KEETEC ®

⚠**WARNING: Carefully read following instructions and technical specifications in this manual before installation. The system must be installed and used only according to this manual. The system is designed for vehicles with 12V power supply. It has to be connected to 12V output and to the ground. Neither producer or seller of the system is responsible for damages caused by incorrect installation, using or operating of this product. Unprofessional operation or modification of the system can damage the system alone, or the electric system of the vehicle and leads to warranty loss. For proper working of the system we recommend the installation to be made by authorized service.**

I.SYSTEM DESCRIPTION

The KEETEC TS IMO is anti-theft system with smart detection and two circuits of immobilization dedicated for vehicles with 12V power supply. TS IMO use 2 modes of system deactivation: by button on transmitter or by contactless transmitter - automatically if transmitter will be in range or system may be deactivated via E-card. Second mode use both - transmitters and E-card together.

II. PROGRAMMING REMOTE CONTROLS

The system can learned maximum 3 pcs transmitters.
- System is deactivated, turn ignition ON, press valet switch 5 times within 10 seconds.
- Turn ignition off. If security mode is not activated (function F4), siren/buzzer will chirp 5 times to enter code learning mode.
- When security mode is activated (function F4), LED diode starts flashes slowly. Enter security mode.
- if the LED will flash so many times which is the value of first PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of second PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of third PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of fourth PIN number, push the service button one time. If you entered correct PIN code, siren/buzer sounds 5 times and LED diode lights permanently. System enter to learning mode.
- Then press the transmitter button within 10 seconds, siren will chirp the times of transmitter's sequence. E.g. one chirp for the first transmitter, two chirps for the second transmitter, and three chirps for the third transmitter.
- If a new remote control is to be programmed, all existing remote controls have to be reprogrammed at the same time.
- After programming, turn ignition ON or wait 10 seconds, exit programming mode, enter the disarm mode and recount the 30 seconds.

III. CODE LEARNING FOR E-CARD

The system can learned maximum 3 pcs E-Cards
- System is deactivated, turn ignition ON, press valet switch 6 times within 10 seconds.
- Turn ignition off. If security mode is not activated (function F4), siren/buzzer will chirp 6 times to enter code learning mode.
- When security mode is activated (function F4), LED diode starts flashes slowly. Enter security mode.
- if the LED will flash so many times which is the value of first PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of second PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of third PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of fourth PIN number, push the service button one time. If you entered correct PIN code, siren/buzzer sounds 6 times and LED diode lights permanently. System enter to learning mode.
- Take one E-card near the antenna coil within 10 seconds. If over 10 seconds or turn ignition ON the system will exit code learning E-card mode automatically.
- The siren will chirp accordingly for confirmation as soon as the code is learned. For example, the first E-card is learned, the siren will chirp once. The second E-card is learned, the siren will chirp twice. (3 pcs maximum).
- If one of the E-card is to be programmed, the other E-card must be reprogrammed at the same time.
- After programming, turn ignition ON or wait 10 seconds, exit programming mode, enter the disarm mode and recount the 30 seconds.

Note: Don't put the two E-card together when using, otherwise the detect range will be affected.

IV. PIN CODE CHANGE (factory preset PIN NUMBER: 4321)
- Turn on the ignition and push the valet button 10 times within 10 seconds.
- Turn the ignition off. Enter security mode.
- If you entered correct PIN code, siren will sound 1 time and LED diode lights no longer.
- Now you are in PIN programming mode.
- LED starts flashing and you can enter a new PIN code.
- if the LED will flash so many times which is the new value of first PIN number, push the service button one time. First PIN number is saved. LED will start to flash again.
- if the LED will flash so many times which is the new value of second PIN number, push the service button one time. Second PIN number is saved. LED will start to flash again.
- if the LED will flash so many times which is the new value of third PIN number, push the service button one time. Third PIN number is saved. LED will start to flash again.
- if the LED will flash so many times which is the new value of fourth PIN number, push the service button one time. Fourth PIN number is saved.
- 5 seconds after entering the fourth code number LED diode will show the new PIN code with the number of flashes with 2 seconds pause between every number.
- Turn the ignition on or wait for 10 seconds after showing the new PIN code and system will automatically end the PIN code programming mode

Note: Keep your new PIN code in safe. In case of lost please contact your dealer.

V. SERVICE MODE

- Turn on the ignition and press service button 2 times within 8 second. Turn off the ignition.
- If security mode is not activated, siren/buzzer sounds 2 times and LED lights permanently. Service mode is activated.
- When security mode is activated (function F4), LED diode starts flashes slowly. Enter security mode.
- if the LED will flash so many times which is the value of first PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of second PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of third PIN number, push the service button one time. LED will start to flash again.
- if the LED will flash so many times which is the value of fourth PIN number, push the service button one time. If you entered correct PIN code, siren/buzzer sounds 2 times and LED diode lights permanently. Service mode is activated.

Deactivation of service mode

Turn on ignition and press the service button 2 times within 8 seconds. Turn off the ignition. Siren/buzzer sounds 2 times and LED diode lights no longer. Service mode is deactivated.

Also, service mode may be activated by the E-card - turn on ignition and put the E-card to antenna on 20 seconds.

VI. EMERGENCY DEACTIVATION

Open the door and turn on the ignition. Push the valet button so many times, which is the value of the first number in PIN code within 8 seconds and then turn of the ignition. If the security mode is turned off, siren will sound 4 times and system will be disarmed. If the security mode is armed (function F4), LED will start to flash slowly. Enter the security mode. If you have entered correct PIN code, siren/buzzer will sound 4 times. System will be disarmed.

MEMORY FUNCTION
- The alarm wills memory the condition although the power is cut off.

VII. PROGRAMMING SYSTEM FUNCTIONS
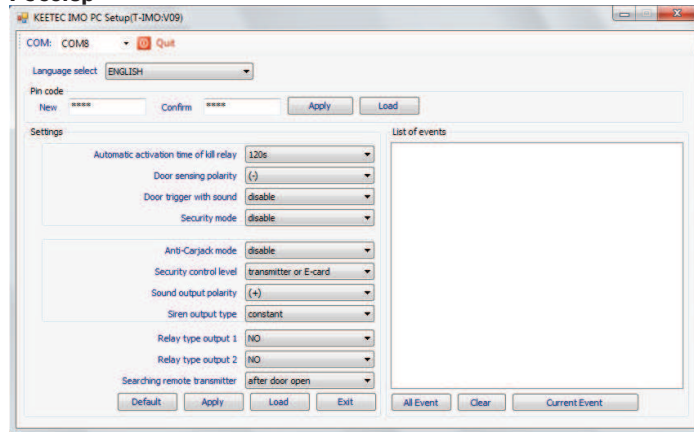The immobilizer TS IMO can be programmed via valet switch or PC.
Follow this when programming functions:
1. Activate the service mode (see section VI)
2. Turn on the ignition and press service button 7 times within 10 seconds.
3. Turn off the ignition, LED will start to flash.
4. Push the valet button within 10 seconds so many times, that corresponds to the number of the function you want to set up. Siren will sound after each push of the valet button.
5. Turn the ignition on. Siren/buzzer will sound 1 or 2 times, depending on which setting was set. Turn off the ignition.
6. You can repeat programming by turning the ignition on. Using the same way from point "4".
8. If 10 seconds without any action or turn ignition to off, system will chirp twice and leave function selection mode.
9. Leave service mode.

Programming table

Prog. menu	Functions	Default settings 1 chirps (buzzer/siren)	Adjustable 2 chirps (buzzer/siren)
F1	activation time of kill relay	120 seconds	30 seconds
F2	door sensing polarity	(-)	(+)
F3	door trigger with sound	no	yes
F4	security mode	no	yes
F5	anti-hijacking mode	no	yes
F6	security control level	transmitter or E-card	transmitter and E-card
F7	siren output polarity	"+"	"-"
F8	siren output type	constant	pulse
F9	relay type output No.1	NO	NC
F10	relay type output No.2	NO	NC
F11	searching remote transmitter	after door open	always
F12	system reset	reset	

PC setup

SYSTEM DESCRIPTION

F1. activation time of kill relay
PRE-SET: system will be activated after 120 seconds when ignition is turn on. (if auto transmit function is enabled, activation time starts when transmitter will be out of range).
ADJUSTABLE: system will be activated after 30 seconds when ignition is turn on. (if auto transmit function is enabled, activation time starts when transmitter will be out of range).

F2. door sensing polarity
PRE-SET: input for door contacts react on negative (-) impulse
ADJUSTABLE: input for door contacts react on positive (+) impulse

F3. door trigger with sound
PRE-SET: if system is active, and door are opened without deactivating system during 30/120 seconds, then siren not hooting.
ADJUSTABLE: if system is active and doors are opened without deactivating system during 30/120 seconds, then siren hooting during 30 seconds in 1 second interval.

F4. security mode
PRE-SET: security mode is deactivated
ADJUSTABLE: security mode is activated

F5. anti-carjack mode
PRE-SET: anti-carjacking mode is disabled
ADJUSTABLE: anti-carjacking mode is enabled

F6. security control level
PRE-SET: system is deactivated via transmitter or E-card
ADJUSTABLE: system is deactivated only via transmitter and E-card together. (in this case anti-carjacking mode not allowed).

F7. siren output polarity
PRE-SET: siren output has positive polarity
ADJUSTABLE: siren output has negative polarity

F8. siren output type
PRE-SET: constant - output is permanently switched on when system is triggered.
ADJUSTABLE: pulse - output is switched on in short intervals when system is triggered.

F9. relay type output No.1
PRE-SET: NO - immobilization circuit is connected to COM and NO (circuit is permanently disabled. It turns on only when immobilizer is deactivated).
ADJUSTABLE: NC - immobilization circuit is connected to COM and NC (when immobilizer is active, circuits is enabled and circuit is disabled if you turn ignition on. When immobilizer is deactivated, circuit is enabled, does not matter on ignition status).

F10. relay type output No.2
PRE-SET: NO - immobilization circuit is connected to COM and NO (circuit is permanently disabled. It turns on only when immobilizer is deactivated).

ADJUSTABLE: NC - immobilization circuit is connected to COM and NC (when immobilizer is active, circuits is enabled and circuit is disabled if you turn ignition on. When immobilizer is deactivated, circuit is enabled, does not matter on ignition status).

F11. searching remote transmitter
PRE-SET: after door open - immobilizer will be deactivated only when doors are opened or ignition is turn on.
ADJUSTABLE: always - immobilizer will be deactivated always if transmitter is in range of main unit.

F12. system reset - system will be reset to factory settings.

VIII. SET THE CAR ALARM USING PC
The immobilizer TS IMO can be also programmed via PC. For connection with PC use programming interface T PROG and for function settings use KEETEC TS 50-100 PC Setup application. Immobilizer must be connected to the power supply during programming.
- install programming software KEETEC TS 50-100 PC Setup (driver for interface T PROG must be installed firstly).
- connect immobilizer with PC via T PROG and launch TS 50-100 PC Setup.
- select COM port, which is allocated to the programming cable T PROG and select the language
- click on **Load** to view actual settings of car alarm
- change settings of immobilizer and click on **Apply**. New values will be saved to immobilizer and system is now programmed
- if you want to set immobilizer to factory settings, click on **Default** and after loading factory settings values, save them by clicking on **Apply**
- it is possible to set security PIN code via PC Setup. Click on **Load** to load actual PIN code
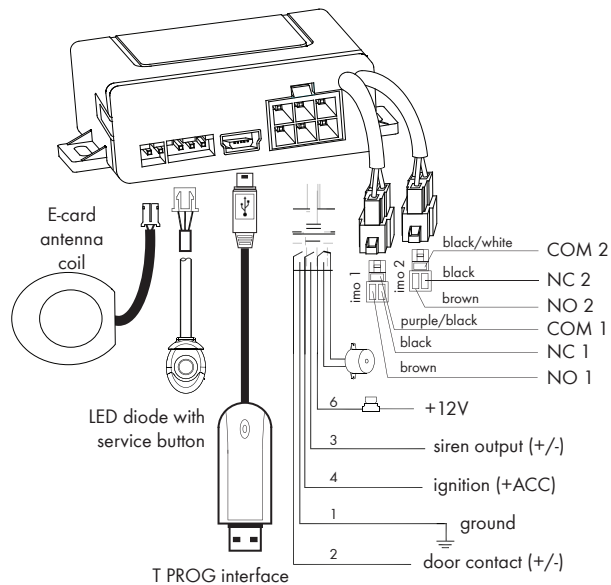- enter new PIN code to the window **New**
- enter same digits to the window **Confirm** and click on **Apply**
- end programming by click on **End**

The immobilizer TS IMO contains the memory of events. The memory stores the last 20 events.

IX. WIRING DIAGRAM

E-card antenna coil

LED diode with service button

T PROG interface

black/white — COM 2
black — NC 2
brown — NO 2
purple/black — COM 1
black — NC 1
brown — NO 1
6 — +12V
3 — siren output (+/-)
4 — ignition (+ACC)
1 — ground
2 — door contact (+/-)

TECHNICAL PARAMETES	
Supply voltage	12V +/- 25%
Operational temperature	-40°C to 80°C
Stand-by current	20mA
Working frequency	2,4 GHz
Current rating of contacts - relay No.1	20A
Current rating of contacts - relay No.2	20A

NOTE: wires in harness are with black colour insulation and with white number of wire. Wire must be connected by wiring diagram.
You not need to connect the E-card antenna into system if you will not using E-card. If yes, please, place the E-card antenna under dash board or steering column, for easy putting of E-card near to antenna.