Items needed for a Venomous Tuning Custom SCT Calibration.
Datalogging with a Windows laptop is REQUIRED:

1. A vehicle that is in good operating condition. You will need a minimum of 10 **NEW** spark plugs for your custom tune. Ask us for recommended brands and gap *before you buy*. Your car or truck must be free from air or fuel leaks, must have FRESH 91 or 93 octane fuel with *NO additives* and all cooling systems must be working. **Fuel cannot be more than 30 days old. Supercharged vehicles MUST confirm that intercooler fluid is moving in the tank when the vehicle is on!**

2. An *updated* SCT handheld tuning device (X4, BDX, LiveWire. X3 is not **acceptable and cannot be used.**)

3. Windows laptop with wifi capability and wifi service.

4. A battery charger (not a Battery Tender) readily available for less than $50. You should own one!

5. A basic working knowledge of computers, email, saving and sending files.

6. Pre-2011 cars *must have a wideband air/fuel monitor installed* or a local dyno shop where you can secure 2 hours of dyno time for me to remotely complete the wide-open throttle portion of the tuning process. 2011+ cars have wideband onboard from the factory, an aftermarket wideband system isn't necessary. **For safety, a dyno should be used for Wide Open Throttle tuning.**

Pay SPECIAL attention to the areas in RED below.

YOUR INITIAL FILE CANNOT BE USED IN BOOST OR OVER ½ THROTTLE UNTIL THE FIRST STEP OF THE TUNING PROCESS IS FINISHED AND YOU'RE APPROVED FOR WIDE OPEN THROTTLE WORK BY VENOMOUS TUNING. FAILURE TO HEED THIS CAUTION MAY CAUSE DAMAGE TO YOUR VEHICLE.

VENOMOUS TUNING STEPS FOR CUSTOM CALIBRATIONS

STEP 1- YOU CAN DO THIS AT HOME!

Save your initial tune file (it has your name in it) and the *datalog configuration file* (ends in .CF4) to the desktop of your computer in your new **VENOMOUS TUNING folder you create.**

Go to the highlighted link and download **DEVICE UPDATER** and **LIVE LINK** from the support area. Run both programs so they're on your Windows laptop and convenient for us to use. https://www.sctflash.com/support

Device Updater is used to update the firmware on your SCT device AND we use it to transfer tune files onto the SCT device. We'll use *Live Link* for the datalogging. *Update your device before starting any logging or tuning.* Here's a video to show you how to update https://youtu.be/aoGf4mzWFyg

Load your start up file onto your SCT device using this method-

https://youtu.be/HQQyXT1HFfVE

Things to remember- HAVE YOUR CAR ON A CHARGER. Key off/on, over and over will drop your battery voltage and potentially interrupt our processes. **Better safe than sorry**. *Do NOT have anything plugged into any outlet in the vehicle when logging. Not even your cell phone!* MAKE SURE YOU HAVE YOUR DEVICE TO OBDII CABLE, A USB CABLE FOR DEVICE TO LAPTOP AND THAT YOUR LAPTOP BATTERY IS CHARGED. ***Plug the SCT device into the OBD port of the vehicle, then from the device to the USB port on your laptop. Start your car, click on the COMM (the red "plugs").***

IMPORTANT!! If your car doesn't connect you must contact SCT at their website and support tab and have them update your device drivers. Plan your tuning times accordingly and know they are on eastern time, Monday through Friday ONLY.

(407) 774-2447 www.sctflash.com

Once connected, click on <u>Check Communications.</u>

Check communications

Click the "Check Communication" button below and wait until the device and the vehicle's processor (if connected to a vehicle) is detected. If no device is detected you may need to unplug and reconnect all cables and try again.

    1) Device drivers must have been installed successfully.
    2) Make sure device firmware is equal or greater than requirements.
    3) USB cable must be connected from PC-to-Device.
    4) Do not try to check communications while tuning a vehicle.
    5) Wait for the device screen to show main menu before proceeding.

Check Communication

        Device : ???
    Firmware : ???
         Serial : ???
   Comm Type : ???
     Strategy : ???

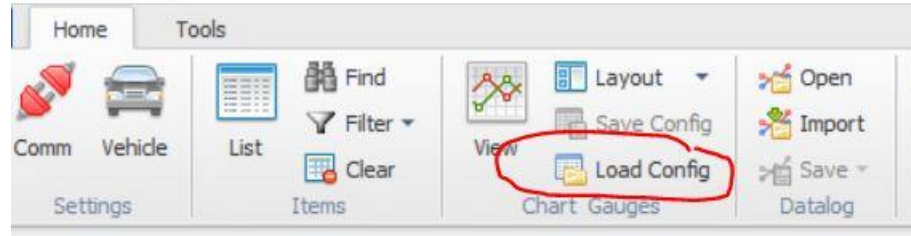==**When communicating, the ??? will be replaced with device and car info.**==

Now, either go to the top and click on <u>LOAD CONFIG</u> and click on the .CF4 file you saved in the Venomous folder.

Gen-II V.2.9.0.0

Home	Tools

Comm Vehicle   List   Find Filter ▾ Clear   View Layout ▾ Save Config Load Config   Open Import Save ▾

Settings   Items   Chart Gauges   Datalog

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*First, we'll do an **"IDLE/SLOW REV" DATALOG** to confirm and dial in any fueling points. This is the area that controls driveability so it's important that we do this first. You'll datalog it, send it to me via email, I edit it, send it back, you reload onto your device then your car (lather, rinse, repeat).*

<u>***With the car running and connected to the laptop via the device***</u>*, click on the* ***GREEN START BUTTON***.
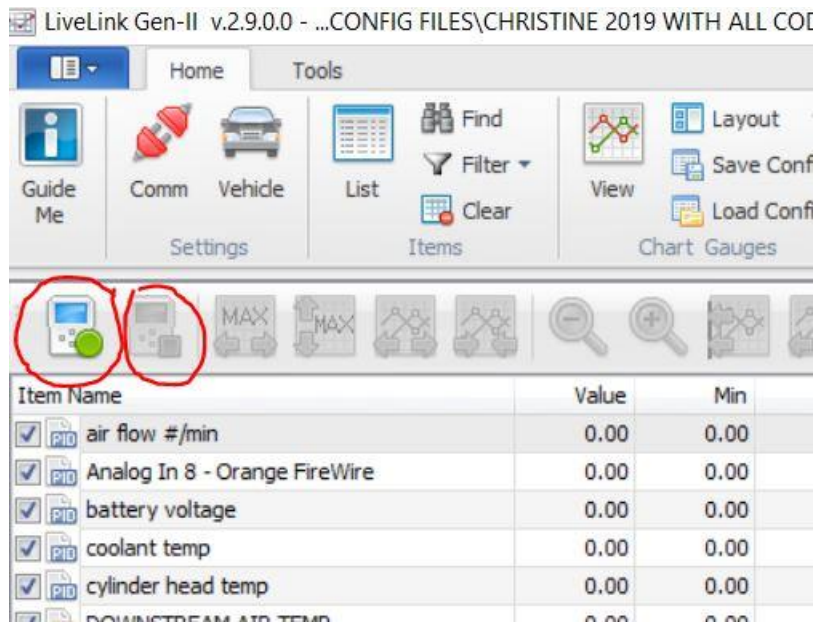

It will take a little while to read all the PIDS/channels but it will soon begin logging and you'll see a jumbled graph on the right side of the screen.

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Check your temperatures. Coolant needs to be above 165f and IAT2/downstream below 130f. If too hot, use a fan or let it cool down.

First log will be 2 minutes of idle followed by a SLOW rev to 4,000 and let off. SLOW, SMOOTH THROTTLE APPLICATION IS KEY. REST YOUR FOOT ON THE TRANS TUNNEL AND ROLL INTO THE THROTTLE FROM THE SIDE RATHER THAN TRYING TO "HEEL AND TOE" IT.

When finished, click on the RED button (next to the GREEN start button) to stop.

Before you turn off the car, save the datalog in the format described above, turn the car off and email the datalog file to bj@venomoustuning.com. **(see below)**
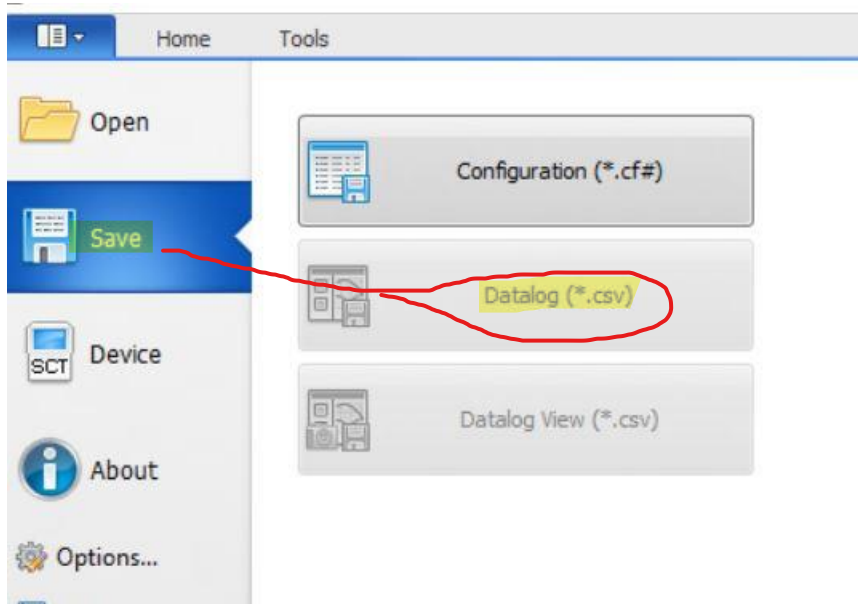
>>>>>>**EXTREMELY IMPORTANT**. Your datalog files **MUST** be named as shown below or they will be quarantined. *Logs not saved with this format will not be reviewed*.

YOUR LAST NAME/YEAR & MODEL /DEVICE SERIAL NUMBER/ TYPE OF LOG/REVISION/DATE OF REVISION (NOT THE DATE YOU LOGGED IT)

(example) SMITH-07GT500-X42372625YBFD-REVISION2 12-31-2023 IDLE LOG

The name of the file and its date can be seen on the SCT device. The file name and date of file are critical so we are working with the exact file. Mistakes aren't acceptable in our world so please help us be making sure your logs are named properly. If you have questions about naming it, call us before you send it to- bj@venomoustuning.com

It will likely take two or three times logging, revising and reloading/relogging to get this correctly dialed in. Once we do, it's time to go to the second step in Custom Calibrating, the Wide-Open Throttle portion.

Remember, 07-10 cars must have wideband monitors installed or use a local dyno with wideband to safely and successfully custom tune your vehicle. 2011+ cars do not need a separate wideband but again, we highly recommend a dyno!

WIDE OPEN THROTTLE WARNING!!!

Never do more than ONE full throttle pull **unless asked to do so by us in writing. In the event of an equipment or fueling issue we need to be able to identify it and help you resolve it.** *Doing multiple full throttle pulls may cause permanent damage.*

Warning! We suggest you use a dyno facility and have us remotely tune the wide open throttle portion for your safety and to assure compliance with local laws. You agree to assumption any and all liability for your safety, the safety of others and your vehicle by doing the "wot pull" on a public road.

Start logging just as you did before. Remove the floormat from the driver's side floor. Stow any loose items. Begin the logging by hitting the **GREEN** button **and wait for the data to cross the screen before you move.** 3^{d} gear (4th gear on a dyno) , traction control off, wide open from 2,000 rpm to 5,000 rpm and let off. Stop logging, save the log and send it to me. The process repeats. In this phase we're confirming fueling but more importantly we're looking for knock sensor activity. If it's knocking due to too much timing for your fuel to tolerate, we adjust it and send you the revision. **We'll repeat this process a time or two.**

IF YOU HEAR AUDIBLE KNOCK OR SEE AIR/FUEL GO ABOVE 12:1, YOU MUST ABORT THE PULL IMMEDIATELY AND TELL US WHAT OCCURRED.

We **will** have you pull and inspect a couple of spark plugs at this point to check for physical signs of detonation. See our spark plug "reading" pictures for details. You'll pull plugs 2 and 3, the middle two on the passenger side. If you see specks of detonation on the white ceramic insulator, replace the plugs with new, properly gapped ones. If not, just put them back in.

Once we've successfully adjusted for proper fueling and added the amount of spark advance/timing that is well-tolerated by your car and your local fuel, we'll turn the adaptive learning back on in the tune and you're done!

Remember, Venomous Tuning provides complimentary updates for future (minor) mods for a full year. We only ask that you run your mod idea past us first. We know what works, what is a waste of time and money and what is truly beneficial to you.

Thank you again for your business and your trust. I look forward to working for you.

CALL US IF YOU HAVE QUESTIONS (352) 800-4407

NOTES: