

# DIY Injector Coding For BMW N54 Engines

## 1. Disclaimer:

This document contains technical information that could potentially lead to damage of personal property. The author provides no warranties, guarantees of success, nor shall be held liable for any damages (personal, property, mental, financial, etc) incurred to anyone who uses this document.

This document is designed to be as an instructional guideline purely for educational purposes and it should be treated as such! You are welcome to experiment and attempt to improve the techniques discussed in this document, but there are no guarantees of success. **Be warned: Your Mileage May Vary!**

All critical warnings are highlighted in **red**.  
All informational notes are highlighted in **gray**!

**It is imperative that you follow all the steps in the order presented in this DIY document.**

## 2. Tools needed:

\* A laptop running Windows 32-bit. Windows XP and Windows 7-32-bit are acceptable!

Note: Some have managed to create a VMWare virtual machine which contains all the tools necessary for this to work on other operating systems. You may or may not succeed in doing so because it depends on the driver software used by your D-CAN compatible USB dongle. I tried creating a complete VMWare virtual machine, but the USB cable drivers caused it to crash. YMMV!

Note: Some have managed to get this running under 64-bit Windows by installing XP-Mode from Microsoft. Please, be warned that the EDIABAS software contains certain 32-bit and even 16-bit tools which are not guaranteed to run under 64-bit Windows! There is a much higher chance of software crashes and failures!

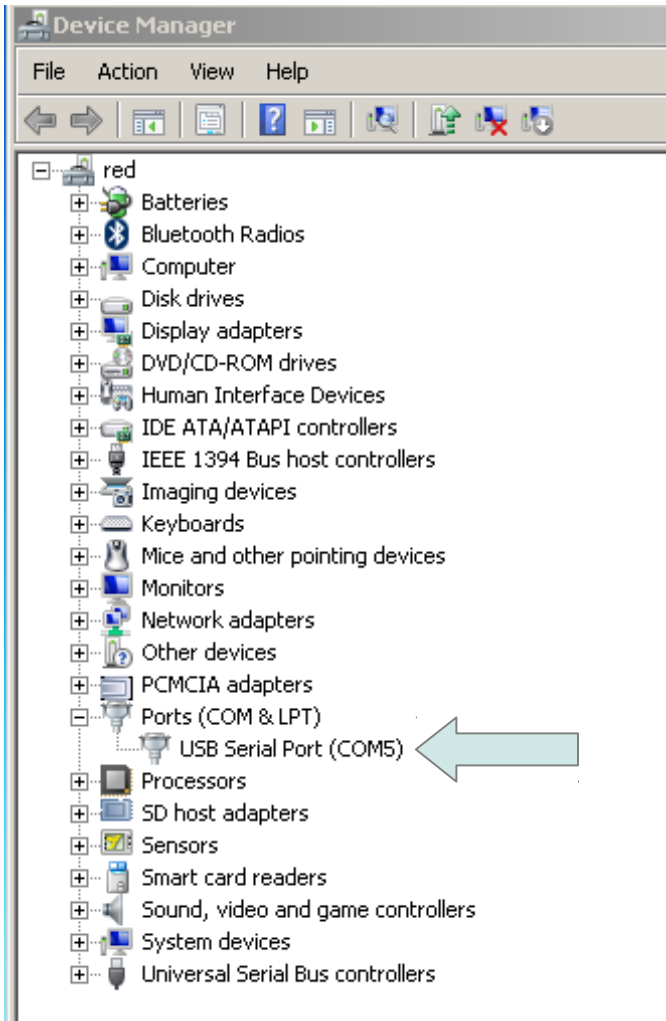
\* D-CAN compatible USB cable. There are several vendors on various online web sites and also on ebay. I am using a "cheap" Chinese cable from ebay and it works fine. It is hard to recommend a specific cable, so dig online and on ebay and find one that fits your budget!

Note: Most vendors on ebay will include a CD or DVD disk with the drivers for their cable. Some will actually include the INPA/EDIABAS/NCSExpert programs as well. DO NOT use this software as chances are it is outdated and it does not contain the correct files and version to perform injector coding! **Install only the cable drivers!**

### 3. Driver Installation:

Plug in the D-CAN cable into your USB port. Install the driver software (if an installer is provided). If an installer is not provided, you might have to point Windows Device Manager to the location of where your drivers are.

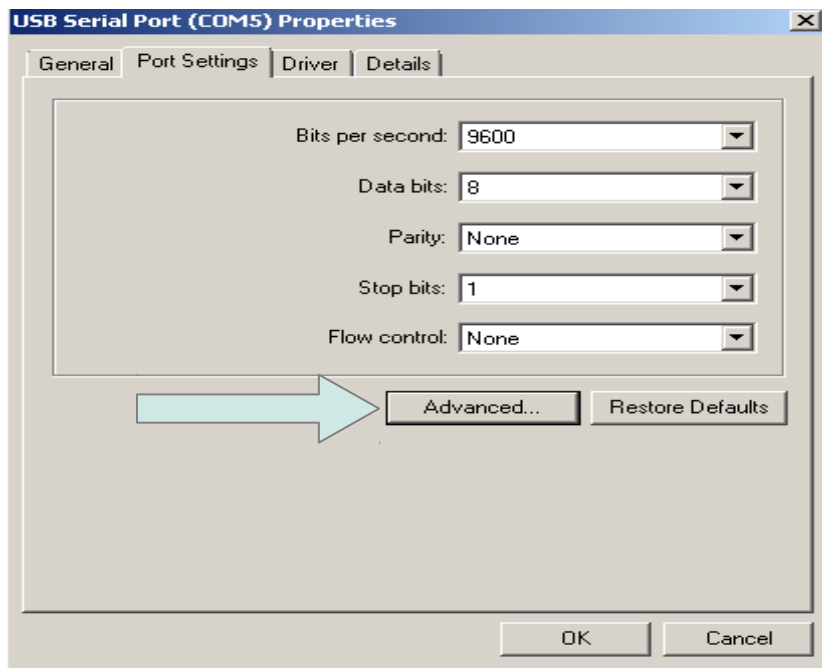
With the cable still plugged into your USB port (not connected to car), launch Windows Device manager. Find the **Ports (COM & LPT)** section as illustrated below:



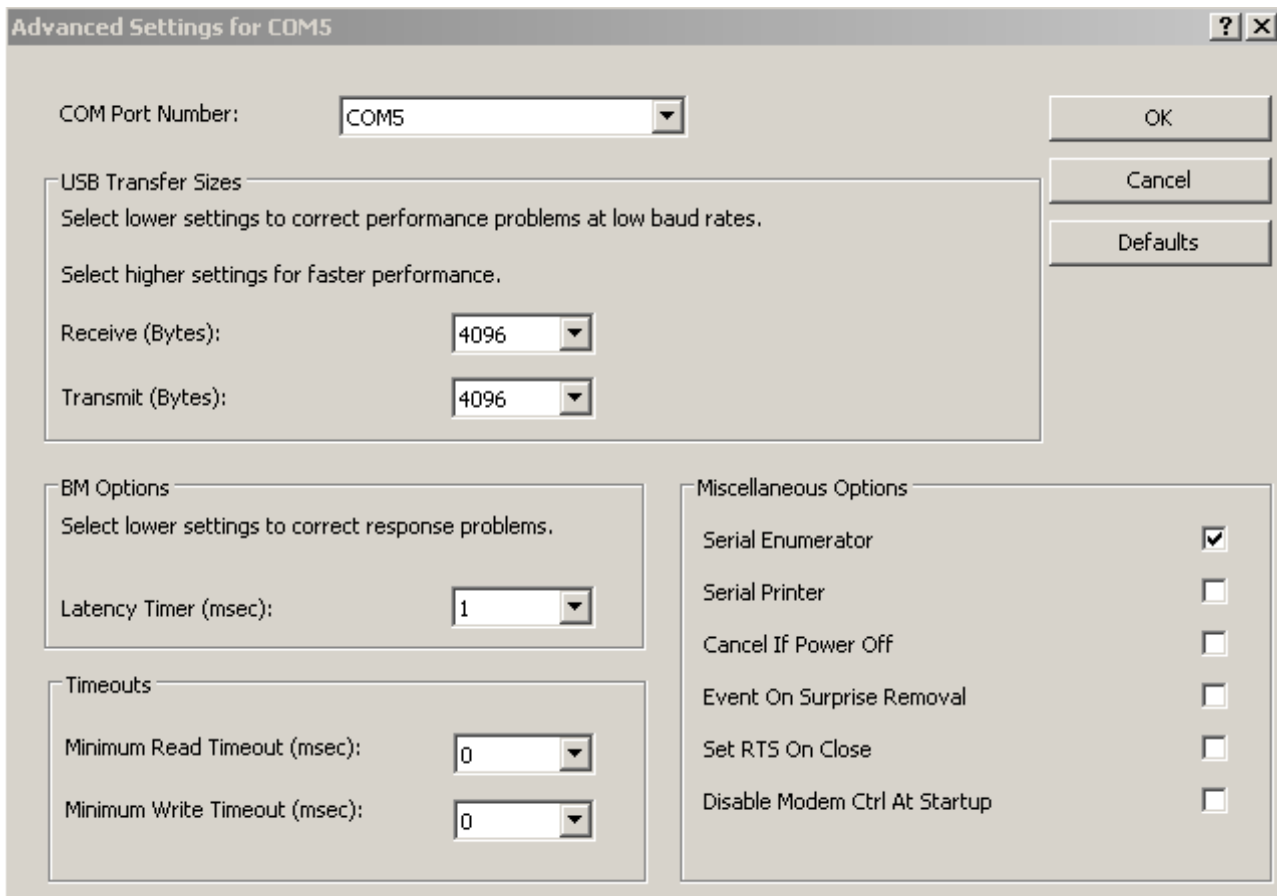
As you can see the picture above shows that the Windows has assigned COM Port 5 to the D-CAN USB cable.

**Make note of the COM port number that you have assigned for your D-CAN cable. It is extremely important in the next steps!**

\* Right Click → Properties on the USB Serial Port. Go to **Port Settings** tab and press the **Advanced** button:



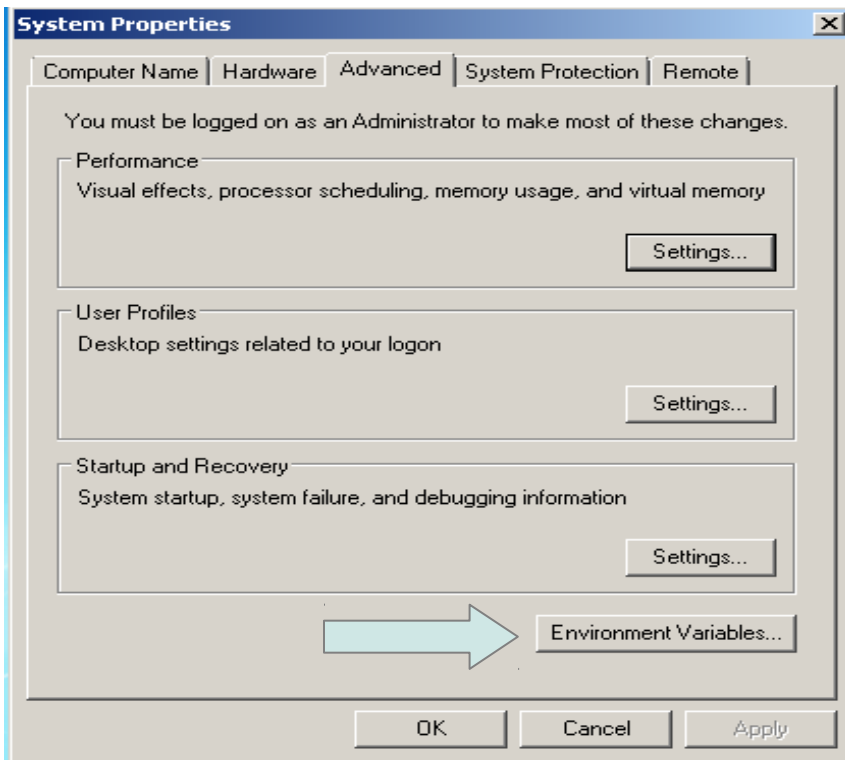
\* Make it look like this (except for the Com Port number):



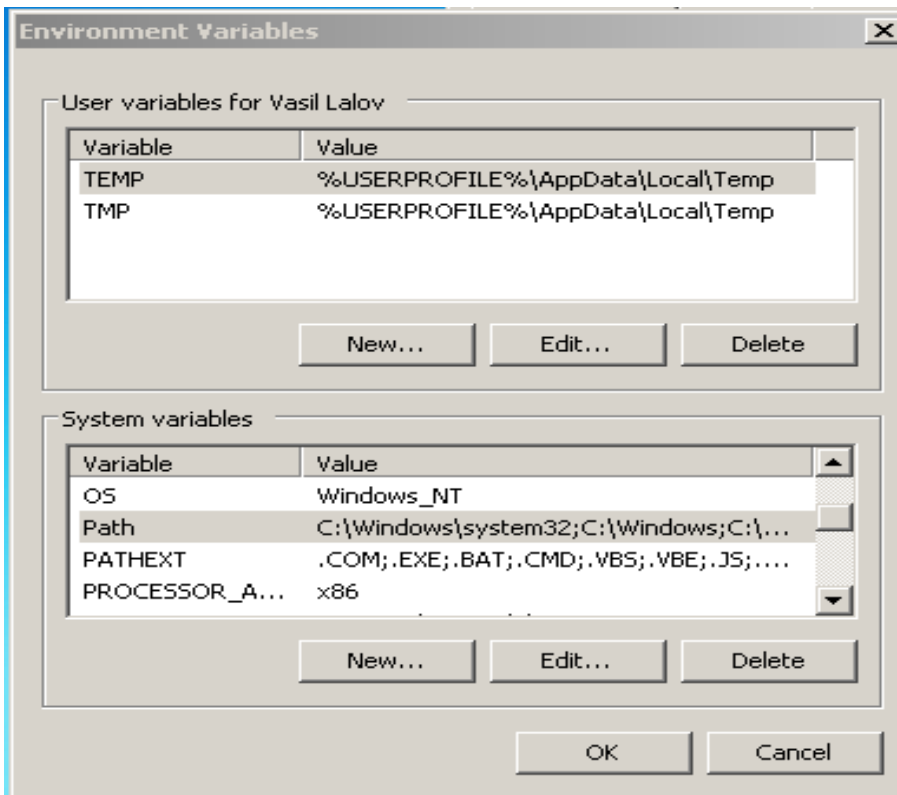
\* Press OK and close all other windows with the OK button.

## 4. Setting up INPA:

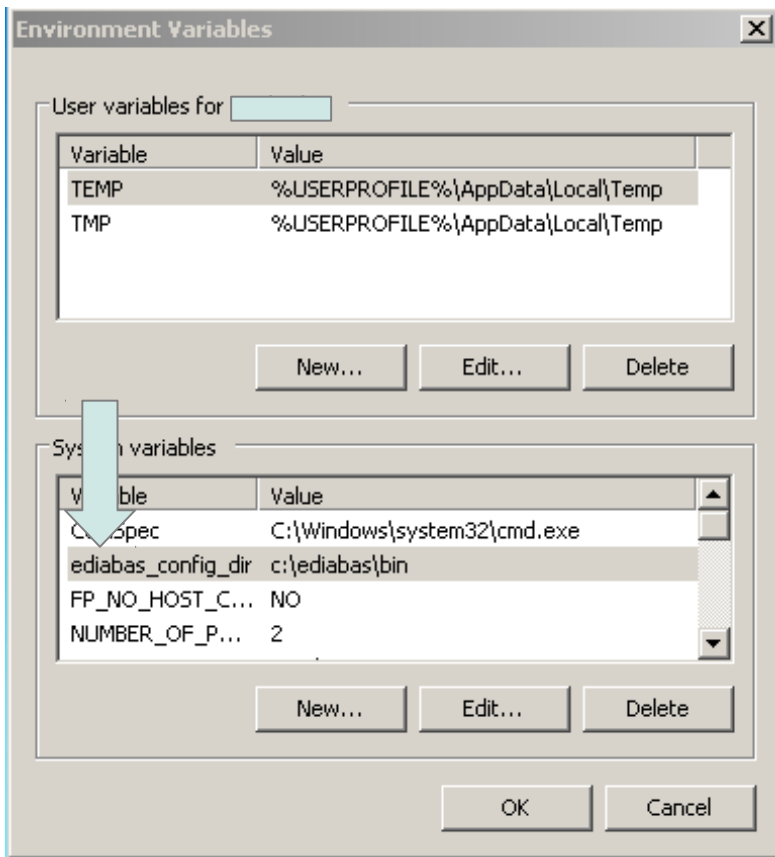
- \* Extract the contents of the **N54-Injector-Coding.zip** file to the **C:\** drive!
- \* Create a shortcut from **C:\INPA\BIN\INPALOAD.EXE** to your Desktop
- \* Go to System Properties. Under the Advanced tab, click the Environment Variables button:



- \* Edit the Path Variable and make sure you append (add to the end) the following: **C:\EDIABAS\BIN**



\* Add a new system variable by pressing the New... button. For Variable type in: **ediabas\_config\_dir** . For Value type in: **C:\EDIABAS\BIN** as shown below:



\* Press OK to make those changes take effect. If Windows wants to restart, do it!

\* Go to **C:\EDIABAS\BIN** folder. Open **OBD.ini** file in a text editor. The first 4 lines should look like this:

```
[OBD]
Port=Com5
Hardware=OBD
RETRY=ON
```

Make sure that the port number matches the one you set during the D-CAN USB driver installation! If the COM port numbers do not match, EDIABAS will not be able to talk to your car!

Once you verified that this is the correct port number the D-CAN USB driver is using, save the file in it's current location.

\* Copy **C:\EDIABAS\BIN\OBD.ini** file to **C:\Windows** folder!

**Warning: The same OBD.ini file must be in both locations: C:\EDIABAS\BIN and C:\Windows . If you change the contents of one of the locations, make sure you copy the file to the other location as well!**

\* Restart your computer! This is very important!

## 5. Coding the Injectors:

\* Open your browser and watch the following YouTube video:

<http://youtu.be/Zb4CdXq-8RE>

## 6. Additional Info:

\* **The N54-Injector-Coding.zip file includes the latest data (DATEN) files for the E90 only!** The version is v45 data files. Even though there are many other options in the INPA main menu, please be advised that the data files must be updated in order for INPA to work with the other cars.

\* **If you have a piggyback tune you must set it to full bypass mode. All CAN hi-jacking must be disabled or removed!**

\* NCSExpert provided here has been tested working for E90 ONLY! Do not try to use NCSExpert with other cars unless you have updated the daten files. Head over to [bmwcoding.com](http://bmwcoding.com) and start reading more about how to code with NCSExpert.

\* There is an INPA\_FAQ.pdf provided in the zip file. It contains common errors with INPA and some help on how to resolve them. This is a good starting point if you are seeing error messages on the screen.

\* The NCS\_DIY.pdf file is also included in the zip file. Use it with caution! You can skip to step 18 on it as you've already setup INPA correctly.

\* I am currently working on translating the MSD80 INPA file. When I finish translating it, I will provide instructions on how to use it. Check the forum link below for more info.

## 7. Questions, Comments, Ideas:

\* All questions comments and ideas can be answered here:

<http://www.e90post.com/forums/showthread.php?t=638610>