

BMW FEM/BDC Anti-theft System Key Matching

Supported equipment: X-431 IMMO Pro anti-theft equipment expert version or comprehensive diagnostic equipment+G3

Supported models: 2011-2018 1 series/3 series, 2013-2018 2 series, etc.

Case description: adding BMW FEM anti-theft system keys



Operating steps:

1. Execute [ECU Information] to view and record the current information of the ECU.
2. Execute [Version Detection] to check if the current software version supports it.
3. Execute [Back up Codes] to back up the code file.
4. Execute [Back up EEPROM] to back up the original vehicle EEPROM file.
5. Execute [Modify EEPROM] to modify the original vehicle EEPROM file.
6. Execute [Write EEPROM] and write the modified EEPROM file into the original vehicle EEPROM chip.
7. Execute [Preprocessing] to upgrade the ECU firmware.
8. Execute [Write EEPROM] to rewrite the original vehicle EEPROM file into the original vehicle EEPROM chip.
9. Execute [Restore Codes] to restore the original vehicle code file.
10. Execute [Key Learning] to generate dealer keys.

Procedure:

1. Take IMMO Pro as an example, connect the G3 programmer to enter the main page of BMW anti-theft software, and select **【Anti-theft Key Matching】** , as shown in Figure 1.

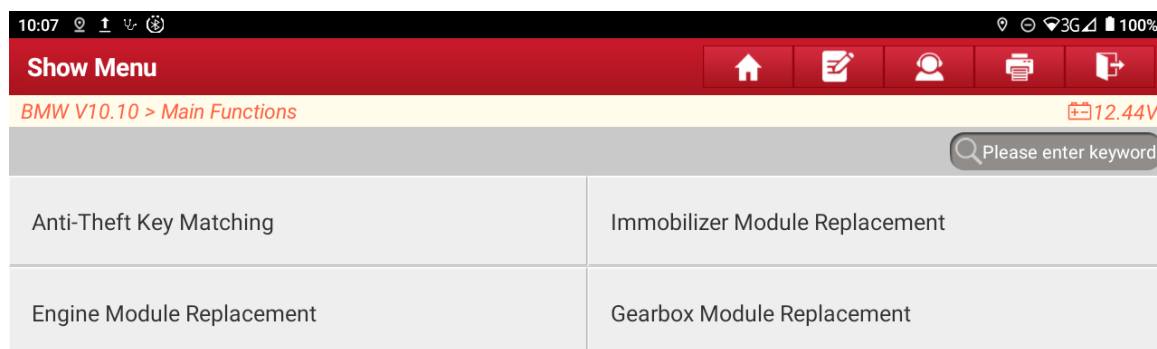


Figure 1

2. Select **【Automatic Detection】** , as shown in Figure 2.

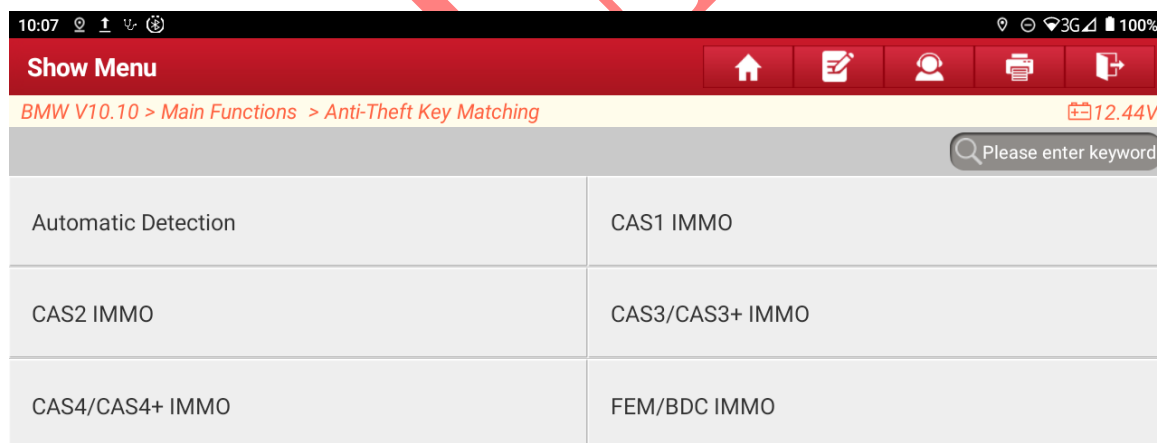


Figure 2

3. It automatically recognizes that the BMW anti-theft system is FEM/BDC.
Select “OK”, as shown in Figure 3.

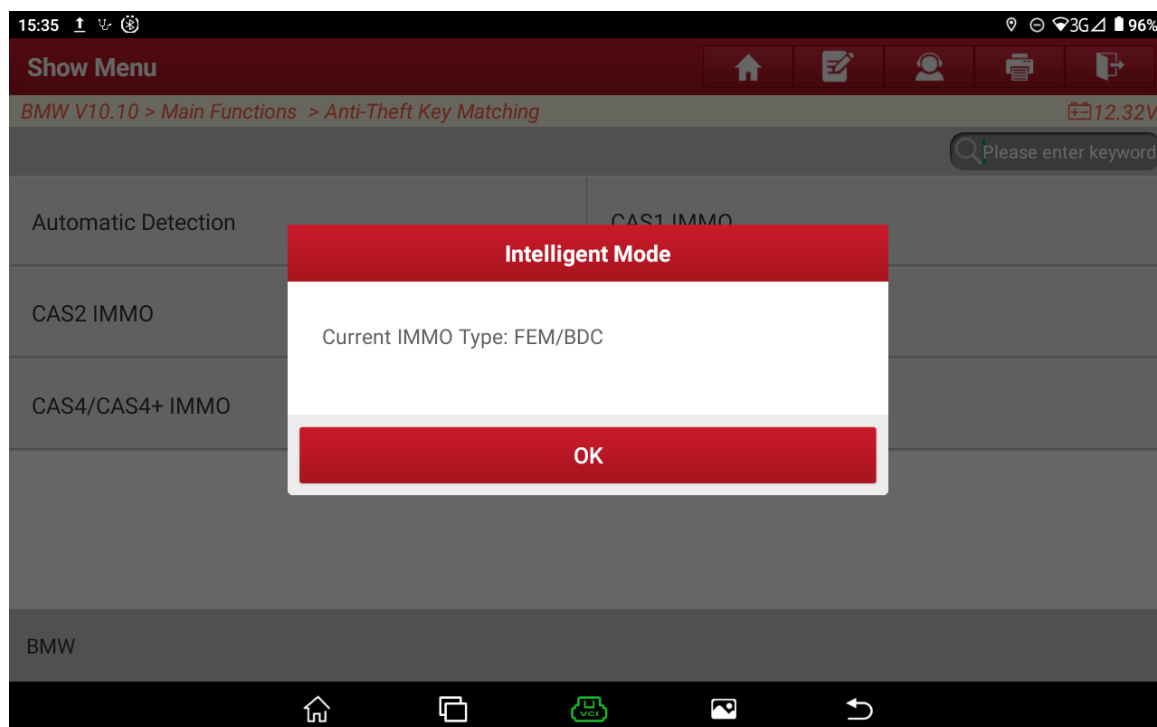


Figure 3

4. Select 【ECU Information】 to view and record the current information of the ECU, as shown in Figure 4.

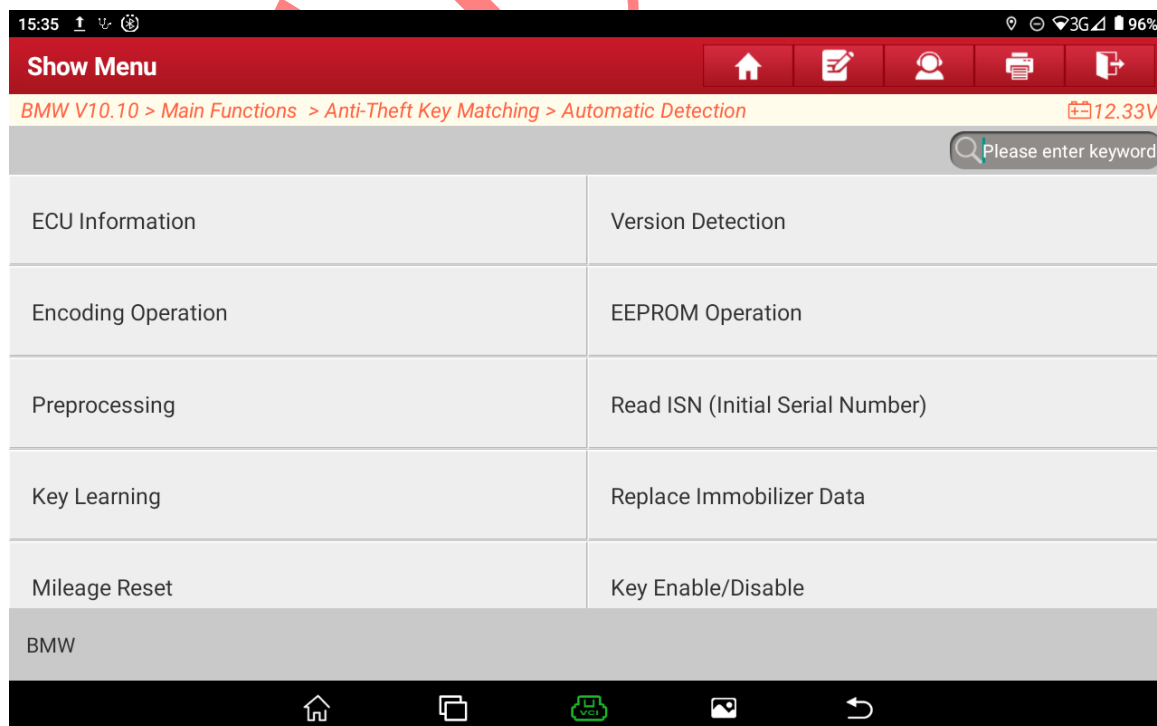


Figure 4

5. The current information of the ECU is displayed. Select “OK”, as shown in Figure 5.



Figure 5

6. Select 【Version Detection】 to check if the current software version of the anti-theft system supports it, as shown in Figure 6.

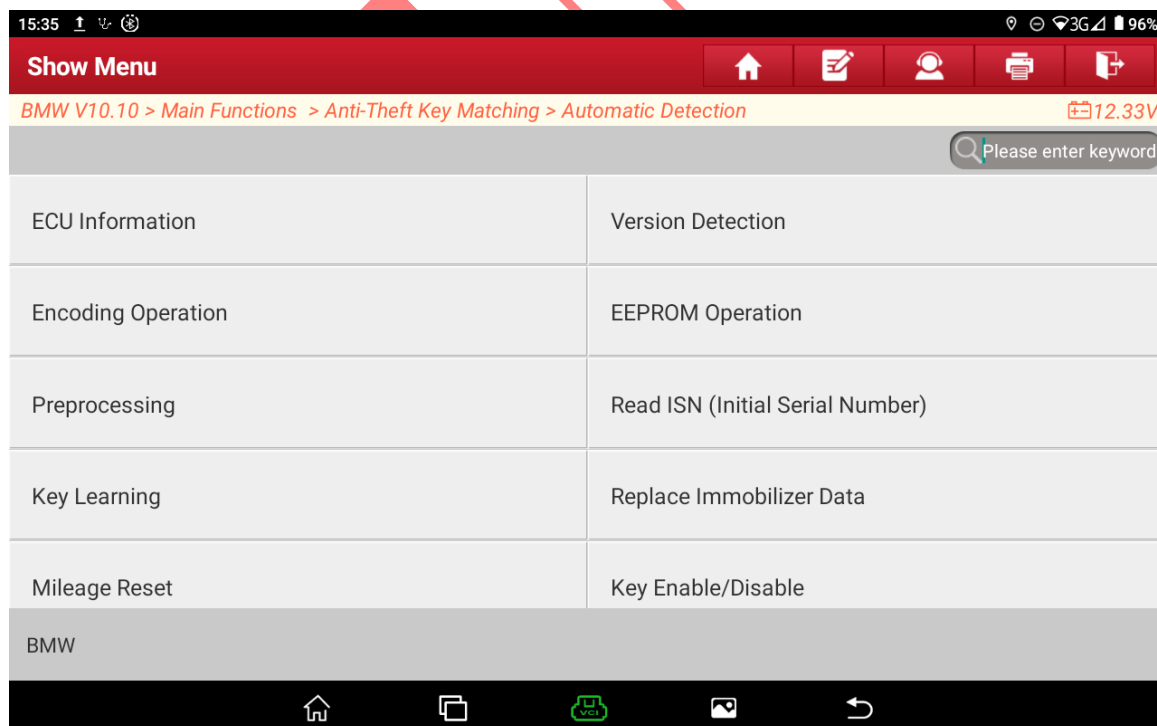


Figure 6

7. The current software version of the anti-theft system supports the following. If it does not support it, a prompt will be displayed. Select “OK”, as shown in Figure 7.

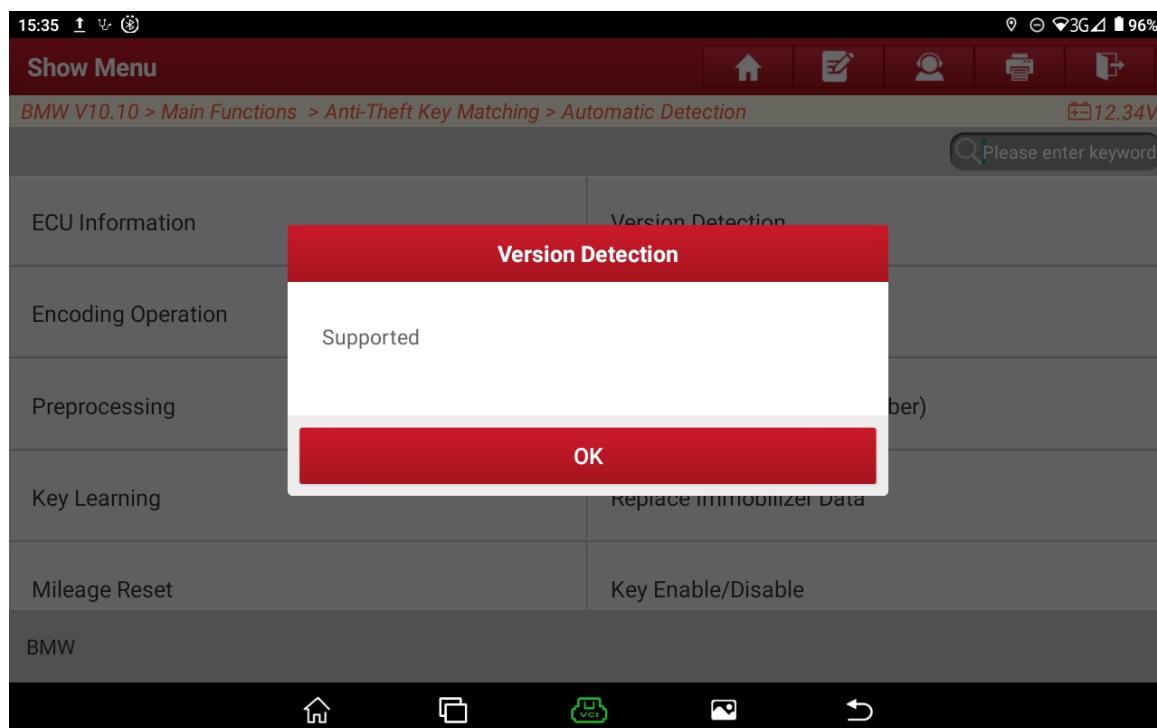


Figure 7

8. Select 【Encoding Operation】, as shown in Figure 8.

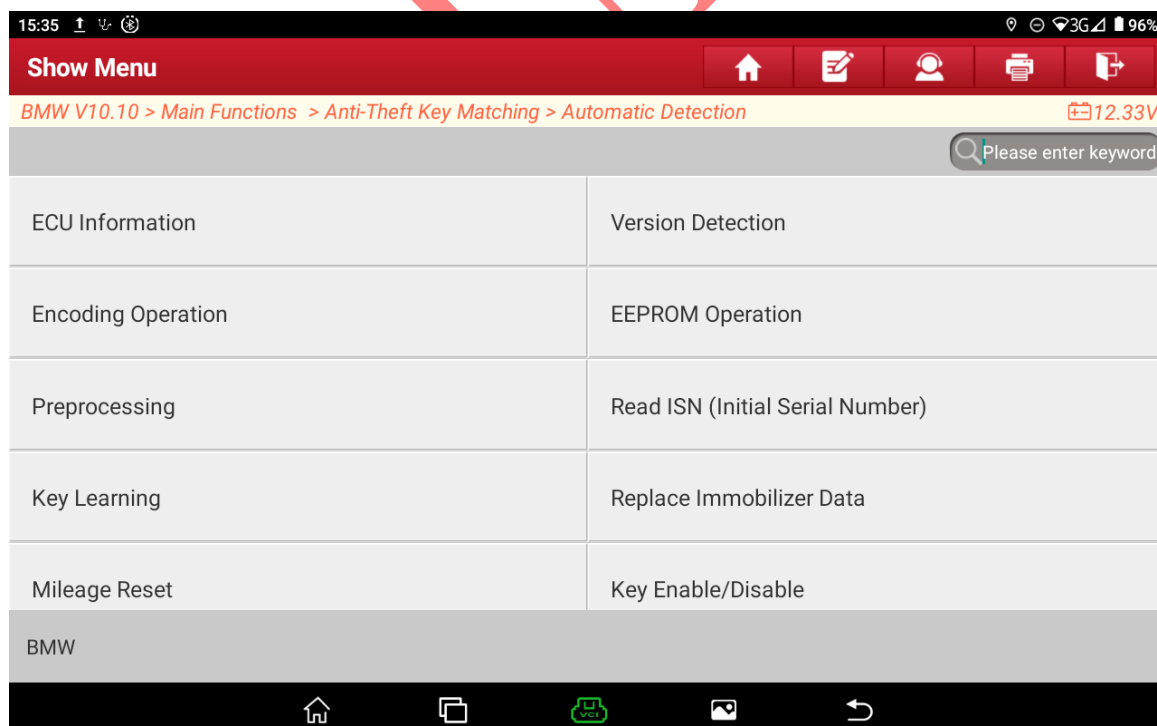


Figure 8

9. Select **【Back up Codes】** to back up the vehicle codes to prevent code loss, as shown in Figure 9.

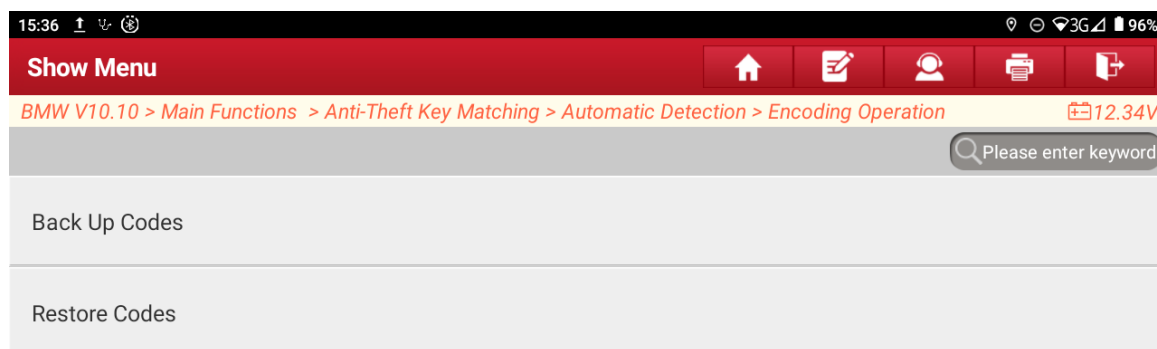


Figure 9

10. Enter the code file name and save it locally, as shown in Figure 10.

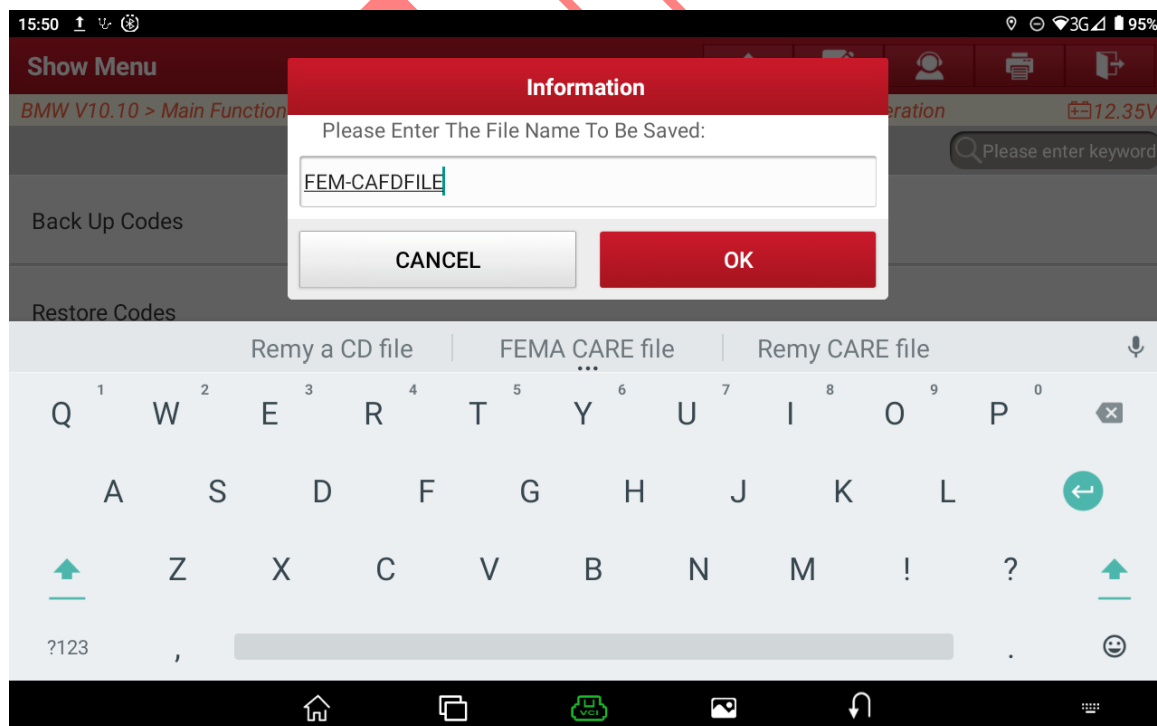


Figure 10

11. The code file is successfully backed up. Select “OK”, as shown in Figure 11;

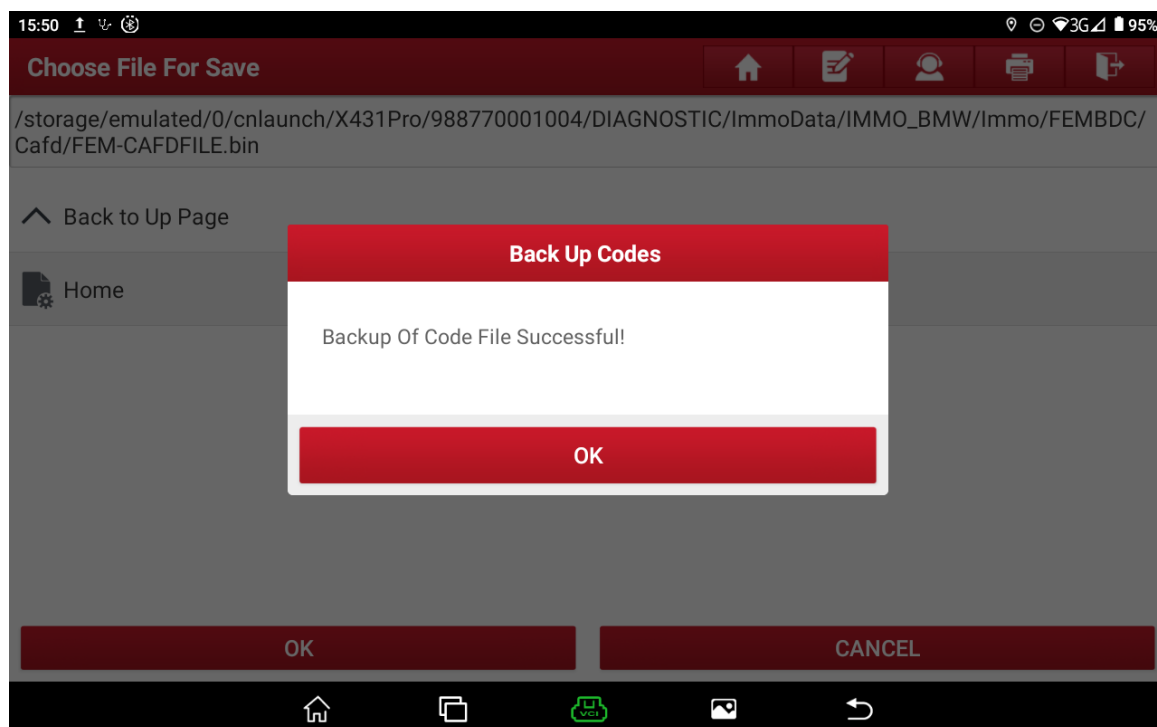


Figure 11

12. Select 【EEPROM Operation】, as shown in Figure 12;

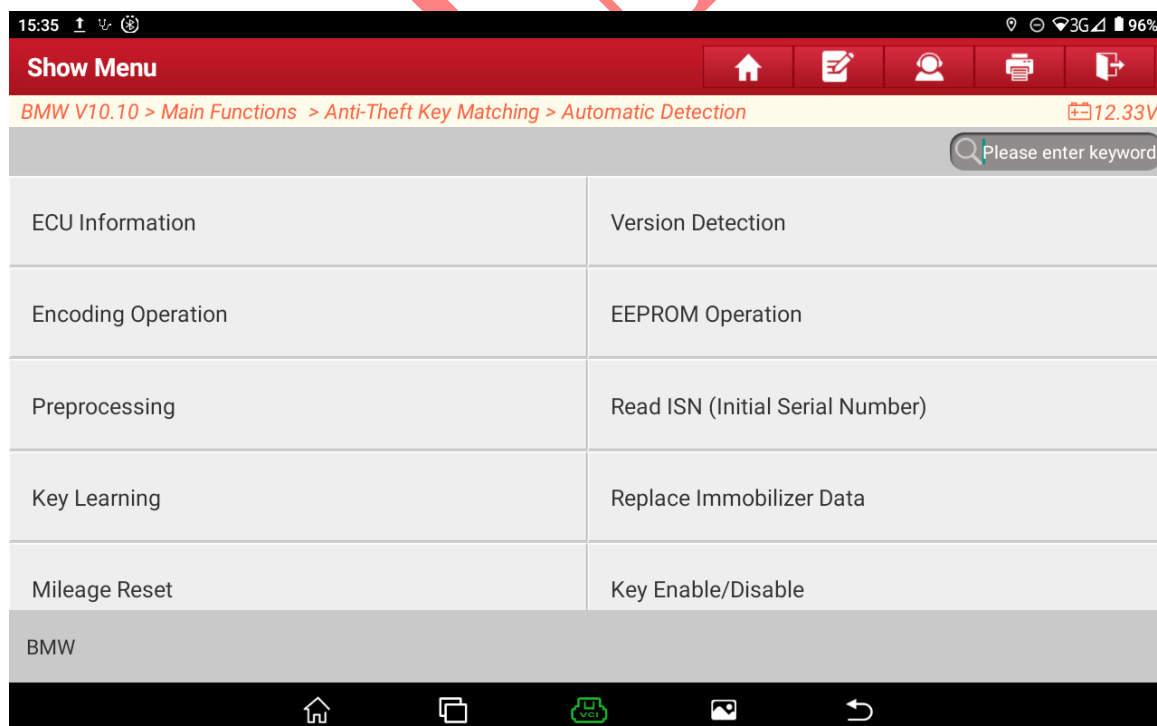


Figure 12

13. Select [M95256] for the BDC system or select [M95128] for the FEM system, as shown in Figure 13.

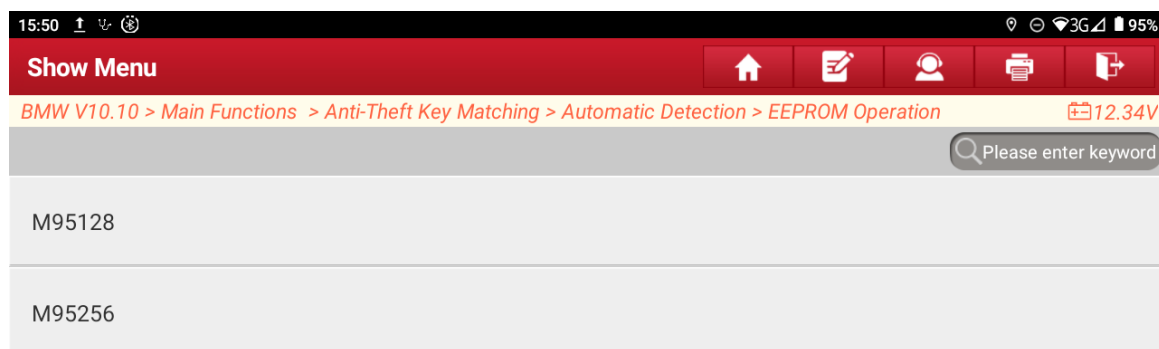


Figure 12

14. Select 【Display Connection Diagram】, as shown in Figure 14.

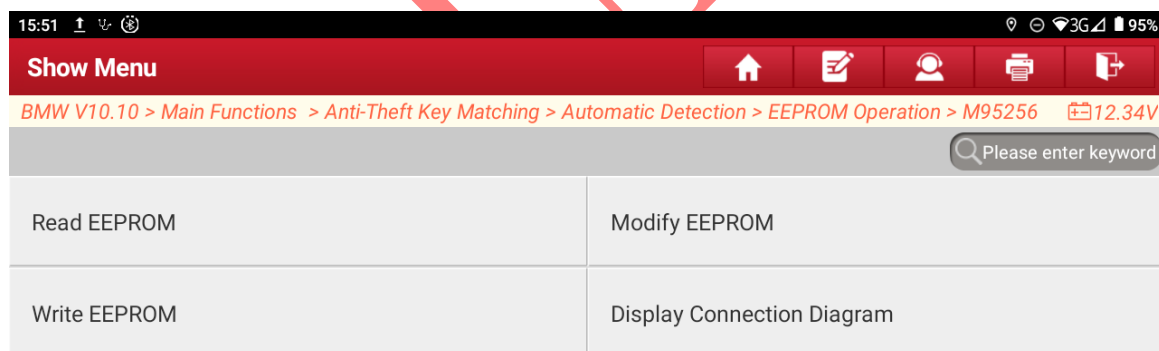


Figure 14

15. Connect according to the picture prompts, as shown in Figure 15.

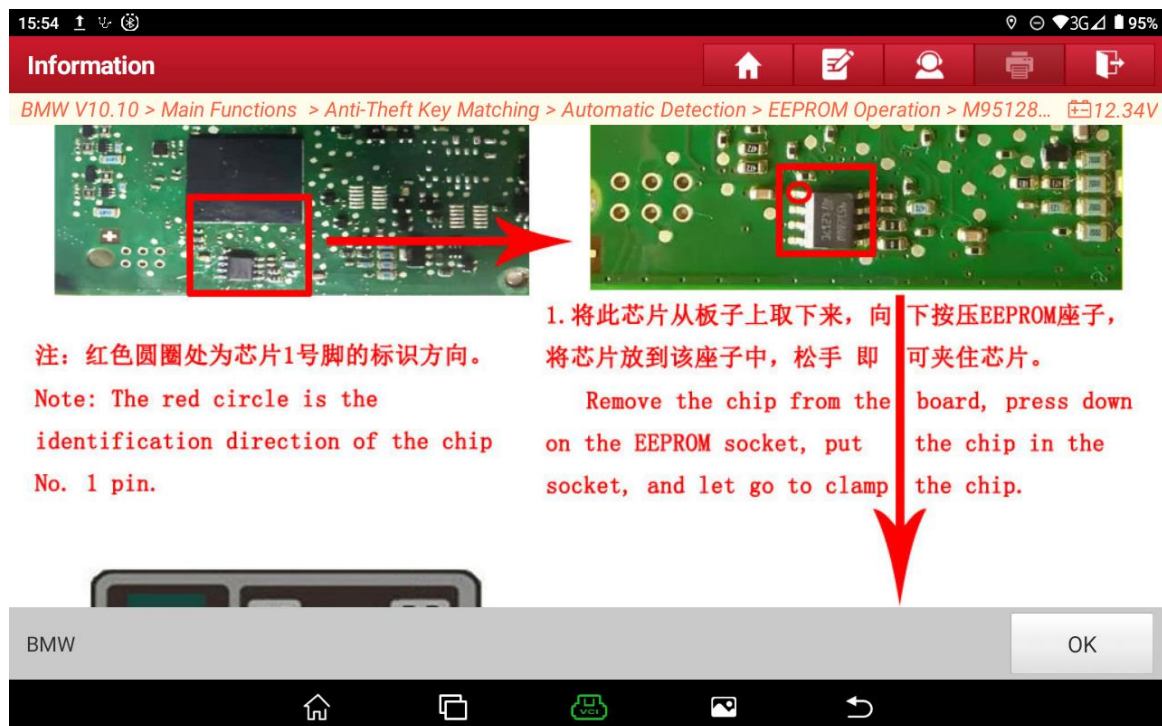


Figure 15

16. Select [Read EEPROM] to read the EEPROM data of the original vehicle, as shown in Figure 16.

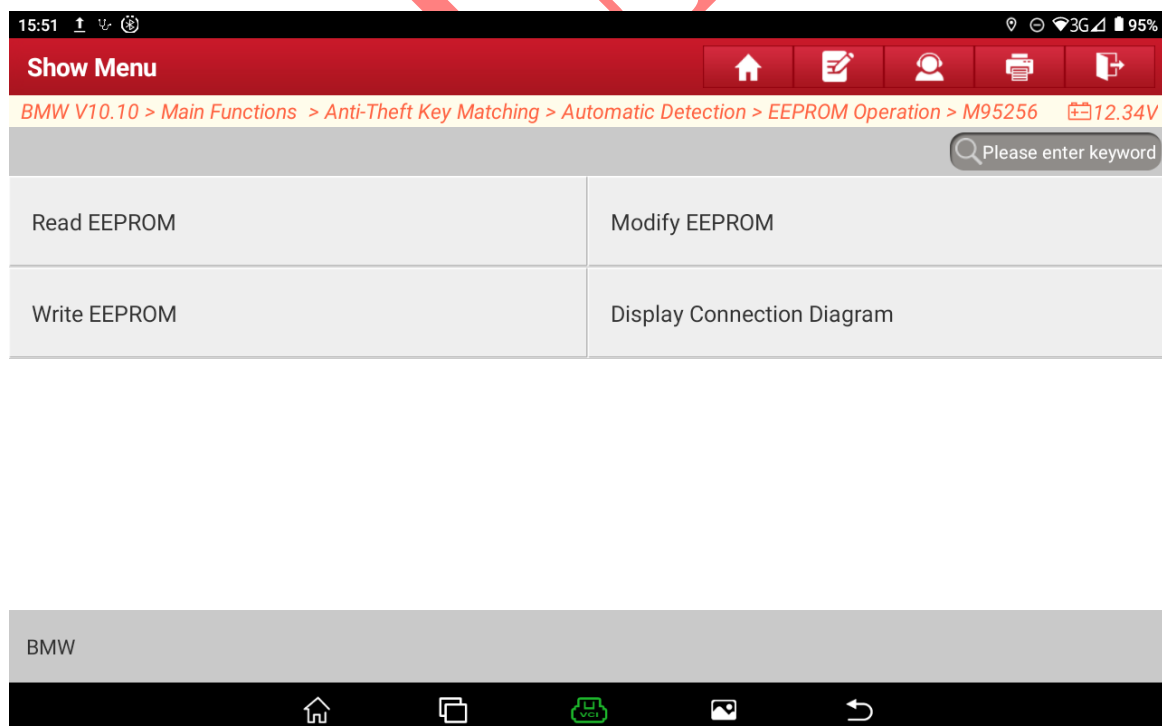


Figure 16

17. Enter the EEPROM file name and select [OK], as shown in Figure 17.

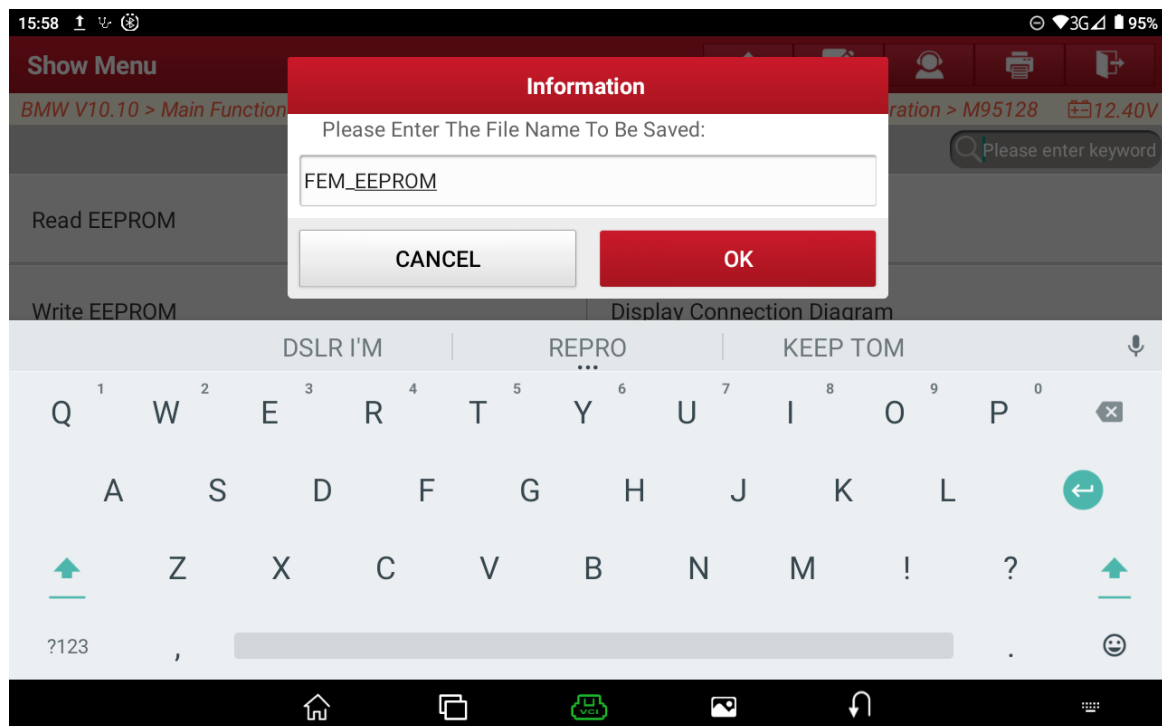


Figure 17

18. Select [Modify EEPROM], load the original vehicle EEPROM for modification, and save the new EEPROM file, as shown in Figure 18.

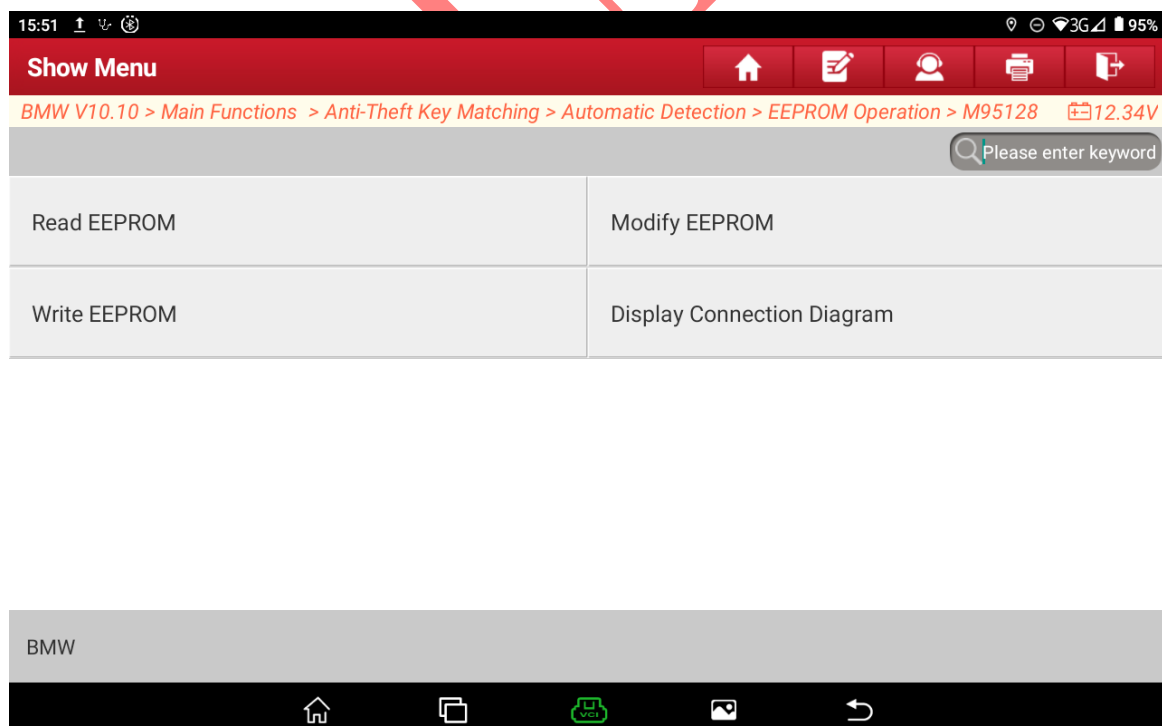


Figure 18

19. Enter the name of the modified EEPROM file and select “OK”, as shown in Figure 19.

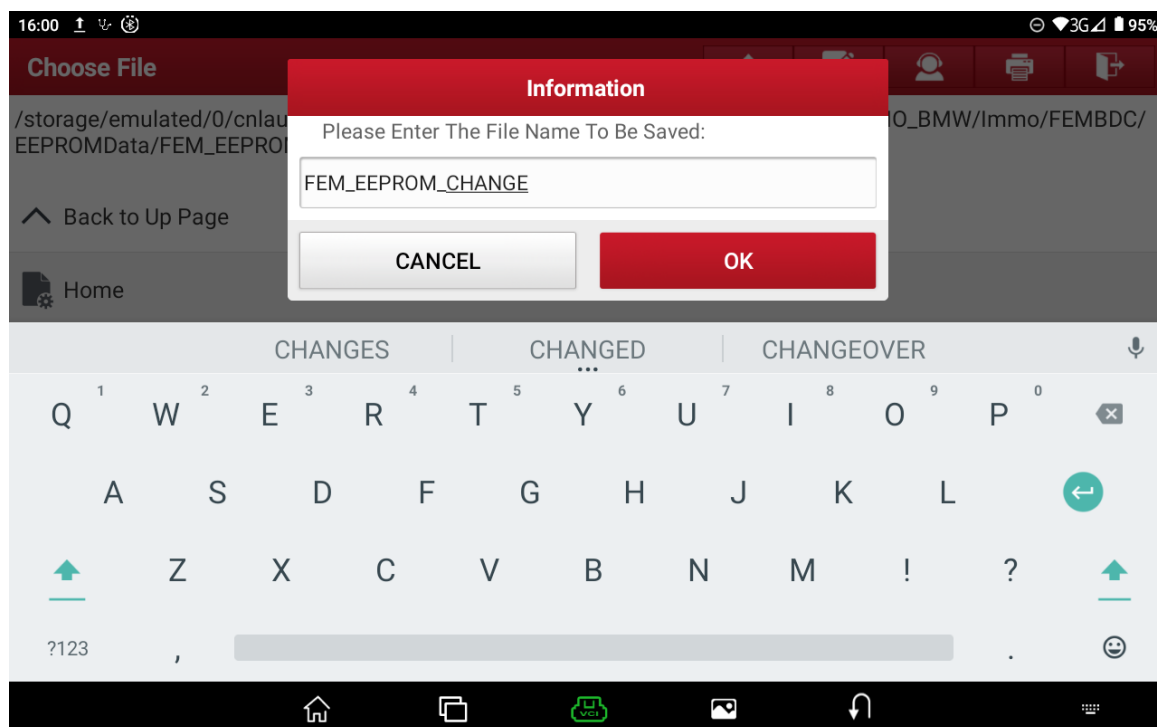


Figure 19

20. Select 【Write EEPROM】 and write the modified EEPROM file into the EEPROM chip, as shown in Figure 20.

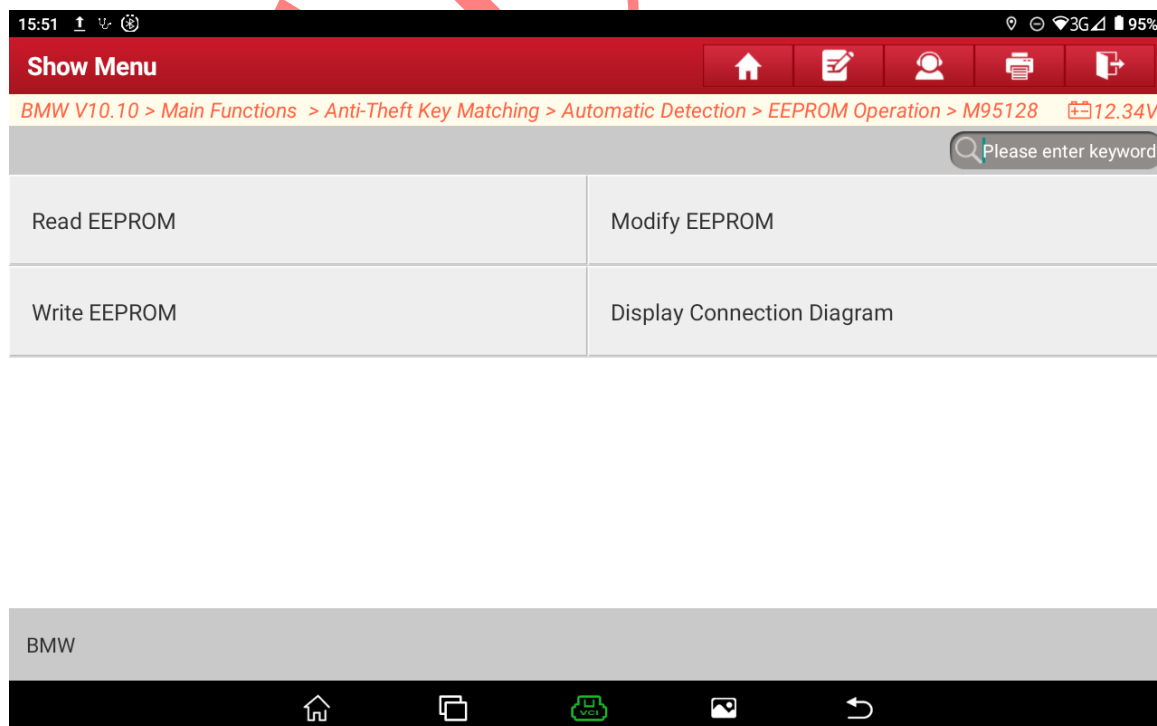


Figure 20

21. After the data is successfully written, click “OK” to remove the EEPROM chip from the chip clamp and install it back on the FEM board, as shown in Figure 21.

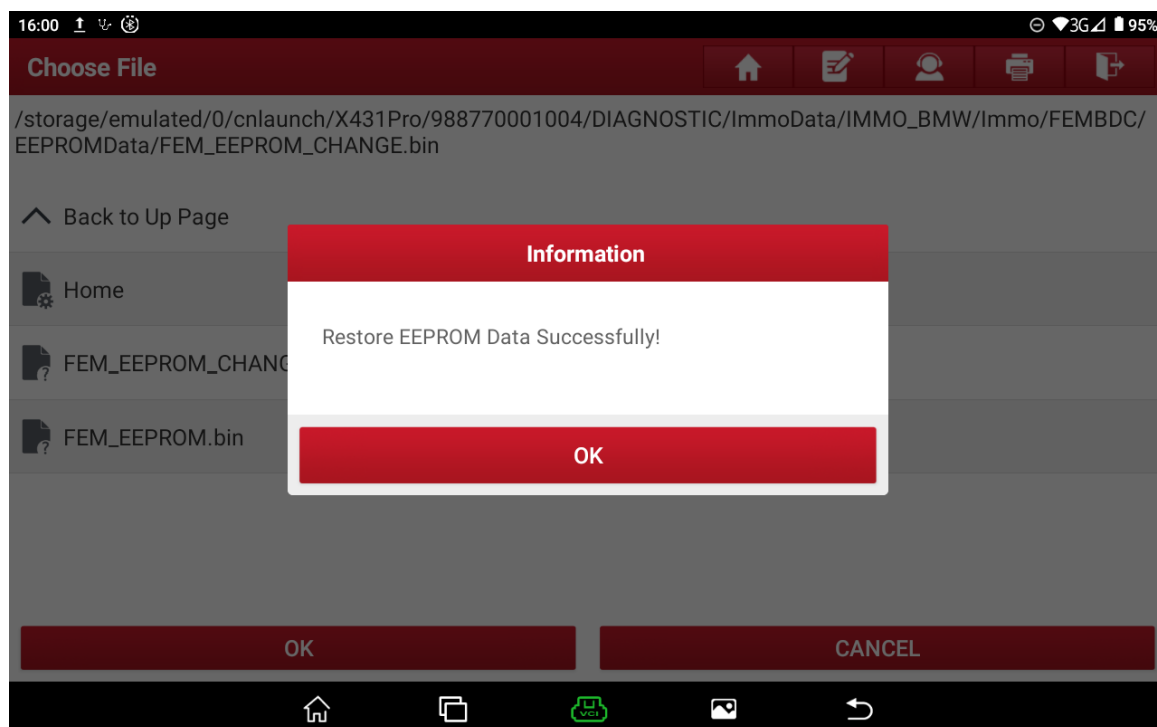


Figure 21

22. Select 【Preprocessing】

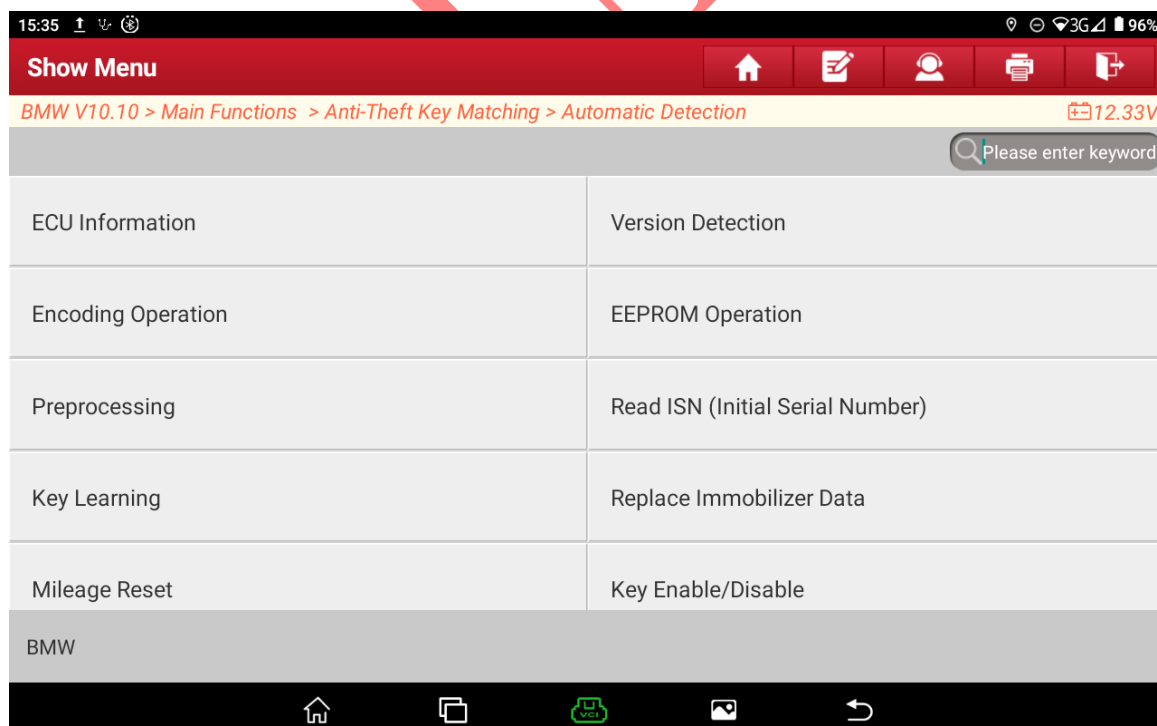


Figure 22

23. If the vehicle has been preprocessed, there is no need for preprocessing again. You can directly perform key matching and select “OK”, as shown in Figure 23.

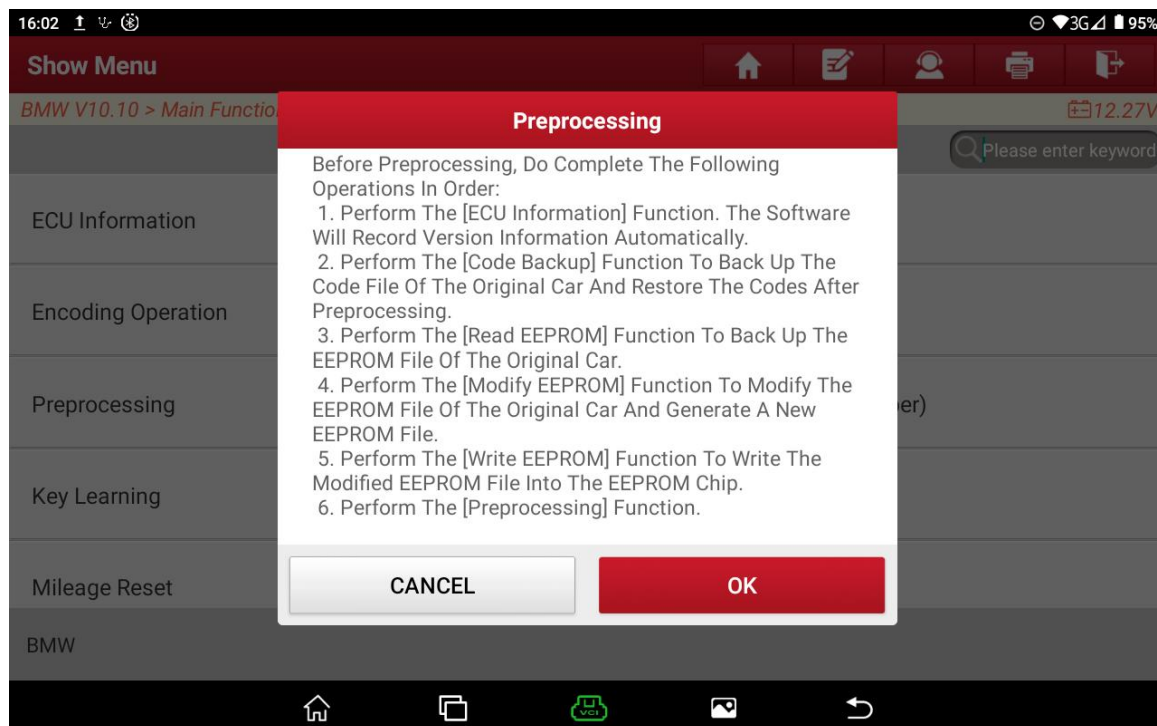


Figure 23

24. If preprocessing is carried out on the vehicle, the ignition switch needs to be turned on. If it is carried out on the platform, select “OK”, as shown in Figure 24

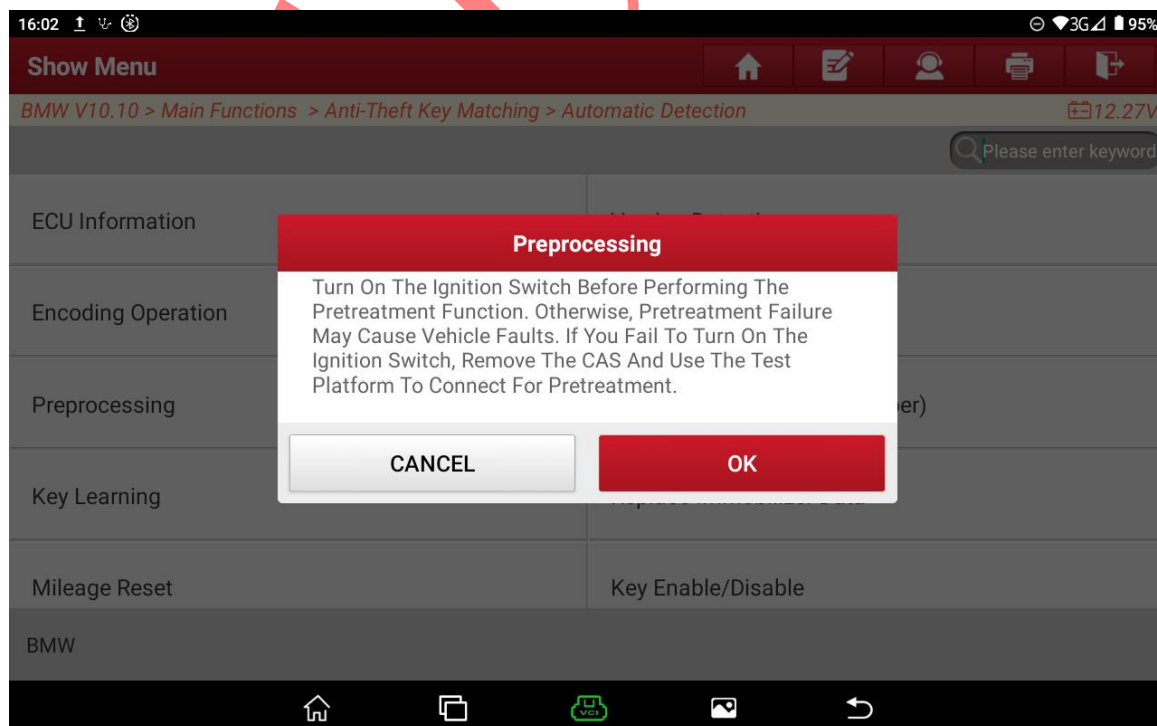


Figure 24

25. Before preprocessing, ensure that the power supply voltage is stable and select “Yes”, as shown in Figure 25.

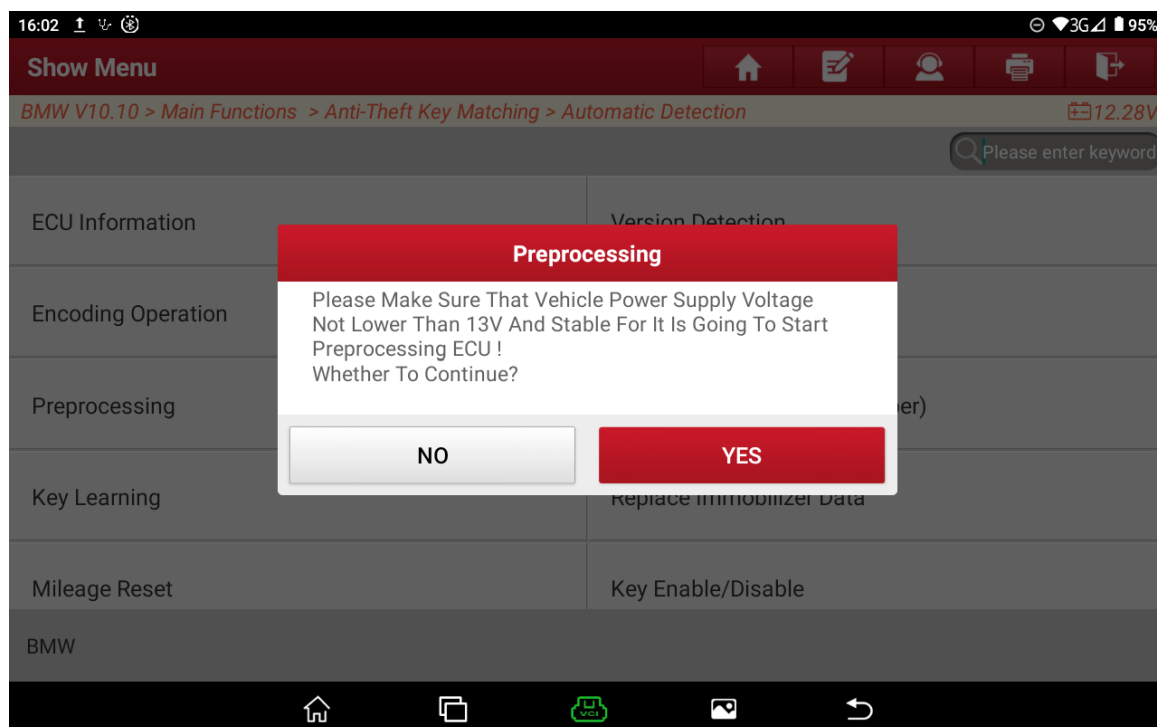


Figure 25

26. After successful preprocessing, it is necessary to restore the original vehicle EEPROM and then perform the code restoration function. Click “OK”, as shown in Figure 26.

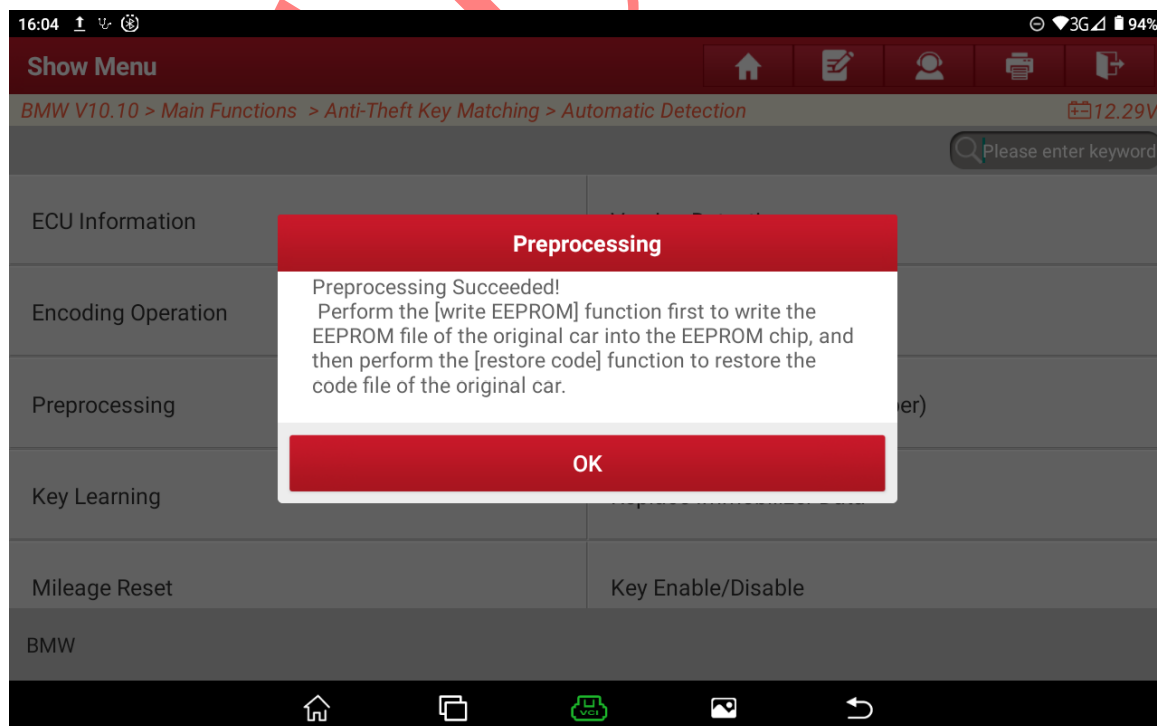


Figure 26

27. Select **【EEPROM Operation】**, as shown in Figure 27.

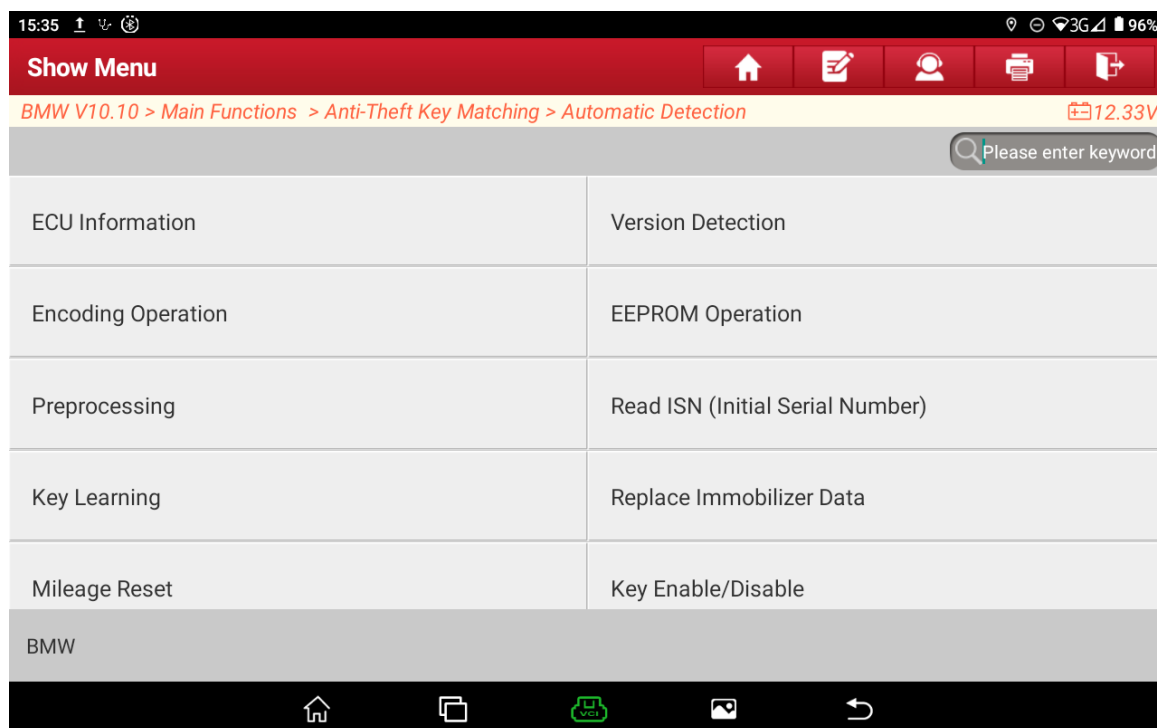


Figure 27

28. Select **【M95128】**, as shown in Figure 28.

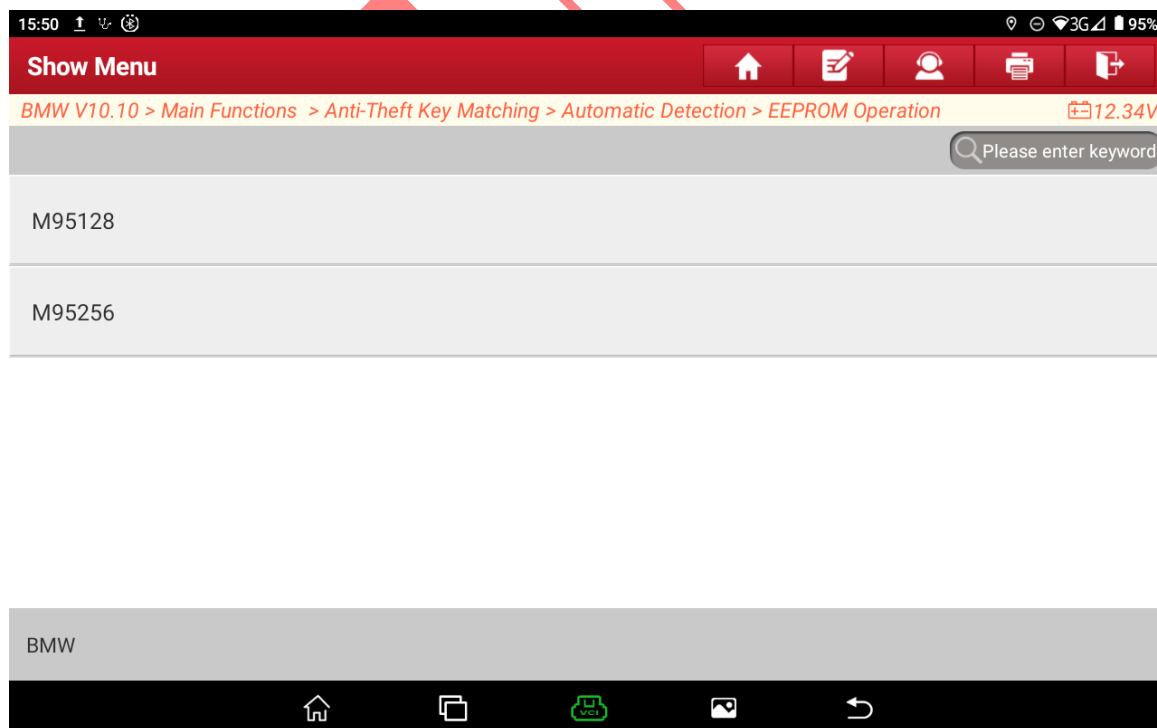


Figure 28

29. Remove the EEPROM chip from the board and install it into the chip clamp, select **【Write EEPROM】**, and write the EEPROM file of the original vehicle into the EEPROM chip, as shown in Figure 29.

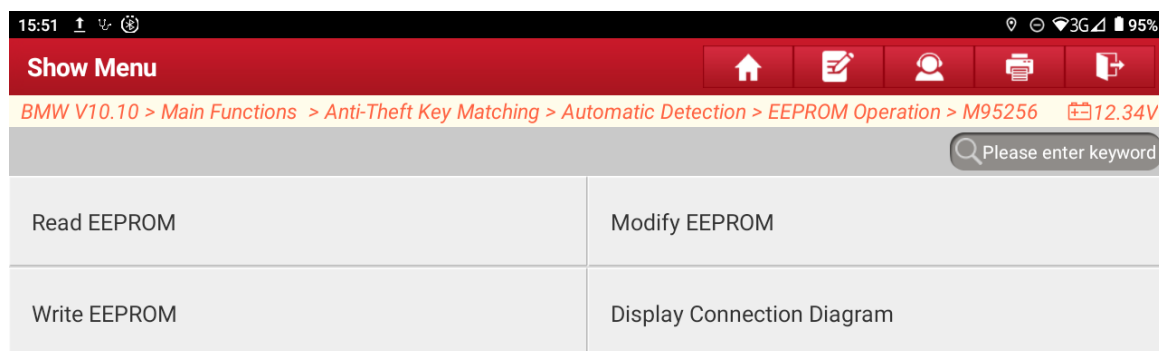


Figure 29

30. After EEPROM data is successfully written, install the EEPROM chip back onto the FEM board and select **“OK”**, as shown in Figure 30.

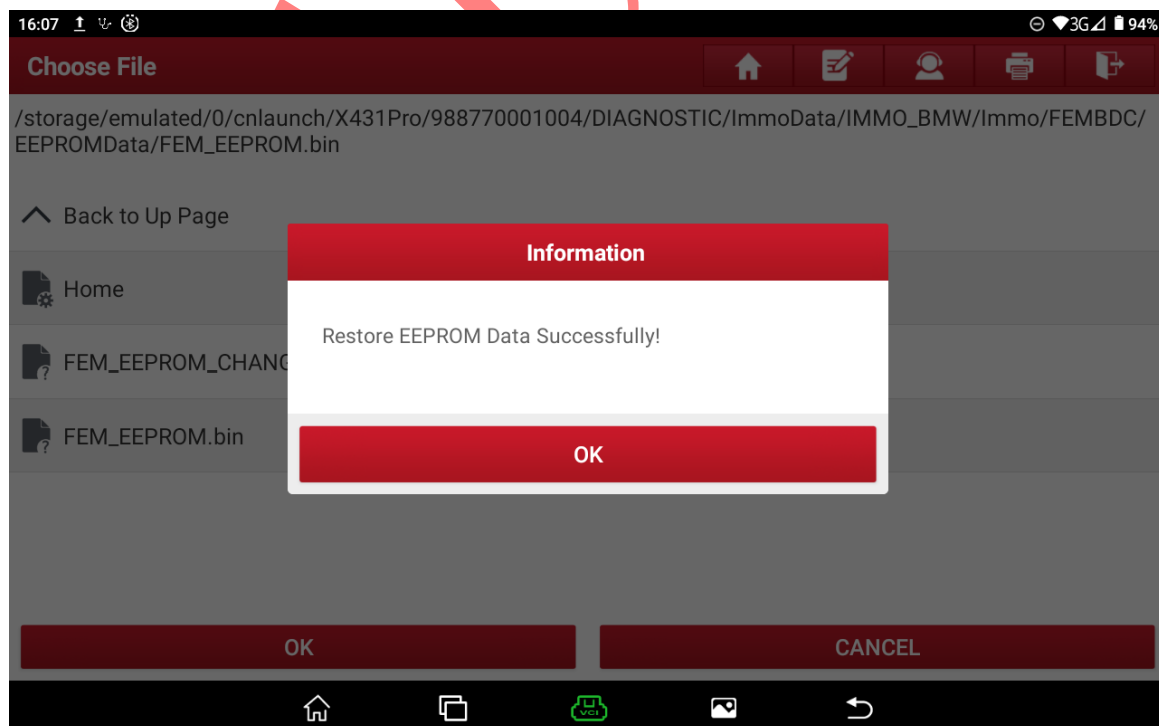


Figure 30

31. Restore the original FEM/BDC data and select **【Encoding Operation】**, as shown in Figure 31.

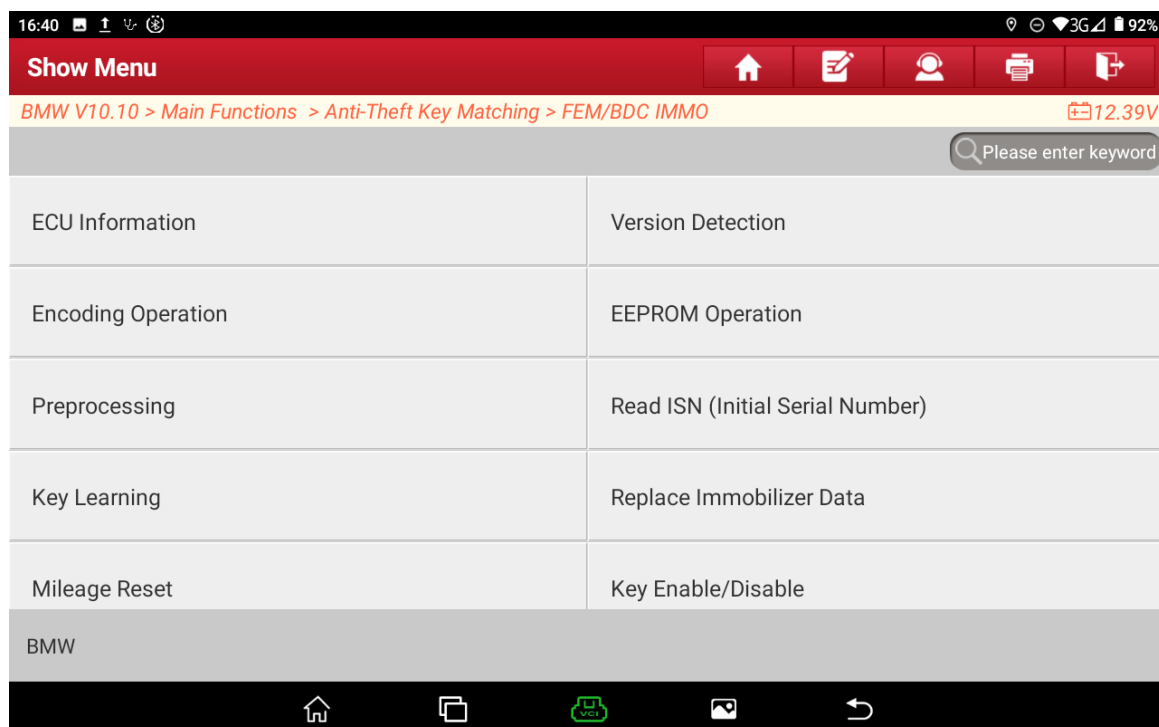


Figure 31

32. Select [Restore Codes], as shown in Figure 32.

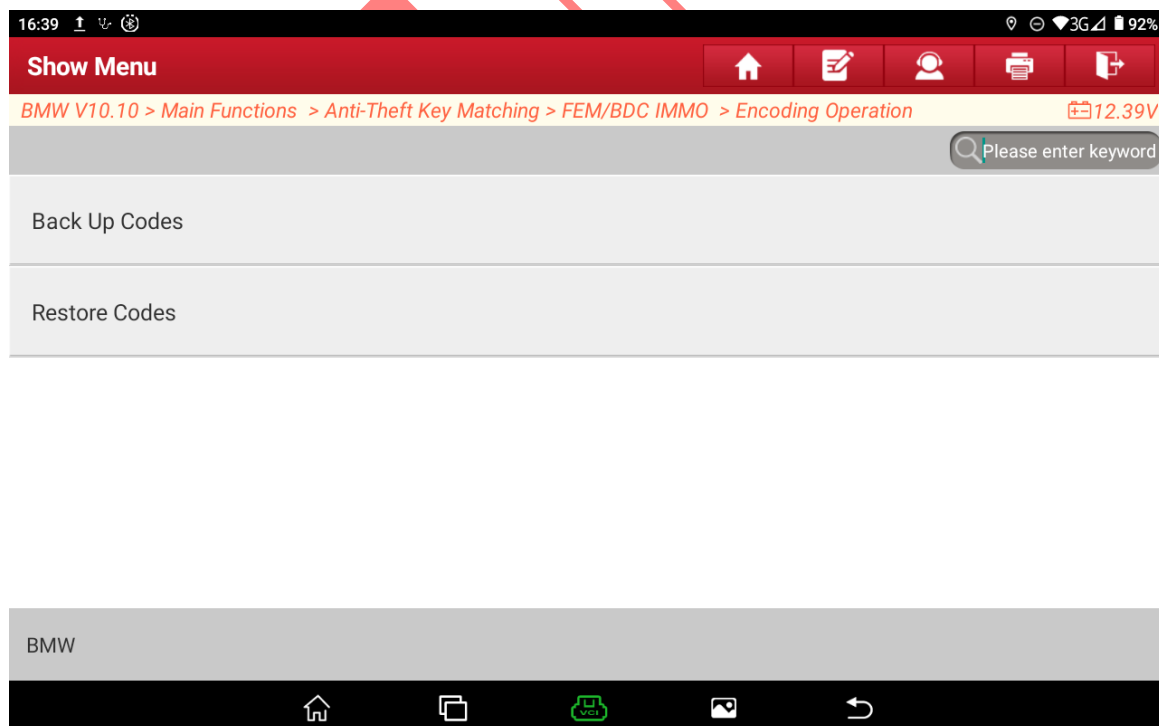


Figure 32

33. Restoration is successful, as shown in Figure 33.

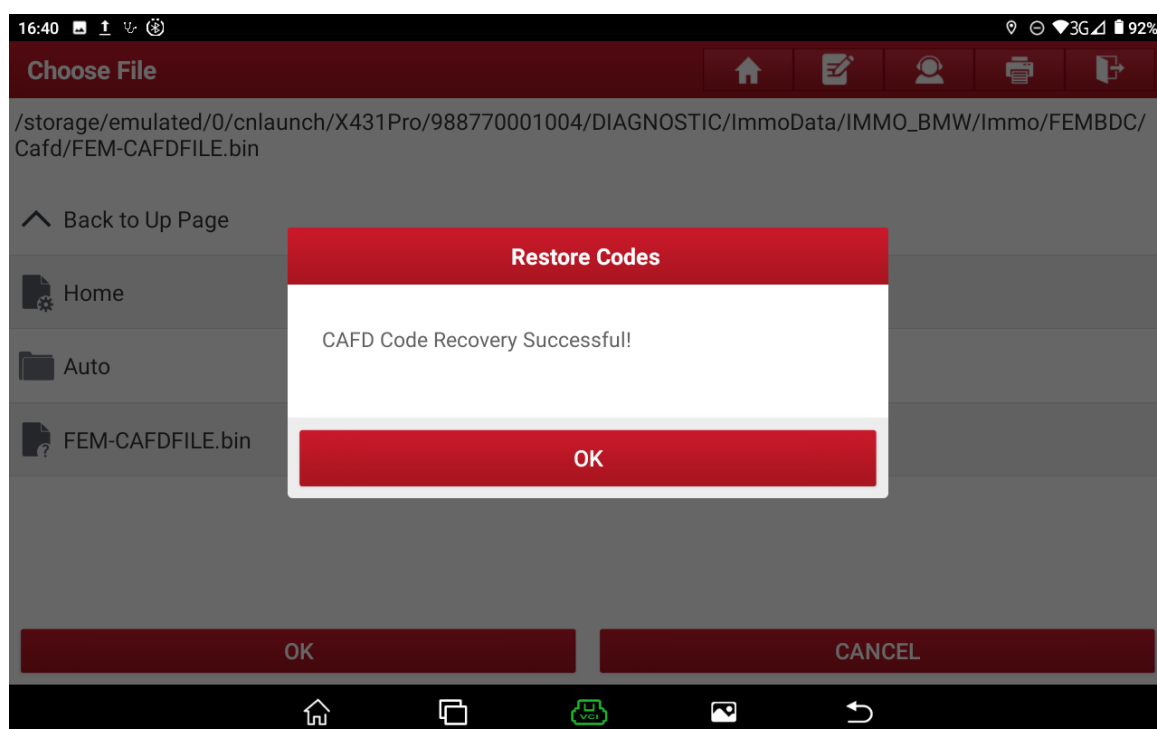


Figure 33

34. Select 【Key Learning】, as shown in Figure 34.

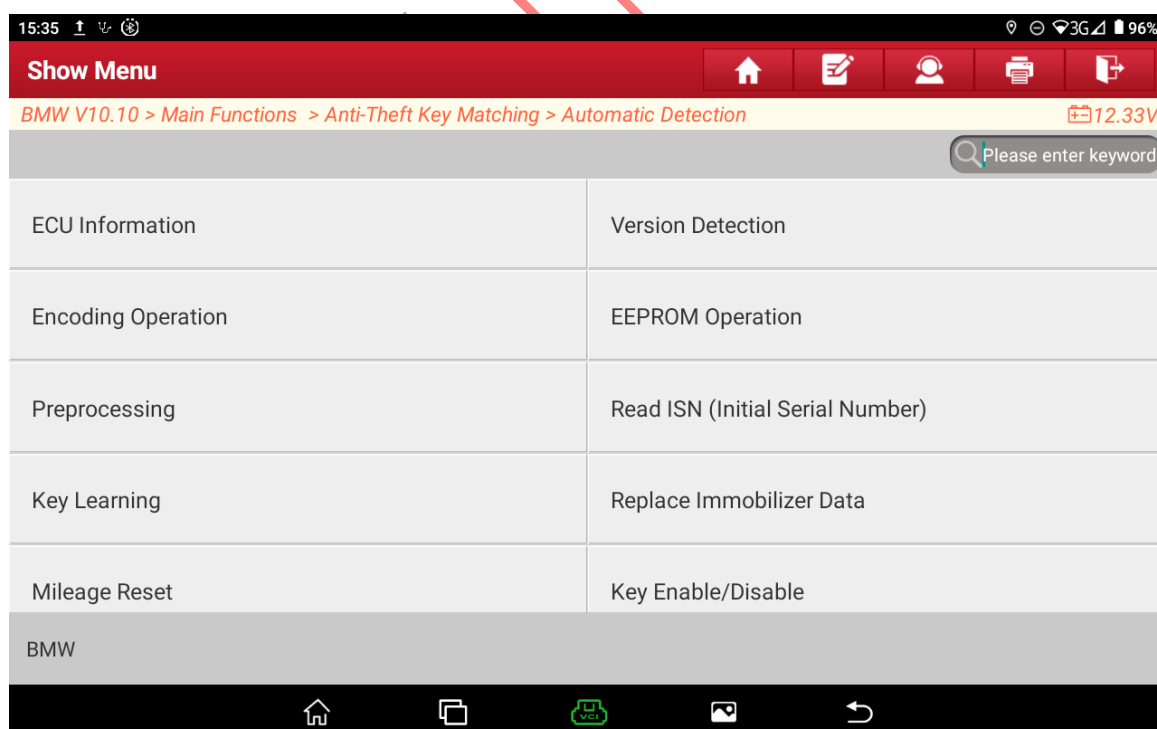


Figure 34

35. Select the blank key position. Select **【Key 3】** here and select **【Key Generated By Ignition Switch】**, as shown in Figure 35.

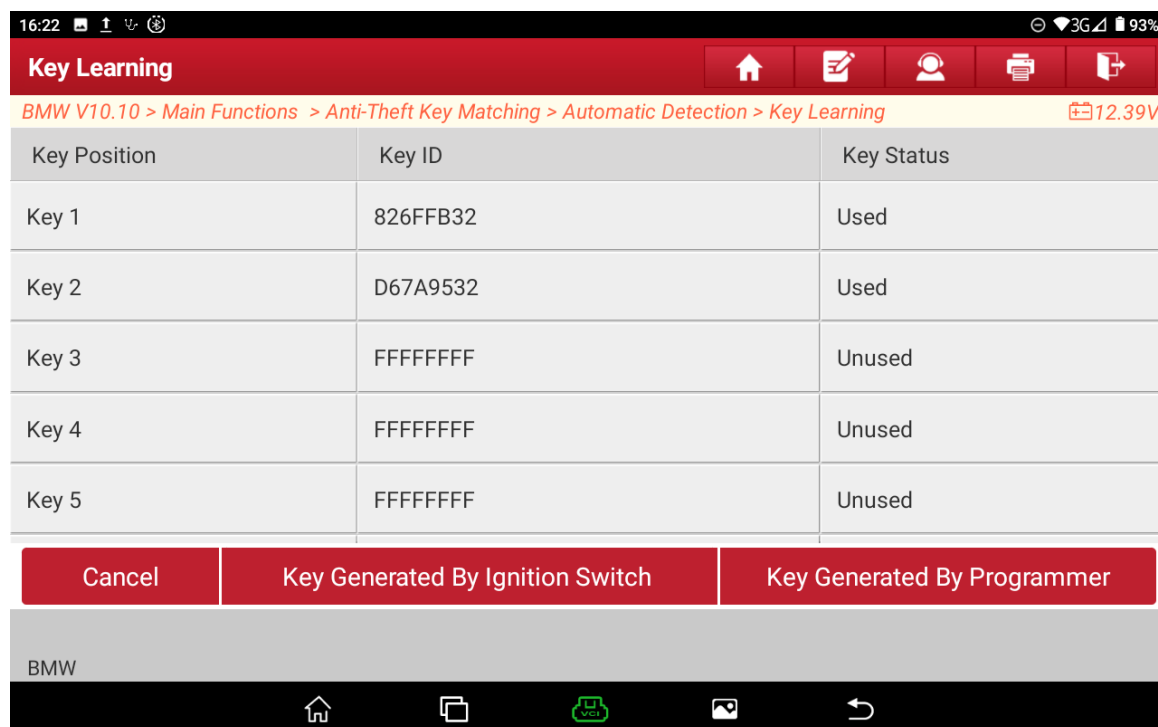


Figure 35

36. Select “No” for key adding. If all keys are lost, enter a 32-digit ISN code and select “Yes”, as shown in Figure 36;

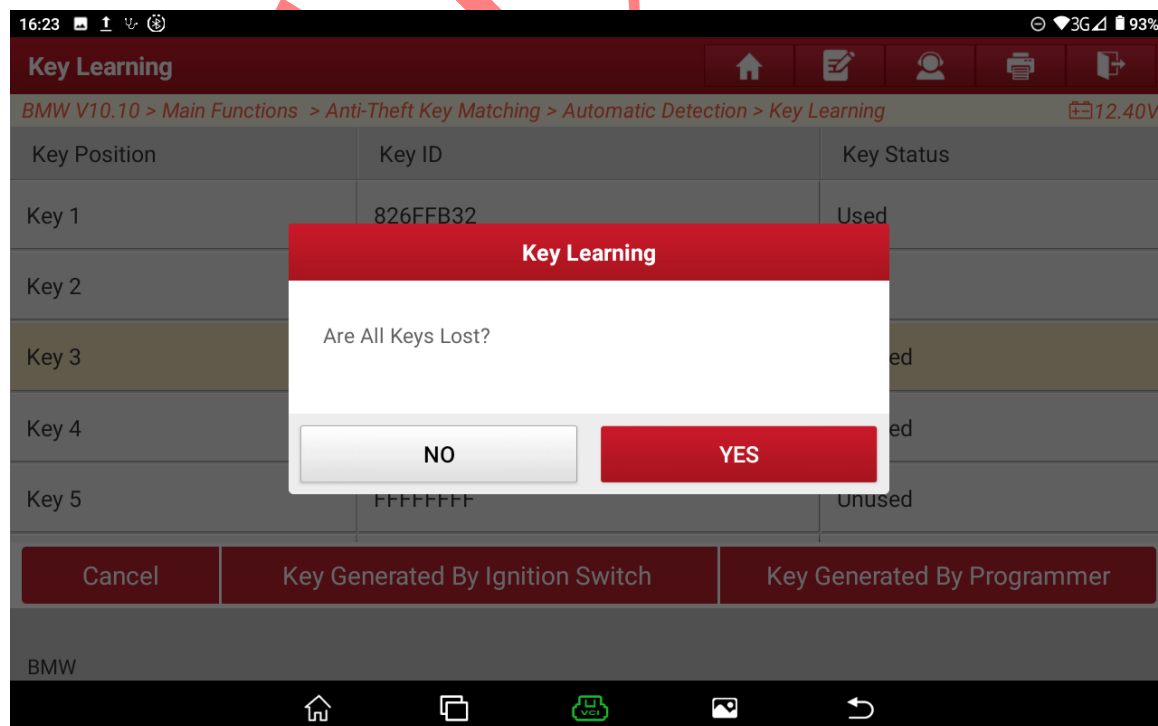


Figure 36

37. Put one working key close to the vehicle key sensing point until the data is successfully read, as shown in Figure 37.

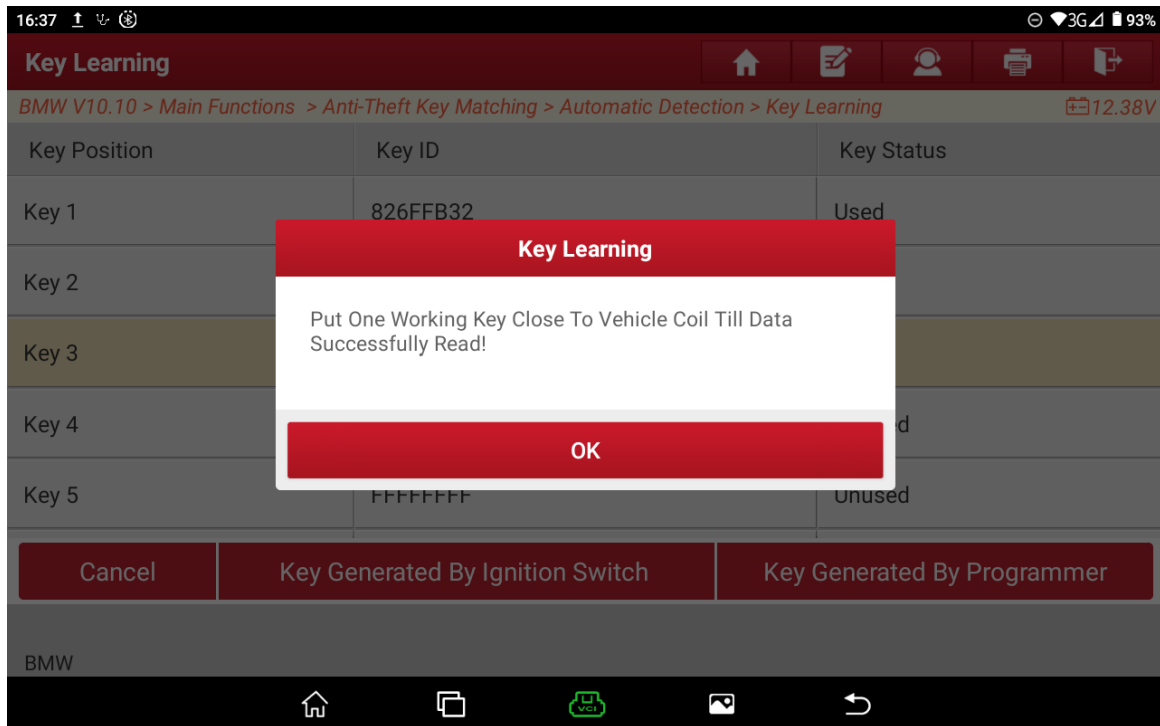


Figure 37

38. The anti-theft data is successfully read. Select “OK”, as shown in Figure 38;

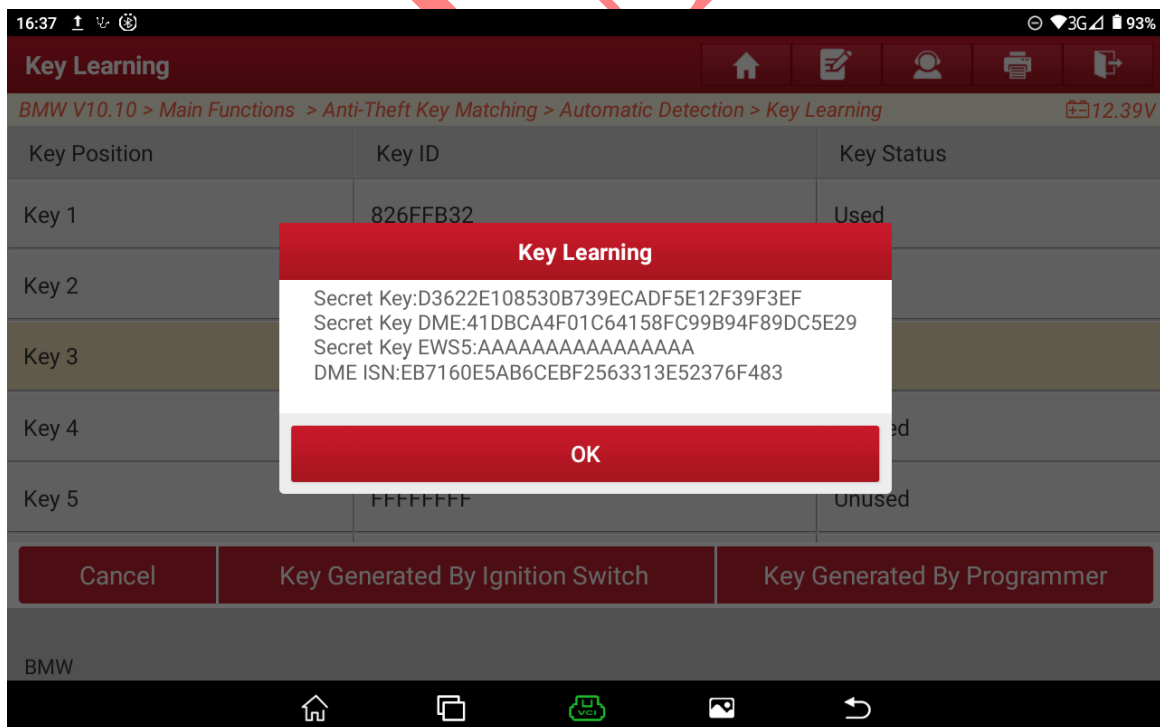


Figure 38

39. Place a new key close to the vehicle key sensing point and wait for the key to be successfully generated. Select “OK”, as shown in Figure 39.

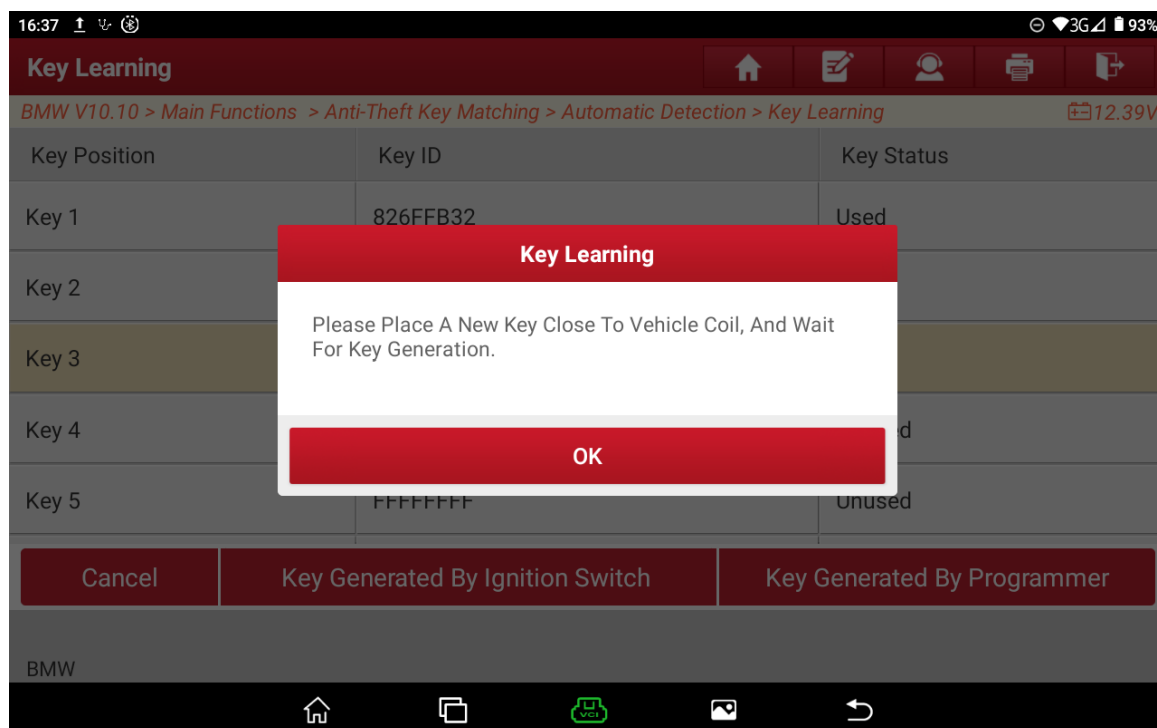


Figure 39

40. A dealer key is successfully generated. Place the key close to the vehicle sensing point and start the vehicle to test whether the remote control is normal, as shown in Figure 40.

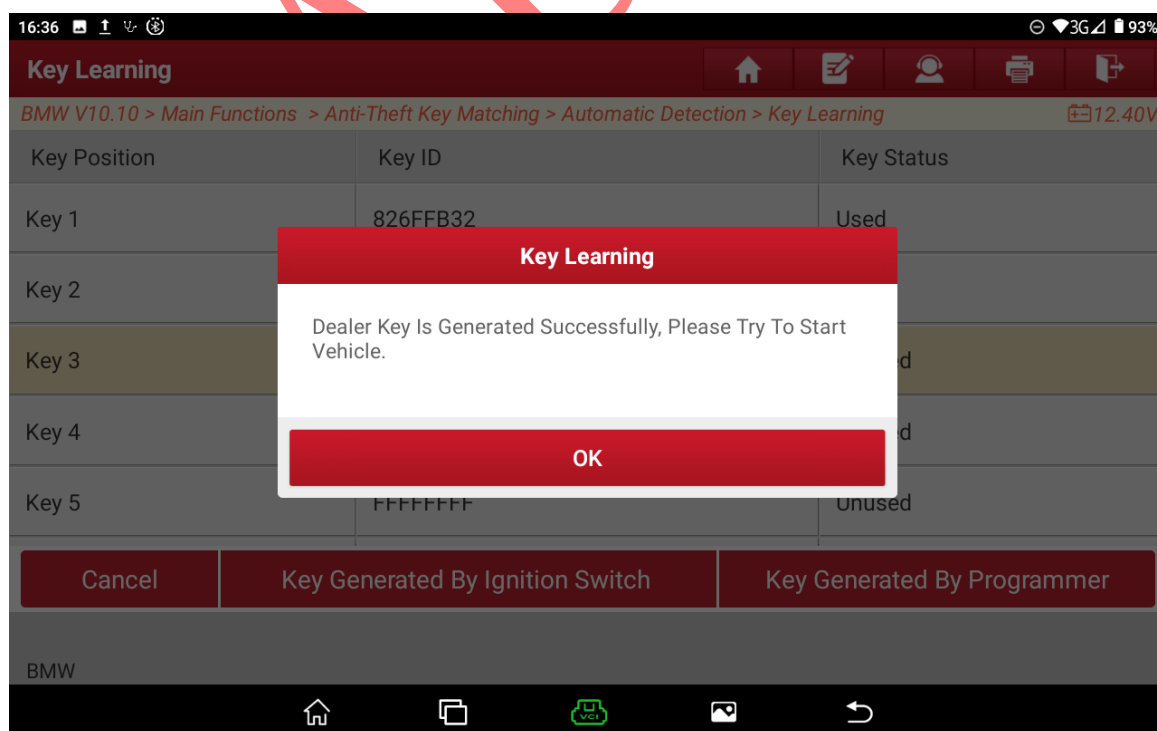


Figure 40

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