

A two-way multifunctional car security system with five service channels, an interactive LCD pager, passive and active anti-hijack and anti-car-jack systems, and automatic engine ignition with a built-in relay.

Manual of the installation and use

▲ Importance

There are five independent (two of them-remotely controlled) programmable channels functionally in the system. The five physical wires with programmable work logic, provided flexible change of the systematical function for control of the switch of the turbo-supercharged engines (turbotaymer), remote disconnection of siren system in “nocturnal” regime with the channel controlled over the supplementary pager or the equipment of mobile communication, car security system with running engine without ignition key, control over the supplementary equipment by the appointed temporary interval, control over the running engine.

Interactive pager provides reception signals by the confirmation after executing system command. During the one security cycle, system provides information conclusion about every working sensor on the LCD display of two-way contact.

For providing security of high level for your car, the car security system has programming function of the manual disconnection. In the conditions, for example, when transmitter of the remote controlled system lost or cannot work (or if it will, your transmitter is blocked by powerful radio of equipment of the kind of “disturb by radiobroadcast”). You can need deliver or divest security system manually. Please read chapter “setting by hand the security system” and “disconnection by hand of the security system”, in which procedures of the setting and disconnection of security system are described detailedly in the situation. Except that tabulation is given in the manual, in one of the sections the used function of the system is specified, including the chosen method of the system disconnection, and supplementary equipment which is installed in the car. Although by default the function does not programmed “secret code” (for the system disconnection it is necessary to enter the personal code), for system disconnection maybe switch “Valet” is chosen. Please see that the method was programmed for your system disconnection, acquaintance with it in relevant chapter of the manual.

If the function F13 “secret code” is programmed, the codes` record of the new trinkets, changes of the secret code and of the status of programmed functions from F12 to F24, emergency security system, system disconnection when start is in conditions “Anti-Hi-Jack” are possible only after inputting of secret code! Change of parameters of the functions from F1 to F11 does not need to enter the secret code and to be accessible always.

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Standard functions of system

- Dynamic code CFM.
- Separate control over condition of turn on/turn of security off.
- Possibility of program until 4 transmitters.
- System of active anti-hijack and anti-car-jack.
- Condition of manual soundless check of contact (manual condition).
- Two-way contact by means of trinket-transmitter from LCD-display.
- One-way control by easy reserved trinket-transmitter.
- Audio confirmation of condition “Valet”.
- Two channels of connection of two-level sensor (of hit, capacity, move).
- Built-in all-purpose power outlet of control by the door lock.
- Control over the car central lock in condition “Valet” and in working engine.
- Two chains of outside blockage (norm of factory, standard) (to need install of supplementary relay).
- Two chains of built-in blockage (ignition, starter).
- Five programmable channels of control over service equipment of car (supplementary lock, turbo timer, channel-trigger, channel-timer, control of glass-frame riser, outlet of polite assist illuminator etc.).
- Two remotely control over channels of service equipments.
- Protection in start of engine.
- Remote control over channel of siren in security condition (disconnection/turn on).
- Supplementary (programmable) channel of control of exterior pager/executive equipment.
- Manual setting of system in the condition of whole protection at any time by means of button “Valet” or even in the absence of key of ignition.
- Noiseless setting and dismounting of system out of protection.
- Temporary disconnection of sensors of hit.
- Temporary disconnection of function of passive setting to protection.
- Alarm signal disconnection out of operation board of remote control.
- Remote control over function “panic” in all conditions.
- Audio and light warning about start of system.
- Indication of channels of turning of alarm signal device on.
- Audio and light confirmation of accomplishing command of trinket of two-way contact.
- Limited time of the alarm condition.
- Protection of perimeter.
- Detour of area is in malfunction.
- Multifunctional LED indicator.
- Memory of starts.
- Memory of conditions “Valet”, “Disarm” (is divested out of protection), “Triggers” (input condition of protection) at delivery disconnection of power.
- Immediately turn on of warning signal in disconnection/turn on of elect power system in the condition “ARM” (protection).
- Disconnection of condition of passive lock of engine from trinket-transmitter, anti-hijack transponder.
- Control over the opening carrier from temporary disconnection of sensor and channel of protection of carrier.
- Remote start of engine:
 - Multifunctional check of automatic start of engine (manual and automatic box of transfer, gasoline and diesel engine).
 - Check the start of engine by tachometer, charging of accumulator, generator or sensor of oil pressure.
 - Automatic disconnection of working engine at system installs in protection trinket-transmitter (manual box of transfer).

- Automatic disconnection of working engine at passive system installs in protection (manual and automatic box of transfer).
- Safe lock of starter.
- To check the charging of accumulator of working engine under control of system ZX-1060.
- Start by built-in and exterior timer of real time.
- Start of exterior controller.
- Start by temperature (exterior sensor).
- Remote (from trinket) change of parameters of start of engine by cyclic timer and sensor of temperature.
- Automatic adapted (clever) turbo timer.
- Remote (from trinket) change of time values of working turbo timer.
- Program of low electric current outlet of control over the inspector of rated immobilizers.
- Service-impulse of control over the supplementary equipment.
- The function of central lock with supplementary programmable channel for safe (phased) opening of passive door of car. Control over the central lock from the car cabin by means of supplementary switch (do not enter to a set of system).

Program function of system

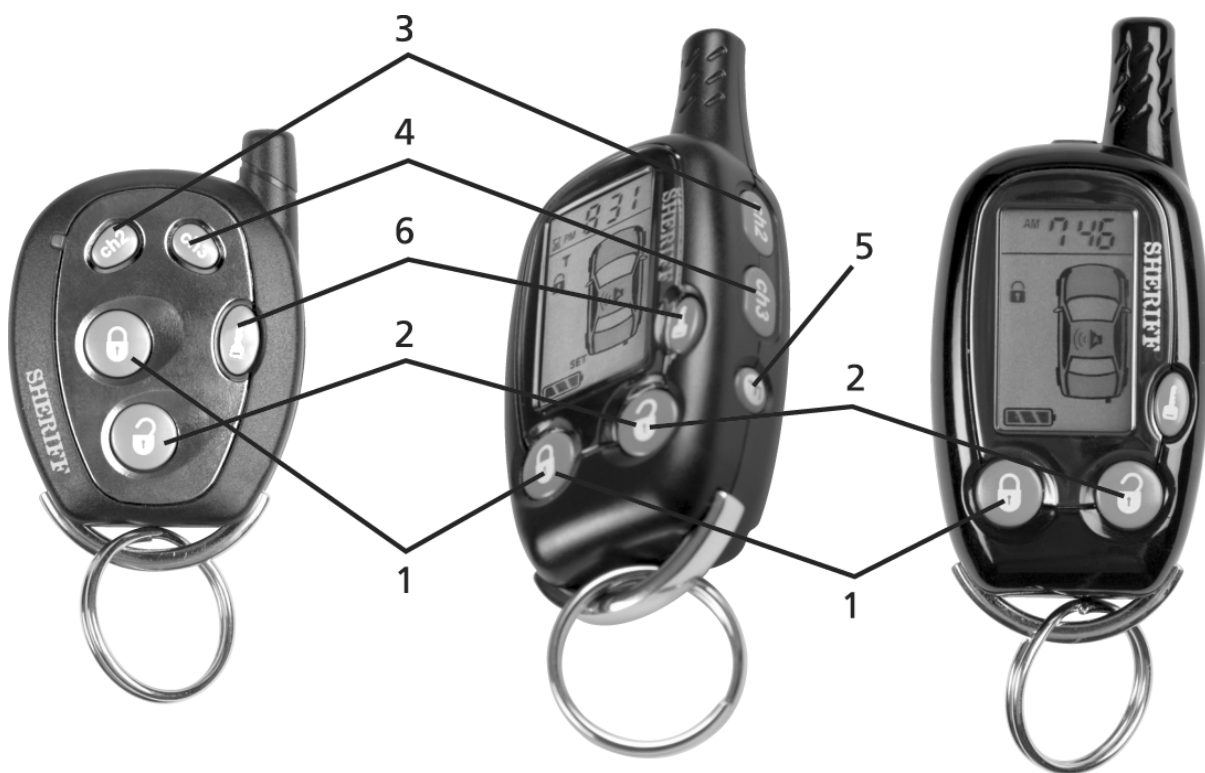
- The function of active anti-hijack and anti-car-jack.
- The function of immobilizer (passive lock of engine).
- Program personal code of disconnection and control over the system.
- Program delay of system install in protection: 5/35/60 seconds.
- Comfort function (close all—impulse to closure of program length-10/15/30 seconds).
- Multichannel program function “Anti-Hi-Jack” (remote turn on/turn off at turn on of ignition and start of terminal switch Door + or Door -, Stop + or at beginning of moving car).
- Program length of impulse of control over the door lock: 0.5/1/3.5 seconds.
- Double impulse of unlocking doors.
- The function of reinstalling in protection.
- Program condition of control over the central lock at reinstalling in protection.
- Passive/active install of system in protection.
- Automatic locking of door at passive install in protection.
- Automatic locking of door at turn on of ignition.
- Automatic locking of door at beginning of moving.
- Automatic locking of door at pressing against the pedal “Stop”.
- Automatic unlocking of door at turn off of ignition.
- Outlet CH2-relay-type reprogrammable controls over the channel of supplementary equipments: program temporary intervals, service-impulses, control over the electric carrier, trigger-outlet.
- Outlet CH3-low accurate reprogrammable controlled channel of supplementary equipments: programmable temporary intervals, service-impulses, control over the electric carrier.
- Outlet CH4-low accurate reprogrammable channel of supplementary equipments: programmable temporary intervals, service-impulses, control over the window lift, outlet of pager.
- Outlet CH5-relay-type reprogrammable channel of supplementary equipments: outlet of central lock at phased control of opening the passenger door of car, outlet “polite” backlight, a second impulse before automatic start of engine, a second impulse at turn on in line of automatic signal communication by system of automatic start ZX-1060.
- Outlet CH6-low accurate reprogrammable channel of supplementary equipments: outlet of control over the detour of rated equipments of immobilizer, service-impulse.
- Function of disconnection “false” start of system.
- Function of checking by pager the condition of turn on of ignition of car in every condition of system.

Control over the work of system ZX-1060 SHERIFF

Function of button of trinket-transmitter

In the trinket-transmitter with a set of security system, use the most perfect and reliable form of radio frequency transfer from all produced at the moment of anti-car-jack system. Some of the contemporary skilled car hijackers use equipments which are as known as interceptors of codes (code grabber), which allow accept and store signal in memory which is transmitted by equipment of remote control by safe system of car. After maintenance of driver, hijacker uses the code for dismounting the security system.

Unlike described above equipments of remote control over the trinket-transmitter, which income to a set of your security system, change of code of transmitted signal every time, when press the button, because, when hijacker reproduces intercepted signal of your trinket-transmitter, do not react the safe system to it just.



Picture 1

Function of button trinket-transmitters

1. Button of system install in protection (ARM)
2. Button of dismounting of system from protection (DISARM)
3. Button of control of programmable channel CH2, control over the system condition at install/dismounting of system from protection.
4. Button of control of programmable channel CH3, control over the supplementary channels.
5. Button of change of parameters of signals of pager, turn off audio and light signaling of pager.
6. Button of control of start of engine.

Combination of indicators LCD-display

Indicator of condition of sensors of system.



Sensor of hit turned off. Start turned off by main area of sensor of hit. Security install with detour of defective sensor of hit.



Blink at start of sensors in powerful hit.



Indicator of operative turning on/turning off of start by timer of real time.



Indicator of turning on of condition of start of engine by sensor of temperature.

Indicator of time:



--it burns always, when cyclic timer of start of engine is turned on.

-it blinks at accomplishment of counting in reverse of time of expectation of correct outlet for cars with manual box of diversion transfer.

-it blinks at accomplishment of counting in reverse of time of condition of working turbo timer.



Indicator of condition of working engine. It burns in active condition.



Working indicator of end of doors. Pictograph of door blinks at system start of terminal switches of doors or at install in protection with detour of defective (unready) ends of doors.



Indicator of contact (antenna).



It disappears in the event of absence of contact with central block or at enquiry about accomplishment of nonexistent command.



Transfer the signal of control.

Working indicator of anti-hijack function.



It blinks, if it activates the forcible function of "anti-car-hijack".



Picture 2

SAVE

Indicator of turning on of condition of economy of elect power of trinket-pager.

Turning on/turning off in condition of "divest the protection" by simultaneous pressing against the buttons 1+F (5) until appearance or disappearance of indicator "SAVE". In condition "divest the protection" trinket-pager disconnects its receiver for 30 seconds, which is testified by disappearance of indicator of contact (antenna).



Indicator of turning on of condition of vibration.



Indicator of turning on of ignition.

It indicates the line condition of car ignition in condition "divest the protection" (F15), "protection" and at accomplishment by system of procedure of automatic start.

Indicator of delivery of audio signal of siren.



Indication of disconnection of siren in condition of "protection".



Indication attends in activated condition "protection".



Indication of reception of call signal from the car cabin. It blinks at reception of call signal from pager.



Indicator of alarm. It burns always at turning on of function of alarm by buttons 3+F (5).



Indicator of start of bonnet end. It blinks at start of bonnet end in condition “protection” or at protection install with opening bonnet.

Indicator of turning on of condition “Valet” (condition of service).



It attends on display always until system is in condition “Valet”.



Indicator of start of carrier end. It blinks at start of carrier end in condition “protection” or at protection condition with opening bonnet.



Indicator of accomplishment of commands by system (it blinks by headlight).



Digital indicator of hourly kind.



Indicator of charge of the battery. The full charge of the battery or blinks.



Low charge of the battery less than 30%.

Indication and install:



-time of alarm



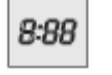
-real time (hour)



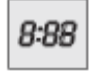
-values of time of start “S” and stop “R” by timer of real time.



-working times of timer of working countdown of engine.



-intervals of time of start of engine by cyclic timer.



-working times of turbo timer.



-values of temperature of start of engine.

Indicators of condition “protection”.



“protection”—doors are blocked at turning on of ignition or in condition “Valet” (service condition).



“it divests protection”—doors are unblocked at turning on ignition or in condition “Valet” (service condition).

Combination of indicators in condition “protection” at working engine of car.

Ignition is turned on:



-indicator blinks



-indicator burns always



-indicator blinks.

⚠ Attention!

For enlargement of job date of battery trinket of two-way contact, it implements the check of contact existence among them and central block of system manually. For check of contact existence with trinket-pager and system it gives command, pressed every button except F. If contact attends—system “returns” confirmation of accomplishment the command with relevant audio signal or blinks twice soundless by pictograph of light in one-shot short press of buttons CH2 and CH3 with renewal of condition of ЖКИ-display. Otherwise, over 3 seconds icon flames out, which indicates contact absence, a buzzer gives one short and one long signal.

Indicator of discharge/replacement of battery

Indicator of discharge of battery is presented on LCD-display in the manner of icon with three elements designator of condition. According to discharge of battery quantity of visible elements is decreased, besides, you can replace the decrease of range of transmitter action.

For replacement of battery in six buttons trinket transmitter



- It divests cover of compartment of battery.
- It ejects discharged battery.
- It installs new battery (of kind “AAA”), which ascertains observance of correct polarity.
- Carefully it installs cover in former place.
























For replacement of battery in five buttons trinket transmitter














- It removes screws with reverse side of transmitter shell and divides half of transmitter shell.
- It ejects discharged battery.
- It installs new battery (of kind CR-2032), which ascertains in observance of correct polarity.
- Carefully it installs cover, do not damage LED or switch in circuit board, it wraps screws with reverse side of transmitter shell.







Command of control by system ZX-1060 with trinket-transmitters












Table 1

Function			Description of action
Security install 			Press and release button 1 (see picture 1). 1. Figure lights of car blink once. 2. Siren gives one short audio signal of confirmation. 3. LED-indicator in antenna module begins to blink immediately.
Dismounting from protection 			Press and release button 2 (see picture 1) 1. LED-indicator flames out. 2. Figure lights of car blink twice. 3. Siren gives two short audio signals of confirmation. Remark: if F5 function is turned on-automatic reinstall in protection, in dismounting of system from protection LED-indicator begins to blink quickly, at the same time indicates that if during the 20 seconds one of the doors does not opened, system turns on the security condition. If during the 20 seconds even one door is opened, LED-indicator flames out and condition of system install of protection will be abolished. If function F23 is turned on—function of passive system install of protection, F5 is turned off, LED-indicator flames out. System crosses to expectation condition of opening/closing of anyone of doors. If you open, afterwards close anyone of car doors, turn on the 30 seconds timer of automatic system install of protection. LED-indicator begins to blink quickly. Remark: attempt to divest system from protection after that system worked (engaged siren of signal), lead to disconnection of audio signal. System will not be divested from protection. In order to divest system from protection, it is necessary to press the button yet of dismounting from protection in trinket-transmitter, when system does not give audio signal.
Close/open doors in condition “Valet” or turning on ignition 	 or 	 or 	Press and dismiss buttons 1 or 2 (see picture 1). If it has supplementary chain of locking/unlocking of doors locks, the car doors will be blocked/unblocked.
Security install in working engine 			Press and maintain button 1 during 3 seconds until getting the confirmation signal (see picture 1). 1. If it has supplementary chain locking/unlocking doors locks, the car doors will be locked. 2. Outside lights of the car behave itself according to function F8.
Divest security in working engine 			Momentarily press and dismiss button 2 (see picture 1). LED-indicator flames out. If signal operated when you are absence, LED indicator will blink by code, at the same time specify the security area by system, which operates when you are absence. Outside lights of the car blink two times. Siren flames out the two short audio signals. If it has supplementary chain locking/unlocking the doors locks, doors locks of the car will be opened.

Function			Description of actions
Panic (turn on/turn off) 	 + 	 + 	<p>Press simultaneously and maintain buttons 3 and 4 more than 2 seconds.</p> <p>This leads to immediate turning on of system siren and blinking of outside lights.</p> <p>For siren disconnection yet momentarily simultaneously press buttons 1 and 2 (see picture 1) in your trinket transmitter. If you do not disconnect condition “panic”, system is turned on automatically for 30 seconds.</p> <p>Remark: in condition “panic” all normal functions of trinket-transmitter will work.</p>
Long-term turning off/turning on of siren to one cycle 	Twice  + 	Twice  + 	<p>Two momentary pressing against the buttons 3 and 4 during 2 seconds in security condition (see picture 1).</p> <ol style="list-style-type: none"> Confirmation of siren turning on: one long and one short flash of outside lights. Confirmation of siren turning on: three short flashes of outside lights. <p>Dismounting of system away from security automatic renew the work of siren in normal condition.</p>
Control by channel 2 (ch2)  Two flashes and melody after release the buttons		 +	<p>Press and maintain button 3 more than 1.5 seconds (see picture 1).</p> <p>Relay-type HP-outlet 25 A.</p> <p>Remark: if outlet of channel CH2 was activated at that time, when system was in security condition and system simultaneously disconnects sensor of hit and trigger of carrier. After the carrier will be locked, system again automatic takes this chain under security and turns on sensor of hit.</p>
Control by channel 3 (ch3)  Two flashes and melody after release the button	+ 	+ 	<p>Press and maintain button 4 more than 1.5 seconds (see picture 1).</p> <p>Outlet of channel CH3-lowcurrent outlet, preassigned for control by coil of supplementary relay or by equivalent low current load.</p> <p>Remark: if outlet of channel CH3 was activated at that time, when system was in security condition and system simultaneously disconnects sensor of hit and trigger of bonnet/carrier. After carrier will be locked, system again automatic takes this chain under security and turns on sensor of hit.</p>
Turning on/turning off of engine by cyclic timer of temporary intervals 1, 2, 3 and 4 hours/procedure of change of intervals of start of engine. 	 + 	 + 	<p>Simultaneously press and maintain buttons 1 and 3 more than 2 seconds. System confirms activation of timer by turning on of icon on display of trinket-transmitter, also, during 3 seconds, indicates earlier installed interval of start.</p> <p>During the following 10 seconds it may enter the procedure of cyclic change of interval in every momentary simultaneous pressing against the buttons 1+4 (Arm+ch3). Every pressing will sequentially install new value of cyclic time with its indication on screen of trinket-transmitter of two-way contact in acceptance of relevant signal from basic block. System automatic leaves out of procedure if during 10 seconds does not accomplish action by change of interval.</p>

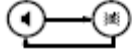










Function			Description of actions
			<p>For example: activated cyclic timer. System indicated interval 2:00. Simultaneously pressed buttons 1+4 (Arm+ch3)-system changed intervals and indicated on screen 3:00. Following pressing against the buttons 1+4 (Arm+ch3) changes interval to 4:00, afterwards 1:00 and by circle.</p> <p>System automatic leaves out of procedure if during 10 seconds does not accomplish actions by change of intervals.</p>
<p>Turning on/turning off the engine by sensor of temperature/procedure of change of temperature of start of engine</p> 	<p>Twice</p>  <p>+</p> 	<p>Twice</p>  <p>+</p> 	<p>Two simultaneous short pressings against the buttons 1+3 during 2 seconds, at installed temperature in function SF6.</p> <p>System confirms activation of timer by turning on of icon “thermometer” on screen of trinket-transmitter, also, during 3 seconds, indicates earlier installed temperature of start of engine.</p> <p>During following 10 seconds it may enter the procedure of cyclic change of value of temperature of start in every momentary simultaneous pressing against the buttons 1+4 (Arm+ch3). Every pressing will sequentially install new value of temperature with its indication on screen of trinket-transmitter of two-way contact at acceptance of relevant signal from basic block.</p> <p>System automatic leaves out of procedure if during 10 seconds do not accomplish actions by change of parameters.</p> <p>For example: activated start by temperature. System indicated temperature -10 °C . Simultaneously pressed buttons 1+4 (Arm+ch3)-system changed indication of temperature on screen - 15 °C . Following pressing against the buttons 1+4 (Arm+ch3) changes value of temperature to -20 °C , afterwards +5 °C and by circle. System automatic leaves out of procedure if during 10 seconds do not accomplish actions by change of parameter.</p>
<p>Emergency disconnection of condition of “turbo timer” in condition: manual gear-box or automatic</p>	<p>Twice</p> 	<p>Twice</p> 	<p>Two short pressings against the button 3(6) during 2 seconds (see picture 1), if function SF2 is turned on.</p> <p>Reset of active condition of turbo timer with the help of transmitter.</p> <ol style="list-style-type: none"> 1. Take out the key from lock of ignition of car. 2. During 2 seconds twice presses the button 3 (6). 3. System must give up the channel of turbo timer without delivery of audio signal. <p>Turbo timer may turn off by command only from trinket-transmitter.</p>
<p>Start/stop of engine/turn on the procedure of change of time of working engine</p>  	<p>Twice</p> 	<p>Twice</p> 	<p>Two short pressings against the button 6 during 2 seconds (see picture 1).</p> <p>System starts engine, if conditions of start are accomplished (see description of “remote start of engine”).</p> <p>During following 10 seconds after successful start of engine it may enter the procedure of cyclic change of interval of time of automatic work of engine in every momentary simultaneous pressing against the buttons 1+4 (Arm+ch3). Every pressing will sequentially install new value of time of automatic work of engine with its indication on screen of trinket-transmitter of two-way contact in acceptance of relevant signal from basic block. System automatic leaves out of procedure, if during 10 seconds do not accomplish actions by change of parameter.</p> <p>For example: remotely started engine. System indicated interval of time 0:10. Simultaneously pressed buttons 1+4 (Arm+ch3)-system changed interval and indicated on screen 0:15, following pressing of buttons 1+4 (ARM+ch3) change interval to 0:20, afterwards 0:25 and so on by circle 0:25, 0:30, -:-, 0:10... System automatically leaves the procedure, if during 10 seconds does not accomplish actions by changing parameter.</p>

Function			Description of actions
Soundless security setting			Momentary press button 3, afterwards during 4 seconds-button 1 (see picture 1). System turns on security condition without delivery of audio signal.
Soundless dismounting out of security			Momentary press button 3, afterwards during 4 seconds-button 2 (see picture 1). System turns off security condition without delivery of audio signal.
Security setting with turning off area of precautionary start of both sensors			Momentary press button 1, afterwards during 4 seconds press button 3 (see picture 1). System turns off audio signal in start of area of warning of sensor of hit in security condition.
Security setting with turning off sensors absolutely. 			Momentary press button 1, afterwards during 4 seconds press button 3, after confirmation signal press button 3 again (see picture 1). System turns off audio signal in start of both areas of sensor of hit in security condition.
Security soundless setting with turning off areas of precautionary start of both sensors			Momentary press button 3, afterwards during 4 seconds button 1, and then button 3 (see picture 1). System is in security condition without delivery of audio signal. System turns off audio signal in start area of precautionary sensor of hit in security condition.
Security soundless setting with turning off sensors absolutely 			Momentary press button 3, afterwards button 1 and during 4 seconds button 3, after signal of confirmation press button 3 again (see picture 1). System is in security condition without delivery of audio signal. System turns off audio signal in start of both areas of sensor of hit in security condition absolutely.

Function			Description of actions
Start of function “Anti-Hi-Jack” 	 + 	 + 	<p>Together press and maintain buttons 1 and 2 more than 3 seconds in turned on ignition and turned on function F18/2.</p> <ol style="list-style-type: none"> 1. Ignition is turned on or engine is started. 2. Temporary press and maintain buttons 1 and 2 (see picture 1) until appearance of confirmative signal in the manner of three flashes of outside lights. 3. Dismiss buttons of trinket. 4. It turns on 20 second delay. 5. During following 20 seconds system begins to give short audio signals and occasionally turns on blocking chain. <p>Afterwards it turns on alarm condition (audio and light signals), and all blocking chains, leading to absolute setting of engine.</p>
Calm check of contact/actual condition of system	 or 	 or 	<p>Temporarily press button 3 or 4 (see picture 1) during 1 second.</p> <p>Precondition of calm request about existence of contact with system block. In the event of achievement, system returns answer with actual condition of system, renews condition of LCD-screen of trinket of two-way contact and confirming icon of dimensions of LCD-screen by double blink.</p>

















Programming working conditions of trinket of two-way contact for setting and change of parameters of time.

Table 2

 <p>Speaker with confirmation LDT, speaker without confirmation LDT, speaker + vibrato</p>	 + 	<p>_____</p>	<p>Temporary press buttons 2 and 5 for serial change of working conditions of trinket. “speaker with confirmation LDT”-one cheep. “speaker without confirmation LDT”-two cheeps. “speaker + vibrato”-one cheep + vibrato.</p>
<p>Setting of hours, of alarm-clock and timers of real time for functions of automatic start or start and stop of engine-see function of SF4.2/4.3 table of functions of automatic start of engine.</p>			<p>Press and maintain button 5 more than 3 seconds. Timer of indication “of hours” begins to blink, indicating condition of change of hours. Pressing against the button CH2 changes indication (+). Pressing against the button CH3 changes indication (-) (every pressing leads to only one unit of change of parameter). For transfer to setting of time temporarily it presses and dismisses button 5 (F): Pressing against the button CH2 changes indication (+), pressing against the button CH3 changes indication (-). Every pressing against the button 5 (F) cyclically transfers to area of install of hours or minutes of different timers. Timers of install “of W-trigger” are highlighted on LCD-monitor with parameters “s” and “r” in position 29. “s”-timer of real time of install of active condition of channel. “r”-timer of reset of active condition of channel. Pressing against the button CH2 changes indication (+). Pressing against the button CH3 changes indication (-). For functions SF4.2 of start of engine value of timer with expansion “s” –start is the time.</p>
<p>Turning on/turning off of alarm-clock of hours of trinket-transmitter</p>	 + 		<p>Temporarily press and dismiss.</p>
<p>Remote control over turning on/turning off of daily timer of real time of LCD transceiver</p>	 + 		<p>Temporarily press and dismiss buttons 5 and 3 for allowance or ban of issue by timer of radio signal of start or stop of procedure of automatic start of engine. Control is allowed - “SET” - indicator on LCD. Control is allowed – there is no indicator “SET” on LCD.</p> 
<p>Functions of enlargement of parameter of time in condition of install of timers</p>			<p>For enlargement of parameter press and dismiss button 3 (every pressing leads to only one unit of change of parameter).</p>
<p>Functions of decrease of parameter of time in condition of install of timers</p>			<p>For decrease of parameter press and dismiss button 4 (every pressing leads to only one unit of change of parameter).</p>






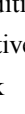













Signals of confirmation of trinket of two-way contact of system ZX-1060

Table 3

	Sound 1	Sound 2	Sound + vibrato	LCD - pictograph
Security setting (from trinket of two-way contact, normal trinket or at passive security setting). Soundless setting, without sensors, setting with started engine.	1 beep	1 beep	1 beep	
Blockage of doors in condition "Valet"	1 beep	1 beep	1 beep	
Security setting with blocking terminal switches of doors	3 beeps	3 beeps	3 beeps	
Security setting with blocking terminal switches of bonnet/carrier	3 beeps	3 beeps	3beeps	
Security setting with blocking basic areas of both sensors	3 beeps	3 beeps	3 beeps	
Dismounting out of security (from trinket of two-way contact, normal trinket, soundless dismounting, dismounting out of security at started engine)	2 beeps	2 beeps	2 beeps	
Unlocking of doors in condition "Valet"	2 beeps	2 beeps	2 beeps	
Warning about start of system from door terminal switch at dismounting from security.	4 beeps	4 beeps	4 beeps	
Warning about start of system from buttons of bonnet/carrier at dismounting out of security	4 beeps	4 beeps	4 beeps	
Warning about start of system from turning of ignition on at dismounting out of security.	4 beeps	4 beeps	4 beeps	
Warning about starting system from first sensor of hit at dismounting out of security	4 beeps	4 beeps	4 beeps	
Warning about starting system from second sensor of hit at dismounting out of security.	4 beeps	4 beeps	4 beeps	
Signal of confirmation of turning of audio and light signal device off at starting system	Set of beeps 1	Set of beeps 1	Set of beeps 1 	
Starting system from terminal switch of doors	Melody 1 x 10 sec.	Melody 1 x 10 sec.	Melody 1 x 10 sec.  x 6 sec.	

* Audio signals may be disconnected.

* * Vibrato may be disconnected.

	Sound 1	Sound 2	Sound and vibrato	LCD - pictograph
Start of system from terminal switch of bonnet/carrier	Melody 2 x 10 sec.	Melody 2 x 10 sec.	Melody 2 x 10 sec.  x 6 sec.	
Start of system at turning on of ignition	Melody 3 x 10 sec.	Melody 3 x 10 sec.	Melody 3 x 10 sec.  x 6 sec.	
Start of system by channel of warning of outside sensors	5 beeps	5 beeps	5 beeps  	
Start of system by basic channel of first outside sensor	Melody 4 x 10 sec.	Melody 4 x 10 sec.	Melody 4 x 10 sec.  x 6 sec.	
Start of system by basic channel of second (main) outside sensor	Melody 5 x 10 sec.	Melody 5 x 10 sec.	Melody 5 x 10 sec.  x 6 sec.	
Battery is discharged	2 beeps	2 beeps	_____	
There is not signal of contact with main block during 3 sec.	1 short and 1 long beep	1 short and 1 long beep	_____	 disappear
Warning about turning on of ignition in condition "security is divested"(if function F15 is turned on)	Set of beeps 2	Set of beeps 2	Set of beeps 2	
Supplementary call from pager (press and maintain button "Call" more than 2 sec.)	Dense beeps x 10 sec.	Dense beeps x 10 sec.	Dense beeps x 10 sec.  x 10 sec.	CALL
Remote disconnection of siren in condition "Security"(night condition)	_____	_____	_____	
Remote turning on/turning off of cyclic timer 1,2, 3 or 4 hours of intervals of automatic start of engine.	1 beep	1 beep	1 beep	
Remote turning on/turning off of automatic start of engine by sensor of temperature.	1 beep	1 beep	1 beep	
Confirmation of registration of transponder	Set of beeps 4		2 vibrato	
Signals of check of contact/renewal of indication of condition of trinket: By delivery of active command Soundless check of contact/renewal of condition (once, short pressing against the button CH2 or CH3)	Indication with relevant command	Indication with relevant command	Indication with relevant command	Indication with relevant command
				 2 times

* Audio signals may be disconnected.

* * Vibrato may be disconnected.

Working conditions of LED-indicator of security system

Dense blink	passive setting of security system
Slow blink	security system is set
Turned off	security system is divested
Burn always	condition “Valet”
One flash...pause	started basic area of first sensor of hit
Two flash...pause	started basic area of second sensor of hit
Three flash...pause	started trigger of bonnet/carrier
Four flash...pause	started trigger of terminal switch of doors, Door (-), Door (+)
Five flash...pause	warning about start of system by turning on of ignition
One long flash and three short	confirmation of registration of transponder

Short signals of confirmation which are given by siren of system

1. Audio signal * security system is delivered
2. Audio signal * system is divested out of security
3. Audio signal system is in security, but door, bonnet or carrier of car is opened.
4. Audio signal warning about start of system in dismounting from security.

* The audio signals may be disconnected.

Working condition of outside light of car

1. Flash system is delivered to security.
2. Flashes system is divested out of security.
3. Flashes system is in security, but door, bonnet or carrier of car are opened.
4. Flashes warning about start of system in dismounting out of security.

↳ Remark

If signal device started when you are absence, in dismounting of system out of security hear four short audio signals and four times blink outside light or indicator of turning, LED indicator will blink by code, which corresponds that area which started when you are absence.

Before start of engine of car to see, it blinks LED indicator positioned in antenna module. Quantity of flashes of LED indicator specifies the security area by system, which called start of system when you are absence. More detailed information happens in chapter “signals of warning about attempting of penetration to car” of that manual.

Attempting divests system out of security after that system started (siren of signal device is turned on), it leads to only disconnection of audio signal device. System will not be divested out of security. For that, in order to divest system out of security, it is necessary to press button of dismounting out of security in trinket-transmitter, when system does not give audio signal device.

Supplementary commands of setting of system to security

Passive (automatic) setting of system to security

- It turns on the engine, leaves out of car, and closes all doors, bonnet and carrier.
- LED indicator begins to blink often, specifying that turned on obstacle light-second timer of passive setting of system to security.
- By expiration 30 seconds system turns on condition of security.
- Outside lights of car blink once.
- Siren will give one short audio signal.

If it has supplementary chain of locking/unlocking of locks of doors and programmable function F24 turned on (locking of locks of doors in automatic setting to security), the doors of car will be locked.

Remark

If during work of timer of passive setting to security the door, bonnet or carrier of car will opened, the work of timer of passive setting of system to security will be checked. When all doors, bonnet and carrier will be closed, system begins cycle of passive setting to security firstly. By the end of obstacle light of second interval of time it will turn on the condition of security.

Manual setting of system to security

If you cannot by any reason use trinket-transmitter for setting of system to security. You can do the thing by means of button “Valet” at anytime, even in absence of key of ignition.

- Temporary press, dismiss, afterwards press and maintain (more than 3 seconds) button “Valet” until confirmation by audio signal of turning on of condition of setting to security.
- LED indicator begins to blink quickly, specifying condition of expectation of close of last door.
 - (1) If the door was closed, system will wait for opening, afterwards for close of last door.
 - (2) If the door was opened, system will wait for close of last door.
- After the last door is closed and by expiration of 3 seconds the condition of full protection is turned on. If there is supplementary chain of locking/unlocking of doors locks and programmable function F24 is turned on (blockage of doors' locks at automatic setting to security), and then doors of the car will be locked.

Remark

Manual setting in condition of security is accomplished only to 1 cycle until dismounting of system out of security. After turning off of ignition, manual setting in condition of security may be accomplished only after 5 seconds of delay.

Protection of car in security condition

Protection of car at turning off security condition

- Opening of bonnet, carrier or door of car lead to immediate start of system and turning on signal device. During 30 seconds siren will work and outside lights of car will blink. After that sound of siren and blinking of outside lights are ceased, and system will continue to control all chains of protection of car. If robber or hijacker left the door by open, siren will work during six 30 seconds cycles and afterwards will be disconnected; that area of protection will be isolated and system continues to control other chains of protection of car.
- Every time, when system is put in security, LED indicator, which is positioned in module of antenna, begins blink quickly. Blinking of LED indicator serves by visual warning for potential robbers or hijackers.
- As indicator the LED are used which use low current, therefore, even if system is left in security condition to long time, work of LED does not lead to discharge of vacuum battery of car.
- At every start of system outside lights of car blink during obstacle lights of cyclic second of signal device, attracting attention to the car.
- Supplementary function: every time, when system is left to security, chain of start of car is blocked. Herewith, engine of car does not may be started by means of key of ignition.
- When system is in security, any strong hit by car body or glass of car leads to start of sensor of hit and turning on of signal device.
- More weak hits lead to start of area of warning of sensor of hit, after that siren will give several short series of warning tonal signals.

Protection of car at turning on security condition and at working engine

- Opening of bonnet, carrier or door of car lead to immediate start of system and turning on of signal device. All blocking chains will be turned on. During 30 seconds siren will work and outside lights of car will blink. After that audio siren and blinking of outside lights are ceased, and system will continue to control all chains of security of car. If robber or hijacker left the door by open, siren will work during six 30 cyclic seconds and afterwards is disconnected; that area of protection will be isolated, system continues to control other chains of protection of car.
- LED indicator begins to blink slowly. At every startup of system outside lights of car blink during 30 cyclic seconds of signal device, attracting attention to the car.

Warning signals about attempting of penetration to the car

If when you are absence attempting of penetration to the car begins, security system informs you about this.

At dismounting of system from protection four short audio signals are heard and four times outside lights or designator of turning blink.

Sit in a car and before that how it turns key in lock of ignition; see that how LED indicator in instrument panel of car blinks.

- If LED indicator blinks one time over pause, system operated from first sensor of hit or from trigger of supplementary device which is connected with system.
- If LED blinks two times over pause, system operated from second sensor of hit or from trigger of supplementary device which is connected with system.
- If LED indicator blinks three times over pause, system operated from terminal turning off of carrier or bonnet (at attempting it opens bonnet or carrier)INST1(-).
- If LED indicator blinks four times over pause, system operated from terminal turning off of door (at attempting it opens door of car) Door(-), Door(+).
- If LED indicator blinks five times over pause, system started from turning on of ignition.

Signals of warning about attempting of penetration to car which are preserved in memory of system and are disappeared in turning of ignition off.

Condition of “Anti-Hi-Jack” (protection against hijacking and grabbing of car)

That system allows to use two independent or simultaneous edition of turning of function “Anti-Hi-Jack” on.

Remote turning of function “Anti-Hi-Jack” on by means of second channel of transmitter (Tx) (programmable function F17).

1. It turns on ignition or winds the engine.
2. Simultaneously press and maintain buttons 1 and 2 (see picture 1) until appearance of confirmative signal in the manner of three flashes of outside lights.
3. It dismisses buttons of trinket.
4. 20 seconds delay is turned on.
5. During following 20 seconds system begins go give short audio signals and periodically turns on blocking chains.
6. Sum total: after 40 seconds delay it turns on condition of alarm (audio and light signal device).
7. Always it turns on all blocking chains which lead to full stop of engine.

Function of “Anti-Hi-Jack” at turning of ignition (IGN) on and start of terminal switch of doors, stop-signals or sensor of rapidity of car (programmable function F18 and F19).

Work of function

1. Function is turned off, is activated at every turning of ignition on.
2. It is activated at every turning of ignition on and start of terminal switch of pedal of brake Stop (+).
3. It is activated at every turning of ignition on and start of terminal switch of door Door (+), Door (-).
4. It is activated at every turning of ignition on and movement of car.

Remark

After alarm signal device is turned on in condition “Anti-Hi-Jack”, audio and light signals will work until full discharge of vacuum of car. Disconnection of system in condition “Anti-Hi-Jack” may only be with the help of button “Valet” in condition of simple pressing against the button “Valet” or by means of inputting of secret code.

Disconnection of condition “Anti-Hi-Jack”

Disconnection of function “Anti-Hi-Jack” during 40 seconds after its turning on (that is during the warning cycle, until turning of siren on, of outside lights, of inside salon of lighting and of chains of blocking of engine) is made by single pressing against the button switch “Valet”.

- If function F13 in condition “Valet” and started alarm signal device, it turns on “Anti-Hi-Jack” by following method: turns on, afterwards turns on again ignition and during 10 seconds press the button switch “Valet”.
- If function F13 in condition “secret code” it turns on and again turns on ignition two times, after that uses personal secret code of disconnection of system.

Passive blocking of engine (function of immobilizer F16)

For turning of function of passive blocking of engine on it turned around the master-setter or see chapter “programmable functions” (function F16).

Passive locking of engine (function of immobilizer) provides automatic turning of chains of locking on ARM, ARM by expiration 20 seconds after turning of ignition off. Herewith system will not start from opening of doors, bonnet or carrier or from sensors, and connected to system, LED will blink slowly.

Turning of passive locking of engine off may be accomplished with the help of transmitter and button “Valet” / “secret code” or with the help of button “Valet” / “secret code” (ONLY! Condition is programmed).

If during 20 seconds after turning of ignition off ignition will again be turned on or engine will be run, the action of function of passive locking will be abolished. If function of passive locking of engine was activated, at turning of ignition on siren of system begins to give short warning signals during 20 seconds, after that the condition of alarm is turned on 30 seconds. If ignition will is turned off, afterwards again it is turned on, process is repeated. If ignition is remained by turning on, siren will continue to work during six cycles by 30 seconds.

At any moment of time YOU can turn on “full” security condition, pressed button 1 (see picture 1) of transmitter. Herewith YOU hear one signal of siren which outside light blink once.

Disconnection of passive locking of engine

- If ignition is turned on, momentarily press the button of dismounting of system out of security – this abolishes action of function of passive locking of engine, but does not abolish action of function “Anti-Hi-Jack” (if it is turned on).
- If transmitter is not corrected or is lost, it disconnects system by means of button “Valet” or by means of input of personal code (depending on condition of function F13). Pay attention to that if system will not disconnected during 20 seconds after turning of ignition on, condition of alarm on.

Turning of condition of passive immobilizer off may be by means of active anti-hijack of transponder, if function F16.4 is turned on. In this condition, system automatic begins to search the transponder in volume of cabin of car during 20 seconds after turning of ignition on.

↳ Remark

If functions F17, F18, F19 (functions “Anti-Hi-Jack”) are turned on and system turned on the alarm signal device, and turning of system off is carried through by principle of disconnection of condition “Anti-Hi-Jack”.

- If function “turbo timer” is activated, system delays turning of locking chains ARM on, ARM at the time of work of turbo timer, providing the work of engine without key of ignition. At the end of working time of timer and expiration 20 seconds, all locking chains are turned on in condition “passive locking of engine”.
- Function of passive locking of engine does not depend on condition of function F20 (AV-trigger).

AV-function-dismounting of system out of security to two stages (function F20)

Dismounting of system out of security to two stages allows to heighten anti-hijacking of your car again of “electronic opening” by equipment of kind 409 and so on. If function is turned on, AV-trigger (F20), setting of security system by trinket-transmitter or by means of button “Valet” installs all locking chains ARM in security condition. At accomplishment of operation “divest out of security” by trinket-transmitter, system releases doors, disconnects terminal switches of doors, bonnet and carrier. All locking chains are remained in condition “security”. For final locking of system use the button “Valet” or lead Your “secret code” of locking of system, herewith the chains of locking will be locked and it may wind the engine.

- If function “turbo timer” is activated, system delays turning of locking chains ARM on, ARM to working time of turbo timer, providing the work of engine without key of ignition. Afterwards the engine will be turned off automatically, all locking chains are turned on and channels of sensors are activated.

Active anti-hijack and anti-car-hijack in condition of monitoring of working engine (active anti-hijack transponder)

Function F14

Working of system in condition of active protection (work with card)

Before the beginning of turning of active protection on program the transponder to memory of system. For working with system it may use two kinds of transponders “all-purpose” or “all-purpose-energy-conserving” (see the appendix 2).

Anti-hijack active transponder is prearranged for increase of effectiveness of protective character of safe system, provision of return of machine and safety of car of owner. The built-in function F14 allows to choose one of three conditions of working.

F14/1 – condition “is turned off”. Active anti-hijack and anti-car-hijack are turned off.

F14/2 – condition of close protection of first grade. System determines existence of transponder at every turning of ignition on, confirming by flashing of LED indicator (one long and three short). The transponder in working area (or delivery of transponder is turned on)-normal working of system. The transponder outside of working area (or delivery of transponder is turned off)-system turns the locking chains on with delay to 1 minute. Installation (turning of delivery on) of transponder in working area provides recovery of chains of breaking-off at any time.

F14/3 – condition of close protection of second grade. System determines existence of transponder at every turning of ignition on, confirming by flashing of LED indicator (one long and three short). Following protective actions are accomplished in condition of turning of algorithm on of locking by kind “Anti-Hi-Jack”, if system “lost” the transponder. The transponder in working area—normal work of system. The transponder outside of the working area—system starts the condition “Anti-Hi-Jack”. Following installation (turning on) of transponder in working area until beginning of safe locking of engine provides recovery of normal work of system. If the procedure of safe locking of engine is started, and continuously – installation (turning of delivery on) of transponder in working area does not provide installation of chains of breaking-off. System may be “recovered” only by means of button “Valet” or by inputting “of secret code”.

Safe turning of engine off – procedure of discontinuous “turning on/turning off of locking” with enlarging pause of turning of locking on, that is to say that pause of turning of engine off will become more and over 15 seconds the engine will turned on absolutely.

Work of system in condition of active protection (work with card)

Necessarily it connects to wire "Stop" of safe system to wire "Stop"-signals of car.

Protection at working engine (be turned of ignition on)

Doors of car are closed.

Ignition is turned on or engine is started.

Transponder is identified.

System begins consultation of condition of terminal switches (triggers) of doors automatically.

Door is opened and is closed.

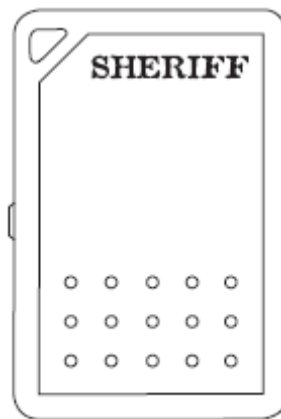
- System moves to consultation of condition of line "Stop", connected to wire "Stop"-signals of car.
If the signal "Stop" did not enter, system may await the signal "Stop" during 5 minutes (condition of short stop).
When 5 minutes expired, the transponder is absent, system begins the procedure of safe locking of engine. Signal "Stop" entered – system begins search of transponder during 1 minute. Continuously:
- The transponder is identified successfully. System returns to consultation of terminal switches of doors in normal condition. Following pressing against the pedal "Stop" does not activates the search of transponder.
- The transponder is not found. System begins the procedure of safe locking of engine by expiration 1 minute.
"Stop" is pressed and is maintained – any opening, closing of doors of car call the procedure of consultation of transponder. If the transponder is not found, system begins the procedure of safe locking of engine for 1 minute.

Door is opened always

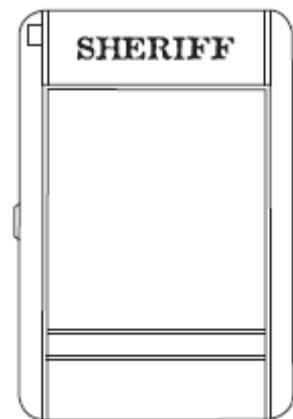
- System checks the condition of line "Stop" connected to wire "Stop"-signals of car. Every pressing against the pedal of brake will activate the procedure of consultation of transponder. In the absence of signal "Stop" more than 5 minutes (condition of short stop) and absence of transponder, system begins the procedure of safe locking of engine.

Remark

Anti-hijack transponder may be used for disconnection of condition "locking" of built-in function of immobilizer at choice of function F16.4.



LDT-920



LDT-920S

All-purpose anti-hijack active transponders

Disconnection of system

Button switch “Valet”

Button switch “Valet” allows YOU to disconnect to all functions of protection of that system temporarily, that it expels necessity for giving the transmitter of control by YOUR system to servant of parking or machinist of station of technical service. When system is in condition “Valet”, all functions of protection are disconnected, except for function of remote control over condition “Panic” and function of remote control over locking and unlocking of locks of doors of car.

Condition “Valet”

Turning of condition “Valet” on.

1. Divest system out of protection from trinket-transmitter or button “Valet” or lead its personal code of manual disconnection of system.
2. Turn on and turn off ignition.
3. During 5 seconds momentarily press and dismiss button “Valet”.
4. LED indicator begins to shine always.
5. System is in service condition “Valet”.

Remark

In condition “Valet” every turning of ignition off will be accompanied by momentary audio signal. Do not forget to disconnect service condition “Valet”, if this condition which YOU do not want it. This provides full protection of your car.

Turning of condition “Valet” off

1. Turn on and turn off ignition.
2. During 5 seconds momentarily press and dismiss button “Valet”.
3. LED indicator flames out.
4. System moves to working condition.

Manual disconnection of security system by means of switch “Valet”

The security system may be divested out of security and without use of trinket-transmitter of remote control. The function is provided to the thing, if YOU need to divest system out of security and to use the car, but trinket-transmitter is lost or is not corrected. If in programmable system for manual disconnection of system switch “Valet” is chosen, and for disconnection of system do following: open the door of car – security system works and siren is turned on; turn of ignition on; during 10 seconds momentarily press the button “Valet”.

Pay attention to that herewith system will not be in condition “Valet”!

Disconnection of system by means of personal code

Choice of coded condition of disconnection of system is actualized by function F13. For this ask YOUR master-setter or see chapter “programmable functions” and specification by setting of system. Pay attention to that choice of the function also determine the method of disconnection of condition “Anti-Hi-Jack” (“Valet” or coded). In the event of that if code of condition of dismounting out of security is turned on, YOU can use factory code (11) or for providing of maximum protection of YOUR car, YOU can program yourself personal code of disconnection at any time. Code consist of two numerals, one of them may be any number from 1 to 9.

For disconnection of system by means of personal code

1. The door is opened by the key (system starts and outside lights are turned on and so on).
2. Turn on, turn off and afterwards again turn of ignition on.
3. During 10 seconds press the button switch “Valet” anytime which corresponding to first number of YOUR personal code (factory setting – 1 time).
4. Turn off and again turn of ignition on.
5. During 10 seconds press button switch “Valet” anytime which corresponds to second number of YOUR personal code (factory setting – 1 time).
6. Turn off and again turn of ignition on – condition of alarm is turned off and engine may start up.

Remark

If 3 times of series are led to incorrect code, system ceases to perceive farther attempting of input code during a few minutes.

Supplementary service function of control over system

Supplementary (emergency) call at pressing against the button of emergency call which is positioned in antenna module of transceiver.

- System has supplementary transfer channel of call signal/information owner about trinket of two-way contact. Control over call may be actualized by second person, who is in a car and active button “CALL” in module of antenna-pager. Signal of call is formed at pressing and maintaining the button “CALL” more than 2 seconds.
- Bipper of trinket of two-way contact begins to give repeating audio signal often during 5 seconds. Vibrato is activated also to 5 seconds.
- Signal of call may be turned off in advance at momentary pressing against the button “F” trinket of two-way contact.

Automatic locking of doors at turning of ignition on (function F3/2)

If in YOUR car supplementary electric locks are installed, the system may be programmed to automatic locking of doors at turning of ignition on. Every time at turning of ignition on over 3 seconds the doors of car will be locked for providing to YOUR safety. If any of doors will be opened in this time, the doors will not be locked. If YOU want to turn the function on, turn to YOUR master-setter or see the chapter “programmable functions”.

Automatic locking of doors at beginning of movement of car (function F3/3)

If in YOUR car electric sensor of rapidity and supplementary electric locking of doors are installed, the system may be programmed in automatic locking of doors at beginning of movement of car – over 3 seconds doors of car will be locked from providing to YOUR safety. If any of doors will be opened in this time, doors will not be locked. If YOU want to turn the function on, turn to YOUR master-setter or see chapter “programmable functions”.

Automatic locking of doors at pressing against the pedal “Stop” of car (function F3/4)

If function F3/4 is programmed, at turning on ignition on and locking doors – pressing against the pedal “Stop” calls automatic locking of locks of doors of car over 3 seconds.

Automatic opening of doors at turning on ignition off (function F4)

If in YOUR car supplementary electric locking of doors is installed, every time turning of ignition of doors of car on will be opened automatically. If YOU want to disconnect the function, turn to YOUR master-setter or see chapter “programmable functions”.

Remote control over supplementary equipments (channel CH2)

The system has channel CH2 (of wire HP-contacts relay: dark blue with black) of control over different supplementary equipment, which is connected to system. This channel may be used (be programmed) for:

- Remote opening of carrier of car;
- Remote control over window lift of car;
- Remote control over timer equipment;
- Control over security condition of car with starting engine without key of ignition.
- Control over different equipments of kind of trigger. Programmable function “trigger” (control over output in any time and in any condition of system).

For delivery of controlling signal to supplementary equipment by channel CH2 use trinket-transmitter by table 1, command of control over system, also use table of programmable functions for choice of asking parameters. Output of channel CH2 – two outputs of opening relay normally with current of loading do not more than 25 A in pulsed condition.

Remote control over supplementary equipment (channel CH3)

The system has channel CH3 (green wire with white) of control over different supplementary equipment, which is connected to system. The channel may be used (be programmed) for:

- Remote opening of carrier of car;
- Remote control over timer equipment;
- Control over equipment by given temporary intervals.

For delivery of controlling signal to supplementary equipment by channel CH3 use trinket-transmitter according to table 1, table 2 command of control over system, also use the table of programmable functions for choice of asking parameters. Output of channel CH3 is connected to “mass” during time of active channel. Output of channel CH3 – weak current output, which is preassigned for control over winding of supplementary relay or equivalent weak current loading.

Remark

If outputs of channel CH2, CH3 were activated at the time, when system was in security condition, and system momentarily to certain time disconnects sensor of hit and trigger of bonnet/carrier for that opening of carrier did not call the start of system. After that carrier will be closed, system again automatically takes this chain under the security.

Remote control over supplementary equipments (channel CH4)

The system has channel CH4 (green wire with black) of control over different supplementary equipments, which are connected to system. The channel may be used for:

- Of remote control over timer equipment;
- Of pulsed output of negative polarity to 1/12/30 seconds at setting of security system (edition of use – output of control over window lift, electric hatch and so on);
- Control over supplementary equipment of alarm signal device – pager.

Output of channel CH4 is connected with “mass” during time of active channel. Output of channel CH4 – weak current output is preassigned to control over winding of supplementary relay or equivalent weak current loading.

Remote control over supplementary equipments (channel CH5)

The system has channel CH5 (of blue wire with red strip and blue with black strip) of control over different supplementary equipments, which are connected to system in condition of start of car engine. This channel may be used as:

- Pulsed outlet with programmable length of opening of lock of passengers` doors at sequential condition of control over central lock (pulse appears at iterative pressing the button of trinket – “divest out of security” after turning of condition “security” off). Length of pulse corresponds to value which is determined in function F7.
- Pulsed outlet to 20 seconds at dismounting from system out of security (edition of utilization – outlet of control over polite backlight). Turning of ignition on abolishes action of pulse at any time.
- 1 second of pulse outlet which arising before automatic start of engine under control over system ZX-1060.
- 1 second of pulse outlet of polarity which arising at turning of line of on in condition of automatic start of engine under control over system ZX-1060.

Outlet of channel CH5 – three outlets of disconnection relay with current of loading do not more than 25 A in pulsed condition of control normally.

Remote control over siren (turning on/turning off, night condition of working system)

If condition of operation of system demands the observance of silence or delivery of alarm signals with the help of another supplementary equipment (pager). YOU can disconnect audio alarm signal device temporarily absolutely in security condition. Light alarm signal device and signal of supplementary channel store its work. Two momentary

simultaneous pressing the button 3 and 4 during 2 seconds in security condition (see picture 1).

- Confirmation of turning of siren off: one long and one short flash one short flash of outside lights.
- Confirmation of turning of siren on: three short flashes of outside lights.

Dismounting from system out of security automatic renews work of siren in normal condition.

Function of central lock

(control over blockage of locking of doors from cabin of car)

System ZX-1060 has built-in standard function of control over central lock of car. Install the supplementary switch inside cabin of car, YOU can block or unblock locking of door at any time for providing YOUR safety (see specification by installation of system). If function F11.1 is turned on, and at pressing and maintaining more 2 seconds of inside cabin of switch of control over central lock in situation “close”, outlet of channel CH4 connects to mass to time 1 second (negative pulse by length 1 second). System provides possibility for control over unblocking of passenger doors of cabin of car perforce at iterative pressing the button 2 trinket-transmitter at dismounting of system out of security. For that use supplementary outlet of control over unblocking of passenger doors of channels CH5. Length of pulse of unblocking of passenger doors equals the length of pulse of control over central locking of car by determined in function F7.

Programmable system

Programmable personal code of disconnection of system

Function F13 must correspond to condition “secret code”.

Factory code of disconnection of system – 11.

For programming of your personal code enter active personal code for permission of operation of exchange of secret code:

1. Divest system out of security (turn off the ignition, if it was turned on and wait for 5 seconds).
2. Turn on, turn off and afterwards again turn of ignition on.
3. During 10 seconds press button switch “Valet” of amount of time which corresponds to first number of YOUR personal code (factory installation – 1 time).
4. Turn off and again turn of ignition on.
5. During 10 seconds press button switch “Valet” of amount of time which corresponds to second number of YOUR personal code (factory installation – 1 time).
6. Turn off and again turn of ignition on.
7. If entered code is right, it sounds one short signal of siren.
8. During 5 seconds turn of ignition off and immediately accomplish procedure of record of new secret code.
9. Press button switch “Valet” 5 times. You can hear one short and one long signal of siren which confirming that system prepares for program of new personal code.
10. During 5 seconds after signals of siren press the button 1 (see picture 1) of transmitter for beginning input of first number of personal code. You can hear one confirmative signal of siren.
11. During 10 seconds press the button switch “Valet” of amount of time which corresponding to first number of YOUR personal code (from 1 to 9). Siren gives corresponding number of signals which confirming input of first number code.
12. During 10 seconds press the button 2 of transmitter (see picture 1) for beginning input of second number of personal code. You can hear two confirming signals of siren.
13. During 10 seconds press the button switch “Valet” of amount of time which corresponding to second number of YOUR personal code (from 1 to 9). Siren gives corresponding number of signals which confirming input of second number of code.
14. Turn of ignition on. You can hear one short and one long signals of siren which confirming that the program of new personal code is completed.

Necessarily record or well memorize Your personal code. Pay attention to that if function F13 is programmed as “secret code”, personal code also will be necessary for disconnected function “Anti-Hi-Jack”.

Remark

If system does not confirm input of secret code by audio signal, deliver system to security by means of trinket-transmitter, afterwards divest system out of security and repeat the procedure of inputting the secret code.

Programmable code of new transmitters (of anti-hijack transponder)

Important!

Pay attention to that at program of new transmitter to memory of system earlier all programmable codes of transmitter

and transponder disappear, therefore at programmable supplementary transmitters and transponder which being transmitters (transponders) must be programmed newly.

System supports in memory until four codes of trinket and transponders which is independent of that codes of four different trinkets or as the same code is registered in system 4 times.

Important!

Because in transmitters changeable (dynamic) code is used always, in certain situations (for example, at pressing buttons of trinket more 30 times outside the area of action of system) may occur the mistiming of trinket and system. In this event come near to the car and during 1 second twice press the button (see picture 1) of transmitter. Synchronization will be renewed, and trinket again can control over system.

Program of transmitters, anti-hijacker of transponder

Record of codes of new transmitters (F13 – condition “Valet”)

Important!

Remember that every operation must be accomplished during 5 seconds after previous operation. If 5 second interval is exceeded, system leaves programmable condition automatically that will be confirmed by one short and one long signals of siren. If in a programmable process it is turned of ignition off, system leaves the programmable condition immediately, and that confirmed this by one short and one long signals of siren.

If record of code of anti-hijacker transponder guesses the system, and its delivery must be turned off until beginning of procedure of programmable transmitters!

- Divest system out of security, sit in the car and turn of ignition on.
- Press the button switch “Valet” three times. You can hear one signal of siren which confirming that system is ready for program of new transmitters.
- Press and maintain the button 1 (see picture 1) of first transmitter, hitherto, until that YOU can hear long signal of siren which confirming that program of first transmitter is completed (channels of transmitter will be programmed automatically). Herewith LED begins to blink unusually.
- Press and maintain the button 1 (see picture 1) of second transmitter, hitherto, until that YOU can hear long signal of siren which confirming that program of second transmitter is completed. Herewith LED begins to blink unusually.
- Repeat operation 3 for other transmitters.
- Turn on delivery of transponder. System must confirm the successful recording code by signal of siren. Afterwards turn of delivery of transponder off.
- For outlet from condition of programmable transmitters:
 - a) Turn of ignition off or
 - b) Waiting for 8 seconds does not make neither action.

You can hear one short and one long signals of siren, which confirming the outlet from condition of programmable transmitters and LED of system flames out.
- Turn delivery of transponder on for normal work of system at starting engine.

Record of codes of new transmitters (F13 – condition “Secret code”)

If record of code of anti-hijacker transponder guess the system, its delivery must be turned off until beginning of procedure of programmable transmitters!

Divest the system out of security by means of trinket or by input of secret code by button “Valet”, that is to say:

- Turn on, turn off and afterwards turn of ignition on;
- By means of switch “Valet” enter first number of code (amount of pressing the button “Valet” corresponds to one number of code);
- Turn off and afterwards turn of ignition on;
- By means of switch “Valet” enter second number of code (amount of pressing the button “Valet” corresponds to second number of code);
- Turn off and afterwards turn of ignition on. System must confirm input of right code by audio signal;
- Press the button switch “Valet” 3 times. You can hear one long signal of siren;
- Press the button 1 (see picture 1) of first trinket-transmitter. System confirms record of new code of trinket to memory by audio signal;
- Press the button 1 (see picture 1) of second trinket-transmitter. System confirms record of new code of trinket to memory by audio signal;
- Repeat the operation 3 for other transmitters;
- Turn of delivery of transponder on. System must confirm successful record of code by signal of siren. Afterwards turn of ignition of transponder off;
- For outlet from condition of programmable transmitters:
 - a) Turn of ignition off or
 - b) Waiting for 8 seconds does not make neither action.You can hear one short and one long signals of siren which confirming the outlet from condition of programmable transmitters, LED system flames out.
- Turn of ignition of transponder on for normal work of system at starting engine.

Programmable function of system

Reprogramming condition of function from F1 to F11 accessibly always is independent of condition of function F13 without input “Secret code”.

If F13 is installed to the condition “Valet”, reprogramming is actualized by normal method from F1 to F25 inclusively.

If F13 is installed to condition “Secret code”, reprogramming condition of function F12-F25 is possible only after input of secret code.

1. Enter the secret code.
2. Program the function subsequently F1, F2-F25.

If secret code is not entered, reprogramming of function is possible only from F1 to F11, at attempt to go to function F12 system leaves the condition of program automatically.

System leaves the condition of reprogramming automatically after 14 seconds waiting or immediately after turning of ignition off.

1 Input to condition of program (F13 – condition “Valet”)

1. Divest system out of security by means of trinket or button “Valet”.
2. Turn of ignition on.
3. During 3 seconds after turning of ignition on press button switch “Valet” 3 times. You can hear one long signal of siren.
4. During 3 seconds after signal of siren turn off the ignition. You can hear one short and one long signals of siren.
5. During 3 seconds after signals of siren turn on ignition. You enter to condition of programmable function F1

automatically. LED begins to blink by single flashes.

In the condition of programmable function one or another the amount of flashes LED corresponds to number of programmable function, and one, two and so on; of signals of siren indicate the condition of this function.

After signals of siren You can:

- Change the condition of the function (pressed the button 1 (see picture 1) of transmitter). Therewith You again can hear 1 or 2 or 3 or 4 or 5 signals of siren correspondingly to new condition of function.
- Go to following function (pressed the button switch “Valet” one time).
- Leave the condition of program (for example, turned of ignition off).

Remark

Do not admit that among Your actions passed more 10 seconds, otherwise, system leaves the condition of program automatically and You can hear one short and one long signals of siren.

2 Input to condition of program (F13 – condition “Secret code”)

1. Divest the system out of security by means of trinket or button “Valet” by input of secret code:
 - a) Turn on, turn off afterwards turn of ignition on;
 - b) By means of switch “Valet” enter first number code;
 - c) Turn off and afterwards turn ignition on;
 - d) By means of switch “Valet” enter second number code;
 - e) Turn off and afterwards turn of ignition on. System must confirm input of right code by audio signal.
2. Press the button switch “Valet” 3 times. You can hear one long signal of siren.
3. During 3 seconds after signal of siren turn off ignition. You can hear one short and one long signals of siren.
4. During 3 seconds after signals of siren turn on ignition. You enter to condition of programmable function F1 automatically. LED begins to blink by single flashes.

In the condition of programmable one or another function the amount of flashes LED corresponds to number of programmable function, one or two signals of siren indicate condition of that function.

After signals of siren You can:

- Change condition of that function (pressed the button 1 (see picture 1) of transmitter). Therewith You again can hear 1 or 2 or 3 or 4 or 5 signals of siren correspondingly to new condition of function;
- Go to following function (pressed the button switch “Valet” one time);
- Leave the following condition of program (for example, turned off ignition).

Remark

Do not admit that among Your actions passed more 10 seconds, otherwise, system leaves the condition of program automatically, and You can hear one short and one long signals of siren.

Programmable function of system ZX-1060 SHERIFF**Table 4**

FN#	1 tone	2 tones	3 tones	4 tones
	At exit to condition of program and at pressing the button ARM	At pressing the button ARM	At pressing the button ARM	At pressing the button ARM
F1 siren	Turn off	Delay of turning on 10 seconds	Turning on always	
F2 limitation of incorrect start	Turn off	Turn on		
F3 locking of doors at turning of ignition on	Turn off	Turn on	“speedometer”	At pressing the pedal “Stop” over 3 seconds
F4 automatic unlocking at turning of ignition off	Turn off	Turn on		
F5 automatic rearrangement to security	Turn off	Turn on	Turn on with locking of doors	
F6 long pulse of locking/unlocking	5 seconds	35 seconds	60 seconds	
F7 long pulse of locking/unlocking	0.5 second	1 second	3.5 seconds	2 pulses of unlocking by 1 second
F8 protection at starting engine	Turn off	Turn on	Turn on with flickering light	Turn on with constant light
F9 controllable channel CH2	Output (-) according to maintenance of button with audio confirmation	Output pulse (-) 0.8 second with audio confirmation	Output pulse (-) 30 seconds with audio confirmation	Outputs of trigger 1 (work always) automatically is dropped at start of system
F10 sent channel CH3 (button 5)	Output pulse (-) 0.2 second with audio confirmation	Output pulse (-) 3.5 seconds with audio confirmation	Output pulse (-) 12 seconds with audio confirmation	Double pulse (-) 0.4/0.3/0.4 second with audio confirmation
F11 programmable channel CH4	Negative pulse 1 second at installing to security and at pressing with maintain more 2 seconds of button of central lock in condition “close”	Negative pulse 12 seconds at installing to security	Negative pulse 30 seconds at installing to security	Output (-) of pager

Factory setting

FN#	1 tone	2 tones	3 tones	4 tones
F12 renewal of factory readjustment	Turn off	Renewal		
F13 disconnection of system	“Valet”	“Secret code”		
F14 anti-hijack map-transponder	Turn off	Turn on	Turn on with “Anti-Hi-Jack”	
F15 signal of warning turning of ignition on in condition is divested out of security	Turn off	Turn on		
F16 passive blockage of engine (function of immobilizer)	Turn off	Turn on (turn off blockage of trinket or by button “Valet”/ “Code”)	Turn on (turn off only by button “Valet”/ “Code”)	Turn on (turn off only by button “Valet”/ “Code” or by transponder)
F17 turn on “Anti-Hi-Jack” with trinket transmitter of city air feed equipment	Turn off	Turn on		
F18 turn on “Anti-Hi-Jack 1” at turning of ignition on	Turn off	Turn on	Turn on with “Stop” (+) (with description of function)	
F19 turn on “Anti-Hi-Jack 2” at turning of ignition on	Turn off	Turn on with “DOOR” (+/-)	“Speedometer”	
F20 AV-trigger	Turn off	Turn on		
F21 programmable channel CH5	Supplementary output of control over passive lock of doors for divided safe unlocking of driver’s locks and locks of passengers’ doors	Negative pulse 20 seconds at dismounting from system out of security (polite backlight)	Pulse (-) 1 second until beginning of car start of engine	Pulse (-) 1 second at turning of line on of automatic signal communication
F22 close all (comfort function)	Turn off	10 seconds	15 seconds	30 seconds
F23 passive installation to security	Turn off	Turn on		
F24 blockage of doors at passive setting to security	Turn off	Turn on		

Factory setting

Short description of function of system ZX-1060 SHERIFF

Table 5

F1 siren	Control over sound of siren in condition of delivery of alarm signals. Siren is turned off, will be turned on, but with delay 10 seconds, is turned on immediately.
F2 limitation of incorrect start	If turning on of alarm occurred by reason of start of sensors of hit of movement, turning off is done ahead-of-schedule 5 times – basic area; 10 times – warning area – system turns of condition of consultation of sensors off until following cycle of security.
F3 locking of doors at turning of ignition on	At turning of key of ignition to condition “is turned on” and coming of following event: turning of ignition on, occurrence of signal in line “Speedometer”, pressing the pedal “Stop” – system blocks the locks of doors automatically.
F4 automatic unlocking at turning of ignition off	At turning of key of ignition to condition “is turned off” – system unblocks the locks of doors automatically.
F5 automatic resetting to security	If by some reasons of (occasional pressing the button “divest out of security”) that dismounting the system out of security is done, but herewith the door did not opened (end of the door did not start), system turns on the condition of security automatically over 20 seconds. Depending on chosen condition. Resetting the condition of security may pass without blockage of locking of doors or with blockage.
F6 Delay of preparedness of the end of doors at setting to security (delay by inside cabin lighting)	If the condition of rated polite backlight is turned on, system provides delay to consultation of the end of doors at setting to security. If terminal switch of the doors is remained without work over installed time, system informs about this by three audio and light signals.
F7 Long pulse of locking/unlocking	Work condition of central lock of system.
F8 Security at starting engine	System may be installed to security at starting engine (turning on ignition).
F9 controlled channel CH2	Remote controlled channel. Control over button “CH2” of trinket-transmitters. Audio confirmation of system and trinket.
F10 controlled channel CH3	Remote controlled channel. Control over button “CH3” of trinket-transmitters. Audio confirmation of system and trinket.
F11 programmable channel CH4	Programmable controlled channel.
F12 renewal of factory readjustment	Provide renewals of factory readjustment of all functions of system (except the functions of auto run)
F13 disconnection of system	Choice of work condition of switch “Valet”.
F14 anti-hijack map (“transponder”)	Turning on and choice of condition of active protective system with utilization of supplementary anti-hijack transponder (mark).
F15 warning signal of turning of ignition on in condition “be divested out of security”	If in the event of “be divested out of security” ignition is turned on, system gives signal to trinket-pager.
F16 passive blockage of engine (function of immobilizer)	At turning of ignition off over 20 seconds system turns on the chains of blockage. Passive immobilizer may be turned off out of trinket, by button “Valet” or by signal of anti-hijack mark.

F17 turning on “Anti-Hi-Jack” from trinket-transmitter (TX)	Remote turning of condition “Anti-Hi-Jack” on at winding engine (turning of ignition on).
F18 turning “Anti-Hi-Jack 1” on at turning of ignition on	Systematic turning of condition “Anti-Hi-Jack” on at turning of ignition on, pressing the pedal “Stop” at turning of ignition on.
F19 turning of “Anti-Hi-Jack” on at turning of ignition on.	F18.2 – turning of condition “A-H-J” on at turning of ignition on. F18.3 – turning of condition “A-H-J” on every time at delivery to wire “STOP” (+) +12 V at turning of ignition on. Prior use – connection with wire “STOP” (+) to switch of manual brake or supplementary button for emergency turning of condition “A-H-J” on. Condition may be abolished by pressing to button “Valet” or at input of secret code only to one cycle, until following delivery +12 V to wire “STOP”(+) (of activation of condition “A-H-J”). Do not recommend, simultaneously use together with functions F3.4.
F20 AV-trigger	Dismounting of system out of security to two stages. System does not turn on the blockage at receiving of signal from trinket-transmitter “divest out of security”. Blockage may be turned off only by button “Valet”.
F21 programmable channel CH5	Programmable controlled channel.
F22 close all (function “comfort”)	Choice of length of pulse of locking of central lock at control over rated function “Comfort” of car.
F23 passive setting to security	Automatic setting of system to security at turning of ignition off and at closing of following door over 30 seconds.
F24 blockage of doors at passive setting to security	If function of automatic setting to security is turned on, system blocks the lock of doors at turning of condition of “Protection” on.

Remote start of engine (general principles)

Control over start of engine in system ZX-1060




Function of automatic start of engine is integrated to protective system ZX-1060 SHERIFF and is its inseparable part. For accomplishment of start of engine it must accomplish all connection of wires to side chain of car, which providing control over function of start of engine according to led map in specification by installation of system ZX-1060.

At utilization of condition of checking the working engine by tachometer do not forget to program “idle turnovers” of warmed engine!

Detour of rated immobilizer

If the car is equipped by rated immobilizer it must accept supplementary measures by temporary turning of (detour of chain) that equipment off. Output of channel CH6 provides control over that equipment in automatic condition.

General start/stop of remote start

Function of control over start of engine is accomplished by pressing the button 6  of protective system ZX-1060. For that during 2 seconds it must twice press the button 6  of trinket-transmitter of two-way contact or twice press the button of the same name of supplementary trinket-transmitter of entering into a set of system. If all conditions are accomplished which permitting the start of engine, and that it will be winded. Forced turning of start of engine off is done by iterative double pressing the button 6  of trinket-transmitters.

Work of outside light (outside lights) in condition of auto run

Work of engine under the control over system ZX-1060 is accomplished with always aflame light (line of control over light (white wire) is activated always), if F8.1, F8.2 and F8.4 are installed or with blinking light, if function F8.3 is installed.

Ban of remote (automatic) start of engine

Automatic start of engine will be banned, if system is in condition “Anti-Hi-Jack” or is blocked by reason of absence of anti-hijack transponder.

If the engine is not started.

The command to start is not given, but start may not be done by reason of not accomplishing the conditions of start, system informs immediately about reason of nonfulfilment start of engine by light and audio signals, which corresponding error is registered to memory of system.

In condition of diagnostics this error may be determined (see the table of diagnostics).

If the engine is not started or is started and flames out

All the conditions of start are fulfilled, but by the any reason of that start of engine is not done or engine is done and flamed out during 5 minutes, system accomplishes supplementary attempting of start automatically (sum to 3 attempting of start). After third unsuccessful attempting start the engine of system, automatically record the incorrect code to memory for farther analysis. New command starts the engine; provide accomplishment of procedure of start firstly.

If the engine is started remotely in the condition of “protection is turned off”

1. Opening of bonnet/carrier, press the pedal “Stop”, activated line “Speedometer” (for the car Volga Automobile Plant with electronic sensor of rapidity), switching the tumbler “AST” to condition “turning off” or disconnection of parking brake (PP) turns off the engine. Corresponding error will be recorded to memory of errors of automatic start for analysis. Following remote (automatic) start is permitted at elimination of reason of stop of the engine (do not need the special procedure).
2. Opening the doors at working engine does not affect the possibility of following start of engine.
3. Opening the doors at stopped engine bans the possibility of following start of engine (only for manual gear-box, correct iteration of procedure of output is asked from machine for permission of following remote (automatic) start of engine).
4. Turning of ignition on by the key automatically goes to the system ZX-1060 from condition of auto run to normal condition for control over the car.
5. Setting the security of the car with starting system by engine turns off the engine immediately, also the engine is turned off automatically at setting the security during the procedure of correct output from machine (only for the car with manual gear-box).

If the engine is started remotely in condition “protection is turned off”

Starting of alarm signal device turns off the working engine and bans the following start until disconnected condition of alarm.



Control over start for the car with automatic gear-box

Condition, permitting the start of the engine


Remote (automatic) start of the engine is possible only at accomplishment following conditions:

1. Switch of the gear-box is in condition “Neutral” or “Parking”;
2. Car is not moved;
3. Terminal switches of bonnet, brake are not activated;
4. Tumbler “AST” in condition “Start is permitted”;
5. Condition of protective system ZX-1060 stably – condition “Protection” or “be divested out of the security” (alarm signal device is not turned on).

Start and work of the engine of the car with automatic gear-box

1. Remote start is permitted.
2. Double pressing the button 6  during 2 seconds starts the procedure of automatic start.
3. On the screen of trinket-pager:
 - Pictograph of dimensions blink;
 - At turning of ignition on appears the blinking pictograph of the key;
 - At successful start of the engine appear the blinking pictograph of smoke and blinking pictograph of hourglasses;
 - In hours working time of engine highlights in automatic condition (timer of countdown – value of function SF3).
4. Double pressing the button 6  during 2 seconds or accomplishing the work of timer stop the procedure of automatic start and turn off the engine.
Pictographs which indicating the work of system in condition of auto run disappear.

Disconnection of condition “Turbo timer”

Emergency disconnection of condition “Turbo timer” is carried through by double pressing of button 6  during 2 seconds.

Automatic disconnection of the engine at passive setting of system to security

1. The engine is started and works under the control over system ZX-1060 (signals of control over working engine attend).
2. Leave the machine and close the doors of the car (the engine works). LED indicator begins to blink immediately.
3. System turns on the condition of the security over 30 seconds and turns off the engine automatically.

Control over start for the car with manual gear-box

Condition which permitting start of the engine

Remote (automatic) start of the engine is possible only at accomplishment of following conditions:

1. Switch of gear-box is in condition “Neutral”;
2. The car is not moved;
3. Terminal switch of bonnet, brake is not activated;
4. Tumbler “AST” in condition “Starting is started”;
5. Condition of protective system ZX-1060 stably – condition “Protection” or “be divested out of security” (alarm signal device is not turned on);
6. The procedure of right output is accomplished from machine which permitting the system to silence the engine absolutely and to take the car under the control over start of engine of safe control in following time.

Start and working engine of the cars with manual gear-box of system ZX-1060


Remote (automatic) start of the engine is possible only at accomplishment of right procedure of preparation of system before start and accomplishment of following conditions.

Procedure of right output from machine (“Turbo timer” is turned off)



1. Start is permitted.
2. Accomplish right procedure of output from machine:
 - a) The engine works (signals of checking of working engine attend);
 - b) Turn off the ignition and take out the key out of the lock of ignition of the car (the engine continues to work).

Remark

After turning of ignition off the engine will work during the time which installed in function SF3. On the screen of trinket-transmitter the value of time of timer of countdown is displayed until automatic turning of the engine off. During this time it may open/close the doors of the car without limitations. If the engine will be silenced by system absolutely at the end of working timer of countdown or remotely (at closed doors to moment of noise elimination) by means of trinket or setting of system to security – following remote or automatic start of the engine are permitted.

- c) Leave the machine and close the doors of the car (the engine works);
- d) Turn off the engine remotely by means of trinket-transmitter, pressed twice the button 6 .

At this point of time you can accomplish remote or automatic start of the engine at any time, because of the system silenced the engine absolutely and took the car under the checking safe control over start of the engine at following time.

3. Double pressing the button 6  during 2 seconds will start the procedure of automatic start.
4. On the screen of trinket-pager:
 - Pictographs of dimensions blink;
 - At turning of ignition on blinking pictograph of the key will appear;
 - At successful start of the engine blinking pictograph of smoke and blinking pictograph of hourglass will appear;
 - In hours working time of the engine will highlight in automatic condition (timer of countdown – value of function SF3).
5. Double pressing the button 6  during 2 seconds or accomplishment of working timer will stop the procedure of automatic start and will turn off the engine.
Pictographs which indicating working system in condition of auto runs will disappear.

Automatic disconnection of the engine at setting of the system to security

1. The engine works (signals of the checking work of the engine attend).
2. Turn off the ignition and take out the key out of the lock of ignition of the car (the engine continues to work).
3. Leave the machine and close the door of the car (the engine works).
4. Press the button of setting to security in trinket-transmitter. System begins the security and over 2 seconds will turn off the engine.

Remark

If during setting to security the door was opened, system will begin the security with opening door, informed about



this over interval of time of installed function F6, the engine continues to work. On the screen of trinket value of time flashes which installed to SF3 timer of countdown. The engine will be turned off automatically over 2 seconds after close of last door.

System does not disconnect to the engine in condition of working function F8 – “resetting the security”.

Procedure of right output from machine (“Turbo timer” is turned on)

At turning of function “Turbo timer” off, noise elimination of the engine may accomplish immediately (especially) or consecutively – with the disconnection of beginning of timer of countdown, afterwards – turbo timer.

Especial disconnection – double pressing the button CH2 of trinket-transmitter will silence the engine especially with confirmation by one light signal (simultaneously start the timer of countdown and turbo timer).

Consecutive disconnection – double pressing the button 6  of trinket-transmitter (one long audio and light signals of confirmation) does not go to noise elimination of the engine. System resets only timer of countdown of specified output from machine, the engine may be silenced by system automatically by the end of time of working turbo timer or ahead of schedule at turning of turbo timer off by means of trinket-transmitter, following double pressing the button CH2 or 6 . The procedure permits to observe interval automatically of time of turning of turbo engine off without extra overspending of fuels, especially for small time of interval which is necessary for cooling of turbine.

Automatic disconnection of the engine at setting the system to security

1. The engine works (signals of checking the working engine attends).
2. Turn off the ignition and take out the key out of lock of ignition of the car (the engine continues to work).
3. Leave the machine and close the doors of the car (the engine works).
4. Press the button of setting to security in trinket-transmitter. System is protected immediately and turns off the engine by the end of time of working turbo timer.

Remark

If during setting to security the door was opened, system is protected with opened door, informed about this over interval of time of installed function F6, the engine continues to work. On the screen of trinket the value of time highlights which installed to SF3 of timer of countdown.

Close the doors of the car. The engine is turned of automatically by the end of time of working turbo timer.

Attention!

If You will open the door of the car at any time after accomplishment the procedure of specified output (the engine will be silenced) – system will ban the possibility automatically of following remote or automatic start and will inform You about this by three short light and audio signals. This provides the protection against luckless event at occasional turning of rapidity on in gear-box.

Corresponding error will be recorded to memory of errors of automatic start. At attempting the system will inform You about error of three short audio and light signals to make remote start of the engine. Accomplish right procedure of output from machine for permitting of following start.

Remark

It may disrupt accomplishment the procedure of programmable neutral at any time by means of switch “AST”, of switch of parking brake or simply press the pedal “Stop”, herewith system will inform You about cessation of procedure of right output by double audio and light signals.

At temporary or long disconnection of system of remote start of the engine by means of switch “AST” the system will inform You about this by audio and light signal simultaneously at the time of switch “AST”.

Choice of condition (of time) of working starter at starting of the engine (function SF8)

For right choice of the condition of working starter serve programmable function SF8.

SF8	-permit to give time of rolling starter in condition of three attempting of start of the engine.
SF8.1 (2/4/8 seconds)	-provide progressive amplification of time of rolling starter with every attempting correspondingly.
SF8.2 (0.6/0.6/0.6 seconds)	-maximal time of rolling starter 0.6 second in all attempting
SF8.3 (0.8/0.8/0.8 seconds)	-maximal time of rolling starter 0.8 second in all attempting
SF8.4 (1/1/1 second)	-maximal time of rolling starter 1 second in all attempting
SF8.5 (1.5/1.5/1.5 second)	-maximal time of rolling starter 1.5 second in all attempting
SF8.6 (2/2/2 seconds)	-maximal time of rolling starter 2 seconds in all attempting

System terminates rolling starter automatically until expiration of maximal time, if the engine is started.

Attention!

System confirms the fact of start of the engine by signal of tachometer or by appearance of voltage of charging of storage cell according to installed parameter to SF7. For some name plates of the cars the signals of confirmative start of the engine may appear with delay that may go to “torsion” of starter by running engine. Urgently we commend to choose that condition of working starter which comes near to your car maximally.

Programmable delay of starter (start of diesel) (function SF10)

For accomplishment of preparative operation of side electronics of the car for start of the engine the starter is turned on with delay. Especially these concerns about the car with diesel engine. SF10 helps to install time of delay of starter optimally or to synchronize starter by preparedness of checking lamp of heating the fuel of nozzle of diesel engine.

Check the start of the engine by signal of tachometer (function SF7.1)

Program idling turnovers before use the auto run of the engine.

System ZX-1060 provides checking the start of the engine by signal of tachometer. Start of the engine will be stopped, if accounted turnovers of the engine exceed the value $4xN_{xx}$ turnovers/minute. System ZX-1060 provides checking the turnovers of the engine in condition it work. The engine will stopped immediately in the event of that if actual turnovers of the engine exceed the value $4xN_{xx}$ turnovers/minute. Corresponding error will be recorded to memory of the errors of automatic start.

Programmable idle turnovers of the engine

1. Transfer the switch “AST” to condition “OFF”.
2. Turn on the ignition or wind the engine.
3. During 10 seconds switch “AST” to condition “ON/OFF” three times.
4. In the event of achievement dimension lights flash one time, siren whistles one time, confirming successful

input to condition of program.

5. During 10 seconds transfer the switch “AST” to condition “ON”. At this point of time during 1 minute conversion of the switch to condition “OFF” makes reading and record to memory of actual turnovers of the engine.

One flash of dimension lights and one long signal of siren will confirm successful record of the turnovers. If it is impossible account the turnovers of the engine or accounted turnovers will leave for the border of permitted extent, and then dimension lights blink three times, siren gives three short signals. Repeat the process of programmable signal of tachometer.

In the event of systematical failure, it is possible; have to refuse to use the tachometer. Programmable signal of tachometer is preserved in memory of the equipment and temporarily disconnects the delivery.

Check the starting engine by signal of charging batteries (function SF7.2)

If the signal of the tachometer may not be used, program the function SF7.2 of start of the engine by signal of charging batteries. System accounts the started engine, if voltage of side network was enlarged more than 0.6V.

Attention!

For some kind of the cars (for example, some cars “Ford”) increase of voltage of charging may happen very slowly (10 seconds and more) at started engine. Necessarily study the condition of working charging batteries in your car for right choice of time of rolling starter in function SF9. In the event of that it commends to choose fixed times of starter – 0.6 second, 0.8 second, 1 second, 1.5 second or 2 seconds.

System continues every time automatically to check the line of charging batteries during 1 minute after stopping the starter. If voltage of charging does not exceed 0.6 V, ZX-1060 accomplishes following attempt of start over 1 minute.

Check the starting engine by signal of working generator (function SF7.3)

If the signal of tachometer may not be used or you are not convinced of working system of charging batteries, program the function SF7.3 of starting engine by signal of working generator of the car. System considers the started engine, if voltage in line of excitation winding of generator achieved 12 V and more. At accomplishment of starting engine the system checks voltage always in line of excitation and in the event of disconnection does not permit to start the engine in condition of the car. For more accurate definition of moment of starting engine (in order that do not twist starter of the car) use the table of values of voltage of side chain, more it's the engine is considered by winding. Outside additional resistor is turned on by resistance 0-56 kilohm consecutively to line of wire the input TACH (green wire with orange (brown) strip).

Additional resistor	- Immediate input Tach (loop of yellow wire is not cut)	Loop of yellow wire is cut	Loop of yellow wire is cut and supplementary resistor 27 kilohm	Loop of yellow wire is cut and supplementary resistor 47 kilohm	Loop of yellow wire is cut and supplementary resistor 56 kilohm
Threshold of definition of starting engine (volt)	3.5	5.1	8	10.2	11

Check the charging batteries in condition of working engine under the control ZX-1060 (function SF9)

If the function is turned on, SF9 system will check the voltage of charging batteries in voltage of all cycle of working engine under control over automatic start. The engine will be stopped immediately, if the voltage of charging will exceed permissible limit in 16.5 V or disappear during the work of the engine (decrease below 11.5 V). Corresponding error will be recorded to memory of errors of automatic start.

Switch of automatic start “AST”

The switch of automatic start “AST” is preassigned for emergency disconnection of the engine, which working under the control by the system ZX-1060, temporary inhibition of the auto run, also for accomplishment function by reprogrammable conditions of working auto run.

“AST” in condition “ON” – start is permitted.

“AST” in condition “OFF” – start is banned (“stop” the engine).

Remark

Line of emergency switch “AST” is incorporated physically with line of parking brake. Before the control over the program of function of auto run ascertain that parking brake is activated.

Condition of turbo timer/short stops (Pit-Stop)

The condition of turbo timer maintains working engine after turning of ignition off by the key (SF2 is turned on), providing safe stop of turbo engine, also the possibility of short stop without turning of engine off (Pit-Stop).

Attention!



Turbo timer ceases the work (is turned off) automatically until the expiration of installed time in the event of emergency or spontaneous turning of engine off divesting delivery of side loading. Turning on/turning off of ignition without start of the engine do not turn on the turbo timer.

The engine works. Turning of ignition off turn on the timer of delay during installed to SF2, contacts with the relay of ignition IGN1 of system of auto run are remained by closed, IGN2, IGN3 are closed, providing the work of the engine at any condition of the system. At setting of the system to security, at line of blockage ARM, ARM is remained in condition “Be turned off” until expiration of time of working timer of delay.

After that SF2 time of line “ARM”, “ARM” are activated to condition “Protection”, the line IGN1 of system of remote start of the engine transfers to inactive condition (contacts with relay are opened, the engine will be stopped).

It is possible for emergency interruption of working turbo timer by means of trinket-transmitter at any time.

Reset of active condition of turbo timer with the help of transmitter

- Take out the key from the lock of ignition of the car.
- Afterwards during 2 seconds twice press the button of trinket-transmitter (see picture 1): CH2 for momentary disconnection TT or TT+timer of countdown in condition of manual box, iterative double pressing the button 6  – for disconnection TT in condition of manual box, button 6  – for momentary disconnection TT in

condition of automatic box.

- Turning of turbo timer off is confirmed by two short audio signals.

Attention!

Condition of turbo timer is maintained by all lines of ignition IGN1, IGN2 and IGN3.

Remote control over supplementary equipment (channel CH6) – function SF14 (detour of rated system)

The system has channel CH6 (wire – light blue with green) of control over different supplementary equipments, which connecting to system. The channel may use (program) how:

- Pulsed output of negative polarity. All times are activated until system accomplishes the procedure of automatic start and the engine works under the control ZX-1060. Turning off the emergency protection abolishes action of pulse at any time.
- Pulsed output of negative polarity. At turning on of line ING1 is activated temporarily, before finish of rolling of starter (until the engine is not started).
- 1 second pulsed output of negative polarity. At turning off of line ING1 of system of auto run is activated or at turning off of ignition by the key.
- One second pulsed output of negative polarity. At turning of ignition on is activated in condition of start of the engine by system of auto run ZX-1060.

Output of channel CH6 – is connected with “mass” during time of activation of channel. Output of channel CH6 weak current output which is preassigned for control over winding of supplementary relay or equivalent weak current loading.

Programmable function of remote start of system

Output to condition of program

- Divest the system out of the protection by means of trinket-transmitter or button “Valet”.
- Install the switch “AST” to condition “is turned off” (“OFF”).
- Turn on the ignition.
- During 5 seconds switch “AST”ON/OFF 3 times. You can hear one short signal of siren.
- During 5 seconds turn off, afterwards turn on the ignition. You enter to condition of programmable function SF1 automatically. LED begins to blink by single flashes.

In condition of program one or another of function the amount of flashes LED corresponds number of programmable function, 1 and 2 and so on signals of siren indicate condition of that function.

After signals of siren You can:

- Change the condition of that function (pressed the button 1 of trinket-transmitter). Herewith You again can hear 1, 2, 3, 4 or 5 signals of siren correspondingly to new condition of function.
- Transfer to following function (switched the switch “AST”ON/OFF.
- Leave the condition of program (for example, turned off the ignition).

Remark

Do not admit that among Your actions more 10 seconds went, otherwise, system leaves the condition of program automatically, and You can hear 1 short and 1 long signal of siren.

Table of programmable functions of remote start of the engine of system ZX-1060 SHERIFF

Attention!

Line of emergency switch “AST” is connected physically with line of parking brake. Before the control over programmable function of auto run ascertain that parking brake is activated.

Table 6

FN#	1 tone	2 tones	3 tones	4 tones	5 tones	6 tones
	At input to condition of program and at pressing the button ARM	At pressing the button ARM	At pressing the button ARM	At pressing the button ARM	At pressing the button ARM	At pressing the button ARM
SF1 diagnostics	Turn off	Output of diagnostic signals				
SF2 turbo timer	Turn off	1 minute	3 minutes	7 minutes	15 minutes	Be not limited
SF3 time of working engine (line IGN1)	10 minutes	15 minutes	20 minutes	25 minutes	30 minutes	Be not limited
SF4 remote start the engine by signal of daily timer from trinket-transmitter in actual time (24hours)	Turn off	Start the engine by signal “Start”(length of working engine according to SF3)	Start the engine by outside signal “Start”, stop by outside signal “Stop”			
SF5 start the engine by signal of temperature sensor (condition “thermostat”)	+5℃	0℃	-5℃	-10℃	-15℃	-20℃
SF6 start the engine by signal of built-in periodic timer in actual time (48hours)	1 hour	2 hours	3 hours	4 hours		
SF7 check the start of the engine	Start by signal of tachometer	Start by signal of tachometer	Start by signal of working generator			
SF8 maximal time of rolling the starter	2/4/8 seconds	0.6 second	0.8 second	1 second	1.5 second	2 seconds
SF9 check the charging battery in condition of working engine under control ZX-1060	Turn off	Turn on				
SF10 delay the start of starter	2 seconds	4 seconds	8 seconds	16 seconds	By preparedness of signal of checking lamp diesel(+)	

FN#	1 tone	2 tones	3 tones	4 tones	5 tones	6 tones
SF11 line IGN2	Automatic signal communication	IGN1 (be not connected at turnabout of the key "ignition is turned on")	Pulse from starter until turning off of ignition			
SF12 IGN3	Automatic signal communication	Automatic signal communication with turning on over 2 minutes after starting engine	Pulse 1 second after starting engine under control ZX-1060			
SF13 kind of gear-box	Manual box	Automatic box				
SF14 programmable channel CH6 (line of control over equipment of detour of rated immobilizers)	Pulse temporary working engine under control ZX-1060	Pulse of procedure of start until condition "engine is done" under control ZX-1060	Pulse 1 second at any turning of ignition off	Pulse (1) 1 second at turning on of line automatic signal communication		

Factory installation

Diagnostics of errors of remote start

1. Enter to condition of programmable function of auto run.
2. Choose the function SF1.
3. Press the button 1 of trinket-transmitter.
4. System informs about code of errors by audio light signal.
5. Codes of possible errors are done in table below.

Every following pressing the button 1 of trinket-transmitter leaves the code of errors newly. In the memory of system always store following error. Every following successful start of the engine start the code of error out of memory.

Table of information about errors of remote start of the engine of system ZX-1060 SHERIFF

Table 7

Signals of errors (audio and light)	
1 long signal	There is not error
Short signals	
1 short signal	Signal of tachometer is not programmed
2 short signals	Auto run is banned or is stopped by switch AST (AST is turned off)
3 short signals	Auto run is banned for manual box (procedure of output out of machine)

	is not accomplished)
4 short signals	Reserved
5 short signals	Terminal switch of bonnet is blocked (or stop of engine by starting terminal switch of bonnet)
6 short signals	Terminal switch “Stop” is blocked (or stop of engine by start of terminal switch “Stop”)
7 short signals	Start is impossible by unpreparation of line of indicator DIESEL (+). Signal did not enter more 1 minute.
8 short signals	Stop of engine at start of sensor of rapidity
One long and short signals	
1 long and 1 short signals	Start is impossible by the reason of absence of signal of charging more 1 minute.
1 long and 2 short signals	Start is impossible – signal tachometer is absent.
1 long and 3 short signals	Start is impossible – signal of generator is absent or disconnection of wire of delivery of winding of excitation of generator.
1 long and 4 short signals	Start is impossible – signal of tachometer is absent.
1 long and 5 short signals	Stop the engine – turnovers of the engine more critical (4000).
1 long and 6 short signals	Stop the engine – voltage of charging is absent (less 11.5V) or exceeds admissible 16.5 V.
1 long and 7 short signals	Stop the engine at starting protective signal device.

Remote functions of starting engine

Remote daily timer of actual time of starting engine (function SF4)

Installation time of remote start of the engine or start and stop the engine is carried through by turning of function SF4 on to condition SF4/2 or SF4/3, also by installation of parameters of timers of trinket-transmitter.

Readjustment of system ZX-1060

Enter to condition of programmable functions of remote start and turn on the function SF4 to one from conditions: SF4.2 – remote starting engine is carried through by time of timer “S”. Length of working engine is defined by value of time, and by installed in function SF3. The engine will be stopped after programmable time.

SF4.3 – remote starting engine is carried through after timer “S”. Stopping the engine happens by achievement of time which installed in timer “R”.

Readjustment of trinket-transmitter of two-way contact

Trinket-transmitter of two-way contact transmits radio signal of start/stop the engine after installed time of timer. Radio signal from trinket-transmitter is transferred only in the event of that if indicator “SET” flashes on screen LCD.

Control is permitted – indicator “SET” flashes on LCD.

Control is banned – indicator “SET” on LCD is absent.

Simultaneously press and maintain the button F and CH3 until appearance of indicator “SET” on screen LCD for turning of control off.

Installation of time in trinket-transmitter

1. Press and maintain F (5) more 3 seconds.
2. Timer of indicator “o`clock” will begin to blink, indicating condition of changing o`clock.
3. By pressing button F (5) transfer to field of installation values of time of remote start. Installation timers of time of start are highlighted on LCD-monitor with parameters “S” and “R”.
 “S” – timer of actual time of installation of active condition of channel.
 “R” – timer of resetting active condition of channel.
 Blinking indicator of time (clock, minutes) indicates that parameter of time may be changed.
4. Install the hour of time of start. Pressing the button CH2 changes reading to “+”. Pressing the button CH3 changes to “+”. Pressing the button CH3 changes reading to “-”.
5. For transfer to installation of minute momentarily press and dismiss F (5). Pressing the button CH2 changes reading to “+”. Pressing the button CH3 changes reading to “-”.
 Every pressing to F (5) cyclically transmitters the installation area of hours or minutes of different timers.
6. Press and maintain F (5) more 3 seconds for output out of condition of installation timers and closure of blinking of indicator of hours.

Timer of starting engine by programmable interval time during 48 hours

(function SF6)

System provides possibility of automatic start of engine over given intervals of time (1, 2, 3 or 4 hours) during 48 hours; also remotely install the periodicity of start of the engine by means of command of trinket-transmitter or by programmable intervals in function SF6. Time of working engine is defined by installed value to SF3.

Remark

In condition of control over engine from manual gear-box – wind the engine and accomplish the procedure of correct output out of machine.

Activation/deactivation

Simultaneously press and maintain the buttons 1+3 (ARM+CH2) more 2 seconds. System confirms activation/deactivation of timer by turning on/turning off of icon 2 (hourglass) on display of trinket-transmitter, also to 3 seconds leave the value of installed interval earlier.

Turning of timer of cyclic start off is accomplished analogically or automatically at full disconnection of delivery by protection of system.

Change (program) of intervals of cyclic start of the engine out of trinket-transmitter

1. Activate cyclic timer, maintaining the button 1+3 (ARM+CH2) more 2 seconds until appearance by pictograph of hourglass and appearance earlier of installed interval of time.
During following 10 seconds it may be possible to enter to procedure of cyclic change of interval at every momentary simultaneous pressing the button 1+4 (ARM+CH3). Every pressing will install new value of cyclic time consecutively with its indication on screen of trinket-transmitter of two-way contact at acceptance of corresponding signal from basic block. System leaves automatically out of procedure, if during 10 seconds do not accomplish the actions by change of interval.
2. For example, activated cyclic timer. System indicated the interval 2:00. Simultaneously pressed the button 1+4 (ARM+CH3) – system changed the interval and indicated on screen 3:00.
Following pressing the buttons 1+4 (ARM+CH3) changes the interval to 4:00, afterwards 1:00 and so on by circle. System leaves automatically out of procedure, if during 10 seconds do not accomplish the actions by change of interval.

Start of the engine by signal of built-in sensor of temperature

(thermostat) – function SF5

System provides possibility of automatic start of the engine by sensor of temperature in condition “thermostat”, if temperature comes down below installed in function SF5. First start by sensor of temperature happens to not earlier 40 minutes after activation of the function. Every following start may occur to not more often 40 minutes. Time of working engine is defined by value installed to SF3.

↳ Remark

In condition of control over engine with manual gear-box – wind the engine and accomplish the procedure of correct output out of machine.

Activate/deactivate the function of starting engine by sensor of temperature, as defined below:

- Twice simultaneously press the button 1+3 (ARM+CH2) during 2 seconds, at installed temperature of automatic start in function SF5.
- System confirms activation/deactivation of timer by turning on/turning off of icon 20 (thermometer) on screen of trinket-transmitter.

Turning of function of start of the engine off by signal of built-in sensor of temperature is accomplished analogically or automatically at full disconnection of delivery of protective system.

Change (program) of temperature of starting engine from trinket-transmitter

1. Activate the function of start by temperature; double simultaneous pressing the button 1+3 (ARM+CH2) until appearance of pictograph thermometer and appearance earlier of installed value of temperature.
2. During following 10 seconds may be possible enter the procedure of cyclic change of values of temperature of start at every momentary simultaneous pressing the button 1+4 (ARM+CH3). Every pressing will install new value of temperature consecutively with its indication on screen of trinket-transmitter of two-way contact at

acceptance of corresponding signal of basic block. System leaves the procedure automatically; if during 10 seconds do not accomplish action by changing parameter.

For example, activated start by temperature. System indicated the temperature -10°C . Simultaneously pressed the button 1+4 (ARM+CH3) – system changed the value of temperature on screen -15°C . Following pressing the button 1+4 (ARM+CH3) changes the value of temperature to -20°C , afterwards $+5^{\circ}\text{C}$ and so on by circle. System leaves the procedure automatically; if during 10 seconds do not accomplish action by changing parameter.

Change (program) of intervals of time of working engine in condition of auto run from trinket-transmitter.

1. Start the engine remotely (double pressing the button 6). System turns on the timer of countdown and on screen appears the value of time of working engine.
2. During following 10 seconds after successful start of engine may enter to procedure of cyclic change of intervals of time of automatic working engine at every temporary simultaneous pressing the button 1+4 (ARM+CH3). Every pressing will install new value of time of automatic working engine consecutively with its indication on screen of trinket-transmitter of two-way contact at acceptance of corresponding signal from basic block. System leaves the procedure automatically; if during 10 seconds do not accomplish action by changing parameter.

For example, remotely started the engine. System indicated the interval of time 0:10. Simultaneously pressed the button 1+4 (ARM+CH3) – system changed the interval and indicated on screen 0:15. Following pressing the button 1+4 (ARM+CH3) changes the interval to 0:20, afterwards 0:25 and so on by circle 0:25, 0:30, -:-, 0:10... System leaves the procedure automatically; if during 10 seconds do not accomplish action by changing parameter.

Starting engine by signal of outside resource (controller)

System provides possibility of automatic starting engine by signal from outside resource (timer, outside sensor of temperature and so on) with length of negative pulse not less 0.3 second. System provides start and check working engine with parameter according to programmable function analogically, if start was done remotely from trinket-transmitter.

SHERIFF

ZX-1060

Automatic protective system with two-way contact, five service channels, interactive LCD-pager, systems of passive and active anti-hi-jack and anti-car-jack, automatic starting engine with built-in relay.

Manual by setting

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Setting the basic component of system

Basic block (module of control)

Choose place in passenger cabin for installation of basic block of system (behind the instrument panel of car) and fix the block by means of two screws. Also basic block of system may be fixed by means of cable strainer.

Never set basic block of system in compartment of engine of the car, because body of that module is not pressurized. Also should avoid the installation of that block directly to rated electronic component of the car. Electronic components of the car may serve as the resource of radio frequency, in turn, may go to curtailment of working distance of transmitter of system or appearance of cessation in working system.

Siren

For installation of siren choose place in compartment of engine, in which siren will be protected from access of side end or arch of front wheel of the car. In chosen place of compartment of engine for installation of siren may not hot or moving accessories. Siren must be sent downwards, and in order to avoid accumulation to its water, faucet must be sent from compartment of engine outward for maximal spreading sound. Fix the siren in chosen place on special bracket by means of screws.

Terminal switch of bonnet or carrier

Terminal switch which incoming to a set of that system, which is preassigned for protective area of carrier (back door in the car with bodywork “хетчбек” or “all-purpose”) or bonnet of the car. In any event terminal switch must be fixed in metallic surface, electrically connected from “mass” the car. Very importantly install terminal switch in that place, in which do not leak or the water is not gathered. Also never install terminal switch in drainpipe, which is positioned in sides of the car along the bonnet and carrier. For installation of terminal switch choose the place, which protected by rubber sealer at closed bonnet or cover of carrier. Terminal switch may be installed by means of incoming to a set of bracket or directly to hole by diameter 6 mm (1/4 inch), drilled in bodywork of the car. In any event of terminal switch must be installed thus, for the bonnet or cover of carrier at closing pressed terminal switch and displaced its moving contact not less than 6 mm, at opening permitted to rise moving contact absolutely.

LED indicator of system

LED indicator is positioned in antenna module and consists of two LED. LED indicator permits to evaluate the condition of protective system and is visual warning for potential robbers and hijackers. As a matter of course antenna module is installed in any glass of the car in which it will be seen well so as from drivers' seat that from outside over glass of the car.

Switch “Valet”

For the installation of switch “Valet” chooses that place in which driver of the car could use it easily. Commend to use decided method of camouflage that exceed the level of protectedness of system and baffle the action of hijackers. Button switch “Valet” may be fixed in instrument panel of the car from side bottom of driver.

Switch of automatic start of engine “AST”

Install the switch “AST” in the place comfortable for use.

Switch “AST” may be fixed in instrument panel of the car from side bottom of driver.

Sensor of hit

For the installation of sensor of hit choose steady hard surface in division which dividing compartment of engine and cabin of the car, from side of passenger cabin. Fix the sensor of hit in chosen place by means of two screws. Also the sensor may fix in stanchions, to which instrument panel of the car is fixed, by means of cable strainers.

Whatever the method of underpinning sensor of hit is used, it is necessary to provide free access to potentiometer of adjustment of sensitivity of sensor, which may be required for following readjustment of system.

Disconnection of wire of system

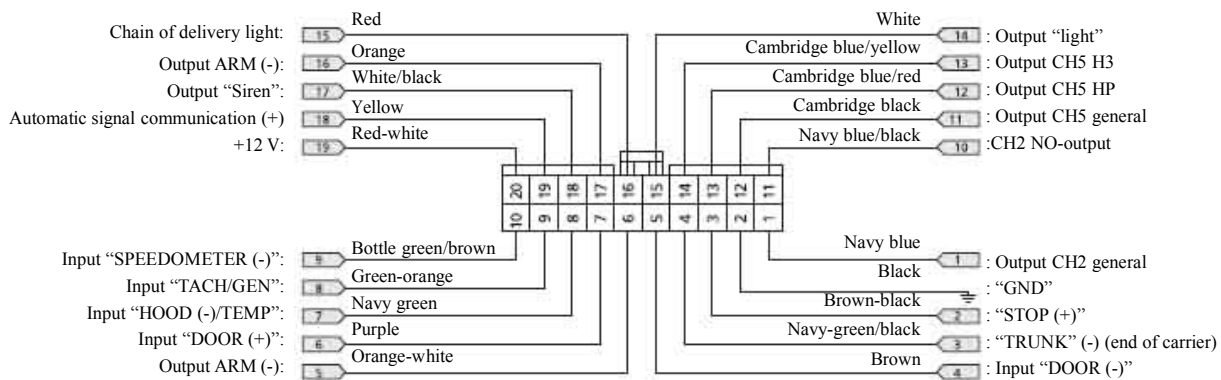
Important!

At connection to supplementary relay to outputs of protective system ascertain existence of damping diode in contact of control over relay. Connect the output of protective system to supplementary relay only from side of anode of damping diode. Do all connections to wires of protective system only with dismantling fuses of chains of delivery of protective system. In the absence of damping diode, consisting of supplementary relay polarity of its connection is optional.

Warning!

Immediate connection of weak current output of channels to executive heavy-current input the chains of opening the lock of carrier of the car, also to input of some equipments of remote start of engine of the car goes to damage of basic block of protective system.

Description of function of wires 20-contact joint of system N1



1.11 – channel CH2 (navy blue/navy blue with black strip). Output of second channel CH2. Output of control by channel CH2 is two outputs of normal-turnoff relay with current of loading not more 25 A in pulse condition. Second channel is activated according to chosen function F9 of programmable table.

2 – “Mass” (black wire). Input of energizing (“mass”). Connect black wire to “mass” (metallic accessory of bodywork of the car). Do not jumble that wire with thin black wire of antenna, which is connected to basic block of system singly, not in wiring harness of wires.

3 – STOP (+) (brown wire with black strip). Input for connection to wire of control over signals “Stop” of the car of positive polarity.

4 – TRUNK (-) (bottle green wire with black strip). Input for connection of terminal switch of negative polarity of carrier. That wire must connect to terminal switch of carrier, second contact of the one always is connected with “mass”. System disconnects to the activity of input TRUNK (-) temporarily at activation of supplementary channels of control over outside equipments CH2, CH3 in condition “protection” and working engine in condition “auto run”.

5 – DOOR (-) (brown wire). Input for connection of terminal switch of doors of negative polarity (the cars “General Motors” and majority of the cars of un-American made). Connect brown wire of system to negative output of terminal switches of doors of the car.

Remark

Do not connect brown wire of system, if the car has a chain of terminal switches of doors of positive polarity (in the event of that purple wire of system is connected).

6 – $\overline{\text{ARM}}$ (-) (orange wire with white strip). Output of signal of negative polarity 500mA (when the system is divested out of protection) – for control over normal-turnoff relay of blockage (installation of supplementary relay is asked).

7 – DOOR (+) (purple wire). Input for connection of terminal switches of doors of positive polarity (majority of cars “Ford” and some cars of un-American made). Connect purple wire of system to positive output of one of terminal switches of doors of the car, because in majority of cars terminal switches of doors are connected paralleled.

Remark

Do not connect to purple wire of system, if the car has chain terminal switches of doors of negative polarity (in the event of that brown wire of system is used).

8 – HOOD (-)/TEMP1 (bottle green wire). Input for connection of terminal switches of negative polarity of bonnet and sensor of temperature, which configuring in motor compartment. Bottle green wire is the wire of momentary negative trigger. That wire must connect to earlier installed terminal switch of bonnet and carrier, second contact of it always is connected with “mass”.

9 – TACH/GEN (tachometer/signal of working generator (oil pressure sensor) – green wire with orange strip). Connect that wire to low-tension signal with level from 0-4 to 0-12 V. For control over high-tension signal of tachometer 0-200 V use supplementary resistors for matching between level of pulse signal.

In condition of definition of starting engine by signal of tachometer may use connective wire TACH to line of control over fuel nozzles or primary winding of bobbin (bobbins) of ignition of cars with petrolic engines of sprayer with system of ignition of distributed kind.

In condition of control over auto run of engine by signal of working generator connect green wire with orange strip to wire of delivery winding of excitation of generator over outside resistor by resistance 0-56 kilohm. It is necessary to do the adjustment of resistance of resistor for providing more smooth starting the engine of your car. In condition of control over condition of auto run of engine by signal of generator, may connect that wire to wire of oil pressure sensor at the event of those levels of controlled signals are changed from 0 to 12 V.

10 – SPEEDOMETER (-) (bottle green wire with brown strip). Input for connection to speed sensor of the cars of Volga Automobile Plant (also other name-plates of cars with analogic technical specifications) for activation of service or protective functions. Bottle green wire with brown strip is the wire of momentary negative trigger, which activating at threefold short circuit to mass of input. That wire must connect to signal wire of speed sensor of the car Volga Automobile Plant.

Use the speed sensor

If in Your car electronic speed sensor is used (cars of Volga Automobile Plant), You may use its such as originator of automatic locking of doors` lock in the car or turning of condition on “Anti-Hi-Jack” at beginning of movement. For that:

1. Connect bottle green wire with brown strip to signal wire of speed sensor of the car;
2. Program required functions F3.4/F19.3.

Manual turning of condition on “Anti-Hi-Jack”

Condition “Anti-Hi-Jack” may be locked manually at utilization of supplementary button switch of connected to wire “Speedometer” (-).

1. Turn on the condition F19.3.
2. Turn on the ignition.
3. Do more three rapid pressings the button of supplementary button switch.
4. System turns on the condition “Anti-Hi-Jack”.

12, 13, 14 – channel CH5 (Cambridge blue with black strip/Cambridge blue with red strip/Cambridge blue with yellow strip). Output of control by channel CH5 is three output relays with current of loading not more 25 A in pulse condition of control.

That channel may use as

- Pulse output with programmable length of opening locks of passenger doors at graded condition of control over central locking (pulse appears at iterative pressing the button of trinket – “divest out of protection” after turning of condition off “protection”). Length of pulse corresponds to value which installed in function F7.
- Pulse output to 20 seconds at dismounting system out of protection (edition of utilization – output of control over polite backlight). Turning of ignition on abolishes action of pulse at any time.

- 1 second of pulse output which arises before automatic start of engine under control over system ZX-1060.
- 1 second of pulse output which arising at turning of line automatic signal communication on in condition of automatic start of engine under control over system ZX-1060.

15 – LIGHT (white wire). Pulse output +12 V for control over outside light of the car (maximal current 15 A in pulse condition of commutation). To the wire the diode decoupling is embedded for connection to separate chains of outside dimensions of the car. Connect the data of wire to the wires of positive polarity of chains of outside dimensions or lights of indicators of turning of the car.

16 – constant resource of delivery +12V (red wire which protected fuse 15 A). The wire is used for delivery of strong built-in chains – control over outside light of the car.

Remark

At connective chains of control over light to lamp of near or far light use supplementary relay.

17 – ARM (-) (orange wire). Output of signal of negative polarity 500 milliampere (when the system is in protection) – normally closed relay of blockage of starter (need the installation of supplementary relay). The wire of system permits to control over working relay of blockage of starter. Connect orange wire to contact No.85 relay. Connect the contact No. 86 relay with wire of ignition of the car, to which delivery is promised +12 V, when the key turns in lock of ignition to condition “ignition” and “starter”, and 0 V, when the key turns to condition “be turned off”(to the rated wire of the car yellow wire of system is connected). Sever weak current wire of solenoid of starter of the car and connect one termination of severed wire to contact No.87a of installed relay, another termination of severed wire to contact No.30 relay.

Remark

The connection is used in the event of that when closed relay of blockage of starter normally is installed. At utilization of that connection of unlocking delivery to protective system goes to that cease to work the function of blockage of starter, this is to that, in return, permit to start the engine of the car.

18 – SIREN (+) (white wire with black strip). Output of control over siren (+12V). Continue the wire over the hole with rubber bushing, which has in division among the compartment of engine and cabin of the car, to the place, in which siren is installed. Connect white wire with black strip with red wire of siren (controlling signal +12V). Adjoin black wire of siren, to “mass” (metallic accessory of bodywork of the car).

19 – automatic signal communication (+) (yellow wire “ignition” IGN IN). Input for connection to wire of ignition +12 V of the car. Connect the wire to the wire of ignition, to which delivery is promised +12 V, when the key turns in lock of ignition to condition “ignition” and “starter”. Ascertain that delivery is not promised to that rated wire of the car, when the key turns in lock to condition “is turned off”.

20 – constant resource of delivery +12 V (red wire with white strip, which protected fuse 5 A). The wire is used for delivery of all basic chains of system.

Description of function of wires 9-contact joint of system N2

1 – HB (-) – manual brake (grey wire). Input for connection to switch of parking brake for providing of safe start of engine. Input permits working function of auto run of system, if it is connected with mass.

2 – RS (-) – outside start of engine (orange wire with white strip). Input of remote start of engine from any outside resources (outside temperature, temporary or another controller) by closing to mass to time more 0.3 second.

3 – STARTER (+) (blue wire with white strip). Input of control over command of starting starter by built-in relay of control over start of starter of system ZX-1060. Built-in relay of control over starter ZX-1060 provides the protection against start of starter at winded engine, also permits to organize supplementary built-in blockage of starter by protective system. Cut the wire of control over starter of moving out of lock of ignition. Connect (before breaking off) to the end of wire of STARTER of locking ignition of the car. Connect strong wire STARTER of strong breaking off of control over auto run to outgoing to starter of the end of wire.

4 – DIESEL (+) (bottle green wire with red strip “DIESEL LAMP (+)”) – the wire of control over start of engine with delaying start for diesel engine. Connect to the wire of lamp of preparedness of starting diesel. Permit the rolling starter after warming fuel nozzle.

5 – UNLOCK (-) (white wire with black strip). Deblocking of doors` lock (momentary connection of wire with mass). System ZX-1060 permits to actualize the function of central lock which controlling from cabin of the car with the help of supplementary three positioned switch. Installed inside the cabin switch. You can at any time block or unblock the doors` locking of the car for providing Your safety. Supplementary switch of central lock does not enter to complement of system and is obtained separately.

6 – LOCK (-) (yellow wire with black strip). Blockage of doors` lock (momentary connection of wire with mass). Use three positioned switch with two pressure spring condition for realization of function of central lock in cabin of the car.

7 – Channel CH3 (-) (green wire with white strip). Output of three channels of system CH3. Channel CH3 permits to control over different supplementary equipments, which connected to system.

For delivery of control over signal to supplementary equipment by channel CH3 use trinket-transmitter according to tables 1 and 2 commands of control over system, also use the table of programmable function for choice of required parameters F10. Green wire with white strip is weak current transistor output, therefore, it must be used only for turning of outside relay on.

8 – Channel CH4 (-) (green wire with black strip). Weak current channel of control over different supplementary equipment, which connected to system (maximal current 300 milliamperes).

Output of channel CH4 is connected with “mass” during the time of activation channel. Output of channel CH4 – weak current output which is preassigned for control over winding of supplementary relay or equivalent weak current loading. For the delivery of controlling signal to supplementary equipment by channel CH4 use trinket-transmitter according to tables 1 and 2 commands of control over system, also use the table of programmable function for choice of required parameters F11. Channel CH4 is activated automatically by system which is depending on programmable condition in function F11. By default the output of channel CH4 is programmed to delivery of pulse signal by length 1 second at setting of system to protection.

9 – Channel CH6 (-) (Cambridge blue wire with green strip). Channel CH6 is preassigned for control over equipments of detour of rated immobilizers of the car or other systems.

- Pulse output of negative polarity. Activate at any time until system accomplishes the procedure of automatic start and engine works under control over ZX-1060. Turning of auto run off abolishes action of pulse at any time.
- Pulse output of negative polarity. Activate at turning of line ING1 on at time before close of rolling starter (until the engine is started).
- 1 second pulse output of negative polarity. Activate at turning of line ING1 of system of auto run off or at turning of ignition off by the key.

- 1 second pulse output negative polarity. Activate at successful attempting start of engine by system of auto run ZX-1060.

Output of channel CH6 is connected with “mass” during time of activation of channel. Output of channel CH6 – weak current output (maximal current 300 milliampere), which is preassigned for control over winding of supplementary relay or equivalent weak current loading. For the choice of function of channel use the table of programmable function SF14.

6-contact strong joint of control over electricity equipments of doors` lock of auto run N3

Relay of locking

Blue wire with white strip with protective fuse 15A – normally turnoff contact of relay.

Green wire – normally close contact of relay.

Yellow wire – general contact of relay.

Relay of unlocking

Orange wire with protective fuse 15A – normally turnoff contact of relay.

Blue wire – normally close contact of relay.

White wire – general contact of relay.

6-contacted joint of control over start of engine N4

1 (blue wire IGN1) – strong output of relay (30A) of control over basic line of ignition of the car.

2 (red wire) – strong wire of delivery chains of commutation IGN1. It is protected by fuse 30A.

3(yellow with red strip of control over starter) – strong output of relay (30A) of control over start of starter of the car.

4 (green wire IGN2) – strong output of relay (30A) of control over supplementary line of ignition of the car. As duplicating basic line of ignition IGN1 may be used at programmable function of auto run (see the table 4), also as line of ignition, which turning on 1 second before beginning of rolling of starter and before turning of ignition IGN1 off in condition of auto run. As basic line of ignition may be used in scheme without breaking off of rated wire of ignition of locking ignition of the car.

5 (red wire) – strong wire of delivery of chains of commutation of automatic signal communication, STARTER. Fuse 30 A is protected.

6 (purple wire IGN3) – strong output of relay (30A) of control over supplementary line of ignition of the car IGN3. It is preassigned for control over supplementary equipments of the car. Channel IGN3 may be programmed as:

- Line automatic signal communication;
- IGN3, line of ignition which activating with delay 2 minutes after starting engine (for example, for turning of inside cabin heating or cooling systems);
- Activating output after starting engine and before turning of ignition IGN1 off in condition of start (safe blockage of starter).

Conditions of working channel are programmed according to specification function SF13 of table 4.

4-contact white joint “Shock sensor 1” N5

4-contact white joint “Shock sensor 1” N5 – sensor of hit. Pave the wires from sensor of hit before basic block of system and connect it's to system.

4-contact white joint “Shock sensor 2” N6

4-contact white joint “Shock sensor 2” N6 – supplementary sensor of hit/capacity/displacement/slope. Pave the wires from supplementary sensor before basic block of system and connect it to system.

2-contact blue joint “Valet” N7

2-contact blue joint “Valet” N7 – connect the buttons “Valet”.

Pave black and grey wires from switch “Valet” to basic block of system and connect of two-way blue joint to corresponding blue joint in basic block of system.

2-contact brown joint “AST” N8

2-contact brown joint “AST” N8 – connection of tumbler of emergency turning of automatic starting engine off, program of function of auto run “AST”. Pave the wire of tumbler “AST” to block of system and connect two-contact brown joint to corresponding brown joint in basic block of system.

Line of emergency switch “AST” is connected physically with line of parking brake. Before the control over programmable functions of auto run ascertain that parking brake is activated.

Standard configuration of lock/unlock of doors of the car

Three wired chain of unlock/lock of doors of negative polarity

(majority of the cars which are made in Japan)

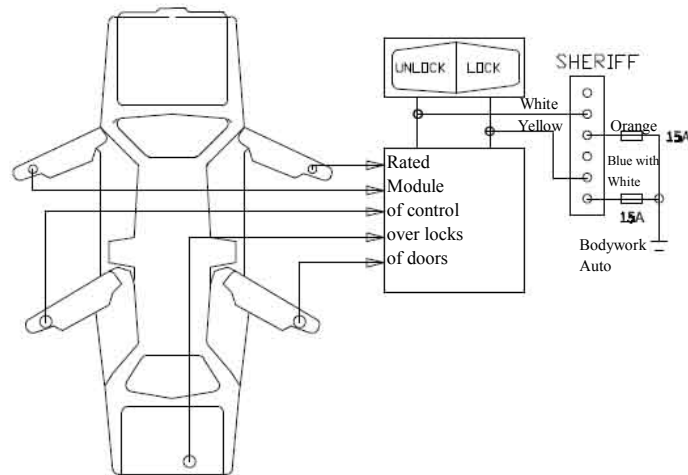
At setting of system in the cars bottle green and navy blue wires of lock/unlock of doors of the car are not used.

Orange wire and blue wire with white strip must be connected to “mass” (metallic accessory of bodywork of the car).

Yellow wire – pulse output of lock of negative polarity, and it must be connected to wire of control over rated relay of locking negative polarity.

White wire – the pulse output of locking negative polarity and it must be connected to wire of control over rated relay of unlocking negative polarity.

Scheme of control over channel of central lock with negative trigger is done below:



Three wired chain of unlock/lock of doors of positive polarity (majority of portable cars “General Motors”)

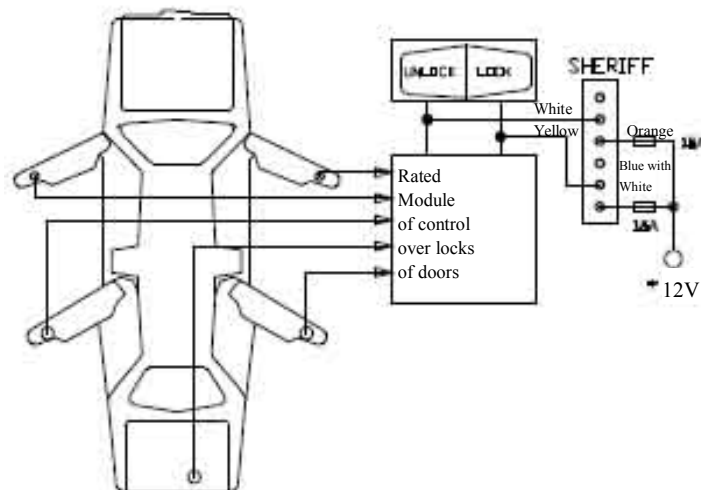
At setting of system in the cars the bottle green and navy blue wires of lock/unlock of doors of the car are used.

Orange wire and blue wire with white strip must be connected to resource of delivery +12 V.

Yellow wire – the pulse output of lock of positive polarity, and it must be connected to wire of control over rated relay of lock of positive polarity.

White wire – pulse output of unlock of positive polarity. It must be connected to wire of control over rated relay of unlock of positive polarity.

Scheme of control over channel of central lock with positive trigger is done below:



Five wired chain of unlock/lock of doors with changing polarity

At setting of system in the cars it must sever rated wires of control over electricity devices of doors` lock of the car. The wires are paved from basic switch of lock/unlock to supplementary switches of lock/unlock, and from them – to electricity devices of doors` locks.

Sever rated wire of lock and connect **yellow wire** of system to that end of severed rated wire, which goes to supplementary switches (electricity devices of doors locks). Connect green wire to that end of severed rated wire, which goes to basic switch.

Sever rated wire of unlock and connect **white wire** with system to that end of severed rated wire, which goes to supplementary switches (electricity devices of doors locks). Connect blue wire to that end of severed rated wire, which goes to basic switch.

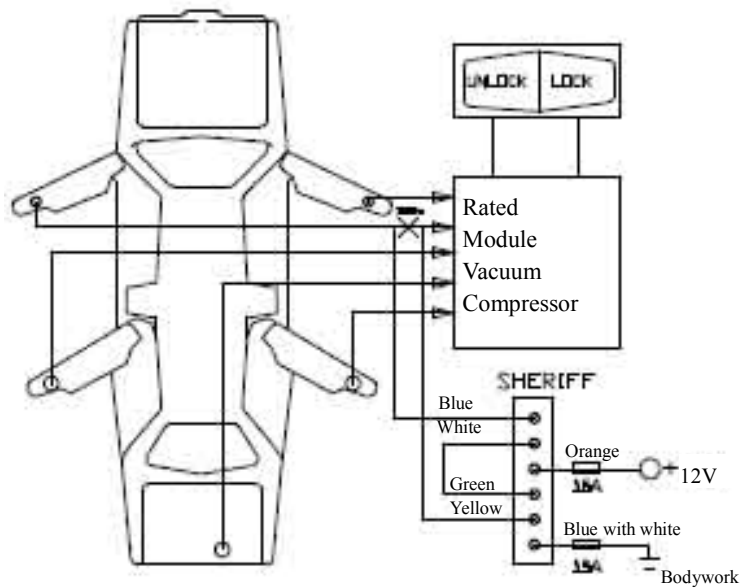
Orange wire and blue wire with white strip must be connected to resource of delivery +12V, which protected by fuse.

Operation

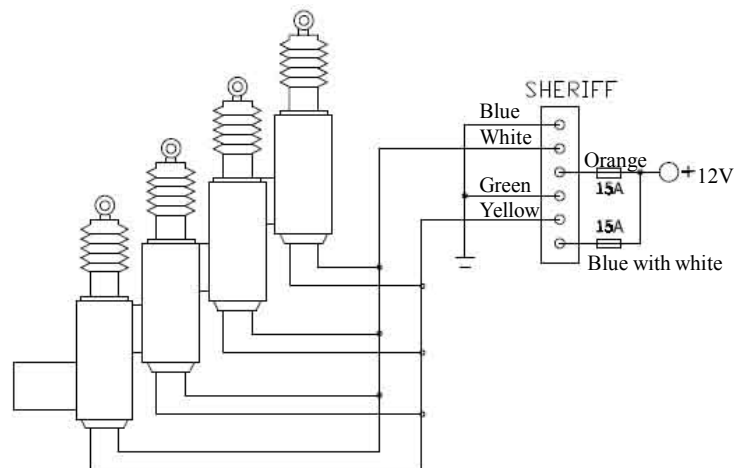
Master-setter must mark in manual of utilization all installed options and programmable adjustments and absolutely explain to the owner of the car principles of operation of protective system.

Supplementary available schemes of control over central lock

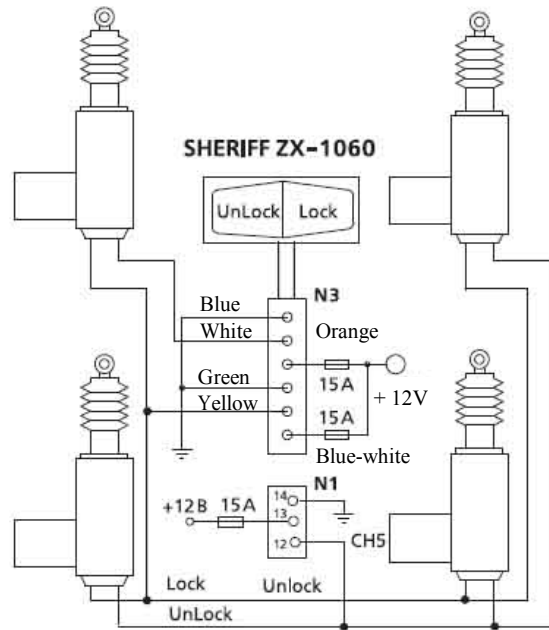
Scheme of control over vacuum systems “Mercedes-Benz”, “Audi”



Scheme of control over supplementary electricity devices

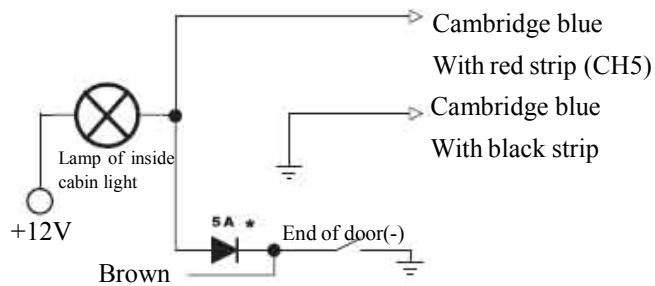


Scheme of control over electricity devices of doors locks at step (separate) unlock of driver and passenger doors of the car



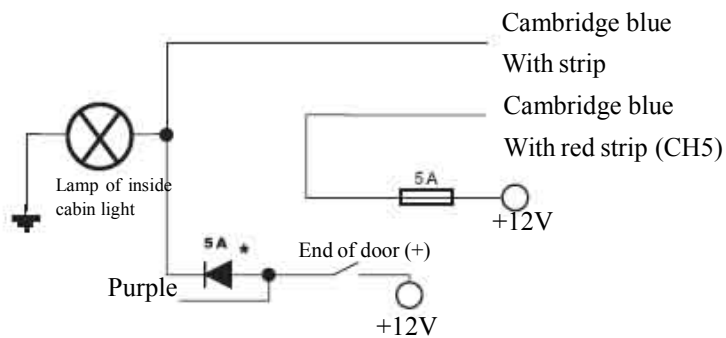
Supplementary available schemes of control over inside cabin light

Inside cabin light with negative polarity



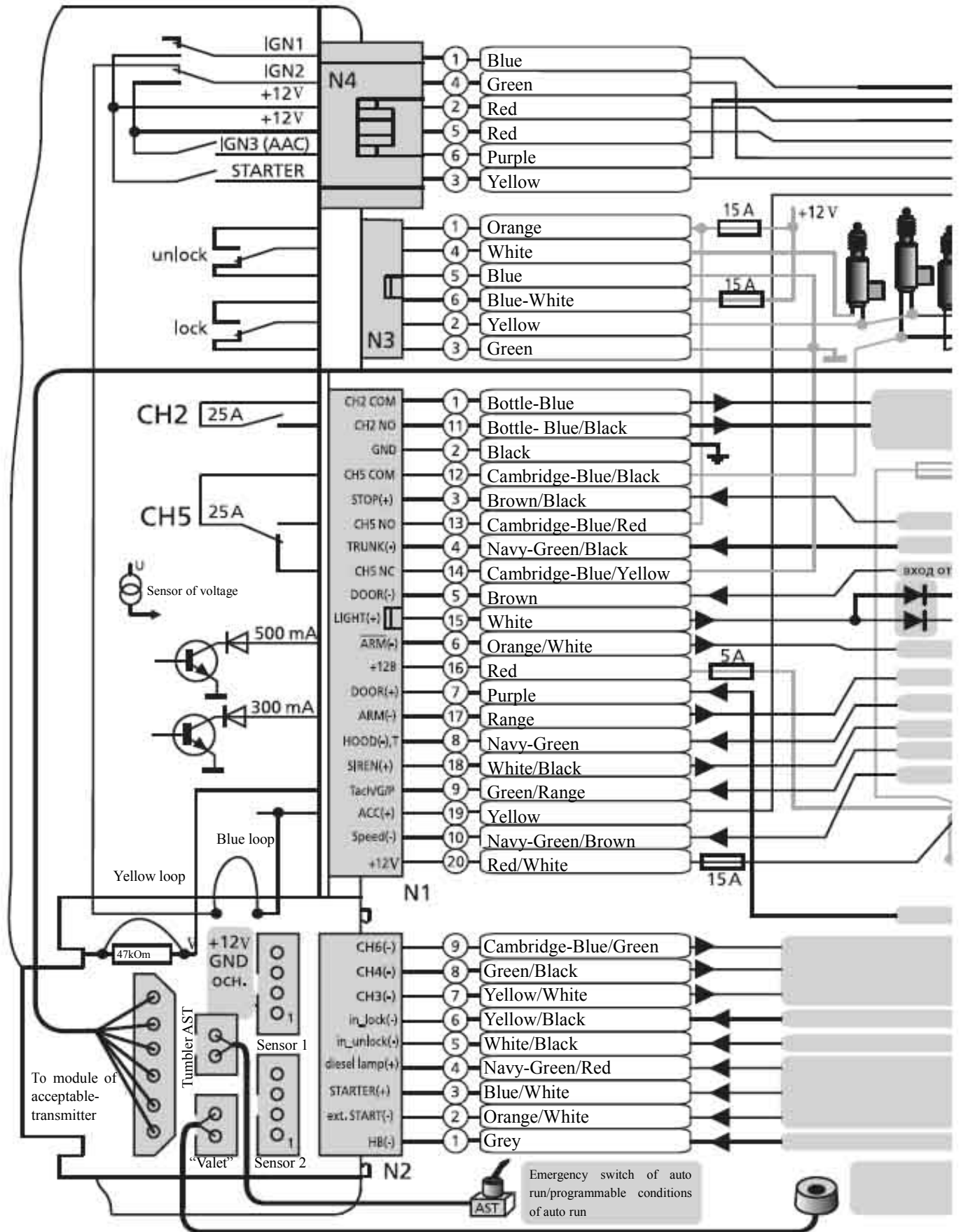
* Supplementary decoupling diode (it is installed at necessity).

Inside cabin light with positive polarity



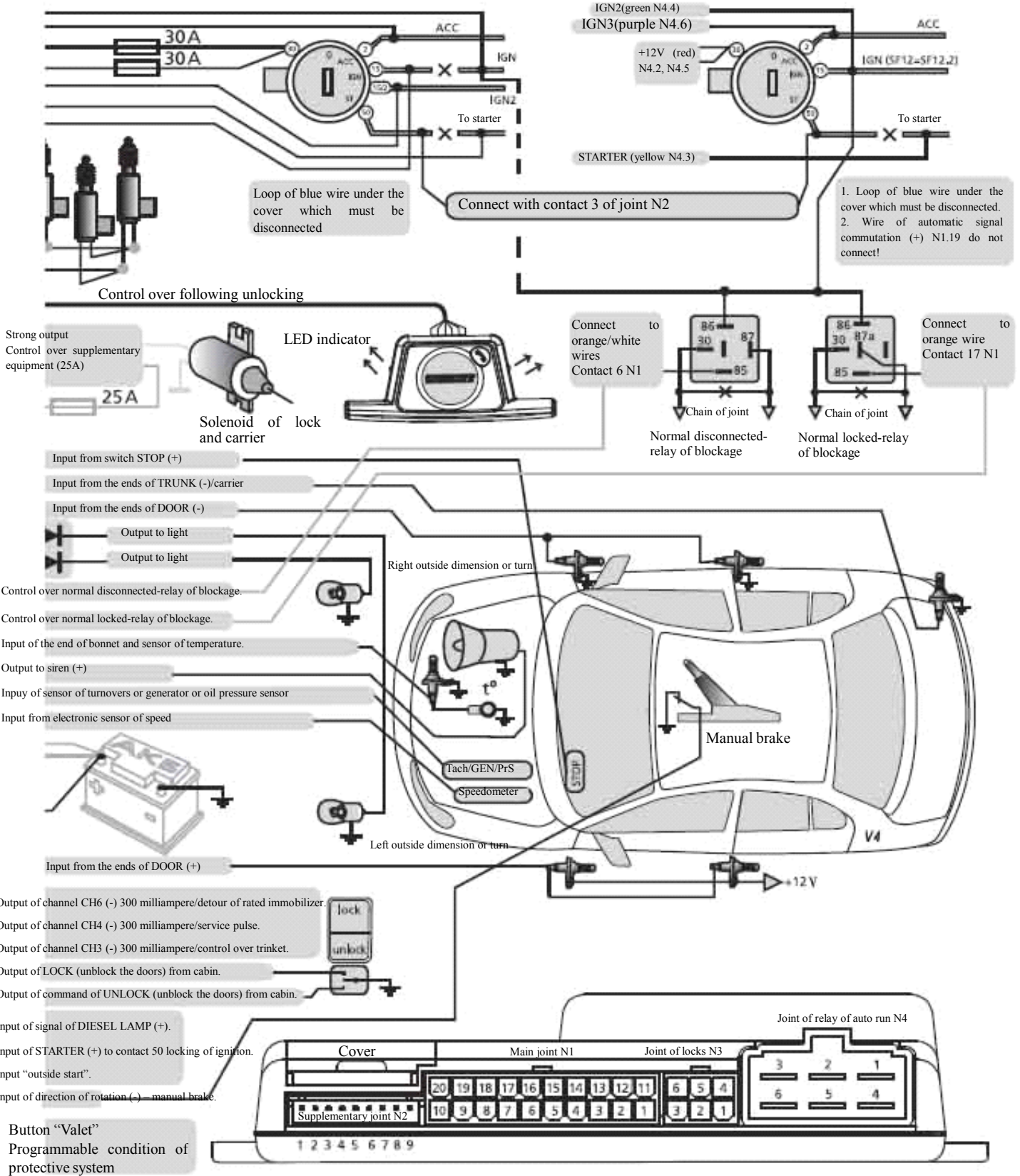
* supplementary decoupling diode (it is installed at necessity).

Scheme of turning on ZX-1060 SHERIFF

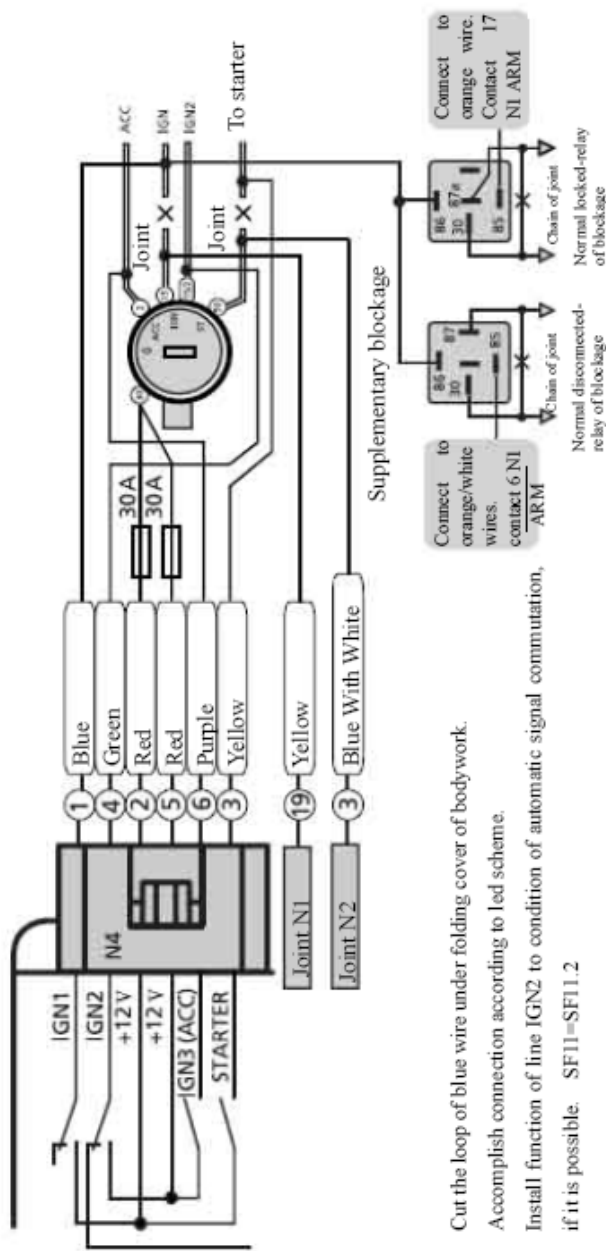


(With joint of chain of ignition, install SF11=SF11.1)

(without joint of chain of ignition)



Scheme of connections ZX-1060 SHERIFF in condition of auto run of engine with joint of chain of ignition



1. Cut the loop of blue wire under folding cover of bodywork.

2. Accomplish connection according to led scheme.

3. Install function of line IGN2 to condition of automatic signal commutation, if it is possible. SF11=SF11.2

1. Control over line of ignition IGN of the car by protective system provide:

-Blockage (Lock) Of Turning Of Basic Line Of Ignition Of The Car On In Condition Of Protection;

-Automatic Turning Of Turbo Timer Off At Turning Of Ignition On By The Key;

-Automatic Unlocking Of Maintenance Of Condition Of Auto Run At Turning Of Ignition On By The Key For Accomplishment Of Trip;

-Automatic Turning Off Condition On "Turbo Timer" At Led Engine At Turning Off Ignition Off By The Key;

-Automatic Turning Off Chains Of Ignition Of The Car Off At Optional Stop Of Engine;

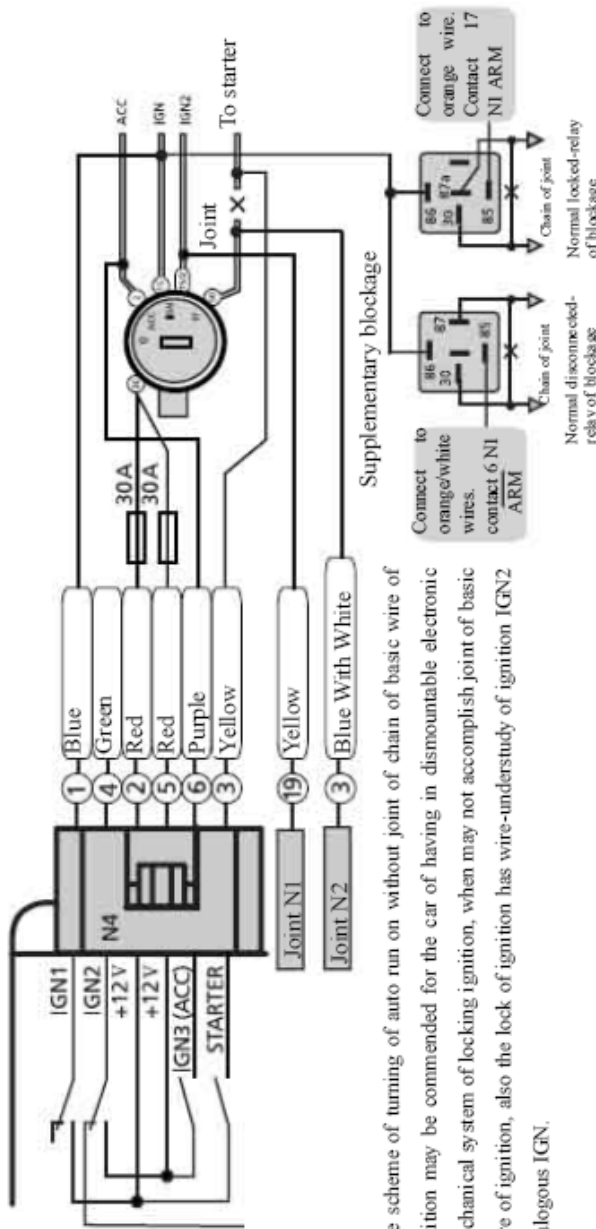
-Provide Correct Accomplishment Of All Automatic Function Of System.

It has not limitation by utilization.

2. Control over starter of the car by protective system turns on iteration of action of driver at control over starter over locking ignition, blockage (ban) of starting of starter in condition of protection or at working engine (protection against occasional turning of start of starter on by the key of ignition at working engine).

At control over starter "without chain of control over starter" of blue wire with white strip of joint N2 of protective system do not connect.

Scheme 2 of turning on ZX-1060 SHERIFF in condition of auto run without joint of chain of ignition

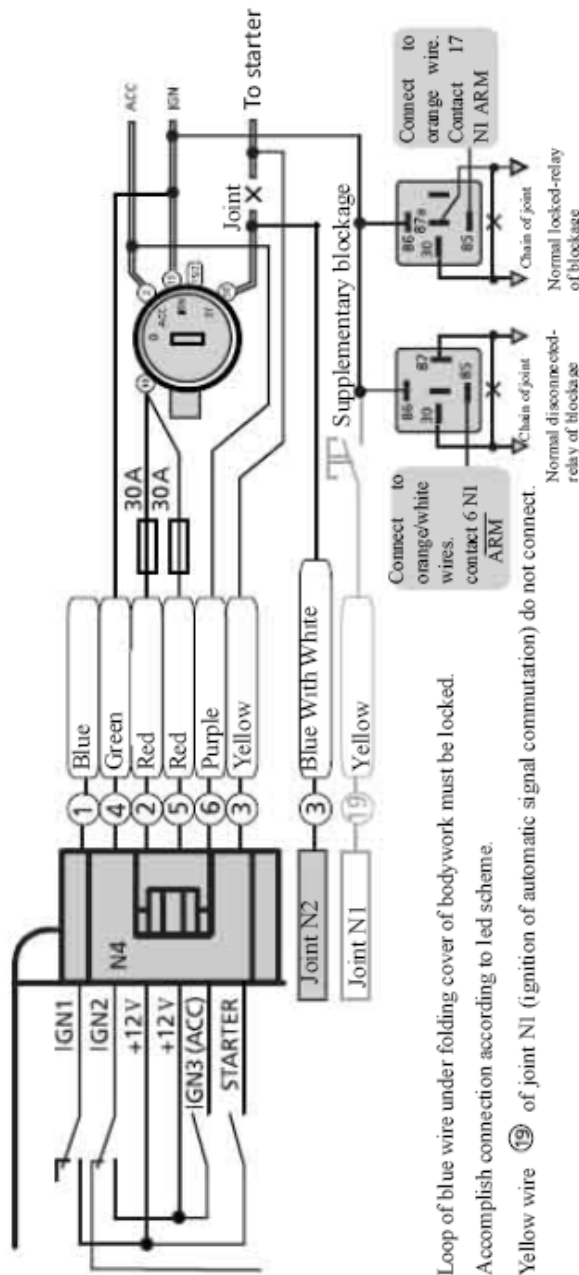


The scheme of turning of auto run on without joint of chain of basic wire of ignition may be commended for the car of having in dismountable electronic mechanical system of locking ignition, when may not accomplish joint of basic wire of ignition, also the lock of ignition has wire-understudy of ignition IGN2 analogous IGN.

Yellow wire 19 of joint N1 (ignition of automatic signal commutation) connect to line IGN2 of locking ignition of the car, which repeat behavior of line IGN of the car.

1. Control over line ignition IGN2 of the car by protective system provide:
 - Automatic turning of turbo timer at turning of ignition on by the key;
 - Automatic disconnecting of maintain of condition of auto run at turning of ignition on by the key for accomplishment trip;
 - Automatic turning of condition on "turbo timer" at winding engine at turning of ignition off by the key;
 - Automatic turning of chains of ignition of the car off at optional stop of engine;
 - Provide correct accomplishment of all automatic function of system. It has not limitation by utilization.
2. Control over starter of the car by protective system turns on iteration of action of driver at control over starter over locking ignition, blockage (ban) of start of starter in condition of protection or at working engine (protection against occasional turning of start of starter on by the key of ignition at working engine).
 At control over starter "without joint of chain of control over starter" blue wire with white strip of joint N2 of protective system do not connect.

Scheme 3 of turning on ZX-1060 SHERIFF in condition of auto run without joint of chain of ignition



1. Loop of blue wire under folding cover of bodywork must be locked.
 2. Accomplish connection according to led scheme.
 3. Yellow wire ⑬ of joint N1 (ignition of automatic signal commutation) do not connect.
1. Use of scheme of auto run without chain of joint of basic wire of ignition may be commended for the cars of having in dismantlable electronic mechanical system of locking ignition, when it is impossible to accomplish joint of basic wire of ignition, also it is absent from possibility, use the turbo timer.
 2. Control over starter of the car by protective system turn on iteration of action of driver at control over starter over locking ignition, blockage (ban) of start of starter in condition of protection or at working engine (protection against occasional turning of start of starter on by the key of ignition at working engine).
At control over starter "without joint of chain of control over starter" blue wire with white strip of joint N2 of protective system do not connect.

Limitation

1. Do not provide function of blockage of line of ignition of relay IGN2 (blockage only of supplementary lines ARM, ARM).
2. Do not accomplish automatic dismounting of function of auto run at following turning of ignition on by the key.
3. Do not accomplish automatic restarting (turning off) of function of turbo timer at following turning on/turning of ignition off by the key. For disconnection it must give command out of trinket-transmitter or supplementary button, activated in condition of the key "ignition is turned on". It is impossible to use command of disconnection out of trinket-transmitter or supplementary button in condition of the key "ignition is turned on", if time of use of the car (of condition of wound engine) exceeds the values of time of installed in function SF2, SF3. Herewith maintaining of working engine is turned off automatically during the time, and turbo timer will be restarted automatically at turning of working engine off.

Accomplishment of installation of system

Installation of antenna of module

Purify and degrease the place of installation of antenna module. Install antenna module in any glass of the car in any place, in which it will be seen well as from driver seat that outwardly over the car. LED indicator is positioned in antenna module and consists of two LED. LED indicator permits to evaluate condition of protective system and is in visual warning for potential robbers and hijackers.

Readjustment of sensor of hit

For the area of warning of the sensor is installed automatically to 30% more high sensibility than for the area of start. By little screwdriver accurately turn the screw of adjustment of sensibility of sensor of hit until the end against hourly arrow (do not adhere unnecessary condition at turning the screw of adjustment, in order that do not break it; maximal angle of turning of the controller equals 270°). Close bonnet and carrier of the car and supply the system to protection. Wait 6 seconds, in order to stabilize area of trigger of accessory equipment, afterwards strongly hit by back bumper of the car by fist. Force of hit must be not less that asks for breaking up the glass of the car.

Attention!

For check of sensibility of sensor of hit never hit by glass of the car – You can break it.

Turn the screw of adjustment by hourly arrow (heightening the sensibility of sensor of hit) approximately to 1/4 of turnovers and turn check of starting sensor. Repeat the procedure up to the point that do not start the system and do not make a sound of the signal device. Finally one essential hit by bumper of the car will lead to delivery of series of warning signals of siren.

Warning!

Choice of high sensibility of sensor of hit too leads to incorrect start of system from strong vibration, which is created, for example, by passing freight car or heavy technique.

Protection of wires of system

Always pave the wire of protective system in checkered tube or protect them, rotate by spiral of insulating band. Fix wiring harness of wires along all length by means of cable strainers. Reliable fixing prevents hit of wire harness to hot surface of engine or sharp moving accessory of the car, it may lead to damage isolation of wires of system.

Exploitation

Master-setter must mark in manual of use all installed options and programmable adjustments, and absolutely explain to owner of the car right exploitation of protective system.

Whole set ZX-1060 SHERIFF

1. Trinket of two-way contact with LCD-display.....	1piece
2. Supplementary trinket of remote control.....	1piece
3. Central module.....	1piece
4. Antenna module with LED indicator.....	1piece
5. Two areas of sensor of hit.....	1piece
6. Service button "Valet".....	1piece
7. Switch of start of engine "AST".....	1piece
8. Button of bonnet (carrier).....	1piece
9. Set of wires.....	1piece
10. Manual of user and specification by installation.....	1piece

* Anti-Hijack active transponder to whole set of system do not enter and it is obtained separately.

* * Supplementary switch of central lock to whole set of system do not enter and it is obtained separately.

Basic technical characteristic

Voltage of delivery.....	9-15V
Current of utilization in condition of protection.....	20 milliampere
Maximal current of loading, commuting by outputs:	
Siren.....	2A
Light signal device (in condition of pulse control over light).....	15A
Light signal device (in condition of constant control over light).....	5A
Light signal device (in condition of pulse commutation).....	15A
Chain of relay of blockage ARM (-).....	0.5A
Chain of relay of blockage $\overline{\text{ARM}}$ (-).....	0.5A
Doors locks.....	15A
Programmable channels:	
CH2 (in condition of pulse commutation).....	10A (25A)
CH3.....	0.5A
CH4.....	0.5A
CH5 (in condition of pulse commutation).....	10A (25A)
CH6.....	0.5A
Built-in relay of starting engine.....	2x40A, 2x25A
Working scope of temperatures.....	from -40°C to +85°C
Radius of action of trinkets (at absent radio disturbing):	
Six buttons trinket of two-way contact.....	until 1000m
Five buttons.....	until 350m
Distance of transference of signal of emergency call.....	until 2000m
Kind of code of trinket.....	dynamic
Number of possible combinations.....	2×10^{23}
Working frequency.....	433.92MHZ

Glossary (often used terms and symbols)

ARM	-condition of system "Protection"
AST	-emergency switch of function of automatic start of engine
DISARM	-condition of system "is divested out of protection"
ARM (-)	-output of line of blockage to relay with normal closed contact
ARM (-)	-output of line of blockage to relay with standard contact
AV-function	-function of control over system "divest out of protection at two stages"
First stage	-deblocking of doors' locks and disconnection of sensors of by command of trinket-transmitter
Second stage	-deblocking of chains of joint ARM (-), $\overline{\text{ARM}}(-)$, by button "Valet" or by input of secret code
IGN IN	-input of line of ignition out of the car lock of ignition
IGN OUT	-output of line of ignition to side chain of the car
IGN1 (automatic signal commutation)	-basic line of ignition in the car
IGN2 (automatic signal commutation)	-line of ignition of supplementary equipments in the car
IGN3	-supplementary line of ignition in the car
INST (-)	-incoming line of connection of terminal switch of bonnet/carrier
INST(+)	-line of blockage of condition of auto run by condition of parking brake or condition of "Parking" for the cars with automatic transmission
DOOR (-)	-incoming line of connection of terminal switch of doors of negative polarity
DOOR (+)	-incoming line of connection of terminal switch of doors of positive polarity
DDIESEL LAMP (+)	-wire of indicator of preparedness of starting diesel
Trigger	-function of output line of channel CH2 for control over outside equipment with two stable conditions
Turbo timer	-function of delay of turning of engine off to set time

Appendixes

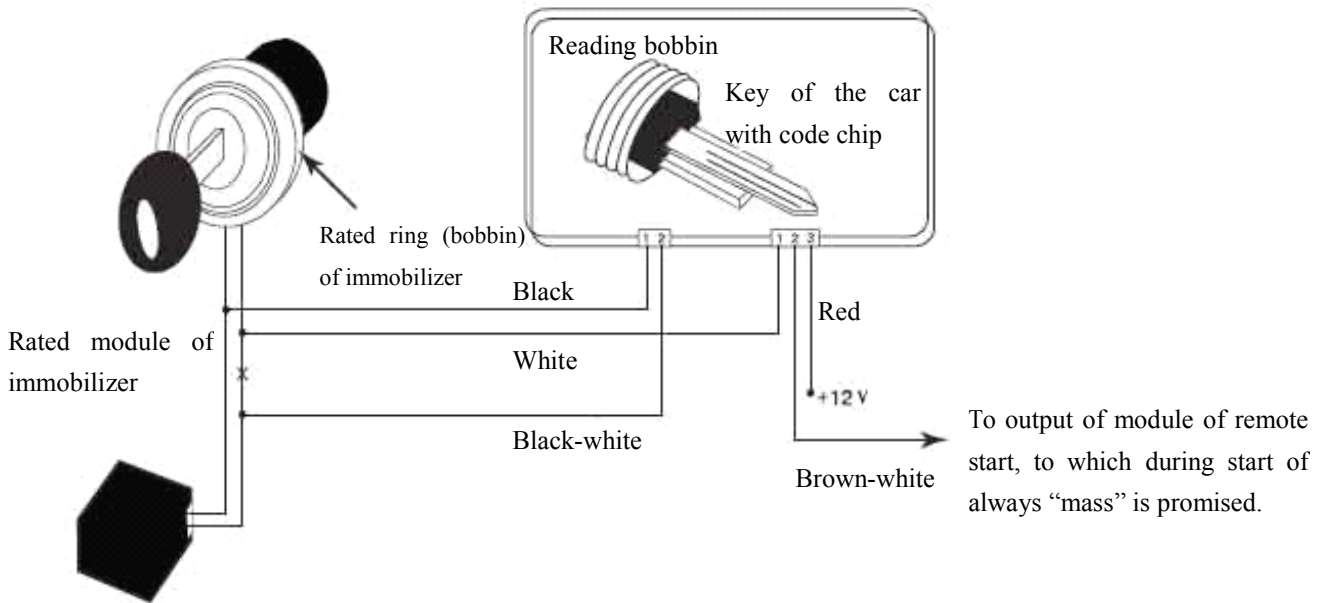
Appendix 1

System of detour of rated immobilizer (module SHERIFF BX-400)

If your car is completed set by rated immobilizer, use the module (obtain separately) BX-400 (BX-400M) for correct providing of function of automatic start of engine of your car by system ZX-1060.

Method of setting 1

The method of setting may use instead of application of ring of antenna KD-KB in the cars, which have two wired rated wiring harness of antenna, moving to ring of antenna around lock of ignition (for the part of the cars of American made).



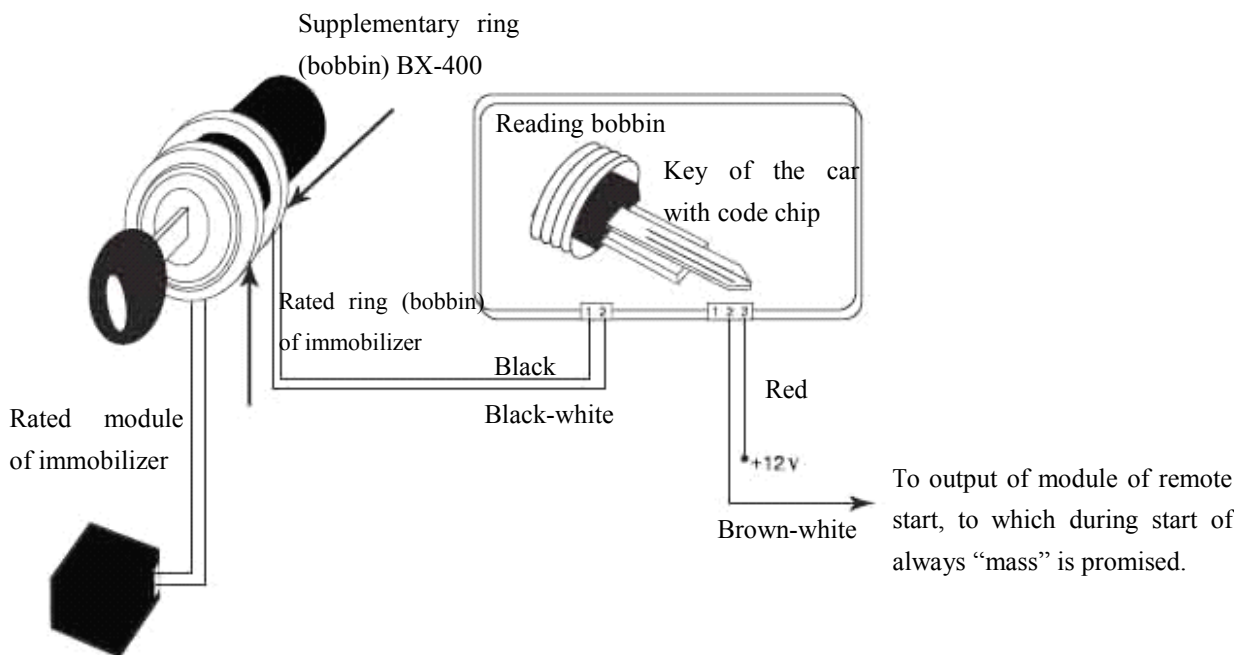
The method may work not with all transponder system

1. Open the module and insert to its key, thus, in order for end of key was in inside of ring of receiver, which is formed by flat cable, as shown in picture. Fix the key in place and close the module.
2. Cut the ring of antenna out of two wired cable.
3. Take apart the cover of locking ignition of the car and find two wired cable, which goes from rated ring of antenna to rated module of transceiver.
4. Cut one of wires in the middle and connect black and black-white wire of two wired cable of antenna to rated two wired wiring harness, as shown in the picture.
5. Connect white wire of three wired joint, which indicated in picture, to the end of severed rated wired, which goes to locking ignition of the car.
6. Connect red wire of three wired joint to protected wire of delivery +12V by fuse, whatever delivery is promised to the wire always or only in turned of ignition on.
7. Connect brown-white wire to output of channel CH6 of system ZX-1060, to which during all time of working equipment of remote start always "mass" is promised.

After successful testing of installation by remote start of engine of the car assemble the cover around locking ignition.

Method of setting 2

The method of setting may use in the cars, which have three and more wired rated wiring harness of antenna, moving to ring of antenna around the locking ignition or do not admit joint of wire of rated bobbin of antenna (for the part of cars of European made).



The method may work not with all pulse transponder system

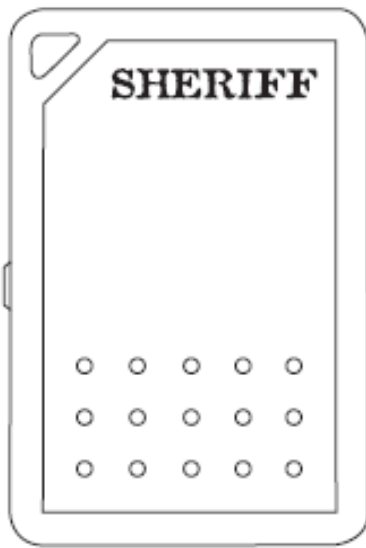
1. Open the module and insert to its key, thus, in order for the end of key was inside of ring of receiver, which is formed by flat cable, as shown in picture. Fix the key in place and close the module.
2. Assemble the cover around the locking ignition of the car and find ringed antenna of rated module of transceiver.
3. Install ringed antenna BX-400 in immediate neighborhood from rated ringed antenna.
4. Connect red wire of three wired joint to protected fuse wire of delivery +12V, whatever delivery is promised to the wire always or only in turned of ignition on.
5. Connect brown-white wire to output of channel CH6 of system ZX-1060, to which during all time of working equipment of remote start always “mass” is promised.

After successful testing of installation by remote starting engine of the car assemble the cover around locking ignition.

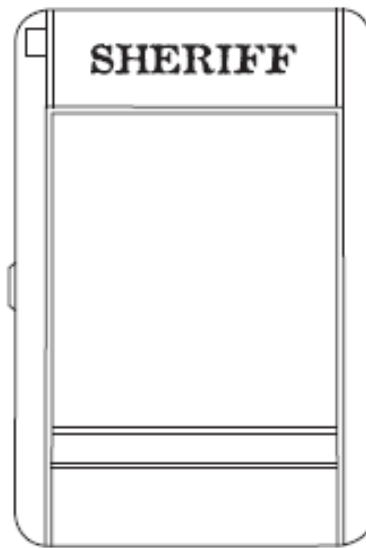
Appendix 2

All-purpose anti-hijack active transponders LDT-920 and LDT-920S (with energy-saving function “SLEEP”)

Anti-hijack active transponder is preassigned for enhancement efficiency of protective characteristic of protected systems, providing recurrence of machine and safety of owner of the car. It may use with automatic signal device SHERIFF, CHALLENGER by having condition of active protection and admitting work with anti-hijack transponder (ZX-950, ZX-1060, CH-7000, CH-9000i). Transponder LDT-920 – begins the work at turning of delivery on by switch, which positioned in side surface of bodywork, to condition “ON”.



LDT-920



LDT-920S

Transponder LDT-920S – begins the work at turning of delivery on by switch, which positioned in side surface of bodywork, to condition “ON”, continuously, if during following 30 minutes transponder remains by immovable (do not move, do not shake, do not upturn), it goes across to condition “SLEEP” (condition of economy of delivery) and remains there unboundedly long until following displacement (upending, shake) do not return it’s to working condition. From every new displacement the transponder renews 30 minutes timer of countdown, herewith time of continuous working transponder may be continued. Full turning of transponder off is actualized by installation of switch of delivery to condition “OFF”.

TECHNICAL CHARACTERISTIC

Voltage of delivery.....	3V
Radius of action.....	5m
Time of stable condition of energy conservation (“SLEEP”).....	30minutes
Duration of continuous work before replacing the battery.....	0.5-1year
Outside dimensions (B x I x T).....	60x40x6mm

Record of code of transponder to memory of automatic signal device

Remember that, program of code of transponder must be carried through jointly with program of codes of transmitters in consistency – firstly the code of trinket transmitter, afterwards the code of pulse transponder.

1. Turn off the delivery of transponder.
2. Disassemble system out of protection.
3. Enter to condition of program of codes of new transmitters of system of signal device.
4. Turn on the delivery of transmitter during that time until You do not hear long signal of siren, confirming that program of code will be completed.
5. Turn off the delivery of transponder.
6. Leave the condition of program (turn off the ignition).
7. Turn on the delivery of transponder for farther its use.

 Attention!

Remember that, every new operation of record of codes in systems of automatic signal devices SHERIFF remove out of memory old codes, herewith operation must be accomplished for all trinkets and transponders for one time.

Detailed work of anti-hijack active transponder in condition of active protective system is described in corresponding specification of user of protective system.

On the strength of constant perfective systems of name-plate SHERIFF in order for providing maximal comfort of utilization and enhance of reliability, producer reserves the right to change, perfection of structure and program of providing the system and component without preparatory announcement of the user.