

NISTUNE

REALTIME ECU TUNING

Feature Pack Training



Overview

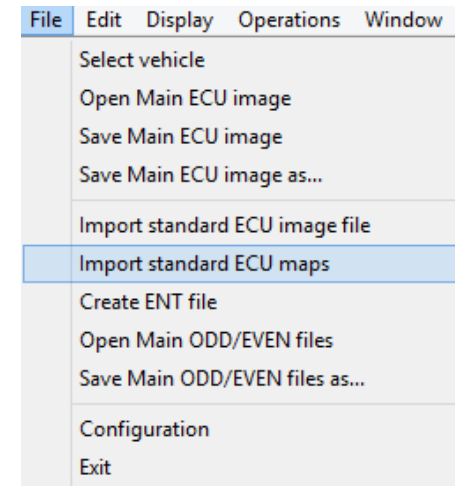
- Adds extra features to standard Nissan ECU
- This is release version 1 which covers:
 - **Flex fuel** (fuel and timing trims based on ethanol content)
 - **Total fuel adjustment** (replaces K constant for injector resize)
 - **Launch control** (fuel cut, ignition retard)
 - **Fan control adjustment** (different operating temps and engine speed)
 - **Added VCT functionality** (for targeted engines RB25DET or SR20VE using earlier ECUs)
 - Remove unused conditional tables (simpler tuning)

Using Feature Pack

- Reprogram Nistune board with upgraded firmware using Base Image Programmer
- Software detects when ECU has been updated

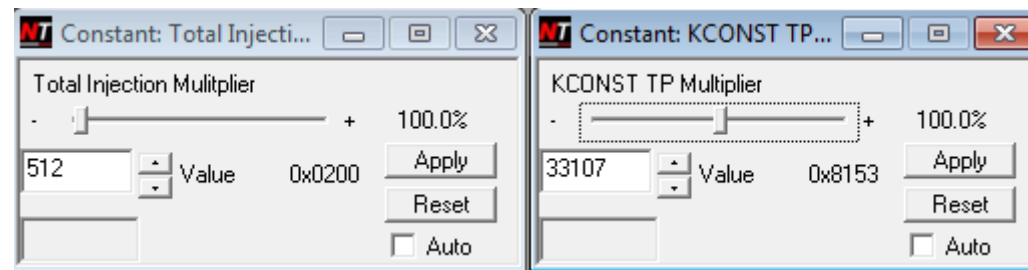
Nistune [S14A(SR20DET) Feature Pack 1.0 (Version: 1)]

- Import previous tunes into the software
- Recommended to start from factory base
- Feature Pack tuning guide on Nistune website documentation pages



Total Fueling Adjustment

- Supplementary parameter for injection control added

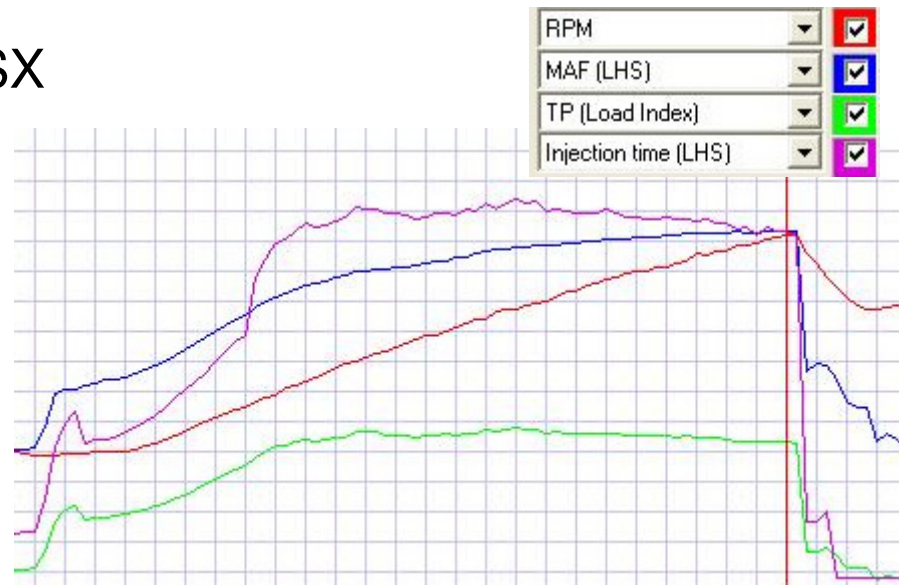


- Adjust total fuel injection without affecting load scales
- Leave factory load scales as default during tuning
- Adjust 'Load multiplier' (K constant) for load adjustment
- Adjust 'Total Injection Multiplier' for final fuel adjustment

Total Fueling Adjustment

- Example power run on S14 200SX

Load	10	16	20	24	29	32	41	48	53	57	62	66	75	77	82	90
800	4	7	11	18	24	28	37	38	36	35	35	35	35	35	35	35
400	194	194	2	7	12	17	28	35	34	34	35	35	35	35	35	35
000	192	193	188	192	5	10	20	34	36	34	35	35	35	35	35	35
800	194	191	190	188	192	5	14	28	31	33	35	35	35	35	35	35
200	194	191	191	188	188	187	8	23	27	31	35	35	35	35	35	35
800	194	191	191	188	188	188	2	9	13	29	35	35	35	35	35	35
400	190	188	190	188	188	189	1	4	10	27	35	35	35	35	35	35
000	191	190	191	188	188	189	1	2	8	24	35	35	35	35	35	35
850	192	191	189	188	189	189	1	1	8	23	35	35	35	35	35	35
200	190	189	190	190	189	188	188	1	2	10	22	28	28	32	36	37
800	191	190	190	190	189	188	188	1	2	4	9	20	24	28	32	35
400	192	194	195	193	190	189	187	1	2	5	10	14	18	22	25	26
000	196	198	198	196	192	189	188	2	4	10	11	12	13	14	15	16
800	195	196	196	194	192	190	188	2	8	10	11	12	13	14	15	16
200	199	198	198	198	197	196	2	8	10	11	12	13	14	15	16	17
00	197	197	199	202	202	202	12	14	15	16	17	18	19	20	21	22



- Make sure your tune utilises the default factory load scales
- Adjust Load (TP) multiplier until range is used after MAF upgrade
- Adjust Total Injection Multiplier (TIM) to adjust total fuel trimming
- Load indexing in the Nissan ECU is left to default to avoid side effects of moving load out of normal range

MAF Adjustment

- HPX MAF inserts have the ability to measure over 500rwkw
- Adjust in the software for the required load range of the vehicle
- Rescale HPX slot MAFs using the Translation Function Generator
- Adjusts Load Multiplier and Total injection multiplier based on range amount



VQ Translation Function Generator

N0	636.90710	Tube Diameter	3.000
N1	-2744.5945	VQ Multiplier	2.40
N2	4837.1694	Load Scaling %	100
N3	-4596.4131	Half Size (GTR ECU)	<input type="checkbox"/>
N4	2595.4258	Adjust TP (K Constant)	<input type="checkbox"/>
N5	-888.41180	Offset Total Injection	<input type="checkbox"/>
N6	182.22015		
N7	-20.518702		
N8	0.97337288	HPXN1	
N9	0.00000000		

Apply Load Save

Constant: Total Injecti...

Total Injection Multiplier

458 Value 0x01CA Apply

65535 Value 0xFFFF Reset

Auto

Constant: KCONST TP ...

KCONST TP Multiplier

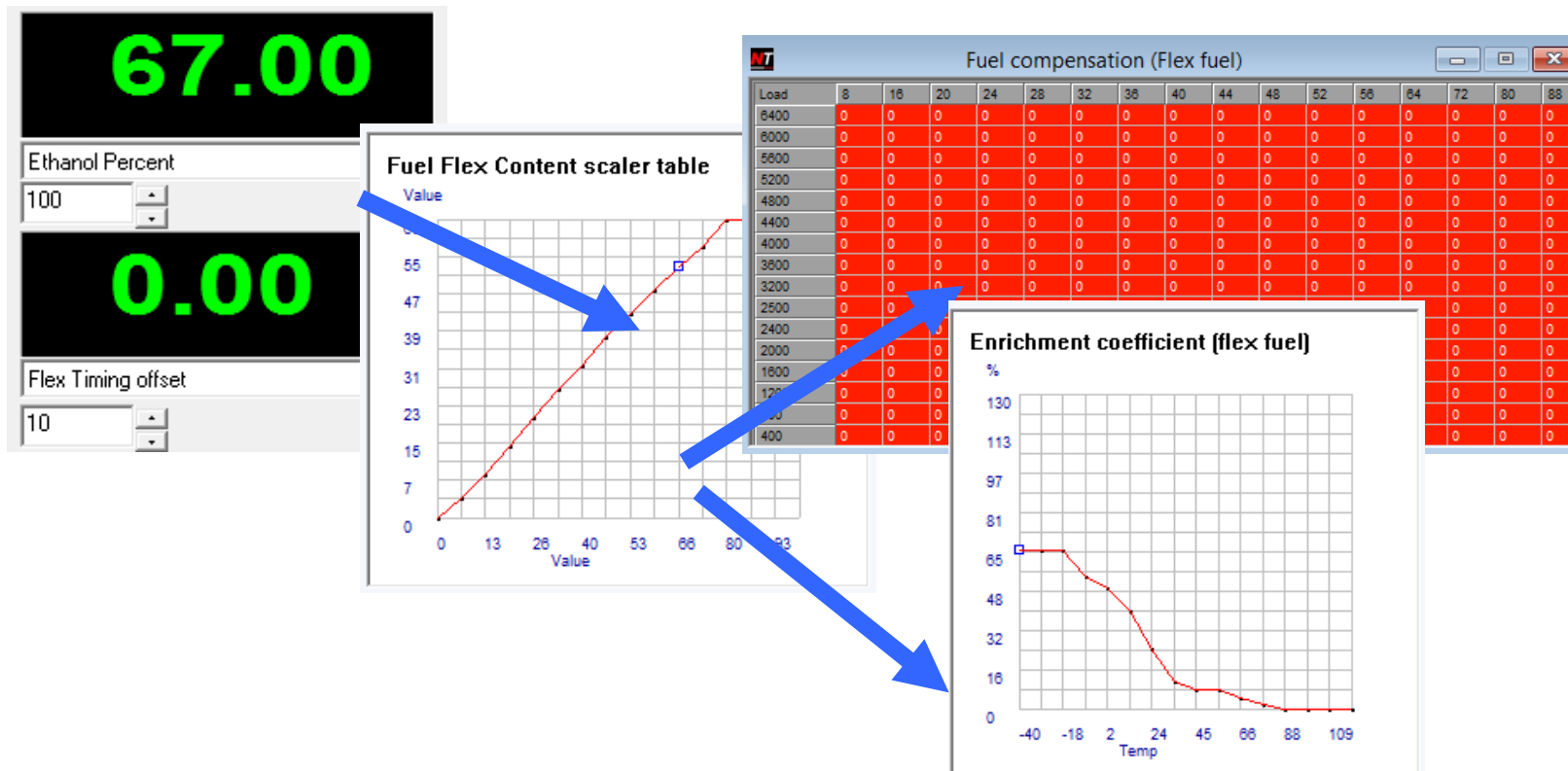
45307 Value 0x80FB Apply

33107 Value 0x8153 Reset

Auto

Flex Fuel Support

- Modelled on popular aftermarket implementations (fuel and timing)
- Reports ethanol content and converts to adjustment percentage



Flex Fuel Hardware

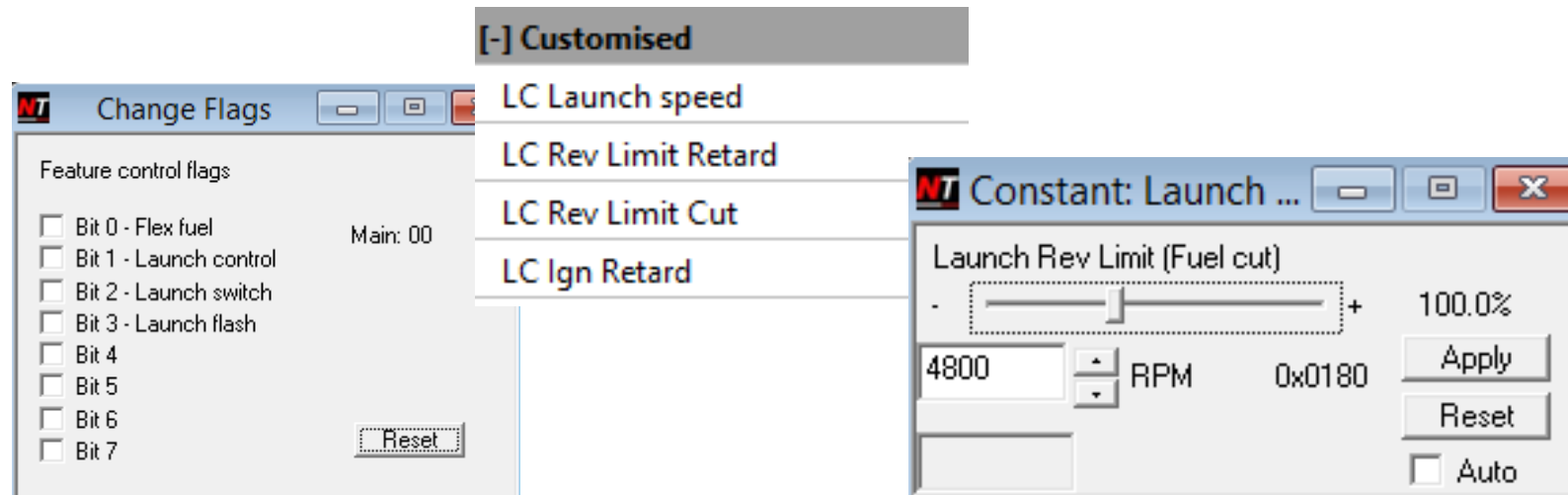
- Installs into standard ECU with minimal soldering
- Uses small converter board and supplied with connector harness fitted to flex sensor in vehicle



- Requires multiple tunes (base tune on 98 octane, high end tune on E85 and then mix tune)

Launch Control

- Adjusts standard rev limiter based on launch speed and RPMs set in the software
- Triggered from speed or external switch input



VCT control

- Support for R33 Skyline RB25DET with VCT
 - Z32 300ZX ECU
 - HCR32 Skyline ECU (23710-04Uxx models using spare output)
- Support for SR20VE engines with VCT
 - B13 SR20DE ECU
 - S13 SR20DET ECU
 - P11 SR20DE ECU
- Add VCT replacing EGR output

