

Instruction manual on how to connect the “MOTOR START BMW V2.3” module for remote start engine for BMW E65/66/67



To connect the «MOTOR START BMW V2.3» module to BMW E65/66/67 you will need:

1) Computer with installed **BMW Standard Tools 2.12.0** software package

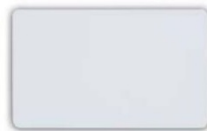
The programs included in this package designed for diagnostics, coding, and programming **BMW** brand cars, particularly **E - series** (you need only **NCS-Expert tool** and **INPA** programs).



2) **BMW INPA K+DCAN** adapter (it is not hard to find and buy it via the internet; it is quite cheap either.)



3) Any plastic card you do not mind spoiling



4) T20 Torx type screwdriver



5) Thin flat screwdriver.



Process of connecting the «MOTOR START BMW V2.3» module:

- Car coding with **BMW INPA K+DCAN** adapter and **NCS-Expert tool** and **INPA** programs that included in the **BMW Standard Tools 2.12.0** software package
- Installation into the car the **MOTOR START BMW V2.3** module.
- Binding **MOTOR START BMW V2.3** module to the **CAS ECU** of the vehicle.
- Keys binding to the **MOTOR START BMW V2.3** module.

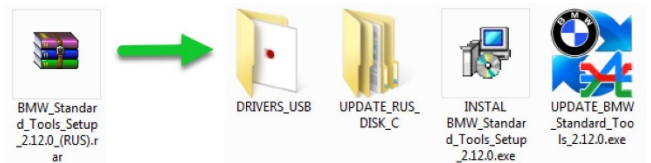
“BMW Standard Tools 2.12.0” software package and “BMW INPA K+DCAN” diagnostic adapter driver installation.

System requirements: Windows: XP, Vista, 8, 8.1, 10 32/64 Bit

1. Download the **BMW Standard Tools 2.12.0** software using this link:

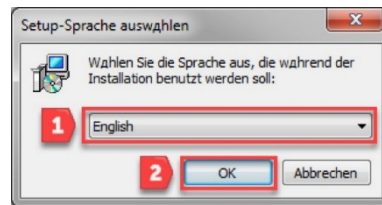
http://electrorefit.com/wp-content/uploads/2019/11/bmw_standard_tools_setup_2.12.0_rus.7z
(If the link does not open, then copy it and open in the browser)

2. Unzip downloaded archive to a convenient place for you.



3. Run the **INSTAL BMW_Standard_Tools_Setup_2.12.0.exe** installer

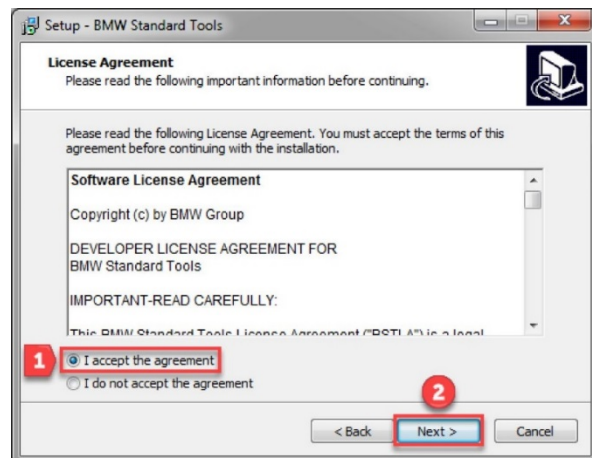
4. Choose English, then press OK



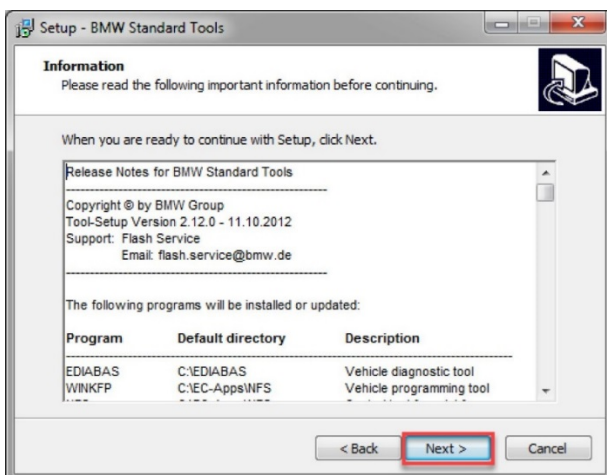
5. Press Next >



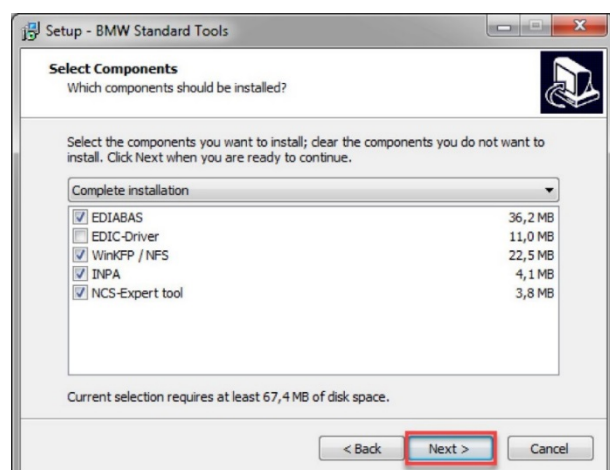
6. Choose “I accept the agreement”, then Next >



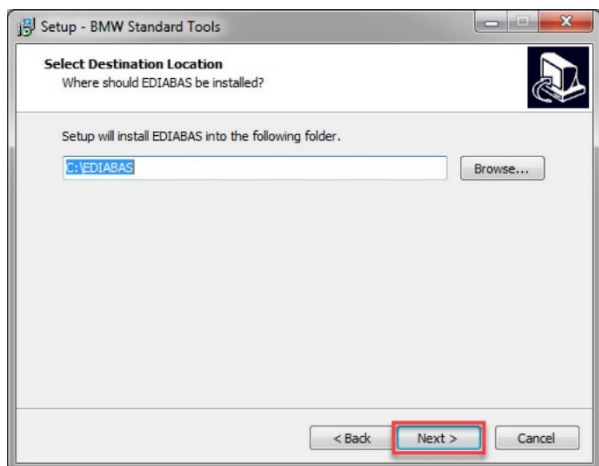
7. Press Next >



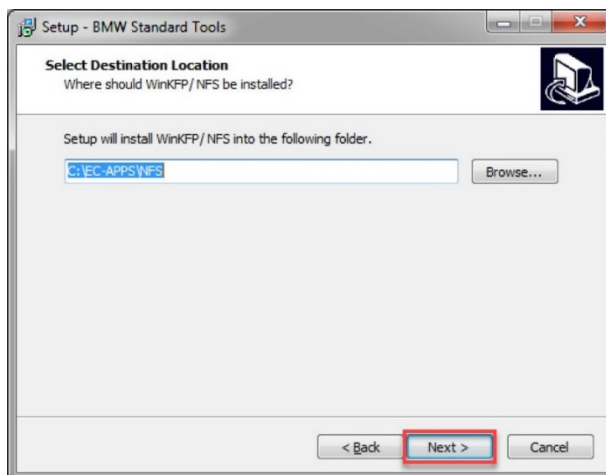
8. Leave everything as it is. Press Next >



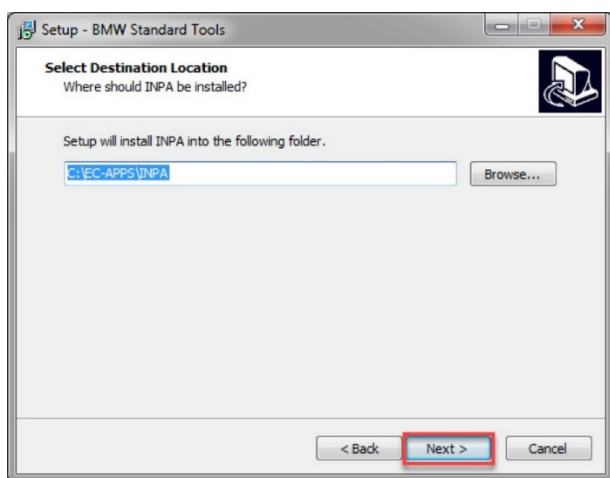
9. Leave everything as it is. Press Next >



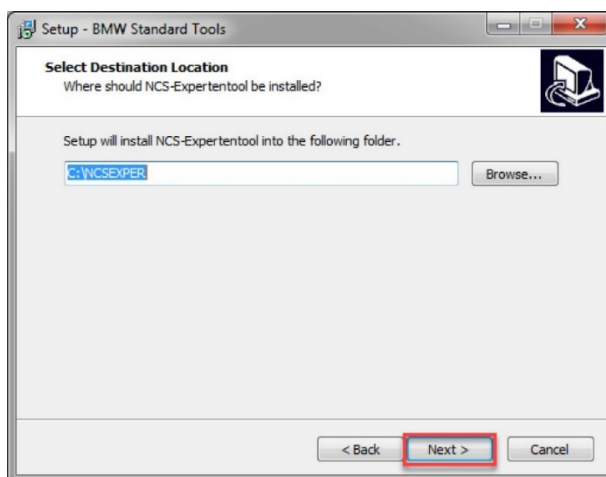
10. Leave everything as it is. Press Next >



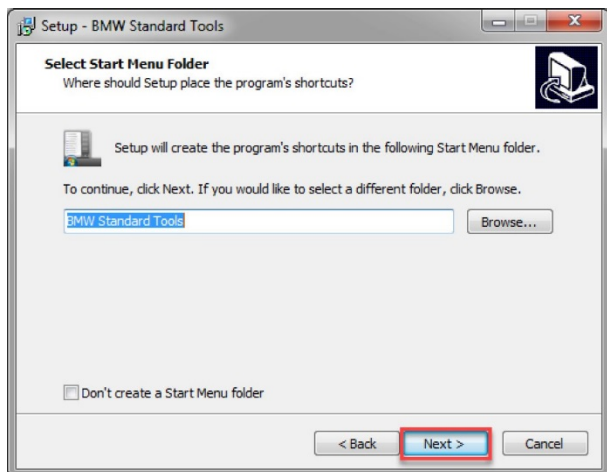
11. Leave everything as it is. Press Next >



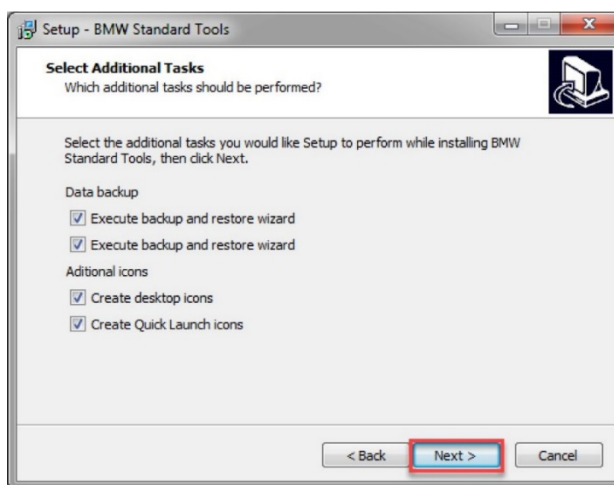
12. Leave everything as it is. Press Next >



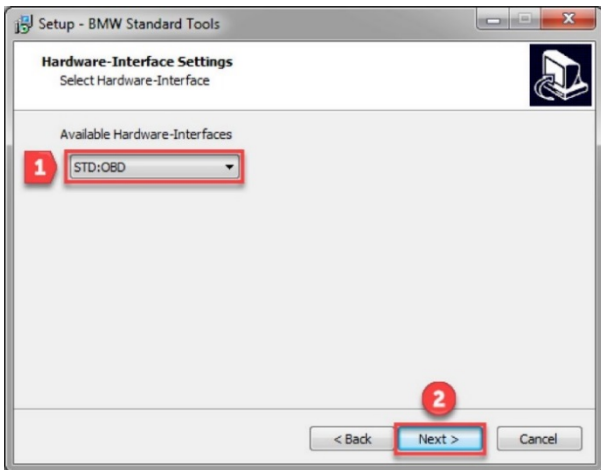
13. Leave everything as it is. Press Next >



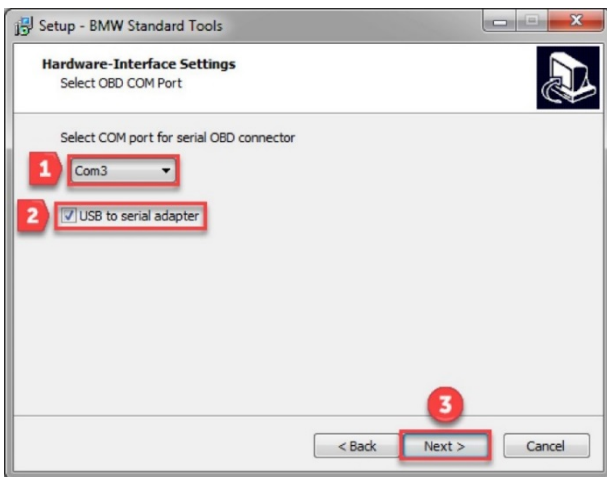
14. Leave everything as it is. Press Next >



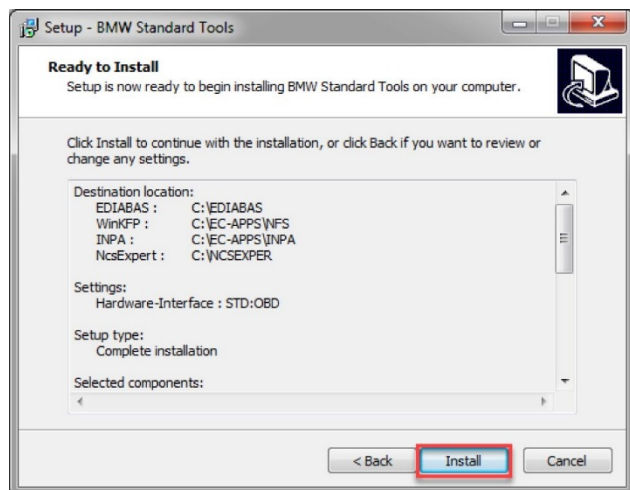
15. Choose STD:OBD, then Press Next >



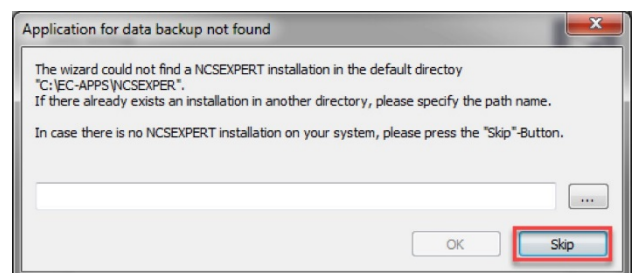
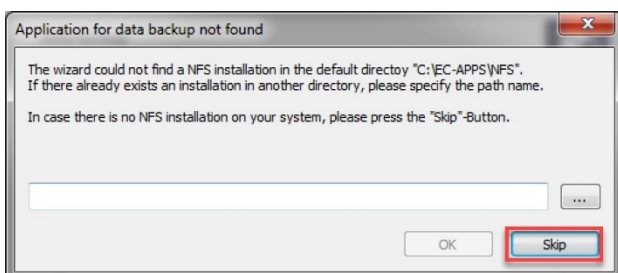
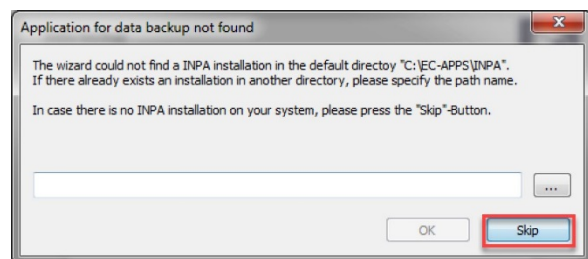
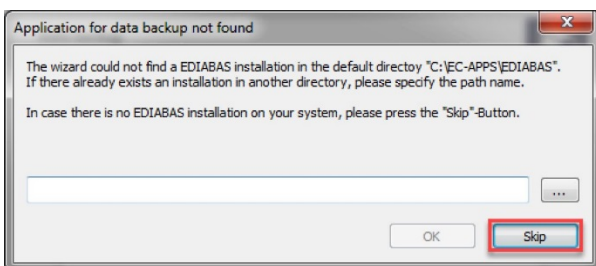
16. Choose the COM port number from 1 to 9. We will use the chosen one to connect the BMW INPA K+DCAN adapter. The chosen COM port should not be occupied by other devices (you can check it in the Device Manager). In the example we chose Com3, you can choose any other number from 1 to 9. If necessary, this number can be changed later. Next, put the «USB to serial adapter» tick and then press Next >



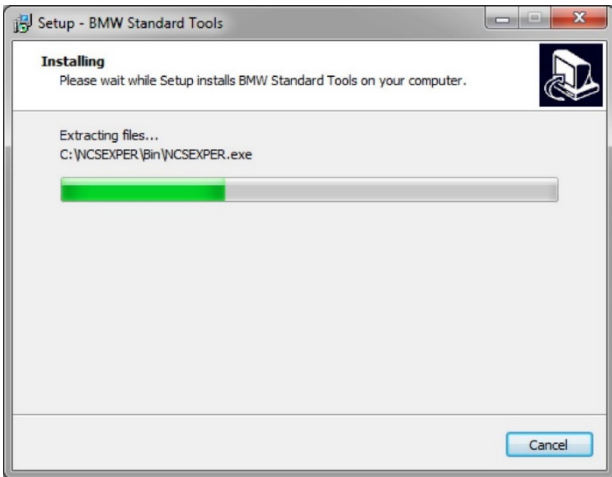
17. Choose Install



18. After that, 4 windows will appear one after another. In each of them choose Skip



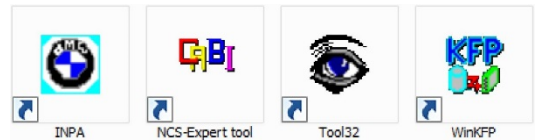
19. The installation process starts.
Wait for the completion of the installation.



20. After the installation is complete, it proposed to restart the computer. Reboot is necessary for the correct installation of this program! Choose "Yes, restart the computer now." and then press "Finish".



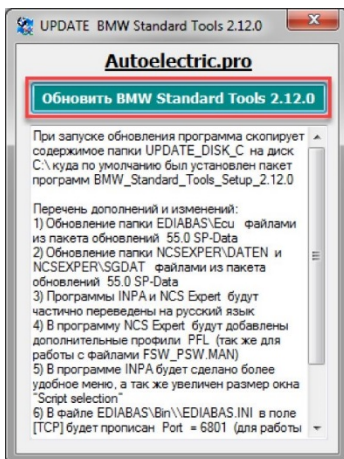
21. After successful installation of the BMW Standard Tools 2.12.0 software package, shortcuts of the programs included in this package should appear on the desktop



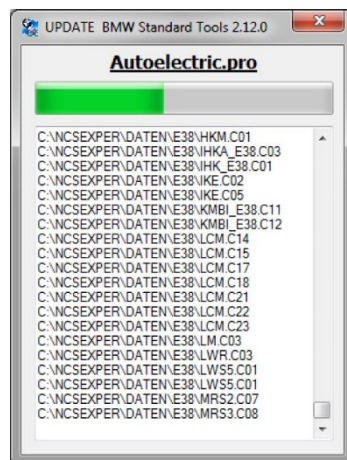
22. Next, start the UPDATE_BMW_Standard_Tools_2.12.0.exe, The BMW Standard Tools 2.12.0 software updating program (which we extracted from the archive we downloaded)



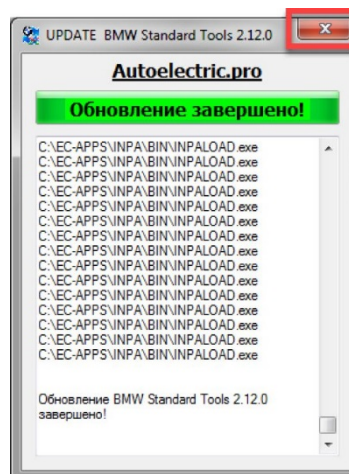
23. Choose Update (Обновить) BMW Standard Tools 2.12.0



24. Wait for the completion of the update

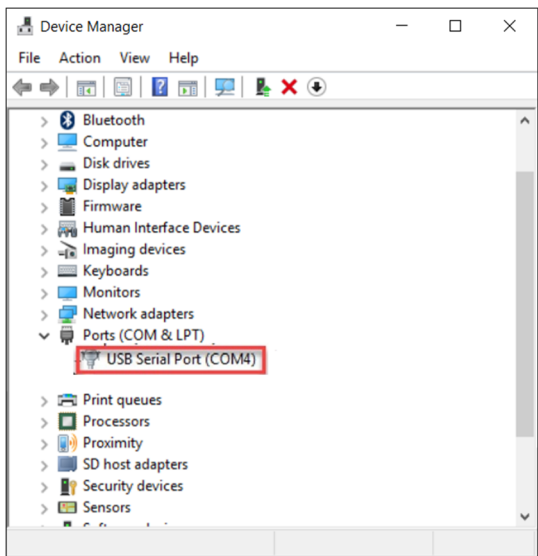


25. After a successful update, the message "Update completed!" will appear. Press [X] to close the program.

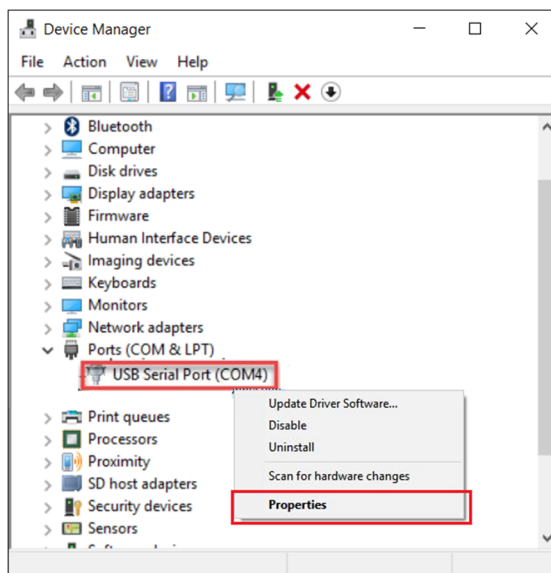


26. Now, we are going to configure the BMW INPA K+DCAN adapter. Connect the adapter to the USB port of the computer and, if necessary, install the driver from the disk that comes with your adapter. If your operating system is Windows 10, driver installation is not required. If for any reason you do not have drivers for your adapter, then you can install them via DRIVERS_USB folder, which is included in the archive downloaded from our site. In 99% of cases, these drivers would be appropriate. If you installed the drivers, then the adapter defined in the “Device Manager”. The fastest way to launch the “Device Manager” is to press the [Win + Pause] shortcut on the keyboard and choose “device manager” in the appeared window in the upper left corner.

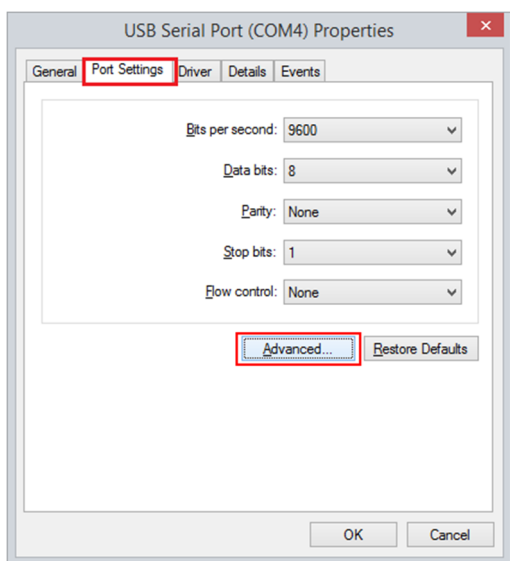
27. Launch “Device Manager”, then open list of ports (COM and LPT). (If there are no any devices connected, this list may not be visible). When the adapter is connected and the drivers installed, the adapter identified as a virtual COM port. In our particular case, the BMW INPA K+DCAN adapter identified as USB Serial Port (COM4). (In your case, the adapter could be identified under a different COM number)



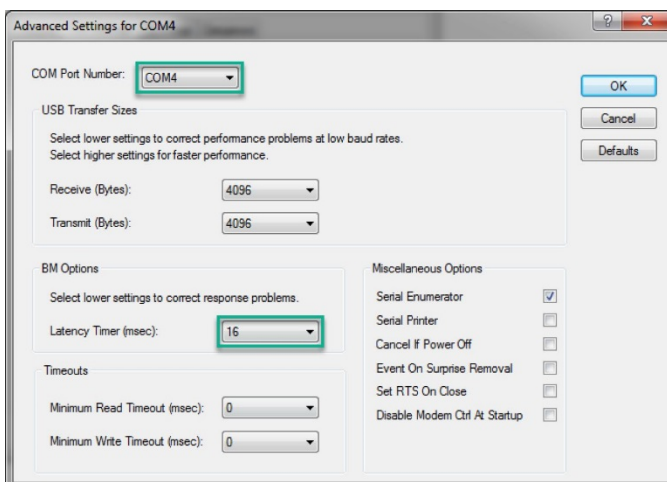
28. Right-click on USB Serial Port (COM4) icon. (In your case there may be a different number) and then choose *Properties*.



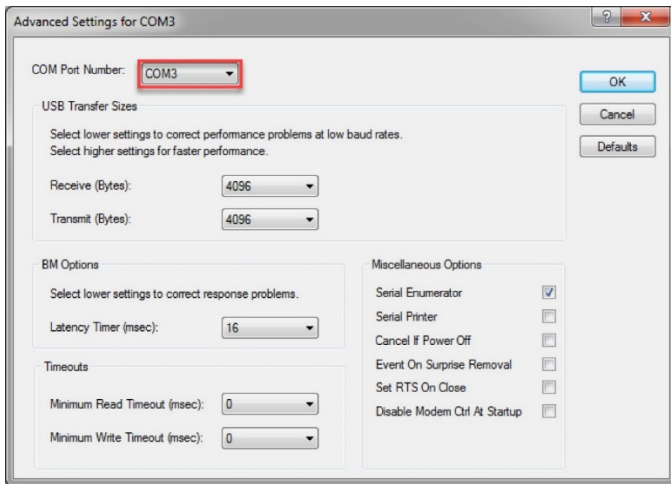
29. Select the *Port Settings* tab. Then *Advanced...*



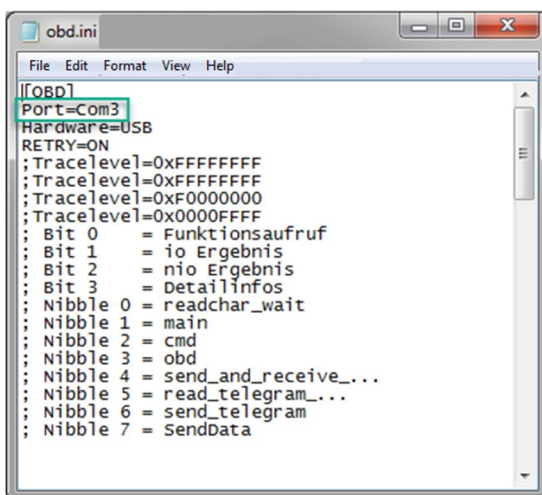
30. In the window that appears, we are only interested in two parameters: COM Port Number and Latency Timer (msec):



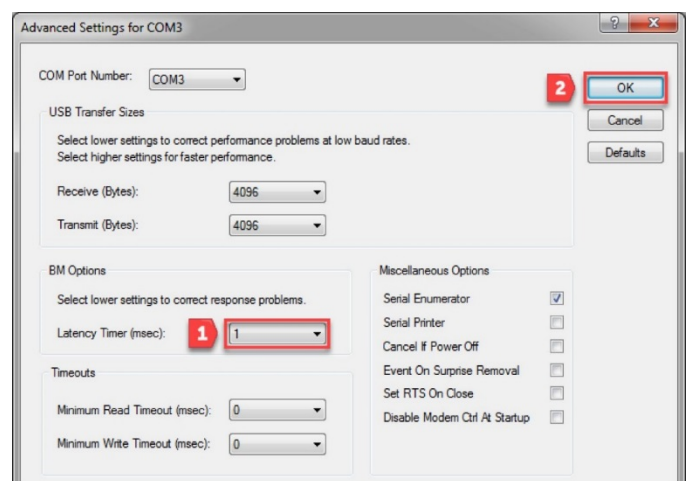
31. In order for the BMW INPA K+DCAN adapter to work in conjunction with the BMW Standard Tools 2.12.0 software package, the COM port number, under which the adapter in the “Device Manager” was identified, must match the COM port number that we choose during the installation of the BMW Standard Tools 2.12 software package. Since we chose COM3 during the installation of the BMW Standard Tools 2.12.0 (in your case it could be any other number from 1 to 9), now we need to change the COM port number of the BMW INPA K+DCAN adapter in “Device Manager”. In our case, we change the COM port number from COM4 to COM3. (In your case, there may be other numbers).



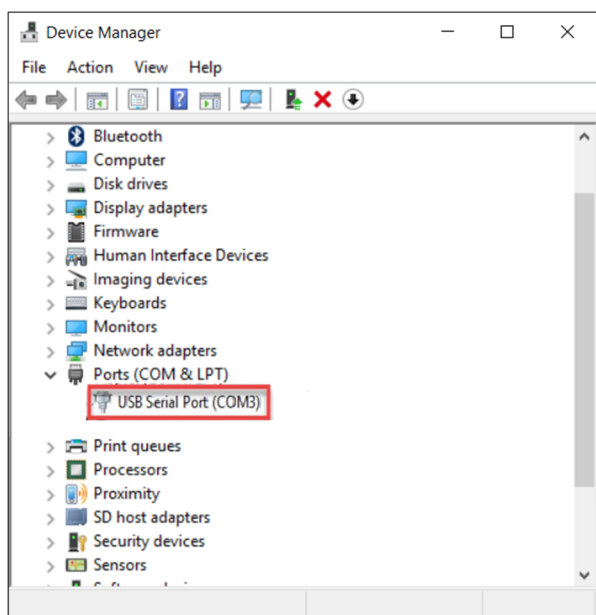
32. If you want to find out or change the COM port number that was chosen for the BMW Standard Tools 2.12.0 software, you need to open this file: C:\EDIABAS\Bin\obd.ini in any text editor (for example “Notepad”). In our case, the port is COM3 since we chose this number during the BMW Standard Tools 2.12.0 installation (in your case it may be another number that you have chosen yourself). If necessary, you can change this number to any other number from 1 to 9, the main thing is that it must be the same with the COM port number for the BMW INPA K+DCAN adapter in the “Device Manager”



33. Next, you need to set the Latency Timer (msec) time to 1 msec. This is necessary for the stable working of the adapter. Then press OK.

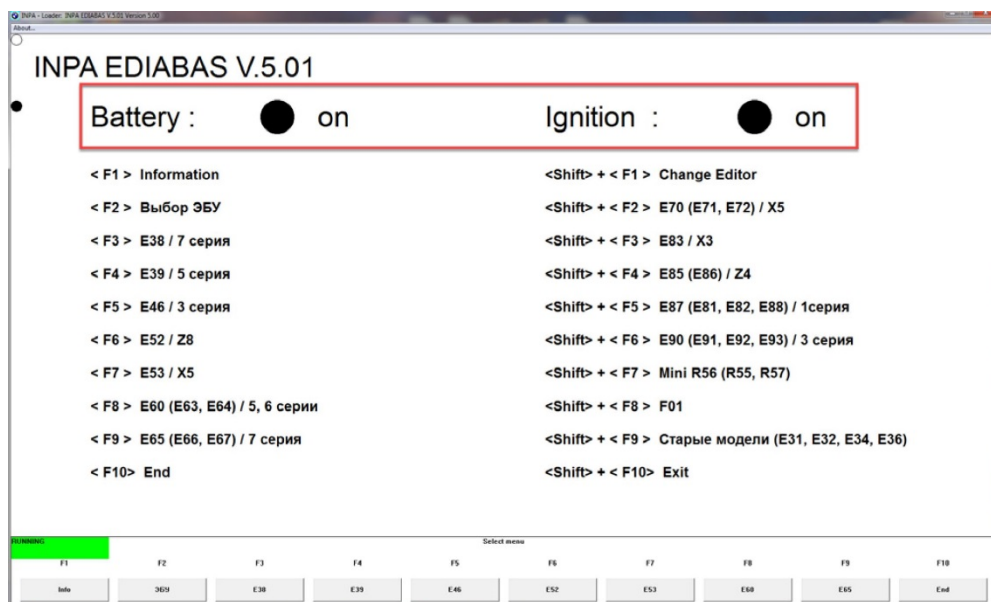


34. In our case, after changing the COM port number from 4 to 3 in the “Device Manager” the adapter will be identified as USB Serial Port (COM3). (In your case, there could be another number). Now you can close the “Device Manager” and go to test the adapter.



IMPORTANT! If you plug the BMW INPA K+DCAN adapter into another USB connector, it could be identified with a different COM port number. Check in the “Device Manager” that the adapter plugged into another USB connector identified with the required number. If the numbers do not match, then change it in the properties of the COM port. The same can happen when you plug in another similar BMW INPA K+DCAN adapter. It could also be identified with a different COM port number, even if another adapter was identified with the required COM port number in the same USB connector. In this case, select the required COM port number in the properties of the COM port.

35. Now the testing. Connect the BMW INPA K+DCAN adapter to the USB port of the computer and to the vehicle's OBD connector. Turn fully on the car ignition and run the INPA program (If you do not have a shortcut on the desktop, you can launch it by this path: C:\ECAPPS\INPA\BIN\INPALOAD.exe). The Battery and Ignition indicators will “light up” with black color. In case the BMW Standard Tools 2.12.0 software package installed correctly, BMW INPA K+DCAN adapter is working properly, all the drivers installed successfully and all the settings set up correctly. USB and OBD connectors must be OK either.



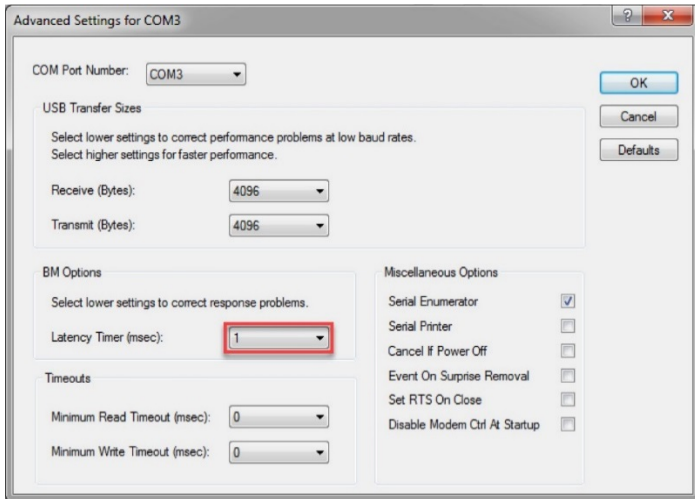
Coding car modules via NCS-Expert tool and INPA programs that included into BMW Standard Tools 2.12.0 software package.

All the process of coding described for programs that included in the BMW Standard Tools 2.12.0 that is located at this link:

http://electrorefit.com/wp-content/uploads/2019/11/bmw_standard_tools_setup_2.12.0_rus.7z

If you use programs installed from another source, the screenshots below may differ from what you have, but the process of the coding remains the same.

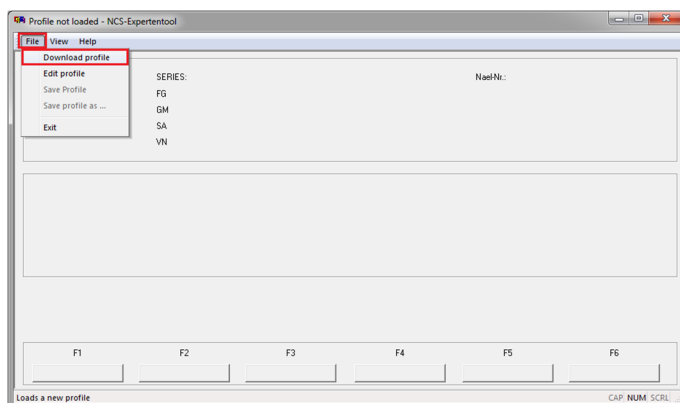
1. Important! Before you start coding, please make sure that in the properties of the virtual COM port of the BMW INPA K+DCAN adapter the Latency Timer (msec) set to 1 msec. (The adapter must be connected to the USB connector of the computer).



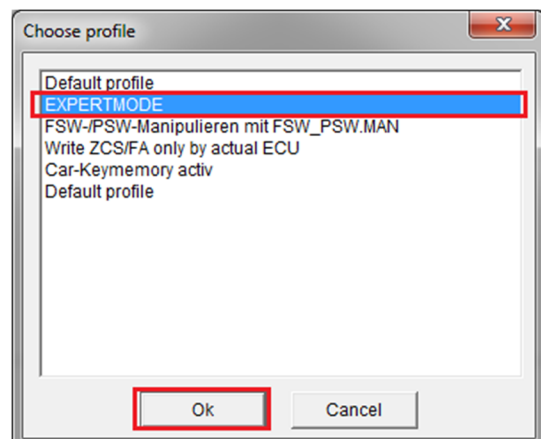
2. To encode, the battery of the car must be fully charged. If the battery is weak, you also need to connect the charger to it. Connect the BMW INPA K+DCAN adapter to the USB port of the computer and to the OBD connector of the car. Turn fully on the car ignition and launch the NCS-Expert tool (If you do not have a shortcut on the desktop, you can launch it by this path: C:\NCSEXPER\BIN\NCSEXPER.exe).



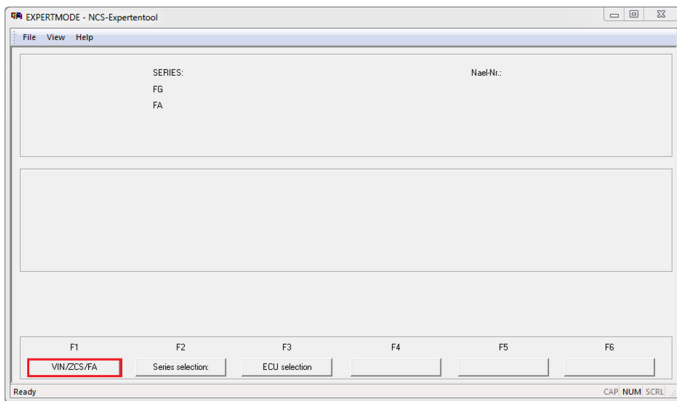
3. Select *File*, and then *Download profile*



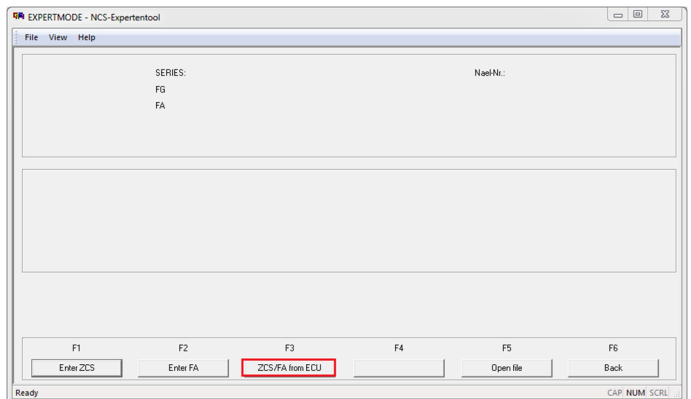
4. Select EXPERTMODE. Press OK



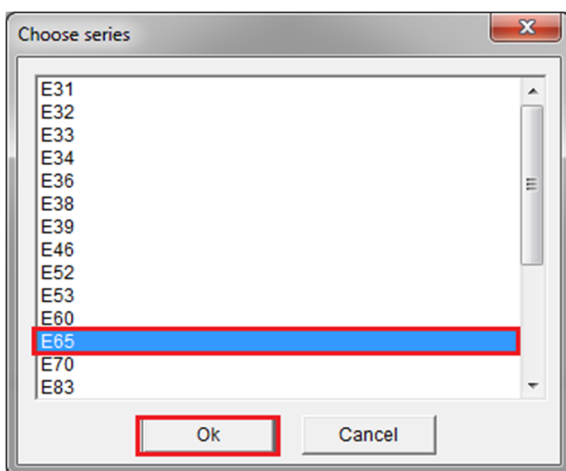
5. Select VIN/ZCS/FA. (F1 key)



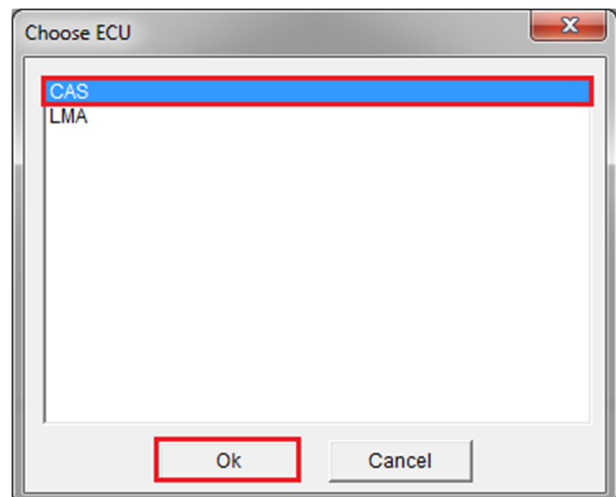
6. Now read the VIN number and FA code (It contains all options of the car) From car's ECU. Select ZCS/FA from ECU. (F3 key)



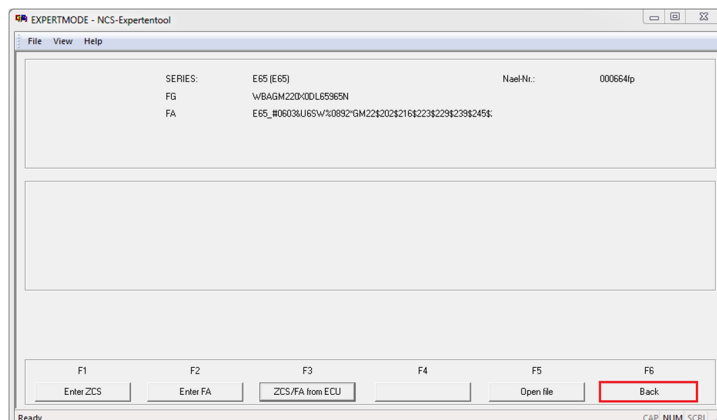
7. Select E65. (Same for E66 and E67) Press OK



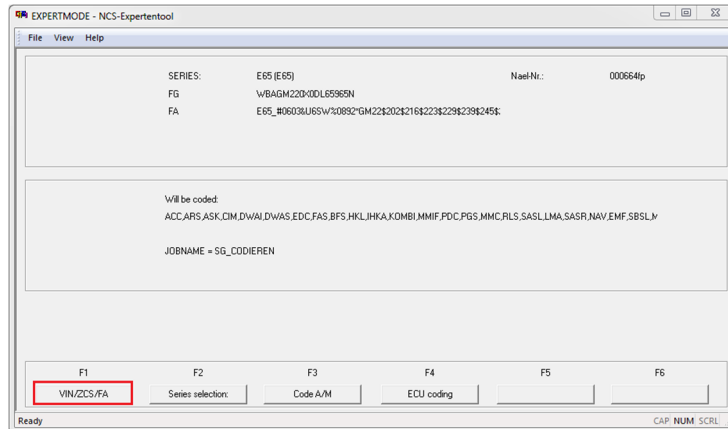
8. Select CAS. (ECU from which VIN and FA will be read) Press OK



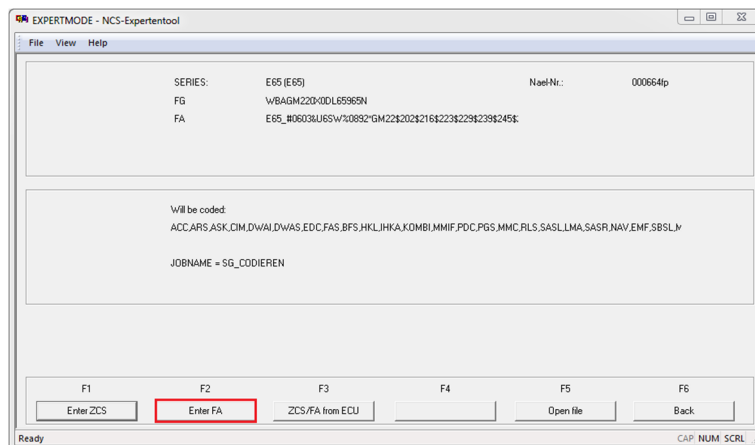
9. After that, the information that was read from the CAS E65 ECU (E66, E67) should appear at the top of the program window. Select Back. (F6 key).



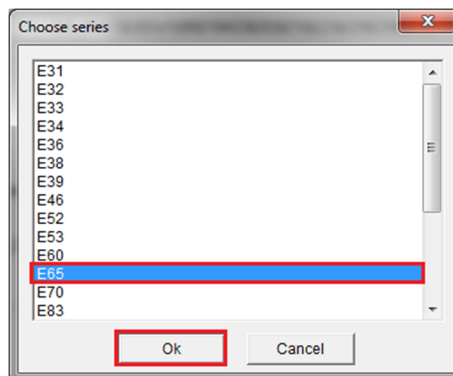
10. After that, in the central part of the program window should appear information about the selected ECU and the name of the jobs that to be done with these blocks. By default, all possible blocks are set to work with. (Depending on FA code). Coding (SG_CODIEREN) chosen as a job (JOBNAME). Choose VIN/ZCS/FA. (F1 key)



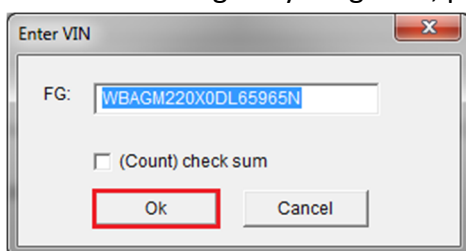
11. Now the menu will be the same as in the 6 step, with the difference that the VIN number and FA code were read from the CAS unit, and the job and ECUs list were selected. Select Enter FA. (F2 key)



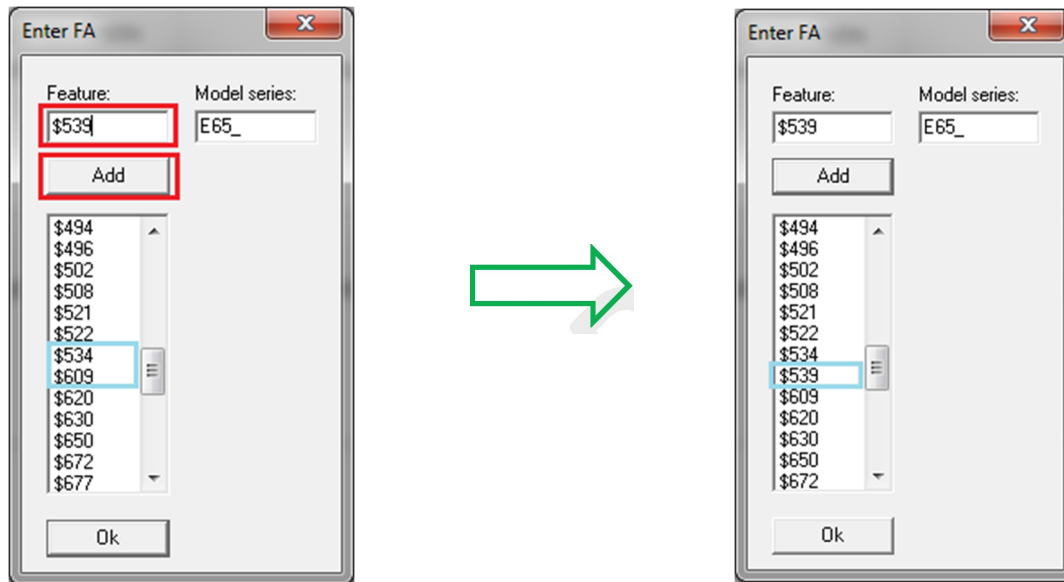
12. Select E65. (Same for E66 and E67) Press OK



13. Do not change anything here, press OK



14. A window will appear. In this window, you can view, add, and delete options. First, scroll down from the beginning to the end of the list and check out that the \$539 (STANDKLIMA) option is there. In this example, you can see that there is no \$539 option between the \$534 and \$609 options. (In your case, the list of options may differ). If the option \$539 is missing, then enter it in the *Feature:* field. Then click *Add*. After that, the \$539 option should appear in the general list of options.



To delete the option (for example, if you mistyped some symbols and added them to general options list) you need first select it and then press the [Delete] key on the keyboard. Be extremely careful not to accidentally remove the necessary options. If you accidentally deleted any necessary options and do not remember its name, do not worry. The data has not yet been recorded in the FA car code. The easiest way now is to close the NCS-Expert tool and repeat everything point by point, from the very beginning since the launch of the program.

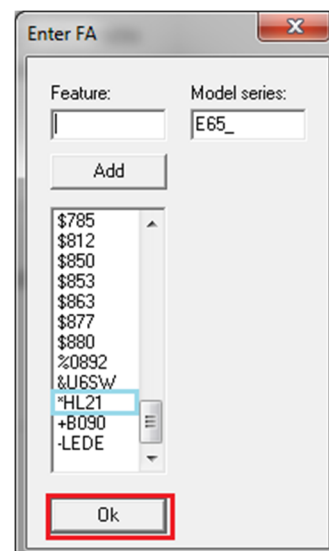
You can check out the description of the all other options for BMW E65/66/67 in the file by this path: C:\NCSEXPER\DATEN\E65AT.000 using the text editor "Notepad".

W 522	XENONLICHT	//Bi-Xenonlicht
W 523	F_KLIMA_KUEHL	//Fondklimaanlage mit Kuehlbox
W 524	ALC	//Adaptiv Light Control (36/09/03)
W 525	KUEHLBOX	//Kuehlbox (E38-L7-Anlage)
W 533		//Fond-Klimatisierung
W 534	KLIMA_HIGH	//Klimaautomatik "High" + gek. Ablagefach in Mittelkonsole
W 536	STANDHEIZUNG	//Standheizung
W 539	STANDKLIMA	//Standklimatisierung zu 03/03
W 541	ACC	//Adaptive Geschwindigkeitsregelung II
W 548	KM_TACHO	//KM-Tacho fuer RL und Kanada
W 584		//LM-Rad vielspeiche 94 mit Notlauf
W 596		//LM-Rad E65-Sportpaket
W 597		//LM-Rad E65- Sternspeiche
W 5AB	OHNE_BFD	//ZWEISTUFIGE BREMSLEUCHTEN ENTFALL (BFD)

15. After that, scroll down until the end of the list and find the option that starts with *(asterisk). After the asterisk, there will be four symbols (two letters and two digits). We are only interested in the very last character (digit).

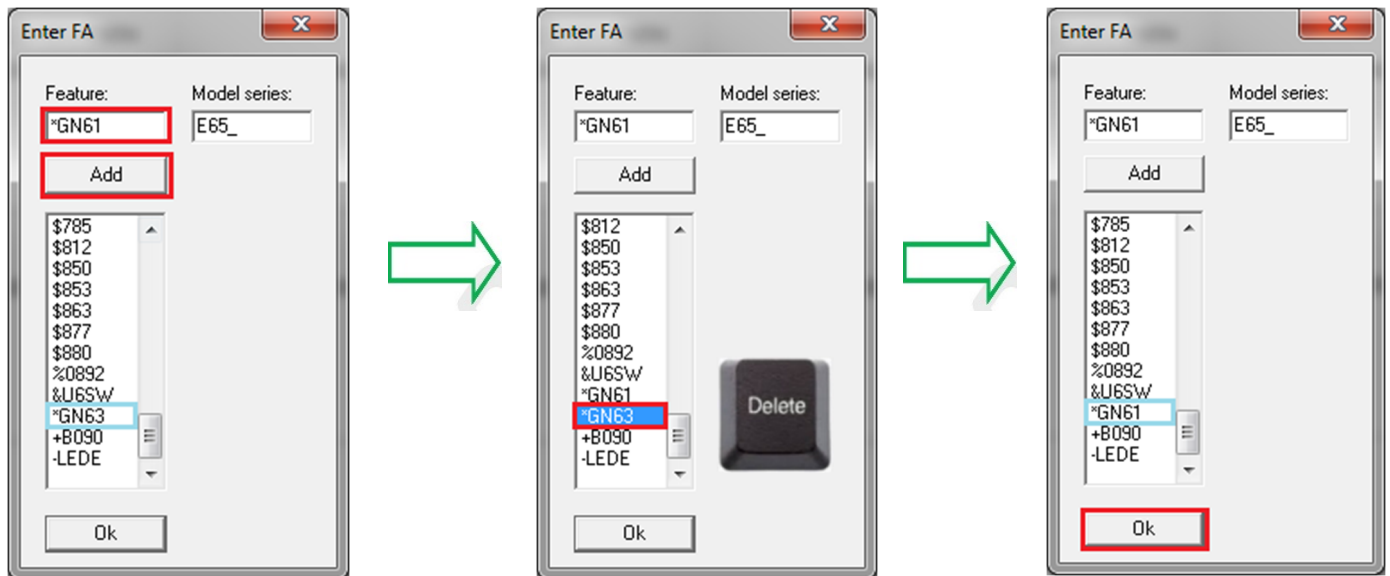
Different variants of the last character (digit):

- If the last character is a digit 1 (for example *HL21, but in your case the first 3 characters after the asterisk may be completely different), that says that the car is encoded for the European market (EUR or ECE). In this case, do not change anything, immediately select OK.



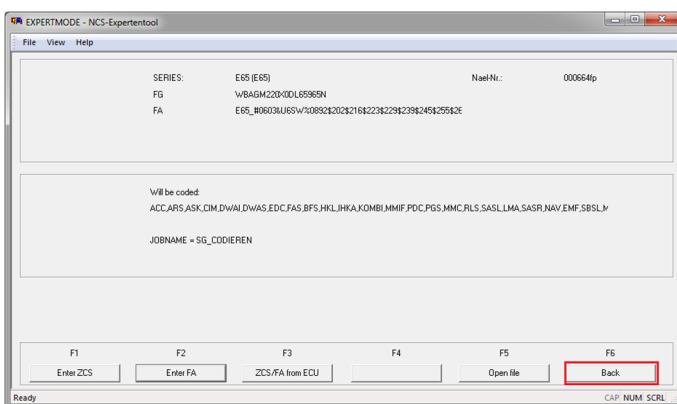
Important! Even if you are 100% sure that your car is coded for the European market (EUR or ECE), anyway, make sure that the option that starts with * (asterisk) ends with 1 (*???1).

If the last character is a digit .3. (For example *GN63 - in your case the first 3 characters after the asterisk may be completely different), this suggests that the car is encoded for the American (US) market. In this case, we change the last character in this option from 3 to 1. Enter the modified option in the field *Feature:* (in this example, we change *GN63 to *GN61). Next, press *Add*. After that, 2 options at once will be displayed in the list of options. (In this example *GN61 and *GN63). Select the option (so it is highlighted) which ends with the digit .3. (In this example it is *GN63) and press [Delete] key on the keyboard. After the list of options remain only the option we need (that one that ends with 1; in this example, it is *GN61) you can click OK.

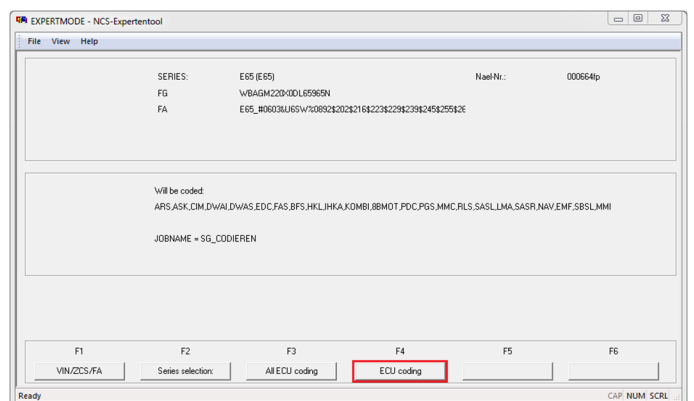


Important! All letters entered in the *Feature:* field must be capitalized.

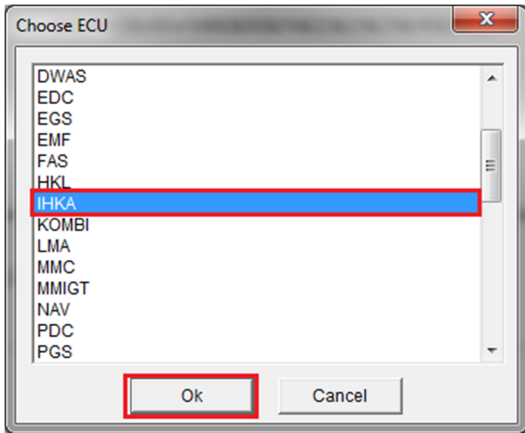
16. After that, we return to the main working window again. Select *Back* (F6 key).



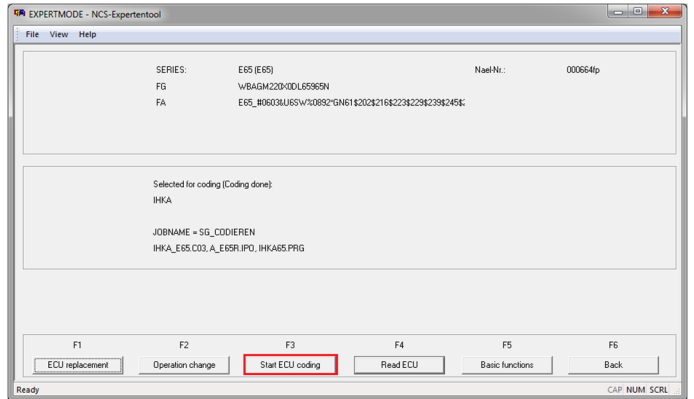
17. Choose ECU coding. (F4 key.)



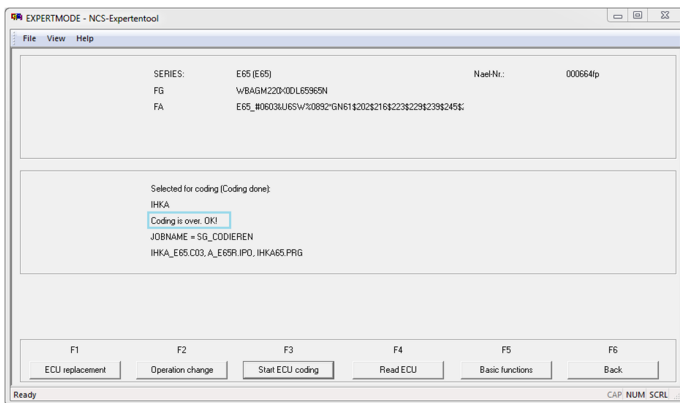
18. Select IHKA ECU (automatic heating and air conditioning system) and press .OK.



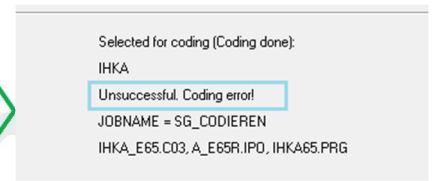
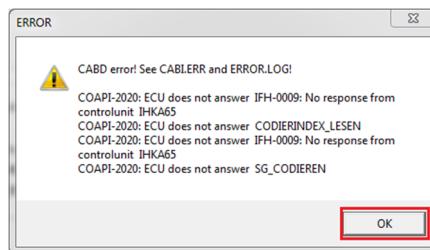
19. In the central part of the window will appear “Selected for coding: IHKA”. The selected job by default must be JOBNAME = SG_CODIEREN. (If another job displayed, then you can select the desired job through “Operation change” (F2 key)). Start the coding process, press *Start ECU coding*. (F3 key).



20. If the encoding is successful, a message “Encoding is complete” will appear in the center of the screen. OK!



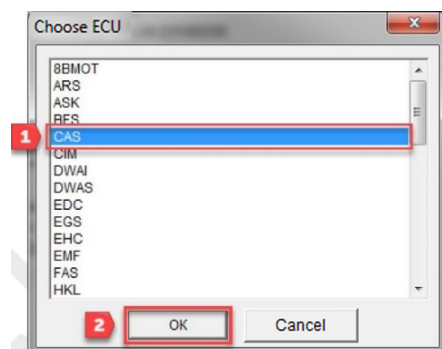
Important! It is possible that during encoding data transfer may fail, and then “ERROR” window will appear. Press OK to close this window. A message that says “Unsuccessful. Coding error!” will appear in the center of the screen. In this case, press again *Start ECU coding*. (F3 key) so that the message “Encoding is complete” appears. OK! If several attempts were unsuccessful, then you need to look for the reason in the program, the adapter, connecting of the connectors or in the car itself.



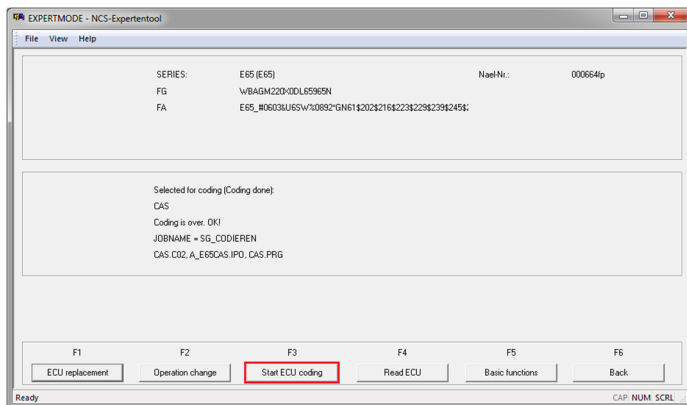
21. After successfully coding IHKA, we change the ECU for coding to CAS. Choose *ECU replacement*. (F1 key).



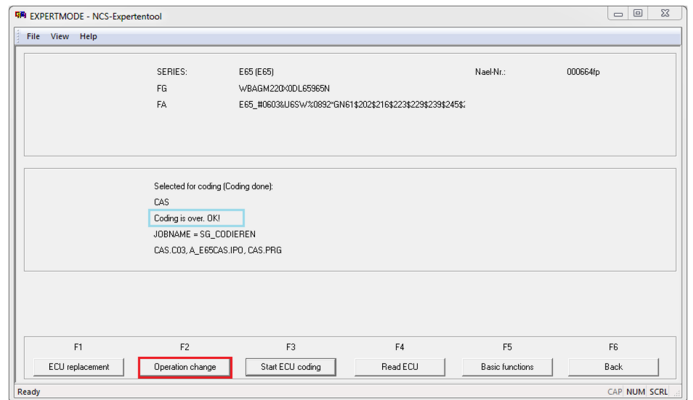
22. Choose CAS ECI (car access system) and then press OK



23. In the central part of the window will appear “Selected for coding: CAS”.
The selected job by default should be .JOBNAME = SG_CODIEREN.
Start the coding process, press *.Start ECU coding.* (F3 key).



24. After the successful encoding, a message “Encoding is complete” will appear in the center of the screen. Next, choose *Operation change.* (F2 key).



Important! After coding the CAS and IHKA ECUs, all their parameters will reset to the factory settings according to the options in the FA code. If you do not want all the settings of the CAS and ECUs to reset to the factory settings, then you need to encode them using a different algorithm that uses different file FSW_PSW.MAN. If setting CAS and IHKA ECUs to the factory settings is okay for you, then you can ignore this warning and just go to the next step.

Next, we briefly describe the coding procedure for CAS ECU according to this algorithm using the FSW_PSW.MAN file (for IHKA ECU, resetting to factory defaults is in most cases not noticeable at all, so it can always be encoded in the standard way, see steps №17...20).

You should encode the CAS ECU via the FSW_PSW.MAN file in the very end, after the IHKA ECU has been encoded and the FA code has been written in the CAS and LMA ECUs.

How to encode CAS ECU via FSW_PSW.MAN file:

NCS-Expert tool → [File] → [Download Profile] → [EXPERTMODE] → [VIN/ZCS/FA {F1}] → [ZCS/FA из ЭБУ {F3}] → [E65] → [CAS] → [Back {F6}] → [ECU coding {F4}] → [CAS] → [Read ECU {F4}] → [Open via “Notepad” C:\NCSEXPER\WORK\FSW_PSW.TRC] → [Find (Ctrl+F)] and paste parameter arguments:

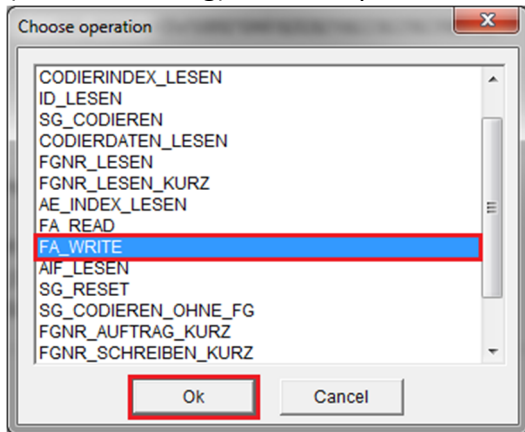
```
MOTORFERNSTART_GENERELL   aktiv
ER_TANKKLAPPE_VR           nicht_aktiv
FBD_HSF_0                   wert_03
FBD_HSF_1                   wert_03
```

] → [in notepad: File → save as... → file name: FSW_PSW.MAN → save]

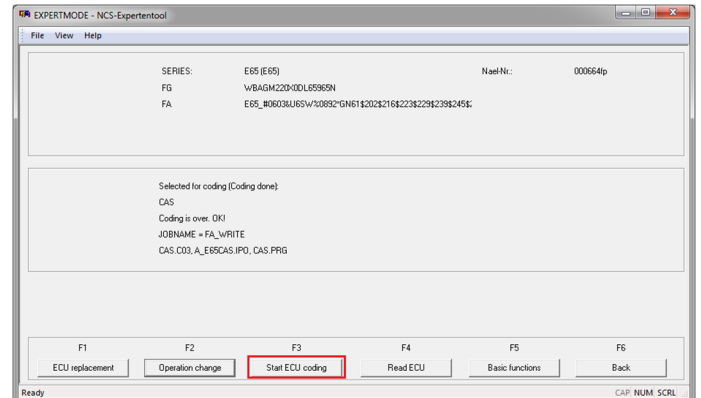
→ NCS-Expert tool → [file] → [Download profile] → [FSW-/PSW-Manipulieren mit FSW_PSW.MAN] → [ECU coding {F4}] → [CAS] → [start ECU coding {F3}]

25. Select FA_WRITE.

(FA code writing) and then press .OK

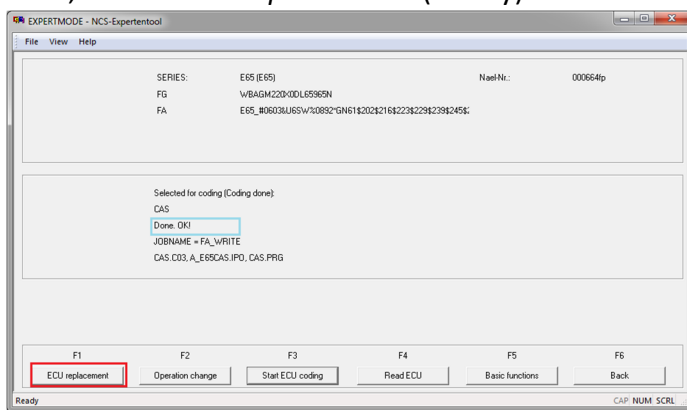


26. In the central part of the window should appear JOBNAME = FA_WRITE. Selected for coding ECU must be CAS. Choose start ECU coding. (F3 key).

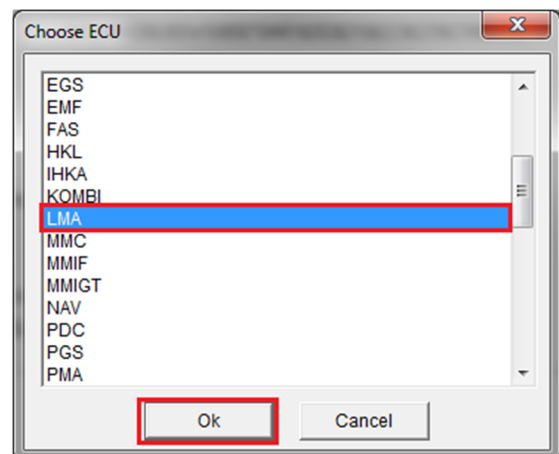


27. After writing the FA code to the CAS control unit, the message "Done" will appear in the center of the screen. OK!

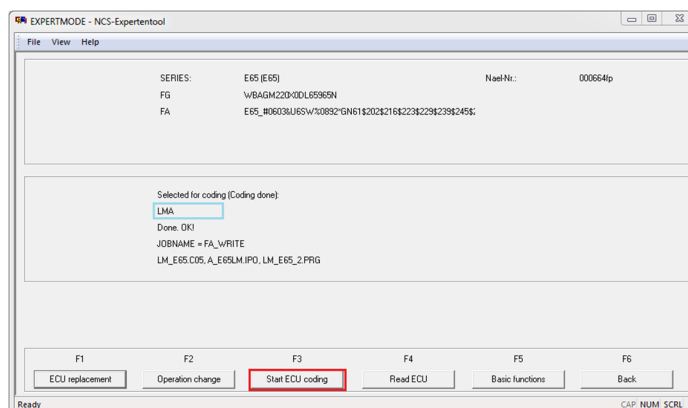
Next, choose ECU replacement. (F1 key).



28. Choose .LMA. ECU (light module). Then press OK

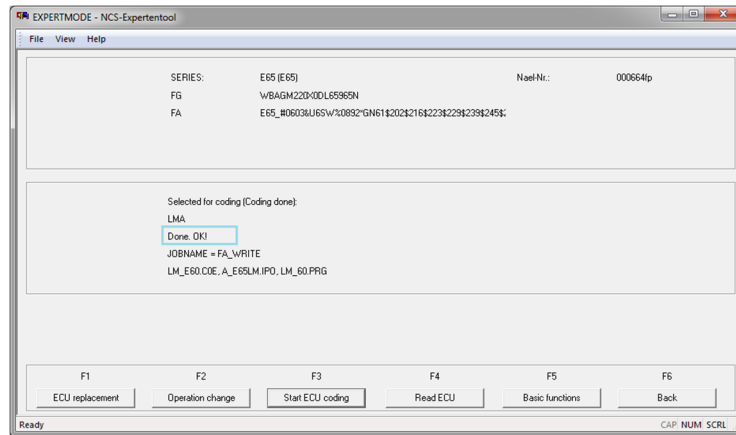


29. In the central part of the window will appear "Selected for coding: LMA". The selected job by default should be .JOBNAME = FA_WRITE. Start the coding process, press .Start ECU coding. (F3 key).



Important! In the LMA ECU, memory is allocated for backup storage of the FA code in case the code in the CAS ECU is lost or corrupted (the FA code from the LMA ECU can be written to the CAS ECU). Therefore, writing the FA code to the LMA ECU is a recommended (desirable), but not mandatory operation to start the engine using the "MOTOR START" module.

30. After the FA code will be written to the LMA ECU, a message “Done” will appear in the center of the screen. The coding process is now completed. Click [X] to close the NCS-Expert tool program.

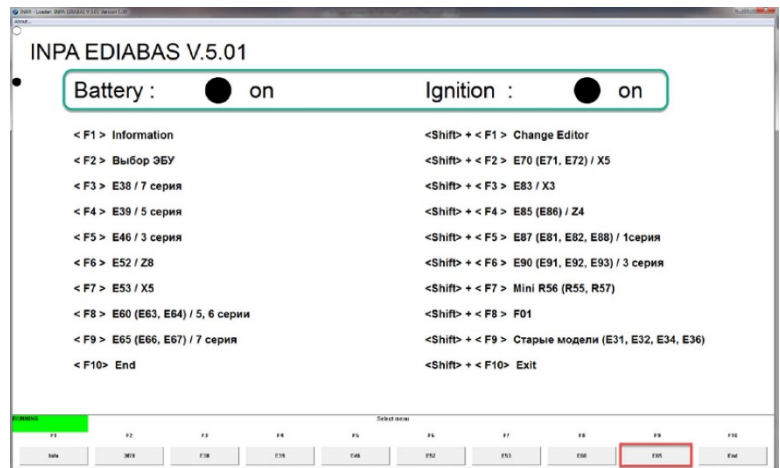


31. Now, open the INPA program.

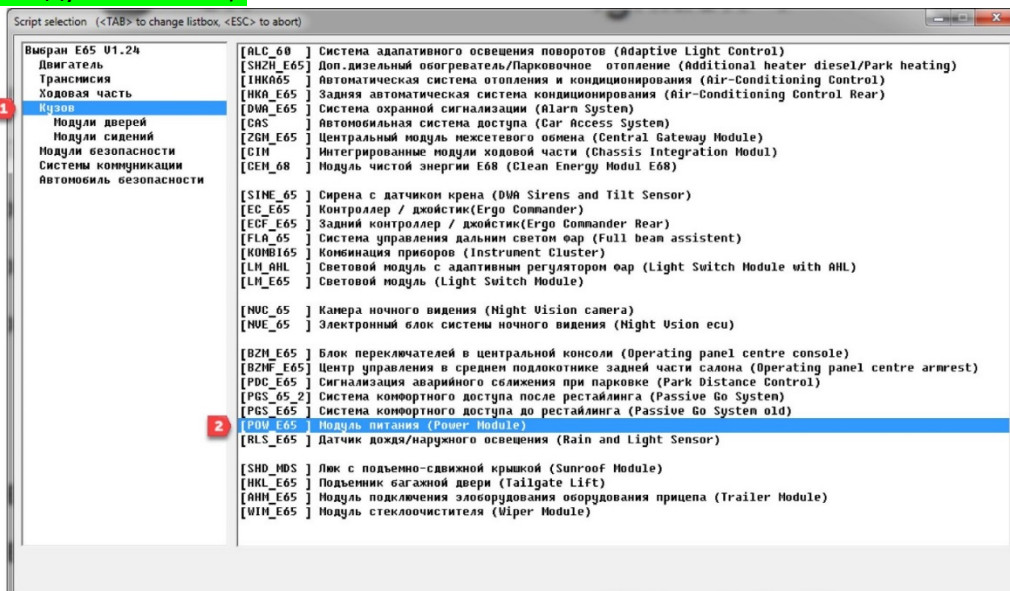
(If you do not have a shortcut on the desktop, you can run it by this path: C:\EC-APPS\INPA\BIN\INPALOAD.exe).



32. The Battery and Ignition indicators should “light up” with black color. Choose .E65(66/67) / 7 series. (.F9. key).



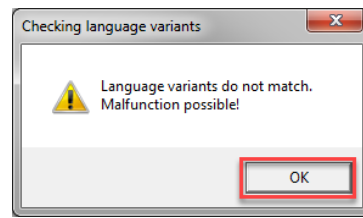
33. First, you need to do the initialization of the battery replacement. In some cases, without initiating battery replacement, the engine may not start from an external signal. In the new window, choose **Body (Кузов)**, then [POW_E65] **Power Module (Модуль питания)**.



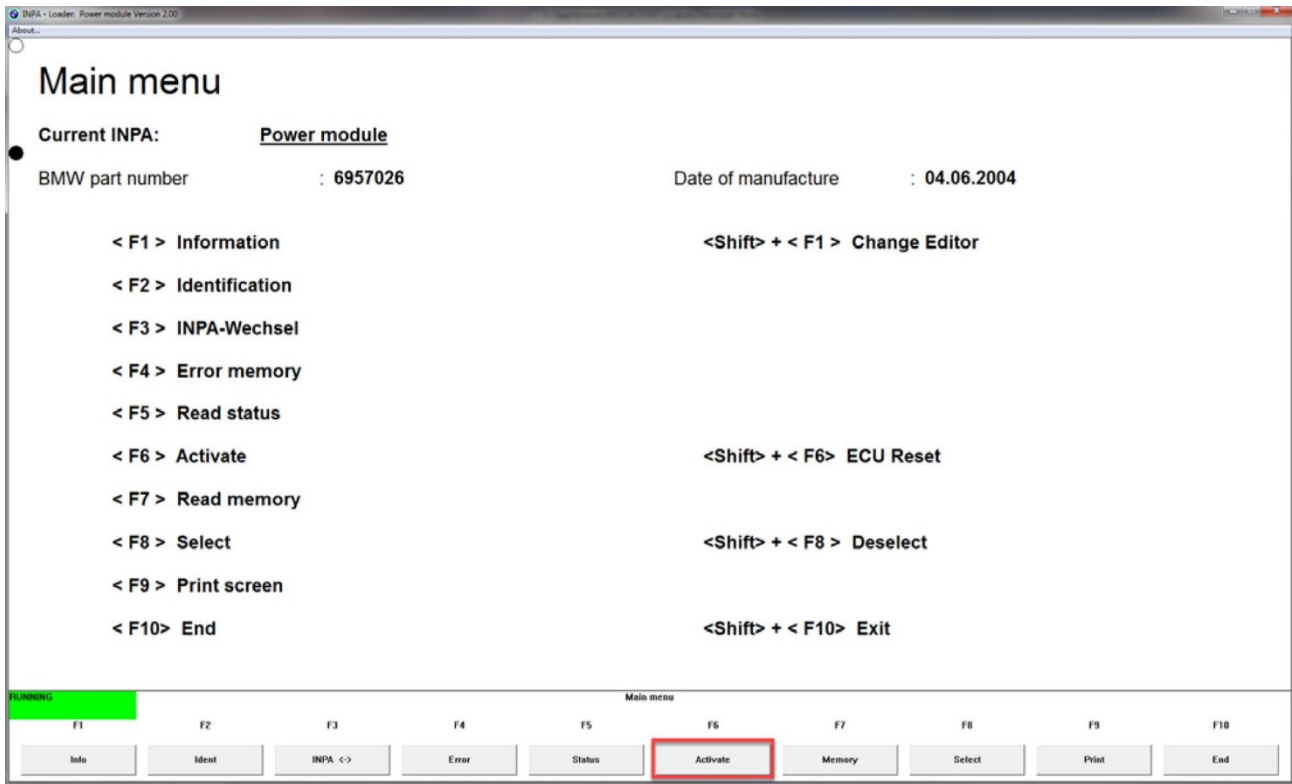
34. Press .OK



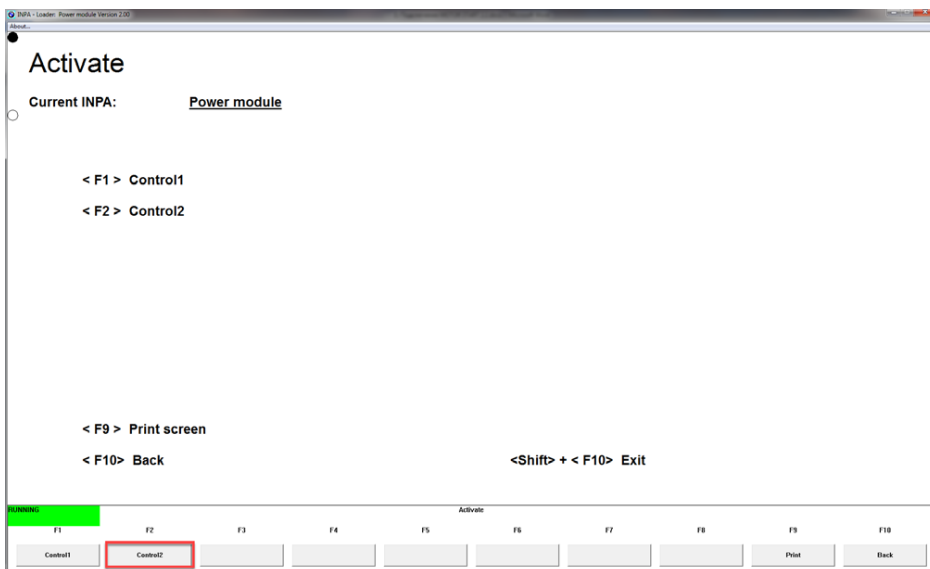
35. Press .OK



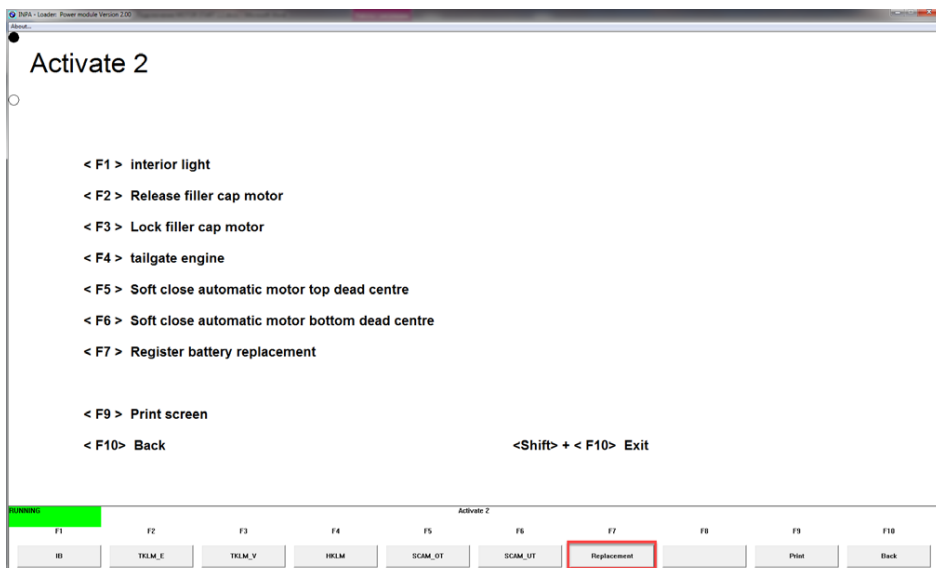
36. Choose .Activate. (.F6. key)



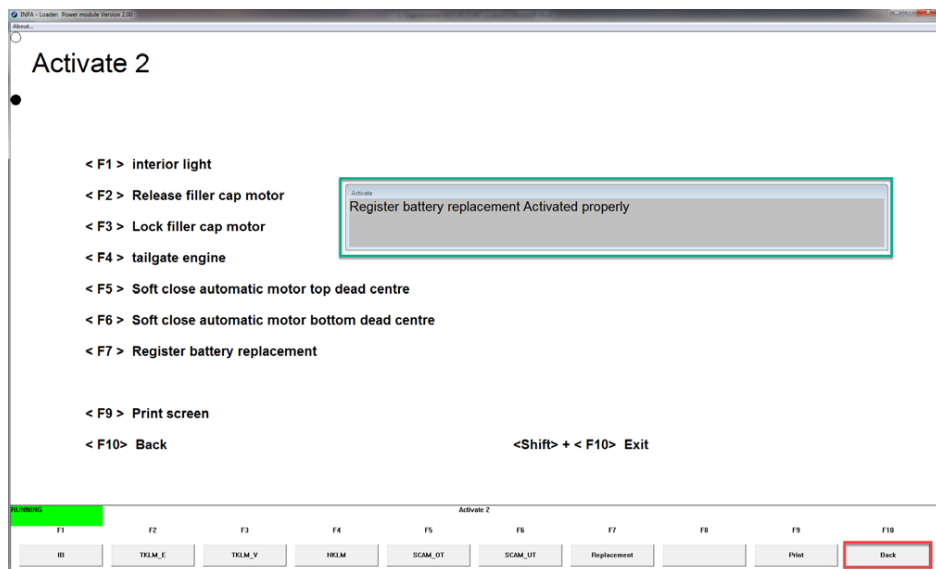
37. Choose .Control2. (.F2. key)



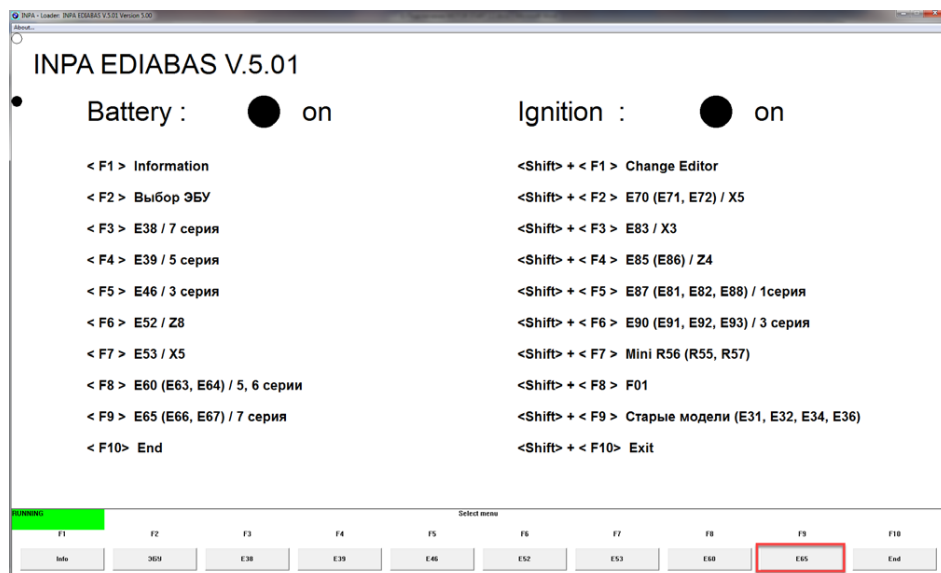
38. Choose .Register battery replacement. (.F7. key)



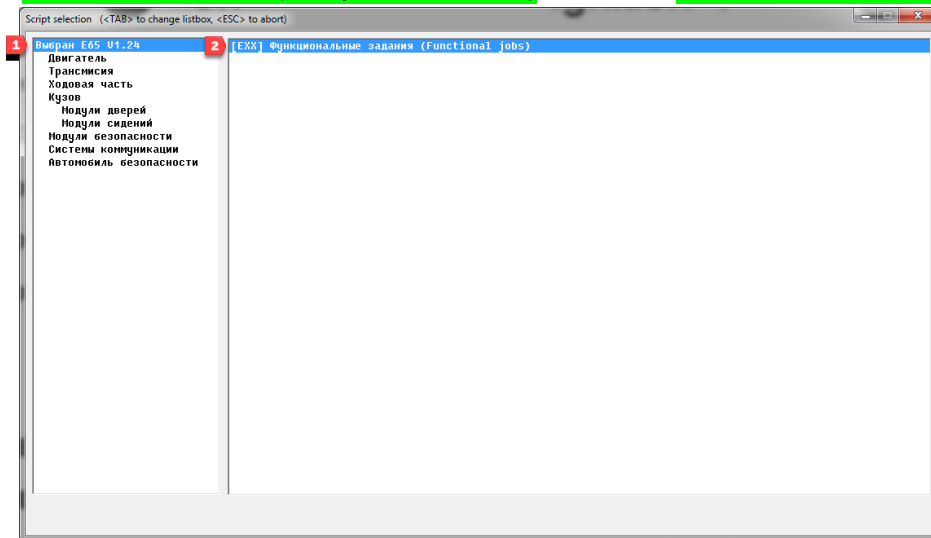
39. After activating the battery replacement, a message box that says “Register battery replacement Activated properly” will appear. Then successively 3 times choose .Back. (.F10. key) until we get to the main menu.



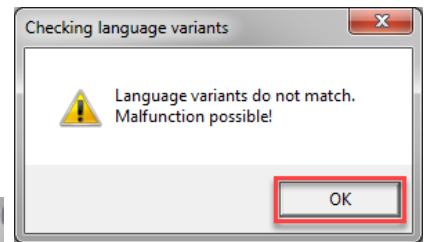
40. Again choose .E65(66/67) / 7 series. (.F9. key)



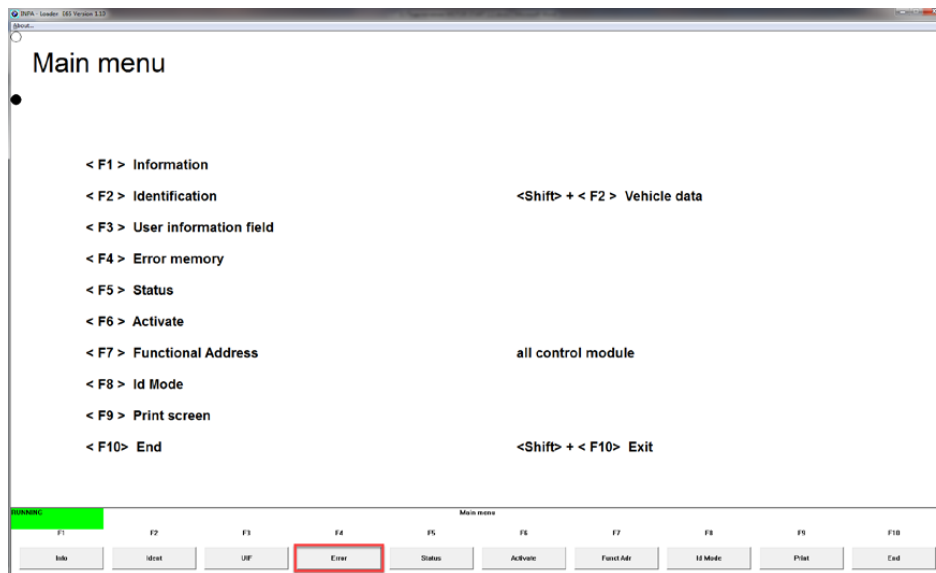
41. Now let's reset the errors on all units of the vehicle ECU. In the window that appears, select: **E65 V1.24 selected (Выбран E65 V1.24)**, and then **[EXX] Functional tasks(Функциональные задания)**.



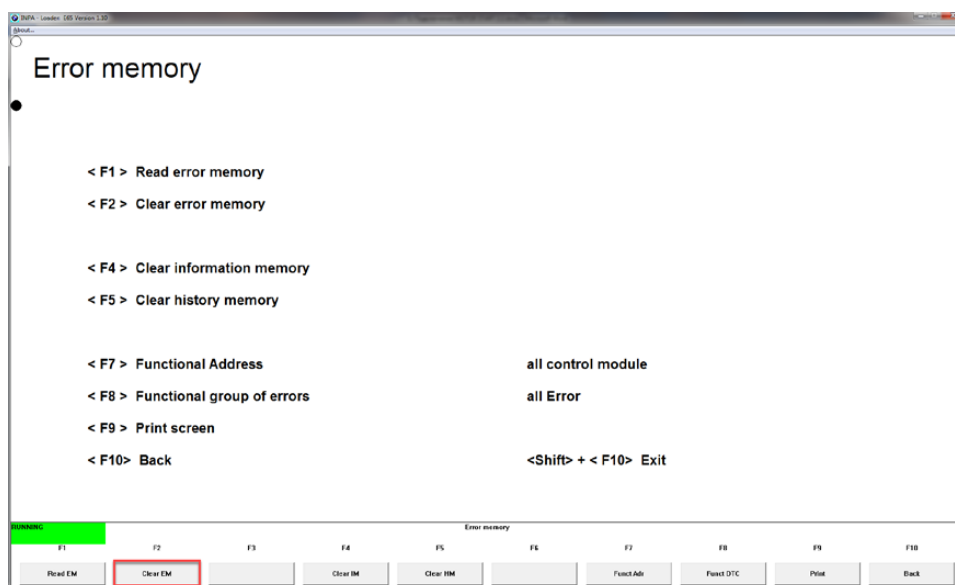
42. Press .OK



43. Select .Error memory. (.F4. key)



44. Select Clear error memory. (.F2. key)

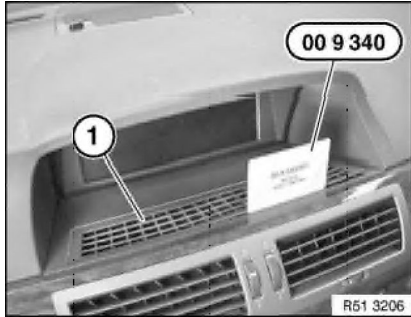


After removing all the errors that could have been removed, close the INPA program. The coding process is completed. We proceed with the installation of the module "MOTOR START BMW V2.3." into the car.

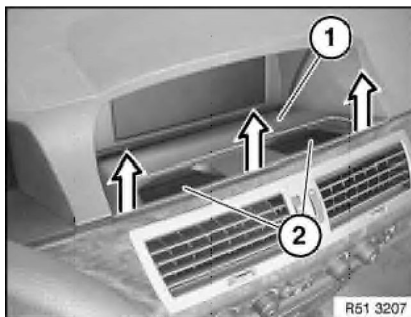
Installing the MOTOR START BMW V2.3 module in the car.

At this link, you can see the video that shows the entire process of installing and connecting the module:
https://www.youtube.com/watch?v=RvcBg_bn7I&t=1s

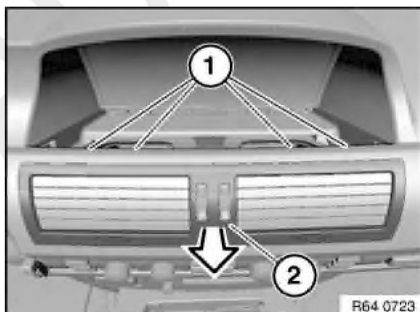
1. Remove the control display cover ①. Take the air ventilation grille out of clips using a plastic card.



2. Then you need to grab the cover ① from the inside through the holes ② and by moving along the decorative strip, gradually release it from the clips by moving it upwards.



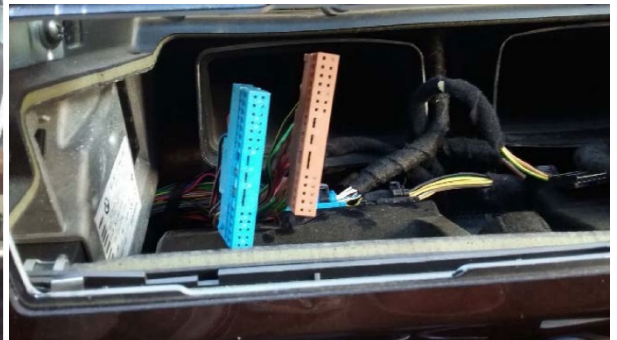
3. Proceed to the removal of the central part of the ventilation grille. Remove the screws ① with the T20 Torx-type screwdriver. Press out the central ventilation grill ② from the inside in the direction indicated by the arrow. Use a thin flat screwdriver to press the metal plate on top of the grill through the gap formed above, not allowing the metal plate to get stuck or break off from the grill body



4. Make sure that the ignition is completely off and there is no key in the ignition lock. Then unplug the connector from the CAS and IHKA ECUs.



5. Release the 2-piece CAS ECU connector from the casing.

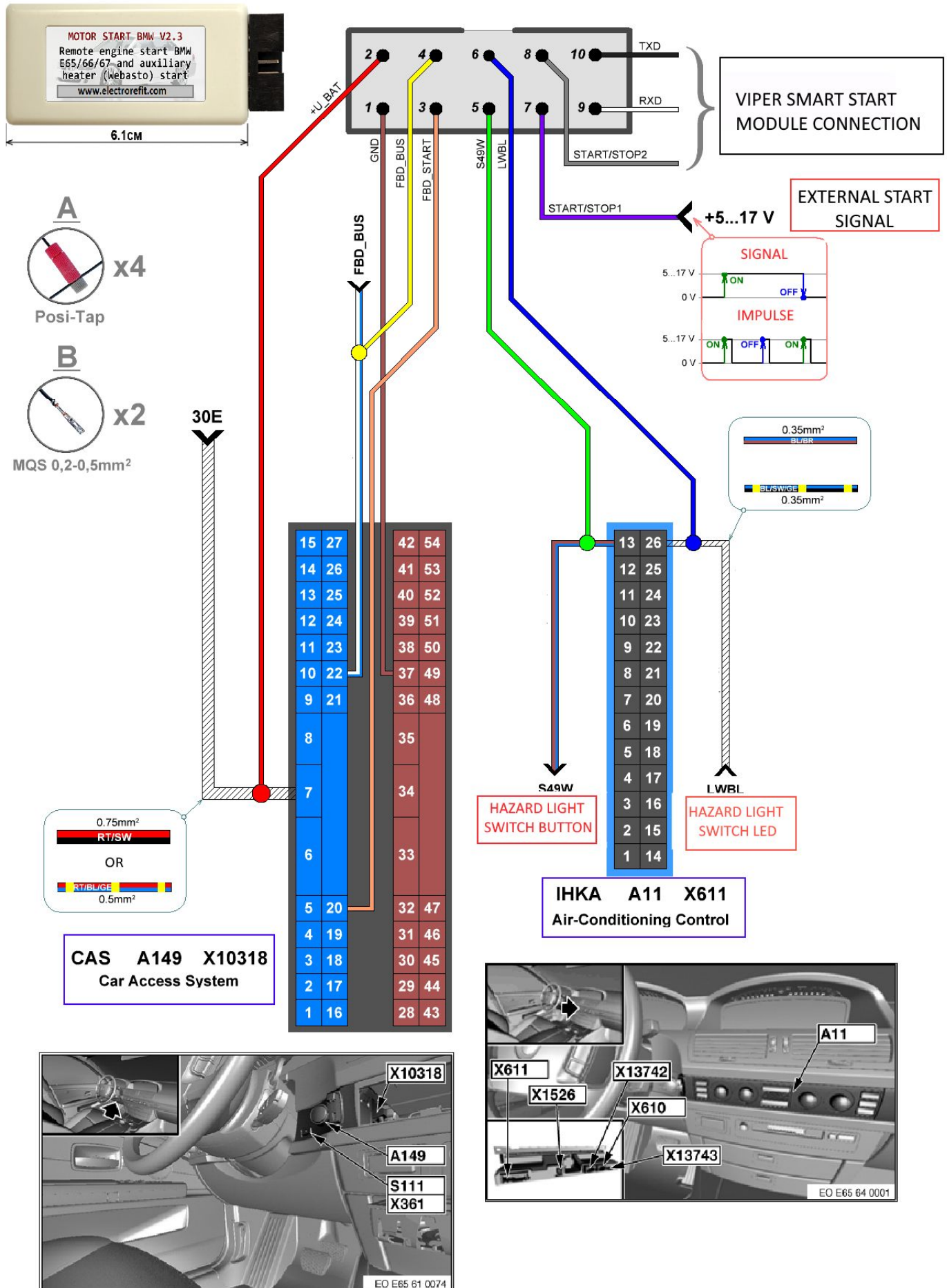


6. Release the IHKA ECU connector from the casing. Then pull off the fabric insulation of the connector for about 5 centimeters to free some space in order to be able to connect wire couplers to the wires of the connector.

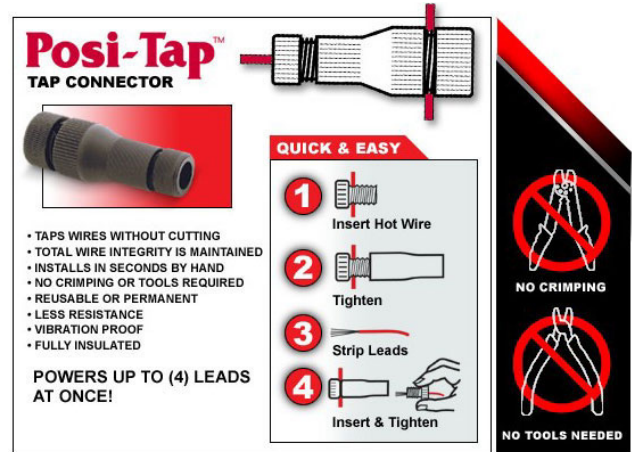
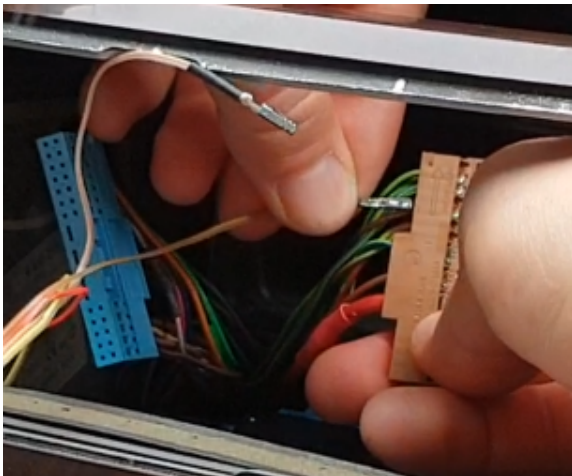


7. Next, connect the "MOTOR START BMW V2.3" module to the CAS and IHKA BMW E65/66/67 ECU connectors according to the diagram below.

BMW MOTOR START CONNECTION DIAGRAMM



8. Find appropriate wires from the remote start module connector and connect them according to this diagram. I recommend installing POSI TAPS connectors further away from cases, so you can close it easily. Just move down factory isolation tape for some extra space. You need to insert 2 contacts female pins and tap 4 wires into existing wires. Please make sure you follow this diagram.



9. Once all wires connected properly, put the connectors covers back on. Plug the connectors back to the CAS and IHKA ECUs. Next, connect the "MOTOR START BMW V2.3" module to the 10-pin connector. If everything was done correctly, you should see emergency blinker flashing 3 times. It will only do it once after you connected the module. This means everything was connected properly and the module can talk to your CAS module. This is a very important step. You cannot proceed if you didn't see flashing. To be sure, you can disconnect it again and connect it, so you see the confirmation flashing again. Now Emergency blinker will be used to program your keys and features.

*** Blue wire from remote start module can be used to add additional remote start module to extend the range or it can be used with GSM module, so you can start it from anywhere in the world where cellular network is present. By default, it is programmed to start the vehicle once +12V is present on this wire. It is also possible to program the module (control: "IMPULSE") ((управление: "ИМПУЛЬС")) so it will alternately give the command to start and stop the engine with each positive signal from 5 to 17 Volts at the START / STOP1 input.

If you are not going to use only the car key for launching without external sources of launch, then this purple wire remains unconnected.

10. Now we bind the "MOTOR START BMW V2.3" module to the CAS ECU and vehicle keys with testing its performance according to the chapter of this instruction: "Linking the MOTOR START BMW V2.3 module to the CAS module and vehicle keys with testing of its performance."

11. After you have configured the module and checked it for operability, remove the double-sided tape on the module. We glue the module into a convenient place so that the wires from the module do not interfere with putting the central air ventilation grille back on. Next, we reassemble everything back together. When assembling the ventilation grille, use a thin flat screwdriver to press the metal plate on top of the grill, not allowing the metal plate to get stuck or break off from the grill body. Make sure that the connector does not disconnect from the MOTOR START BMW V2.3 module during the time of reassembling.

Linking the MOTOR START BMW V2.3 module to the CAS module and vehicle keys with testing of its performance.

At this link you can see the video that shows the entire process of binding the module to the CAS ECU:
<https://www.youtube.com/watch?v=f-KrI9pL7zM>

1. To issue commands to the module, an alarm should have a standard flashing frequency. If the alarm makes two short flashes instead of one (this happens extremely rare), then the standard flashing rhythm should be returned. Otherwise, the commands cannot be accepted and executed by the MOTOR START BMW V2.3 module.

2. Before issuing commands, make sure that the LED in the alarm button does not emit any light. **For this, the ignition must be completely turned off, and the light switch must be in the "0" position.**



3. At the beginning (take into account that the car was encoded with the \$539 option), we will bind the "MOTOR START BMW V2.3" module to the car's CAS ECU using next algorithm:

LED_ALARM_OFF{t > 5s}

co3i2 co2^{1.5s}#3^

Get in the car, shut all the doors (but all door locks must be open).
do not perform any actions: turning on/off
the ignition, alarm, pressing buttons on the key
and opening/closing the doors [Fulfillment of terms: **LED_ALARM_OFF{t > 5s}**].

Press the CLOSE button on the key (all locks must close)

Wait 1-2 seconds [command execution: **C** (close)]



Press the OPEN button on the key (all locks should open)

Wait 1-2 seconds [command execution: **O** (open)]



Warning! The car could be encoded, so when you click the "open" button, only the driver's door opens. In this case, you must immediately click "open" second time to open the locks of all 4 doors.

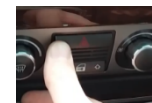
Press the Alarm button



wait for three flashes



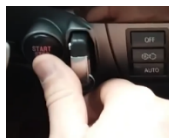
And then again press the alarm button



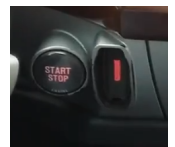
(there should not be a fourth flash)

Wait 1-2 seconds [command execution: **3**]

INSERT THE KEY into the ignition switch
(alarm button should light up dimly)
Wait 1-2 seconds

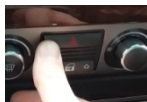


REMOVE THE KEY from the ignition lock
(alarm button should go off)
Wait 1-2 seconds



[command execution: **i** (ignition)]

Press the Alarm button



wait for two flashes



And then again press the alarm button



(there should not be a third flash)

Wait 1-2 seconds [command execution: **2**]

Immediately after this, the locks should automatically close. [Response action: **C** (close)]

Then immediately the locks should automatically open. [Response action: **O** (open)]

The "alarm" button in response should perform two flashes. [Response action: **2^**]

After 1.5 seconds, the "motor start BMW" module will restart. [Response action: **{1.5s}#**]

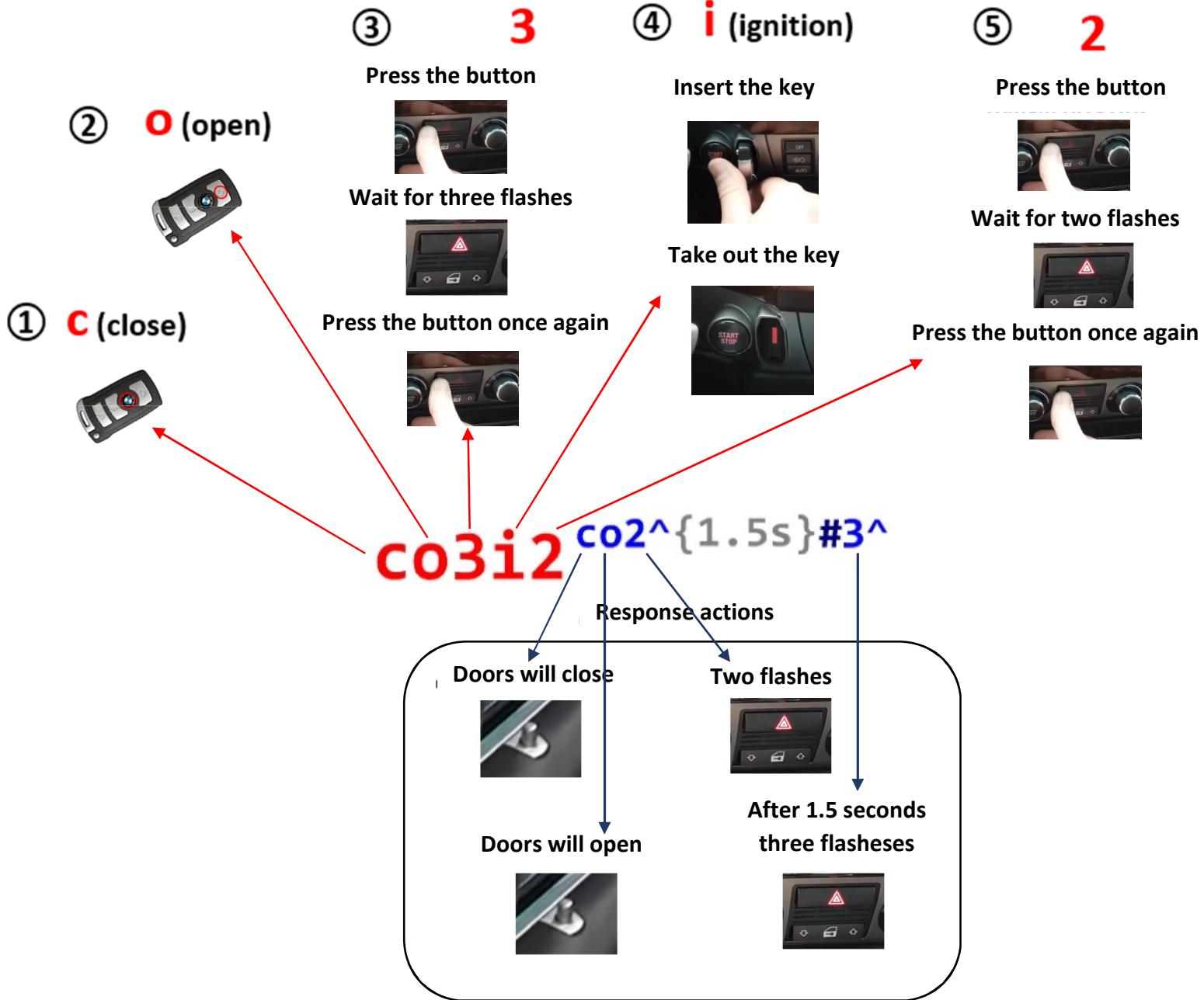
The "alarm" button after rebooting the module should execute three flashes. [Response action: **3^**]

The binding of the "MOTOR START BMW" module to the CAS ECU is successfully completed !!!
If during the algorithm there was no response confirmation by flashing the "ALARM" button and/or there was no central locking. This could be due to incorrect timing of time intervals or incorrect countdown of flashes of the "ALARM" button. You need to repeat the entire algorithm from the very beginning, after waiting for at least 5 seconds. Also, unsuccessful attempts to bind the "MOTOR START BMW" module to the CAS ECU may be due to the lack of correct encodings. If, after several attempts, it is not possible to achieve a correct response blinking of the "ALARM" button, then once again carefully check the correctness of the connection and the contact of all the wires that go to the module, as well as the "MOTOR START BMW" module connector itself.

Brief manual on how to bind the «MOTOR START BMW 2.3» module

LED_ALARM_OFF{t > 5s}

Get in the car, shut all the doors (but all door locks must be open).
For 5 seconds, do nothing.



IMPORTANT!!! BEFORE BEGINNING CODING ENSURE THAT:

Closed: hood, trunk, all doors (but the locks of all doors must be open).

The ignition must be completely turned off and the light switch must be in the "0" position."






4. Now we will bind the #1 key to the «MOTOR START BMW V2.3» module using the next algorithm:




LED_ALARM_OFF{t > 5s}

2i3³ 2² o¹ c²




Get in the car, close all the doors (but all door locks must be open). For five seconds, do not perform any actions: turning on/off the ignition, alarm, pressing buttons on the key and opening/closing the doors [Fulfillment of terms: **LED_ALARM_OFF{t > 5s}**].

Press the Alarm button  wait for two flashes  And then again press the alarm button  (there should not be a third flash)
Wait 1-2 seconds [command execution: **2**]

INSERT THE KEY into the ignition lock (alarm button should light up dimly)  Wait 1-2 seconds
REMOVE THE KEY from the ignition lock (alarm button should go off)  Wait 1-2 seconds
[command execution: **i** (ignition)]

Press the Alarm button  wait for three flashes  And then again press the alarm button  (there should not be a fourth flash)
Wait 1-2 seconds [command execution: **3**]

The “alarm” button should execute two flashes in response. [Response action: **3^**].

Press the Alarm button  wait for two flashes  and then again press the alarm button  (there should not be a fourth flash)
Wait 1-2 seconds [command execution: **2**]

The “alarm” button should execute two flashes in response. [Response action: **2^**].

Press **OPEN** button on the key (All the locks must open)
Wait 1-2 seconds [command execution: **o** (open)]



The “alarm” button should execute one flash in response. [Response action: **1^**].

Press **CLOSE** button on the key (All the locks must close)
Wait 1-2 seconds [command execution: **c** (close)]



The “alarm” button should execute two flashes in response. [Response action: **2^**].

Binding the key #1 to the «MOTOR START BMW» module is successfully completed!!!

At this link you can see the video that shows the entire process of binding the key #1 to the module:

https://www.youtube.com/watch?v=wc3g_2-wYJk

No more than 3 keys can be attached to the module. Keys #2 and #3 are attached to the module by algorithms **2i3³3³1¹c²** (For the key #2) and **2i3³4⁴1¹c²** (For the key #3).

See chapter V of this manual for more details.

If during the algorithm, there was no response confirmation by flashing the “ALARM” button:

This could be due to incorrect timing of time intervals or incorrect countdown of “ALARM” button flashes.

You need to repeat the entire algorithm from the very beginning, after waiting for at least 5 seconds. If, after several attempts, it is still not possible to achieve a correct response blinking of the “ALARM” button, then once again carefully check the correctness of the connection and the contact of all wires that go to the module, as well as the “MOTOR START BMW” module connector itself.

5. Now you can test starting the engine with the “MOTOR START BMW V2.3” module. To do this, certain conditions must be met:

All doors must be closed. Door locks can be both open and closed.

Range of the car must be at least 100 km. With this, there may not be a warning on the dashboard that you need to go to the gas station.

The hood must be closed. At the same time, the hood pin switch must be in good condition and work correctly (it often breaks due to moisture). If you remove the connector from the pin switch, the car’s electronics will receive a signal that the hood is always closed.

The battery should be fully charged and do not give undervoltage.

6. By default, the module is programmed that way: 3 presses of the “close” button on the key starts the engine; 4 presses of the “close” button on the key start the autonomous heater (webasto) with its presence and provided that the the autonomous heater is started from the timer in the monitor menu; 5 presses of the “close” button on the key start the the autonomous heater, letting the whole system warm-up, and after a certain time the engine starts automatically; 2 presses of the “close” button on the key stops any of the above modes.

7. Now, let’s start (3 presses of the “close” button) and then stop (2 presses of the “close” button) the engine, observing all the conditions listed in paragraph 5:

Press the “CLOSE” button on the key (if the door locks were initially closed, then no confirmation of the first pressing will be made). Wait 0.5-3 seconds.

Press the “CLOSE” button on the key.

We get a short single confirmation of the alarm that we pressed the button on the key. Wait 0.5-3 seconds.

Press the “CLOSE” button on the key.

We get a short single confirmation of the alarm that we pressed the button on the key.

After a few seconds, the engine should start.

We receive confirmation of the received command by triple blinking of the alarm.

Now let's stop the engine using the module (between the “start” and “stop the engine” commands must be at least 5 seconds interval):

Press the "CLOSE" button on the key (if the door locks were initially closed, then no confirmation of the first pressing will be made). Wait 0.5-3 seconds.

Press the "CLOSE" button on the key

We get a short single confirmation of the alarm that we pressed the button on the key.

After a few seconds, the engine should stop.

We receive confirmation of the received command by double blinking of the alarm.

At this link you can check out the video that shows the entire process of starting and stopping the engine using the key:

If you did not manage to start the engine with a key, check all the conditions in the list in paragraph 5 once again. It could also have been too far from the car to the key. Or the "close" button does not work every time you press. Probably, you too fast or slowly press the "close" button without fitting in the interval 0.5 - 3 seconds between pressings.

Contact us.

Our site: <http://electrorefit.com>

If you have any questions or recommendations about the "MOTOR START BMW V2.3" autorun engine, you can contact us using the contacts listed below.