

## Tunerpro RT Guide to Data Logging

Things you will need.

A Laptop

Tunerpro RT <http://www.tunerpro.net/>

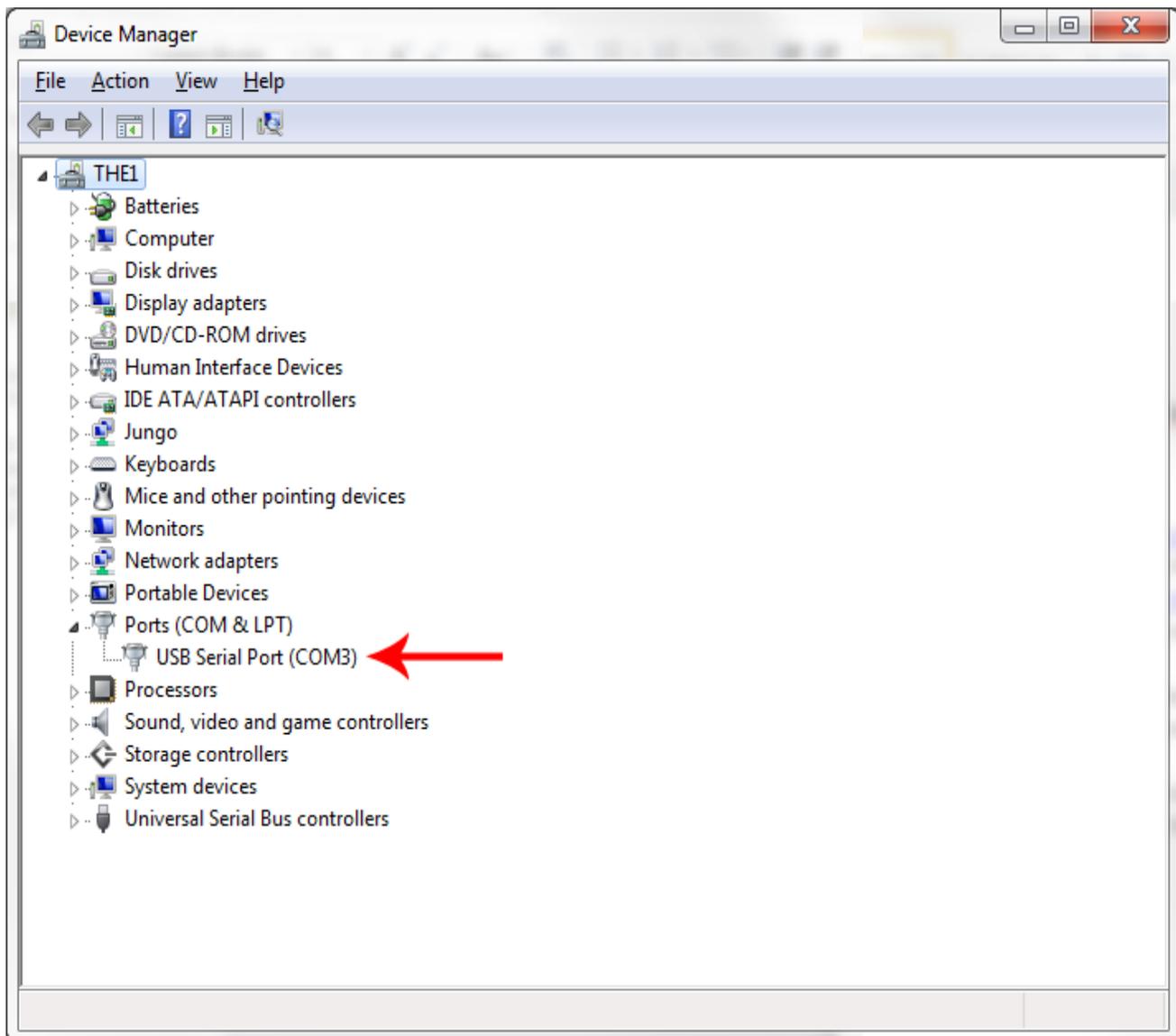
ADX File: <http://delcohacking.net/forums/viewtopic.php?f=10&t=29>

ALDL Cable:

VN/VP <http://pcmhacking.net/forums/viewtopic.php?f=14&t=3613>

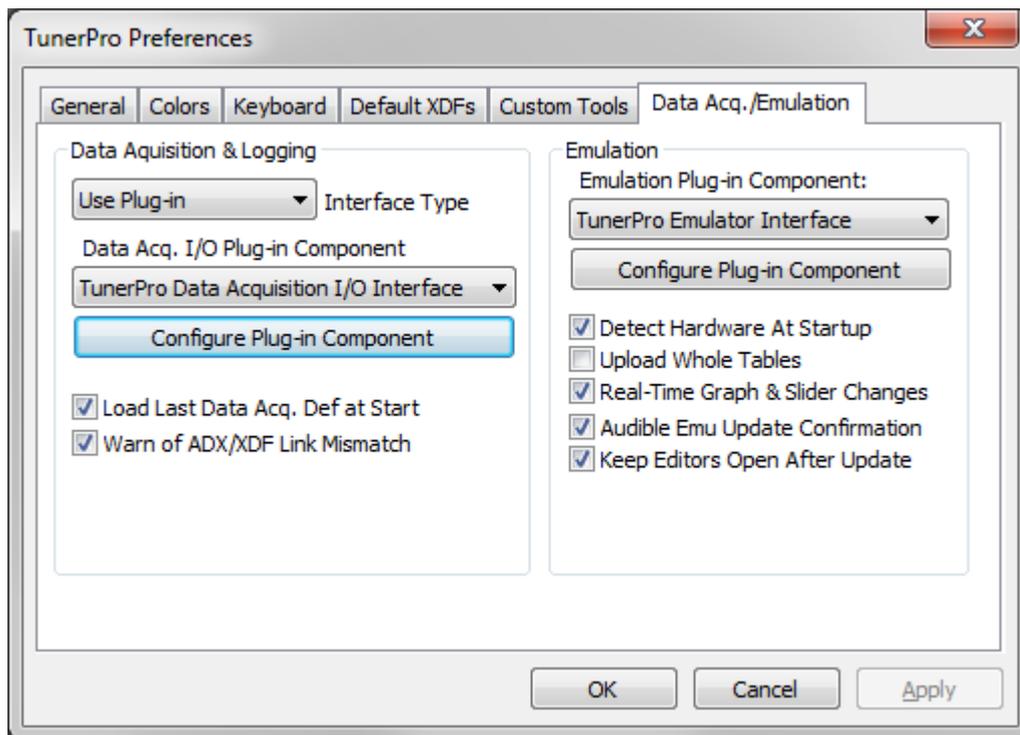
VR-VY USB Connector <http://pcmhacking.net/forums/viewtopic.php?f=14&t=3616>

Once you have Tunerpro RT installed and the appropriate ADX file First Check your Connector Device, either a USB or Serial Connector both should show up as a serial port device in Device Manager, you can get to device manager by going start and run and typing devmgmt.msc



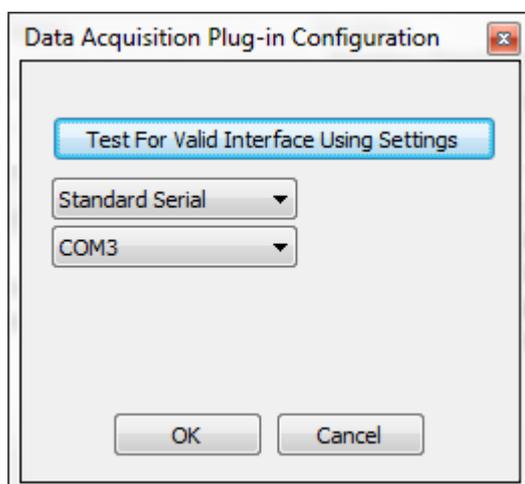
As you can see the usb serial port Device is assigned to COM3

Next Open Tunerpro, Goto the Tools Menu and Select Preferences. Select the Data Acq./Emulation Tab. Click Configure Plugin Component on the left side the screen.



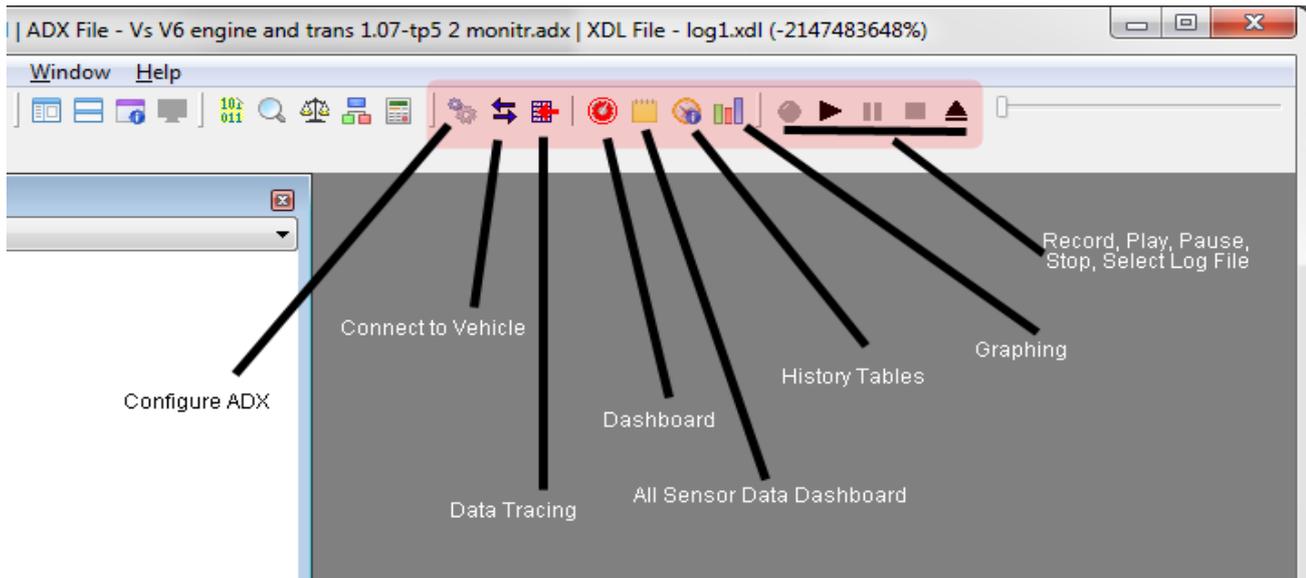
Now As Per Below Change to standard Serial Port, Select the Com Port that was listed for you device in device manger and hit the test button, if ok it should say cable found then we are good to go.

If the test fails, set the setting correctly and try unplugging and replugging in your connector and restart tunerpro and test again.



Next We Need to Load the ADX file for your vehicle, Goto the Acquisition menu and Click the Top option, Load Definition File, find your adx file and hit ok.

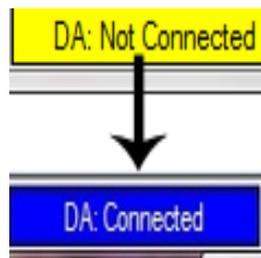
For general logging you will only be using the buttons highlighted in RED.



Now we are ready you can hookup to your vehicle and either turn the ignition to ON or start the car.

To Connect Tunerpro to your pcm Hit the Connect to Vehicle Button with the Two Blue Arrows as show above.

Once you are connected The Yellow Connect status in the tray should change from Yellow to Blue and Say Connected.



If it does not connect then your cable may need it echo settings changed. To do this Select the Configure ADX Button shown on the toolbar. The change the status of the tickbox RS232 Echo then click save and hit connect again.

Now that you are connected you can use any of the functions on the toolbar.

Data Tracing isn't used in normal logging, this feature is used more in realtime tuning to show a bubble on data tables.

The Dashboard should now work and show live sensor

The 'Dash' window displays the following data:

- Knock Retard:** 0 Degrees Retard
- Spark Advance:** 14 Degrees Spark Advance
- Transmission Slip:** 738.00 Trans Slip RPM
- Fuel Corrections:**
  - Left Short Term Fuel Correction (LH STFC%): 0
  - Right Short Term Fuel Correction (RH STFC%): 0
  - Left Long Term Fuel Correction (LH LTFC%): 2
  - Right Long Term Fuel Correction (RH LTFC%): -6
- Oxygen Sensors:**
  - Wideband o2: 14.9
  - Wideband B12 (in) feedback time: (blank)
  - Left Hand O2 Cross Counts: 2
  - O2 Left Cross Counts: (blank)
  - Right Hand O2 Cross Counts: 2
  - O2 Right Cross Counts: (blank)
- Temperatures:**
  - Engine Coolant: 86.0 Degrees C
  - Intake Air Temp: 25.3 Degrees C
- Shift Times:**
  - 1-2 Shift Time: 0.77
  - 2-3 Shift Time: 0.20
- Status Indicators:**
  - Knock Detected: Clear
  - Low Speed Fan: Off
  - BLM Enabled: Disabled
  - O2 #1 Status: Not Read
  - O2 #2 Status: Not Ready
  - Closed Loop Enabled: Clear
  - Knock Detected: Clear
  - TCC Status: Off

The Sensor Data Dashboard Should show current Data Also, the dropdown should let you select Engine or Trans Data

The 'Item Lists' window shows the following data for 'Message 0 - Engine Data Only':

- Engine Sensor Data:**
  - 0 EGR Pintle Position
  - 0 EGR Pintle Position Feedback
  - 0 EGR Desired Pintle Position
  - 824.0 Engine RPM
  - 800.0 Desired Idle RPM
  - 2.16 CTS Voltage
  - 86.0 Engine Coolant
  - 2.47 IAT Voltage
  - 25.3 Intake Air Temp
  - 2526.00 MAF Hz: Manifold Air Flow Frequency
  - 5.1 MAF: Manifold Air Flow
  - 0.49 TPS Voltage
  - 0 TPS
  - 757 Left Hand o2 Sensor
  - 2 Left Hand O2 Cross Counts
  - 549 Right Hand o2 Sensor
  - 2 Right Hand O2 Cross Counts
  - 1.59 Injector Pulse Time
  - 14.9 Wideband o2
  - 0 Left Short Term Fuel Correction
  - 0 Right Short Term Fuel Correction
  - 2 Left Long Term Fuel Correction
  - 6 Right Long Term Fuel Correction
  - 0 BLM Cell #
  - 0.0 Short Term Fuel Correction Change
  - 8.0 Long Term Fuel Correction Change
  - 14.2 Air/Fuel Ratio
  - 13.4 Battery Voltage
  - 5.0 Reference Voltage
- Flags:**
  - Ready O2 #1 Status
  - Ready O2 #2 Status
  - Disabled BLM Enabled
  - Set Fuel Pump Enabled

History Tables will depend on what your ADX file has configured in it, this can be used to look at the history after the log file has been played back or a run has taken place in realtime, anything from a sensor can be setup and recorded in history for tuning purposes.

History Tables

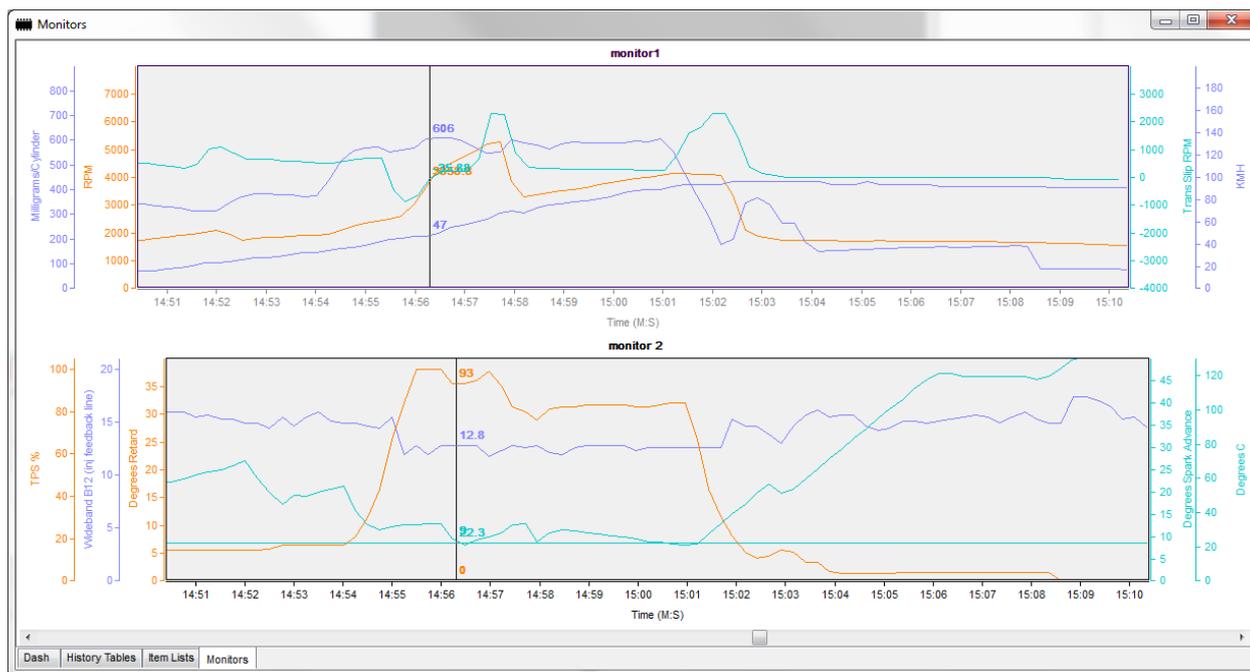
History Table: Spark Advance View: Running Average Clear Graph

Spark Advance - Milligrams per Second per Cylinder vs Engine RPM vs Spark Advance

	93	125	156	187	218	250	281	312	343	375	406	437	468	500	531	562	593
400	0										11.953						
600						9.492											
800		40.562	31.736	29.727	24.434	24.610	24.610										
1000	46.035	43.236	29.531	23.687	28.125	21.680	25.664										
1200	47.101	29.180	22.852	26.602		27.949	27.422	24.727	20.039								
1400	48.113	18.633	43.039	39.024	36.276	32.547	27.801	25.504	20.708	17.727	15.625	13.887					
1600	48.354	45.834	46.116	41.886	37.499	31.843	28.074	24.838	22.064	18.765	16.314	14.213	13.477	12.305	11.039		
1800	38.360	36.724	43.168	40.791	35.778	32.479	28.218	25.542	23.019	20.440	17.697	15.542	14.004	13.228	11.953		
2000			42.715	41.309	34.668	30.625	28.924	26.083	23.762	20.022	18.032	16.364	16.127	14.531	12.715	11.074	10.195
2200								27.071	24.610	20.022	19.688	17.070	15.991	14.834	13.169	11.903	12.422
2400		18.281						22.500	17.930				16.875	15.117	13.491	12.983	14.180
2800					35.508					13.359			16.875	16.172	14.086	13.623	
3200				19.688										15.586	13.711	13.008	11.250
3600																11.250	10.095
4000				17.227			15.117			13.008			10.547			8.438	8.789
4400										11.602				9.141			8.672
4800																12.188	9.844

Dash History Tables

Graphing will show live data and also if a log is recorded you can then scroll through and view the data afterwards, any sensor can be displayed on the graph, simply right click and add or subtract what you want to see.



The Last options are the record and playback functions, once you stop a log from recording you will be asked to save your log, after you have saved a log you can then view and replay it back.

Finally if your data is showing up scrambled and incorrect then try changing the Echo option as mentioned before.

# Tunerpro RT Realtime Tuning

For Realtime Tuning you will need a nvram and oseplugin installed.

## NVRAM'S

FOR ECM's: <http://pcmhacking.net/forums/viewtopic.php?f=14&t=3612>

FOR PCM's: <http://pcmhacking.net/forums/viewtopic.php?f=14&t=3617>

See links for Vehicle Specific Information.

Nvram's enable realtime tuning, uploading and downloading of the calibration area, this is vehicle specific, to change from one vehicle to another you must reburn the nvram on a chip burner to the appropriate bin file for the vehicle you are wanting to tune.

Available Bin files for use with nvrams include:

11p: <http://pcmhacking.net/forums/viewtopic.php?f=27&t=3798>

12p: <http://pcmhacking.net/forums/viewtopic.php?f=27&t=356>

Enhanced Mod: <http://pcmhacking.net/forums/viewtopic.php?f=27&t=2518>

See links for Vehicle Specific Information.

### \*\* Please note for Enhanced Mod

Only Version 1.50 OSEPLUGIN is supported

Calibration Uploading while engine is running or datalogging is connected will likely corrupt the NVRAM.

If you have trouble connecting with VT,VX,VY and OSEPlugin check this link

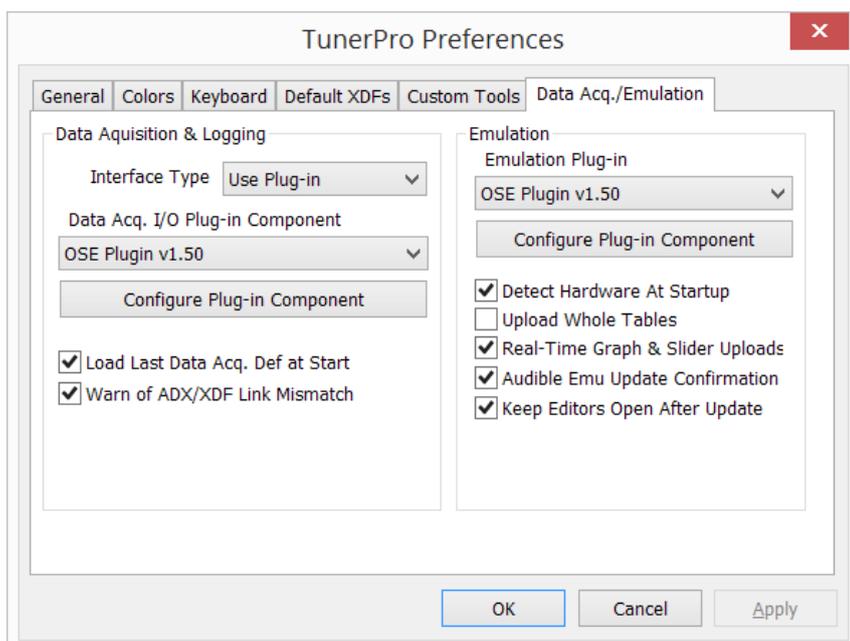
<https://pcmhacking.net/forums/viewtopic.php?f=27&t=2518&start=580#p71623>

## OSEPlugin

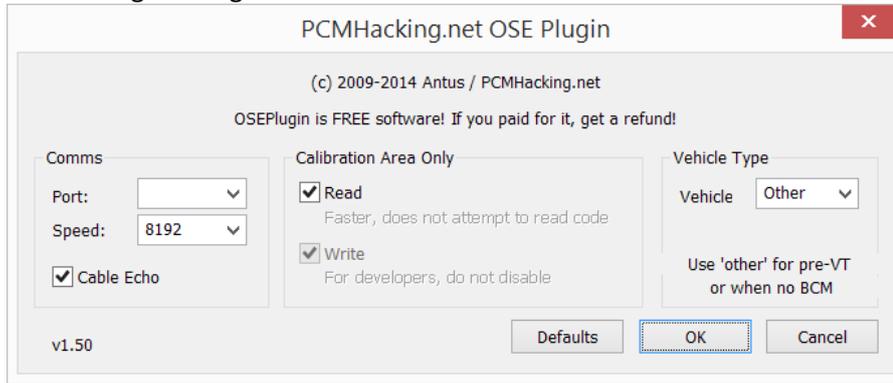
<http://pcmhacking.net/forums/viewtopic.php?f=3&t=590>

Once downloaded extract the file to your folder, My Documents\TunerPro Files\Plugins

Next Open Tunerpro, Goto the Tools Menu and Select Preferences. Select the Data Acq./Emulation Tab. Click Configure Plugin Component on the left side the screen. We should be able to select OSE Plugin as per below.



## Click Configure Plugin



Your Options should be configured as shown, select your COM port and Vehicle type then Click OK.

Close Tunerpro, Then once your NVRAM is installed turn the key to ON or start the car. Open tunerpro again.



If the Nvram & Correct Code is burnt it will detect the code version and be ready for use as shown above.



Also the Realtime buttons will now be available on the toolbar.

The Connector button on the Left can be used to redetect the nvram code

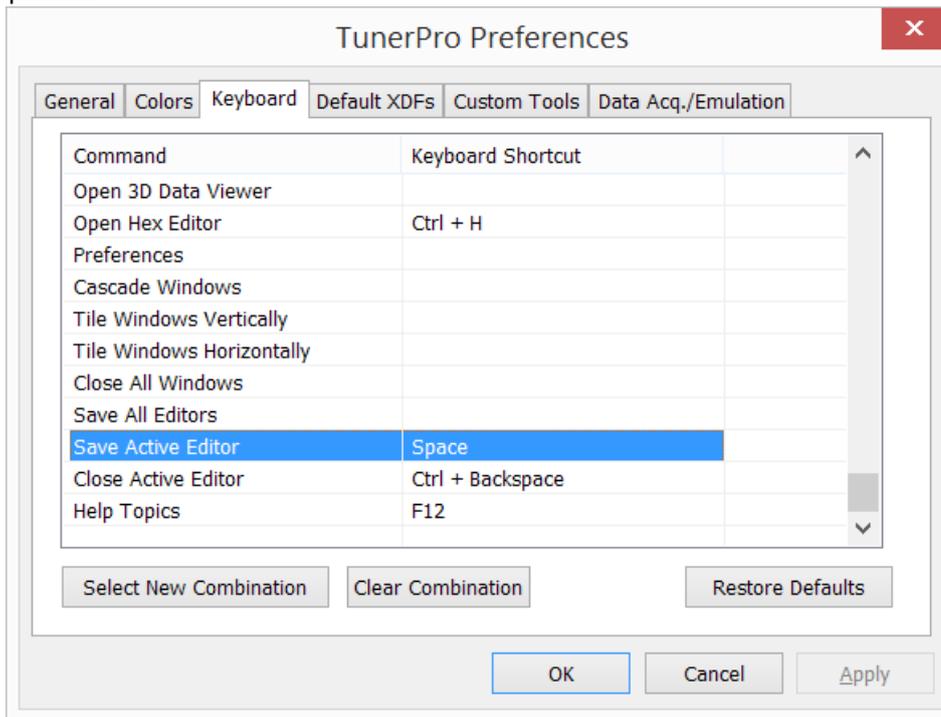
The UP arrow can be used to upload the calibration area data from a BIN file to your nvram

The DOWN arrow can be used to Download the calibration area data from your nvram into Tunerpro, this can be used to see what is on the current nvram via the xdf or saved to a bin file(Note this is not a full bin file, it can not be used to burn to a memcal)

The Blue Chip button will enable realtime tuning in scalars and tables, you will see the normal disk icon change to a upload/update button, once changes are made and the button pressed changes are instant and live.

	Drive	Neutral
-40	1000	1000
-28	1000	1000
-16	950	950
-4	800	900
8	800	850
20	800	850
32	800	800
44	750	800
56	725	800
68	700	800
80	700	800
92	700	800
104	700	800
116	700	800
128	700	800
140	700	800
152	700	800

To help with making changes more instant for EG when dyno tuning a key can be mapped to the save button using "Save the Active Editor" Also buttons can be mapped to increment and decrement the value chosen in a table for instance. There are a whole host of keyboard shortcuts that can be setup to suit yourself to make tuning easier and quicker.



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