### Guides

These guides will help you to use the features of eCtune and illustrates how to setup certain options.

- <u>Create a basemap</u>
- <u>Setting up injectors</u>
- <u>Tps calibration</u>
- <u>Why use a calibration?</u>
- <u>Electronic boost controller</u>
- <u>Setting up scalars</u>
- <u>Using Map Trails</u>
- <u>Using Snapshot Manager</u>
- <u>Working with Secondary Maps</u>
- <u>3-Step</u>
  - <u>Anti-lag</u>
  - <u>Full Throttle Shift</u>
  - Launch Control

## **Creating a basemap**

Select file -> New or press the new basemap button on the toolbar.

	) (	Toolb	ar new	button					
F	ile	Edit	View	Datalog	Emulator				
	)	New		Ctr	·l+N				
	Z	Open		Ctr	1+0				
4	9	Open La	ast Rom	Ctrl+Al	t+O	New file	e menu ite	<sup>o</sup> m	
						iten più			
٢	eC	tune Ba	iseMap (	Ereator					×
1	Sett	ings:							
[			or Setting	s: Stock Ho	unda.				
		ap Sensi				Ĺ			
			nbar @0V	=	mBar				
			mbar @5\		mBar				
	Ke	ey On En	igine Off:	2.91	V				
[		njector Se			00000				
		w Injecto		240	CC				
	Inj	ectors(ba	at offset):	Acura Integ	gra (92-96 '	VTEC) 240	)cc (23lb) 12	20-	
ſ	В	oost Seti	up:						
	œ	Not Bo	osted(NA)	0	Boosted				
					Boost	: Columns:	6		
					Boost	:Cut: 🔽	3	psi	
					Boost	: Fuel:	120	%	
					Boost	:Retard:	1.25	degree	per psi
	Bar		273 v:0.	0.38					
	0.93		213 4.0.	.0.50	Car	ncel	Previous		Next

eCtune BaseMap Creator - Parameters

Mapsensor: Select a predefined mapsenor or fill in the min and max mbar.

Note: If you want to know if you configuration is good. The KOEO mbar displayed shouldn't differ much from the PA(baro) mbar

Injector Setup: Select the injector size(this will adjust injector fuel trim and crank fuel trim) select the correct battery offset table

Boost Setup:

-Not Boosted(10 columns) NA cars

-Boosted:

-Boost columns: Select the amount of columns you want(max 14). Your mapscalars will be setup. You can change them later

-Boost cut: You can enable a boostcut during creation

-Boost fuel: Boost fuel sets how much additional fuel to add to the boost portion of the basemap. The more efficent the turbo is, the higher you want to set this number. A good starting point is usually 120%

-Boost retard: This will retard a specified amount timing per PSI(starting at the first

boost column)

Base: This will show you whice codebase and version is in the basemap creator. **Setup these parameters and press "NEXT"** 

Ecu	Region	Vtec ecu	
RACE	Everything Disabled	Vtec	
P06	USDM	Non vtec	
P06	EDM	Non vtec	
P06	CDM	Non vtec	
P08	JDM	Vtec	
P28	EDM	Vtec	
P28	USDM	Vtec	
P28	CDM	Vtec	
P30	USDM	Vtec	
P30	JDM	Vtec	
P30	EDM	Vtec	
P61	USDM	Vtec	
P72	JDM	Vtec	
P72	USDM	Vtec	
P75	USDM	Non vtec	

*New BaseMap Creator -> Ecu Type* 

Here you need to select the ecu type you have. This will set:

-ELD -Baro sensor -Knock sensor -Injector test -O2 heater -VTEC enable/disable -VTEC points -Rev limit points(cold/hot) After selecting the ecu type press "NEXT"

Ecu	Region	Engine	Description				
P06-313	EDM	D1587	Stock P06 313 EDM maps				
P06-301	USDM	D1587	Stock P06 301 USDM maps				
P28-304	USDM	D16Z6	Stock P28 304 USDM maps				
P30-203	JDM	B16A	Stock P30 203 JDM maps				
P30-209	EDM	B16A	Stock P30 209 EDM maps				
P72-273	USDM	B18C1-3	P72 273 USDM Maps				
P75-274	USDM	B18A	Stock P75-274 USDM Maps				
P75-270	USDM	B18A	Stock P75-270 JDM Maps				
P28-304	USDM	D16Z6	P28 304 USDM Extended-Rpm maps				
P30-203	JDM	B16A	P30 203 JDM Extended-rpm maps				
P30-209	EDM	B16A	P30 209 EDM Extended-rpm maps				
P72-273	USDM	B18C1-3	P72 273 USDM Extended-Rpm Maps				
P75-274	USDM	B18A	P75-274 USDM Maps; Runs HighCam C				
P2P		D16Y8	P2P D16Y8 MAPS FOR P28				
211		1.000					

New BaseMap Creator -> Base map

Here you select which fuel and ignition map you will start with. Ecu: Which ecu the map was orginally Regoin: JDM/EDM/USDM/CDN Engine: which engine the stock map was designed Description: About the map Note: You can select a map with extended high cam rpm scale(11000 rpm) These are basemap. *Tuning is always required.* 

After selecting the right ignition and fuel map press "Finish".

## **Injector calibration**

02	2:	13.8		
Offset: 0.0	0 FV	Fnl Multiplier: 0.4	436	
njector Size: —		_		
Old Injector:	240	cc		
New Injector:	550	cc		
Overall fuel trim:	0	%		
Battery Offset:	Acura Ir	ntegra (92-96 VTEC)	240c 💌	
njector Offset A	djustmen	t		

#### **Parameters/information:**

-Old injector size

-New injector size

-Overall fuel trim

-Injector deadtime compensation(injector offset)

-Battery compensation table

-Fnl multiplier: Injector fuel trim(multplier) due to an other injector size

#### Notes:

1) You must first setup your wideband to read correctly in eCtune.

2) Changing the injector size adjusts the final multiplier and the cranking multiplier. Cranking multiplier can be adjusted in "Fuel Trims".

3) Injector offset can be used the adjust for injector latency(In Fuel Values).

4) Overall fuel trim can be used to add/substract fuel op top of injector trim.

#### Steps:

-Let your car IDLE

-Put in the information about your injectors.(already done if you used the basemap creator)

-You want to adjust injector offset and overall fuel trim during idle.

-Adjust injector offset and/or overall trim until you get a reading round 14.75 afr or 1 lambda

## **Tps calibration**

#### Select Tools -> Tps Calibration



Notes:

-This only works during KOEO(: Key on engine off)

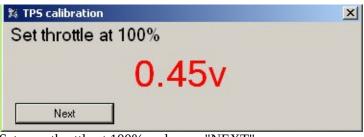
-Datalogging must be turned on

🎋 TPS calibration	x
Ecu disconnected	
Next	Cancel

Datalogging not connected

🎉 TPS calibration	×
Set throttle at 0%	
0.45	V
Next	Cancel

if your throttle at 0% press "NEXT"



Set your throttle at 100% and press "NEXT"



Press "Close". Settings will be saved in the calibration.

You will see your tps volt at 0% and at 100%

## Why use a calibration?

This section details the benefits of using a calibration file (.cal) instead of a .bin file for editing the ROM's parameters.

Note: Bin saving is only possible in Tuner Version of eCtune

#### **Calibration Benefits**

- Calibration Holds all the settings of the tune.
  - -Tables
  - -All settings
  - -Comments
  - -EVERYTHING
- Calibraitons are universal
- Calibration are backwards compatible
- Calibration can be opened in eCtune, eCtune will use the baseRom stored in the program.
- File extention \*.cal
- Tuner version can import/export calibrations

#### Example:

If you make a tune with rombase 0.0.35 and save a calibration.

Then, if you open the calibration with an updated ectune version/rombase e.g. 0.0.37 -- Every setting will be in the new bin with rombase 0.0.37. New settings/options in 0.0.37 rom that are not in 0.0.35 will not be overwritten. They will have the default values.

**Electronic boost controller** 

## **Setting up Scalars**

oost Scalar Setup:	
Don't Change	
New Boost Scalar(Increment	it)
Start pressure: 0	PSI
Increase 0	PSI, starting at column 11
C New Boost Scalar(Divide)	
Start pressure: 0	PSI
End pressure: 20	PSI
Starting at column: 11	-

#### NOTE: This will adjust the map scalar for the selected map set(primary or secondary)

#### **Increment:**

Start psi:The first boost value for the first column. Specify 0 here and the first column with get theincrement.Increase:Amount of psi the load increments each columnColumn:The first boost columnNote:You can specify 1 psi increment for the first 3psi(e.g. column 11,12,13) then 2 psiincrements for the following 4 columns)

#### **Devide:**

Coloumn:Fill in the first boost columnStart pressure:The start psi for the first given columnEnd pressure:End psi for the last columnThis will devide the boost range over the boost columns of your map

🖶 Rpm Scalar Setup		×
Rpm Scalar Setup:		
Oon't Change		
C New Rpm Scalar(Inc	rement)	
Start rpm: 0	1	
Increase 🛛	) rpm, starting at row	0
O New Rpm Scalar(Di	vide)	
Start rpm:	,	
End rpm:	J	
Starting at row:		
Cancel	Apply	

Rpm scalar setup

# Note: This will adjust the currect rpm scale. E.g. if low cam primary map is selected this scalar will change

#### **Increment:**

Start rpm:	The rpm the first given row will get
Increase:	Amount of rpm the following row get increased
Starting row:	Which row you start adjusting
Note:	You can make the first row increase e.g. 300 rpm and afterward 500 rpm

#### Devide:

Start rpm:	The start rpm of your rpm band
End rpm:	The end rpm of your rpm band
Starting row:	Start row
Note:	The rpm band will be devide into row(start) till the last row.

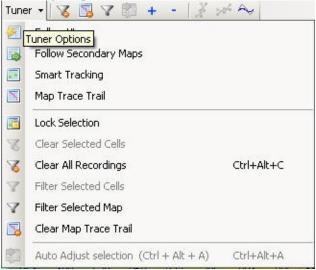
### Map trace trails

**What is map trails?:**Map trails highlights the area of the fuel maps where the ecu read during a pull. This for quick reference to find where the afr was not what you want. To use live plot Rpm vs Afr/Boost wideband o2 logging must be enabled

#### Steps for map trails:

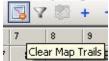
Enable map trails Enable Live plot Rpm vs Afr/Boost Make a pull(dyno/street) Look at the plot Spot a wrong AFR and lookup in the table with map trail where that spot is

#### **Enabling Map Trails**



Enable map trails by clicking the map trace trail menu item

#### **Clearing Map Trails:**



Click this icon to clear map trails Click the menu item Clear Map Trace Trail from above screen.

#### **Example:**

ect.27	3.003	7.001.c	al: Tab	le - Pri	imary I	Fuel Ma	ıp - Hig	h Cam															
1 3	*1	¥2 +1	-	8	Tune	er 🕶   🏹	5 🖪	7 🕅	+ •	- 1 %	204 A	~			20		<u>M- M</u>	Graph Bel	ow table	1			
Rpm / Col		7 :	3	9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19 B	Map	Afi							
mbar/psi	757	875	933	982	0.25	2.52	4.66	6.93	9.06	11.34	13.62	15.9	18.16	20.31 2	2600	20	<u></u>						
3750	393	498	553	596	671	716	835	1029	1208	1337	1473	1576	1706	1834									
4050	403	498	553	604	664	740	888	1075	1310	1421	1558	1658	1794	1938									
4500	403	507	557	600	660	764	895	1104	1337	1421	1542	1667	1785	1938		-							
4900	418	528	578	626	694	828	985	1225	1478	1540	1659	1799	1925	2090	2080	18						_	
5100	430	534	592	645	735	868	1035	1254	1499	1547	1682	1807	1934	2100									
5250	435	531	609	668	773	924	1085	1254	1465	1554	1697	1823	1943	2100									
5400	443	531	623	690	776	960	1115	1298	1465	1575	1736	1873	2004	2157	-								
5750	465	546	623	698	799	960	1095	1254	1418	1568	1721	1848	1986	2119	1560	10			/	~			
6000	475	567	651	735	818	956	1080	1277	1418	1540	1721	1856	1995	2109									
6450 6750	475	570	655	746	814	936	1050	1231	13//	1526	1721	1840	1986	2119	25								
7050	488 500	582 597	662 669	739 739	806 799	940 920	1040	1231	13//	1513	1713	1832	1986	2119 2119	1040	1.4		/					
7350	488	597	669	739	799	920	1025	1179	1.304	1013	1682	1832	1995	2119	1040	14							
7700	400	588	669	739	788	908	1020	1133	1304	1491	1651	1790	1943	2062			1						
8000	475	588	672	739	784	904	1030	1121	1316	1477	1643	1790	1934	2062					2				
8300	470	576	662	724	780	892	1015	1.48	1310	1470	1643	1807	1925	2062	520	12		m	~ ~	~~~		m	
8600	468	567	651	709	776	884	1005	1127	1310	1470	1628	1790	1916	2052				/			0		
8900	468	567	637	690	769	880	990	1127	1303	1463	1620	1774	1899	2052									
9200	468	567	637	690	773	884	990	1127	1296	1463	1620	1774	1899	2052									
9800	468	567	637	690	776	888	990	1127	1296	1463	1620	1774	1899	2052	0	10						-	10 11
	•							-						•		C L		2 3	4 Rpm	5 1000	78	9	10 11

At 8000 rpm you see that the afr dipped to 12. So you need to know fast where that was read of the fuel table.

With map trails you see where the ecu read during a pull. You know where the dip happend and you can change the 2 rows(8000/8300)(mabye from column 14 to the end)

### **Snapshot Manager**

**What is Snapshot Manager?**During tuning i always used to put names like try00, try001, try003. I did this to save the rom if i made a lot of changes.

Snapshot manager does the same. You save the base then after doing things you save an other time. If you don't like the changes just roll back an older version.

To open snapshot manager go to "View" -> "Snapshot list"

Click snapshot on the toolbar Snapshot List

Save	Date/Time	Description	
	6:00 PM	lgn - 2	
.oad	5:59 PM	lgn - 3	
lear	5:57 PM	Base	

Snapshot manager

Save: Click save to save the current rom as a snapshot Load: Select which snapshot to roll back Clear: Remove all the snapshots Working with Secondary Maps

## 3-Step

FTL input: Alwa	ays on	*	
Г I	nvert Input		
TPS based:			
Minimum rpm:	3000	rpm	
Below Vss:	22	kmh	
TPS engage thresho	ld: 35	~ %	
TPS disengage three	hold: 19	7 %	
VSS based: VSS Based			
Launch rpm:	5514	rpm	
Below Vss:	22	 kmb	

Settings

#### Type:

-TPS Based -VSS Based

#### General

Activation input: Here you can select which input(switch) you want to you use as activation You can choose "always off" to disable FTL or "always On" to enable it full time This can be a clutch swith or a on/off toggle switch

#### **TPS Based:**

Tps based launch control the driver can adjust the launch rpm on the fly. Just rev to that rpm point and cross the tps engage threshold after that you can give less tps but the lock will stay. If you drop below the disengage threshold the lock is removed.

Minimum rpm: The mimimum rpm for 2-Step cut to work. Putting this to low(when always enabled)

can cause ftl locks in city traffic. High tps and low minimum rpm will cause FTL to engage.

Below vss: 2-Step will be active below this vss

TPS engage: If you cross the tps therhold the rpm will be lock

TPS disengage: If you come below this tps threshold the rpm lock will be released

#### **VSS Based:**

Launch rpm:	specified rpm where the 2-Step will cut
Below vss:	speed at which ftl lock deactivates.
To use clutch	based just select in activation input that is connected to the clutch.

Clutch Input:	Disabled	
	Invert Input	
Shift Rpm:	7411 rpm	

Full-Throttle Shift

#### Full Throttle Shift

Clutch input:	Select which input is connected to the clutch
Shift rpm:	The rpm where the engine will hold during shifts.

Note: If you enable Ignition cut or Ignition and fuel cut you keep your boost up during shifts(anti-lag effect)

Anti-Lag 35tep - Anti-Lag		
TPS thershold:	75	%
Extra Fuel:	60.00	FV
Ignition Retard:	15.00	degrees
Apply to fina	al ignition	

See anti-lag setup guide

## Anti-Lag

35tep - Anti-Lag Settings 7 Enable Anti-Lag		
TPS thershold: 75	%	
Extra Fuel: 60.00	FV	
Ignition Retard: 15.00	degrees	
Apply to final ignition	n	Anti-lag Setti

#### Anti-lag:

Anti-lag helps you build boost(spool turbo) at the start line when 2-Step is active. You can prestage on 2-step and the tps threshold decides when anti-lag starts.

Enable anti-lag:Enables/Disables anti-lag featureTps threshold:Anti-lag will start pulling timing and throw extra fuel above this tps threshold(onlywhen 2step active)Extra Fuel:Extra Fuel:Amount of fuel to dump during anti-lag(Fuel value between 0 -255)IngitionRetard:Amount of retard during anti-lag(postive value)Apply to final ignition:The anti-lag value will be substracted from the final ignition.<br/>Otherwise it will be substracted from the ignition table lookup

Note: Anti-lag disengage as soon as the wheels spin

### eCtune

- Installation of eCtune
- List of usable Outputs
- List of usable Inputs
- <u>Registration</u>
- <u>Shortcut Keys</u>
- <u>Settings</u>
- <u>Advanced Tables</u>
- Import/Export
- <u>Chip Operations</u>
- <u>Snapshot Manager</u>
- <u>Communication Errors</u>
- Error (MIL) Codes
- <u>Updating eCtune</u>
  - Force Update
  - <u>Check for Update</u>
  - Check for Update on Loading
- <u>Tools</u>
  - Injector Calibration
  - TPS Calibration
  - <u>Timing Sync</u>
  - Kill Injectors
  - Boost Table Setup
  - <u>RPM Scalar Setup</u>
  - MAP Scalar Setup
- <u>Tables and Graphs</u>
  - <u>Table Editing</u>
  - <u>Graphs</u>
- <u>Datalogging</u>
  - Logging
  - <u>Graphs</u>
    - <u>Templates</u>
  - <u>Review Log File</u>
  - Datalog Display
    - <u>Customize Display</u>
  - Datalog Parameters
  - <u>Sensor Setup</u>
- <u>Tuner Tools</u>
  - Map Trace Trails
  - <u>Live Plots</u>
    - <u>Time Vs AFR</u>
    - RPM Vs AFR/Boost
    - <u>RPM Vs Accel</u>
  - <u>Smart Tracking</u>
- <u>Realtime Programming</u>
  - <u>Downloading</u>
  - <u>Upload Calibration</u>
  - <u>Upload Base ROM</u>
  - <u>Verify</u>

## Installation of eCtune

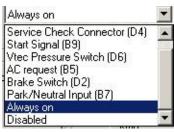
## List of usable Outputs



These are the selectable outpus for eCtune. -Ac clutch (A15) -Purge valve (A20) out->ground -O2 heater (A6) out->ground -Radiator Fan Relay (A12) out->ground -Check engine light (A7) out->ground -Fuel Pump (A7) out->ground -Intake butterflys (A17) out->ground -Vtec solenoid (A4) out-> 12v

Notes: Most outputs can also be inverted.

## List of usable Inputs



Service Check connector (d4) Start Signal (B9) Vtec Pressure Switch (D6) AC request (B5) Brake Switch (D2) Park/Neutral Input (B7)

Brake switch is not available on EDM ecus Park/Neutral is available on NON-AUTO ecu's

### Registration

ar Register	×	
	Registration Information	
Name:	Calvin Debug	
Organization:	test	
Email:	calvin@test.com	
Machine ID:	0564E7-E756EB-EBC149-49234B-4BE24F-0E	
Serial Key:	KS02diHWN5TqR27WPhenhuqFG948z7yf5vjHE74 G7Z/RIn0CQNYV2oHj2k7pJZ4cBmzA085R+TMICYj QvQbI+cD/h8kPZuw2gMLRr8VfCqi8oK2x+ABQIa2fJ b87ZYfftNijvgo9GwgbY8zUVgErzg==	
	Register Online Close	Registration Window

Fill in your details(name, organization, email) and press "**Register Online**" The information will be received by eCtune Webserver. After the license payment is received you will receive an email.

Follow the steps in the email to complete the registration. If you have the reg key you don't have to fill in you infromation. Just paste the key in *"Serial Key"*, If your key is valid you will see your name, organization and email. "Register Online" will be disabled.

Your software is now registered. you can press "Close".

Note: You need to fill in a valid email address. Your reg key will be send to that address.

## Shortcut keys

## Settings

## **Advanced Tables**

2D	•	IAT (C)	-26	-21	-13	-1	20	50	70	99	141
	1	Idle & Light Load	10	6	4	2	2	1	0	-1	-1
	1	Mid Load	14	10	8	5	3	1	-1	-2	-3
		High Load	19	16	12	8	4	1	-2	-4	-6

Table IAT correction

#### **Advanced Tables:**

Most advanced tables are correction tables. Shortcuts: Ctrl + Arrow up (increase selection) Ctrl + Arrow down (decrease selection)

Ctrl + Arrow down (decrease selection) Page up (increase selection) Page down (decrease selection)

	Set Selection	
	Adj Selection(-/+)	
	Adj Selection(%)	
	Show 2d graph	
Cor	ntext menu:	
	0.01.	

Set Selection Adj Selection(-/+) Adj Selection(%) Show 2d graph

Adjust Table		×
Set selection to	0	Ok
Set selection to	Jo	Cancel

×
_ Ok
Cancel

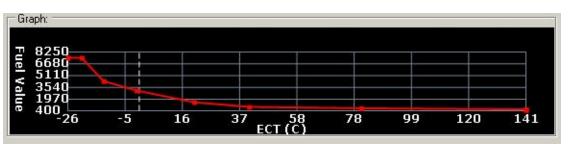
Adjust Table	
Percentage change: 0	. Ok
reicentage change. jo	Cancel

2D		IAT (C)	-26	-21	-13	-1	20	50	70	99	141
		Idle & Light Load	10	6	4	2	2	1	0	-1	-1
		Mid Load	14	10	8	5	3	1	-1	-2	-3
	1	High Load	19	16	12	8	4	1	-2	-4	-6

Advance table trace

#### **Advance Table Trace:**

When datalogging is active you will see in most advance tables a trace where the current ecu reads.



Advance table graph

After clicking the 2d button or Right click "show 2d graph", you will see a 2d graph of the data.

## Import/Export

## **Chip Operations**

## **Communication Errors**

## Error (MIL) Codes

Error Co	des	_ 🗆 🗙
Code	Description	
		Error Cod

#### When you have an error code:

MIL led will turn on

MIL in the datalogging data(parameters) window will turn ON(RED) (double clicking will open the error code window)

#### To view error codes:

Click "Error codes" on the view toolbar

Error Codes Error Error Codes Error Codes Error Codes Error Codes Error Error Codes Error Error Codes Error Error Error Error Error Codes Error Error



Click "View" -> "Error codes" Shortcut: *CTRL* + *E* 

#### **Clear Error Codes:**

Click "Clear DTC(error codes)" after right-clicking on the datalog grid Click "Clear DTC(error codes)" after right-clicking on the error code list Click "Tools"->"Clear DTC(error codes)

## **Updating eCtune**

#### Methods to update:

- <u>During loading</u>
- <u>Force update</u>
- <u>Check for update</u>

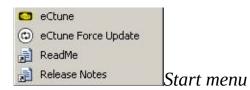
If there is an update and you update your installation these are the step you will see.

🕲 eCtune WebUpdate	×
Cancel	
	During update you will see this
eCtune Webupdate	
eCtune is updated to 0.0.1.7.	
OK ]	
Finished	

After the update completes the changelog will be displayed and you will be able to use the latest version of eCtune.

## Force update

To force a update go to **Start-> All programs -> eCtune -> eCtune Force Update** 

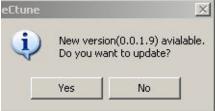


### **Check for update**

To check to see if you are using the latest version of eCtune, select **Help -> Check for update** from eCtune's menu.



### If there is an update you will see:



### If there is no update you will see:

eCtune		×
You have the latest version.	You can always run "force update" to dov	vnload the server version.

## Check for update on load

This setting allows eCtune to automatically check for updates when the program is first ran. To enable this feature in eCtune, select **Settings**, then the **Main** tab.

Check for update on lau		VI	
eEtune Loading	Developer Version: 0.0.1.8	×	
Warning: This co treaties. Unautho of it, may result in the maximum exte	Version Update New version(0.0.1.9) avialable. Do you want to update?	d international or any portion roscecuted to	
Copyright © 2006 info@ectune.con	Yes No	e author at	
Cancel update Update found on update ser	ver		
	Y GI		Loading screen eCtun

## Tools

- <u>Injector Calibration</u>
  <u>Tps Calibration</u>

- <u>Timing Sync</u>
  <u>Kill Injectors</u>
  <u>Boost Table Setup</u>
- <u>Rpm Scalar Setup</u>
  <u>Map Scalar Setup</u>

## **Timing sync**

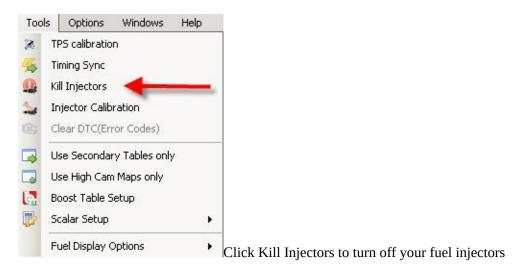
To Sync your ignition to 16.5 go to **Tools -> Ignition Sync** 

Ignition Syr	nc			×	
Base Timing:	16	•		Sync	
Ignition Lock:	16.5	] •		Close	
					Startup screen ignition sync
🛃 Ignition Sy	nc			×	1
Base Timing:	16	•		End Sync	
Ignition Lock:	16.5	]•		Close	
Ignitic	on lo	ock a	t 16.5	)°	
Ignition sync	lock 16.5	5 enable			

Note: For ignition lock to work an emulator must be connected and real-time update enabled.

### **Kill Injectors**

When this feature is enables, the injectors will not fire. This feature can be useful to free-air calibrate a wideband or measure your compression.



### **Boost table setup**

🚰 Boost Table Setup	X
Table Selection Current Set Maps Selected Maps Primary Maps Secondary Maps 1	Fuel Adjustment: C Don't Change C Set to last vacumn column Add fuel under boost 120 % naturally aspriated fuel values
Apply Cancel	Ignition Adjustment: Don't Change Set to last vacumn column Retard ignition 0.75 degrees/psi Step Retard: 0 Psi to 3 Psi: 0.08 degrees/psi
	3Psi to5Psi:0.15degrees/psi5Psi to7Psi:0.25degrees/psi
	7     Psi to     12     Psi:     0.5     degrees/psi       12     Psi to     30     Psi:     0.75     degrees/psi   Boost Te

#### **Boost table setup:**

- 1: Select which map set you want to adjust
- 2: Fuel Adjustment:

Boost fuel sets how much additional fuel to add to the boost portion of the basemap. The more efficent the turbo is, the higher you want to set this number.

A good starting point is usually 120%

3: Ignition Adjustment:

Retard per psi: This will retard a specified amount timing per PSI(starting at the first boost column) Step retard: This will retard your ignition in steps. Lower boost less retard

Click here to read more on Step Retard.

### **RPM scalar setup**

🖶 Rpm Scalar Setup	2	×
Rpm Scalar Setup: Don't Change		
New Rpm Scalar(Increment)     Start rpm:     Increase	rpm, starting at row 0	-
New Rpm Scalar(Divide) Start rpm:		
End rpm: 0 Starting at row: 0		
Cancel	Apply	Rpm scalar se

**Note:** This will adjust the currently selected rpm scale. For example if the low cam primary map is selected, then the scalar changes will be applied to that table only.

### Increment

Start rpm:	The rpm the first given row will get
Increase:	Amount of rpm the following row get increased
Starting row:	Which row you start adjusting
Note:	You can make the first row increase e.g. 300 rpm and afterward 500 rpm

### Divide

Start rpm:	The start rpm of your rpm band
End rpm:	The end rpm of your rpm band
Starting row:	Start row
Note:	The rpm band will be devide into row(start) till the last row.

### Map scalar setup

Boost Scalar Setup	×
loost Scalar Setup:	
Don't Change	
New Boost Scalar(Incremer	nt)
Start pressure: 0	PSI
Increase 0	PSI, starting at column 11
New Boost Scalar(Divide)	
Start pressure: 0	PSI
End pressure: 20	PSI
Starting at column: 11	-

**NOTE:** This will adjust the map scalar for the selected map set(primary or secondary)

#### Increment

Start psi:The first boost value for the first column. Specify 0 here and the first column with get theincrement.Increase:Amount of psi the load increments each column

Column: The first boost column

**Note:** You can specify 1 psi increment for the first 3psi (e.g. column 11,12,13) then 2 psi increments for the following 4 columns.

### Divide

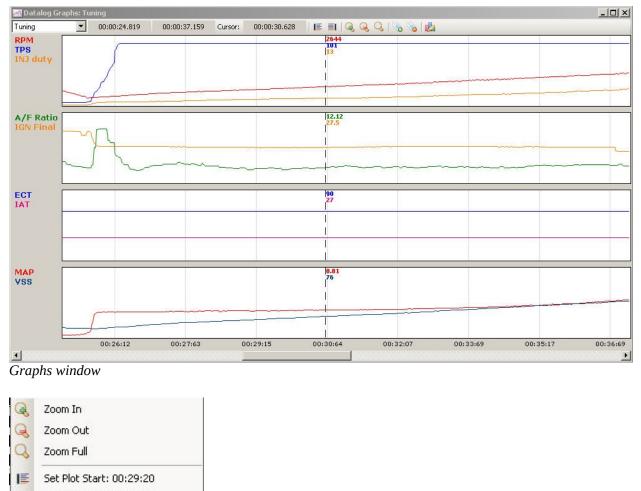
Coloumn:Fill in the first boost columnStart pressure:The start psi for the first given columnEnd pressure:End psi for the last columnThis will divide the boost range over the boost columns of your map

# **Tables and Graphs**

- <u>Table Editing</u> <u>Graphs</u>

## **Table Editing**

## Graphs



**EI** Set Plot End: 00:29:20 Set Marker at: 00:29:20 0

Clear All Markers . Edit Templates

~ Show Data at cursor

### Graphs Context menu(right-click)

#### **Datalogging Graphs:**

12

- Template: Select the template you want to use
- Show data at cursor: This will show the data from the plots at the current cursor.
- Zoom In: This will zoom in the datalog
- Zoom out: This will zoom out if the datalog is zoomed in
- Zoom full: this will show the complete datalog
- Set Marker: This will put a cursor marker with data where the mouse is. We scrolling through the log file

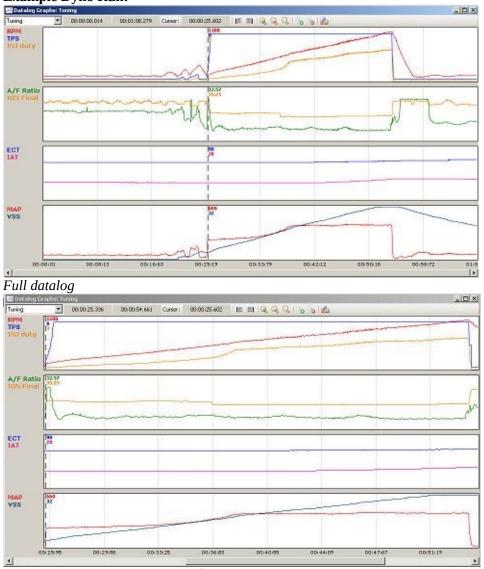
-

- you can see where you put flags(markers)
- Clear all markers: This will remove all the markers currently set.

- Set plot start: This will set the plot start frame(time)

- Set plot end: This will set the plot end frame(time)

Note: If a datalog is fully ploted you can zoom in on a piece of the log with plot start and plot end



#### **Example Dyno Run:**

Used plot start at the beginning of the run Used plot end at the end of the run

#### **Datalogging Graphs Information:**



#### **Graph Shortcuts:**

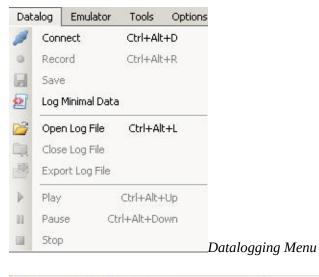
- Left/Right: Scroll through log file Ctrl + Left:
- Move datalog cursor left(small step) Move datalog cursor right(small step) Ctrl + Right:
- Ctrl + Shift + Left: Move datalog cursor left(large step)
- Ctrl + Shift + Right: Move datalog cursor right(large step)
- Ctrl + Shift + Up: Zoom in Ctrl + Shift + Down: Zoom out

## Datalogging

- <u>Logging</u><u>Graphs</u>

- <u>Graphs</u>
  <u>Graph Templates</u>
  <u>Review Log File</u>
  <u>Datalog Display</u>
  <u>Customize Datalog Display</u>
  <u>Datalog Parameters</u>
  <u>Sensor Setup</u>

### Logging



Ø • □ | 🚰 □ | 4 ▶ ≫ n □ | ↓

Datalogging Toolbar

#### **Connect To Ecu:**

Click "Datalog "->"Connect" Click Connect Icon(first from left) on the tool bar Note: If auto-scan datalogging is enabled in setting it takes a little longer to connect to the ecu.

#### **Record datalog:**

The datalog will be recored in a temp log file(eCtune diretory ~tmp.elf). If eCtune ever crashes you can open that file to review your last log. Click "Datalog" -> "Record" Click Record icon(second from left) on datalog toolbar

#### Save datalog:

Click "Datalog" -> "Save" Click Save icon on the datalog toolbar

#### **Datalogging Options(Settings menu):**

Sampling rate: Set how fast your display will be updated. To much data to fast makes your screen unreadable

Load datalog after recording: If this is enabled after recording the temporary log file is loaded after recording stopped. You view graphs to see where something went wrong.

Add data and time to log file: This will add the time and date to filename when saving a log file Record on connection: This will start recording as soons as a connection to the ecu is made Play datalog on load: This will start playing the datalog when opened

#### Shortcuts:

Connect to ecu: CTRL + ALT + D Record: CTRL + ALT + R

### **Templates**

ning	Add	Remove	Close
emplate Graph 1   Graph 2   Gr	aph 3 Graph 4	Name: Tuning	
Plot 1: RPM		Graphs:	
Plot 2: TPS	•	Graph 1	
Plot 3: NJ duty	<b>_</b>	Graph 3	
Plot 4:	<b>•</b>	Graph 4	

#### **Graph Templates:**

You can make different templates to see data you want easy.

- Add: Click "Add" to add a new template to the template collection
- Name: The name of the template
- Remove: Click "Remove" to remove the current template
- Graphs: Enable how many plots there will be in this template
- Plot1-5: Select the sensor(parameters) you want to view(also set the color)

Example:

Closeloop(if you are testing wideabnd closeloop) Tuning(to see all important tuning sensors) EBC(to see your duty and target/current)

### **Review log file**



#### **Review a datalog file:**

- 1: Open a log file
- 2: Close a log file
- 3: Play a log file in reverse mode
- 4: Play log file
- 5: Play log file a in fast mode
- 6: Pause a log file
- 7: Stop a log file
- 8: Current index time and total log file time
- 9: Track bar to scroll through the log file

Note: during play back you can move the trackbar

## **Datalog Display**



Datalogging display

#### **Datalogging display:**

This displays all nessary data you need during tuning. You can customize this display(click here).

#### Data Display(example INJ):

INJ: Injector data Primary data: Duty cycle Secondary Data: Injector duration Warning color: If you setup warning colors in sensor setup the back ground will color orange to red(<u>click</u> <u>here</u>).

	Add Data Display	
	Add Led Display	
	Remove O2	
	Set Type	۲
	Move Left	
	Move Right	
	Restore Defaults	
~	Show Secondary Data	
	Show Graph(bar)	
	Don't color AF box	
~	Color back based on AF	
	Color Text based on AF	

Context menu display item(Exmaple right click on o2 display item)

#### **Context menu:**

Add Data display: This adds a new data display(<u>see customize display</u>) Add Led display: This adds a new led display Remove o2: This removes the current display Move left: Move the current item one to the left Move right: Move the current item one to the right Restore defaults: This restore the default display items Show Secondary data: This enable/disable secondary data for current display item Note: Some display items have extra options

### **Customize Display**

	Add Data Display		
	Add Led Display		
	Remove O2		
	Set Type	•	
	Move Left		
	Move Right		
	Restore Defaults		
~	Show Secondary Data		
	Show Graph(bar)		
	Don't color AF box		
~	Color back based on AF		
	Color Text based on AF		Context menu display item

Click "**add data display**". You will see the following in your display window.(note if you don't see it make your display window bigger)



Right click the "New" Item. Then go to "Set type" and select the display you want.

	<b>E</b> 1.
	o2Trim
	gear
	VSS
	bstctrl
	bat
	ect
	iat
	ign
	inj
	tps
	o2
	map
	rpm
0	

Note: Expect this list to get bigger

### **Datalog Paramers**

Data	Value	
RPM		
VSS	kmh	
Gear		
MAP	mBar	
Boost		
PA	mBar	
TPS	%	
TPS Voltage	V	
INJ duration	ms	
INJ duty	%	
Fuel Value		
IGN Final	*	
IGN Table		
ECT	*C	
IAT	°C	
A/F Ratio	afr	
02V wideband	V	
BAT Voltage	V	
ELD Voltage	V	
MAP Voltage	V	
MIL		
Frame		
Interval	ms	
Duration		

Datalogging Data

**Datalogging Data(Parameters):** This displays all the data collected from the ecu.

#### **Context Menu:**

Sensor Setup Clear DTC(error codes) View error Codes Log mininal

### **Sensor Setup**

Sensor List —		N:	 Sensor Detail	-	
Sensor Tag	Display Name	Description	Tag:	ltbu	Default
rpm	RPM	Engine speed	Display name:	RPM	
VSS	VSS	Vehicle speed	Sensor Desc:	Engine spe	ed
gear	Gear	Vehicle gear			1.1.1
map	MAP	Manifold abosolute pressure			
boost	Boost	Manifold boost	Warning Min:	9000	Warning Max: 9500
pa	PA	Athmopheric pressure	Show Parm List		
tps	TPS	Throttle position sensor	SHOW FOR EIST	• • • • • •	
tpsV	TPS Voltage	Throttle position sensor voltage	Close		
injDur	INJ duration	Opening time of the injectors			
injDuty	INJ duty	Injector duty cycle			
injFV	Fuel Value	The final fuel value			
ignFnl	IGN Final	Ignition advance final			
ignTbl	IGN Table	Ignition advance from ignition table			
ect	ECT	Engine coolant temperature sensor			
iat	IAT	Intake air temperature sensor			
afr	A/F Ratio	Air fuel ratio			
ecu02V	02 V ecu	o2 input on d14			
ω60.2V	02V wideband	Wideband Input ecu			

Sensor setup

#### Sensor List:

all the datalogging parameters Sensor tag: The internal name of the sensor in eCtune Display name: This name will be displayed in the datalogging data window Description: Description for the parameter

#### Sensor Detail:

Here you can change: display name, sensor description, warning min and warning max. Warning: you can fill in a min and max value. The background(grid/display) will go from orange to red.

### **Tuner Tools**

- <u>Map Trace Trails</u>
  <u>Live Plots</u>
- Live Plot Time Vs AFR
- Live Plot RPM Vs AFR/Boost
  Live Plot RPM Vs Accel
- <u>Smart Tracking</u>

## Live plots

- Time Vs AFR
- RPM Vs AFR/Boost
- RPM Vs Accel

### Time vs AFR

### **RPM Vs AFR/Boost**

### **RPM Vs Accel**

## **Smart Tracking**

# **Realtime programming**

- <u>Downloading</u>
  <u>Upload Calibration</u>
  <u>Upload Base ROM</u>
  <u>Verify</u>

## Downloading

# **Upload Calibration**

# Upload Base ROM

## Verify

## **Rom Parameters**

These topics will guide you through the rom parameters

- <u>Main Settings</u>
- Fuel and Ignition corrections
- <u>Features</u>
- <u>Boost settings</u>

### **Main Settings**

- B Main Settings
  - Rom Options
  - Map Sensor
  - Idle Settings
  - Vtec Settings
  - IAB Settings
  - Rev Limiter Settings
  - Fuel Cut Settings
  - Closeloop
  - Tps Sensor
  - Rom Comments
  - Fuel & Ign Table settings
  - Purge Valve(PCS)

#### • <u>Rom options</u>

- <u>Map sensor</u>
- <u>Idle settings</u>
- <u>Vtec settings</u>
- <u>IAB settings</u>
- <u>Rev limits</u>
- <u>Fuelcut settings</u>
- <u>Closeloop</u>
- <u>Tps sensor</u>
- <u>Comments</u>
- <u>Fuel and Ign table settings</u>
- <u>Purge valve(PCS)</u>

## **Rom Options**

Rom Options:	1
I Disable knock sensor	
I Disable ELD	
Disable PA(baro)	
I Disable Injector Test	
✓ Disable 02 heater	
I Disable Closeloop Only	
Disable Closeloop + VE correction (Stock)	
Disable VTEC	
I Disable VE correction	
🔽 Disable Auto tranny	
I Disable IAB	
Disable STS(Starter Signal) input	
I Disable Altenator Control	
Ignition Corrections:	
Disable ignition correction above 1028 mBar	
Caution!: This disables stock ignition corrections. Ect/lat/Cylinder/Gear/Anti-lag corrections are still active.	
Gear Ratio:	
Tranny: Integra GSR USDM 94+	
Custom Batio	
r Batio's Baw	
gear 1: 70 gear 2: 110 Save	
gear 3: 154 gear 4: 196	
	Rom options

### **MAP Sensor**

or:    nbar @0V:   mbar @5V  ngine Off:   <sup>-</sup>	3155	mBar mBar V				
, mbar @5∨; 	3155	mBar				
ngine Off: 🦵	1.62	V				
						Map se
	ettings :et Map S	ettings	ettings	ettings 🔀	ettings	ettings

## **Idle Settings**

	t Idle: 94		rpm							
IAC	V Settings:	-								1
	V duty: 👘				$\vdash$			18%		
A-1200	•••••••••••••••••••••••••••••••••••••••	• •	6.3	• •	÷ .	- 9 4	1.1			
	Disable IAC	V error								
	Disable IAC get Idle Ma			a		a				
			20	30	40	60	81	141		
Tar	get Idle Ma	p:		30 1450	40 1300	60 1000	07.02 0	141	 	

## **VTEC Settings**

-Vtec Settings:	-			
	EC routine			
	TEC speed (			
Disable V1	TEC ect che	eck		
Disable V1	TEC pressur	e sensor		
Disable V1	TEC solenoi	d error		
Disable V1	TEC error cł	neck(Race use	e only!)	
Disengage	e VTEC belr	ow minimum lo	ad	
1000				
Minium Load:	100	mBar		
Minium Ect:	57	C		
Minium Speed	± 8	kmh		
	500	and balance		
Disengage:	1000	rpm below	engage rpm	
Vtec Points:				
Low load:	5600	rpm 15	tos %	
High load:	5100	rpm 40	tps %	
Note: Vtec rp tps low load			en tps is between	
(ps iow ioau i	anu (ps nigr	HUGU.		VTEC sett
				virt Sett

## **IAB Settings**

-IAB Settings:		
🗌 IAB enable		
USDM/ED	M ecu(gnd output)	
IAB rpm:		
Set: 5750	rpm	
Reset: 5450	rpm	

IAB settings

#### **Rev Limits**

– Rev limits & C	)ptions: —				
Cverall Rev	limit:			5	
Low cam:	Set	7022	rpm		
	Reset:	6970	rpm		
High cam:	Set:	8600	rpm		
	Reset:	8561	rpm		
Rev Limter	Туре:				
C Fuel Cut					
C Ignition C	Cut				
Fuel + Ig	nition Cut				Day limita & Onti

Rev limits & Options

# **Fuel Cut Settings**

Below tps: 5 % Below load: 128 mBar Fuel cut delay: 600 mSec Overrun Tps vs Rpm: 2D tps(%) 9 6 rpm 3000 1400 Overrun: When fuelcut active(mbar/tps based) fuel withe us the dube a presenter is below the end	Decel FuelCu	t Conditio	ns:	
Fuel cut delay:       600 mSec         Overrun Tps vs Rpm:       2D         2D       tps(%)       9         pm       3000       1400         Overrun:       When fuelcut active(mbar/tps based) fuel	Below tps:	5	*	
Overrun Tps vs Rpm: 2D tps(%) 9 6 rpm 3000 1400 Overrun: When fuelcut active(mbar/tps based) fuel	Below load:	128	mBar	
2D     tps(%)     9     6       rpm     3000     1400   Overrun: When fuelcut active(mbar/tps based) fuel	Fuel cut delay	600	mSec	
will be restored when current rpm is below the rpm from the table above.	2D tr	tps(%) rpm 3 en fuelcut d when c	000 1400 active(mbar/tps based) fuel	



# Closeloop

Options:							
Disable Closeloop							
Disable 02 heater							
🔲 Wideband as closeloop inp	ut						
Closeloop Settings:	-		80.90 Y				
Target 02 volt:	0.5	1	V				
Max load for closeloop:	750		mBar				
Minium ECT for closeloop:	81		С				
Maxium IAT for closeloop:	74	-	С				
Maximum 02 volt for closeloop:	1.5	1	v				
Stock Closeloop Disable by Tp	)s :						
2D Prpm	8000	4000	3000	2000	1500	) 500	
openloop tps(%)	44	44	37	28	22	16	
closeloop tps(%)	41	41	35	25	19	13	
Correction Settings:							
Minimum closeloop adjustment:	-30		%				
Maximum closeloop adjustment:	47	-	%				
		18	200				Closel

settings

#### **TPS Sensor**

Enable tps	sensor rescaling			
Tps Volt Set	tings:			
Tps sensor:	Stock Honda	<b>X</b>		
Min (0%):	0.47 V			
Max (100%):	4.55 V			
			TPS	sensor

#### **ROM Comments**

Here you can add comments to the calibration. Comments are save both in the binary(tuner version) and calibration.

# **Fuel And Ign Table Settings**

High Cam Map only: 🔲 Secondary Maps only: 🗖	_	
Fuel & Ign table columns: 10 Fuel & Ign table rows: Table Indexing:		
Primary Tables:     Map Sensor indexing     TPS Sensor indexing     Alpha-N indexing	Secondary Tables: Map Sensor indexing TPS Sensor indexing Alpha-N indexing	
Alpha-N Settings: MAP value with tps 0%:	mbar	
MAP value with tps 100%:	mbar %	
Alpha-N Map crossover:	mbar	Fuel

Ignition Table settings

### **Purge Valve (PCS)**

Purge Valve(PCS) Settings:

Disable PCS

Invert PCS (obd2b)

valve(PCS) Settings

**Disable PCS:** Disables the Purge valve function in the ECU.

**Invert PCS:** Some obd2 cars have their PCS signal inverted. You may need to invert the output otherwise it may cause the PCS to stay open causing a vaccum leak.

Purge

#### **Fuel And Ignition Corrections**

- E Ignition & Fuel Corrections
  - Injector Calibration
  - Fuel Trims
  - ECT Corrections
  - IAT Corrections
  - Individual Cyl Corrections
  - Gear Corrections
  - Crank Fuel Map
  - Post Fuel Map
  - VE Correction
  - Dwell Ignition Corrections
  - <u>Injector calibration</u>
  - <u>Fuel Trims</u>
  - ECT corrections
  - <u>IAT corrections</u>
  - Individual Cylinder Corrections
  - <u>Gear Corrections</u>
  - Crank Fuel Map
  - Post Start Map
  - <u>VE correction</u>
  - <u>Dwell Ignition Corrections</u>
  - <u>About Advance Tables</u>

# **Injector Calibration**

1	oration:							
Injector Siz		g: 240	1					
Stock Injec	tor Flow Ratin	g:  240	cc					
Current Inje	ctor Flow Rati	ng: 1000	cc					
Injector Tri			1					
Injector(Fin	al) multiplier:	0.240						
Injector offs	set:	81.00	FV					
Overall Fue	l Trim:	0	%					
			1					
Battery Off:	_					-		
njectors(ba	at offset): Pre	ecision Turbo	1000cc (95	lb) 2ohm		-		
	Volts(V)	15.98 14.0	1 13.02 1	1.98 10.99	9.02 6.	99		
2D	Offset(ms)	1.03 1.05		.70 2.03	CONCINENTIAL PURCH	58		
	Onsequisy	1.00 1.00	1.00 10		0.02 1.			
Graph:								
an april								
6								
<u> </u>								
0ff 5	-							
	1							
	1							
	1							
54の21 Offset(ms)	5	8	9	11 Volts(V	L.	13	14	16

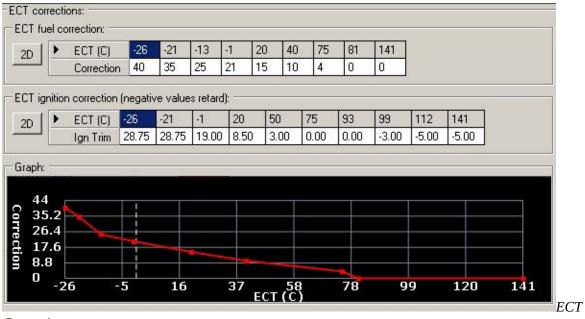
calibration

Injector

### **Fuel Trims**

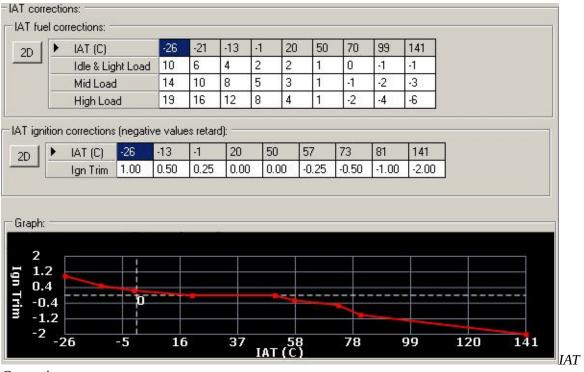
- Fuel Trims:			
Injector(Final) Multiplier:	0.240		
Overall Fuel Trim:	0	%	
Cranking Trim:	.76	%	
Post Start Trim:	0	%	
02 correction Trim:	0	%	
Tps Tip-in:	50	%	Fuel Trims

#### **ECT Corrections**



Corrections

### **IAT corrections**



Corrections

# **Individual Cylinder Corrections**

	Cylinder	1	3	4	2
1	Fuel trim	0	9	5	0
ler ig	phition trim (n	egative	1000	etard): -	1-2
er ig	nition trim (n Cylinder	egative 1	values n 3	etard): - 4 -0.25	2

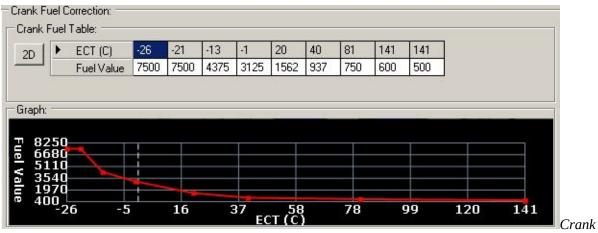
Individual Cylinder Corrections

### **Gear Corrections**

mum ear fu		ed: 16 m:	kmh				
D	•	Gear	1	2	3	4	5
	0	Fuel trim	0	0	0	0	0
earig	nitio	n trim (nega Gear	tive val	ues retai	rd):	4	5
	-	lan trim	0.00	0.00	0.00	0.00	0.00

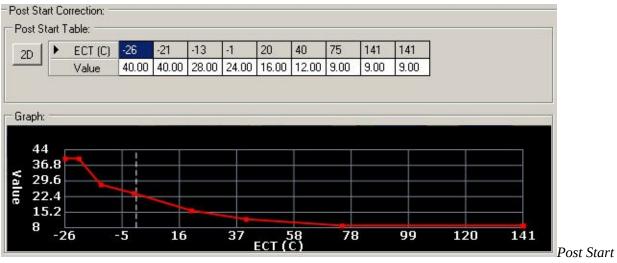
Gear Corrections

### **Crank Fuel Map**



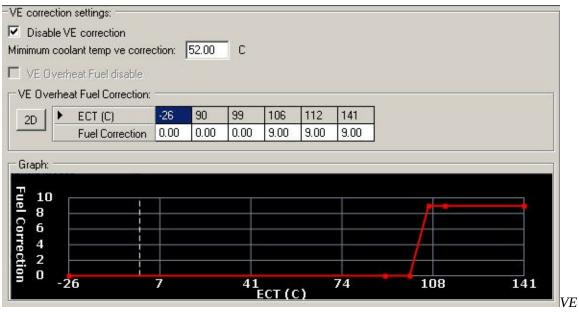
Fuel Corrections

### **Post Start Map**



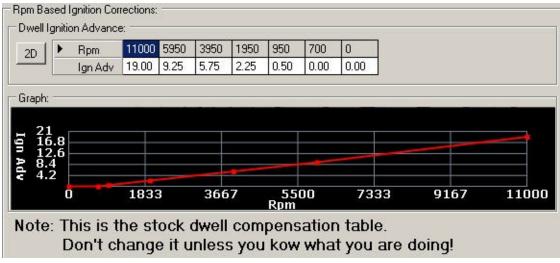
Correction

#### **VE Corrections**



Corrections setting

#### **Dwell Ignition Corrections**



Dwell Ignition settings

#### Features

- ⊨ Features
  - Service Check Connector
  - Fuel Pump Settings
  - Secondary Map Settings
  - Output Control
  - # 3-Step Settings
  - MIL ShiftLight
  - Air Conditioning
  - Radiator Fan Settings
  - Anti-Start Device
  - <u>Service Check Connector</u>
  - <u>Fuel pump setting</u>
  - <u>Secondary Map settings</u>
  - <u>Output Control(General Purpose Outputs)</u>
    - <u>GPO</u>
    - <u>GPO Fuel and Ignition Settings</u>
- <u>3-Step Settings</u>
  - <u>Anti-lag</u>
  - Full Throttle Shift
  - Launch Control
- <u>MIL Shiflight</u>
- <u>Air Conditioning</u>
- <u>Radiator Fan Settings</u>
- <u>Anti-Start Device</u>

#### Service check connector

-Service Che	ck Connector Input:
SCC input:	Service Check Connector (D4) 💌
	Invert Input
without placin To flash code	"KOEO TPS BASED" your MIL can flash ECU codes ng a jumper in the service connector. es, turn the key on, engine off, and press the throttle more then 50%. error codes, simply press the brake pedal when codes are flashing.

Service check connector input

**SCC Input:** Use any any input as SCC connector

#### KOEO TPS BASED: Your MIL will flash ecu codes.

To flash codes, turn the key on, engine off and press the throttle more then 50% To clear the current error codes, press the brake pedal while codes are flashing.

#### **Fuel Pump control**

Fuel Pump 9	Settings:		
Fuel Pump:	Normal	-	
	Normal Always On (Drain Tank)		
	Always On (Drain Tank) Always Off (Fuel Off)		Fuel Pump Settings

Fuel Pump:

Normal: The fuel pump will work as stock.

If you switch you key, your pump will prime and turn off again.

After starting your car the fuel pump will turn back on(when starter signal input is active)

Always ON: you fuel pump will be on as soon as your key is ON.

This can be usefull to drain your fuel tank

Always OFF: your fuel pump will be always off

This can be usefull to free-air calibrate a wideband or messure your compression(no fuel in the cylinders)

# Secondary Map Settings

Secondary	Map Activation:	000	Activate with General Purpose Output Input Switch Condition Based
Secondary	Maps Input Swit	ch:	
Input:	Disabled		
	□ Invert I	nput	
Secondary	Map Crossover:	-	
Minimur	n Load: 🛛 🛛 🗍 35		mbar
Minimun	n Throttle: 12		%
Above F	3pm: 100	)	—

# General Purpose output



- GPO
- Adjustments

# **Fuel And Ignition Corrections**

Fuel Value         0	2D	•	Engine Speed (rpm)	11000	10000	9000	8000	7000	6000	5000	4000	3000	2000	0
	-		Fuel Value	0	0	0	0	0	0	0	0	0	0	0
1 Ignition Trim (negative values retard):	1	Ignit	ion Trim (negative valu	es retard	i):									
0 1 Ignition Trim (negative values retard): 	-	Ignit			<u>.</u>	9000	8000	7000	6000	5000	4000	3000	2000	0

GPO fuel and ignition corrections

# **General Purpose Output**

	1				
GPO 1 Output:					
Output:	MIL (Check	< Engine L	ight A13)	-	
	🔲 Invert C	) utput			
GPO 1 Input: -					
Input	Power Stee	ering Swito	:h (B8)	•	
	Invert In	nput			
Switch to hi	econdary ma igh cam map put if Mil(erro	s on outpu			
Switch to hi	igh cam map put if Mil(erro put if Ftl/Fts/	s on outpu r) code Boostcut a	t active		
Switch to hi Disable out	igh cam map put if Mil(erro put if FtI/Fts/ ion Condition	s on outpu r) code Boostcut a	ıt	rpm	
Switch to hi Disable out Disable out GPO 1 Activati	igh cam map put if Mil(erro put if FtI/Fts/ ion Condition Minimum	s on outpu r) code Boostcut a s:	t active Maximum	rpm mBar	
Switch to hi Disable out Disable out GPO 1 Activati Engine Speed:	igh cam map put if Mil(erro put if FtI/Fts/ ion Condition Minimum 3000	s on outpu r) code Boostcut a s: rpm	t active Maximum [8223	_	
Switch to hi Disable out Disable out GPO 1 Activati Engine Speed: Load: Coolant Temp:	igh cam map put if Mil(erro put if Ftl/Fts/ ion Condition Minimum 3000 -45	s on outpu r) code Boostcut a s: rpm mBar	t Maximum 8223 1790	mBar	
Switch to hi Disable out Disable out GPO 1 Activati Engine Speed: Load:	igh cam map put if Mil(erro put if Ftl/Fts/ ion Condition Minimum 3000 -45 -23	s on outpu r) code Boostcut a s: rpm mBar C	t Maximum 8223 1790 141	mBar C	

General Purpose Output Settings

### **3-Step Settings**

TL input:	Always on		<b>•</b>		
	🗖 Inverti	nput			
TPS based: TPS Base	ed			ŝ	
dinimum rpm:		3000	rpm		
Below Vss:		22	, kmh		
TPS engage	threshold:	35	%		
FPS disengag	ge threshold:	19	*		
VSS based: VSS Base	ed				
aunch rpm:		5514	rpm		
Below Vss:		22	, kmh		

settings

- 35 tep - Anti-Lag Enable Anti-L		
TPS thershold:	75	%
Extra Fuel:	60.00	FV
Ignition Retard:	15.00	degrees
Apply to final	al ignition	

Anti-lag Settings

Clutch Input:	Disabled	*
	Invert Input	
Shift Rpm:	7411 rpm	

Full throttle Shift Settings

See 3-Step guide

### **Full Throttle Shift**

Content goes here

### Launch Control

Content goes here

# MIL shiftlight



MIL Shiftlight settings

# Air Conditioning

Air Conditioning Settin	igs:		
🗖 Disable AC			
AC idle recovery: — Disenage below:	500	rpm	
Engage above:	600	rpm	
AC cut settings: —			
🔲 Enable AC cut		_	
Disengage above rpn	n: 5000	rpm	
Disengage above tps	: 66	%	
		and the second sec	Air Condition Settings

# **Radiator Fan Settings**

C	
(AC Clutch A15)	
nvert Output	
VSS	
ect	
ect	
	C (AC Clutch A15)

Radiator Fan Settings

#### **Anti-Start Device**

Content goes here

#### **Boost settings**

- <u>Options</u>
- Boostcut Settings
- <u>Electronic Boost Controller Settings</u>
  - <u>EBC Settings</u>
  - <u>Solenoid Sonfiguration</u>
  - <u>Duty Lookup Map</u>
  - Boost on Error Map
  - <u>IAT Compensation Map</u>
  - <u>Gear Based Target Maps</u>
  - <u>RPM Based Target Maps</u>
- <u>Manual Boost Controller settings</u>

See guide how to setup EBC

# Options

Content goes here

### **Boost Cut Settings**

Enable boost	cut				
Boostcut Type:					
Limit at current r					
Limit at 1200 rpr	m: C				
Enable boos		eck engi	ne code		
Cold->Hot ECT:		eck engi C	ne code		
			ne code	psi	

Boost Cut Settings

#### **Electronic Boost Controller Settings**

- Electronic Boost Controller Settings
  - Solenoid Configuration
  - Duty Lookup Map
  - Boost On Error Map
  - IAT Compensation Map
  - Gear Based Target Maps
  - Rpm Based Target Maps
- <u>EBC Settings</u>
- <u>Solenoid Configuration</u>
- <u>Duty lookup map</u>
- <u>Boost on error map</u>
- IAT compensation map
- Gear Based Target Maps
- <u>Rpm Based Target Maps</u>

See guide how to setup EBC

### **EBC Settings**

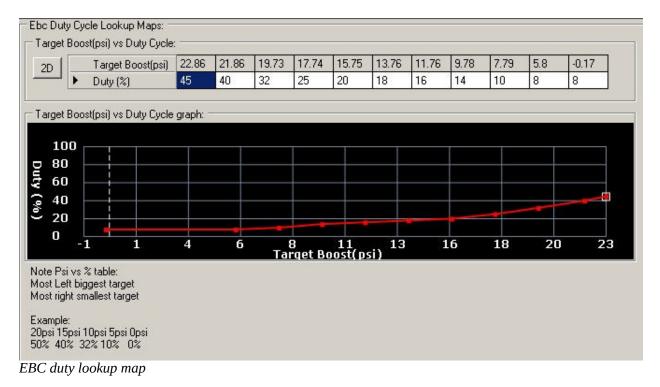
Ebc Activation Input:	Ebc Hi/Lo switch:
Activation: Service Check Connector (	D4) 💌 Hi/Lo Select: AC request (B5)
Invert Input	Invert Input
Ebc Feedback Methode:	Ebc Target Methode:
Duty Lookup	Fixed Duty Cycle Lo: 40.00 %
O Boost On Error	Hi: 15.00 %
Ebc Feedback Activation: 1473 mbar 6.51	— psi C Gear Based
	C Rpm Based
Ebc FastSpool:	
FastSpool Activation: 100 mbar -13	1.40 psi
FastSpool Duty: 100.00 %	
Ebc Feedback Settings:	
Overshoot Timer: 2 x 10 mSec	5
Undershoot Timer: 100 x 10 mSec	
Deadband error: 1 psi	
Ebc Steps:	
->Check if input switch active	gate @ fastspool duty cylce(100% can be used)
->FeedBack/Controller Activation e.g. 5psi: L	Looks up your target psi with Rpm/Gear based
<ul> <li>Target Psi found.</li> <li>Checks if Dutylookup or Boost on error is</li> </ul>	used
-Determents the duty cycle -If Dutylookup is used; adjust dutycycle wi	

# Solenoid Configuration

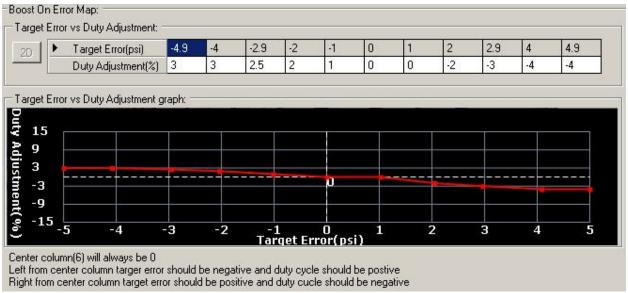
Ebc Output:	
Pin A11(EGR)	
C Pin A17(AT Lockup	
Solenoid Configuration	r —
Normally Open	0% duty maxium boost; 100% duty Minimum boost(GM)
se informally open	

EBC solenoid configuration

#### **Duty Lookup map**



#### **Boost on error map**

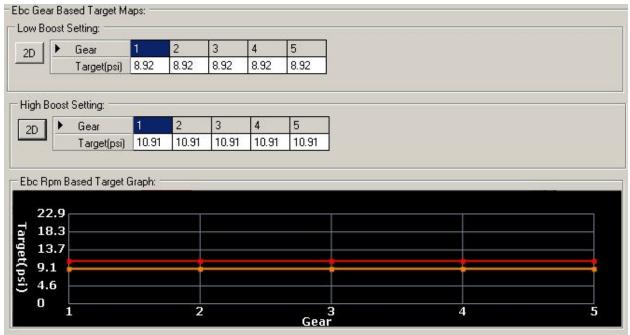


EBC boost on error map

# IAT compensation map

Content goes here

#### **Gear Based target maps**



EBC gear based target maps

# **Rpm Based target maps**

2D	•	Rpm	11000	10000	9000	8000	7000	6000	5000	4000	3000	2000	0	
		Target(psi)	7.79	7.79	7.79	7.79	7.79	7.79	7.79	7.79	7.79	7.79	7.79	
igh B	loost	Setting:												
2D		Rpm	11000	10000	9000	8000	7000	6000	5000	4000	3000	2000	0	
		Target(psi)	9.78	9.78	9.78	9.78	9.78	9.78	9.78	9.78	9.78	9.78	9.78	
10.00		ased Target (	àraph: —											
22 18	2.9 3.3 3.7	ased Target (	àraph: —											

EBC rpm based target maps

### **Manual Boost Controller**

Input:	Disabled			-		
	L invert	Input				
Settings: -			- 2500			
Minimum Er	igine Speed:	1000	rpm			
Minimum Co	olant Temp:	-26	С			
Minimum Th	rottle:	3	%			
Stage 1 Ign	ition Retard:	0	•			
🗖 Disable	boost controlle	er If Mil(err	or) code			
🗖 Disable	boost controlle	er If Ftl/Fts	/Boostcut	active		
Stage 2:						
	ACC (AC	Clutch A1	5)	-		
Output:	and the second sec	Clutch A1	5)	•		
Output:	☐ Invert	: Output	5)	•		
Output: Speed:	and the second sec		5)	•		
Output: Speed: Stage 3:	0	: Output		-		
Output: Speed:	Invert	: Output kmh Clutch A1		•		
Output: Speed: Stage 3: Output:	ACC (AC	: Output kmh Clutch A1!		× ×		
Output: Speed: Stage 3:	Invert	: Output kmh Clutch A1		•		
Output: Speed: Stage 3: Output:	ACC (AC	: Output kmh Clutch A1!		× ×		
Output: Speed: Stage 3: Output: Speed:	ACC (AC	: Output kmh Clutch A1!	5)	× ×		
Output: Speed: Stage 3: Output: Speed: Stage 4:	Invert     O     ACC (AC     Invert     O     ACC (AC	: Output kmh Clutch A1 : Output kmh	5)	× ×		

# **Snapshot Manager**

See <u>snapshot manager guide</u>