PART 2 – V7.5 SCAN DATA LOGGING
This is the console screen.

This does nothing more than keep a chronological record of everything that goes on.

Any errors, issues, connection problems, etc., will be logged here and, if needed, can be sent to your tuner or EFILive to try and resolve the problem.
This is the OBDII screen.

Anything related to modules, codes, system readiness tests, etc., is accessed on this screen.

The tab that is currently selected is DTC (trouble codes).

If you look directly above the PID tab, you will see what looks like small engines. The far left one is normally solid red. You press that to bring up any trouble codes. The third one to the right is normally solid green. That one clears any current trouble codes.
This is the screen that most users find difficult at first. This is where you select the parameters that you want to monitor. Prior to creating any gauges, charts, etc., you need to create and save your PID list, which you do here.

For most users, the pre-defined groups that I have selected to the left will fit most needs.

Remember, you can only monitor 96 PID’s and they are grouped, you can’t select individual PID’s like you can with a GM vehicle.

The PID’s to the left are in the groups selected above.
Once we’ve selected our PID’s and saved our PID list, the next tab over is the Data tab.

This is the raw information as it’s happening.

As you can see, there is a lot going on and it’s simply too much to absorb and much of it isn’t critical or even what you are really looking for, but because we are forced to use the pre-determined PID groups (Cummins not EFILive’s doing), that information is there.

So, what we need to do is take the PID’s we want and put it into a format we can use. That takes us to the next tab.
This is the Dashboard.

This is likely the tab you’ll use the most. This is where you create your charts, gauges, and otherwise filter down the PID’s that you need and put them into a visual format that you can more easily use.

The information that you see displayed is a chart, actually it’s 3 charts. Each chart can display 4 PID’s, which we’ll get into later.

The dashboard can also be setup with analog gauges, digital gauges, and several other forms of visual displays that meet the users needs.

You can scale and color each as you need or see fit.

Up above you see the letters A,B,C. Those are your DASH PAGES. They form your DASH BOARD.
This is the Maps tab.

For the new or casual user, you may not ever use this tab, but if don’t you’re missing out on an incredible tuning tool.

This allows you to create custom maps that, much like the maps you see in the Tune tool, have data with 2 axis’. The difference is, you select the data displayed AND you select the 2 axis’ that you want it referenced against.

It sounds more difficult than it is, but I’ll show you how to do this later.
This is the Dynamic Vehicle Testing Tab.

This is not currently used or supported on the Cummins, it’s a GM tool, so we’re not going to spend a lot of time on this.
Let’s get started!

You’ve probably already used your V2 and the Tune tool so we’re going to go into getting you setup to data log.

Where people make the mistake is NOT using this. If you’re not using this incredibly powerful tool, you’re tuning in the blind.

What you need to do to get started the FIRST TIME you do this is have the V2 connected to the vehicle and your computer. With the key in the run position, click the GREEN Connect button. This will bring up a window that asks you to select your controller. You either want to select the Cummins controller for either the 5.9 or 6.7 and check the box for automatic transmission, if it applies.

The program will then connect and you’ll see the GREEN button turn off and the RED button turn on.
Now that we’re connected, we can select our PID’s. You only need to have it connected to the truck the first time. Once you select and save your PID list, you can open it any time.

What you can see we’ve done here is selected our Pre-defined groups that give us the “Best Bang For The Buck”. Select the groups that give YOU the most usable parameters.

The ones selected here are the ones I use, but many not suit your needs.

Once you have your PID’s selected, SAVE your PID list by going to the File drop down menu at the top.
Now that we have our PID’s selected and saved, we’re ready to actually see some data.

At this point we could see the raw data if we wanted to. All you have to do at this point is go down to the bottom of the screen where those YELLOW and RED buttons are.

The YELLOW button is to MONITOR parameters and the RED button is to start RECORDING them.

Either way, when you chose to stop, you’ll be given the option to save the data log.
BUT, like I mentioned earlier, the raw data is WAY too hard to follow along with and make any sense of with in any reasonable time.

So, what we need to do is take all that RAW DATA and weed out the information that we really don’t need and put the data that we DO need into a usable, visual format like the set of charts that I have here in the background.

This set of charts and it’s parameters are the same ones I normally use with my own vehicle.

On the left side, from top to bottom, you have: RPM, Boost Pressure, Commanded Fuel (mm3), Main Timing, Gear (transmission) and TOS (transmission output shaft speed).

On the right, again from top to bottom, you have: Coolant Temp, Engine Load, Main Duration, Pilot Duration, Commanded Governor Pressure and Actual Governor Pressure.
No, let's create one of these charts.

First, we need to clear the page. On the same row as the A,B,C, all the way to the left there is an icon that looks like a blank page, push that. Now, right click on the main page area, select Remove background image. Now we're ready.

To add a chart or gauge, look at the pop-ups below. Right click the main page area, select Add – Chart – New chart.
This will give us what we have here.

This is too small to work with and demonstrate, so I’m going to resize it (just like anything else windows based) so you can see it.
Now that it’s resized, we see that the chart has no information.

We have to tell it what parameters from our PID list we want it to display.

To do this, right-click the chart and select Chart properties. A new box will pop up.
This is our chart properties.

Here is where we tell the chart what PID's from our list we want displayed on this chart and how we want them formatted.

In the selection to the right, I've chosen Engine RPM's for my first parameter, and I want it in YELLOW with a range of 0 – 5000 RPM's.

Once you do all 4, you save your chart and call it whatever you like.
Here's our finished chart.

We selected RPM's, Boost PSI, Commanded Fuel (mm3’s) and Rail Pressure.

You can resize this to fit it how you want and you’re really only limited by the amount of screen real estate that you have.
Here is our data in visual format
Now that we’ve used most of the basic functions, let’s look at one that not everyone uses...the Custom Maps.

When used correctly, this is one of THE most powerful tools you have to tune your truck.

The reason this is so powerful is YOU determine WHAT you want to see and HOW you want to see it.

You select everything from the main data displayed to the parameters used to display it.

BUT, it’s not as hard as it seems to set up. It’s actually quite easy.

If you already have maps created, you just press SHIFT+CTRL+M to load a map.

If you want to create a new map, you press CTRL+ENTER.
When you press CTRL+ENTER, this is what you’ll see.

Much like the charts, you pick the parameter and you name it. This is for the data INSIDE the map. For our map, let’s say it’s Main Duration.

You then do the same for the Column, the Rows, select cell colors and decide if you want cells with no data empty and what determines an empty cell.
Now we have our map created.

The data that will be displayed inside of this map will be the Main Injection Duration.

The parameters that it will cross it with is Commanded Fuel (mm3’s) in the Columns and Engine RPM’s in the Rows.

What this allows me to do is determine just how many microseconds of duration my tune is producing at a given RPM when I’m asking for a given amount of fuel.

What you’ll see in the next page is that a good majority of your maps are COMPLETELY unused.
What you see here is the average number of microseconds (uS) that this tune produced over a 12 mile route from our shop to a store. This was just normal driving, nothing aggressive, just as I would on any given day.

As you can see, very little of the map is being used. What this does is allows YOU to focus your efforts on the parts of your tune that actually get used and not waste time on things that are generally irrelevant.