







# SEO CANblu IMMOBILIZER USER MANUAL

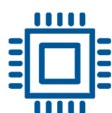
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CAN BUS devices



AVL and GPS/GSM systems



CAR security systems

# SEO CANblu IMMOBILIZER – USER MANUAL

**Disarming** – automatic when the ID transmitter is within the range of the main unit.

**Arming** – automatic, 10 sec after losing connection between the ID transmitter and the main unit.

ID transmitter has a button in its right-hand hole, by which a user can operate it (use a paper clip). LED is located in the left-hand hole of the ID transmitter.

Number of ID's button presses	Function	ID's LED indication	
Press and hold (for 5 seconds)	Turning the ID transmitter ON or OFF	5 blinks (in 2 sec) – ID has been switched ON Continuous illumination (in 2 sec) – ID has been switched OFF	
1x	ID ON or OFF status info	5 blinks (in 2 sec) – ID is ON Continuous illumination (in 2 sec) – ID is OFF	
2x	Service mode ON or OFF status (while ID is ON and in range of main unit)	1 blink – service mode is OFF 2 blinks – service mode is ON <del>No blink – out of range</del> (only if transmitters software is before 2023-03-04)	
3x	ID status: connection with the main unit and whether the ID transmitter is in range of main unit (while ID is ON)	Single blinks for 20 seconds – ID out of range Double blinks for 20 seconds – ID in range of main unit 3 fast blinks – ID does not store any encryption keys	
4x	Checking ID's battery level (while ID is ON)	1 blink – battery discharged, transmitter may not work 2 blinks – urgently replace the battery 3 blinks – replace the battery 4 blinks – good battery level	
5x	Checking qty of IDs programmed into main unit (while ID is ON and in range of main unit)	Number of blinks = number of programmed IDs	
6x	Checking, if the sequence of buttons to disarm the immobilizer was set in the vehicle (i.e. PIN code, alternative to the ID transmitter)	1 blink – NO 2 blinks – YES	
7x	Switching the <i>service mode</i> ON/OFF (while ID is ON and in range of the main unit; not later than 60 seconds after switching the ignition ON)	A series of very fast blinks confirms sending the request to the main unit. 5 blinks of dashboard indicator confirm setting the <i>service mode</i> ON; 1 blink confirms setting the <i>service mode</i> OFF	
8x	Checking current power of the ID transmitter (while ID is ON)	1 to 9 blinks indicate the transmitter signal level	
9x	<b>Setting the transmitter emitted power, removing the encryption keys from the ID transmitter, removing lost ID from the main unit and PIN code from the main unit</b>		
		<b>Additional code</b>	<b>ID's LED indication</b>
	(a)	1-1-1-1 + 1 press & hold to set power -40 dBm	LED will briefly go OFF and ON to confirm entering each digit. After entering all 4 digits of additional code, a press & hold action (until the LED goes OFF) is required for the settings to take effect. After releasing the button, LED will blink rapidly if the emitted power-level setting was set or if encryption keys were removed from the ID transmitter
		1-1-1-2 + 1 press & hold to set power -20 dBm	
		1-1-1-3 + 1 press & hold to set power <b>-16 dBm</b>	
		1-1-1-4 + 1 press & hold to set power -12 dBm	
		1-1-1-5 + 1 press & hold to set power -8 dBm	
		1-1-1-6 + 1 press & hold to set power -4 dBm	
		1-1-1-7 + 1 press & hold to set power 0 dBm	
		1-1-1-8 + 1 press & hold to set power +3 dBm	
		1-1-1-9 + 1 press & hold to set power +4 dBm	
	(b)	1-2-3-1 + 1 press & hold to remove encryption keys (while ID is OFF)	The ID transmitter must be switched ON See the manual for details
	(c)	1-2-3-5 + 1 press & hold to remove PIN code	
(d)	1-2-3-9 + 1 press & hold to remove ID transmitters keys from the main unit		

During normal operation, the ID transmitter does not signal its state by LED, which increases the battery life. For extra security we recommend you do not attach the ID to your car keys.

**Disarming** – automatic while the ID transmitter is within the range of the main unit. If a PIN code is defined and you do not have your ID transmitter with you, the immobilizer may be disarmed by entering the previously set buttons combination. Single blink of dashboard indicator will confirm disarming of the immobilizer. The time between pressing consecutive buttons must be shorter than 5 sec; in some vehicles this time must be longer than 0.4 sec.

**Arming** – automatic 10 sec. after losing connection between the ID transmitter and the main unit. If a PIN code has been set, switching the ignition OFF and opening driver's door will arm the immobilizer (2 blinks of a dashboard indicator)

### **Turning the ID transmitter ON or OFF**

To switch the ID transmitter ON or OFF, press and hold the button for about 5 seconds. The LED will indicate if it has been switched ON or OFF:

- a) 5 blinks in about 2 seconds – the ID transmitter **has been switched ON**,
- b) continuous light for about 2 seconds – the ID transmitter **has been switched OFF**.

## **1x Checking if the ID transmitter is switched ON or OFF**

Press the button once to check if the ID transmitter is switched ON or OFF. The LED will indicate whether it is switched ON or OFF:

- a) 5 blinks in about 2 seconds – ID transmitter **is switched ON**,
- b) continuous illumination for about 2 seconds – the ID transmitter **is switched OFF**.

## **2x Checking the status of the *service mode***

The *service mode* allows to temporarily disable the immobilizer function and is useful while servicing the vehicle. ~~To check the status of the *service mode* (ON or OFF), the ID transmitter must be switched ON and within the range of the main unit.~~ Press the ID transmitter button twice and the LED will indicate the status of the *service mode*. In the transmitters with software 2023-03-04 or newer, this information is stored in the transmitter's memory and will be displayed even when the transmitter is not within range of the main unit.

- a) one blink – *service mode* is OFF (the immobilizer must be authorized to drive away),
- b) two blinks – *service mode* is ON (the vehicle is not protected by the immobilizer),
- c) no blinks – the ID transmitter not in range of main unit.

## **3x Checking the connection status with the main unit and ID transmitter signal range**

Pressing the ID transmitter button 3 times permits you to check whether the ID transmitter is programmed into the main unit and if it is within its signal range.

- a) LED single blinks for 20 seconds – the ID transmitter is or has been programmed into the main unit, but remains out of its range,
- b) LED double blinks for about 20 seconds – the ID transmitter is programmed into the main unit and is within its range. **This information is useful when setting the desired signal range (see section 9).** Press the button 3 times again to extend the time of indicating whether the ID transmitter is within signal range. NOTICE: signal range depends on the electromagnetic noise present in the surrounding environment,

- c) three blinks – the ID transmitter has no encryption keys in its memory and can be programmed into the main unit.

#### **4x Checking the ID transmitter battery charge level**

Press the ID transmitter button 4 times to check the battery charge status indicated by the LED:

- a) one blink – battery discharged, transmitter may not work
- b) two blinks – urgently replace the battery
- c) three blinks – replace the battery
- d) four blinks – good battery level

**Low battery indication** (available in software 2022-03-10 and newer)

If the transmitter's battery requires replacement, the immobilizer will signal it with 10 blinks of the indicator light (it will occur 3 seconds after the end of the previous signaling after switching the ignition on) – it applies only to the transmitter which is within the range of the immobilizer at the time of disarming.

The battery needs to be replaced after approximately 15 months of usage. The CR2032 Energizer or Energizer Ultimate battery are originally installed in the device as these batteries have much longer service life than the batteries of other well-known manufacturers (Duracell, Maxell, Panasonic, Renata, Sony, Varta batteries were all tested).

#### **5x Checking the number of ID transmitters programmed into the main unit**

Press the ID transmitter button 5 times to check the number of ID transmitters and smartphones programmed into the main unit. Number of LED blinks indicates the number of programmed devices. Up to 8 ID transmitters and smartphones can be programmed. **Use this function to make sure that all ID transmitters and smartphones paired with the main unit are in your possession.**

In the transmitters with software 2023-03-04 or newer, this information is stored in the transmitter's memory and will be displayed even when the transmitter is not within range of the main unit.

You can also check the number of ID transmitters and smartphones programmed into the main unit without using the ID transmitter. Turn the car ignition ON and then press and hold the service button for 15 seconds. Number of dashboard's indicator blinks corresponds to the number of programmed ID transmitters and smartphones.

Immobilizer needs to be switched ON and not in *service mode*.

#### **6x Checking if the sequence of car's buttons (PIN code) to disarm the immobilizer has been set**

Press the ID transmitter button 6 times to have the LED indicate if the sequence of buttons (i.e. the PIN code, see section 11 for details) to disarm the immobilizer has been set in the vehicle. ~~The ID transmitter must be turned ON and within the range of the main unit.~~ In the transmitters with software 2023-03-04 or newer, this information is stored in the transmitter's memory and will be displayed even when the transmitter is not within range of the main unit.

- a) one blink – the PIN code has not been set in the vehicle,
- b) two blinks – the PIN code has been set in the vehicle,
- c) no blinks – the ID transmitter is not within the signal range of main unit.

## 7x Switching the *service mode* ON/OFF

The *service mode* allows for disabling the immobilizer function temporarily and is useful while servicing the vehicle. To switch the *service mode* ON or OFF, the ID transmitter must be switched ON and within the range of the main unit. Turn car's ignition ON (or press the START/STOP button) and within 30 seconds, press the ID transmitter's button 7 times. The ID's LED will confirm sending the request to the main unit by a sequence of short blinks. Correct activation of the *service mode* will be confirmed by 5 blinks of the indicator on the vehicle's dashboard. Correct deactivation of *service mode* will be confirmed by a single indicator's blink on vehicle's dashboard.

Attention – switching the service mode ON/OFF when the immobilizer blocks switching the ignition ON – with the ignition OFF disarm the immobilizer by entering the previously set PIN code, switch the ignition ON and enter again the previously set PIN code holding the last programmed button for 10 seconds. If you successfully managed to enable the service mode, the indicator on the dashboard will blink 5 times. If you want to switch the service mode off, just repeat the above procedure.

**WARNING – in the *service mode* the dashboard indicator does not indicate that the *service mode* is active and the car is not protected – the car owner, after picking the vehicle up from servicing, should immediately switch the *service mode* OFF. During normal operation, the SEO CANblu immobilizer indicates (by the dashboard indicator light) whether it has been armed or disarmed.**

## 8x Checking current power of the ID transmitter

Press the ID transmitter button 8 times to have the LED show the current power setting of the ID transmitter. The number of LED blinks indicates one of nine transmitter power levels:

- |                  |  |
|------------------|--|
| a) one flash     | – power -40 dBm (0.0001 mW)                    |
| b) two flashes   | – power -20 dBm (0.01 mW)                      |
| c) three flashes | – power -16 dBm (0.025 mW) – factory-set power |
| d) four flashes  | – power -12 dBm (0.063 mW)                     |
| e) five blinks   | – power -8 dBm (0.158 mW)                      |
| f) six blinks    | – power -4 dBm (0.398 mW)                      |
| g) seven blinks  | – power 0 dBm (1 mW)                           |
| h) eight blinks  | – power + 3 dBm (1.995 mW)                     |
| i) nine blinks   | – power + 4 dBm (2,512 mW)                     |

Adjust the ID transmitter signal power to set the distance from which the ID transmitter will be able to get authorized with the main unit. By default the transmitter power is set to -16 dBm. The smaller the power is set, the smaller the signal range of the ID transmitter will be. **NOTICE: signal range depends on the electromagnetic noise present in the surrounding environment.**

## 9x (a) Setting the transmitter's power

To enter into the settings mode press the ID transmitter button 9 times. The LED will light up and the **additional-code** should be entered. Entering of the additional-code should be done by quickly pressing the ID transmitter button appropriate number of times for each digit.

Entering of each digit is acknowledged by the LED briefly going OFF and ON. After entering all 4 digits of the additional code, press and hold the button until the LED goes OFF for the settings to take effect. After releasing the button, LED will blink rapidly if the emitted power setting was saved or if the encryption keys were removed.

1-1-1-1 – setting the transmitter's power to -40 dBm (0,0001 mW)

1-1-1-2 – setting the transmitter's power to -20 dBm (0,01 mW)

**1-1-1-3 – setting the transmitter's power to -16 dBm (0,025 mW) → factory-set power**

1-1-1-4 – setting the transmitter's power to -12 dBm (0,063 mW)

1-1-1-5 – setting the transmitter's power to -8 dBm (0,158 mW)

1-1-1-6 – setting the transmitter's power to -4 dBm (0,398 mW)

1-1-1-7 – setting the transmitter's power to 0 dBm (1 mW)

1-1-1-8 – setting the transmitter's power to +3 dBm (1,995 mW)

1-1-1-9 – setting the transmitter's power to +4 dBm (2,512 mW)

Example: if you want to enter the **additional code** 1-1-1-2, you should perform the following sequence:

- 1 – press the button once → the LED will briefly go OFF and ON,
- 1 – press the button once → the LED will briefly go OFF and ON,
- 1 – press the button once → the LED will briefly go OFF and ON,
- 2 – press the button twice → the LED will briefly go OFF and ON,
- press and hold the ID transmitter button (until the LED goes OFF) → after the button has been released, the LED will blink quickly, confirming that the settings have been saved.

## 9x (b) Encryption keys removal from the ID transmitter

**In order to remove encryption keys from the ID transmitter, it must be switched OFF.**

Programming the ID transmitter into the main unit assigns unique encryption keys which encrypt the communication between main unit and ID. After programming the ID transmitter, it can establish a connection with only one main unit – the one with which it has been paired. This means that the ID transmitter and the main unit are paired, i.e. they have encryption keys that define their connection. **In order to program the ID transmitter into another main unit, you must remove the encryption keys from this ID transmitter.** To perform this operation, enter the ID transmitter into settings mode (press the ID transmitter button 9 times). Then enter the additional code 1-2-3-1. Entering of each digit is acknowledged by the LED briefly going OFF and ON. After entering all 4 digits of additional code, press and hold the button for the settings to take effect. After releasing the button, LED will blink rapidly if encryption keys (encrypting communication with the previous main unit) were removed successfully.

It's not possible to program one ID transmitter into two main units at the same time.

Attention!

If the encryption keys have been removed from the wireless transmitter, in order to pair it again with the same immobilizer's main unit, the encryption keys encrypting the communication between the main unit and this particular transmitter must be removed from the main unit. See section 9x(d). If you'd unable to use another wireless transmitter or a smartphone, ask the installer for help.

## **9x (c) Removing (resetting) the previously set PIN code**

To remove the previously set PIN code, press the ID transmitter button 9 times. The LED will light up and the 1235 **additional-code** should be entered. Entering of the additional code is performed by quickly pressing the ID transmitter button adequate number of times for each digit. Entering of each digit is acknowledged by the LED briefly going OFF and ON. After entering all 4 digits of the additional code, press and hold the button until the LED goes OFF for the settings to take effect. After releasing the button, LED will blink rapidly confirming that the previously set PIN code was removed. After performing this procedure, check if it has been carried out correctly (check section 6x). It is also possible to remove the PIN code using our mobile app available for iOS and Android.

## **9x (d) Removing encryption keys from the main unit**

**All the ID transmitters you own must be switched ON and in range of the main unit during this process.**

In the case of losing one of the programmed ID transmitters or smartphones, remove it from the main unit. It's possible to remove ID's as long as they are not within the range of the main unit when being deleted – to do so, the user has to bring all the owned IDs and leave them switched ON and in range of the main unit – all other IDs will be removed.

To delete all ID transmitters and smartphones which at the moment of removal will not be within the range of the main unit, press the ID transmitter button 9 times. The LED will light up and the 1239 **additional-code** should be entered. To enter additional code quickly press the ID transmitter button respective number of times for each digit. Entering of each digit is acknowledged by the LED briefly going OFF and ON. After entering all 4 digits of the additional code, press and hold the button until the LED goes OFF for the settings to take effect. After releasing the button, LED will blink rapidly confirming that all ID's not present within the range on the main unit at the moment of deleting, were removed. After performing this procedure, make sure that it has been carried out correctly (check section 5x). It is also possible to remove a certain ID transmitter using our mobile app available for iOS and Android – see bullet 14 of this manual.

## **10. Programming (pairing) another ID transmitter into the main unit (max 8 ID transmitters and smartphones)**

Only a switched ON ID transmitter can be programmed into the main unit.

To enter into the programming mode, switch the ignition ON (so that the dashboard lights up) and disarm the immobilizer (using the ID transmitter, PIN code or smartphone), then press the service button 10 times. Two blinks of the indicator light on the dashboard will indicate entering into the programming mode. Immediately press the ID transmitter button once. If the ID transmitter was programmed successfully into the main unit, the dashboard indicator light will blink once.

**The programming mode may be activated only for 30 seconds from switching the ignition ON. After entering into the programming mode, DO NOT press any supported buttons, including the service button and brake pedal. Pairing must occur within 15 seconds after the procedure is initiated.**

The ID transmitters should be programmed one-by-one – it is not possible to program more than one ID transmitter at a time.

## 11. Setting the PIN code (setting the buttons combination)

**The PIN code** is a combination of any buttons available in a particular vehicle (supported buttons are listed on the connection diagram for the respective vehicle). The PIN code is an alternative to the ID transmitter. If a PIN code is set and you do not have your ID transmitter with you, the immobilizer may be disarmed by entering the previously set combination. **The pin code must consist of at least 2 different buttons.**

**To set or modify the PIN code**, you must switch the paired ID transmitter ON, start the vehicle ignition (but do not start the engine), press the service button 10 times. Two blinks of the indicator on the dashboard will indicate entering into the programming mode. Press the combination of 1 to 15 supported buttons. Just after entering the combination, turn the car ignition off. If the PIN code was programmed successfully into the main unit, the dashboard indicator light will blink once.

**You must start setting new PIN code within 15 seconds from switching the ignition on. The engine must be off.**

**To check** if the code has been set correctly, turn off all the ID transmitters that are within range of the main unit, turn the car ignition ON and enter the PIN code you just set. If the dashboard indicator will blink once (indicating that the immobilizer was disarmed), the code has been set correctly. If not, repeat the PIN code programming procedure. It's necessary for the ignition to be switched ON when disarming using the PIN code.

The installer can reset the existing PIN code.

NOTICE: According to UNECE Regulations 116 EKG ONZ oraz 97 and the Directive 95/56 EEC, the code for disarming the immobilizer must be one of at least 10,000 possible combinations. For SEO CANblu, the transmission between the ID transmitter and the main unit is randomly coded with one of  $2^{128}$  possible combinations ( $2^{128} = 340$  undecillion =  $340 \cdot 10^{36}$ ). The set PIN code cannot limit the possible number of combinations to fewer than 10,000. The installer offers all the know-how about this matter, which is available in the Installer's Manual.

**Disarming** – while the ignition is ON, press the previously set buttons' combination. Single blink of the dashboard indicator will confirm disarming of the immobilizer. The time between pressing consecutive buttons must be shorter than 5 sec; in some vehicles this time must be longer than 0.4 sec.

**Arming** – automatic after switching the ignition OFF and opening the driver's door (2 blinks of the dashboard indicator)

### **Attention!**

After 50 unsuccessful attempts to enter the PIN code, the device will not unlock for 30 seconds even after the correct PIN code has been entered.

The attempt is treated as unsuccessful when you make a mistake in entering the code. The device then waits for the correct sequence to be entered from the beginning.

One unsuccessful attempt is when you start entering the PIN code (by pressing one or more consecutive correct buttons) interrupted by pressing invalid button.



## 12. Switching the *service mode* ON/OFF using the PIN code

To switch the *service mode* ON using only the PIN code, turn the ignition ON, disarm the immobilizer by entering the previously set PIN code and holding the last programmed button for 10 seconds. If you successfully managed to enable the *service mode*, the indicator on the dashboard will blink 5 times.

To switch the *service mode* OFF, just enter the PIN code holding the last button until the dashboard indicator blinks once.

Attention – switching the *service mode* ON/OFF when the immobilizer blocks switching the ignition ON – with the ignition OFF disarm the immobilizer by entering the previously set PIN code, switch the ignition ON and enter again the previously set PIN code holding the last programmed button for 10 seconds. If you successfully managed to enable the *service mode*, the indicator on the dashboard will blink 5 times.

If you want to switch the *service mode* off, just repeat the above procedure.

**WARNING – in the *service mode* the dashboard indicator does not indicate that the *service mode* is active and the car is not protected – the car owner, after picking the vehicle up from servicing, should immediately switch the *service mode* OFF. During normal operation, the SEO CANi immobilizer indicates (by the dashboard indicator light) whether it has been armed or disarmed.**

## 13. Removing the ID transmitter or smartphone from the main unit's memory with the help of the installer – an alternative method of removing the lost ID transmitter

**This procedure may be carried out only when the ignition is switched ON.**

To remove all programmed ID transmitters and smartphones, you need to set the Program number 22999 (can only be performed with the installer – manually by pressing the main unit's button or by programming the device). Keep in mind that now all ID transmitters and smartphones which are in your possession need to be programmed again into the main unit, after removing encryption keys from them.

## 14. SEO CANblu mobile app

Every phone equipped with Android or iOS system with Bluetooth 4.2 or more recent version can be paired with the immobilizer. The immobilizer will allow you to drive your vehicle only when the paired phone or ID transmitter is in range or the PIN code has been entered.

App details available at [www.seocanblu.com](http://www.seocanblu.com)

## 15. Switching off the start-stop system

Auto start-stop is a system that automatically turns off the engine, e.g. when stopping at traffic lights, and turns it on, e.g. when the clutch pedal is pressed.

To deactivate the start-stop system, switch on the ignition, then press and hold the start-stop button in the car for 10 seconds. The indicator light on the dashboard will signal that the start-stop system is turned off with one blink, and will signal that the system is turned on with two blinks.

**The device turns off the auto start-stop system by remembering its last selected mode.**

The system remains off until changed by the user.

**Attention! The functionality is not available in every vehicle, ask dealer/installer about details.**

## **16. Unlocking the immobilizer with an emergency code**

From September 2021, scratch cards with a unique emergency code are added to each immobilizer, allowing you to unlock the car in case you do not remember your PIN code and you cannot disarm the immobilizer with a transmitter or smartphone. Instructions for unlocking the immobilizer with an emergency code can be found on the scratch card attached to the device. If the card has been damaged, it is not possible to recover the emergency code.