



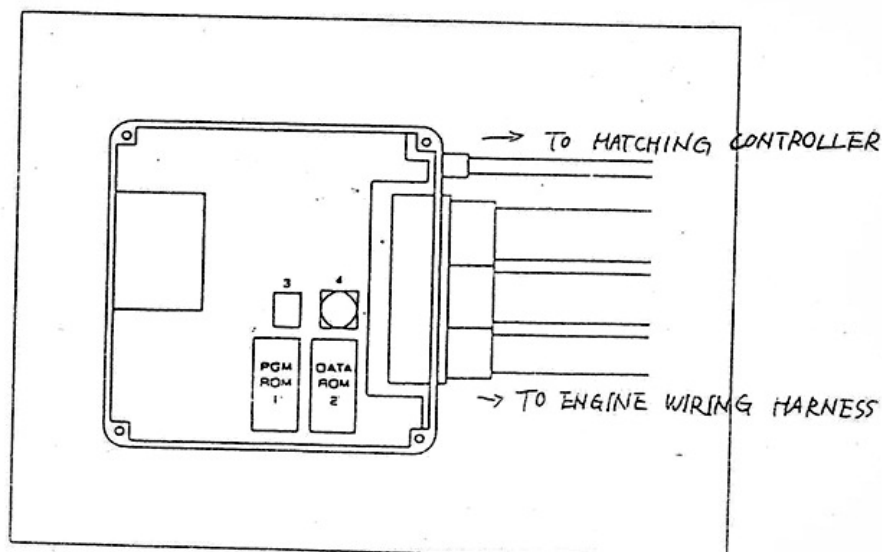
THE INSTRUCTION MANUAL OF TRD MULTI ECU

この度はTRDマルチECUをお買い上げいただきありがとうございます。
本品はモータースポーツ専用開発されたエンジンコントロールコンピューターです。
今までのコンピューター以上に多くの機能とセッティングの自由度を持った新製品です。
以下に構成部品およびその仕様について説明します。

1. THE CONTENTS OF THIS SET

- (1) ECU
- (2) MATCHING CONTROLLER
- (3) INSTRUCTION MANUAL

2. ECU



(1) FUNCTION : This product has been designed to control amount of injected fuel and ignition timing in compliance with the type of engine and use by 2 kinds of built-in switches

(2) How To USE :

① Please set the Dep switch and rotary switch in compliance with the type of engine and use

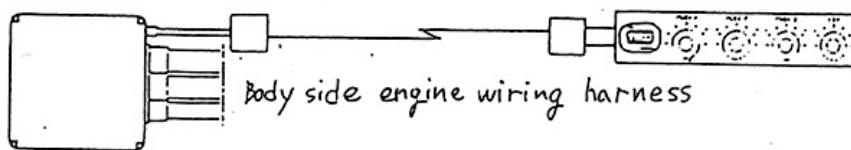
	Dep switch			Rotary switch
	1	2	3	
AE86	ON	OFF	OFF	0
EP71	ON	ON	OFF	4
EP71-T	OFF	ON	OFF	8

(Ref. Appendix 1)

② Please take off standard ECU, and install Multi ECU.
(Ref. Appendix 2)

③ If you complete the above set up, car will start. But Multi ECU is developed to suitable for our designed engine, so we recommend that you use Multi ECU on our designed engine. (Ref. Appendix 4)

3. Matching Controller (Map switch)



(1) FUNCTION : You can control basic data of ignition timing and amount of injected fuel from the outside. (ex. driver's seat)

(2) How to Use : ① Please connect ECU side connector (6p) and controller side connector (6p).

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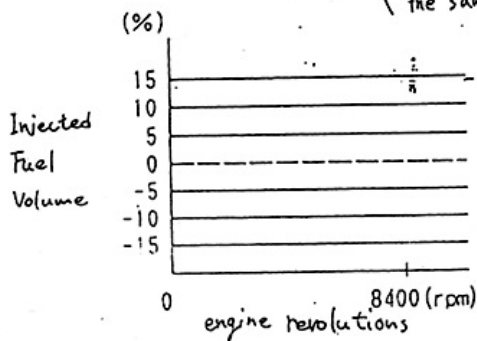
- ② (+) side increase or advance
(-) side decrease or put back

NAME	SUBJECT	CONTENT	MAXIMUM	INTERVAL
FUEL 1	FUEL	Generally Correction	$\pm 15\%$	5 %
FUEL 2	FUEL	Revolution Correction	$\pm 21\%$	7 % $\times 1$
FUEL 3	FUEL	Vacuum Correction	$\pm 18\%$	6 % $\times 2$
ESA	IGNITION	Generally Correction	$\pm 6^\circ \text{CA}$	2°CA

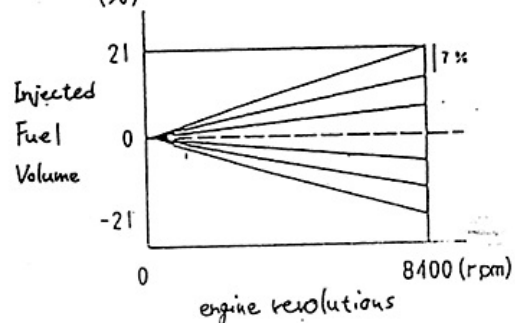
Electronic Spark Advance

- $\times 1$ The value of correction changes in compliance with revolution. (Max: 7%)
 $\times 2$ The value of correction changes in compliance with aspiration pressure (Max: 6%)

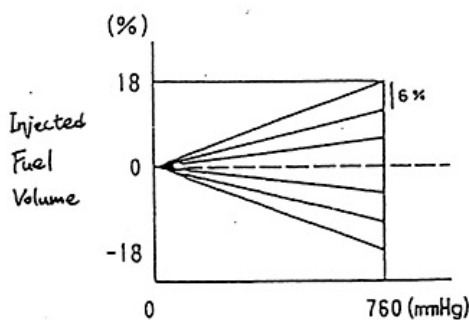
EX) AEG6 (As for 2E-E and 2E-TE, the basic working is the same as 4A-GE)



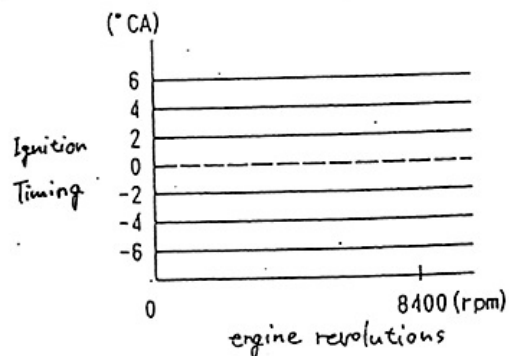
- I) FUEL 1
It corrects by 5% regardless of revolution.



- II) FUEL 2
It corrects in compliance with the rise of revolutions (7% / 8400 rpm)



- III) FUEL 3
It corrects in compliance with the rise in aspiration pressure. (6% / 760 mmHg)



- IV) ESA
It corrects by 2°CA regardless of revolutions.

4. Advices when you use TRD Multi ECU

App

- (1) This product is a precise part, so please don't take it apart or transform. Please don't take off the inside ROM because it will be the cause of the incorrect works or the breakdown for the break in the circuit.
- (2) Competition rules may prohibit or limit the use of Matching Controller on vehicles used in competition.
- (3) This product is for the exclusive use of motor sports, so please never use for ordinary maintenance or ordinary drive.
- (4) It is not available for automatic transmission car.
- (5) This product has self diagnosis function. (Ref. Appendix.3)

switch No.
0
1
2
3
4
5
6
7

Appendix

1. Switches (There are 2 kind of switches)

(1) Dep switch

This switch is for the selection of programs (engine type).

It can correspond to 8 kinds of programs for combination ON-OFF.

Programming (engine type)

1	2	3	engine type	Spec.	Car Model	
ON	ON	OFF	2E-E	N1	EP71	Built-in
OFF	ON	OFF	2E-TE	N1	EP71 turbo	↑
ON	OFF	OFF	4A-GE	N1	AE86	↑
OFF	OFF	OFF	4A-GE	Gr. A	AE86, AE82, AE92	↑
OFF	OFF	ON	—	—	—	Blank
ON	OFF	ON	—	—	—	↑
OFF	ON	ON	—	—	—	↑
ON	ON	ON	—	—	—	↑

(2) Rotary switch

This switch is for the selection of the data.

It can be mounted 16 kinds of data (0~F).

Data mount (engine type)

switch No.	engine type	Spec.	Car Model	No.	engine type	Spec.	Car Model
0	4A-GE	N1	AE86	8	2E-TE	N1	EP71 turbo
1	4A-GE	Blank	AE86	9	2E-TE	Blank	EP71 turbo
2	4A-GE	↑	AE86	A	2E-TE	↑	EP71 turbo
3	4A-GE	↑	AE86	B	2E-TE	↑	EP71 turbo
4	2E-E	N1	EP71	C	4A-GE	Gr. A	AE86, AE82, AE92 (~'89.4)
5	2E-E	Blank	EP71	D	4A-GE	Gr. A	AE92 ('89.5~)
6	2E-E	↑	EP71	E	4A-GE	Blank	AE86, 82, 92
7	2E-E	↑	EP71	F	4A-GE	↑	AE86, 82, 92

2. ECU wiring harness table

- (1) ECU side connector arrangement It is different from the connector arrangement of standard ECU, but it is able to exchange from standard ECU

※10P coupler

E01	#10	STA		
E02	#20	IGt	E1	

※18P coupler

VSV		G-	G1	IGF	T	THA	PIW	THW
STH		E21	NE	(G2)	IDL	Vcc	VTA	E2

※14P coupler

			FC		Batt	+B1
	E3		A/C		W	+B

(2) Note

- ① As for engine side and body side wiring harness, please use standard parts of your car.
- ② As for (G2) terminal of 18p coupler, it is used only for 2E-TE

3. Diagnosis indication code

Code No.	Item of Diagnosis	check engine warning lamp
		Wink Times/1 cycle (Terminal Short, IDL Contact ON)
1	Normal	1 time
2	Intake manifold air pressure signal	2 times
3	Water temperature sensor signal system	4 times
4	Revolution signal system	6 times
5	Throttle position sensor signal system	7 times
6	Inhaled air temperature sensor signal system	8 times

Electronic Spa
Advance

Injected
Fuel
Volume

Injected
Fuel
Volume

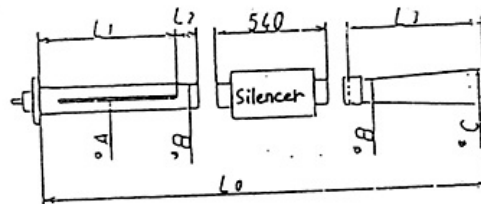
f
with
switches
with

4. Spec. sheet to fit Multi ECU

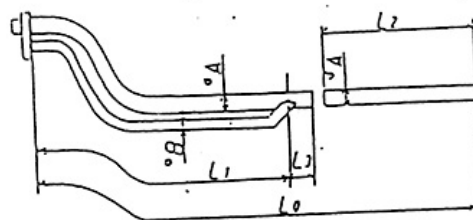
(ENGINE SPEC)

	2E-E(N1)	2E-TE(N1)	4A-GE(N1)
CYLINDER HEAD GASKET	11115-EP701	11115-EP701	11115-AE812
COMPRESSION RATIO	10.2	8.8	10.0
INJECTOR	2E-TE part	3E-TE part	AE86 standard part
SPARK PLUG	#24	#27	#31
IGNITION TIMING	Terminal short 10 °CA	—	—
INTAKE SYSTEM	Air Element: removed	—	Air Element Resonator: removed
EXHAUST SYSTEM (mm)	PIPE OUTER DIA. A=	42	76
	PIPE OUTER DIA. B=	50	28
	PIPE OUTER DIA. C=	60	—
	PIPE LENGTH L ₀ =	3.000	2.300
	PIPE LENGTH L ₁ =	670	500
	PIPE LENGTH L ₂ =	510	1.700
	PIPE LENGTH L ₃ =	1.280	100
			520

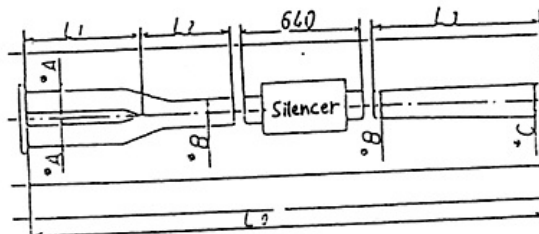
2E-E(N1)



2E-TE(N1)



4A-GE(N1)



d
river's seat)