Immobilizer» mode)

$x = 1$  – activate passive lockout (activate «Immobilizer» mode)

Default setting – 0 («Immobilizer» mode is deactivated)

System will send the following SMS-report to number from which this SMS was sent:

**AVFUN OFF** or **AVFUN ON**

**6.2.10 Setting CAN-bus signals for system arming/disarming (only for model Convoy iGSM-005 CAN)**

Depending on car brand/model CAN-bus can have signals of CL closing/opening and CL status signal. It is necessary to choose the required signal type for proper system control. To set signal type enter the following command in SMS-text (see clause 2.3):

**CANARM x**

- where **x** = 0 – CAN-bus signals for system arming/disarming are not used
  - x** = 1 – signals of CL closing/opening using regular transmitter are used
  - x** = 2 – CL status signal (regular security system) is used
- Default setting – 1.

**⚠ ATTENTION!**

*When you have per f or med settings procedure, remove safety jumper t o exclude unpurposed hardware settings changes by the user.*

**6.3 Hardware-controlled settings using service button**

You can set system hardware settings using service button and main unit speaker, which sounds allow you to control button pressing, current status of changeable functions and their setting. Speaker can play the following signals

- «**SHORT BEEP**» (🔊) – pressing service button
- «**LONG BEEP**» (🔊) – entering of 0 digit
- «**SHORT TRILL**» (🎵) – function number digit or function value digit is entered
- «**LONG TRILL**» (🎵) – entering system hardware settings mode
- «**KU-KA-RE-KU**» (🎵) – new function value record is done and return to function number entering mode
- «**BOOM**» (🔊) – return to function number entering mode without new function value record
- «**BOO-BOO-BOO-BOOM**» (🎵) – entering of wrong PIN-code or wrong new function value
- «**STAIRS**» (🎵) – exiting system hardware settings mode

**6.3.1 Digits input using service button**

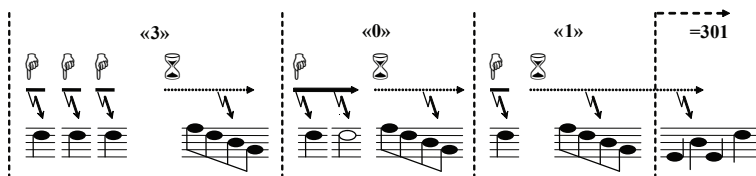
Entered figure can consist of one or several digits. Digit is entered with consecutive short (or long – 0 digit) pressings. Speaker short sound controls every pressing «**SHORT BEEP**». When long pressing despite sound «**SHORT BEEP**» second signal «**LONG BEEP**» sounds which means that digit 0 is entered (previous short pressings are canceled when this digit is pressed). Pause between buttons pressing should not exceed 1 second. Pause between 1 and 2 seconds means that current digit is already done (speaker will play sound «**SHORT TRILL**»). If pause after pressing is longer than 2 seconds, module will finish entering of whole figure (speaker will play sound depending on mode).

**Example:**

Function 301 number entering

The specified function number is entered in the following way:

1. Press service button shortly 3 times consecutively (digit 3).  
When pressing you will hear «**SHORT BEEP**» signal, in 1 second after button release you will hear «**SHORT TRILL**» signal.
2. Press and hold service button for more than 2 seconds (digit 0)  
When pressing you will hear «**SHORT BEEP**» signal, in 1 second after pressing you will hear «**LONG BEEP**» signal, in 1 second after button release you will hear «**SHORT TRILL**» signal.
3. Press service button once (digit 1)  
When pressing you will hear «**SHORT BEEP**» signal, in 1 second after button release you will hear «**SHORT TRILL**» signal.
4. In 4 seconds after button release you will hear signal «**KU-KA-RE-KU**».



If incorrect function number is entered signal «**BOOM**» will sound (function absent).

### 6.3.2 Setting mode

This mode allows built-in shock sensor adjusting, programming inputs and outputs of system for main variants of its control and returning to factory settings.

To change system settings start the ignition.

Enter command number indicated in the table below. It is possible only if safety jumper is installed.

Command number	Operation	Sound
0	Entering programming mode	LONG TRILL
4	Entering shock sensor warning zone setting mode by real shock	Long whistle with increased frequency (15 seconds)
5	Entering shock sensor alarm zone setting mode by real shock	Long whistle with increased frequency (15 seconds)
300	Return to default settings	KU-KA-RE-KU
301	Inputs/outputs setting when GSM-system controls regular CL (see sub-item 7.4.4.)	KU-KA-RE-KU
302	Inputs/outputs setting when GSM-system controls regular CL and system cooperation with start module Convoy ARS-300 (see sub-item 7.4.4.)	KU-KA-RE-KU
303	Inputs/outputs setting when GSM-system controls additional security system (see sub-item 7.4.5.)	KU-KA-RE-KU
304	Inputs/outputs setting when GSM-system controls additional security system and system cooperation with start module Convoy ARS-300 (see sub-item 7.4.5.)	KU-KA-RE-KU
305	Inputs/outputs setting when GSM-system controlling at its independent operation (control only from phone) (sub-item 7.4.6.)	KU-KA-RE-KU
306	Inputs/outputs setting when control GSM-system controlling at its independent operation (control only from phone) and system cooperation with start module Convoy ARS-300 (sub-item 7.4.6.)	KU-KA-RE-KU
other	Wrong command number is entered	B00-B00-B00-BOOM

To adjust shock sensor select command 4 or 5. Built-in microspeaker warning signals will follow after entering, during them leave your car without stopping ignition. During 8 seconds after warning signals stop you should hit your car with required force. Then you will hear confirmation signal from microspeaker and system will exit setting mode.

### 6.3.3 PIN-code input to enter programming mode

To change system hardware settings start the ignition.

Further you have two variants to change system settings:

1. Turn on ignition.

2. Using service button enter figure of 4 digits of whole system PIN-code.

If wrong PIN-code is entered system will play «**B00-B00-B00-BOOM**» signal. If PIN-code is correct system will play «**LONG TRILL**» signal and start programming mode.

### 6.3.4 Programming mode

This mode enables to change system hardware settings using service button. Setting is made by required value change (is necessary).

To enter programming mode:

1. When safety jumper is installed enter command "0", if jumper is removed – enter PIN-code. (see sub-item 6.3.2).

You will hear «**LONG TRILL**» sound.

2. Enter function number which value you need to know or change (see table below).

If you enter number which does not correspond to any function you will hear «**B00-B00-B00-BOOM**» sound and system will return to entering another function number. If you enter existing function number, speaker will inform you of current function status.

3. Enter new function value. If you don't need to change function value wait 4 seconds till you hear «**BOOM**» sound.

Function value change will be confirmed by «**KU-KA-RE-KU**» sound, saving of previous value – with «**BOOM**» sound. In both cases you can enter new function number.

To change another function value repeat clauses 2 and 3.

To exit system programming mode stop ignition or during 16 seconds do not fulfill any operations. System

will play «**STAIRS**» sound and exit programming mode.



**ATTENTION!**

When you have performed settings procedure, remove safety jumper to exclude unperposed hardware settings changes by the user.

Function number	Function name	Function value
4	Shock sensor warning zone setting	1 – 255; 0 – zone is deactivated
5	Shock sensor alarm zone setting	1 – 255; 0 – zone is deactivated
7	Inclination sensor setting	1 – 9; 0 – sensor is deactivated
8	Auto rearming function setting	0 – function is deactivated; 1 – function is activated
11	Input IN1 (green)	Function
12		What is considered as actuation
13		Polarity
14		Closing timer
15		Opening timer
21	Input IN2 (green-red)	Function
22		What is considered as actuation
23		Polarity
24		Closing timer
25		Opening timer
31	Input IN3 (blue)	Function
32		What is considered as actuation
33		Polarity
34		Closing timer
35		Opening timer
41	Input IN4 (white-black)	Function
42		What is considered as actuation
43		Polarity
44		Closing timer
45		Opening timer
51	Input IN5 (yellow-red)	Function
52		What is considered as actuation
53		Polarity
54		Closing timer
55		Opening timer

Function number	Function name		Function value
61	Input IN6 (white-red)	Function	0 – trunk lock actuator; 1 – door s; 2 – driver's door; 3 – hood; 4 – trunk; 5 – hood/trunk; 6 – universal; 7 – siren; 8 – external sensor; 9 – shock sensor; 10 – motion sensor; 11 – inclination sensor; 12 – glass brake sensor
62		What is considered as actuation	0 – closing; 1 – opening
63		Polarity	1 – negative; 0 – positive
64		Closing timer	1 – 255 (0 = 0,05sec, 1 = 0,1sec, 2 = 0,2sec...)
65		Opening timer	1 – 255 (0 = 0,05sec, 1 = 0,1sec, 2 = 0,2sec...)
71	Input IN7 (yellow-black)	Function	0 – disarming confirmation button; 1 – doors; 2 – driver's door; 3 – hood; 4 – trunk; 5 – hood/trunk; 6 – universal; 7 – siren; 8 – external sensor; 9 – shock sensor; 10 – motion sensor; 11 – inclination sensor; 12 – glass brake sensor
72		What is considered as actuation	0 – closing; 1 – opening
73		Polarity	1 – negative; 0 – positive
74		Closing timer	1 – 255 (0 = 0,05sec, 1 = 0,1sec, 2 = 0,2sec...)
75		Opening timer	1 – 255 (0 = 0,05sec, 1 = 0,1sec, 2 = 0,2sec...)
81	Input IN8 (blue-red)	Function	0 – arming/disarming permission; 1 – doors; 2 – driver's door; 3 – hood; 4 – trunk; 5 – hood/trunk; 6 – universal; 7 – siren; 8 – external sensor; 9 – shock sensor; 10 – motion sensor; 11 – inclination sensor; 12 – glass brake sensor
82		What is considered as actuation	0 – closing; 1 – opening
83		Polarity	1 – negative; 0 – positive
84		Closing timer	1 – 255 (0 = 0,05sec, 1 = 0,1sec, 2 = 0,2sec...)
85		Opening timer	1 – 255 (0 = 0,05sec, 1 = 0,1sec, 2 = 0,2sec...)
91	Cabin lighting delay timer setting (ARMTIMER)		0 – 255 (1 – 255 sec)
92	Successful start check timer setting (STARTTIMER)		1 – 100 (1 = 10sec; 2 = 20sec...) – time of system check of engine start
112	TIMER1 disarming operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
113	TIMER1 ignition start operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
114	TIMER1 ignition stop operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
115	TIMER1 cell phone command operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
116	Pause before TIMER1 arming activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
117	Pause before TIMER1 disarming activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
118	Pause before TIMER1 ignition start activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
119	Pause before TIMER1 ignition stop activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
110	Pause before TIMER1 cell phone command activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
121	TIMER2 arming operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
122	TIMER2 disarming operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
123	TIMER2 ignition start operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
124	TIMER2 ignition stop operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
125	TIMER2 cell phone command operation time		0 – 255 (1 = 1sec, 2 = 2sec...); 0 – event is off
126	Pause before TIMER2 arming activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)

Function number	Function name		Function value
127	Pause before TIMER2 disarming activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
128	Pause before TIMER2 ignition start activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
129	Pause before TIMER2 ignition stop activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
120	Pause before TIMER2 cell phone command activation		0 – 255 (0 = 0sec, 1 = 1sec, 2 = 2sec...)
131	Output OUT1 (black–white)	Function	1 – normally closed lockout; 2 – universal timer channel №1; 3 – universal timer channel №2; 4 – system LED indication (parking lights); 5 – normally opened lockout; 6 – siren; 7 – autostart activation (START); 8 – autostart deactivation (STOP); 9 – turbotimer; 10 – pager (GSM–network signal level control); 11 – START/STOP
132	Output OUT2 (green–black)	Function	1 – normally closed lockout; 2 – universal timer channel №1; 3 – universal timer channel №2; 4 – system LED indication (parking lights); 5 – normally opened lockout; 6 – siren; 7 – autostart activation (START); 8 – autostart deactivation (STOP); 9 – turbotimer; 10 – pager (GSM–network signal level control); 11 – START/STOP
133	Output OUT3 (blue–black)	Function	1 – normally closed lockout; 2 – universal timer channel №1; 3 – universal timer channel №2; 4 – system LED indication (parking lights); 5 – normally opened lockout; 6 – siren; 7 – autostart activation (START); 8 – autostart deactivation (STOP); 9 – turbotimer; 10 – pager (GSM–network signal level control); 11 – START/STOP
135	Output OUT5 (black–red)	Function	1 – normally closed lockout; 2 – universal timer channel №1; 3 – universal timer channel №2; 4 – system LED indication (parking lights); 5 – normally opened lockout; 6 – siren; 7 – autostart activation (START); 8 – autostart deactivation (STOP); 9 – turbotimer; 10 – pager (GSM–network signal level control); 11 – START/STOP
136	Output OUT6 (brown)	Function	1 – normally closed lockout; 2 – universal timer channel №1; 3 – universal timer channel №2; 4 – system LED indication (parking lights); 5 – normally opened lockout; 6 – siren; 7 – autostart activation (START); 8 – autostart deactivation (STOP); 9 – turbotimer; 10 – pager (GSM–network signal level control); 11 – START/STOP
151	System operation time in Turbotimer mode		0 – 255 min
152	Time ignition start when engine lockout is active		0 – 255 sec
160	Car CAN–bus used signals type for GSM–system arming/disarming		0 – signals are not used 1 – signals "open/close CL" are used 2 – CL status signal (regular security system) is used



## 7 System components installation and connection

### 7.1 General provisions

#### ATTENTION!

*Before starting works read carefully car and additional installed equipment using guide and find out whether it is allowed or not to disconnect main battery as this may lead to fault of onboard computer, encoded radio receiver or air bag, etc. If you are not allowed to disconnect main battery we recommend removing compartment light fuse (or lamp). This will allow avoiding battery discharge during system installation*

In case of unqualified installation or misuse the owner of the car is responsible for safety and electromagnetic compatibility.

The power supply wire is recommended to be connected as close to car battery as possible. Ground wire should have minimum length and reliable contact with car body. Try to make connective wires as short as possible. If you need to extend wires use wires of the same or bigger cross-section. Make all nondetachable connections reliable and with high isolation. Radius of wires bend should be not less than 5 mm. All wires unused when installing system are recommended to be shortened and safely isolated to exclude accidental contact with car body or another conductors.

You should also exclude possibility of ingress of fuels, lubricants, cleaning agents, foreign objects with diameter of less than 1 mm, dust and moisture inside system main unit.

Do not reduce quantity and location of provided fuses, and do not use another rates and types. If possible use regular terminal box and install fuses as close to battery as possible. All power circuits which use external relay and other actuating devices and which are not powered from GSM-system main unit should have their own fuses in their power supply circuits.

In a case when system harnesses cross metal partitions use insulating protective sleeves or pipelines. Avoid wires tension and pinching, fasten harnesses with cable ties along the whole length.

The use of generator with built-in noise-suppression elements increases system reliability

### 7.2 SIM-card preparation and its installation into main unit

**When installing SIM-card you must power GSM-system off.**

#### ATTENTION!

*SIM-card should be active (at least one call should be made)*

*SIM-card should not be blocked by mobile operator*

*The request of PIN-code on SIM-card when powering on should be deactivated*

*SIM-card should have available memory to receive several SMS*

Car GSM-system Convoy iGSM-005 and Convoy iGSM-005 CAN uses GSM-channel for control and information. The use of this channel is paid service and the payment depends on current mobile operator tariffs. That's why it is important to choose the right operator and its tariff plan. We recommend you to choose mobile operator which provides the highest quality of connection in your region. You are preferable to use the same operator.

If GSM-system is supposed to use monitoring (tracking) mode regularly then when choosing mobile operator and its tariff plan you should take into account quality and cost of GPRS-connection.

The users whom system will call or send SMS should deactivate AMI mode ("number is hidden") in their cell phones.

To install SIM-card of the chosen mobile operator into system press with thin object on SIM-card removal button (see clause 7.4.1), take out holder and put SIM-card in it. Put holder with SIM-card in its place. The holder should enter main unit without any efforts.

If you use old SIM-card, then before installation delete all records in its phone book.

It is also important to check and Top Up (if necessary) SIM-card account balance. Check SIM-card contacts, if necessary clean them with soft fabric moistened in alcohol-containing, degreasing but not aggressive liquid and then dry them.

Besides before installation check GSM-network quality (GSM-signal level) in the place where system main unit and antenna are supposed to be put.

### 7.3 System components installation and mounting

#### ATTENTION!

*We highly recommend you to address to qualified specialists to install the system components.*

To ensure correct operation of GSM-system built-in inclination/ motion sensor and to exclude its false actuations it is recommended to install the main unit on the hard metal elements of the car body construction. Do not install the unit on air ducts and in places of their direct airflow.

### **Note**

*For correct operation of the built-in inclination/motion sensor control unit orientation is of no importance.*

Wires laid to main unit should be put in such a way as not to show where the unit is placed, to be like regular wires and be not damaged with unsteady elements of car cabin while exploitation.

Before installation determine mounting places of system components: siren, antenna, control unit and additional sensor (if such will be used). Divide 20-pin connector harness to parts which will be installed to engine section, doors and trunk.

#### **7.3.1 Main unit**

To install main unit choose a hidden place in car cabin if possible far from regular electronic components. System main unit should be installed also far from heating and unsteady elements of car body and car cabin.

During system operation it can be necessary to have access to SIM-card (for example in case of mobile operator change). That's why place main unit in such place where you can get it without problems without disassembling the entire cabin.

Fix main unit in chosen place using self-screws, double-sided adhesive tape (taking into account heating elements in car compartment) or cable ties. Exclude condensate drops ingress into main unit body via wires.

#### **7.3.2 GSM-antenna**

When mounting antenna do it with the highest accuracy as quality and true range of connection with GSM-station depend on correctness, optimality of its location and anti-car-jack.

We recommend to place and connect antenna to main unit first of all. Place and fix GSM-antenna with adhesive tape as far as possible from metal surface of car body, car wiring, radio-recorder and its signal circuits. Do not fix antenna to metal. Also if possible do not mount antenna to windscreen or any other car glass so as not to show that car has installed GSM-system. To detect optimal place for antenna installing you can use mobile phone. If base stations with 2 frequencies (900 and 1800 MHz) are used in your region it is preferably that stations of both frequencies are registered in the purposed place of antenna location.

Optimum alternative is to place GSM-antenna to plastic element inside car cabin with minimum 5 cm distance from car body or to plastic air duct of car climate system. Place antenna cable separately from microphone cable. Do not lengthen the cable and do not wind the cable.

Reliably connect antenna VHF-connector to correspondent main unit connector (see sub-item 7.4.1).

#### **7.3.3 Microphone**

Place microphone in such a way so that it would be turned to driver but would not stand out against the whole car cabin. To avoid disturbance it is not recommended to place it close to GSM-antenna.

Connect microphone connector to correspondent main unit connector (see sub-item 7.4.1).

When microphone is installed check quality of listening function of car cabin via GSM-network. If necessary adjust microphone sensitivity level (see sub-item 6.1.8).

#### **7.3.4 Alarm button «Call»**

If service button is intended to be used as alarm button "Call" place it secretly (but it should be accessible from driver place) to use it unnoticed in a case of danger from passengers or in available place (for example, on dashboard) – to use it in emergency conditions.

Connect one of button wires to red-black wire of 20-pin main unit connector, and the second one to black wire of the same connector or to car body (see sub-items 7.4.4; 7.4.5; 7.4.6).

#### **7.3.5 LED**

Install LED indicator on dashboard or on molding of windscreen pillar drilling the hole with diameter of 8 mm. LED wires can be brought out to appropriate gab between compartment elements. LED indicator flashing should be well seen outside the car and from driver's sit, at emergence system disarming and "Immobilizer" mode deactivation.

Connect LED indicator connector to correspondent main unit connector (see sub-item 7.4.1).

#### **7.3.6 Hood/trunk terminal switch**

Terminal switch should be fixed on metal surface connected with car «ground». If possible exclude moisture ingress on it as it will have impact on switch service life and its early break-down.

#### **7.3.7 Siren**

Fix siren with emitter down under hood as far as possible from heat and moisture sources. Installation place should be inaccessible from car bottom and front wheels arches. The most appropriate place is on cabin partition or wings protective arches.

Put siren control wire under hood far away from open parts (if possible in regular car wiring). In a case when wire is transferred from under-hood space into car compartment use rubber sleeves of regular wiring. Connect siren control wire to system main unit brown wire (OUT6) (see sub-items 7.4.4; 7.4.5, 7.4.6).

### **7.3.8 CAN-bus adapter Convoy UniCAN-420 (only for model Convoy iGSM-005 CAN)**

Fix adapter unit using double-sided adhesive tape or cable ties on GSM-system control unit or fix it using PVC tape (ties) to wire harness.

Connect 4-pin adapter connector to 4-pin connector of GSM-system main unit (see sub-item 7.4.1).

More detailed information on CAN-bus adapter and system connection using this bus see in sub-item 7.4.3

### **7.3.9 Speaker Convoy GSM-001 (option)**

Place system speaker inside the cabin in such a place where its sufficient audibility can be provided. Fix speaker using screws, ties or two-sided adhesive tape on cabin elements. Once installation is done speaker should not disturb driver or passengers.

Connect speaker connector to correspondent system main unit connector (see clause 7.4.1.)

Check speaker phone quality. If necessary you can adjust speaker volume level (see clause 6.1.9).

### **7.3.10 External shock sensor (option)**

Place shock sensor inside car cabin in a place where its reaction on car body shocks will be approximately identical. It is recommended to fix sensor on metal surface, for example, on tunnel near engine section partition. It is even better if it will be metal amplifier element – for example frame rail under front seats.

Fix sensor using screws, double-sided adhesive tape or cable ties. Placing sensor on plastic elements of cabin can cause false system actuations. You should remember that after arming cabin elements heat or cool. That leads to some deformations, which can also cause false sensor actuation.

When placing sensor provide free access to its adjustment potentiometers. It does not matter how sensor is oriented.

Use any universal system input programmed as alarm one for sensor alarm zone (see sub-item 6.2.2).

Use white wire of additional sensor 4-pin connector for sensor warning zone (see sub-item 7.4.1, 7.4.2 – only for Convoy iGSM-005).

### **7.3.11 Reserve battery Convoy GSM-001 (option)**

As reserve battery you can use, for example, maintenance-free lead-acid battery Convoy GSM-001 (12 V, 0.8–1.2 A/h) or similar. To extend reserve battery service life do not place it upside-down or close to heat sources.

Connect positive reserve battery contact using red wire with terminal (from system set) to red (without fuse) wire of system main unit 20-pin connector and negative battery contact – using black wire with terminal (from system set) to car body or black wire of system main unit 20-pin connector.

### **7.3.12 GPS-module Convoy GPSM-003 (option)**

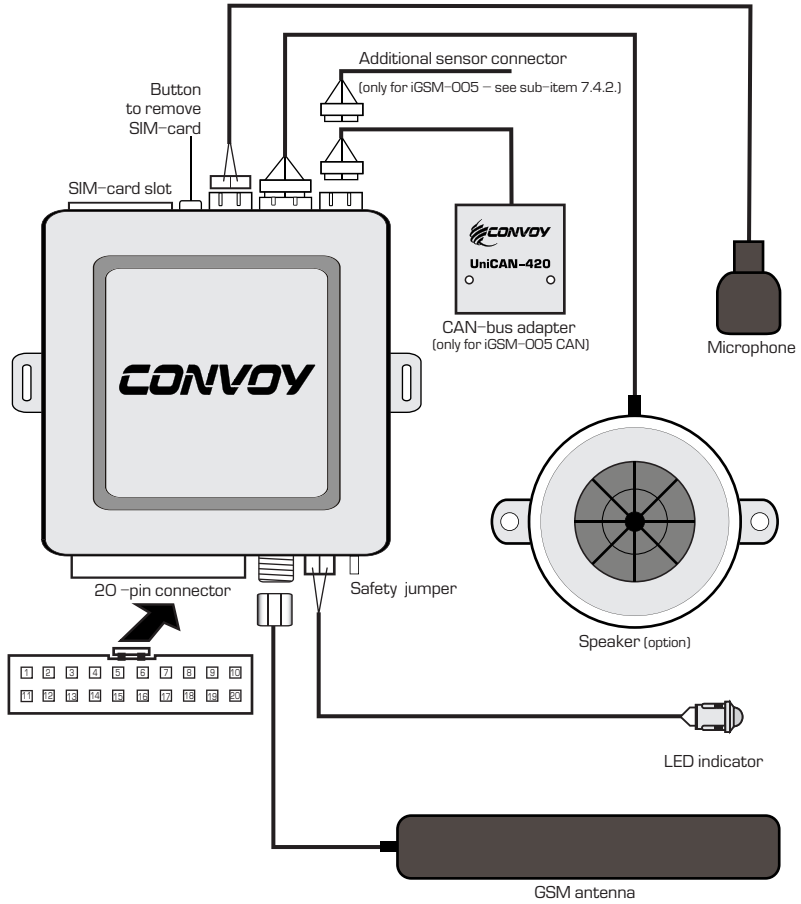
Place module if possible horizontally with logo on the body upwards close to car glass without covering it with metal elements of car body or car cabin. It is allowed to place module under plastic elements as close to car glass as possible. Take into account that any shading elements including screen heating weaken GPS-signal, decrease navigation satellites quantity and as a result increase time and accuracy of GSM-system positioning.

Connect GPS-module power supply in any comfortable place. Red wire +12 V, black wire – ground.

Connect green (blue) wire of GPS-module to grey wire of GSM-system control unit 20-pin connector (see clauses 7.4.4, 7.4.5, 7.4.6).

## 7.4 System connection

### 7.4.1 General system connection diagram



### 7.4.2 System wires purpose

#### System main unit 20-pin connector

**Red wire** (with fuse 10A) – power +12 V of system. If possible connect this wire to the «plus» terminal of the car battery (to current sensor of on-board vehicle network). This will provide a guaranteed switching of the car into power save mode and as a result little current consumption by on-board computer in arm mode.

**Red wire** (without fuse) – power +12 V from reserve battery (option). If you use the reserve battery, connect this wire to its «plus» terminal (see sub-item 7.3.11.).

**Black wire** – system “ground”. Provide a reliable contact of this wire to car body. If possible, connect it to «negative» terminal of car battery.

**Yellow wire** – input «Ignition». Connect this wire to car regular wire, which has voltage 12 V when turning key into the last position in ignition lock before position “Start”. The voltage on this wire should not disappear when starting engine.



#### ATTENTION!

Voltage on system yellow wire should not appear if working together with engine autostart module (See start module installation and using manual!)

**Grey wire** – system digital bus. It is used for system operation with GPS-module Convoy GPSM-003. Connect this wire to the green (blue) wire of GPS-module.

**Red-black wire** – service button negative input. Connect this wire to button red-black wire (see sub-items 7.4.4, 7.4.5, 7.4.6).

**Green wire** – universal input IN1. Green-red wire – universal input IN2. Blue wire – universal input IN3.

**White-black wire** – universal input IN4. Yellow-red wire – universal input IN5. White-red wire – universal input IN6. Yellow-black wire – universal input IN7. Blue-red wire – universal input IN8.

Connect wires of universal inputs according to the settings (see sub-item 6.2.2). Recommended system connection diagrams (see sub-items 7.4.4, 7.4.5, 7.4.6).

**Black-white wire** – negative (300 mA) output OUT1. Green-black wire – negative (300 mA) output OUT2. Blue-black wire – negative (300 mA) output OUT3.

**White wire** – positive (2A) output OUT4. (In some cases when connecting this wire it is necessary to use additional relay).

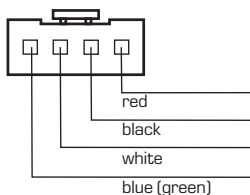
**Black-red wire** – negative (300 mA) output OUT5.

**Brown wire** – positive (2 A) output OUT6.

Connect wires of system outputs according to the settings (see sub-item 6.2.3). Recommended system connection diagrams (see sub-items 7.4.4, 7.4.5 and 7.4.6).

#### 4-pin connector of system main unit additional sensor

(only for Convoy iGSM-005)



**Red wire** – power +12V of external sensor.

**Black wire** – “ground” of external sensor.

**White wire** – external sensor warning zone input.

**Blue (green) wire** – input “-” of disarming ban (for 2 seconds) – see clause 6.2.2.

**7.4.3 Connection and setting CAN-bus adapter Convoy UniCAN-420  
(only for model Convoy iGSM-005 CAN)**

CAN-bus adapter Convoy UniCAN-420 is designed for connection of information-security GSM-systems Convoy iGSM-005 CAN via 2-wire serial bus UART to car CAN-bus.

**Adapter functional capabilities**

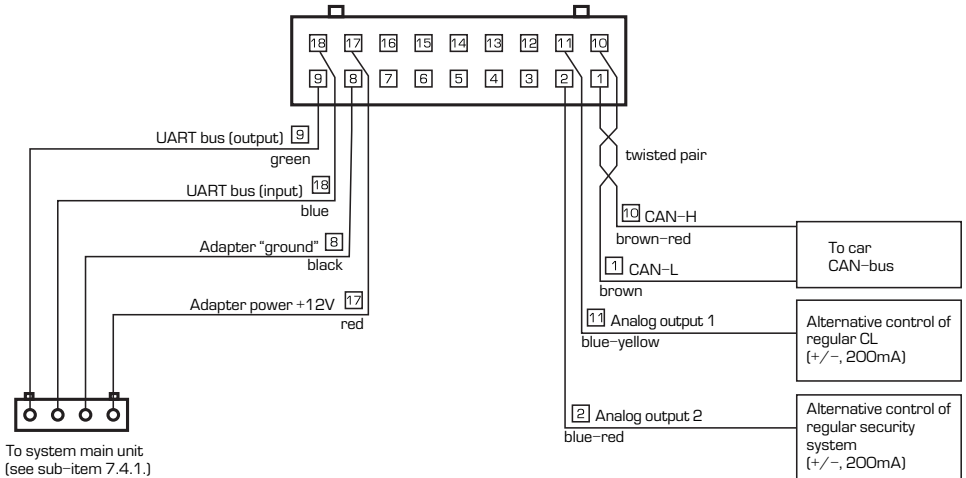
GSM-system commands, performed by adapter UniCAN-420\*:

- Regular central lock closing. This action is similar to closing of CL using a button in car cabin
- Regular central lock opening. This action is similar to opening of CL using a button car cabin
- Car regular central lock closing with regular security system activation
- Car regular central lock closing without regular security system activation
- Car regular central lock closing with regular security system activation and with activation of «Comfort» function
- Car regular central lock closing without regular security system activation and with activation of «Comfort» function
- «Comfort» function activation (sunroof closing)
- «Comfort» function stop (sunroof closing stop)
- Car regular central lock opening with regular security system deactivation
- Only driver's door opening with regular security system deactivation
- Trunk opening
- Pulsing to turn lights lamps
- Setting of car group and subgroup
- Reset of CAN-bus adapter to default settings

\* This list can be limited depending on peculiarities of specific car model.

Information about connection of adapter to specific car model, the list of all car brands and models which the adapter operates with, and information about peculiarities of its operation can be obtained by installing software application «Integrator» from the site [www.bat.com.ua](http://www.bat.com.ua) (Application archive is in section "Accessories to car security systems" / "Sensors and modules" / "CANTEC-F2" / "Integrator").

**Adapter 18-pin connector**



Adapter analog output 1 is used to control regular central lock on cars where CL can't be controlled by CAN-bus.

Adapter analog output 2 is used to control regular security system on cars where regular security system can't be controlled by CAN-bus.

Pins 3-7 and 12-16 are not used.

#### **Note**

*Outputs polarity is set automatically when matching adapter and the car (see clause "Matching of adapter and the car").*

#### **Setting and programming of adapter**

To set adapter use «Programming button» (Button) and light emitting diode (LED) located aflush in the adapter case (Figure 1).

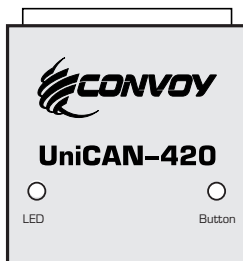


Figure 1

#### **Matching of adapter and the car**

#### **ATTENTION!**

*If adapter was previously installed on another car (group and subgroup were set) then you should reset status of programmable functions to default settings before matching.*

#### **Reset to default settings**

Adapter provides programmable settings' reset procedure during which set numbers of groups and subgroups are deleted from its non-volatile memory, and the status of all other programmable functions are reset to default settings (by default).

To reset to default settings fulfill the following procedure:

1. Power off adapter (disconnect adapter 4-pin connector from GSM-system control unit – see clause 7.4.1) and disconnect adapter from CAN-bus (brown and brown-red wires).
2. Press and hold «Programming button».
3. Power on adapter (connect adapter 4-pin connector to GSM-system control unit). CAN-bus should be disconnected. Adapter LED will start giving light signals. Release «Programming button» while LED is flashing.
4. During LED flashing power off adapter and connect CAN-bus.

All cars supported by adapter are divided into groups and subgroups. Each car brand/model corresponds to particular number of group and subgroup. Matching procedure of adapter and the car CAN-bus lies in setting of group and subgroup.

Once twisted pair (brown and brown-red wires) is connected to car CAN-bus, and adapter 4-pin connector is connected to GSM-system (see sub-item 7.4.1.) as well as after a series of simple operations (for most cars they are: ignition start/stop and car central lock closing/opening using regular transmitter) required group and subgroup will be set automatically.

You need to control the proper setting of group and subgroup according to LED signals: amount of signals (group number) – pause; number of signals (subgroup number) – pause.

### **Programming of adapter functions**

To program adapter functions fulfill the following operations:

1. Start ignition.
2. Not later than 10 seconds after ignition start (while LED are flashing) press and release "Programming button" 10 times. LED will flash 3 times.
3. Select the required function number in the programming menu (see Table 1) pressing and releasing «Programming button» the amount of times corresponding to its number. Adapter will inform of function number with series of light signals.
4. Press and hold brake pedal. When brake pedal is pressed time countdown till exiting programming mode is not conducted. To change function state press and release «Programming button» the amount of times according to Table 1. Adapter will inform of function state with series of LED flashed (see Table 1).
5. To exit programming mode stop ignition or wait 60 seconds after the last operation if brake pedal is not pressed. All changes will be saved in adapter non-volatile memory.



Table 1

№	Function	Adapter LED signals					
		Does not flash	Flash constantly	1 flash	2 flashes	3 flashes	4 flashes
1	Car brand/model	See clause "matching of adapter with the car"					
2	Regular security system control	OFF <sup>1</sup>	ON <sup>2</sup>	-	-	-	-
3	Successive doors opening	OFF	ON	-	-	-	-
4	Blue-yellow wire function (CL alternative control method)	OFF	-	Pulsed (-)	Pulsed (+)	-	-
5	Blue-red wire function (regular light alarm system alternative control method)	OFF	-	Pulsed <sup>3</sup> (-)	Status <sup>4</sup> (-)	Pulsed <sup>3</sup> (+)	Status <sup>4</sup> (+)

– function default settings

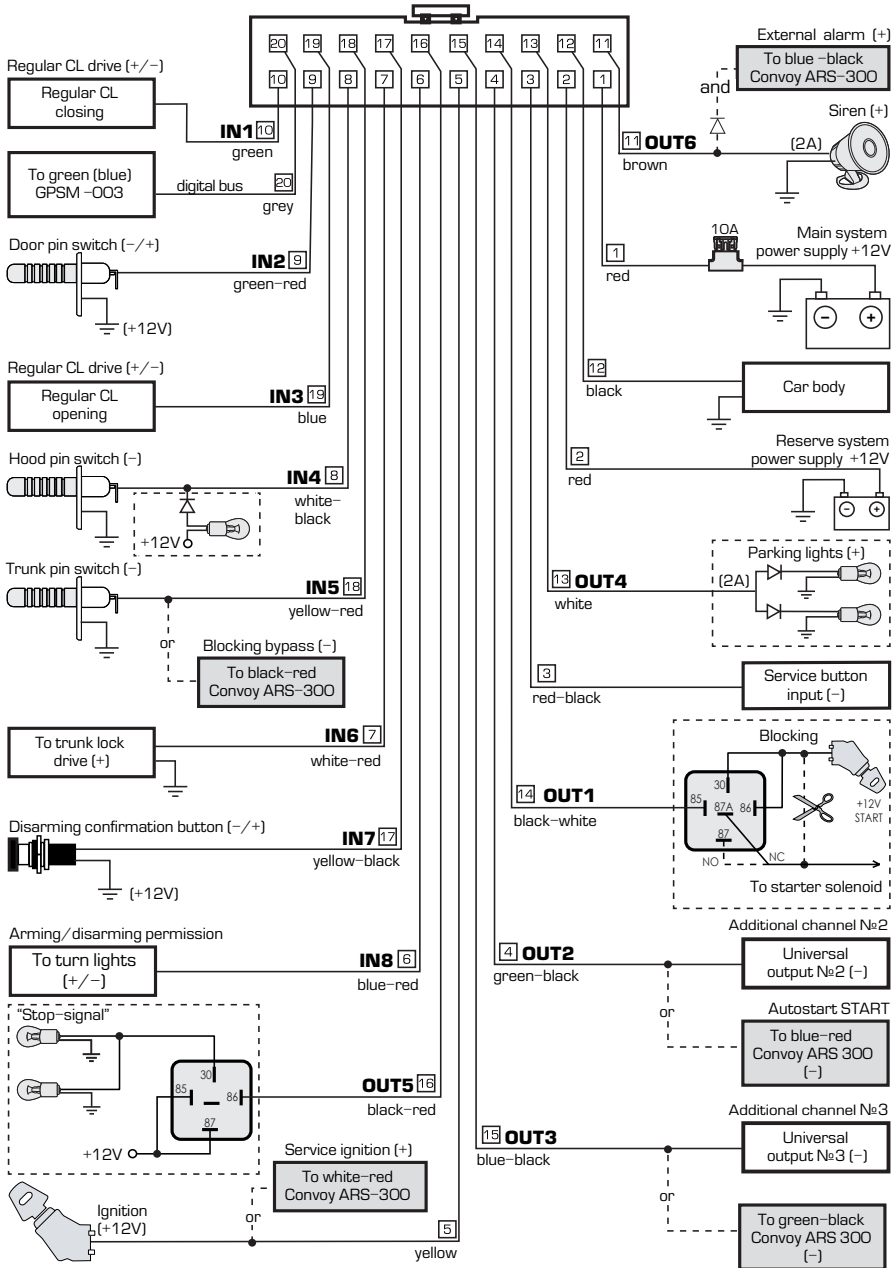
- <sup>1</sup> – Adapter closes/opens car CL using those commands which do not lead to regular security system activation/deactivation (CL closing/opening using button in car compartment).
- <sup>2</sup> – Adapter closes/opens car CL using those commands which lead to regular security system activation (system arming)/deactivation (CL closing/opening using regular transmitter, door/trunk lock cylinder).
- <sup>3</sup> – Adapter gives on blue-red wire double impulses of selected polarity which correspond to start/finishing of turn lights flashes (1 flash when arming, 2 flashes when disarming).
- <sup>4</sup> – Adapter gives on blue-red wire 1 impulse of selected polarity when arming (1 flash of turn lights) and 2 impulses when disarming (2 flashes of turn lights).



**ATTENTION!**

*Due to peculiarities of software and electronics set of cars imported into Ukrainian market operation and adjustment of adapter Convoy UniCAN-420 can differ from described above.*

7.4.4 Connection diagram of factory central lock control (main unit 18-pin connector)



**Note**

GSM-system wires connections when operating with remote engine start module Convoy ARS-300 are also shown on the diagram.

**Universal system inputs and outputs settings when system is controlled by regular central lock**

System inputs/ outputs	SMS-text for settings	Input/output signal	Notes
Input IN1 (green)	IN1 +1 0	«+» signal of central lock drive closing	Choose required signal type
	IN1 -1 0	«-» signal of central lock drive closing	
Input IN2 (green-red)	IN2 +1 1	«+» door pin switch normally opened when armed	Choose required pin switch type
	IN2 -1 1	«-» door pin switch normally opened when armed	
Input IN3 (blue)	IN3 +1 0	«+» signal of regular central lock drive opening	Choose required signal type
	IN3 -1 0	«-» signal of regular central lock drive opening	
Input IN4 (white-black)	IN4 -1 3	«-» hood pin switch normally opened when armed	
Input IN5 (yellow-red)	IN5 -1 4	«-» trunk pin switch normally opened when armed	Choose required pin switch type
	IN5 -2 4	«-» trunk pin switch normally closed when armed	
Input IN6 (white-red)	IN6 +1 0	«+» signal of trunk drive opening	
Input IN7 (yellow-black)	IN7 -1 0	«-» system disarming confirmation button	
Input IN8 (blue-red)	IN8 +1 0	«+» regular light indication control signal (turn lights)	Choose required signal type
	IN8 -1 0	«-» regular light indication control signal (turn lights)	
Output OUT1 (black-white)	OUT1 1	«-» normally closed (NC) blocking	Choose required blocking type
	OUT1 5	«-» normally opened (NO) blocking	
Output OUT4 (white)	OUT4 4	«+» output to light indication (parking lights)	Use additional relay for connection to turn lights
Output OUT5 (black-red)	OUT5 8	«-» "Stop-signal" control output	
Output OUT6 (brown)	OUT6 6	«+» siren control signal	2A

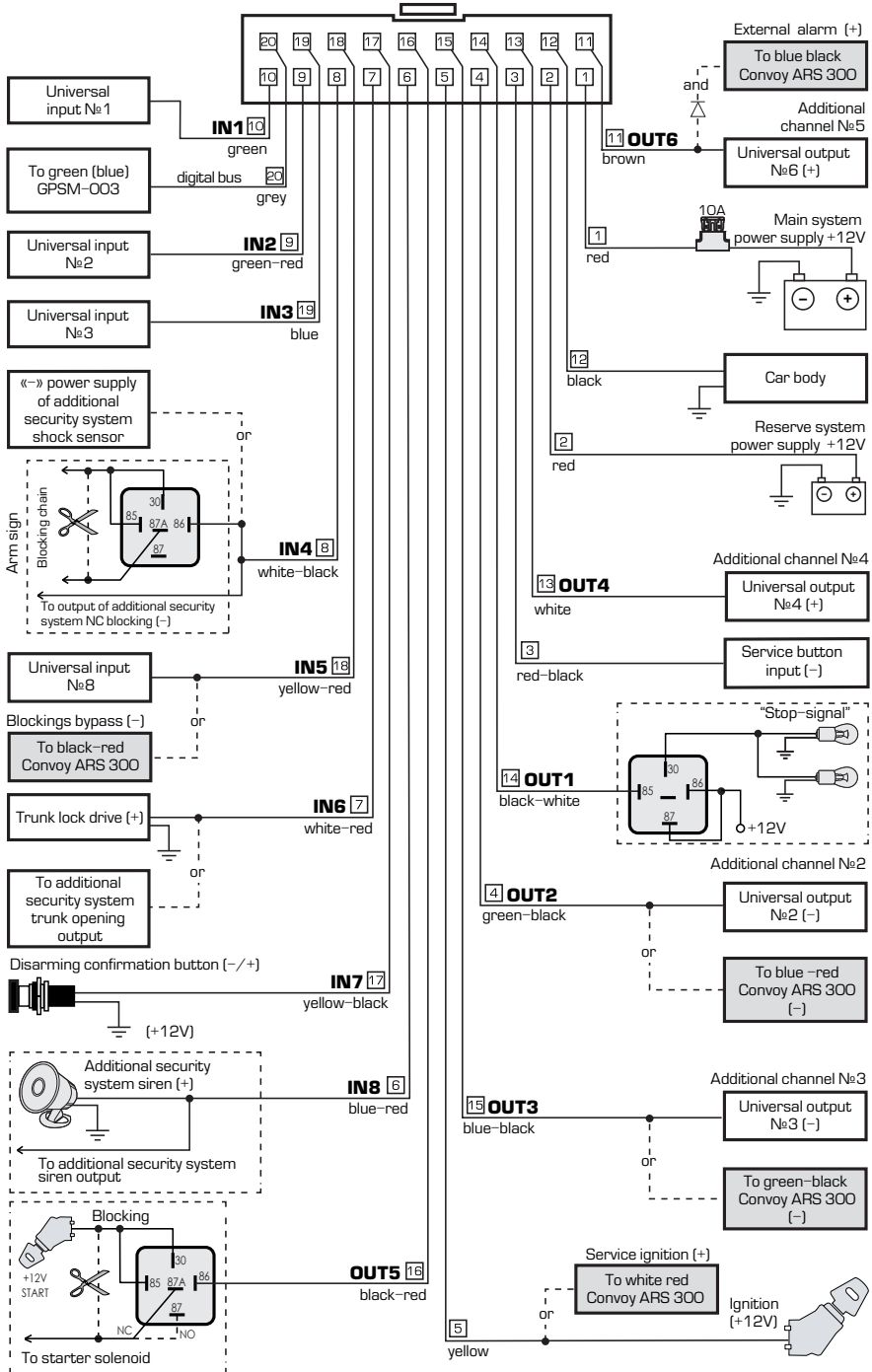
**Universal inputs and outputs settings when system operates with remote engine start module Convoy ARS-300 and is controlled by regular CL**  
(changes and additions to previous settings table)

System inputs/ outputs	SMS-text for settings	Input/output signal	Notes
Input IN4 (white-black)	IN4 -1 5	«-» hood/trunk pin switch normally opened when armed	
Input IN5 (yellow-red)	IN5 -1 0	«-» autostart control signal	
Output OUT2 (green-black)	OUT2 7	«-» autostart activation signal (START)	
Output OUT3 (blue-black)	OUT3 8	«-» autostart deactivation signal (STOP)	

– GSM-system inputs/outputs settings determined by function 301 (see sub-item 6.3.3.)

Settings determined by function 302 take into account system cooperation with remote start module Convoy ARS-300 (see sub-item 6.3.3.).

7.4.5 Connection diagram of additional alarm system control (main unit 18-pin connector)



**Note**

GSM-system wires connections when operating with remote engine start module Convoy ARS-300 are also shown on the diagram.

**Universal system inputs and outputs settings when system controlling by additional security system**

System inputs/ outputs	SMS-text for settings	Input/output signal	Notes
Input IN4 (white-black)	IN4 -1 0	«-» additional security system signal at its arming	NC blocking or «-» shock sensor power supply
	IN4 +1 0	«+» siren control signal from additional security system	«+» shock sensor power supply
Input IN6 (white-red)	IN6 +1 0	«+» trunk drive opening signal	
Input IN7 (yellow-black)	IN7 +1 0	«+» system disarming confirmation button	Choose required button type
	IN7 -1 0	«-» system disarming confirmation button	
Input IN8 (blue-red)	IN8 + 1 7, 15 1	«+» additional security system signal	
Output OUT1 (black-white)	OUT1 8	«-» "Stop-signal" control output	
Output OUT5 (black-red)	OUT5 1	«-» normal closed (NC) blocking	Choose required blocking type
	OUT5 5	«-» normal opened (NO) blocking	

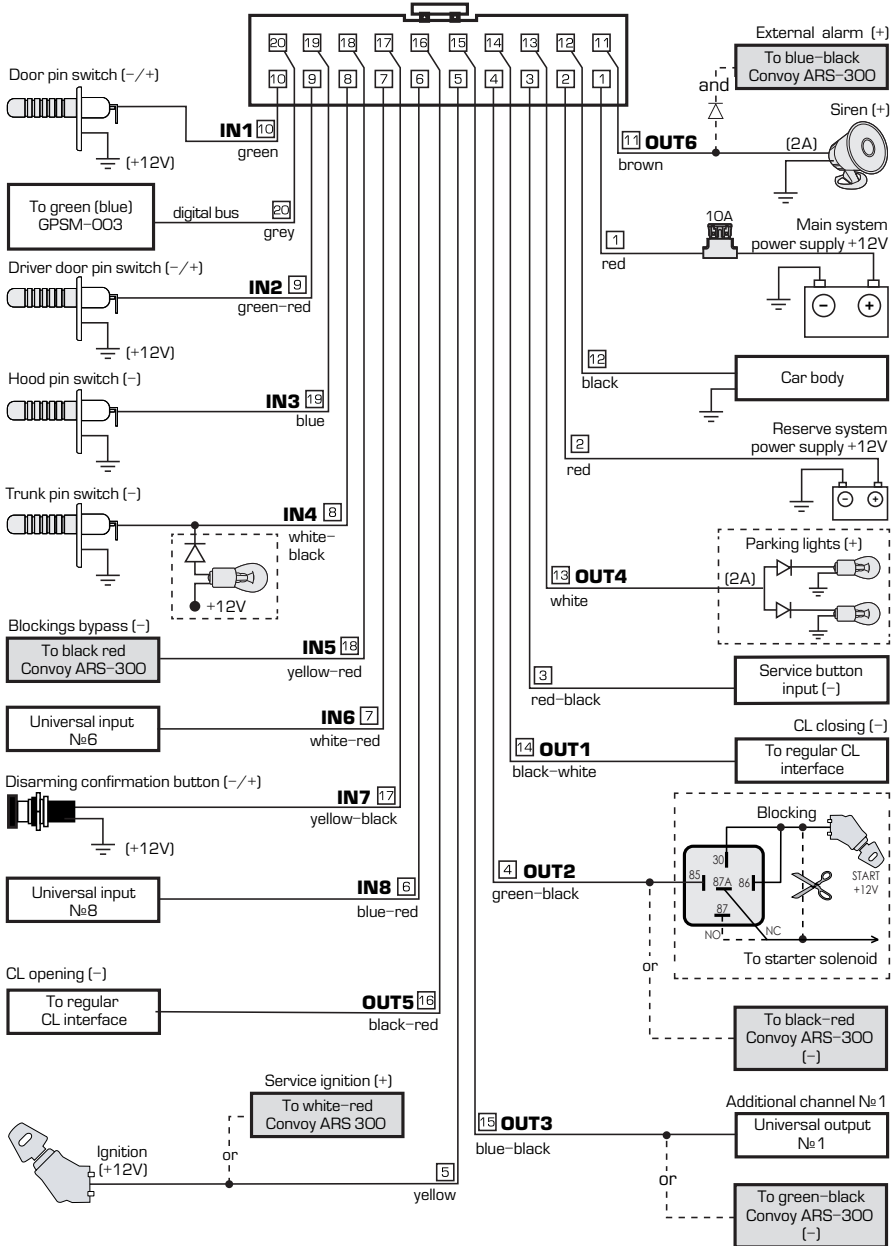
**Universal inputs and outputs settings when system operates with remote engine start module Convoy ARS-300 and controlling additional security system**  
(changes and additions to previous settings table)

System inputs/ outputs	SMS-text for settings	Input/output signal	Notes
Input IN5 (yellow-red)	IN5 - 1 0	«-» autostart control signal	
Output OUT2 (green-black)	OUT2 7	«-» autostart activation signal (START)	
Output OUT3 (blue-black)	OUT3 8	«-» autostart deactivation signal (STOP)	
Output OUT6 (brown)	OUT6 6	«+» output for external alarm of remote engine start module	

— GSM-system inputs/outputs settings determined by function 303 (see sub-item 6.3.3).

Settings determined by function 304 take into account system cooperation with remote start module Convoy ARS-300 (see sub-item 6.3.3).

**7.4.6 Connection diagram of stand-alone GSM-system operation (control only using cell phone)  
(main unit 18-pin connector)**



**Note**

GSM-system wires connections when operating with remote engine start module Convoy ARS-300 are also shown on the diagram.

**Universal inputs and outputs settings when system operates independently  
(control only using cell phone)**

System inputs/ outputs	SMS-text for settings	Input/output signal	Notes
Input IN1 (green)	IN1 +1 1	«+» door pin switch normally opened when armed	Choose required signal type
	IN1 -1 1	«-» door pin switch normally opened when armed	
Input IN2 (green-red)	IN2 +1 2	«-» driver door pin switch normally opened when armed	Choose required pin switch type
	IN2 -1 2	«-» driver door pin switch normally opened when armed	
Input IN3 (blue)	IN3 -1 3	«-» hood pin switch normally opened when armed	
Input IN4 (white-black)	IN4 -1 4	«-» trunk pin switch normally opened when armed	Choose required pin switch type
	IN4 -2 4	«-» trunk pin switch normally closed when armed	
Input IN7 (yellow-black)	IN7 +1 0	«+» system disarming confirmation button	Choose required button type
	IN7 -1 0	«-» system disarming confirmation button	Choose required button type
Output OUT1 (black-white)	OUT1 2	«-» central lock closing signal	Adjust: TIMER1 M1 T1 – see clause 6.2.4
Output OUT2 (green-black)	OUT2 1	«-» normal closed (NC) blocking	Choose required blocking type
	OUT2 5	«-» normal opened (NO) blocking	
Output OUT4 (white)	OUT4 4	«+» output to light indication (parking lights)	Use additional relay for connection to turn lights
Output OUT5 (black-red)	OUT5 3	«-» central lock opening signal	Adjust: TIME R 2 M2 T1 M5 T1 – see clause 6.2.4
Output OUT6 (brown)	OUT6 6	«+» siren control signal	2A

**Universal inputs and outputs settings when system operates with remote engine start module  
Convoy ARS-300 and is controlled using cell phone**  
(changes and additions to previous settings table)

System inputs/ outputs	SMS-text for settings	Input/output signal	Notes
Input IN5 (yellow-red)	IN5 -1 0	«-» autostart control signal	
Output OUT2 (green-brown)	OUT2 7	«-» autostart activation signal (START)	
Output OUT3 (blue-black)	OUT3 8	«-» autostart deactivation signal (STOP)	

– GSM-system inputs/outputs settings determined by function 305 (see sub-item 6.3.3.).

Settings determined by function 306 take into account system cooperation with remote start module Convoy ARS-300 (see sub-item 6.3.3.).

## 8 Applications

### 8.1 Software application «SMS-generator 005» to setup system

This application is designed for programming and setting of system Convoy iGSM-005 and Convoy iGSM-005 CAN by means of service SMS.

Application interface allows to set both installation and user's functions easily and intuitively.

If you suppose to use this application regularly, we recommend you to install it on your PC by launching file

#### Convoy 005\_eng\_instal.exe.

Once standard installation procedure is over you'll be able to launch «SMS-generator Convoy 005» using icon of your desktop (or from any folder specified during installation).

If you plan to use this application only now (for example, you use foreign PC) launch file **Convoy 005\_eng\_mob.exe** from folder «**SMS-generator 005 (eng.mob.)**».

#### ATTENTION!

*In order to provide proper application functioning folder «Config» and file Convoy005\_eng\_mob.exe should be located at the same computer level (in one folder).*

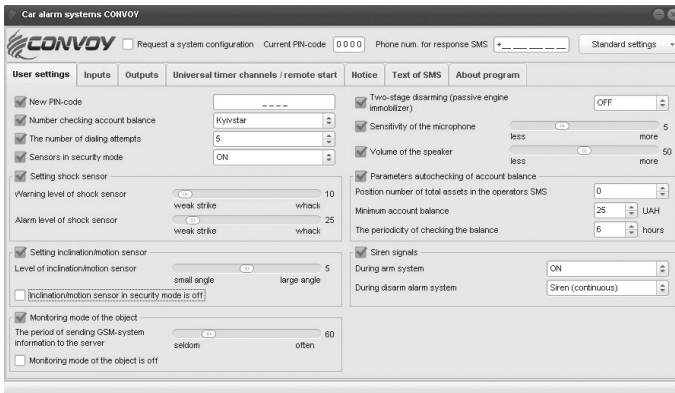
#### Application functioning description

After startup screen interface upper part («header») with seven tabs will be opened.

In «header» user can change phone number for system reply, its PIN-code and also choose typical settings and request for current system configurations (current parameters, settings and set functions).

Tabs:

1. **User settings.** This tab settings allow to set system account verification procedure, turn on/off immobilizer mode and set siren signals, set quantity of calls to one user when arming/disarming and in alarm mode, change PIN-code for access to system and also adjust its built-in shock/ inclination/motion sensors, microphone and speaker. You can also turn on/off and adjust system monitoring (tracking) mode.



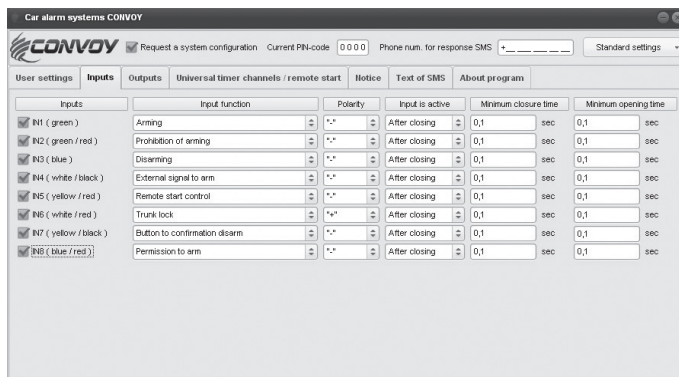
The screenshot shows the 'Car alarm systems CONVOY' application window. At the top, there is a header with the 'CONVOY' logo, a checkbox for 'Request a system configuration', 'Current PIN-code' (0000), 'Phone num. for response SMS' (with a dropdown), and 'Standard settings' (with a dropdown). Below the header are several tabs: 'User settings' (selected), 'Inputs', 'Outputs', 'Universal timer channels / remote start', 'Notice', 'Text of SMS', and 'About program'.

The 'User settings' tab contains the following sections and options:

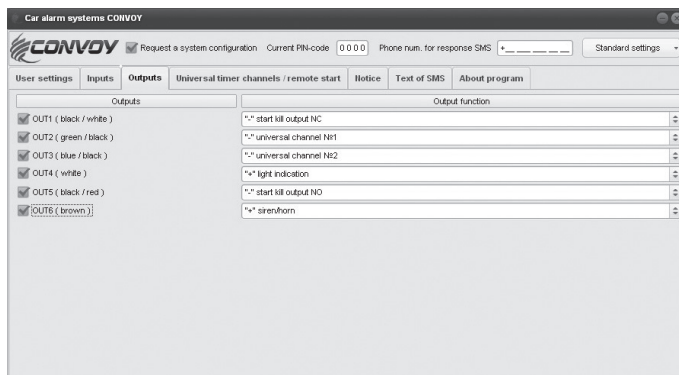
- General Settings:**
  - New PIN-code: [ ]
  - Number checking account balance: Kyrestar [ ]
  - The number of dialing attempts: 5
  - Sensors in security mode: ON
- Shock Sensor Settings:**
  - Setting shock sensor: Warning level of shock sensor [weak strike | 10 | whack]
  - Alarm level of shock sensor [ ] [weak strike | 25 | whack]
- Inclination/Motion Sensor Settings:**
  - Setting inclination/motion sensor: Level of inclination/motion sensor [ ] [small angle | 5 | large angle]
  - Inclination/motion sensor in security mode is off
- Monitoring Mode Settings:**
  - Monitoring mode of the object: The period of sending GSM-system information to the server [ ] [ seldom | 60 | often ]
  - Monitoring mode of the object is off
- Disarming and Siren Settings:**
  - Two-stage disarming (passive engine immobilizer): OFF
  - Sensitivity of the microphone: less [ ] more 5
  - Volume of the speaker: less [ ] more 60
  - Parameters autochecking of account balance: Position number of total assets in the operators SMS [0]
  - Minimum account balance [25] UAH
  - The periodicity of checking the balance [6] hours
  - Siren signals: During arm system [ON]
  - During disarm alarm system [Siren (continuous)]



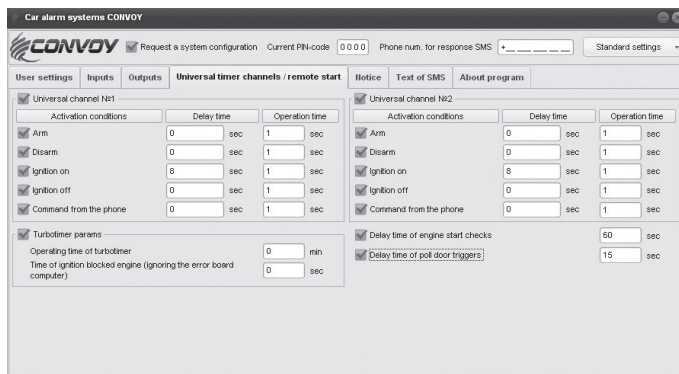
2. **Inputs.** This tab settings allow to set parameters of 8 system inputs – enter function, polarity, input signal appearance and time for system to respond it.



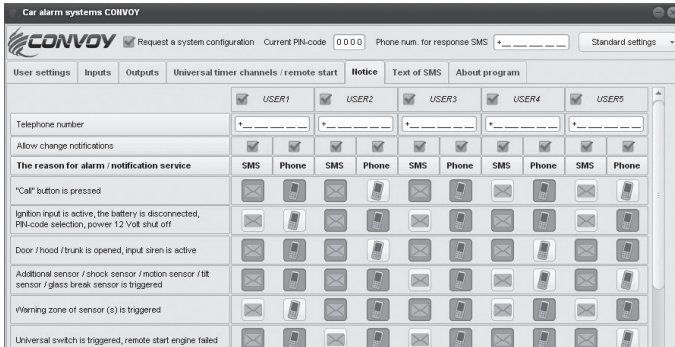
3. **Outputs.** This tab settings allow to specify parameters of 6 system outputs.



4. **Universal timer channels.** This tab settings allow to set activation conditions and operation parameters of 2 timer channels, conditions of engine start check and pin switches scanning and also turbotimer parameters..



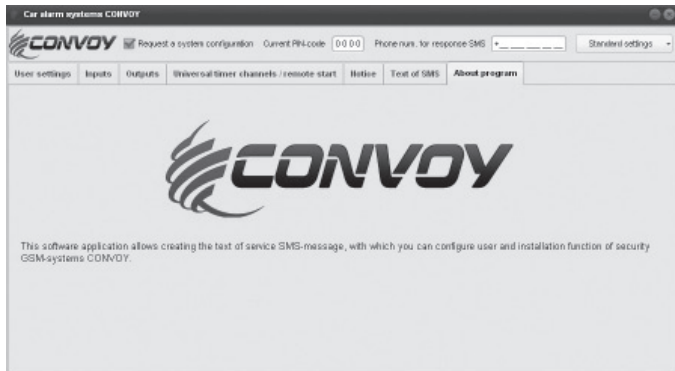
5. **Notifications.** This tab settings allow to set causes and type of alarm/service notifications for each system user.



6. **SMS-text.** In this tab service SMS-text based on results of previous settings is created.



7. **About program.** Short description of application «SMS-generator Convoy 005».



Square fields left of functions, settings and parameters in «header» and tabs if they have checkmarks allow to adjust current system parameter, setting or function.

At any program work stage you can press button «Create» in tab «SMS-text» and you will see service SMS-text based on results of made settings. You may save SMS-text on your PC in file of txt. format by pressing button «Save» or delete text from the tab field by pressing button «Delete».

Application can create up to 10 service SMS, which length corresponds to mobile operator requirements to sent SMS. Text of each SMS is in separate line of tab «SMS-text» field and starts with current system PIN-code.



### ATTENTION!

*In a case when several SMS are created and one of them contains command of new PIN-code setting, such SMS should be always sent the last one (in such a sequence as its text is created in the field of tab "SMS-text").*

SMS with created texts can be sent via Internet by means of SMS-gateways and SMS-services of mobile operators.

Links for some of numerable SMS-services for sending free SMS in CIS countries of some mobile operators are below.

Sending of SMS in CIS countries:

<http://www.sms-send.org.ua/>

<http://sms.cod3sun.com/>

Sending of SMS to users of Ukrainian mobile operators:

Kyivstar, Beeline

<http://www.kyivstar.net/ru/sms/>

MTC

<http://www.mts.com.ua/ukr/sendsms.php>

Life

<http://www.life.com.ua/sms/smsFree.html?locale=ru>

## 8.2 System control using iPhone and smartphones with Android platform

Application to control GSM-system «Convoy GSM» by means of Apple iPhone you can download for free from iTunes Store.

Application to control GSM-system by means of smartphones with Android platform (version 2.1 and higher) is also available for free at Best Automotive Technologies website [www.bat.com.ua](http://www.bat.com.ua) in section Car security systems/GSM-car alarm systems.

Application "Convoy GSM" is also available for free at Google Play.

### Short description of application to control GSM-system by means of iPhone

After first program running and startup screen user will be offered to enter GSM-system phone number of security object (you can also find and choose phone number from cell phone contact list – icon left of the number) and also PIN-code to control GSM-system.

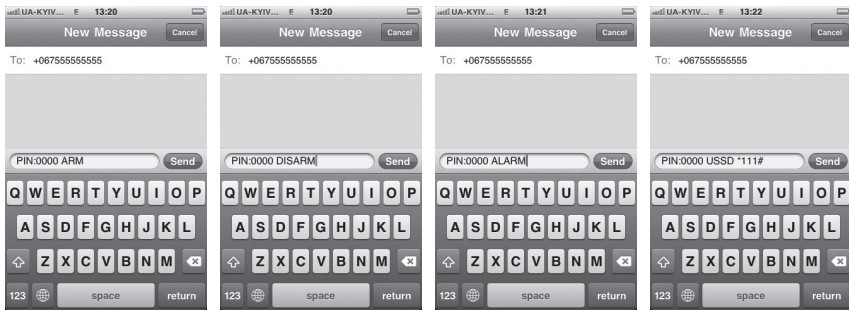


Then pressing buttons «Close» and «Alarm system control» user will enter main application page. The name of security object profile («Car» – first profile set by default) is at the top of the page.



At the bottom of main menu page call icon of profile settings menu is at the left and call icon of help page («About program») is at the right.

Base 4 icons to control GSM-system are also placed on the main page. Using these icons user can create SMS to arm/disarm GSM-system, activate alarm («Panic») mode and check system account balance:



You can edit each control SMS using touch keyboard (selection of language, registers etc.). User can also add extra recipient from phone book by pressing on number field «To» (icon «+» at the left).

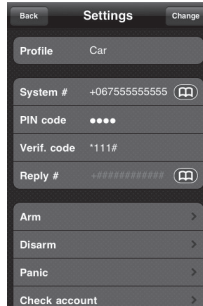
To send control SMS (i.e. in fact for GSM-system fulfilling of correspondent control command) you should press button «Send». To cancel command fulfillment press button «Cancel». The application will be returned to main menu automatically.

To edit current security object profile («Car») press call icon of settings page in the left lower corner of main menu.

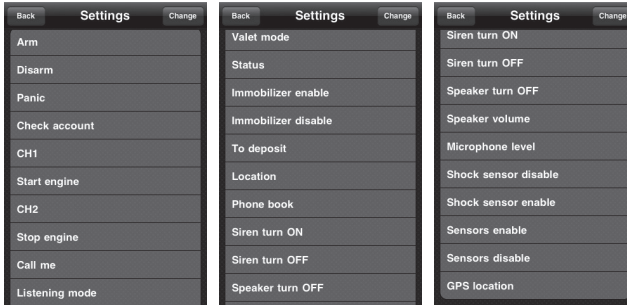


User can add up to 6 security objects profiles which will be controlled from cell phone. («House», «Garage», etc.)

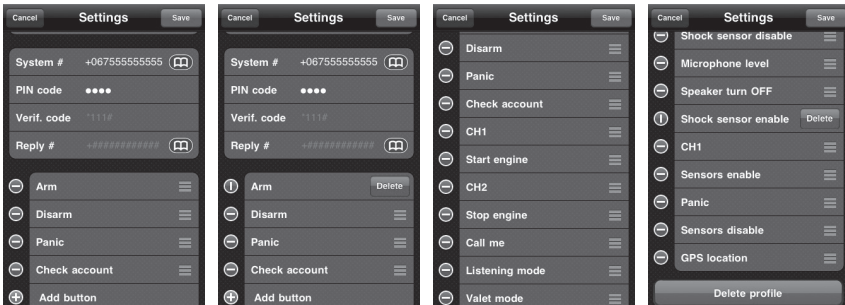
Pressing on object profile name in opened window you can edit GSM-system number, its PIN code, account verification code and system reply number.



In the lower field of settings page user can specify from opened list 4 commands of basic control group (edit first icon page of main menu).



Pressing in the upper right corner button «Change» you also can add or delete system control commands (buttons) in main menu (add main menu pages).

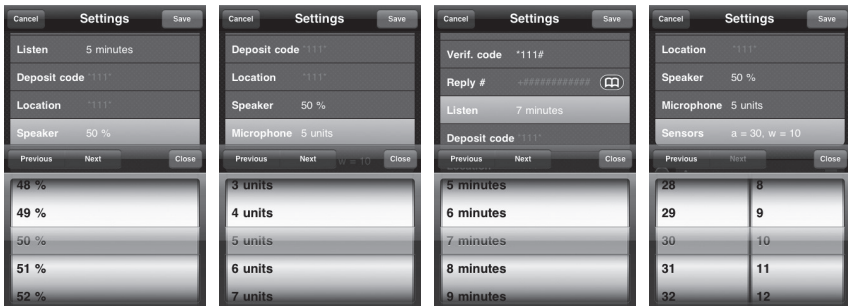


Maximum quantity of main menu pages is 8, control commands (icons) at all pages – 29. After adding new pages into main menu at the bottom of each page indicator of current page will appear.



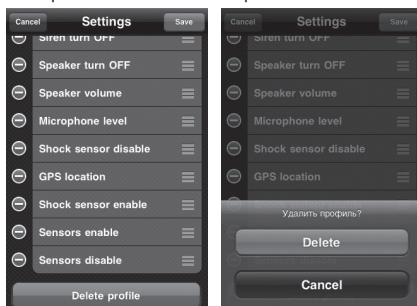
Pages are scrolled as usual in iPhone.

In security object profile menu you can also adjust speaker volume, microphone sensitivity in car compartment, duration of cabin listening mode and built-in shock sensor warning/alarm levels:

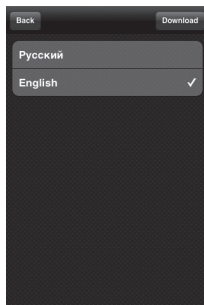


To save all made settings press button «Save» in upper right corner of the page. To exit settings menu without saving any changes press button «Cancel».

To delete security object profile press button «Delete profile»:



You can also choose application language.




The use of system operating program on Android basis does not differ from iPhone program. Menu, command and settings design is specially designed for this basis. After button pressing on phone screen, unlike in iPhone, SMS will be send without conformation.

## 9 Brief guide to control and set up the system

### 9.1 System control

#### 9.1.1 Using phone keyboard

##### Control keys during call

Cell phone key	Command
<b>1</b>	Arming (alarm signals deactivation)
<b>2</b>	Disarming (alarm signals deactivation)
<b>3</b>	Alarm mode activation («Panic» mode, engine lockout)
<b>4</b>	Service mode VALET activation
<b>5</b>	Universal timer channel №1 activation (auto start activation)
<b>6</b>	Universal timer channel №2 activation (auto start deactivation)
<b>7</b>	Cabin listening-in mode activation/deactivation
<b>8</b>	Programmable
<b>9</b>	Request of system current status, condition and location
<b>0</b>	Current system account status request
<b>#</b>	Selection of voice report about current system status and condition
<b>*</b>	End call (disconnection by system)
	End call (disconnection by user)



#### ATTENTION!

Control keys will work properly only after PIN code is entered correctly (see sub-item 2.2).

#### 9.1.2 Using SMS

##### Control SMS-text

SMS-text	Command
<b>ARM</b>	Arming
<b>DISARM</b>	Disarming
<b>ALARM</b>	Alarm mode activation («Panic» mode)
<b>VALET</b>	Service mode VALET activation
<b>RUNCH1</b>	Universal timer channel № 1 activation
<b>RUNCH2</b>	Universal timer channel № 2 activation
<b>STATE?</b>	Current system status request
<b>LISTEN</b>	Callback with car cabin listening-in mode
<b>CALLME</b>	Activation of system calling mode upon user's request
<b>START</b>	GSM-system call mode activation upon request of user
<b>STOP</b>	Auto start deactivation (engine stop without alarm mode activation)
<b>GPS?</b>	System GPS-location request



#### ATTENTION!

Any SMS which do not start with PIN-code (see sub-item 2.3.) will be ignored by system. System won't respond to all SMS during the following 2 minutes.



## 9.2 System setup

### 9.2.1 User settings

#### Setting using SMS

SMS-text	Command
<b>NEWPIN xxxx</b>	New system PIN-code (4 digits, each one from 0 to 9)
<b>SIREN x y</b>	Siren signals setting: where <b>x</b> = 0 – deactivation of confirmation siren signals when arming/disarming <b>x</b> = 1 – activation of confirmation siren signals when arming/disarming <b>x</b> = 2 – activation of confirmation siren signals only when arming <b>y</b> = 0 – siren signals in alarm mode are switched off <b>y</b> = 1 – continual siren signals in alarm mode <b>y</b> = {2, 3} – intermittent siren signals in alarm mode (horn) Default settings: x=1, y=1
<b>AVFUN 1</b>	Immobilizer mode activation (engine passive blocking)
<b>AVFUN 0</b>	Immobilizer mode deactivation (engine passive blocking)
<b>CALLCNT x</b>	Specifying of quantity of calls to user who does not answer (from 1 to 10; default one is 1)
<b>ECHO "+....."</b>	Specifying of phone number for system to send SMS-report
<b>VOL 0</b>	System speaker turning off
<b>VOL x</b>	System speaker turning on at level x (1-100, default setting is 50)
<b>MIC 0</b>	Turning off of system microphone in car compartment
<b>MIC x</b>	Turning on of compartment microphone at level x (1-15, default setting is 5)
<b>SENSOR 1</b>	Activation of all GSM-system sensors (external and built-in)
<b>SENSOR 0</b>	Deactivation of all GSM-system sensors (external and built-in)
<b>SHOCK A255 W255</b>	Built-in shock sensor deactivation
<b>SHOCK Ax Wy</b>	Built-in shock sensor levels setting (x, y=1-255, default settings: alarm level x=25; warning level y=10)
<b>SENSOR 1 0</b>	Built-in inclination/motion sensor deactivation
<b>SENSOR 1 y</b>	Built-in inclination/motion sensor level setting y=(1-9, default setting – 0 – sensor is deactivated)
<b>MONITOR 0</b>	Object monitoring (tracking) mode deactivation
<b>MONITOR 1</b>	Object monitoring (tracking) mode activation
<b>GPRS?</b>	Request of state and settings of monitoring (tracking) mode
<b>APN "name1"</b>	GSM-system is specified the access point name (APN) of system SIM-card mobile operator: where <b>name1</b> – mobile operator access point name
<b>IPNAME "name2"</b>	GSM-system is specified server WEB-name of monitoring (tracking) service: where <b>name2</b> – server WEB-name. Default setting – www.convoyonline.com
<b>USSD *.....#</b>	USSD-request to mobile operator (GSM-request of current account balance/system account replenishment/car GPS-location request)
<b>USER?</b>	Request of list of users and system notifications
<b>USERx ""</b>	Deleting from user call list user x (x = 1 – 5)

SMS-text	Command
<b>USERx Ca Mb</b>	Record of sender phone number from which this SMS was send and causes of alarm/service notifications (a, b) for user x
<b>USERx Ca Mb</b> "+....."	Record of phone number specified in this SMS and causes of alarm/service notifications (a, b) for user x
<b>AUTOCHECK a b c</b>	Setting of system automatic account balance check: where <b>a</b> – position number in GSM-operator's reply text on account balance request, which corresponds to balance integral part (1-10. 0 – automatic account check function is off) <b>b</b> – critical account balance level (1 – 255. default setting – 25) <b>c</b> – time period in which system should check account balance (1 – 24 hours. default setting – 6)

**ATTENTION!**

Any SMS which do not start with PIN-code will be ignored by system. System won't respond to all SMS during the following 2 minutes.

**List of alarm/service messages' causes (a, b)**

Alarm/service message cause	a value (digits after C)	b value (digits after M)
Alarm «Call» button is pressed	<b>0</b>	<b>0</b>
Ignition input is active. PIN-code fitting attempt. Power supply 12V has disappeared.	<b>1</b>	<b>1</b>
Door/hood/trunk pin switch actuated. External siren input is active	<b>2</b>	<b>2</b>
Additional/shock/motion/inclination/glass brake sensor was actuated	<b>3</b>	<b>3</b>
Universal pin switch was actuated. Engine autostart is failed	<b>5</b>	<b>5</b>
Battery is discharged. System account balance is less than critical one		<b>6</b>
GSM-network signal is disappeared/appeared		<b>7</b>
System disarming	<b>8</b>	<b>8</b>
System arming	<b>9</b>	<b>9</b>

**ATTENTION!**

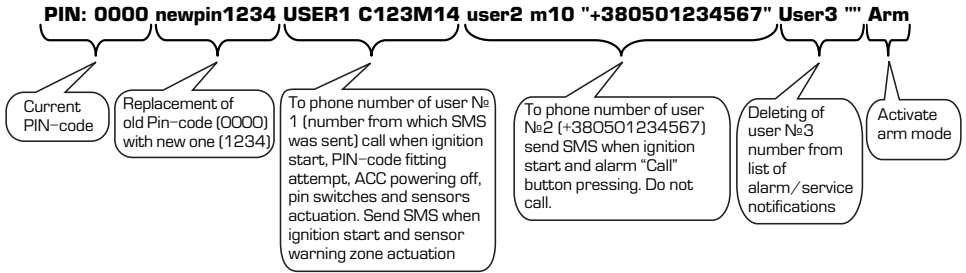
If SMS do not contain letters C and M system will save previous list of alarm/service notifications (before this SMS).

**9.2.2 System hardware-controlled settings**

SMS-text	Setting/Command
<b>CONFIG?</b>	Current system hardware settings request
<b>TURBOTIMER x y</b>	Selection of system operation time in turbotimer mode (x = 0 – 255 min, y = 0 – 255 sec ); on default x=0, y=0
<b>STARTTIMER x</b>	Selection of delay time of engine start check (x = 4 – 1000 sec. default setting – 60)
<b>ARMTIMER x</b>	Selection of delay time of pin switches scanning (x = 0 – 255 sec, default setting – 15)
<b>REARM 1</b>	System automatic rearming function activation
<b>REARM 0</b>	System automatic rearming function deactivation

SMS-text	Setting/Command
<b>TIMERx My Pz Tw</b>	Timer channel adjustment (x = 1, 2). Delay time of channel z activation y (z = 0 – 255 sec.). Operation time w of channel x (w = 0 – 255 sec). Channel x activation conditions: <ul style="list-style-type: none"> <li>• system arming (y = 1)</li> <li>• system disarming (y = 2)</li> <li>• ignition start (y = 3)</li> <li>• ignition stop (y = 4)</li> <li>• command from cell phone (y = 5)</li> </ul>
<b>INx y z f m n</b>	Input x setting (x = 1 – 8) Signal y polarity (y = +/-). Input is active z on closing (z=1)/opening (z=2). Maximum closing time m (m=1–100 (0,1–10 sec). Minimum opening time n (n=1–100 (0,1–10 sec)). Function f = 0 for input x: <ul style="list-style-type: none"> <li>• arming (x = 1)</li> <li>• arming ban (x = 2)</li> <li>• disarming (x = 3)</li> <li>• arm sign (x = 4)</li> <li>• autostart control (x = 5)</li> <li>• trunk lock drive (x = 6)</li> <li>• disarming confirmation button (x = 7)</li> <li>• arming permission (x = 8)</li> </ul> Functions f = 1–12 for input x: <ul style="list-style-type: none"> <li>• door pin switch (f = 1)</li> <li>• driver door terminal switch (f = 2)</li> <li>• hood terminal switch (f = 3)</li> <li>• trunk pin switch (f = 4)</li> <li>• hood/trunk terminal switch (f = 5)</li> <li>• universal terminal switch (f = 6)</li> <li>• siren (f = 7)</li> <li>• external sensor (f = 8)</li> <li>• shock sensor (f = 9)</li> <li>• motion sensor (f = 10)</li> <li>• inclination sensor (f = 11)</li> <li>• glass brake sensor (f = 12)</li> </ul>
<b>OUTx y</b>	Output x setting (x = 1 – 6) «-» output x polarity (x = 1, 2, 3, 5) «+» output x polarity (x = 4, 6) Output x function y: <ul style="list-style-type: none"> <li>• normally closed blocking (y = 1)</li> <li>• universal timer channel № 1 (y = 2)</li> <li>• universal timer channel № 2 (y = 3)</li> <li>• light indication (parking lights) (y = 4)</li> <li>• normally opened blocking (y = 5)</li> <li>• siren (y = 6)</li> <li>• autostart activation (START) (y = 7)</li> <li>• autostart deactivation (STOP) (y = 8)</li> <li>• turbotimer (y = 9)</li> <li>• pager/GSM-signal loss (y = 10)</li> <li>• START/STOP (y = 11)</li> </ul>
<b>CANARM x</b> (only for iGSM-005 CAN)	Setting of signals type used by CAN-bus for system arming/disarming: where <b>x=0</b> – CAN-bus signal for GSM-system arming/disarming is not used <b>x=1</b> – CL closing/opening from regular transmitter signal is used <b>x=2</b> – CL signal status (of regular security system) is used Default value – 1

**Example of properly created SMS for system:**



**Note**

*SMS-text can be typed with both initial and lowercase latin letters.*