NISSAN GT-R (R35)
STARTDATA MANUAL＝NP5-21 Harness

This document assumes use with CF Adaptor and EVC 6 - IR

NISSAN GT-R ECU Pin-out[NP5-21 Base]

128	124	120	116	112	108	104	100
127	123	119	115	111	107	103	99
126	122	118	114	110	106	102	98
125	121	117	113	109	105	101	97

96	82	88	84	80	76	72	68	64	60	56	52
95	91	87	83	79	75	71	67	63	59	55	51
94	90	86	82	78	74	70	66	62	58	54	50
93	89	85	81	77	73	69	65	61	57	53	49

48	44	40	36	32	28	24	20	16	12	8	4
47	43	39	35	31	27	23	19	15	11	7	3
46	42	38	34	30	26	22	18	14	10	6	2
45	41	37	33	29	25	21	17	13	9	5	1

Please use “R35STARTDATA” file (downloadable from website) and then adjust to suit the specific vehicle.
＊R35STARTDATA is just a base file designed to get the engine started.

Base data is created around high octane gasoline (the octane level is approximately 98-100)using the parts listed below.
In general this is a “boost up” setup with stock injectors.
Due to limitations in stock injectors and fuel pumps, the maximum boost (using EVC) is set around ≒1 .2 k Pa.
Excessive boost can lead to engine damage so please exercise caution.
In House testing showed that boost dropped to ≒1.0kPa during high load/high rpm situations. This seems to be the limit of the stock actuator.

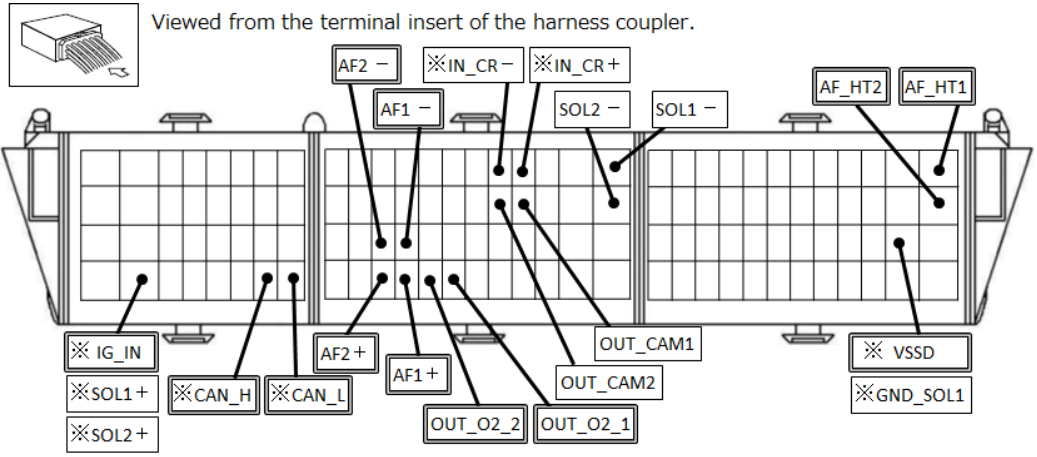
Fitted Parts

- CF Adaptor
- EVC6IR2.4
- LEGAMAX Premium Muffler
- Metal Catalyzer
- M45HL Spark Plug

This file explains how to get started with the base file for NISSAN GT-R (R35) ＝NP5-21 harness. For information about maps, parameters and data logging please see the separate manual for V Pro Ver 3.4

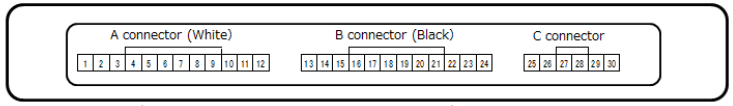
■Notes R35GT-R SETUP (Fitting + Combination with CF Adaptor)

①This assumes use in combination with CF Adaptor.
On an R-35 GT-R, the difference between the F-Con fuel setting and the stock ECU target fueling value causes an Engine Check Light.
This can cause the ECU to go into a failsafe state. Using the CF Adaptor allows learning of the OBD2 data and sends AF Sensor/O2 Sensor signals to the ECU within the expected range to avoid these issues.



CF ADAPTER Terminal Position/Signals

Viewed from the terminal insert of the harness coupler.



A connector (White)

No.	Sig.name	Color
1	IG_IN	Red
2	VSSD	Black
3	SOL1+	Yellow/White
4	SOL1−	Yellow/Black
5	SOL2+	Brown/White
6	SOL2−	Brown/Black
7	GND_SOL1	Green/Black
8	SOL3+	Blue/White
9	SOL3−	Blue/Black
10	SOL4+	Orange/White
11	SOL4−	Orange/Black
12	GND_SOL2	Green/Black

B connector (Black)

No.	Sig.name	Color
13	O2_HT2	Orange/Black
14	AF_HT2	Purple/Black
15	O2_HT1	Orange
16	AF_HT1	Purple
17	AF2−	White/Black
18	AF2+	Blue/Black
19	AF1−	White
20	AF1+	Blue
21	OUT_O2_2	Pink/Black
22	OUT_O2_1	Pink
23	CAN_L	Blue
24	CAN_H	White

C connector

No.	Sig.name	Color
25	IN_CR+	Orange
26	IN_CR−	Black
27	OUT_CAM1	Yellow
28	OUT_CAM2	Brown
29	OUT_CAM3	Blue
30	OUT_CAM4	Pink

⚠Caution

●please be vigilant when wiring. Mistakes in wiring can lead to permanent damage to the vehicle or related products.

Make 2x A Connector and 10x B Connector wiring modifications. C Connector is not used

A Connector

Stock ECU Side

Vehicle Side

CFADP
IGIN（12V+）terminal 1
＊Splice

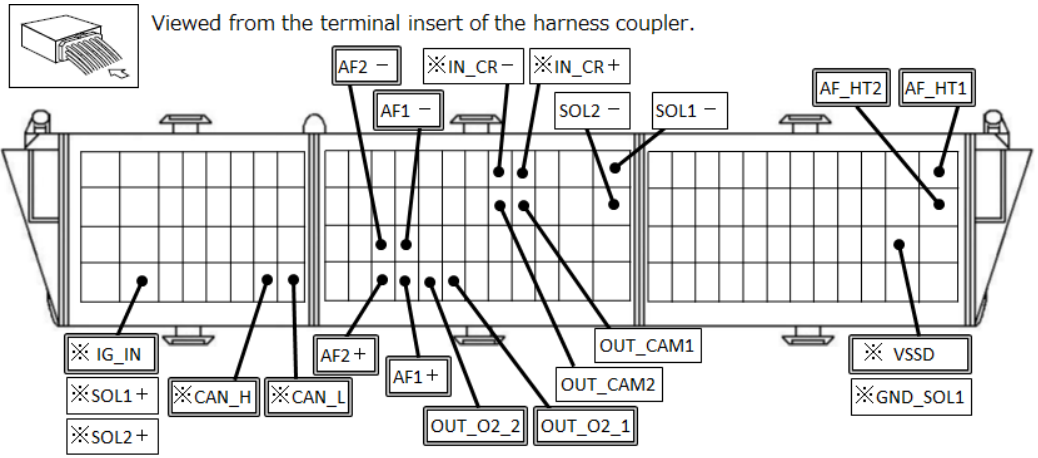
A Connector

Stock ECU Side

Vehicle Side

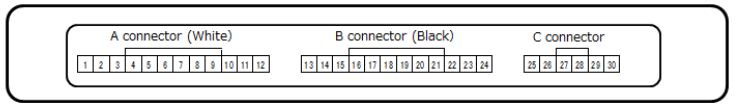
CFADP
VSSD（Earth）Terminal 2
＊Splice

A Connector has only these 2 connections. All others should be disconnected & insulated



CF ADAPTER Terminal Position/Signals

Viewed from the terminal insert of the harness coupler.



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6	SOL2−	Brown/Black
7	GND_SOL1	Green/Black
8	SOL3+	Blue/White
9	SOL3−	Blue/Black
10	SOL4+	Orange/White
11	SOL4−	Orange/Black
12	GND_SOL2	Green/Black

B connector (Black)

No.	Sig.name	Color
13	O2_HT2	Orange/Black
14	AF_HT2	Purple/Black
15	O2_HT1	Orange
16	AF_HT1	Purple
17	AF2−	White/Black
18	AF2+	Blue/Black
19	AF1−	White
20	AF1+	Blue
21	OUT_O2_2	Pink/Black
22	OUT_O2_1	Pink
23	CAN_L	Blue
24	CAN_H	White

C connector

No.	Sig.name	Color
25	IN_CR+	Orange
26	IN_CR−	Black
27	OUT_CAM1	Yellow
28	OUT_CAM2	Brown
29	OUT_CAM3	Blue
30	OUT_CAM4	Pink

⚠Caution

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B Connector has a total of 10 modifications. 2x Splice, 8x “OUT Connection”
Terminal 13 and 15 are not used. Please disconnect and insulate

■AF Sensor Heater Signal（AF_HT2、AF_HT1）

Stock ECU Side → To Adaptor → CFADP AF Sensor Heater 2 terminal 14 ＊OUT Connection

× **Cut and insulate**

Vehicle Side

Stock ECU Side → To Adaptor → CFADP AF Sensor Heater 1 terminal 16 ＊OUT Connection

× **Cut and insulate**

Vehicle Side

■AF2 Signal（AF2−、AF2+）

Stock ECU Side → To Adaptor → CFADP AF2 Negative signal terminal 17 ＊OUT Connection

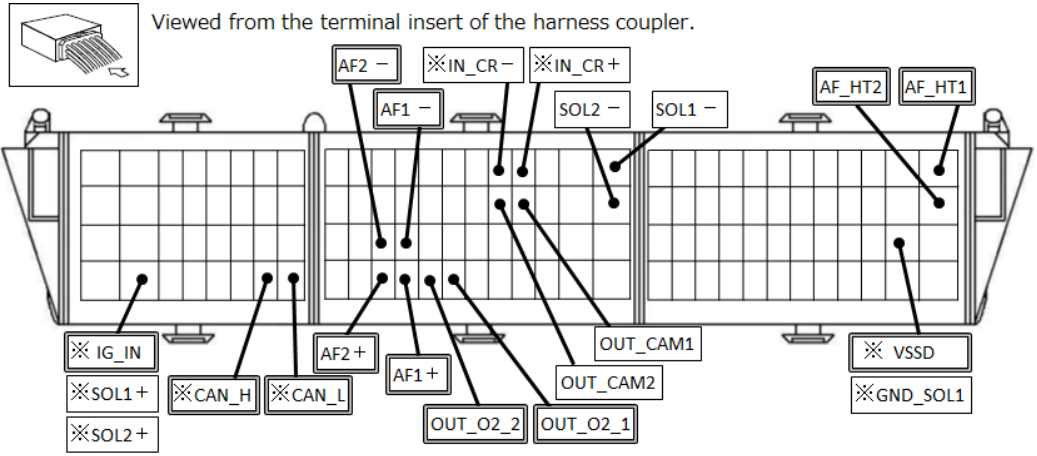
× **Cut and insulate**

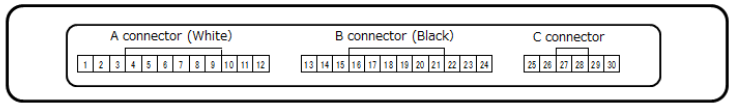
Vehicle Side

Stock ECU Side → To Adaptor → CFADP AF2 positive signal terminal 18 ＊OUT Connection

× **Cut and insulate**

Vehicle Side





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9	SOL3−	Blue/Black
10	SOL4+	Orange/White
11	SOL4−	Orange/Black
12	GND_SOL2	Green/Black

B connector (Black)

No.	Sig.name	Color
13	O2_HT2	Orange/Black
14	AF_HT2	Purple/Black
15	O2_HT1	Orange
16	AF_HT1	Purple
17	AF2−	White/Black
18	AF2+	Blue/Black
19	AF1−	White
20	AF1+	Blue
21	OUT_O2_2	Pink/Black
22	OUT_O2_1	Pink
23	CAN_L	Blue
24	CAN_H	White

C connector

No.	Sig.name	Color
25	IN_CR+	Orange
26	IN_CR−	Black
27	OUT_CAM1	Yellow
28	OUT_CAM2	Brown
29	OUT_CAM3	Blue
30	OUT_CAM4	Pink

⚠Caution

●please be vigilant when wiring. Mistakes in wiring can lead to permanent damage to the vehicle or related products.

■AF1 Signal（AF1−、AF1+）

Stock ECU Side → To Adaptor → CFADP AF1 negative signal terminal 19 ＊OUT Connection

× **Cut and insulate**

Vehicle Side

Stock ECU Side → To Adaptor → CFADP AF1 Positive signal terminal 20 ＊OUT Connection

× **Cut and insulate**

Vehicle Side

■O2 Signal（OUT_O2_2、OUT_O2_1）

Stock ECU Side → To Adaptor → CFADP O2・2nd signal terminal 21 ＊OUT Connection

× **Cut and insulate**

Vehicle Side

Stock ECU Side → To Adaptor → CFADP O2・1st signal terminal 22 ＊OUT Connection

× **Cut and insulate**

Vehicle Side

■CAN signal （CAN_L、CAN_H）

Stock ECU Side → CFADP CAN-L Terminal 23 ＊Splice

Vehicle Side

Stock ECU Side → CFADP CAN-H Terminal 24 ＊Splice

Vehicle Side

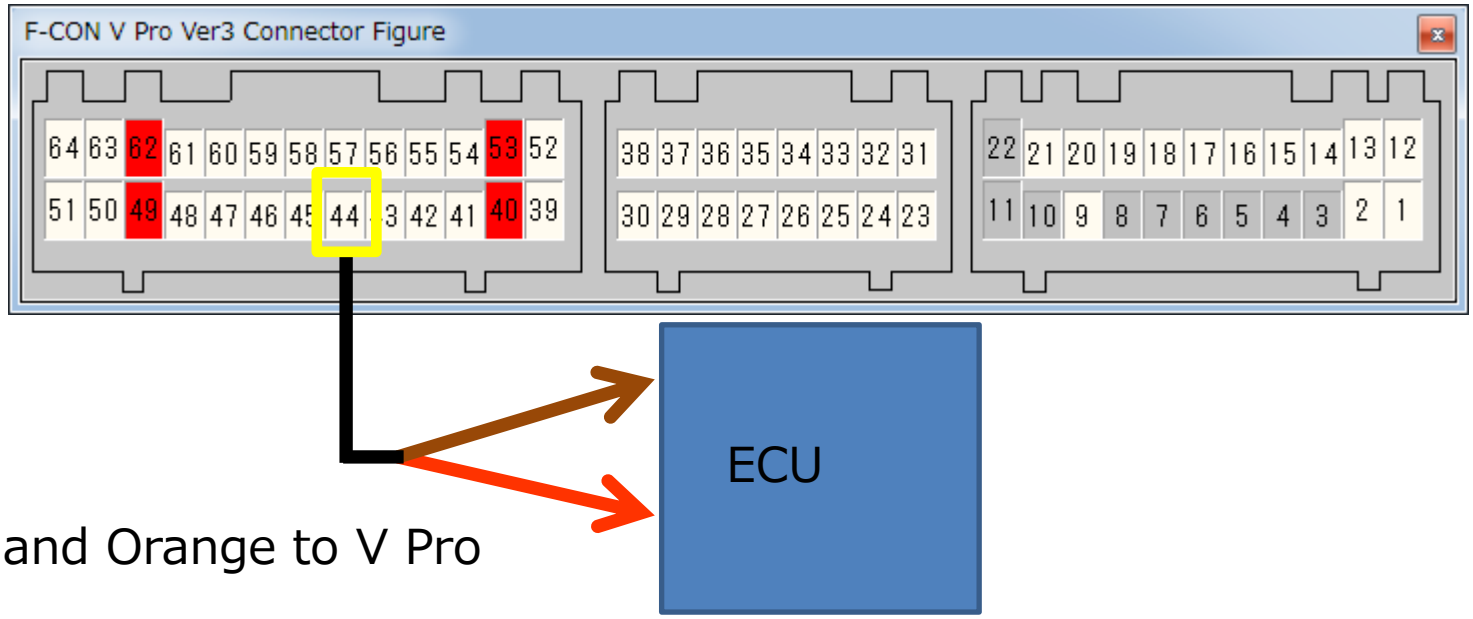
Warning
When using with VAC (Speed limiter cut) make sure VAC is connected towards the vehicle side of the splice

■Pressure Sensor Synthesised Signal

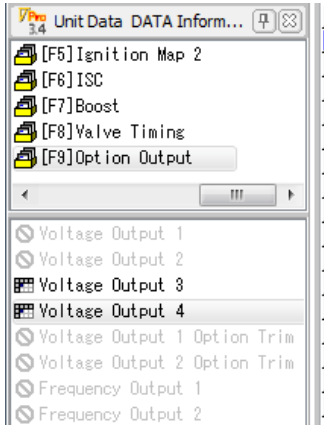
Using the pressure sensor data which is connected via NP5-21 harness, F-Con V Pro option Map 4 can send a 600->3000mV synthesized signal. This allows raising boost levels whilst avoiding the ECU Failsafe.

Originally:
Brown⇔Light Blue
Orange⇔Blue
Joined by connector

Disconnect and insulate light blue and blue wires.



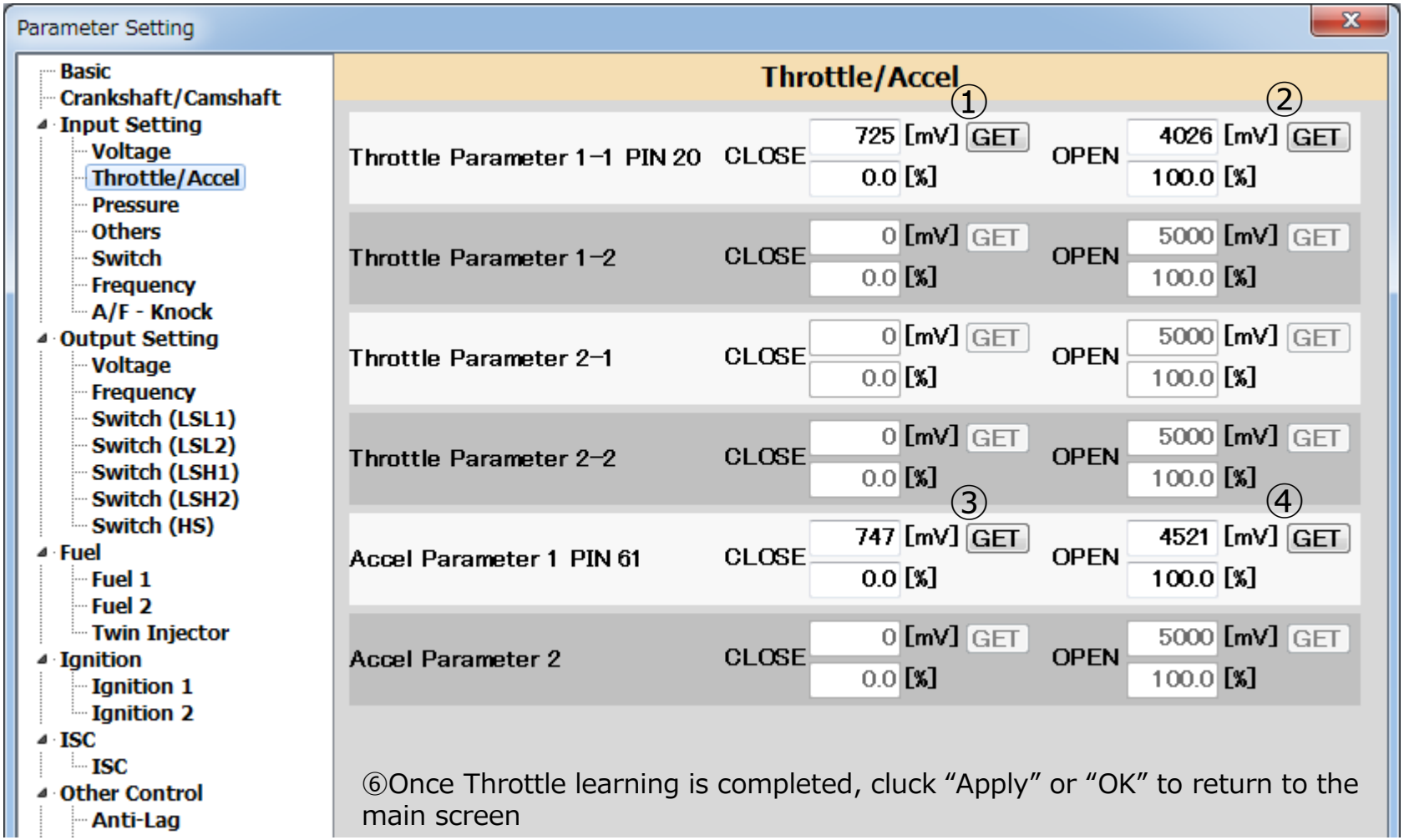
Connect Brown and Orange to V Pro terminal 44



	250	1000	1500	2000	2500	3000	3500	3875	4250	4625	5000	5500	6000	6500	7000	7500
-0.80	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
-0.64	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
-0.48	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
-0.32	828	828	828	828	828	828	828	828	828	828	828	828	828	828	828	828
-0.16	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055
0.00	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283	1283
0.17	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520	1520
0.33	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
0.49	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977
0.65	2207	2207	2207	2207	2207	2207	2207	2207	2207	2207	2207	2207	2207	2207	2207	2207
0.81	2431	2431	2431	2431	2431	2431	2431	2431	2431	2431	2431	2431	2431	2431	2431	2431
0.89	2545	2545	2545	2545	2545	2545	2545	2545	2545	2545	2545	2545	2545	2545	2545	2545
0.97	2659	2659	2659	2659	2659	2659	2659	2659	2659	2659	2659	2659	2659	2659	2659	2659
1.05	2772	2772	2772	2772	2772	2772	2772	2772	2772	2772	2772	2772	2772	2772	2772	2772
1.13	2886	2886	2886	2886	2886	2886	2886	2886	2886	2886	2886	2886	2886	2886	2886	2886
1.21	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000

■Using the above map to send a synthesized signal between 600->3000mV from F-CON VPRO terminal 44 avoids ECU Fail safe (Maximum intake pressure)

■Before using R35 START DATA…
When creating R35 Start Data, we had the throttle and accelerator voltages as shown below.
Please ensure that throttle and accelerator voltage learning are performed before starting setup.
①Switch vehicle ignition on and confirm F-Con is powered up.
②From “Communication->Write All Data” and set to linked state.
③In Parameter/Input Setting, click ①GET without pressing accelerator
④Press accelerator fully and then press ②Get on OPEN side.
⑤Set Accelerator Sensor limits in the same way with ③&④



⑥Once Throttle learning is completed, cluck “Apply” or “OK” to return to the main screen

■Air Flow Meter Setting

Modern vehicles have very advanced systems using air flow meters and pressure sensor to monitor vehicle loads. This makes it very difficult to run an airflow-less setup as we used to with older vehicles.

Depending on how Option Map (Synthesized Air Flow Output Map) is setup, it can cause issues to the gear shift program or cause a check engine light due to air flow meter signal error

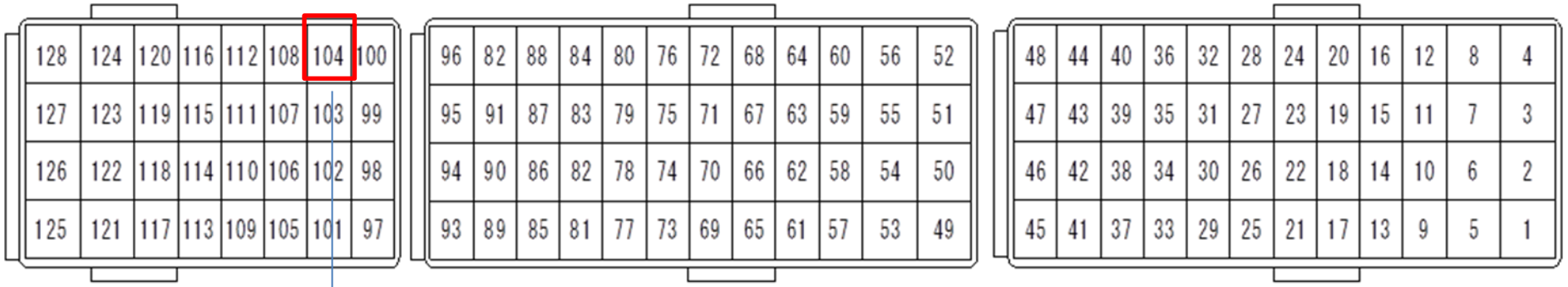
This “Start Data” is based around the use of stock airflow meters. F-Con Vpro will use the MAP sensor to measure engine loads.

＊A Synthesized voltage can be output to the ECU via Option Map 3

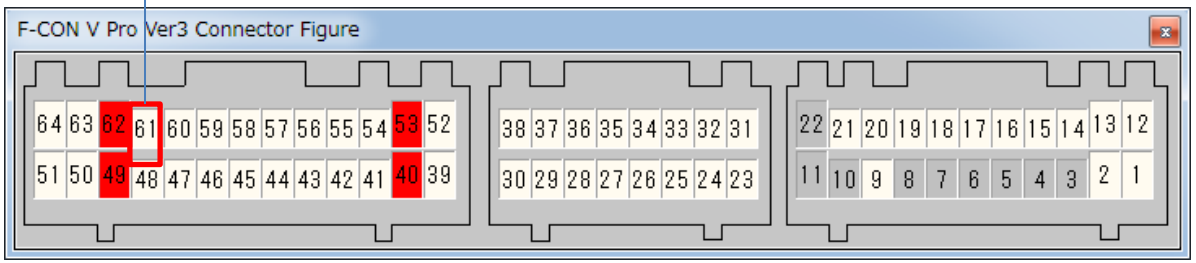
“R35 Start Data” uses the stock air temperature sensor signal. For accurate D-Jetro control, please connect HKS intake air temperature sensor. Details on connection are list later in this document.

■Accelerator position signal input (Hardware)

NISSAN GT-R（R35） has electronically controlled throttles as standard.
Engine load is measured by connecting throttle butterfly signal 1 to F-CON terminal #20. However there can sometimes be cases when releasing the accelerator does not fully close the throttle which causes fuel to be injected and therefore engine braking may be compromised. To avoid this situation, connect accelerator position signal 1 to F-Con terminal #61. ＊Accelerator position overrides physical throttle position and operates as per fully closed throttle condition.

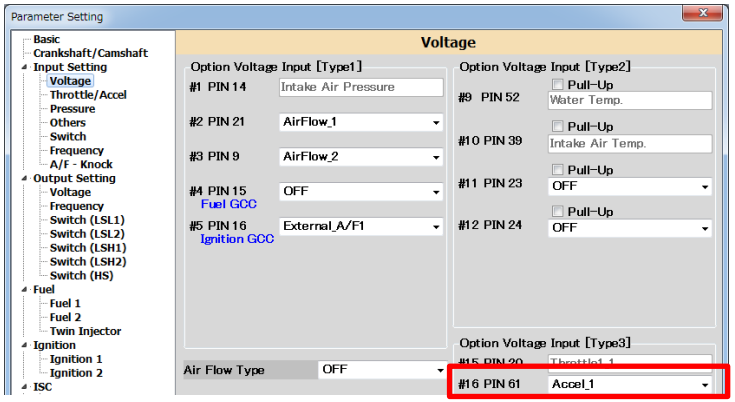


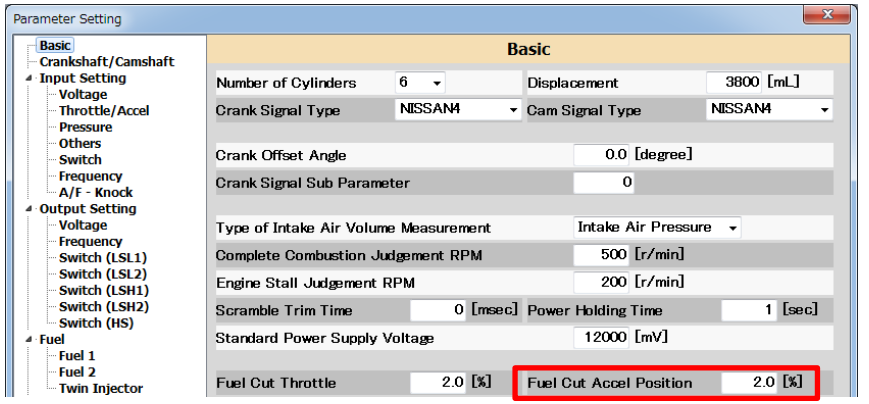
Engine side accelerator position sensor 1



■Accelerator position signal input (software)

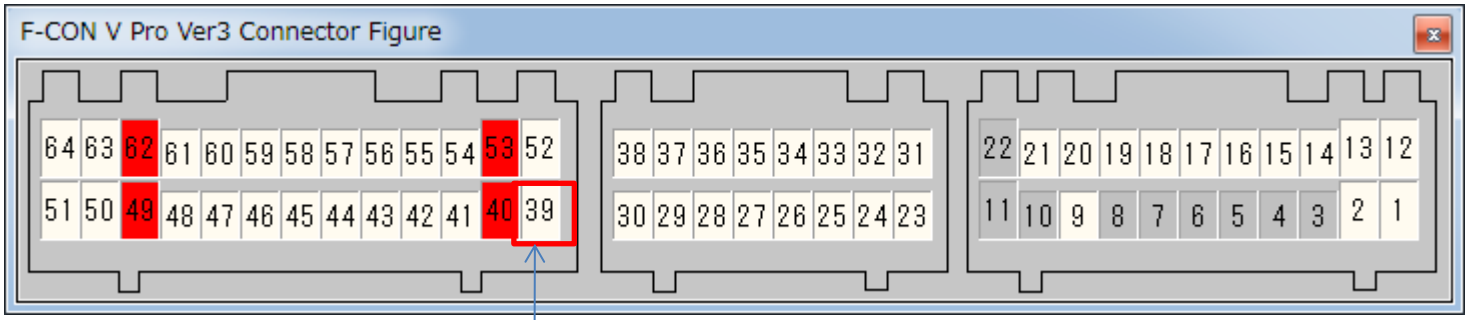
In Parameter / input settings / voltage tab, Pin 61 is set to Access 1. Setting accelerator fully closed level to 2.0% can avoid the above mentioned issue





■Intake Air Temperature Signal additional information.

The stock air flow meter contains IAT sensors. In order to measure actual IAT it is necessary to modify the wiring harness as indicated below:



Connect HKS IAT sensor to now vacant terminal #39

Remove the wire connected to terminal #39, connect a resistor then connect to body earth.

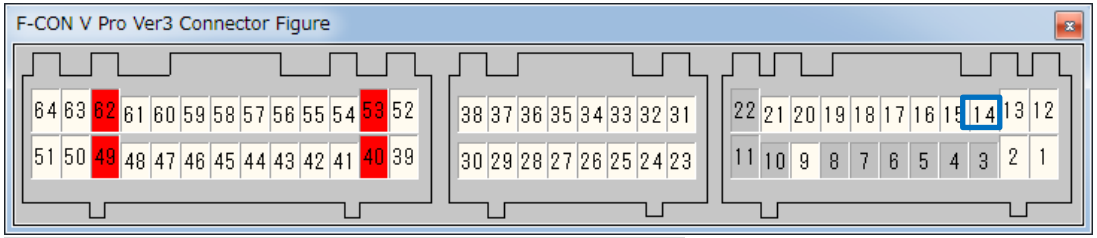
×

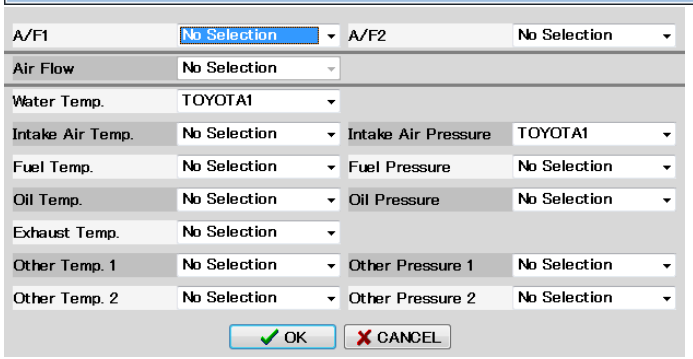
Insulate after removal

Engine side THA Sensor

■Stock Pressure Sensor

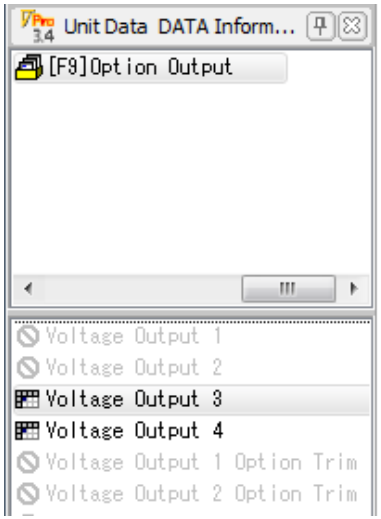
The stock vehicle has a pressure sensor as well as air flow meters. “Start Data” is setup to utilize the stock pressure sensor. When connecting HKS3 Pressure sensor, please follow the notes below:





Remove and insulate the wire connected to F-Con Terminal #14 and connect HKS3 sensor (blue wire). Connect yellow to #40 and green to #3 by connector.

When using HKS3 sensor, adjust Setting⇒Conversion Table Intake air Pressure from VR38DETT to HKS3



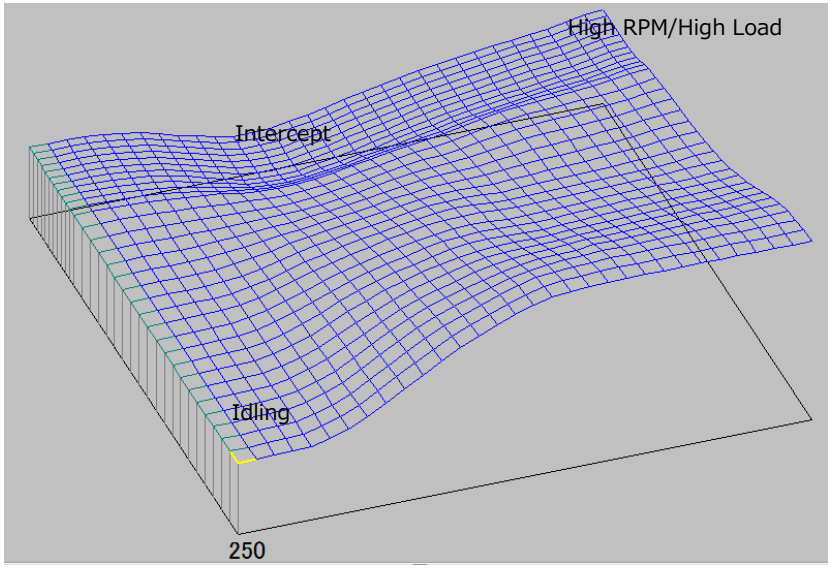
	250	1000	1500	2000	2500	3000	3500	3875	4250	4625	5000	5500	6000	6500	7000	7500
-0.80	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
-0.64	862	862	862	862	862	862	862	862	862	862	862	862	862	862	862	862
-0.48	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122	1122
-0.32	1384	1384	1384	1384	1384	1384	1384	1384	1384	1384	1384	1384	1384	1384	1384	1384
-0.16	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646
0.00	1906	1906	1906	1906	1906	1906	1906	1906	1906	1906	1906	1906	1906	1906	1906	1906
0.17	2168	2168	2168	2168	2168	2168	2168	2168	2168	2168	2168	2168	2168	2168	2168	2168
0.33	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430
0.49	2690	2690	2690	2690	2690	2690	2690	2690	2690	2690	2690	2690	2690	2690	2690	2690
0.65	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952
0.81	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212	3212
0.89	3474	3474	3474	3474	3474	3474	3474	3474	3474	3474	3474	3474	3474	3474	3474	3474
0.97	3661	3661	3661	3661	3661	3661	3661	3661	3661	3661	3661	3661	3661	3661	3661	3661
1.05	3758	3758	3758	3758	3758	3758	3758	3758	3758	3758	3758	3758	3758	3758	3758	3758
1.13	3857	3857	3857	3857	3857	3857	3857	3857	3857	3857	3857	3857	3857	3857	3857	3857
1.21	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954

Regardless of whether the stock or HKS3 sensor is used, option voltage output 3 is used to avoid stock ECU failsafe by sending a synthesized signal to the ECU.
＊F-CON terminal #43 is already connected and no modification to wiring is necessary

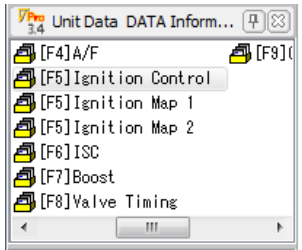
Points Regarding Vehicle Setup. (Setup on Chassis Dynamo Meter)

■Standard Ignition Timing Main Map

Based on OBD2 (CAN H-L) data, a base ignition map was created with emphasis on safety and engine protection. We found that output is approximately:
Intercept point ≒ 13° BTDC, high load high rpm area ≒ 20° BTDC
So this map has traced this as close as possible.
Stock knock sensor signal was checked with an oscilloscope to ensure safety when using “Start Data”
Each vehicle should be setup individually and this data should only be used as a starting point. Please adjust as necessary paying particular attention to knock



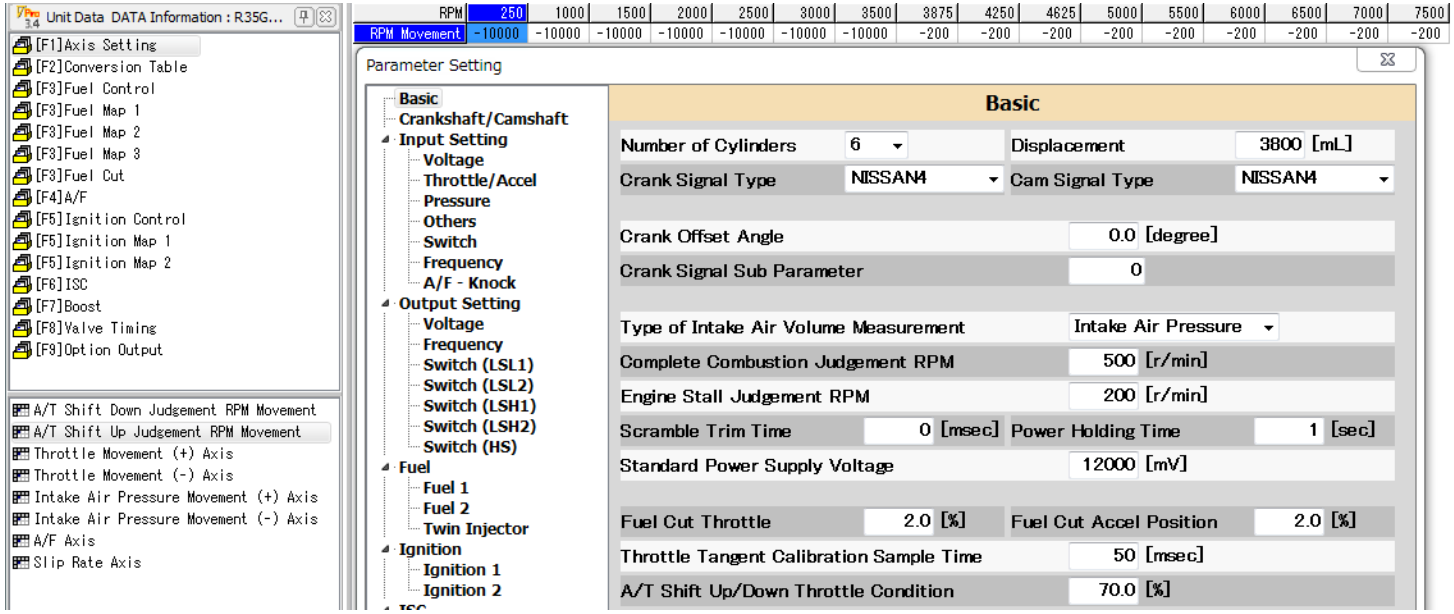
NB: acceleration ignition trim, which can affect engine response is set to default. Please setup to suit vehicle characteristics



	2681	2902	3123	3344	3565	3785	4006	4227	4448	4669	4890	5111	5332	5553	5774	5995	6216	6437	6658	6879	7100
-0.80	28.0	30.0	31.7	33.2	34.6	36.0	36.8	37.2	37.4	37.6	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7
-0.72	27.9	29.8	31.4	32.9	34.3	35.6	36.4	36.9	37.1	37.3	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.5	37.5
-0.64	27.6	29.4	30.9	32.3	33.6	34.9	35.7	36.1	36.3	36.5	36.7	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.9	36.9	36.9
-0.56	27.1	28.8	30.2	31.4	32.6	33.8	34.6	35.0	35.2	35.4	35.6	35.7	35.8	35.8	35.8	35.9	35.9	36.0	36.0	36.1	36.1
-0.48	26.5	28.1	29.3	30.5	31.5	32.6	33.3	33.7	33.9	34.0	34.3	34.4	34.5	34.5	34.6	34.7	34.8	34.8	34.9	35.0	35.1
-0.40	26.0	27.4	28.5	29.5	30.5	31.4	32.0	32.3	32.4	32.5	32.8	32.9	33.0	33.0	33.1	33.2	33.4	33.4	33.5	33.7	33.8
-0.32	25.3	26.7	27.7	28.6	29.5	30.3	30.7	30.8	30.8	30.9	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	32.0	32.2	32.3
-0.24	24.8	25.9	26.9	27.7	28.5	29.1	29.4	29.4	29.3	29.4	29.6	29.8	29.9	30.0	30.1	30.2	30.3	30.4	30.5	30.7	30.8
-0.16	24.0	25.1	26.0	26.8	27.5	28.1	28.2	28.1	28.0	27.9	28.2	28.4	28.5	28.6	28.8	28.8	28.9	29.0	29.1	29.2	29.3
-0.08	23.3	24.3	25.1	25.9	26.6	27.0	27.1	27.0	26.8	26.7	26.9	27.2	27.3	27.4	27.6	27.6	27.7	27.8	27.9	28.0	28.1
0.00	22.5	23.4	24.2	24.9	25.5	26.0	26.1	25.9	25.7	25.6	25.7	25.9	26.1	26.2	26.3	26.4	26.4	26.5	26.6	26.8	26.9
0.09	21.6	22.4	23.2	23.9	24.5	25.0	25.1	25.0	24.7	24.5	24.6	24.8	24.9	25.0	25.1	25.2	25.3	25.4	25.6	25.8	25.9
0.17	20.7	21.4	22.0	22.7	23.3	23.9	24.1	24.0	23.7	23.5	23.5	23.7	23.8	23.9	24.0	24.1	24.2	24.4	24.7	25.0	25.1
0.25	19.8	20.4	20.9	21.5	22.1	22.7	22.9	22.9	22.7	22.5	22.6	22.8	22.9	23.0	23.1	23.2	23.5	23.7	24.0	24.3	24.5
0.33	18.8	19.3	19.8	20.3	20.9	21.4	21.7	21.9	21.7	21.6	21.8	22.0	22.3	22.4	22.5	22.6	22.9	23.2	23.6	23.9	24.0
0.41	17.8	18.2	18.6	19.1	19.7	20.2	20.6	20.8	20.8	20.8	21.1	21.5	21.8	22.0	22.0	22.2	22.4	22.8	23.2	23.5	23.7
0.49	16.6	16.9	17.4	17.9	18.5	19.1	19.5	19.8	19.9	20.1	20.5	21.0	21.4	21.6	21.7	21.8	22.1	22.4	22.8	23.2	23.4
0.57	15.4	15.7	16.1	16.7	17.3	18.0	18.5	18.8	19.0	19.3	19.8	20.5	21.0	21.3	21.4	21.5	21.7	22.0	22.4	22.9	23.1
0.65	14.3	14.5	14.9	15.5	16.1	16.8	17.4	17.8	18.0	18.4	19.2	19.9	20.4	20.7	20.9	21.0	21.2	21.6	22.0	22.4	22.7
0.73	13.2	13.4	13.7	14.3	14.9	15.6	16.3	16.7	17.1	17.5	18.3	19.1	19.7	20.1	20.3	20.5	20.7	21.0	21.4	21.9	22.2
0.81	12.1	12.2	12.5	13.0	13.6	14.4	15.1	15.6	16.1	16.6	17.4	18.2	18.8	19.2	19.5	19.8	20.1	20.5	20.9	21.4	21.7
0.85	11.1	11.1	11.3	11.8	12.4	13.2	13.9	14.5	15.1	15.7	16.5	17.3	17.8	18.3	18.7	19.1	19.4	19.9	20.3	20.9	21.2
0.89	10.1	10.0	10.2	10.8	11.4	12.3	13.0	13.7	14.3	15.0	15.8	16.5	17.0	17.5	17.9	18.4	18.7	19.2	19.8	20.4	20.7
0.93	9.4	9.3	9.5	10.1	10.7	11.6	12.3	13.1	13.8	14.5	15.3	15.9	16.4	16.9	17.3	17.8	18.2	18.7	19.3	20.0	20.3
0.97	9.0	8.9	9.1	9.7	10.3	11.2	12.0	12.7	13.5	14.3	15.0	15.6	16.1	16.5	16.9	17.4	17.8	18.4	19.0	19.7	20.0
1.01	8.9	8.8	9.0	9.5	10.2	11.1	11.8	12.6	13.4	14.2	14.9	15.5	16.0	16.4	16.8	17.3	17.7	18.2	18.8	19.5	19.9
1.05	8.8	8.7	8.9	9.5	10.1	11.0	11.8	12.6	13.3	14.1	14.8	15.4	15.9	16.4	16.8	17.3	17.7	18.2	18.8	19.5	19.9
1.09	8.8	8.7	8.9	9.5	10.1	11.0	11.8	12.6	13.3	14.1	14.8	15.4	15.9	16.4	16.8	17.3	17.7	18.2	18.8	19.5	19.9
1.13	8.8	8.7	8.9	9.5	10.1	11.0	11.8	12.6	13.3	14.1	14.8	15.4	15.9	16.4	16.8	17.3	17.7	18.2	18.8	19.5	19.9
1.17	8.8	8.7	8.9	9.5	10.1	11.0	11.8	12.6	13.3	14.1	14.8	15.4	15.9	16.4	16.8	17.3	17.7	18.2	18.8	19.5	19.9
1.21	8.8	8.7	8.9	9.5	10.1	11.0	11.8	12.6	13.3	14.1	14.8	15.4	15.9	16.4	16.8	17.3	17.7	18.2	18.8	19.5	19.9
1.25	8.8	8.7	8.9	9.5	10.1	11.0	11.8	12.6	13.3	14.1	14.8	15.4	15.9	16.4	16.8	17.3	17.7	18.2	18.8	19.5	19.9

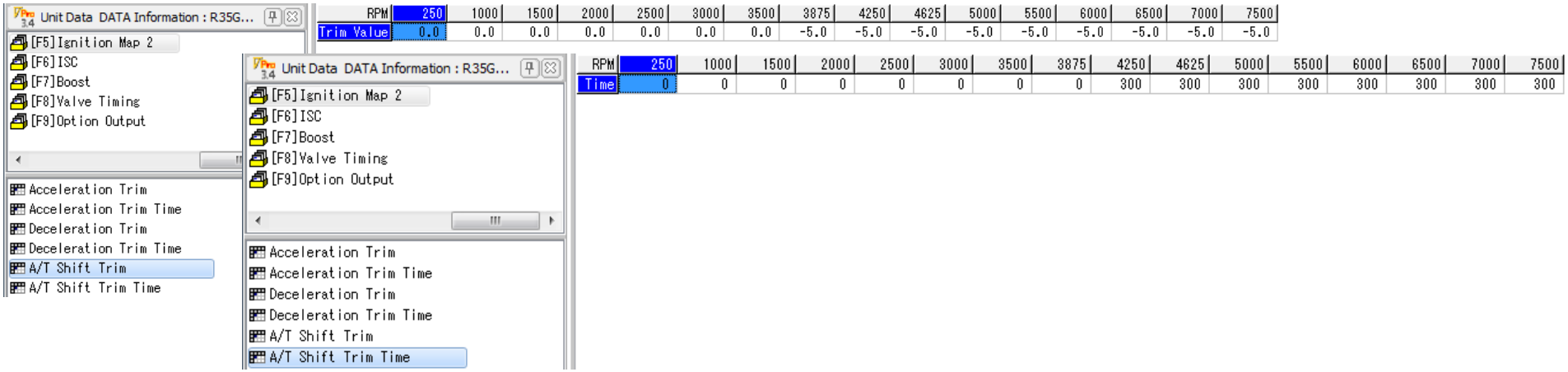
■AT Shift Retarder Function.

R35GT-R uses a DCT transmission. Unlike standard manual shift cars, the throttle remains open during shifting which can cause momentary boost spikes which can cause knocking.
Using the AT Shift Retarder function can help avoid such a situation.



AT Shift trim map is activated when accelerator position is over 70% and engine rpm drop is more than 200rpm. “Start Data” is set to retard ignition by 5° for a duration of 300mSec when engine rpm is above 3875 and throttle position is above 70%

＊Trim is gradually dampened after the defined duration time of 300mSec

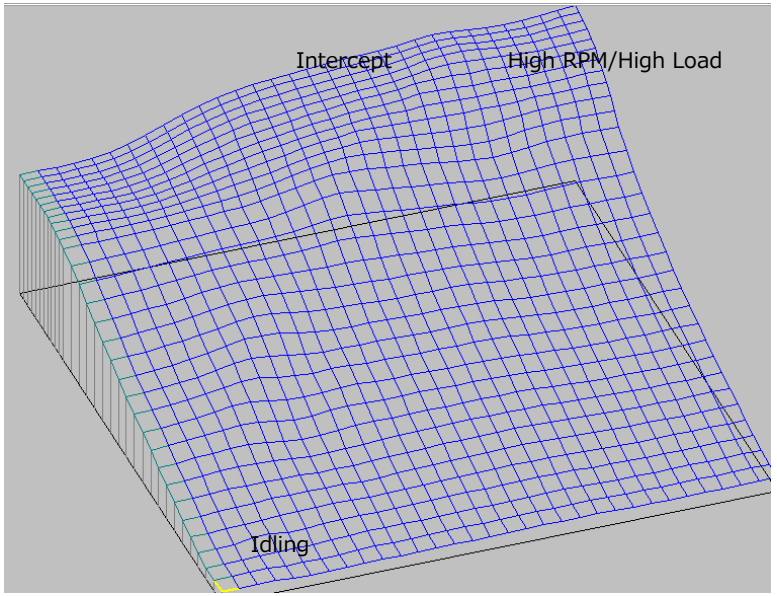


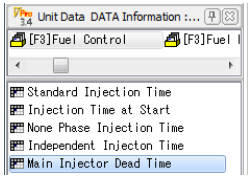
Points Regarding Vehicle Setup (Setup on Chassis Dynamo Meter)

■Standard Injection Time Main Map.

Based on OBD2 (CAN H-L) data, a base fuel map was created with emphasis on safety and engine protection. With emphasis on vehicle safety, we found that intercept point fuel duration ≒1 8 0 0 0 µSec and around high load areas (just before rpm limit) ≒1 6 0 0 0 µSec

Boost levels dropped in high rpm area with fuel injector duty around ≒86%. Stock boost upper limit was approx ≒1.2K. We found A/F ratio in high load area to be approx ≒11.0.



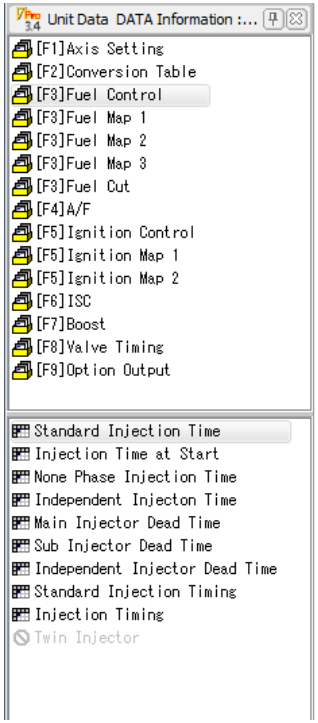


Voltage	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
Time	5000	4000	3000	2000	1625	1250	1100	950	825	700	650	600	550	500	450	400

NB: In consideration of stock injector dead time, the default data is set to ensure adequate fuelling with std injection time set to combine with this

Acceleration Fuel Trim Map, which can affect engine response is set as default. Please bare this in mind when setting up fuelling.

Pleas consult separate F-Con V pro 3.4 manual for details on fuel control.

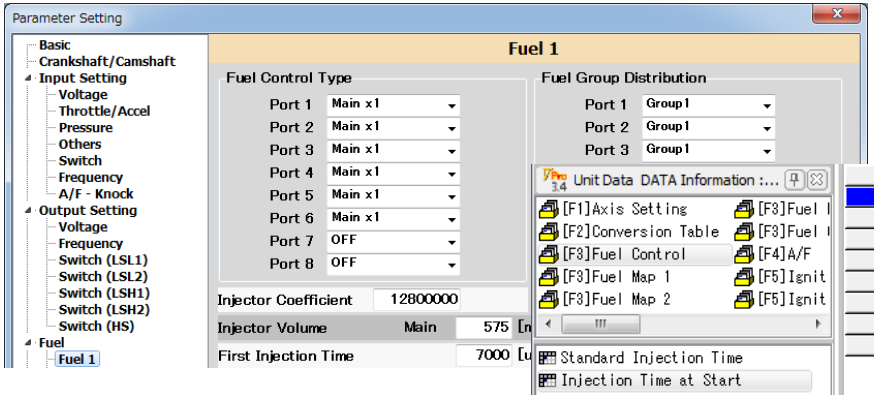


	2681	2902	3123	3344	3565	3785	4006	4227	4448	4669	4890	5111	5332	5553	5774	5995	6216	6437	6658	6879	7100
-0.80	1275	1280	1287	1298	1315	1340	1370	1400	1422	1430	1422	1403	1377	1355	1345	1352	1372	1397	1420	1437	1444
-0.72	1391	1399	1409	1421	1439	1463	1494	1524	1544	1551	1541	1518	1487	1460	1446	1450	1468	1491	1513	1530	1537
-0.64	1661	1672	1686	1702	1721	1746	1777	1806	1826	1829	1813	1782	1740	1703	1680	1678	1690	1710	1730	1747	1754
-0.56	2003	2026	2057	2086	2110	2138	2169	2198	2214	2213	2189	2147	2093	2043	2009	1997	2003	2020	2038	2054	2061
-0.48	2396	2426	2472	2516	2550	2585	2616	2642	2654	2647	2616	2564	2498	2436	2390	2370	2369	2382	2399	2415	2423
-0.40	2761	2838	2896	2958	3009	3052	3082	3103	3108	3095	3057	2996	2920	2847	2792	2764	2758	2768	2784	2800	2808
-0.32	3211	3306	3341	3404	3470	3522	3548	3564	3563	3544	3498	3430	3344	3262	3199	3165	3155	3162	3177	3194	3202
-0.24	3748	3827	3820	3873	3954	4010	4028	4034	4026	4000	3945	3867	3771	3680	3610	3572	3559	3565	3578	3596	3604
-0.16	4493	4474	4400	4434	4498	4533	4530	4527	4514	4479	4413	4321	4212	4111	4034	3993	3978	3983	3996	4014	4022
-0.08	5275	5175	5058	5062	5099	5092	5064	5058	5039	4994	4914	4806	4680	4568	4484	4440	4424	4429	4442	4460	4470
0.00	5910	5869	5718	5690	5689	5663	5632	5629	5607	5551	5454	5327	5185	5061	4971	4924	4907	4912	4925	4944	4954
0.09	6483	6434	6333	6314	6284	6249	6231	6234	6209	6143	6029	5885	5728	5594	5500	5452	5434	5438	5450	5470	5480
0.17	7025	7006	6958	6953	6864	6851	6851	6857	6831	6758	6632	6475	6307	6168	6073	6026	6009	6011	6020	6039	6048
0.25	7867	7706	7644	7623	7512	7494	7491	7496	7470	7392	7258	7093	6919	6780	6689	6648	6632	6633	6638	6652	6659
0.33	8658	8514	8394	8339	8229	8191	8174	8165	8132	8050	7911	7741	7565	7431	7348	7319	7308	7310	7308	7315	7318
0.41	9532	9373	9223	9148	9073	8995	8938	8895	8844	8751	8606	8432	8254	8126	8057	8044	8045	8048	8038	8035	8031
0.49	10218	10156	10097	10075	10018	9908	9803	9714	9629	9519	9363	9181	8999	8877	8824	8834	8852	8862	8842	8826	8812
0.57	10908	10947	11076	11167	11164	10990	10798	10629	10504	10368	10194	9998	9806	9689	9656	9699	9743	9765	9735	9702	9678
0.65	11533	11697	11960	12161	12245	12086	11860	11621	11456	11290	11092	10877	10673	10560	10552	10636	10718	10761	10725	10674	10636
0.73	12166	12428	12800	13107	13261	13163	12926	12665	12450	12257	12032	11795	11578	11473	11497	11636	11778	11861	11829	11758	11703
0.81	12779	13077	13434	13758	13978	14013	13885	13657	13434	13219	12974	12722	12506	12421	12490	12691	12904	13038	13014	12921	12842
0.85	13340	13641	13995	14337	14653	14809	14796	14595	14359	14135	13905	13681	13503	13463	13567	13793	14029	14181	14149	14044	13951
0.89	13853	14145	14468	14786	15127	15332	15449	15348	15193	14998	14822	14702	14585	14572	14647	14816	15007	15116	15094	15013	14938
0.93	14321	14615	14911	15208	15532	15766	15930	15888	15800	15707	15686	15680	15618	15577	15576	15622	15706	15766	15786	15780	15756
0.97	14743	15043	15314	15580	15839	16058	16241	16320	16333	16357	16472	16449	16394	16277	16289	16236	16200	16267	16356	16436	16427
1.01	15124	15430	15682	15922	16185	16425	16613	16687	16726	16830	17077	17066	17012	16835	16836	16794	16744	16832	16901	16976	16971
1.05	15481	15794	16032	16250	16505	16759	16967	17075	17120	17243	17517	17612	17645	17515	17474	17393	17299	17353	17383	17436	17423
1.09	15825	16148	16377	16574	16799	17036	17239	17335	17378	17507	17796	18092	18226	18160	17983	17856	17764	17765	17767	17803	17825
1.13	16149	16482	16712	16893	17078	17273	17447	17553	17609	17745	18010	18387	18600	18599	18360	18136	17988	17978	18036	18132	18186
1.17	16428	16775	17010	17186	17347	17509	17659	17768	17834	17962	18186	18520	18708	18704	18463	18247	18119	18153	18265	18413	18492
1.21	16628	16985	17230	17409	17563	17711	17851	17961	18028	18135	18315	18599	18760	18749	18517	18314	18210	18278	18431	18614	18710
1.25	16714	17077	17326	17509	17666	17816	17956	18066	18128	18220	18376	18634	18779	18763	18535	18340	18249	18334	18503	18701	18804

Points Regarding Vehicle Setup (vehicle setting etc)

■OTHER

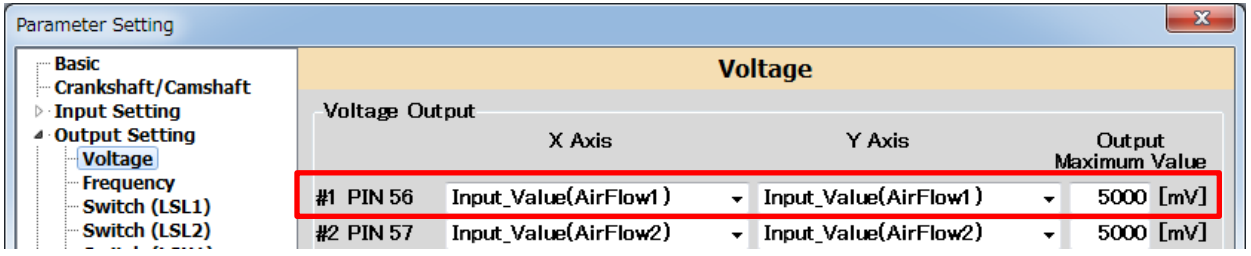
■Fuel control during engine starting has been modified in Parameter･Fuel 1. Whilst there are difference between each vehicle, if the engine is starting to an acceptable level, please retain the default data and continue setup.

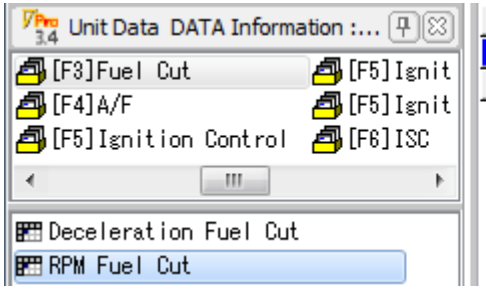


	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	130
1	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000
2	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000
3	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000
4	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000
5	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000
6	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000
7	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000
8	78820	48500	26450	18540	14710	12390	10550	8720	7440	7000	7000	7000	7000	7000	7000	7000

■Airflow Meter Parameter

“Start Data” is designed to work with stock airflow meters and not setup to be used airflow-less. Airflow meter signals are not clipped with maximum value set at 5000MV



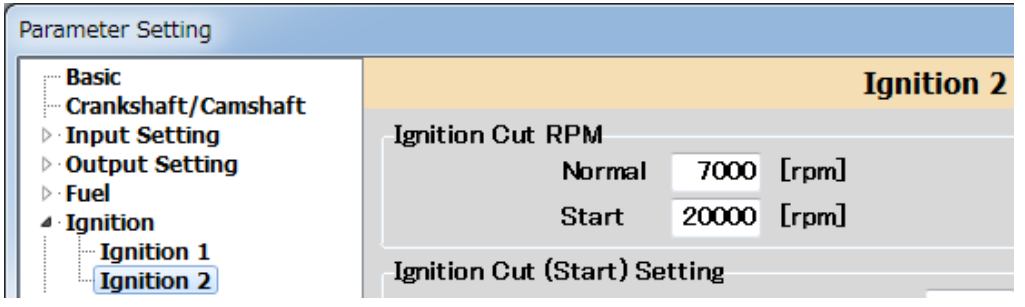


Port	1	2	3	4	5	6	7	8
Cut	7000	7050	7100	7000	7050	7100	20000	20000
Return	6800	6800	6800	6800	6800	6800	20000	20000

■RPM fuel cut map

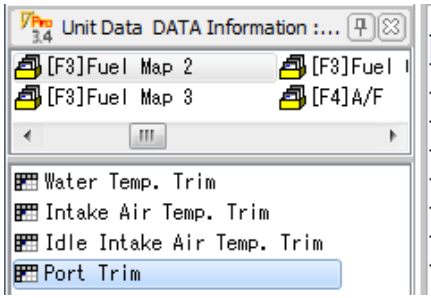
In consideration to stock or sports catalyzers, rev limiter is set through fuel cut. “Start Data” is setup to minimise fuel cut shock.

For competition vehicles which do not have catalyzer installed, it is possible to use an ignition cut rpm limiter. Using this feature with catalyzers installed can cause damage to the catalyzer from unburned fuel and may lead to engine damage.



■Using Port Trim

R35 GT-R can show some imbalance between A/F ratio in left and right bank. The stock ECU uses AF Feedback correction to address this, “Start Data” uses port Trim to achieve the same result. Ports 1/3/5 have had fuelling increased (drivers side bank). It is also possible to group ports and perform group trim.



	250	1000	1500	2000	2500	3000	3500	3875	4250	4625	5000	5500	6000	6500	7000	7500
1	1.5	1.5	1.5	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	1.5	1.5	1.5	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	1.5	1.5	1.5	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0