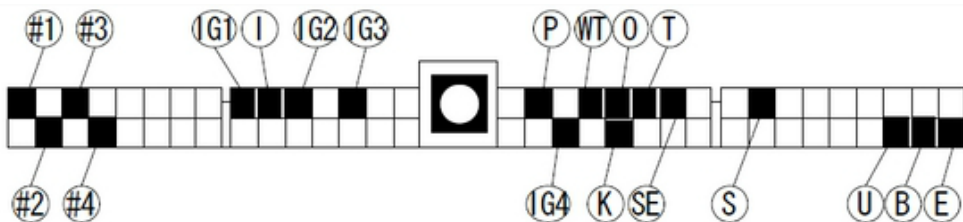


NISSAN ECU Side Terminal[NP5-4 Base]
 Refer the following for special setting when
 modifying the wiring, etc.



To prepare the vehicle data, write PS13 STARTDATA on HKS website to F-CONVPRO. Setting by using an actual vehicle according to each vehicle characteristics is required.
 * PS13 STARTDATA is data only to start the engine.

The data were prepared based on the vehicle using high-octane gasoline (the octane level is approximately 98-100), and the following parts were installed:

- EVC6IR2,4
- Silent Hi-POWER Muffler
- Super Power Flow KIT
- M40i Spark Plug
- S type Intercooler

Suppose the vehicle is a boost-up specs using a factory injector.
 The max boost is set to ≈0.9K considering the performance of the
 factory injector and fuel pump. Excessive boost-up may lead to the engine damage.

This explains the main points to prepare STARTDATA using the modified harness NP5-4 for Nissan Silvia/180SX. For mapping, parameter settings, and data logging, refer to the operation manual of F-CON V Pro Ver.3.4.

Explanatory Notes

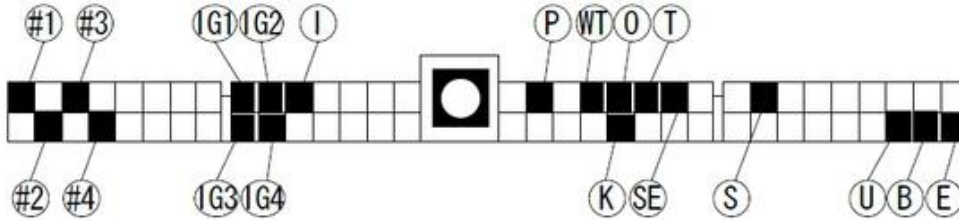
- Ⓟ: Power Supply (12V)
- Ⓢ: Backup Power Supply (12V)
- Ⓧ: Ground
- ⓍⓍ: Center Ground
- Ⓟ: Pressure Sensor, Airflow Signal, etc.
- ⓍⓍⓍ: Press Sensor Signal for HKS FCD
- ⓍⓍⓍ: Airflow Signal for HKS AFR
- Ⓧ: Speed Signal
- ⓍⓍ: Speed Signal for HKS SLD
- Ⓧ: RPM Signal
- ⓍⓍ: RPM Signal Level Converter Required.
- Ⓧ: Injector Signal
- ⓍⓍ: Primary Injector Signal
- ⓍⓍ: Secondary Injector Signal
- Ⓧ: Throttle Angle Signal
- ⓍⓍ: Ignition Signal
- ⓍⓍⓍ: Leading Ignition Signal
- ⓍⓍⓍ: Trailing Ignition Signal
- ⓍⓍⓍ: Rotor Detect Signal(Leading Side)
- ⓍⓍⓍ: Rotor Detect Signal(Trading Side)
- ⓍⓍ: Water Temp Signal
- ⓍⓍ: Intake Air Temp Signal
- Ⓧ: Knocking Signal
- Ⓧ: O2 Sensor Signal
- S/C·T/C: Supercharger·Turbocharger
- A/T: Automatic Transmission
- M/T: Manual Transmission

※ When there is more than one signal, a number comes after the mark.
 The number comes with the injector and ignition signals mean a number of cylinder.

NISSAN ECU Side Terminal[NP5-5 Base]

*SR20DET Engine

Refer the following for special setting when modifyi the wiring, etc.



To prepare the vehicle data, write PS13 STARTDATA on HKS website to F-CONVPRO. Setting by using an actual vehicle according to each vehicle characteristics is required.
* PS13 STARTDATA is data only to start the engine.

The data were prepared based on the vehicle using high-octane gasoline (the octane level is approximately 98-100), and the following parts were installed

- EVC6IR2,4
- Silent Hi-POWER Muffler
- Super Power Flow KIT
- M40i Spark Plug
- S type Intercooler

Suppose the vehicle is a boost-up specs using a factory injector. The max boost is set to $\approx 0.9K$ considering the performance of the factory injector and fuel pump. Excessive boost-up may lead to the engine damage.

This explains the main points to prepare STARTDATA using the modified harness NP5-5 for Nissan Silvia/180SX. For mapping, parameter settings, and data logging, refer to the operation manual of F-CON V Pro Ver.3.4.

Explanatory Notes

- Ⓟ: Power Supply (12V)
 - Ⓡ: Backup Power Supply (12V)
 - Ⓧ: Ground
 - Ⓢ: Center Ground
 - Ⓟ: Pressure Sensor, Airflow Signal, etc.
 - ⓇCD: Press Sensor Signal for HKS FCD
 - ⓇAF: Airflow Signal for HKS AFR
 - Ⓢ: Speed Signal
 - ⓈLD: Speed Signal for HKS SLD
 - Ⓡ: RPM Signal
 - ⓈI: RPM Signal Level Converter Required.
 - Ⓢ: Injector Signal
 - ⓈP: Primary Injector Signal
 - ⓈS: Secondary Injector Signal
 - Ⓡ: Throttle Angle Signal
 - ⓇG: Ignition Signal
 - ⓇGL: Leading Ignition Signal
 - ⓇGT: Trailing Ignition Signal
 - ⓇGSL: Rotor Detect Signal(Leading Side)
 - ⓇGST: Rotor Detect Signal(Trading Side)
 - ⓇT: Water Temp Signal
 - ⓇI: Intake Air Temp Signal
 - ⓇK: Knocking Signal
 - ⓇO: O2 Sensor Signal
 - S/C·T/C: Supercharger·Turbocharger
 - A/T: Automatic Transmission
 - M/T: Manual Transmission
- ※ When there is more than one signal, a number comes after the mark.
The number comes with the injector and ignition signals mean a number of cylinder.

■ Before Using PS13STARTDATA

PS13 STARTDATA explains how the set-up was performed for Nissan 180SX (RPS13) using the modified harness NP5-4.

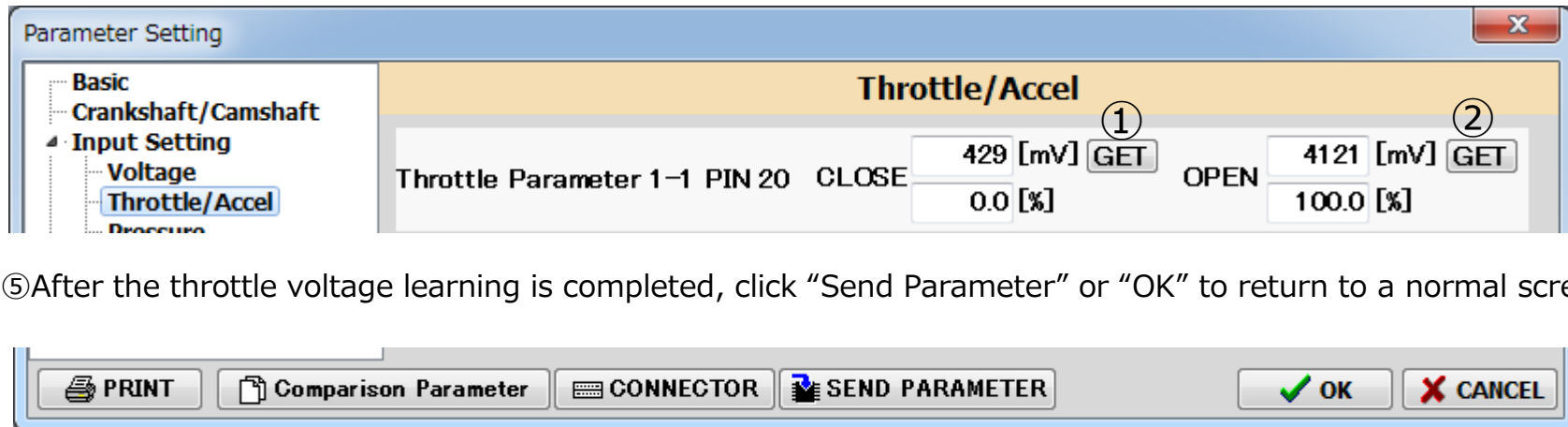
For Nissan Silvia(PS13), refer to this information as well since the engine control logic is the same.

■ Before using PS13STARTDATA...

When preparing PS13STARTDATA, the following throttle sensor voltage input was performed.

Make sure to complete the throttle sensor learning before starting the vehicle set-up.

- ① Turn on the ignition. Check if the power of F-Con unit is on.
- ② Select "Send All Data" from "Communication" menu.
- ③ Click "GET" of CLOSE side (①) in Throttle/Accel under Parameter Setting without acceleration.
- ④ Click "GET" of OPEN side (②) in Throttle/Accel under Parameter Setting while an accelerator is fully opened.



- ⑤ After the throttle voltage learning is completed, click "Send Parameter" or "OK" to return to a normal screen.

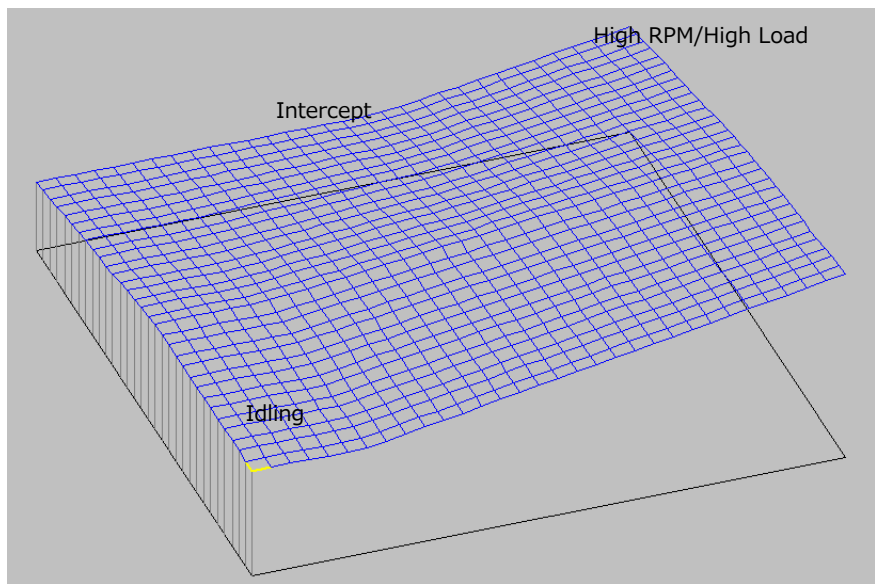
Vehicle Setup Points (Setup on Chassis Dynamometer)

Standard Ignition Time Main Map Based on information from F-CONIS[C_TX][C_RX][C_CLK], the ignition time map tracing the factory ECU ignition time was prepared to maintain the vehicle condition. (At intercept=BTDC13, and under high speed & high load area =BTDC20)

To prepare STARTDATA, the knocking signal from the factory knocking sensor was confirmed using Oscilloscope, and the vehicle conditions were checked from its output waveform.

This map's values may vary depending on the vehicle's individual difference. Attention must be paid to the vehicle's knocking during setting up the vehicle.

Use the acceleration trim ignition time map and other items that may effect on the engine response as default data. The setup must be performed in accordance with each vehicle characteristics.



	2661	2903	3145	3387	3629	3871	4113	4355	4597	4839	5081	5323	5565	5806	6048	6290	6532	6774	7016	7258	7500
-0.80	23.0	23.6	24.2	24.8	25.4	26.0	26.6	27.2	27.8	28.4	29.0	29.6	30.2	30.8	31.4	32.0	32.6	33.2	33.8	34.4	35.0
-0.75	22.9	23.5	24.1	24.7	25.3	25.9	26.5	27.0	27.6	28.2	28.8	29.4	30.0	30.6	31.2	31.8	32.3	32.9	33.5	34.1	34.7
-0.69	22.9	23.4	24.0	24.6	25.2	25.7	26.3	26.9	27.5	28.0	28.6	29.2	29.7	30.3	30.9	31.5	32.0	32.6	33.2	33.8	34.3
-0.64	22.8	23.4	23.9	24.5	25.0	25.6	26.2	26.7	27.3	27.9	28.4	29.0	29.5	30.1	30.6	31.2	31.8	32.3	32.9	33.5	34.0
-0.58	22.7	23.3	23.8	24.4	24.9	25.5	26.0	26.5	27.1	27.7	28.2	28.7	29.3	29.8	30.4	30.9	31.5	32.0	32.6	33.1	33.7
-0.53	22.7	23.2	23.7	24.3	24.8	25.3	25.9	26.4	27.0	27.5	28.0	28.5	29.1	29.6	30.1	30.7	31.2	31.8	32.3	32.8	33.3
-0.47	22.6	23.1	23.6	24.2	24.7	25.2	25.7	26.2	26.8	27.3	27.8	28.3	28.8	29.3	29.9	30.4	30.9	31.4	32.0	32.5	33.0
-0.42	22.6	23.1	23.6	24.1	24.6	25.1	25.6	26.1	26.6	27.1	27.6	28.1	28.6	29.1	29.6	30.1	30.7	31.2	31.7	32.2	32.7
-0.36	22.5	23.0	23.5	23.9	24.4	24.9	25.4	25.9	26.4	26.9	27.4	27.9	28.4	28.9	29.3	29.8	30.4	30.9	31.3	31.8	32.3
-0.31	22.4	22.9	23.4	23.8	24.3	24.8	25.3	25.7	26.3	26.7	27.2	27.7	28.2	28.6	29.1	29.6	30.1	30.6	31.1	31.5	32.0
-0.25	22.4	22.8	23.3	23.7	24.2	24.6	25.1	25.6	26.1	26.5	27.0	27.5	27.9	28.4	28.8	29.3	29.8	30.3	30.7	31.2	31.6
-0.20	22.3	22.7	23.2	23.6	24.1	24.5	25.0	25.4	25.9	26.4	26.8	27.3	27.7	28.2	28.6	29.0	29.6	30.0	30.4	30.9	31.3
-0.14	22.2	22.7	23.1	23.5	23.9	24.4	24.8	25.2	25.7	26.2	26.6	27.0	27.5	27.9	28.3	28.7	29.3	29.7	30.1	30.5	31.0
-0.09	22.2	22.6	23.0	23.4	23.8	24.2	24.7	25.1	25.6	26.0	26.4	26.8	27.2	27.7	28.1	28.5	29.0	29.4	29.8	30.2	30.7
-0.03	22.1	22.5	22.9	23.3	23.7	24.1	24.5	25.0	25.4	25.8	26.2	26.6	27.0	27.4	27.8	28.2	28.7	29.1	29.5	29.9	30.3
0.02	21.6	22.0	22.4	22.7	23.1	23.5	23.9	24.4	24.8	25.2	25.6	26.0	26.4	26.8	27.2	27.6	28.1	28.5	28.9	29.3	29.7
0.08	21.0	21.4	21.7	22.1	22.4	22.8	23.1	23.6	24.0	24.4	24.8	25.3	25.7	26.1	26.5	26.9	27.4	27.8	28.2	28.7	29.1
0.13	20.5	20.9	21.2	21.5	21.9	22.2	22.5	23.0	23.4	23.8	24.2	24.6	25.1	25.5	25.9	26.3	26.8	27.3	27.7	28.1	28.5
0.19	19.9	20.3	20.6	20.9	21.2	21.5	21.8	22.2	22.6	23.0	23.5	23.9	24.3	24.8	25.2	25.6	26.1	26.6	27.0	27.4	27.9
0.24	19.5	19.7	20.0	20.3	20.6	20.9	21.2	21.6	21.9	22.4	22.9	23.3	23.7	24.1	24.6	25.0	25.6	26.0	26.4	26.9	27.3
0.30	18.9	19.1	19.4	19.6	19.9	20.2	20.4	20.8	21.2	21.6	22.1	22.6	23.0	23.4	23.9	24.3	24.9	25.3	25.7	26.2	26.6
0.35	18.4	18.6	18.9	19.1	19.3	19.6	19.8	20.2	20.5	21.0	21.5	21.9	22.4	22.8	23.3	23.7	24.3	24.7	25.2	25.6	26.1
0.41	17.8	18.0	18.2	18.4	18.6	18.8	19.1	19.5	19.8	20.3	20.8	21.2	21.7	22.1	22.6	23.0	23.6	24.0	24.5	25.0	25.4
0.46	17.3	17.5	17.7	17.9	18.1	18.3	18.4	18.8	19.1	19.6	20.1	20.6	21.0	21.5	22.0	22.5	23.0	23.5	23.9	24.4	24.9
0.52	16.7	16.9	17.0	17.2	17.4	17.5	17.7	18.1	18.4	18.9	19.4	19.9	20.3	20.8	21.3	21.8	22.3	22.8	23.2	23.8	24.2
0.57	16.2	16.4	16.5	16.7	16.8	16.9	17.1	17.5	17.7	18.3	18.8	19.2	19.7	20.2	20.7	21.2	21.7	22.2	22.7	23.2	23.7
0.63	15.6	15.8	15.9	16.0	16.1	16.2	16.3	16.7	17.0	17.5	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0
0.68	15.2	15.2	15.3	15.4	15.5	15.6	15.7	16.1	16.3	16.9	17.4	17.9	18.4	18.8	19.4	19.9	20.5	20.9	21.4	22.0	22.4
0.74	14.6	14.6	14.7	14.8	14.8	14.9	15.0	15.3	15.5	16.1	16.7	17.2	17.6	18.1	18.7	19.2	19.8	20.3	20.7	21.3	21.8
0.79	14.1	14.1	14.2	14.2	14.3	14.3	14.4	14.7	14.9	15.5	16.1	16.5	17.0	17.5	18.1	18.6	19.2	19.7	20.2	20.7	21.2
0.85	13.5	13.5	13.5	13.6	13.6	13.6	13.6	13.9	14.1	14.7	15.3	15.8	16.3	16.8	17.4	17.9	18.5	19.0	19.5	20.1	20.6
0.90	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.3	13.5	14.1	14.7	15.2	15.7	16.2	16.8	17.3	17.9	18.4	18.9	19.5	20.0

- Unit Data DATA Inform...
- [F1] Axis Setting
- [F2] Conversion Table
- [F3] Fuel Control
- [F3] Fuel Map 1
- [F3] Fuel Map 2
- [F3] Fuel Map 3
- [F3] Fuel Cut
- [F4] A/F
- [F5] Ignition Control
- [F5] Ignition Map 1
- [F5] Ignition Map 2
- [F6] ISC
- [F7] Boost
- [F8] Valve Timing
- [F9] Option Output
- Ignition Main Map
- Ignition Sub Map
- Idle Ignition Main Map
- Idle Ignition Sub Map
- Main Close Angle Time
- Sub Close Angle Time
- Index Ignition Timing
- Antilag IGN Cut

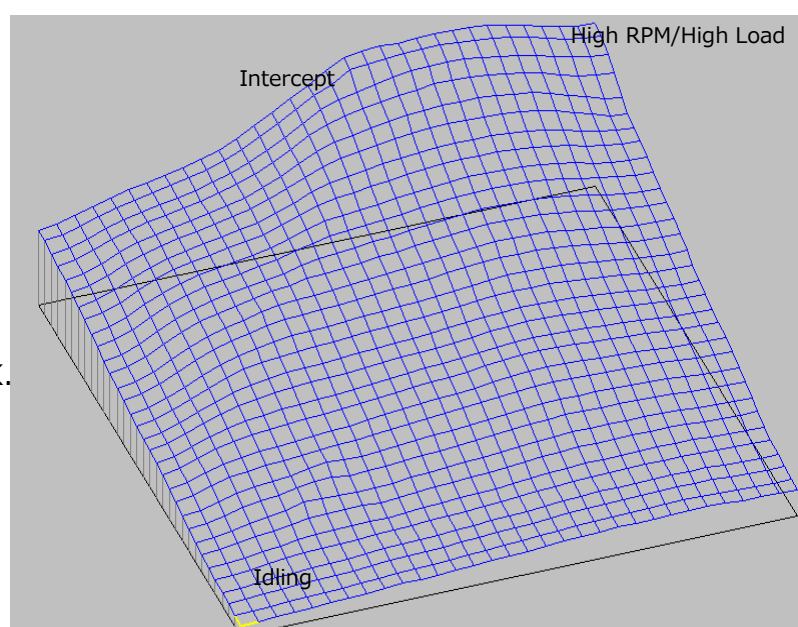
Vehicle Setup Points (Setup on Chassis Dynamo Meter)

■ Standard Ignition Time Main Map

Based on information from F-CONIS "F Main Input·Output", the ignition timing map tracing the factory ECU ignition time was prepared to maintain the vehicle condition.

(At intercept=18500μSEC, and under high area (nearly the rev limit) =16000μSEC afterward.)

Under the high RPM area, the boost pressure slightly dropped, but the injector opening rate became nearly equal to 90% or higher; therefore, the limit of the factory boost pressure increase should be about 0.8K. Also, it was confirmed that the value of the AF was about 11.0 under the high RPM and high load area.



Unit Data	DATA Inform...	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	
[F3]Fuel Control	[F3]F	Time	5000	4000	3000	2000	1625	1250	1100	950	825	700	650	600	550	500	450	400

- Standard Injection Time
- Injection Time at Start
- None Phase Injection Time
- Independent Injection Time
- Main Injector Dead Time

Considering the injector dead time of the factory injectors, the injector dead time of the injector dead time map was set to be longer, and the total injection time was adjusted in the standard injection time main map.

Use the non-phase injection time map, acceleration trim map (fuel correction), and other items that may effect on the engine response as default data. The setup must be performed in accordance with each vehicle characteristics.

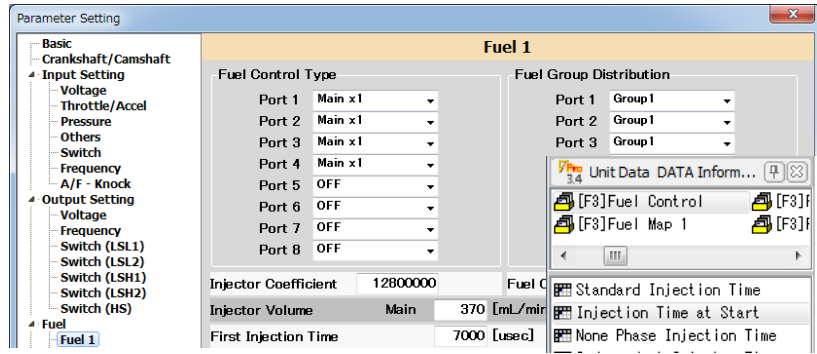
Refer to the manual of F-CON V Pro Ver.3.4 for use of the fuel mapping, etc.

	2661	2903	3145	3387	3629	3871	4113	4355	4597	4839	5081	5323	5565	5806	6048	6290	6532	6774	7016	7258	7500	
[F1]Axis Setting	-0.80	1822	1874	1945	2037	2144	2257	2367	2468	2566	2631	2693	2743	2782	2807	2816	2803	2765	2710	2649	2599	2576
[F2]Conversion Table	-0.75	1877	1929	2000	2090	2195	2308	2418	2521	2612	2688	2752	2802	2841	2867	2876	2863	2826	2770	2708	2657	2634
[F3]Fuel Control	-0.69	2012	2066	2135	2222	2324	2435	2547	2653	2749	2830	2896	2948	2987	3013	3023	3011	2974	2917	2852	2799	2774
[F3]Fuel Map 1	-0.64	2219	2279	2349	2433	2530	2638	2752	2864	2966	3054	3123	3175	3213	3239	3249	3238	3201	3141	3072	3015	2988
[F3]Fuel Map 2	-0.58	2490	2562	2637	2719	2812	2918	3034	3152	3262	3356	3428	3479	3513	3536	3544	3533	3495	3432	3358	3296	3266
[F3]Fuel Map 3	-0.53	2760	2907	2991	3076	3168	3274	3393	3518	3637	3736	3809	3855	3882	3898	3902	3887	3846	3779	3699	3631	3598
[F3]Fuel Cut	-0.47	3137	3311	3405	3497	3593	3703	3828	3963	4090	4194	4264	4302	4318	4321	4315	4294	4247	4174	4086	4012	3976
[F4]A/F	-0.42	3575	3766	3872	3975	4080	4198	4333	4477	4614	4722	4788	4815	4813	4798	4776	4743	4688	4606	4511	4430	4391
[F5]Ignition Control	-0.38	4142	4261	4381	4497	4614	4743	4888	5044	5189	5301	5363	5376	5353	5315	5272	5222	5154	5062	4959	4872	4831
[F5]Ignition Map 1	-0.31	4643	4777	4911	5041	5169	5308	5463	5628	5781	5896	5954	5954	5911	5848	5780	5709	5624	5522	5412	5321	5279
[F5]Ignition Map 2	-0.25	5143	5292	5439	5578	5714	5858	6018	6189	6348	6466	6521	6511	6450	6365	6272	6178	6077	5964	5849	5756	5714
[F6]ISC	-0.20	5629	5788	5941	6083	6219	6362	6521	6693	6853	6972	7027	7011	6939	6837	6724	6610	6493	6370	6252	6160	6118
[F7]Boost	-0.14	6102	6259	6408	6545	6674	6809	6962	7129	7287	7406	7461	7445	7370	7259	7132	7002	6870	6739	6618	6526	6485
[F8]Valve Timing	-0.09	6575	6714	6848	6979	7092	7218	7362	7521	7673	7790	7848	7837	7766	7652	7518	7371	7226	7085	6960	6868	6827
[F9]Option Output	-0.03	7056	7172	7287	7398	7507	7626	7762	7913	8059	8175	8238	8237	8172	8059	7913	7754	7592	7439	7307	7212	7170
	0.02	7550	7649	7749	7852	7957	8073	8206	8351	8493	8609	8679	8689	8633	8518	8360	8180	7998	7829	7687	7587	7544
	0.08	8049	8151	8249	8350	8458	8579	8715	8859	9000	9118	9196	9216	9165	9044	8869	8685	8459	8270	8115	8009	7964
	0.13	8568	8670	8775	8884	9002	9134	9277	9425	9567	9690	9775	9801	9751	9623	9429	9201	8969	8759	8589	8476	8427
	0.19	9067	9180	9303	9426	9561	9707	9860	10015	10162	10289	10379	10410	10360	10225	10016	9766	9510	9280	9095	8971	8919
	0.24	9550	9681	9815	9953	10108	10269	10434	10595	10748	10880	10975	11008	10961	10822	10605	10340	10065	9814	9611	9476	9419
	0.30	10073	10139	10238	10347	10463	10584	10710	10841	10975	11111	11150	11150	11096	11001	10813	10510	10240	10000	9793	9673	9609
	0.35	10445	10626	10776	10962	11147	11336	11518	11688	11846	11983	12084	12125	12087	11959	11747	11471	11168	10874	10626	10455	10382
	0.41	10865	11051	11362	11475	11685	11869	12057	12228	12386	12520	12619	12660	12626	12506	12303	12030	11715	11397	11120	10923	10840
	0.46	10840	11458	11897	11938	12216	12429	12629	12803	12958	13085	13176	13209	13174	13060	12865	12594	12267	11922	11610	11383	11286
	0.52	11087	11709	12251	12642	12788	13028	13251	13434	13588	13705	13782	13801	13758	13643	13451	13180	12840	12466	12157	11854	11740
	0.57	11296	11909	12665	13143	13389	13677	13927	14129	14287	14396	14458	14459	14401	14278	14092	13815	13448	13018	12657	12262	12110
	0.63	11520	12200	12978	13608	14068	14352	14644	14874	15044	15153	15210	15207	15139	15002	14866	14604	14172	13625	13143	12558	12336
	0.68	11732	12466	13314	14107	14722	15047	15386	15642	15843	15963	16036	16029	16073	15873	15591	15432	14945	14422	13865	13295	13037
	0.74	11957	12791	13675	14561	15258	15817	16161	16512	16894	16954	17039	17083	16935	16746	16462	16178	15788	15314	14819	14449	14274
	0.79	12150	12959	13854	14780	15765	16427	16895	17272	17512	17713	17829	17912	17830	17495	17282	16987	16596	16141	15696	15357	15206
	0.85	12289	13133	14059	15026	16049	16832	17359	18045	18208	18280	18396	18441	18248	18127	17916	17614	17216	16758	16316	15900	15822

★ Actual signal output duration is the sum of (standard injection time x fuel correction) + Injector dead time setting.

Vehicle Setup Points (Setting Items, etc.)

OTHER



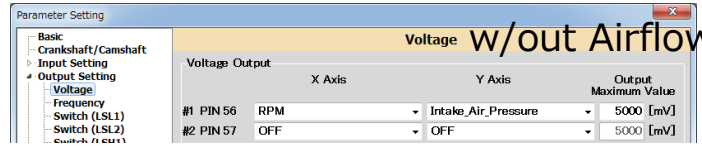
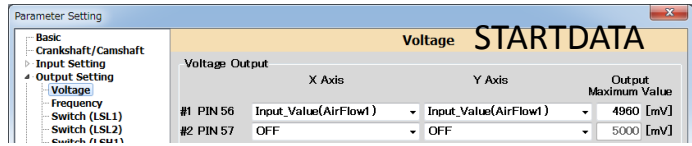
■ Fuel control during engine starting has been modified in Parameter·Fuel 1. Whilst there are difference between each vehicle, if the engine is starting to an acceptable level, please retain the default data and continue setup.

	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	130
1	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780
2	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780
3	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780
4	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780
5	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780
6	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780
7	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780
8	89510	54490	24910	16930	12140	10740	9340	7780	7780	7780	7780	7780	7780	7780	7780	7780

■ 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

	0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500
0.00	3008	1338	1614	1764	1878	1971	2051	2121	2184	2241	2293	2341	2388	2428	2467	2505
-0.80	500	1858	1928	2108	2242	2354	2450	2530	2608	2676	2738	2796	2849	2898	2947	2991
-0.50	500	1827	2125	2322	2472	2595	2700	2792	2875	2950	3018	3082	3141	3196	3248	3297
-0.44	500	1953	2271	2481	2642	2773	2886	2984	3072	3152	3226	3295	3358	3415	3471	3524
-0.33	500	2054	2390	2610	2778	2918	3036	3140	3233	3317	3394	3465	3531	3594	3652	3707
-0.21	500	2142	2491	2721	2897	3042	3165	3273	3370	3458	3539	3612	3682	3748	3807	3865
-0.09	500	2217	2578	2817	2998	3148	3277	3389	3489	3578	3663	3739	3811	3878	3941	4001
0.03	500	2295	2659	2903	3081	3245	3377	3492	3595	3689	3775	3854	3929	3997	4062	4124
0.15	500	2346	2728	2980	3173	3331	3467	3585	3681	3767	3845	3916	4002	4070	4130	4188
0.27	500	2401	2793	3051	3248	3410	3546	3670	3778	3877	3967	4050	4127	4200	4269	4333
0.39	500	2459	2853	3117	3318	3484	3625	3749	3860	3960	4052	4137	4217	4291	4351	4427
0.51	500	2501	2909	3177	3383	3552	3696	3822	3935	4037	4131	4218	4298	4374	4445	4510
0.63	500	2548	2961	3235	3444	3616	3762	3891	4008	4110	4205	4294	4376	4453	4525	4594
0.74	500	2588	3010	3288	3501	3675	3824	3955	4072	4178	4275	4364	4448	4526	4600	4670
0.86	500	2627	3056	3339	3554	3731	3883	4015	4134	4242	4340	4431	4516	4596	4670	4741
0.98	500	2665	3100	3386	3606	3785	3939	4074	4194	4303	4403	4495	4581	4662	4738	4810

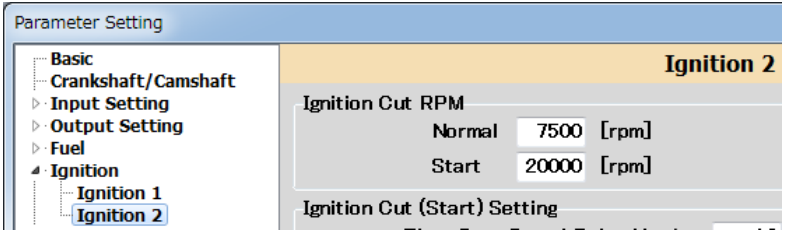


Port	1	2	3	4	5	6	7	8
Cut	7500	7450	7500	7450	20000	20000	20000	20000
Return	7400	7400	7400	7400	20000	20000	20000	20000

■ RPM Fuel Cut Map

For those vehicles equipped with the factory CAT or Metal Catalyzer, the rev limiter is controlled by fuel cut. For STARTDATA, the impact from the fuel cut is reduced by the setting shown above.

For those vehicles without CATs, the rev limiter can be controlled by editing Ignition Cut RPM of Parameter Setting as shown in the diagram on the right. Make sure not to perform this setting for the vehicle equipped with a CAT. If neglected, it may cause damage to a CAT by unburnt gas which results in damage to an engine.



Speed Limiter Cancel Function (Formula is shown on the right.)

The speed signal setting is done in #1 PIN 45 of Frequency Output Setting under Parameter Setting.

#For PS13STARTDATA, the following setting was done to cancel the speed limiter. The speed limiter cancel function is set to activate at 58.3[Hz] by input 58.3 to the output maximum value.

#For PS13STARTDATA, the output maximum value is set to the value shown above, and the ECU's speed recognition is clipped approximately at 165km.

In Frequency of Input Setting under Parameter Setting, "JIS_Speed" was selected for Option Frequency Input's Frequency 1 PIN 58, and "2" was input for Number of JIS Car Speed Signal Pulse.

Formula to Calculate Frequency Input Value

$$F = N \times SPD / 5,6515$$

- F=Frequency (HZ)
- N=Speed Pulse
- SPD=Car Speed (KM/H)

Parameter Setting - Frequency Output

	X Axis	Y Axis	Output Maximum Value
#1 PIN 45	Input_Value	Input_Value	58.3 [Hz]
#2 PIN 46	OFF	OFF	2000.0 [Hz]

Parameter Setting - Frequency Input

Option Frequency Input

Frequency 1 PIN 58	JIS_Speed
Frequency 2 PIN 59	OFF

Car Speed Control Data

Car Speed Control Data: JIS_Speed

Wheel Speed 1 Tire Circumference	0 [mm]
Wheel Speed 1 Number of Pulse	0
Wheel Speed 1 Trim Coefficient	0.0 [%]
Wheel Speed 2 Tire Circumference	0 [mm]
Wheel Speed 2 Number of Pulse	0
Wheel Speed 2 Trim Coefficient	0.0 [%]

Number of JIS Car Speed Signal Pulse: 2