Setting up and using NCS Expert:

This was originally written by Junior, Mark, and Revtor on various boards. It has been modified to be specific to the E63-E64 models

- First you will need NCS Expert ver. 3.1.0. It is a 96MB file zipped. It will download as a .rar file, but can be opened with WinZip or Unrar
- Follow these instructions to the letter. In step 1. where it says unzip NCS Expert.rar into C:\. Do not unzip it into any other folder. The scripts are written to look for certian files in C: Unless you are an expert in rewriting scripts, do not deviate from the instructions.
- The zip file actually has three programs embedded in it NCS Expertentool ver 3.1.0; INPA Loader ver 5.0.2 and EDIABAS 6.4.3
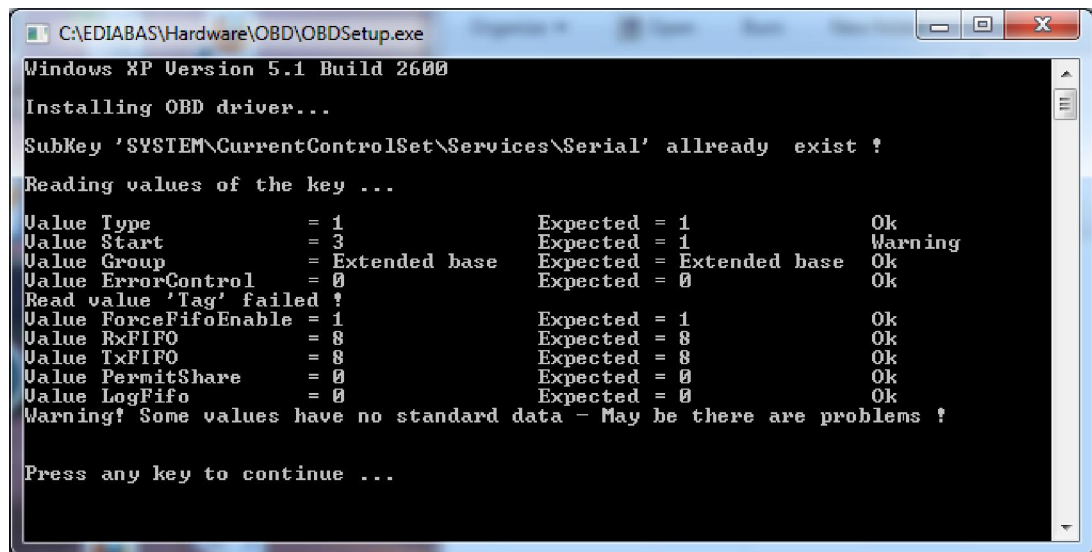
　　　　　paste in your browser　　　　http://rapidshare.com/#!download|216tl|429882289|NCSEXPER.rar|100601

Over-view

1. Unzip "NCS EXPERT.rar" to C:\
   a. We are looking for three folders, EDIABAS, INPA and NCS EXPERT
   b. folders should look like this
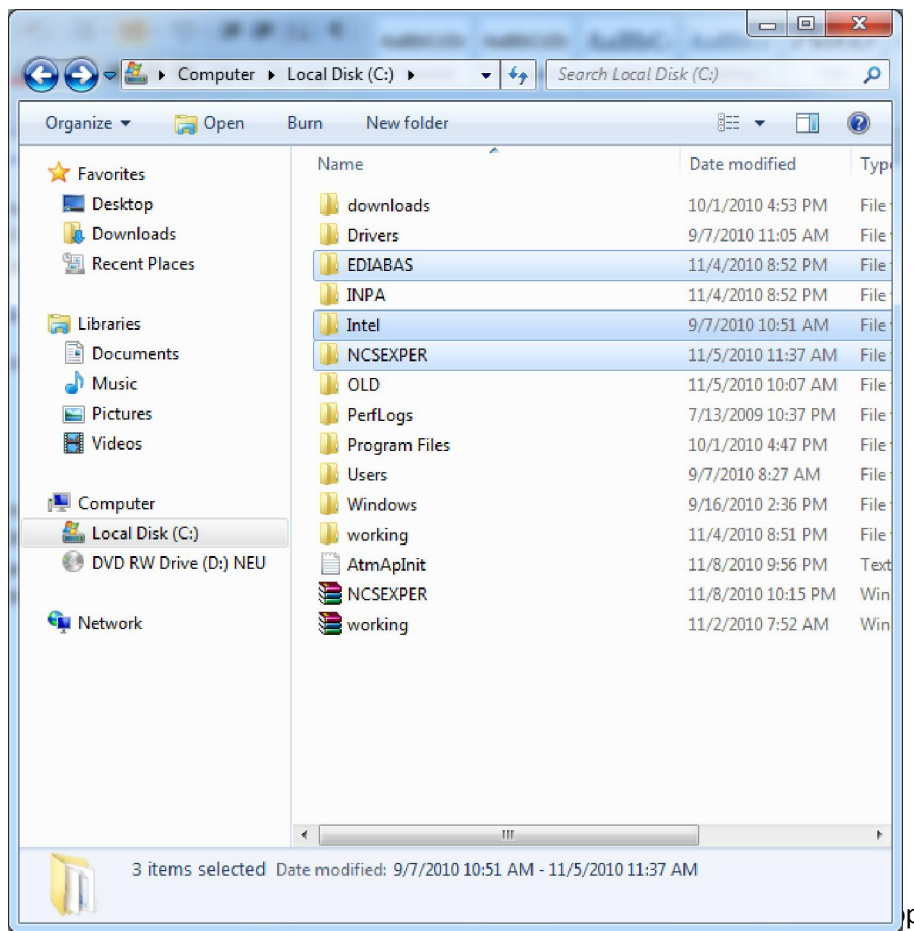
3. Navigate to C:\NCS EXPERT
   a. Create a shortcut to your desktop of the "WORK" folder
4. Navigate to C:\NCS EXPERT\BIN
   a. Create a shortcut to desktop of "NCSEXPER.EXE"

5. Navigate to C:\Ediabas\hardware\OBD and run the OBDsetup.exe. Your screen will look something like this, since I have ran this script previously it might look a little different the first time you run it. YOU MUST RESTART after this!!



```
C:\EDIABAS\Hardware\OBD\OBDSetup.exe

Windows XP Version 5.1 Build 2600

Installing OBD driver...

SubKey 'SYSTEM\CurrentControlSet\Services\Serial' allready  exist !

Reading values of the key ...

Value Type            = 1            Expected = 1            Ok
Value Start           = 3            Expected = 1            Warning
Value Group           = Extended base    Expected = Extended base  Ok
Value ErrorControl    = 0            Expected = 0            Ok
Read value 'Tag' failed !
Value ForceFifoEnable = 1            Expected = 1            Ok
Value RxFIFO          = 8            Expected = 8            Ok
Value TxFIFO          = 8            Expected = 8            Ok
Value PermitShare     = 0            Expected = 0            Ok
Value LogFifo         = 0            Expected = 0            Ok
Warning! Some values have no standard data - May be there are problems !


Press any key to continue ...
```
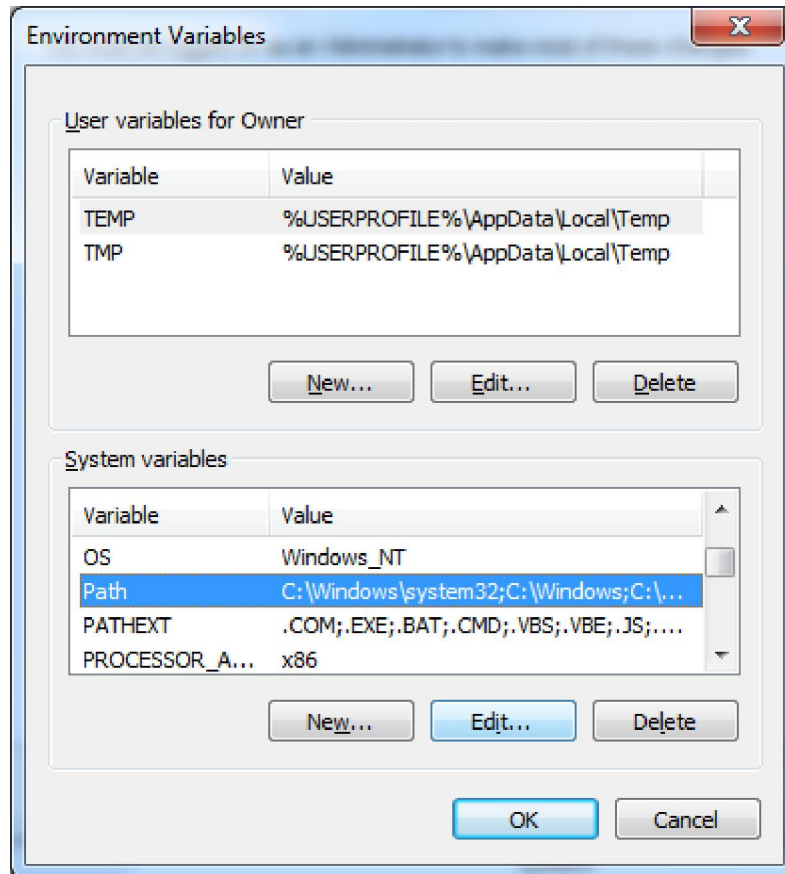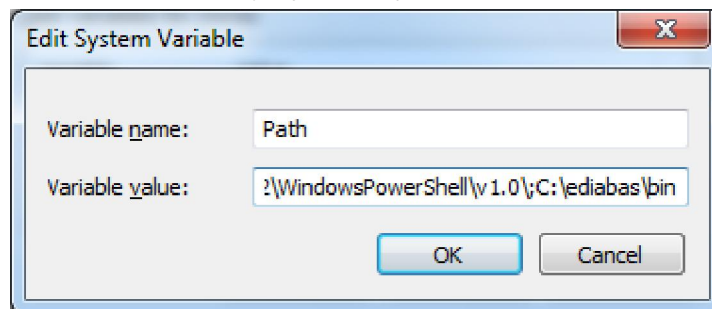
a.

6. Right click on my computer > properties
   a. Windows 7   and WinXP is similar
      i. Click on Advanced system settings
      ii. click on Environment Variables
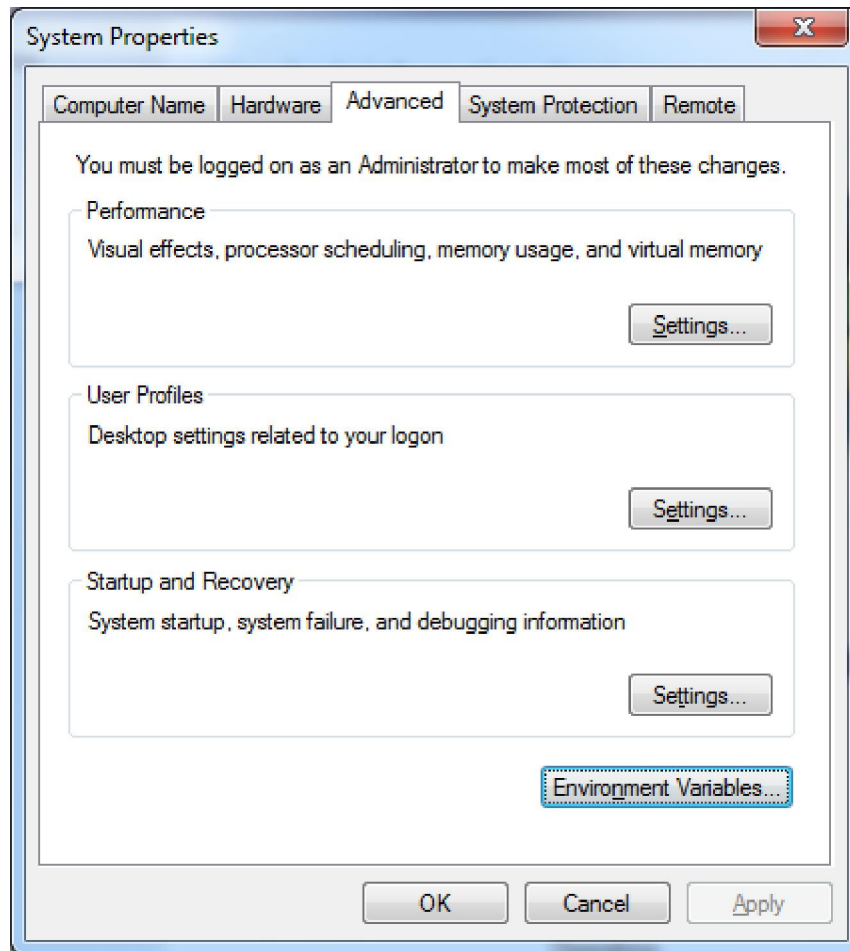
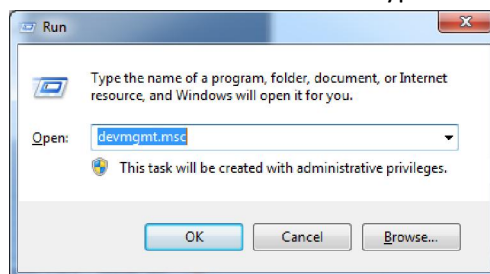iii. Highlight "Path" and click edit

iv. Add this to the end ";C:\ediabas\bin"

v. Click ok and exit all windows to desktop

7. From desktop press the WINDOWS KEY + R and type devmgmt.msc or just type in to search
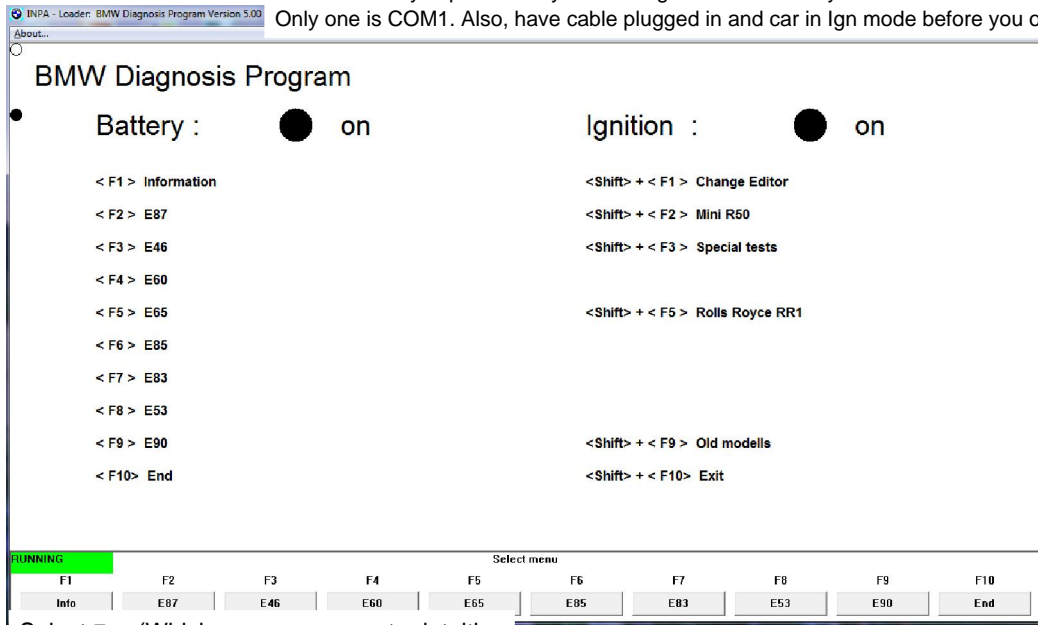
8.

9. This will open device manager.

   a. Go to PORTS> double click on com1 > port settings tab > advanced

9c. Perform after step 9b.

Now plug the cable in to your laptop.When you plug the connector into the laptop, it must be on COM1. It will not work with any other COM#. Highlight the + sign by PORTS>double click the USB Serial device>port settings and change the port to Com 1>save. It may give you a pop up that there may be a conflict with other devices on COM1. That's OK as you will no be using any other device when you code the car. >Now go into the advanced tab>change if not alreday set to this Com Port number should be COM 1; receive and transmit bytes should both be 4096; latency timer change to 1; minimum read and minimum write 0>OK>OK

b. Ensure "use fifo uffers" option is marked and receive buffers and transmit buffers are both set to 8. Once that is finished press ok and exit all windows.

10. Take a second, double check everything you just did. Trust me when I say you can't skip steps!

11. Connect your obd cable to car and computer we are going to test functionality with INPA.

12. Put key in slot and press the START STOP button but not to start car.   Press twice so car Ign on, lights and climate off

13. Go to desktop and click on "INPALOAD" (shortcut we created previously)

a. Both circles are black then continue, if not double check all previous steps make sure serial is set to COM1. **Very important. If you do not get black circles try a differnt USB slot on laptop. Only one is COM1. Also, have cable plugged in and car in Ign mode before you open INPALOAD

INPA - Loader: BMW Diagnosis Program Version 5.00
About...

BMW Diagnosis Program

Battery : ● on	Ignition : ● on
< F1 > Information	<Shift> + < F1 > Change Editor
< F2 > E87	<Shift> + < F2 > Mini R50
< F3 > E46	<Shift> + < F3 > Special tests
< F4 > E60	
< F5 > E65	<Shift> + < F5 > Rolls Royce RR1
< F6 > E85	
< F7 > E83	
< F8 > E53	
< F9 > E90	<Shift> + < F9 > Old modells
< F10> End	<Shift> + < F10> Exit

RUNNING

Select menu

F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
Info	E87	E46	E60	E65	E85	E83	E53	E90	End

Select E60 (Which may seem counter intuitive since we have E63's. B

14. S   you will get this box

Script selection (<TAB> to change listbox, <ESC> to abort)

Select E   E60   1.27   Functional Jobs
   Engine
   Transmission
   Chassis
   Karosserie
      Seat Modules
   Communication Syste

It will be in English and not German
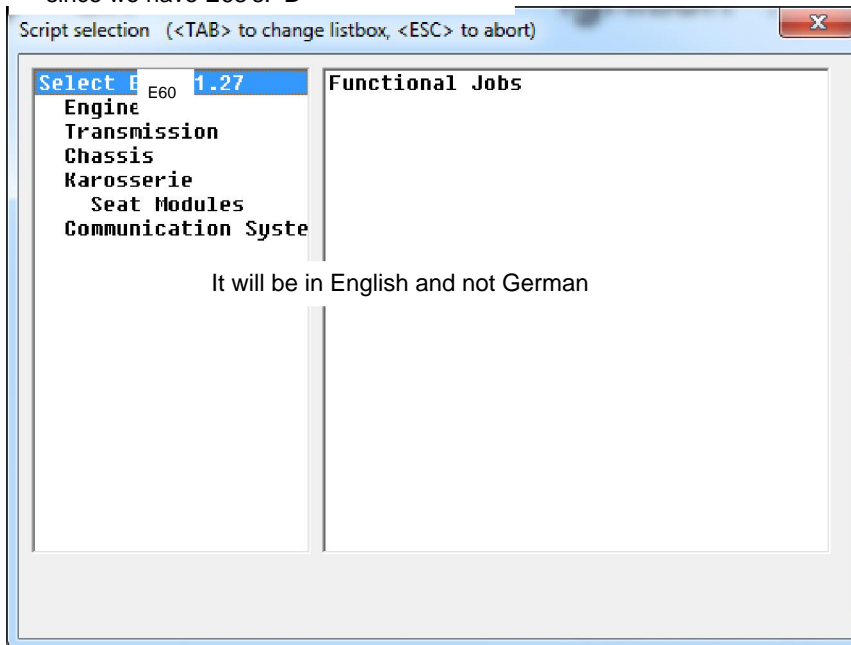
I believe you select Seat Modules then airbag or any other option You are merely testing the ability to see a module

15. Select "Karosserie" now you will see another menu to the right. Select "airbag"

16. Press F5 to read status.. if it continues without any errors we are ready to run NCS Expert

17. Close INPA and start NCS EXPERT.exe from desktop shortcut.
18. Follow instructions very very very carefully, you can screw up your car starting now. If you don't know how to follow directions stop immediately . ok now for the fun part.
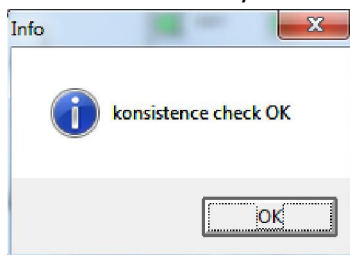19. Should start off looking like this..
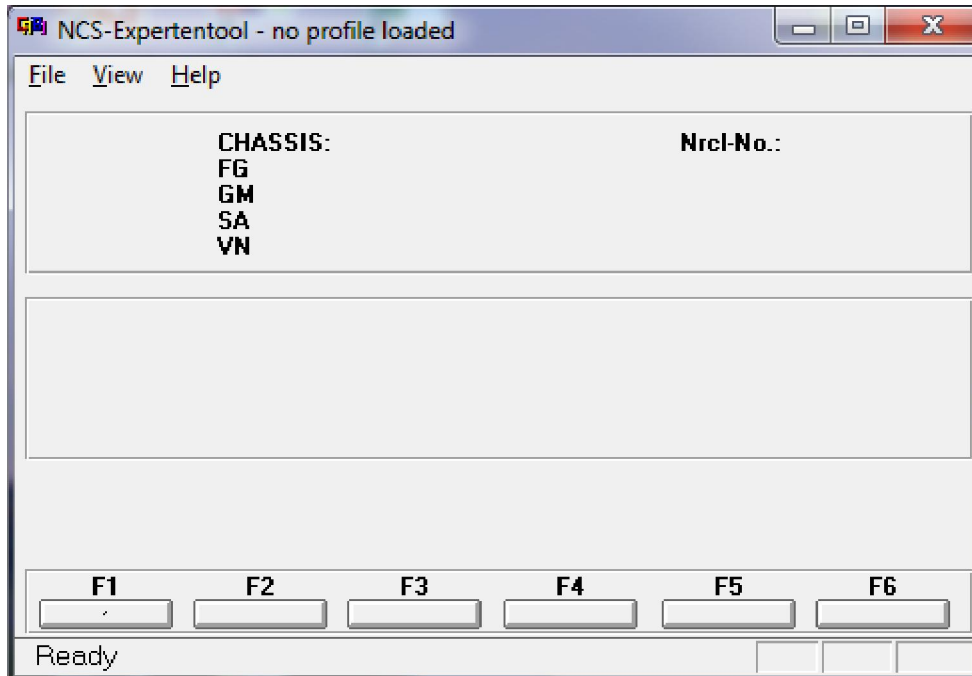
20.
21. Remember to follow directions closely….
22. Select "File > Load profile > Expertmode > OK
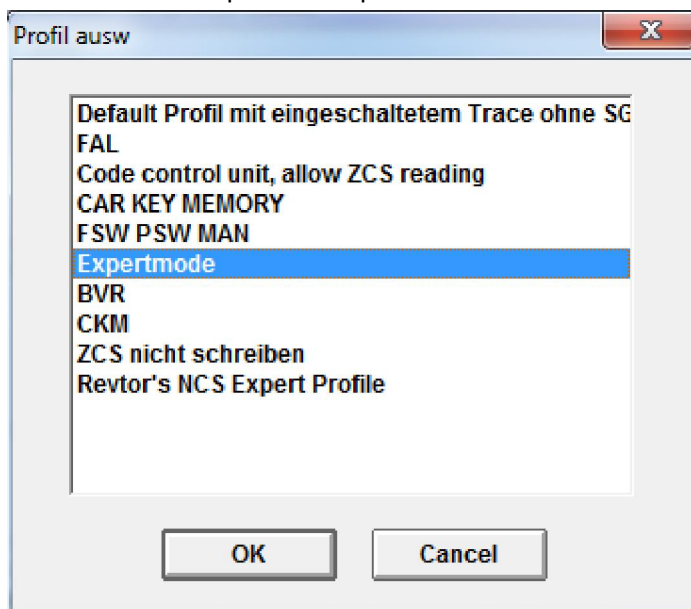
23.
24. File > edit profile   password is "**repxet"**
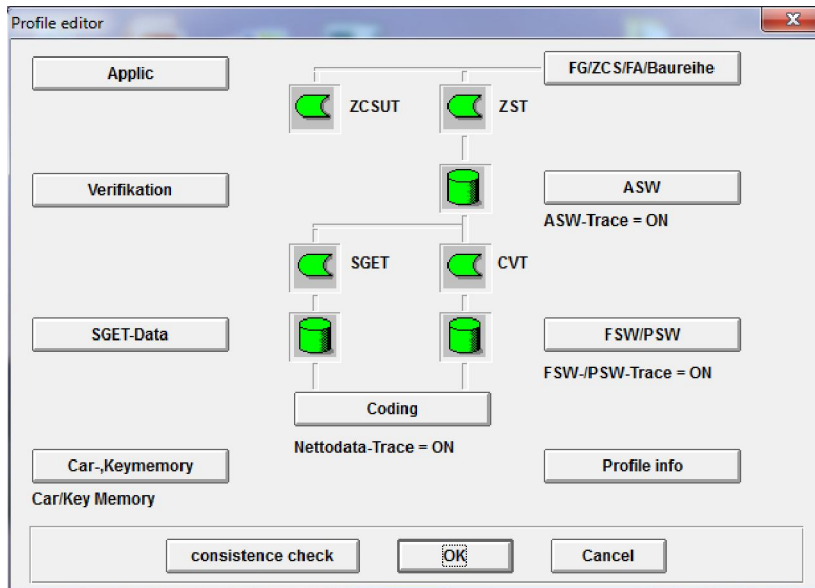
25.

26. Select car-keymemory > check all three boxes > press ok

27. Click on "consistency check" should get this .. press ok

28.

29. Then select "FSW/PSW"

30. Make sure both check boxes are checked and top part only has "from CVT" selected .. should look like this
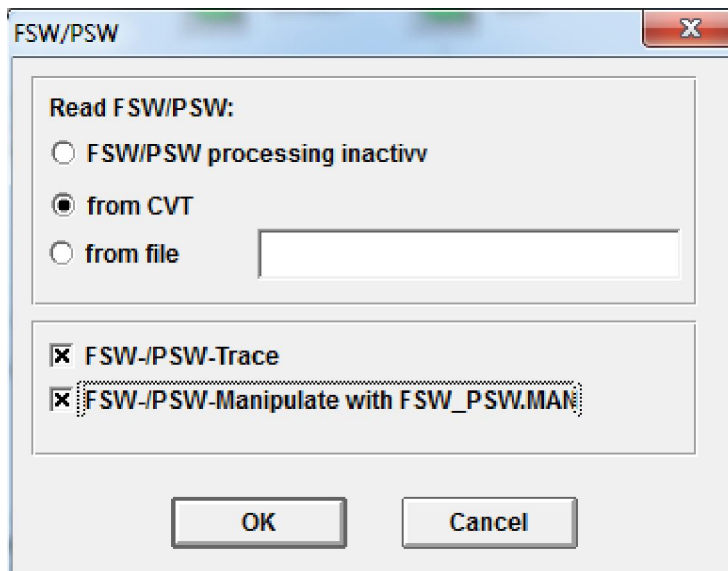
31.

32. Press ok, select consistency check again.. if no errors then press ok

33. File > save profile as > FZG4.PFL "mine is name GZG2.PFL" press ok

33a. Save it as the name it defaults to. Don't change the name

34. Example

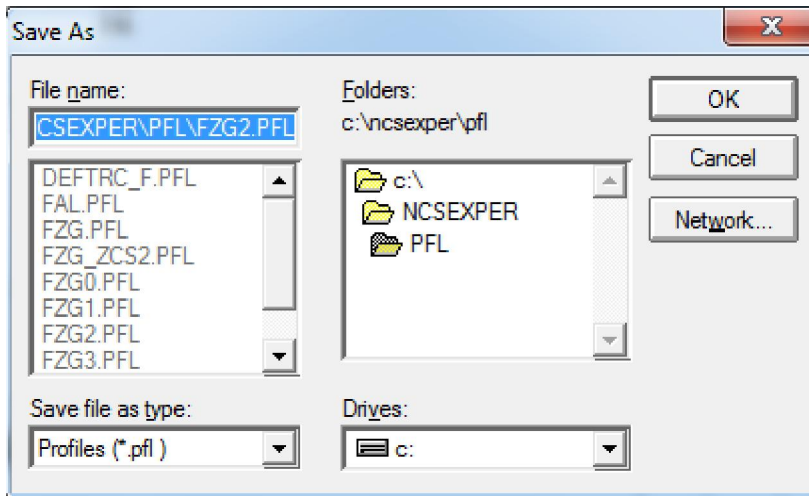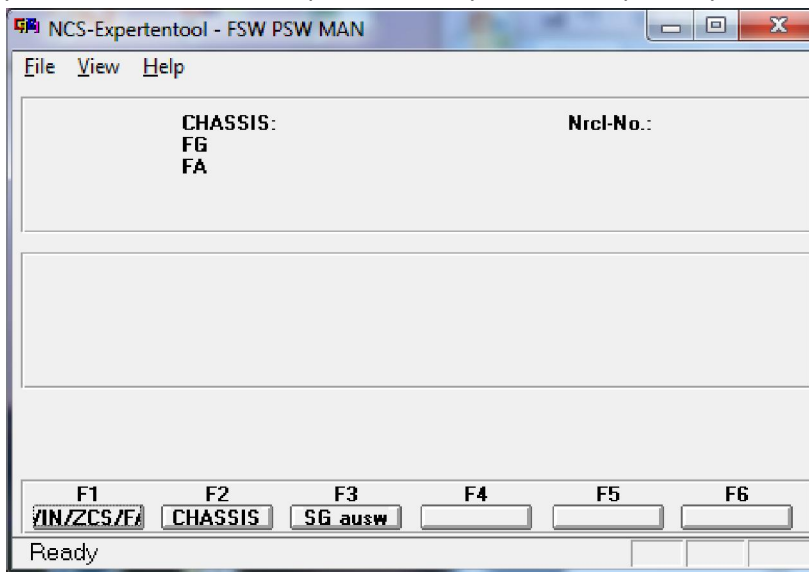35. File>edit profile>repxet>profile info> set profile name to "FSW PSW MAN"

36. We have just created a profile to write to car via a .man file. Every time you start NCS expert you will need to load this profile. After you load the profile you will see options like this

Note** I use and load the profile default profil mit.....as the one I load. It seems to work better than the one created. It needs to be edited to look like step 30. Both bottom boxes require the x. Remember password is repxet

37.

38. Select F1 > select F3 here we can choose our chassis. We are going to select E60 assuming you are working on an E63-64. Again this may seem counter intuitive but it is the correct procedure

The program seeks the modules loaded for an E60 via files in NCVS Expert known as DATEN files. Most of the modules are loaded in these files. There is an update to these files that I got from a helpful site in Moscow. I did update them in my DATEN folder, but so far do not see any differenmce, so for now use what comes with NCS Expert

BR ausw

```
E39
E46
E52
E53
E    E60 is the one to highlight
E - -
E70
E83
E85
E
K    E89
R50
R56
```

OK   Cancel
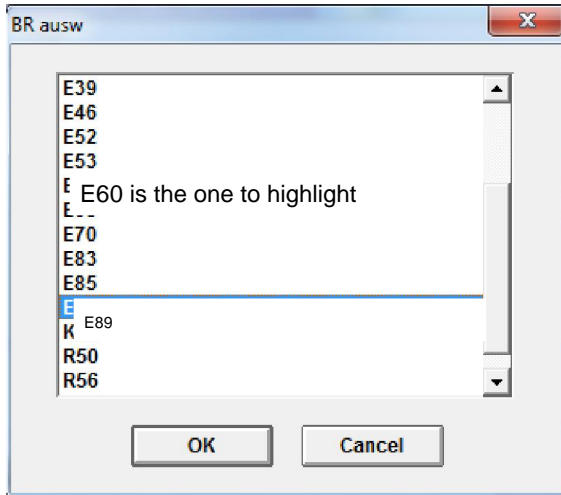
39.

40. Press ok. Now it is asking which computer we want to code.. we are going and always select "CAS" press ok. All options will gray out for a couple seconds and then it will look like this.

NCS-Expertentool - FSW PSW MAN

File   View   Help

CHASSIS: E60   Nrcl-No.:   017605go
FG   WBAVB13566PT13516M
FA   E90_#0905&KAB4%0668*V| FG is your VIN
                                     FA will say E60

| F1 | F2 | F3 | F4 | F5 | F6 |
| Enter ZCS | Enter FA | CS/FA f F[| | Datei | Back |

Ready

Note* CAS is not the comfort access module. It is a coding reference Coincidentally, there is a module called CAS, which is in fact the comfort access module. In case you were wondering
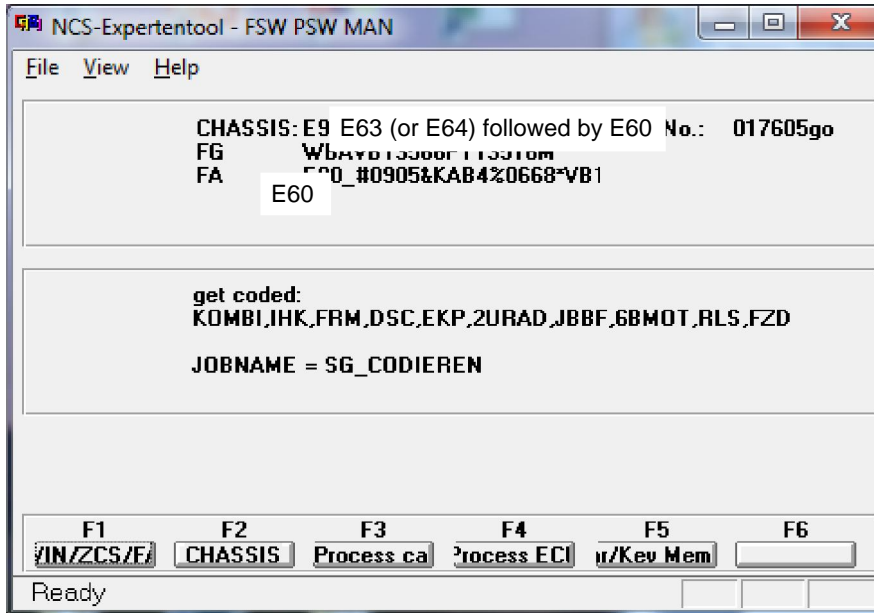
41.

42. Notice that now our vin is there along with "FA" FA is like a single string that tells the car everthing that it came with from the factory. More advanced users can change this but not really needed. ~~I have provided a pdf for that if you are interested.~~

43. Now select "F6" for back will gray out then will look like this This may take a minute. Do not interrupt.

44.

45. We are going to start by making a backup of the car.

46. WARNING this initial step will reset your ECU and replace any settings you have coded previously since we have just "coded nothing" to the ECU.

47. The whole point of this was for the ECU to read all the settings from every module and place them in a file called FSW_PSW.TRC.

48. Navigate to the "WORK" shortcut we created on the desktop.

49. Open the file FSW_PSW.TRC with notepad. Make a copy of it in a safe place. This is your backup of all the settings.

50. Ok now for the fun.. coding.. lets code the famous "digital speed on cluster"

51. Just to avoid any mistake close NCS we are going to start from the beginning.

52. Load NCS >File>load profile "FSW PSW MAN"

53. F1>F3>select your chassis>select "CAS"

54. Press F6 for back

Step 49 saves a master file of all your modules and settings. Save this on a thumb drive as well as on the PC in the backup folder Name it something other than FSW_PSW.TRC, like Master.TRC

55. Press F4 to select a specific module "process ecu" then you get a list of all modules on your car.. will and may be different.
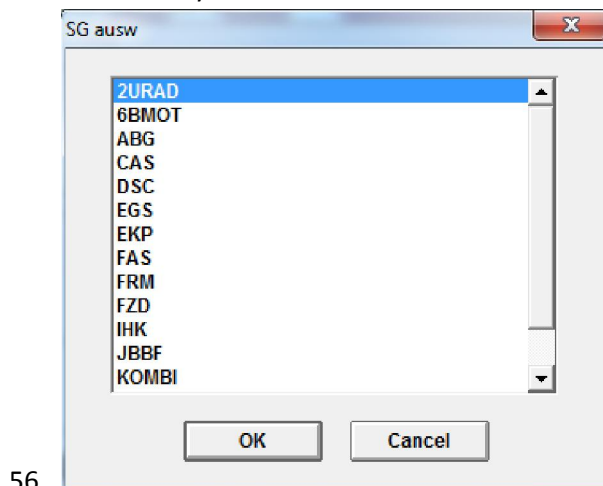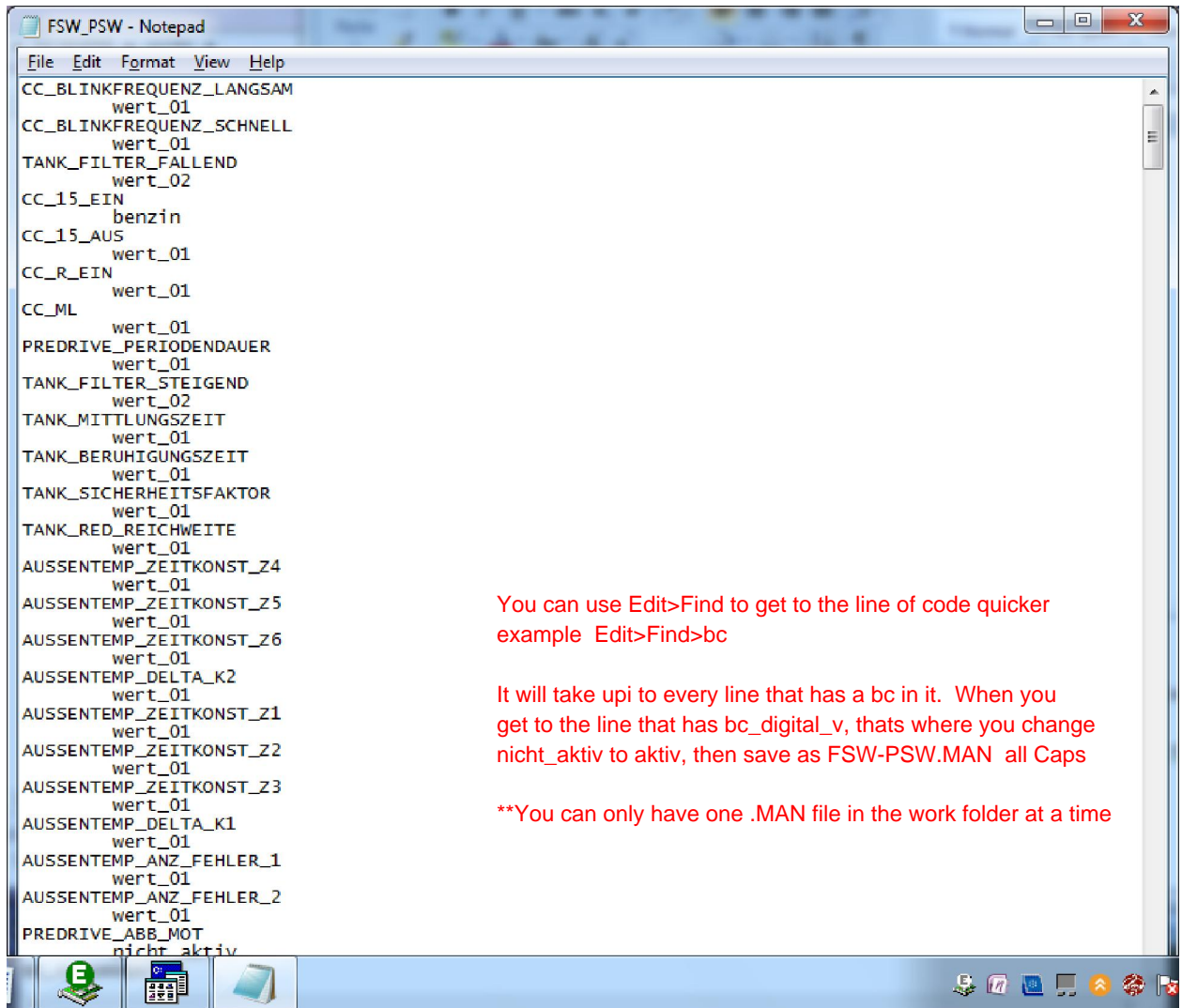

56.

57. Select "CAS" then select "READ ECU" this is going to create another FSW_PSW.TRC file but only with the values on for the module we select.

58. Select "READ ECU" this will read all the values from the specific module and place ten in the file stated above. You will get a screen like this.. you can close it.

```
NETTODAT.TRC
B 00101100,000B,14,66,01,08,1E,02,C2,02,08,50,64
B 00101200,0008,30,36,36,38,4B,41,42,34
B 00300000,000D,2F,37,02,51,38,1E,1E,32,0A,0E,10,1E,0C
B 00300100,0010,68,69,A1,00,02,00,10,02,18,00,00,00,BF,00,00,00
B 00300110,0008,00,00,00,00,00,00,00,00
B 00300200,0010,2C,22,30,7F,00,00,05,23,05,23,33,19,0F,05,1E,14
B 00300210,0003,0A,0A,00
B 00300300,000B,40,05,14,08,08,3C,28,00,01,00,00
B 00300400,000B,80,05,05,14,02,09,AA,28,0E,32,03
B 00300500,0004,97,0A,05,27
B 00300600,0002,00,00
```

59.

60. Leave ncs open and head to the "work" folder.

61. Open the FSW_PSW.TRC file with notepad

62. File>save as FSW_PSW.MAN (be sure to select "save as type" to all files so that it will accept our "MAN" extension. If you fail to do so it will just save it as a text file .TXT   Note* very important to save as a .MAN

63. The "FSW PSW MAN" profile that we used is going to use this "FSW_PSW.MAN" file . this is where we are going to make any changes and then NCS will write this to ECU.

64. Open the file we just saved with notepad will look like this.

```
FSW_PSW - Notepad

File  Edit  Format  View  Help
CC_BLINKFREQUENZ_LANGSAM
        wert_01
CC_BLINKFREQUENZ_SCHNELL
        wert_01
TANK_FILTER_FALLEND
        wert_02
CC_15_EIN
        benzin
CC_15_AUS
        wert_01
CC_R_EIN
        wert_01
CC_ML
        wert_01
PREDRIVE_PERIODENDAUER
        wert_01
TANK_FILTER_STEIGEND
        wert_02
TANK_MITTLUNGSZEIT
        wert_01
TANK_BERUHIGUNGSZEIT
        wert_01
TANK_SICHERHEITSFAKTOR
        wert_01
TANK_RED_REICHWEITE
        wert_01
AUSSENTEMP_ZEITKONST_Z4
        wert_01
AUSSENTEMP_ZEITKONST_Z5
        wert_01
AUSSENTEMP_ZEITKONST_Z6
        wert_01
AUSSENTEMP_DELTA_K2
        wert_01
AUSSENTEMP_ZEITKONST_Z1
        wert_01
AUSSENTEMP_ZEITKONST_Z2
        wert_01
AUSSENTEMP_ZEITKONST_Z3
        wert_01
AUSSENTEMP_DELTA_K1
        wert_01
AUSSENTEMP_ANZ_FEHLER_1
        wert_01
AUSSENTEMP_ANZ_FEHLER_2
        wert_01
PREDRIVE_ABB_MOT
        nicht_aktiv
```
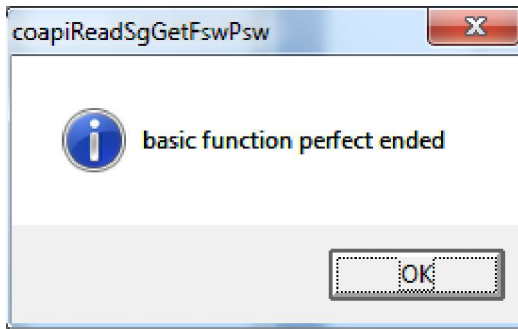
You can use Edit>Find to get to the line of code quicker
example Edit>Find>bc

It will take upi to every line that has a bc in it. When you
get to the line that has bc_digital_v, thats where you change
nicht_aktiv to aktiv, then save as FSW-PSW.MAN all Caps

**You can only have one .MAN file in the work folder at a time

65.
66. The basics are if an option is enabled it will say "aktiv" if its not it will say "nicht_aktiv"
67. Search for the option "BC_DIGITAL_V" and change the value from "nicht_aktiv" to "aktiv"
68. File >save
69. Back to NCS now hit F5 for basic functions
70. Select "coapiReadSgGetFswPsw" and ok.. you are basically telling NCS to read all the values
    from your fsw_psw.man file. You will see a screen similar to this just press ok.


```
coapiReadSgGetFswPsw                                    X

        CBD name:  CAS2.C05

         Chassis:  E60

     Ergebnisdatei  [                    ]


              OK              Cancel
```
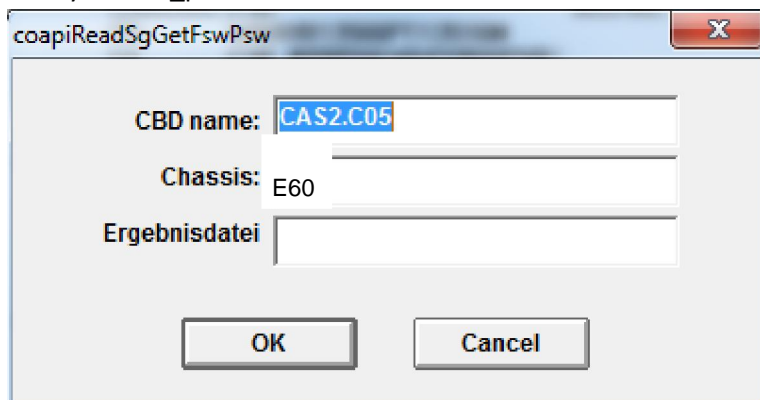
71.

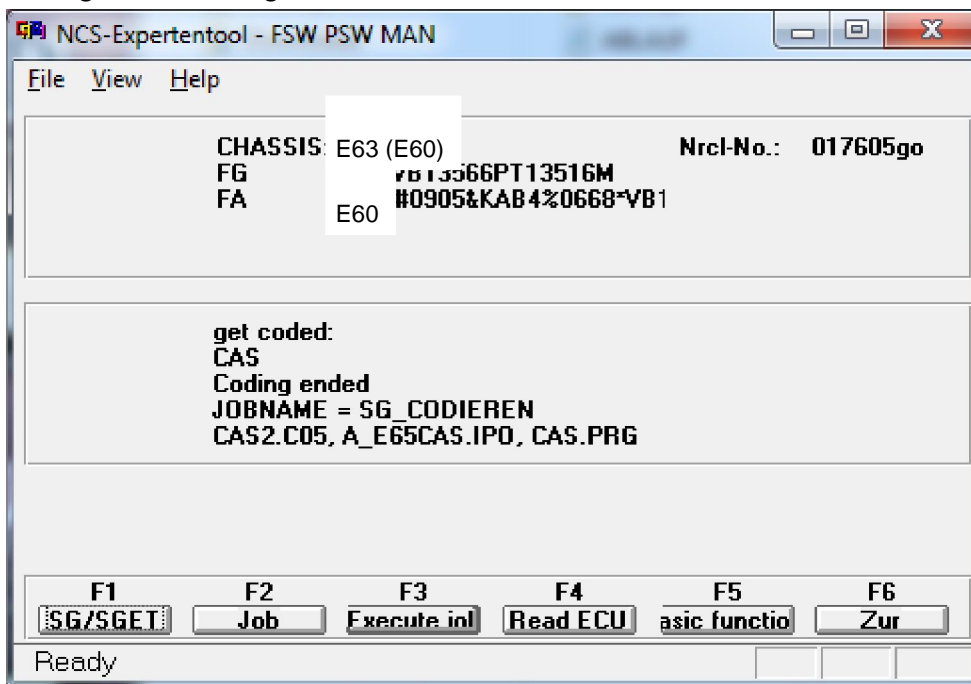72. Then you should get this.

73.
74. Press ok.
75. Ok now take a look where it says "JOBNAME = CODIERDATEN_LESEN"
76. We need to change that to a coding function because we want to write the changes to the module.
77. Select F2 "job" select SG_CODIEREN and press ok
78. Then press F3 to execute the job. Will gray out for some time.. now you will see this . notice the "coding ended' message

79.
80. Assuming no errors.. CONGRATS you now have digital speed .
81. Press the BC button to scroll by MPG, MLS and MPH eventually you will see "V= 0 mph"..
82. After a couple of times you will get used to the process.. to code other options you just have to know which module controls them. Which value or values to change. Always do your research.

This is as descriptive as possible. Post all questions on this thread so everyone can see and we can share our learnings together

Happy Coding