SECTION BOOKLET

4 Tuning Strategies

1 guide · compiled Oct 14, 2026 · https://help.impactwiringsolutions.com/section/tuning-strategies
Each guide keeps its own page numbers and version stamp. The newest versions are always online.

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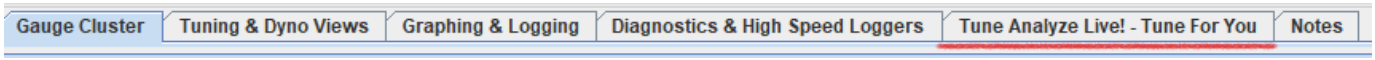
Auto Tuning Guide (Tune Analyze Live)

This guide is intended to walk you through the best practices for taking advantage of the TuneAnalyze Live feature in Tunerstudio.

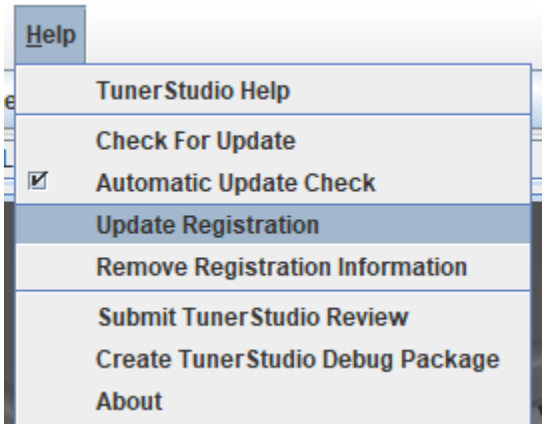


Properly using TuneAnalyze Live will make the process of accurately dialing in your VE tables a breeze.

Requirements:

- In order to use Tune Analyze Live, you must purchase the PRO version of Tunerstudio. It is $69.95, as a ***ONE TIME COST!***

To verify if you are already on the PRO version of Tunerstudio, just open Tunerstudio and click “HELP” on the toolbar. If you see “Enter Registration” this means you must purchase Tunerstudio Pro. If your Tunerstudio looks like this image then you are already on the PRO version of Tunerstudio and you can move forward.



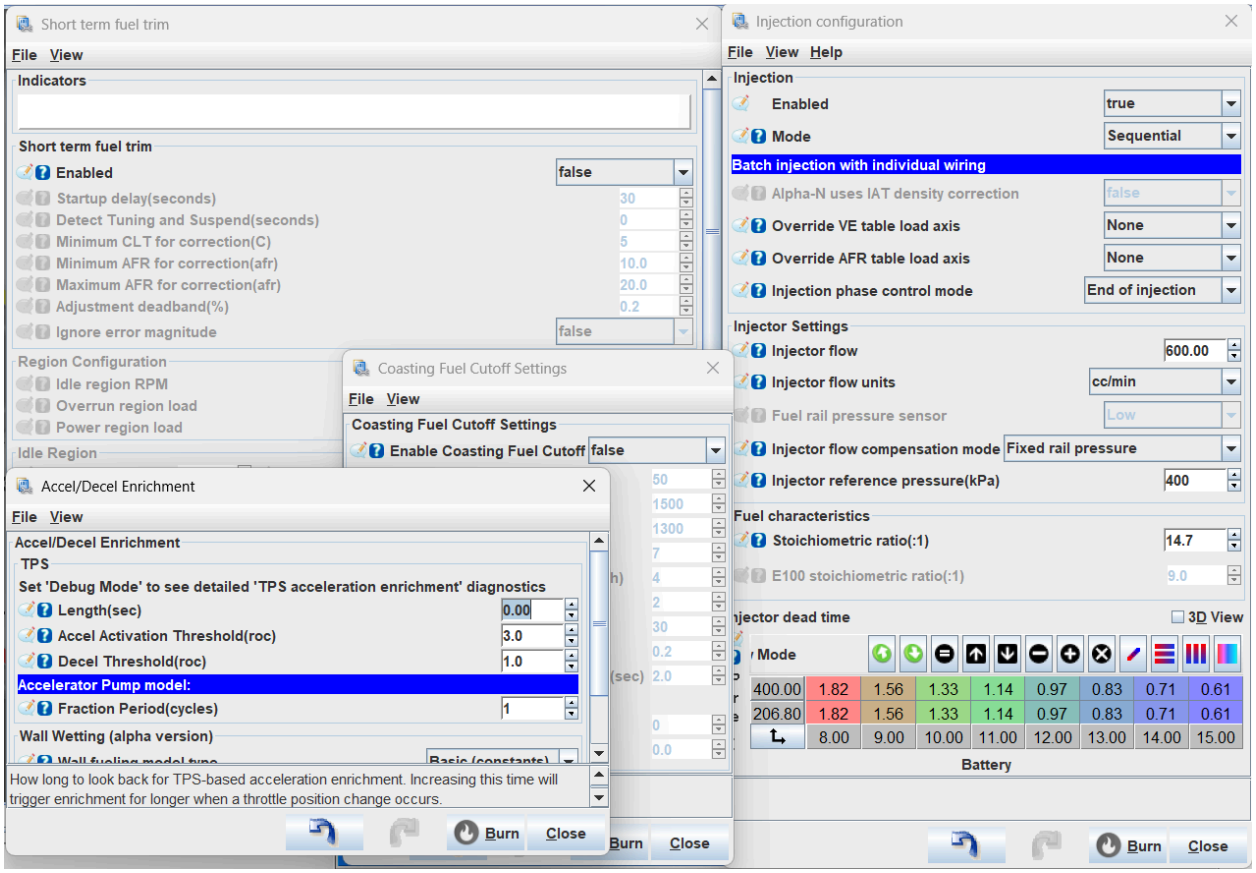
Setting Up Tune Analyze Live For Success

If you are going to be using Tune Analyze to help calibrate your VE tables use the following checklist to ensure the best results possible:

Fuel Menu

Prior to running an “Auto Tune” session perform the following steps

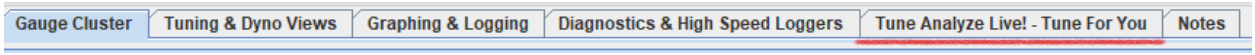
- ☐ Verify that you have the correct Engine Displacement set in **“Setup Menu → Vehicle Information”**
- ☐ Set Your Target AFR Callouts by navigating to **“Fuel Menu → Target AFR”**
- ☐ Verify that you have the Injector Size correctly defined in **“Fuel Menu → Injection Configuration”**
  - ☐ Also verify that you have correct Injector Dead Times, a list of this data can be found at https://docs.impactwiringsolutions.com/injectors.html
- ☐ Disable Short Term Fuel Trim under **“Fuel Menu → Short Term Fuel Trim”**
- ☐ Turn Off Decel Fuel Cut under **“Fuel Menu → Deceleration Fuel Cutoff”**
- ☐ Turn Off Acceleration Enrichment by navigating to **“Fuel Menu → Acceleration Enrichment”** and set the **“Length(secs)” to “0”**



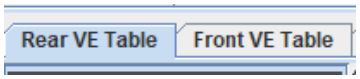
Tune Analyze Live

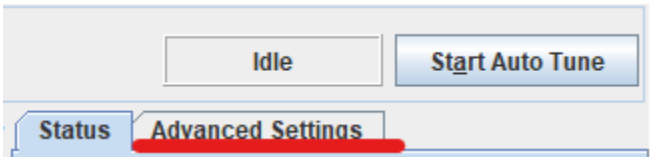
Now let's begin to set up Tune Analyze Live. **(Note: This only has to be done once per project)**

1. Navigate to the Tune Analyze Live Tab within Tunerstudio **(See Image Below)**



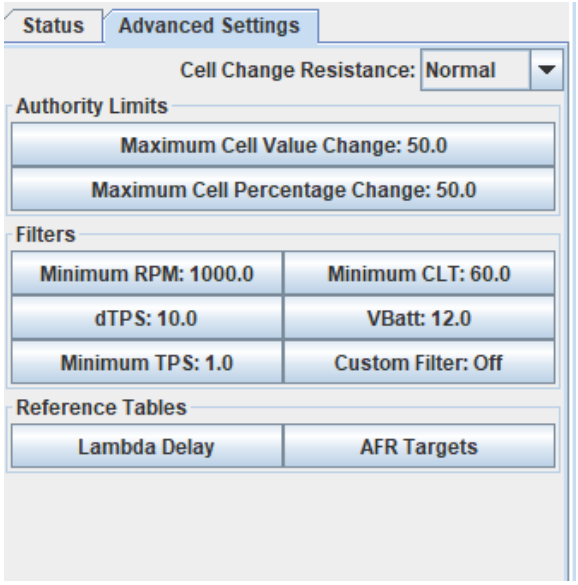
2. Once within Tune Analyze Live, take notice of the tabs for Rear/Front Cylinder VE Tables. This is how you switch in between cylinders if you need to make adjustments between the cylinders.





3. Click into **"Advanced Settings"** underneath the **"Start Auto Tune"** Button and fill in the following settings for **both the Front & Rear Cylinders**

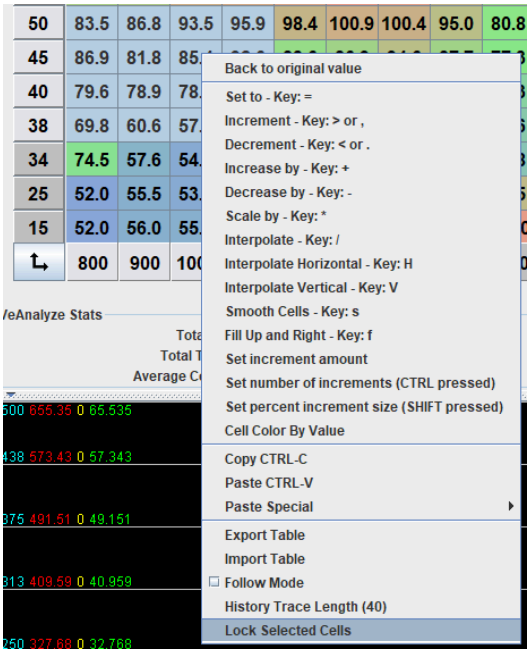
Use The Following Settings:



The Auto Tuning Process

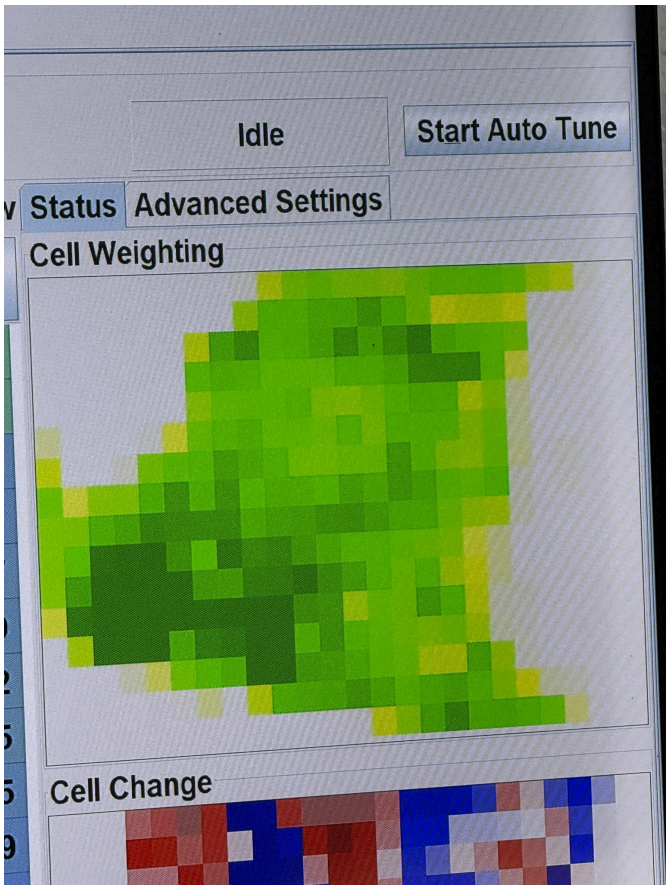
This checklist assumes that you have already performed the Throttle Body & Twist Grip Calibrations & have already fired up the engine for the first time with Impact ECU!

- ☐ Navigate into the Tune Analyze Live Tab
- ☐ Start the engine, wait for the WBO2 sensor gauges to begin reading.
- ☐ Manually tune the VEs in the Idle Region to achieve stable and consistent AFRs at Idle.
- ☐ Once Stable AFRs are achieved at idle, in the Tune Analyze Live Tab lock out the region where the bike is idling in the VE map, by highlighting the cells, right clicking your mouse and clicking on **"Lock Selected Cells"** like shown in this image. **(NOTE: "Locked" Cells will be greyed out and will not be changed by Impact ECU's auto tune system).**



- ☐ With engine running, confirm AFR gauges are reading.
- ☐ Now you can begin Auto Tuning. Begin by clicking the **"Start Auto Tune"** button on both the **"Front & Rear Cylinders"**
- ☐ Tune VE as you normally would

As you are tuning you will see the **Cell Weighting** & **Cell Change Histograms** on the right hand side of Tune Analyze Live begin to populate and change colors as shown in the image.



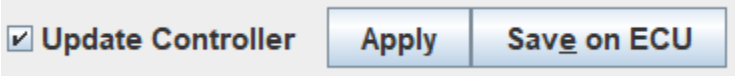
Cell Weighting: Visually displays how much data has contributed to the recommended value. This allows you at a glance to see what sections of the table you have covered during your VE Analyze session and what sections you have not, or needs more coverage. Ideally you want to turn as much of this Heat Map green as possible.

Ideally you want to get as many of the sections of this histogram to "Green State" as possible. This means that VE Analyze has gotten significant usable data for that section.

Cell Change: Visually displays how much the recommended values changed from the starting value. Displayed dark blue to dark red, richer to leaner. Holding the mouse over a specific block will bring up a tooltip that indicates what X & Y coordinate the block represents.

Once you are done with an Auto Tuning session:

- ☐ Click **"Stop Auto Tune"** on both Front & Rear Cylinders
- ☐ Hit **"Apply"** & then **"Save On ECU"** on both cylinders.



Typically, 3 - 4 quality data acquisition sessions will suffice.

Once you are completely done tuning the VE and are happy with the results, remember to turn on the following:

- ☐ **“Fuel Menu → Short Term Fuel Trim”**
- ☐ Acceleration Enrichment, go to **“Fuel Menu → Acceleration Enrichment”** and set **“length”** back to 0.1