



## User Manual

Thank you for buying Turner Performance Software for your BMW! This guide will assist you in flashing your car with our performance software. We strongly suggest you review this guide in detail before beginning the flash. If there are any questions please contact us now.

### Setup:

You should already have the following on hand and ready to use:

- SharkInjector OBD flash tool and USB cable
- Turner USB memory stick, containing:
  - SharkInjector updated Base file
  - SharkInjector Tune file
  - SharkInjector Windows program setup file
  - SharkInjector User Manual PDF
  - SharkInjector Setup Guide PDF
- SharkInjector software installed on your laptop (refer to separate Setup Guide)
- Battery charger for the flash install

### Pre-Install Notes:

- The SharkInjector will only install over stock BMW software. If your ECU was previously tuned by someone else please stop here and contact us.
- The 6-ft USB cable should be long enough if you leave the laptop outside the car (on the roof, a table, tool cart, etc). If necessary you can leave the laptop on the driver's seat and reach in through the open window.
- A battery charger is **very** strongly recommended.
- **Step 8 is very important!** The ECU must be updated with a new base version of stock software.
- **The flash software must be installed without any interruption!** During the reading and programming steps do not sit in the car, open the doors or windows, change any settings in the car, use the radio or iDrive, move the seat, change the A/C settings, etc.etc.

## Connection to the Vehicle:

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Open the SharkInjector.exe program. Please read the license and user agreement and click "I Agree" to continue.

First time users do not need to check for software updates. If you just received the software from us you already have the latest version.

Click the [Next >] button.
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The SharkInjector program will now scan your computer and check its compatibility and settings.

All four lines under "System status" should be green, indicating your computer meets the requirements for software use.

If any red text is shown, check your system against the requirements.

The most-often overlooked requirement is the laptop's battery condition. You must have 60 minutes of battery life or have the laptop plugged in and charging.
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Check the condition of your car's battery. Do not continue if the battery is old, does not hold a charge, or the "Increased battery discharge!" warning is shown on the iDrive. Turn off all electrical loads – air conditioning, interior lights, headlights, radio, etc.

**A battery charger is very strongly recommended.**

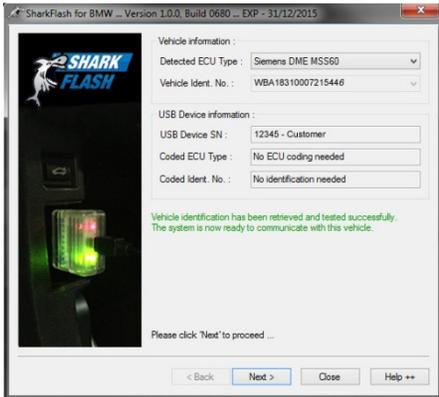
Plug the SharkInjector tool directly into your computer. Then connect the SharkInjector tool to the OBD socket on your car.

Turn the ignition on (but do not start the engine). The Service Engine Soon (SES) or Check Engine light should be shown in the cluster.

SharkInjector will go through a series of communication checks with the car.

Click the [Next >] button.

4.



The next screen will display the information from your car: ECU type, VIN, and the SharkInjector device info. All of this info should match your car.

Click the [Next >] button.



**First time users only:**

A window will pop up asking for confirmation of the information shown in the previous screen. This is a one-time pop-up on the first install only. The SharkInjector tool is now permanently linked to this VIN.

Click [Yes] to continue.

5.



This is the main SharkInjector functions menu. At the top is the specific info for your car's ECU. At the bottom are the buttons for running the various SharkInjector functions –

Read ECU Memory: Read and save a copy of the software currently installed.  
Program ECU Memory: Write a new version of software into the ECU.  
Recover ECU Memory: Contact us before clicking this.

Diagnostics: Fault code memory reading and clearing, Adaptation clearing.  
Data Logging: Used for R&D. Not currently activated for end-user.

Software options: Contact us before clicking this.

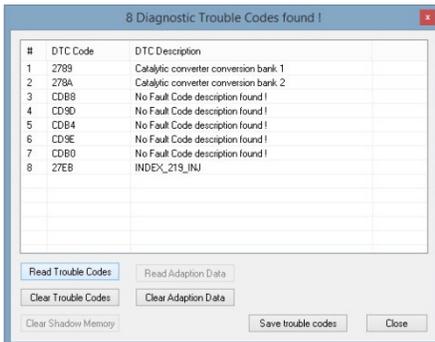
## Check for Existing Fault Codes

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The first action is to check for existing fault codes in your ECU. This is also a communications test between your car and the SharkInjector tool.

Click the [Diagnostics] button on the right.



In the new screen, click [Read Trouble Codes].

If no codes are present then click [Close] and continue to Step 7.

If there are any unexpected codes you may want to stop the software upgrade now and address these issues first.

There is an option to save the fault codes (.txt file) if you want to refer back to them later. You will be checking and clearing codes again after the software is installed.

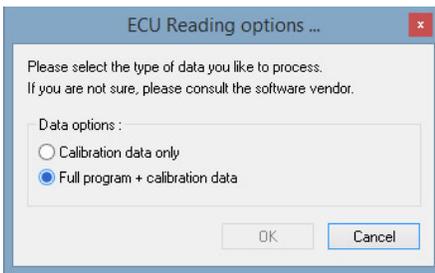
When done checking codes click [Close].

## Read and Save Your Original Software

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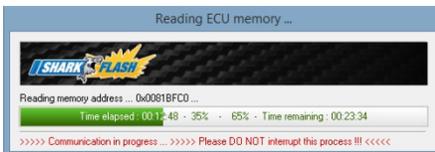


Next we want to save a copy of your stock software. From the SharkInjector menu screen click the [Read ECU Memory] button.

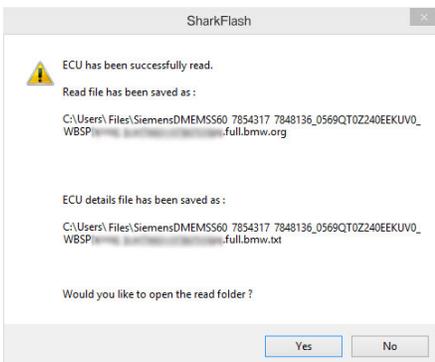


In the Read Options window select the “Full Program + calibration data” option and then click [OK].

Select a folder to save your files. Two files are created: the full copy of your stock file and a text summary of your ECU details.



A new window will open with a green progress bar displaying the progress of the Read. It will take about 35 minutes. **Do not interrupt this process! Do not open/close doors or touch anything inside the car or on the laptop or cable.**



ECU Read is complete.

Click [No] to continue.

Clicking [Yes] will open the folder where your files are stored (optional).

## Install the Turner Base File

8.

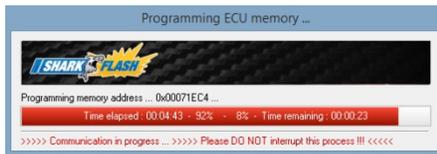


We require you to install an updated Turner version of stock software before the tuned file can be loaded. This is a new Base file similar to the factory “240E” file. This is mandatory and you must ensure the Turner 240E base software is installed before continuing with the tuned software install.

Click [Program ECU Memory]. Navigate to the folder containing the software files. This should be the Turner USB drive that should still be plugged into your laptop.

Select the “SharkInjector Base” file and click [Open].

The Base file will now install.



A new window will open with a red status bar displaying the progress of the Base file update. The update takes about 5 minutes to install.

**Do not interrupt this process! Do not open/close doors or touch anything inside the car or on the laptop or cable.** It is normal for systems in the car to cycle on/off and error messages to appear in iDrive as the engine ECU is taken offline to be programmed.



After the update is complete turn off the ignition via the Start/Stop button. Click the [Ignition is OFF] button on the screen. When the green status bar is done counting down your ECU is now ready for the Performance Software install.

You can turn the ignition back on but do not start the vehicle.

## Installing the Turner Performance Software

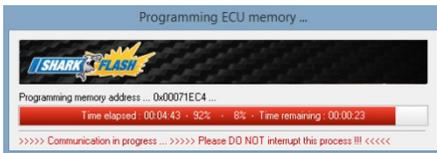
9.



Back in the SharkInjector menu screen click [Program ECU Memory].

Navigate to the folder containing the software files. This should be the Turner USB drive that should still be plugged into your laptop.

Select the "SharkInjector Stage "X" Tune" file and click [Open]. This is the actual Turner Motorsport Performance Software file.



A new window will open with a red status bar displaying the progress of the software upgrade. This takes about 5 minutes to install.

**Do not interrupt this process! Do not open/close doors or touch anything inside the car or on the laptop or cable.** It is normal for systems in the car to cycle on/off and error messages to appear in iDrive as the engine ECU is taken offline to be programmed.



After the flash is complete turn off the ignition via the Start/Stop button. Click the [Ignition is OFF] button on the screen. When the green status bar is done counting down your ECU is now tuned!

10.



Start the engine and let it idle. As long as the car starts and idles normally you can now turn it off. You can ignore any error messages in the iDrive screen (you will clear fault codes and adaptations in the next step).

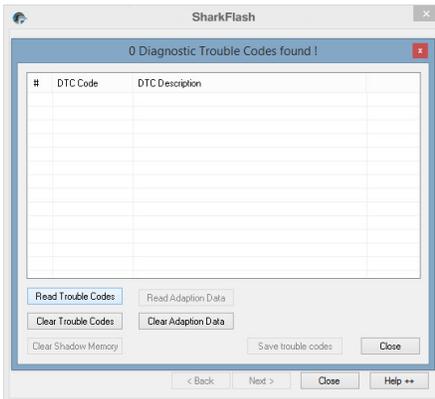
## Clear Fault Codes and Adaptation

11.



Turn the ignition back on (but do not start the engine).

Back in the Shark Injector menu screen click the [Diagnostics] button again.



Click [Read Trouble Codes]. There may be some harmless codes here after flashing the ECU. These are typically message errors from programming.

Click [Clear Trouble Codes] to erase them.

Then re-click [Read Trouble Codes] again. Unless you had pre-existing faults this screen should now be empty.

You must also click the [Clear Adaptation Data] button to clear ECU adaptations.

Remember, you can use this tool again to check fault codes or restore the ECU back to stock.

Close the program and disconnect the SharkInjector tool from your OBD port.

**Congratulations on flashing your ECU! You're now ready to enjoy the extra power, torque, smoothness, and response of a Turner-tuned BMW!**



## Post-install notes

**OBD Readiness.** Clearing fault codes and adaptation settings will also reset the OBD Readiness monitors. These will need to be set before taking the car for an inspection. Drive normally and the Readiness monitors will set one-by-one. For track or race cars, note that not all Readiness monitors will set.

**Octane.** Your Performance Software is set to either 91 or 93 minimum octane. Plan ahead if 93 is not available and reinstall your stock software. Additional performance software files can be purchased separately if you want to have multiple software versions.

**Dealer Updates:** Make sure your BMW dealer does not install any new software updates to your ECU. Installing a new version of BMW software will overwrite your Turner Performance Software. The new Base software that we use is already the best version available so there should be no need to update to a newer version. If BMW does update your ECU contact us for further instructions. We cannot guarantee compatibility with all BMW software versions, including updates. In some cases an update fee may apply.

**Shark Injector Updates.** Occasionally a newer version of Shark Injector will be released. Your older version may no longer open or have limited functions. You can download a new version of Shark Injector from our website here:  
<http://www.turnermotorsport.com/t-SharkInjector.aspx>.