

How to flash ECM/PCM using handheld V2 (Black Box Flashing-BBF)

Flashing an ECM/PCM can be done using a V2 handheld (Black Box Flashing-BBF). This method can be used by those who can't get their laptop to the vehicle or those who do the tuning using a desktop PC. This guide will show you how to retrieve your stock tune from the vehicle's ECM and flash the ECM with your own tweaked tune.

What is required?

EFLIVE V7 with latest update

EFILIVE V8 with latest update

Latest Firmware/Boot Block update

SD Memory

A tune file (.tun) for your vehicle converted to (.ctd) extension

V2 Handheld (BB)

Before you start/Things to know

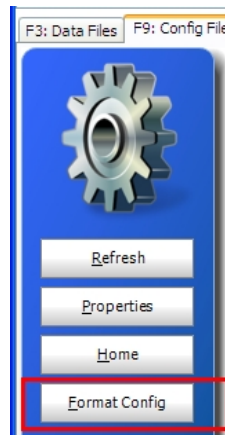
Just in case if you have messed up with your device and getting some sort of errors or missing files do the followings:

Back up any file on your device & SD

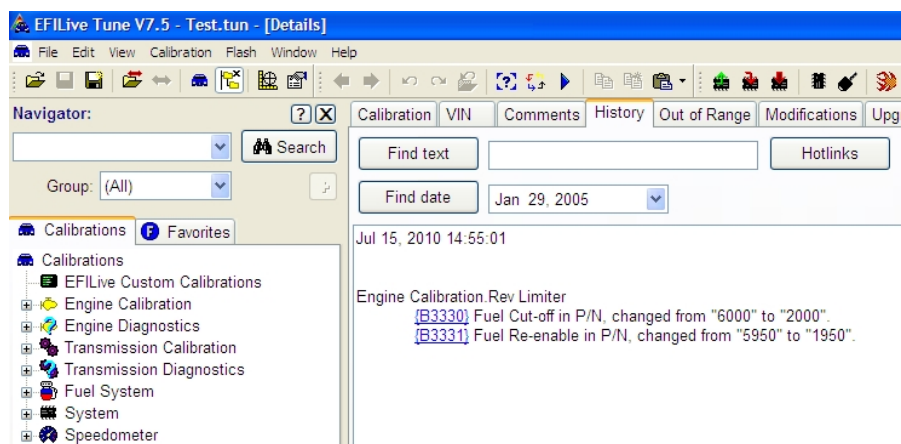
Format the SD memory from the handheld (BB) (**F4→F2→F3→Yes**)

Format the BB config files (Internal memory) from the **EFILIVE Explorer** (Requires connecting BB to PC via supplied USB cable).

Run **EFILIVE Explorer**→ Press **F9**→ Click on **Format config**



Any change, modification in a tune file will be automatically displayed in the History tab in **EFLIVE Tune Tool**.



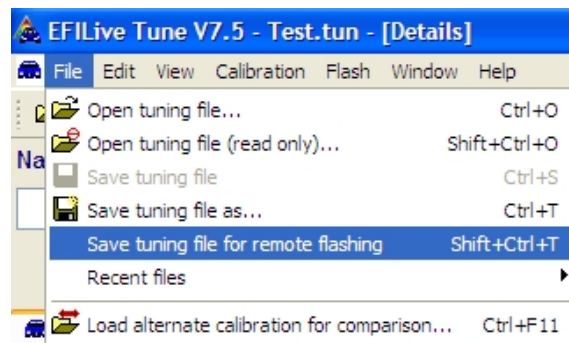
However, always write a note about your tweaks and changes in a word or excel file and why you altered those settings, just in case if you deleted the tune file accidentally (or more probably it got corrupted), in addition it will be easier/wiser to write notes about how the vehicle performed after those changes for comparing with your previous settings

A. Converting (.tun) file to (.ctd) file

1. Run **EFLIVE (V7.5) Tune Tool**

2. Open your tune file

3. From file **select tune file for remote flashing** (*the file will be saved with [.ctd] extension*). This will require your BB connected to PC, otherwise use **save as and select .ctd format**

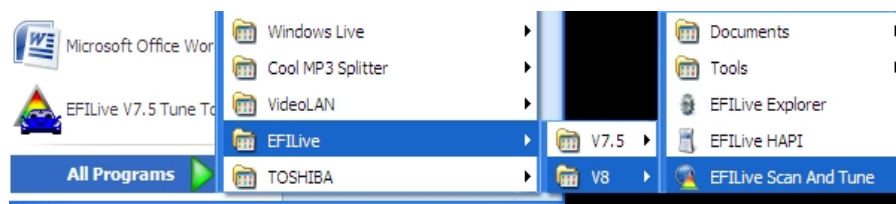


4. Give your (.ctd) file a name (Example: Rev limit mod) and **click save**

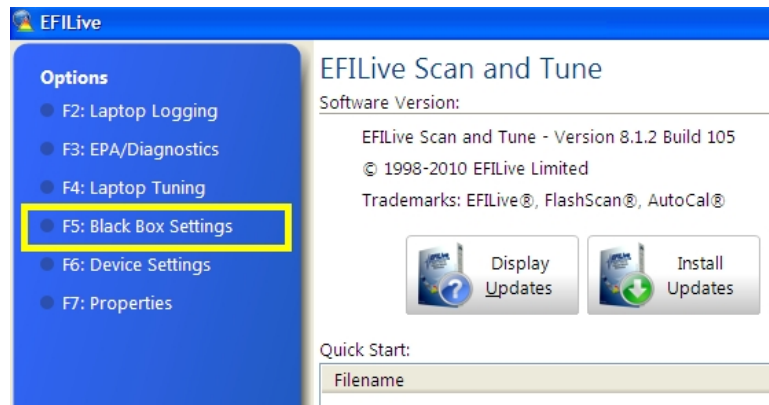
E. Transferring a tune file to BB

1. Make sure BB is still connected to your PC via USB

2. Run **EFILIVE (V8) Scan & Tune**

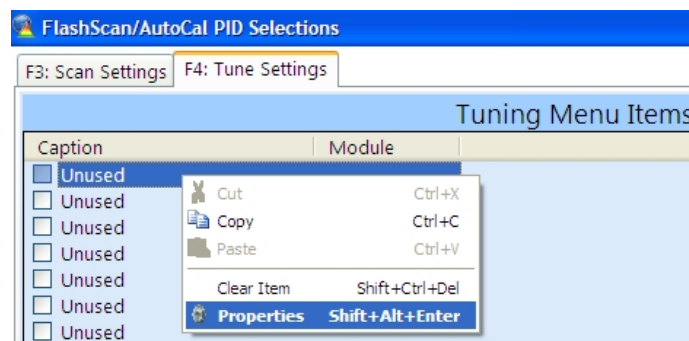


3. On **EFILive Scan & Tune** screen click **Black Box Settings**

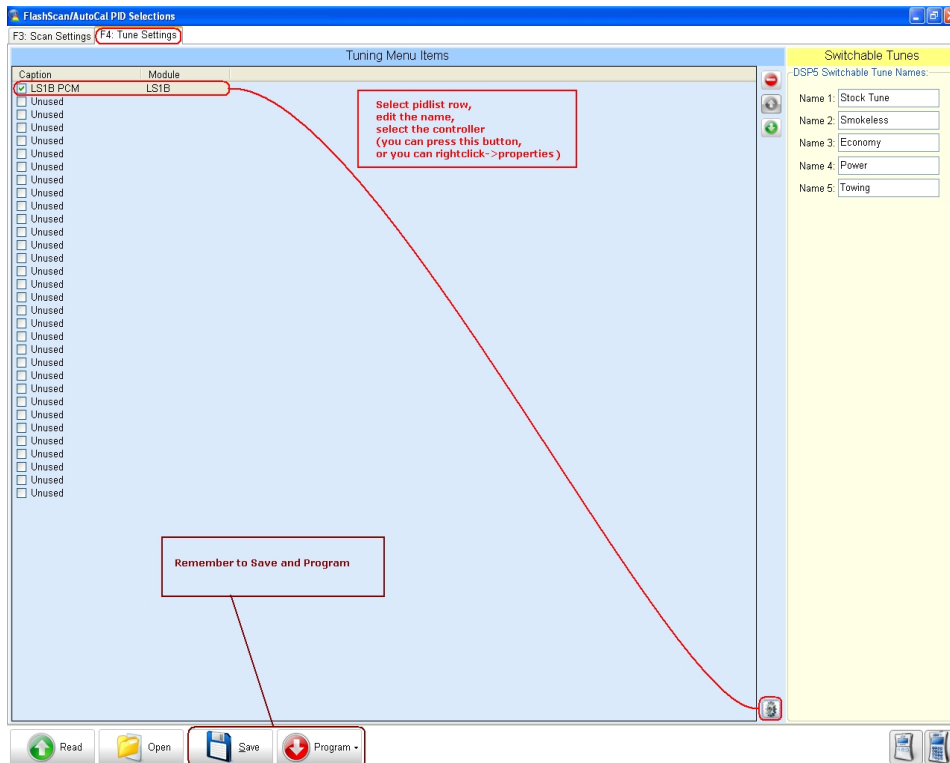


4. A new window will appear, **Click F4** on your PC or **select (Tune settings)** tab

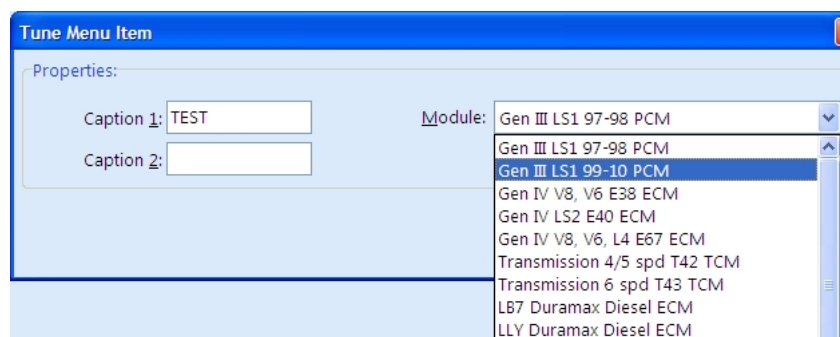
5. Right click on **(Unused)** and **select properties** or **Double click**



5.1 Here is a much better view of the screen (zoom it in) (thanks to [Joecar](#) for the picture)



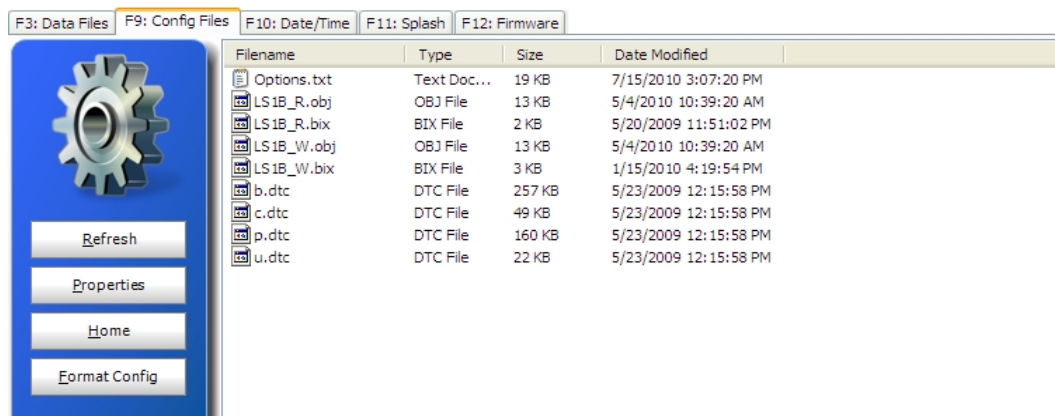
6. Type a description (e.g, Test, E38, E40, G3_LS1B..etc) and **select your PCM/ECM** and click **OK**



7. Click on **“Program”** and wait until copying is completed



7.1 Consequently, if you click [**Config Files**] tab in **EFILIVE Explorer** you will notice some files are appearing now in the lower pane. These files are automatically copied to [**Config files**] which is internal BB memory and they will be relevant to your selected ECM/PCM in the previous steps. You really don't need to do anything manually (i.e. copy & paste) to get these file in [**Config Files**] and they should be copied automatically once you click {**program**} button in **EFILIVE Scan & Tune/ Black Box settings** screen (*unless otherwise stated..*)

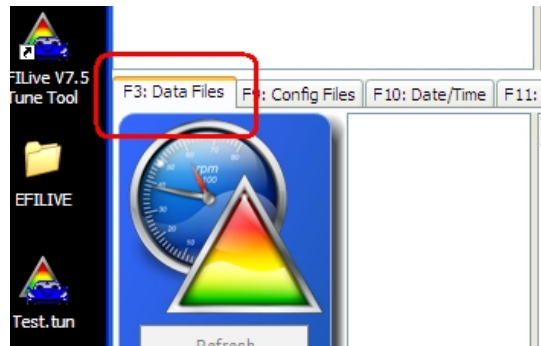


8. Close **EFILIVE (V8) Scan & Tune**

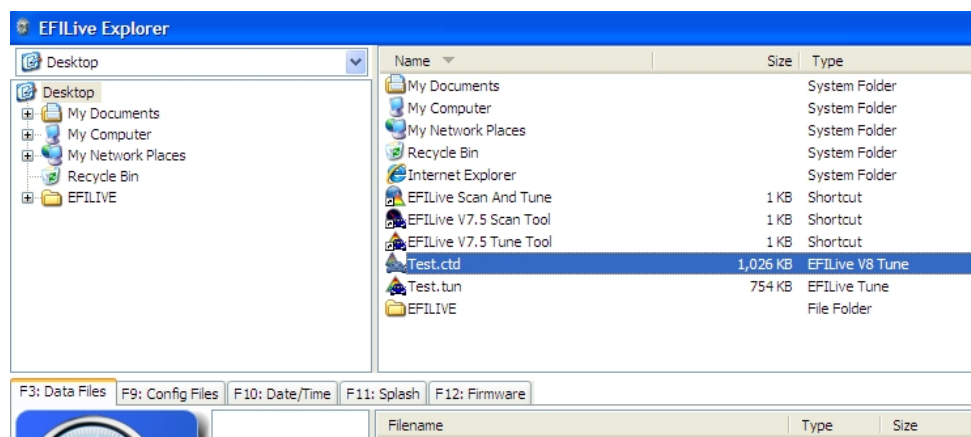
9. Run **EFILIVE Explorer**



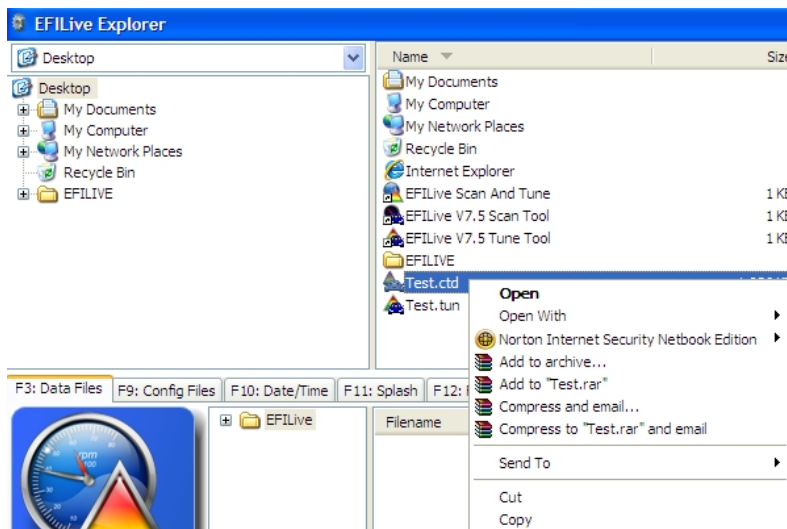
10. Press **F3** on your PC or click **Data Files**



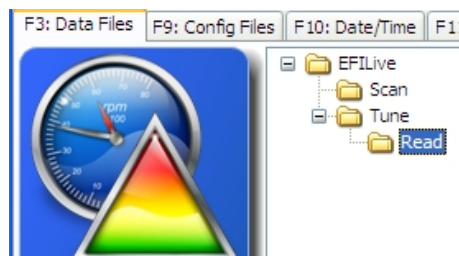
11. In the **upper pane** navigate to where you saved your **(.ctd) file**



12. **Right click** on your **(.ctd) file** and select **copy**

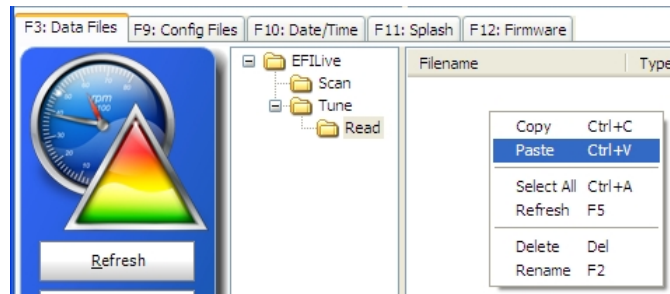


13. Move the mouse to lower pane, **select** the **[Read]** folder under **[Tune]** folder

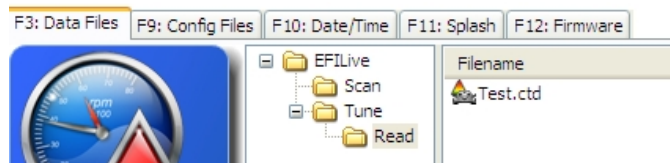


13.1 You can create your own tune files folder(s) under **[Tune]** folder. To create one: Select **[Tune]** folder, right click and **select new folder**, you can rename the new folder.

14. Right click on the **right pane** and select **paste**, it will take few seconds until the file is transferred (*depending on your PC speed and the file size*)



15. Now your screen should look like this once the file transfer is completed



16. Close the **EFILIVE Explorer**

Q. Retrieving stock tune and flashing the PCM/ECM with BB

Make sure when connecting any handheld flashing device to your vehicle:

The battery is in good status and is not drained or weak

Handheld to/from OBDII connections aren't loose either ways

Turn off any power consuming device (DVD, Head lights...etc)

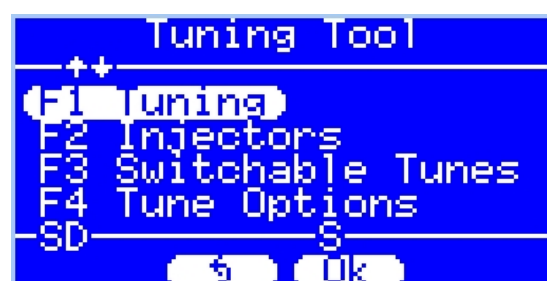
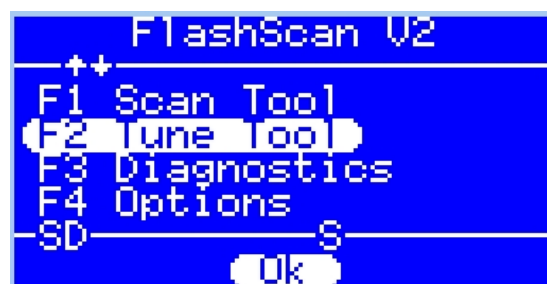
Don't do anything with the ignition key or the handheld when flashing/calibration is in progress, never ever, chances are good that it would be your last tuning attempt until you get a new ECM

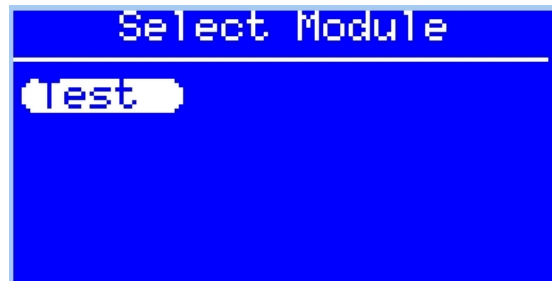
Don't use power inverters to run/charge any device around while flashing the ECM

1. Connect the BB to your vehicle OBDII port and **turn the ignition key to "ON"**

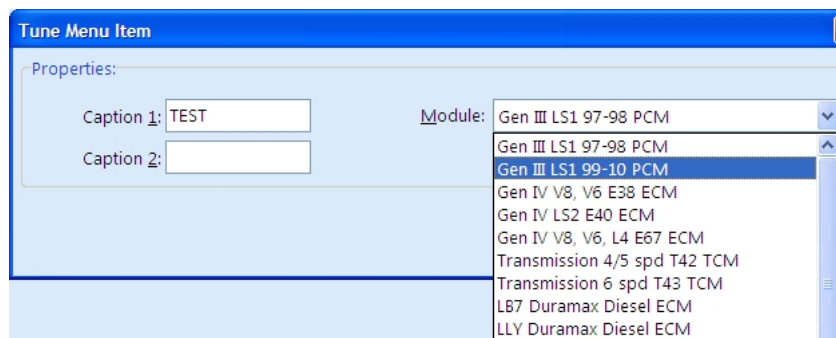
1.1 **For keyless ignition systems** (e.g., Corvette) **hold the ignition button pressed** for 4-5 seconds (*The front lights will turn on, turn them off manually to save battery from draining*) (*Don't apply brake (auto tran) or clutch otherwise the engine will start*)

2. On BB select **Tune Tool**→**Tuning**→ **Read Tune**→**[Caption1]: Test**→**OK twice** or press (**F2**→**F1**→**F1**→**OK twice**)





Note: [Caption] is what you typed in this screen in step (B.6)

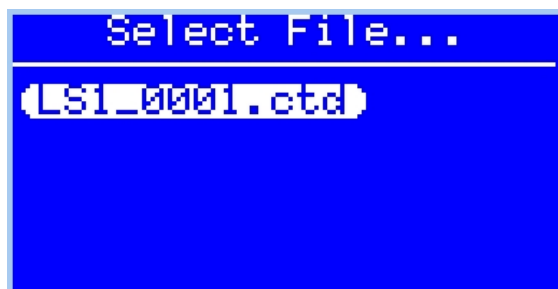


3. Now the BB first will check the available space, if the available space is sufficient then it will start reading/retrieving your stock tune, this will take about 2-3 minutes depending on stock tune file size, a progress bar will appear on BB showing reading/retrieving process. You don't need to do anything here other than waiting with a drop of sweat on your forehead
4. Wait until the progress bar is completed, once completed the BB will ask you to turn the ignition key to "Off"

5. Turn the ignition key to off, then click OK on the BB, and wait the countdown (15→1 sec) to finish

5.1 To verify that your stock tune is saved successfully to the BB memory, do the following: Press F2→F1→F2→OK.

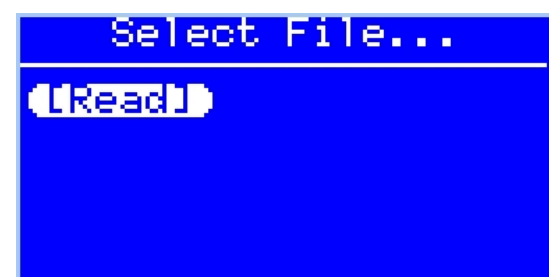
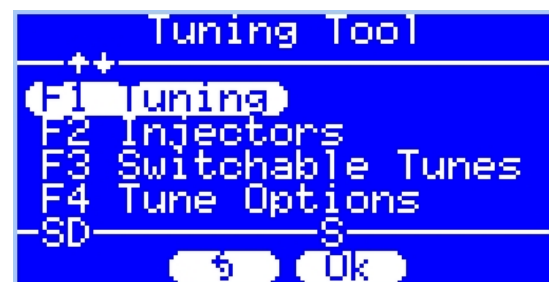
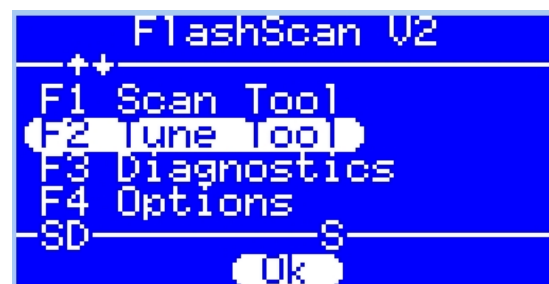
5.2 You should see a screen with a file name (eg, xxx_000x.ctd), this is your highly engineered stock tune (or {if any} the recent tune your ECM has been flashed with)



5.3 Later, using [EFILIVE Explorer](#), save this file to several places (eg, USB memory, CD..etc) in both .ctd and .tun extension format. And keep it out of children reach and definitely your wife, as both are proved to be hazardous substance to nothing but your own important stuffs

6. Turn on the ignition key

7. On BB go to Tune Tool→Tuning→Program Cal→Read (press OK)→ Select your modified tune file→ OK twice or press F2→F1→F2→OK→ Select your modified tune file→OK twice





8. The BB will start flashing your ECM, wait until programming (Flashing) progress bar is completed. It will take about 1-2 minutes
9. Turn "Off" the ignition key and disconnect the BB from the vehicle if you don't want to log data
10. Turn on the engine, put the gear in (1st or D), say "*In GOD I trust*"... and floor it and log the new performance data with your integrated SOPD device for further analysis. Your other options are GTECH or Dyno.

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