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Document and Product Description <u>ECU versus TTT802 Gearshift Controller</u>		

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Interfacing TTT802 Flatshift to DTA S40, S40 Ignition

Adjust Shift Cut Settings according to picture below...

Shift Cut Settings	Retard After Cut (0 - 60) Deg	Retard For (0 - 500) mS
Shift Cut Delay Time (1 - 500) millisecs	1	
No Shift Cut Below Throttle (0 - 100) %	0	
Blanking Window After Cut (0 - 5000) ms	0	
Delay (1 - 500) ms, Retard, Time 1st -	0	0,0
Delay, Retard, Time 2nd - 3rd	0	0,0
Delay, Retard, Time 3rd - 4th	0	0,0
Delay, Retard, Time 4th - 5th	0	0,0
Delay, Retard, Time 5th - 6th	0	0,0
Delay, Retard, Time 6th - 7th	0	0,0
Delay, Retard, Time 7th - 8th	0	0,0
Retard if not Using Cut (0 - 100 Deg)	0,0	
Retard Ramp in Time (0 - 500) mS	0	
Post Cut Fuel Increase (0 - 100) %	0	
Post Cut Fuel Increase Time (0 - 500) mS	0	
Gear Position Dead Band (0 - 100) mV	0	
Shift Cut Trip Point (0 - 200) mV	0	
Number of Gears (1 to 7)	0	
Gear Filter Depth (1 to 10)	0	
Gear Timeout (0 - 500) mS	0	

Shift Cut on ? ☒ off ☒ on

Delay Only ? ☒ off ☐ on

Use Gear Dependant Time Table ☐

Use Ignition Retard not Cut for Shift ☐

Also Cut Fuel During Shift ☐

Use Pot not Switch to Start Cut ☐

Use Pot Position to End Cut not Timer ☐

Use Shift Cut Switch to Enable Pot ☐

Use Switch to Start, Pot to Finish ☐

If you wish to use retard after cut and have no gear potentiometer fitted use the entries in 1st - 2nd change for retard and retard time only. In all circumstances retard tapers linearly from initial value to zero at end of time interval. Zero in either time or retard columns inactivates the function in that gear.

The Rpm limit from where the gearcut function is enabled is setup in the TTT802 instead of using setting "No shift cut below throttle" in the DTA.



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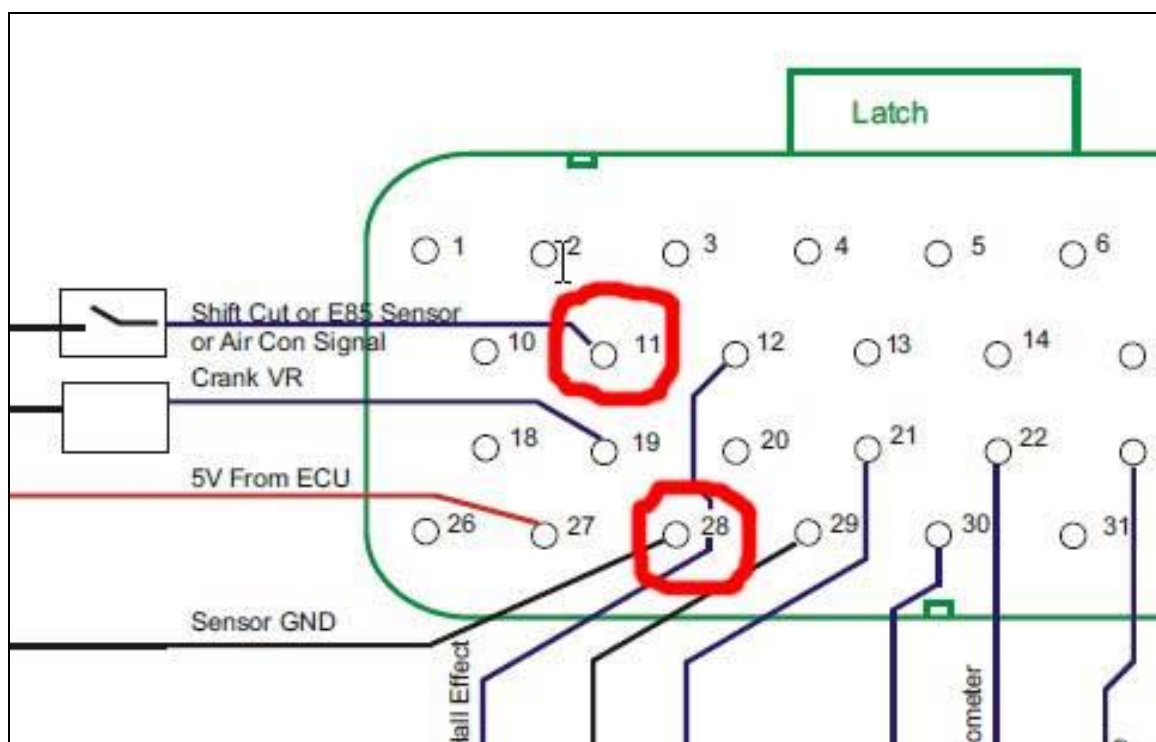
Interfacing TTT802 Flatshift to DTA S40, S40 Ignition

Wire connections

Use extension cable (TTT Part # 12-650-6) to interface the DTA with the TTT802 cable harness (TTT Part # 12-630-8).

Red – Cut Open Collector – connect to DTA pin 11

Blue – Cut Gnd – connect to DTA pin 28



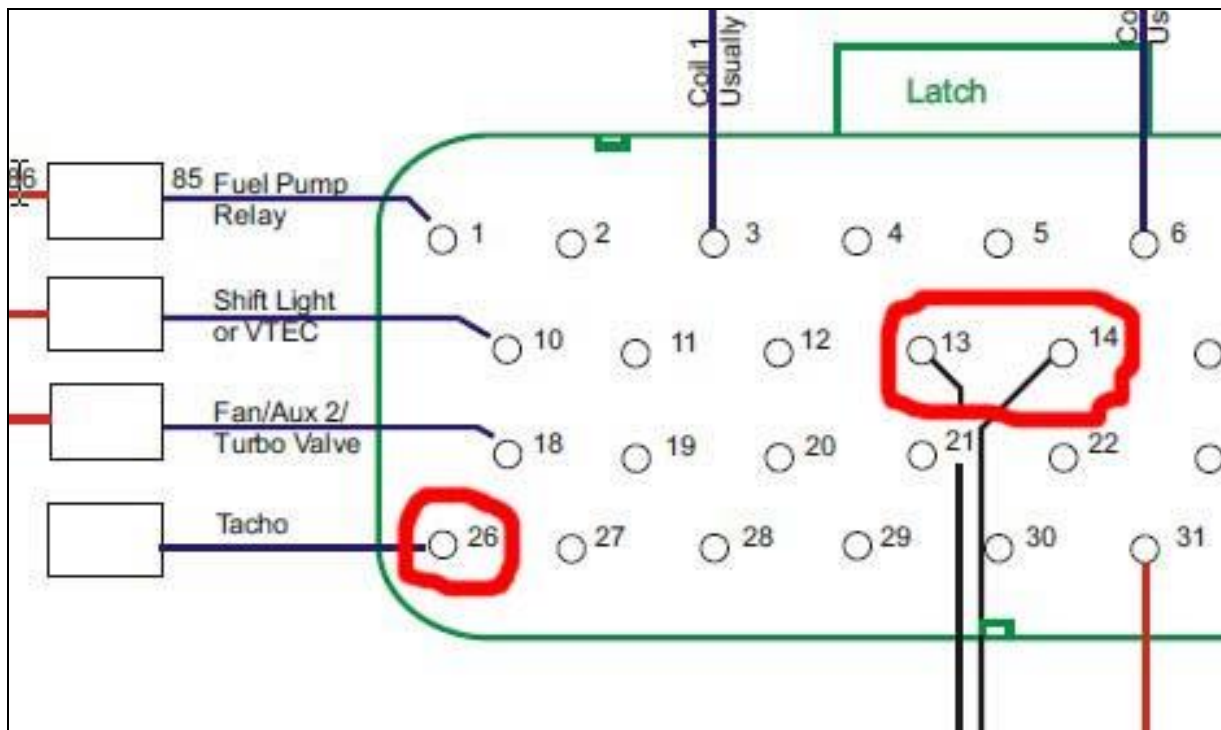


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Interfacing TTT802 Flatshift to DTA S40, S40 Ignition

White – Ign pulse – connect to DTA pin 26

Black - Gnd Ign pulse – connect to DTA pin 13 or 14



Interfacing TTT802 Flatshift to DTA S60, S80



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Adjust Shift Cut Settings according to picture below...

Shift Cut Parameters*

Shift Cut Settings	Retard After Cut (0 - 60) Deg	Retard For (0 - 500) mS
Shift Cut Delay Time (1 - 500) millisecs	1	
No Shift Cut Below Throttle (0 - 100) %	0	
Blanking Window After Cut (0 - 5000) ms	0	
Delay (1 - 500) ms, Retard, Time 1st -	0	0,0
Delay, Retard, Time 2nd - 3rd	0	0,0
Delay, Retard, Time 3rd - 4th	0	0,0
Delay, Retard, Time 4th - 5th	0	0,0
Delay, Retard, Time 5th - 6th	0	0,0
Delay, Retard, Time 6th - 7th	0	0,0
Delay, Retard, Time 7th - 8th	0	0,0
Retard if not Using Cut (0 - 100 Deg)	0,0	
Retard Ramp in Time (0 - 500) mS	0	
Post Cut Fuel Increase (0 - 100) %	0	
Post Cut Fuel Increase Time (0 - 500) mS	0	
Gear Position Dead Band (0 - 100) mV	0	
Shift Cut Trip Point (0 - 200) mV	0	
Number of Gears (1 to 7)	0	
Gear Filter Depth (1 to 10)	0	
Gear Timeout (0 - 500) mS	0	

Shift Cut on ? ☐ off ☒ on

Delay Only ? ☒ off ☐ on

Use Gear Dependant Time Table ☐

Use Ignition Retard not Cut for Shift ☐

Also Cut Fuel During Shift ☐

Use Pot not Switch to Start Cut ☐

Use Pot Position to End Cut not Timer ☐

Use Shift Cut Switch to Enable Pot ☐

Use Switch to Start, Pot to Finish ☐

If you wish to use retard after cut and have no gear potentiometer fitted use the entries in 1st - 2nd change for retard and retard time only. In all circumstances retard tapers linearly from initial value to zero at end of time interval. Zero in either time or retard columns inactivates the function in that gear.

The Rpm limit from where the gearcut function is enabled is setup in the TTT802 instead of using setting "No shift cut below throttle" in the DTA.

Interfacing TTT802 Flatshift to DTA S60, S80

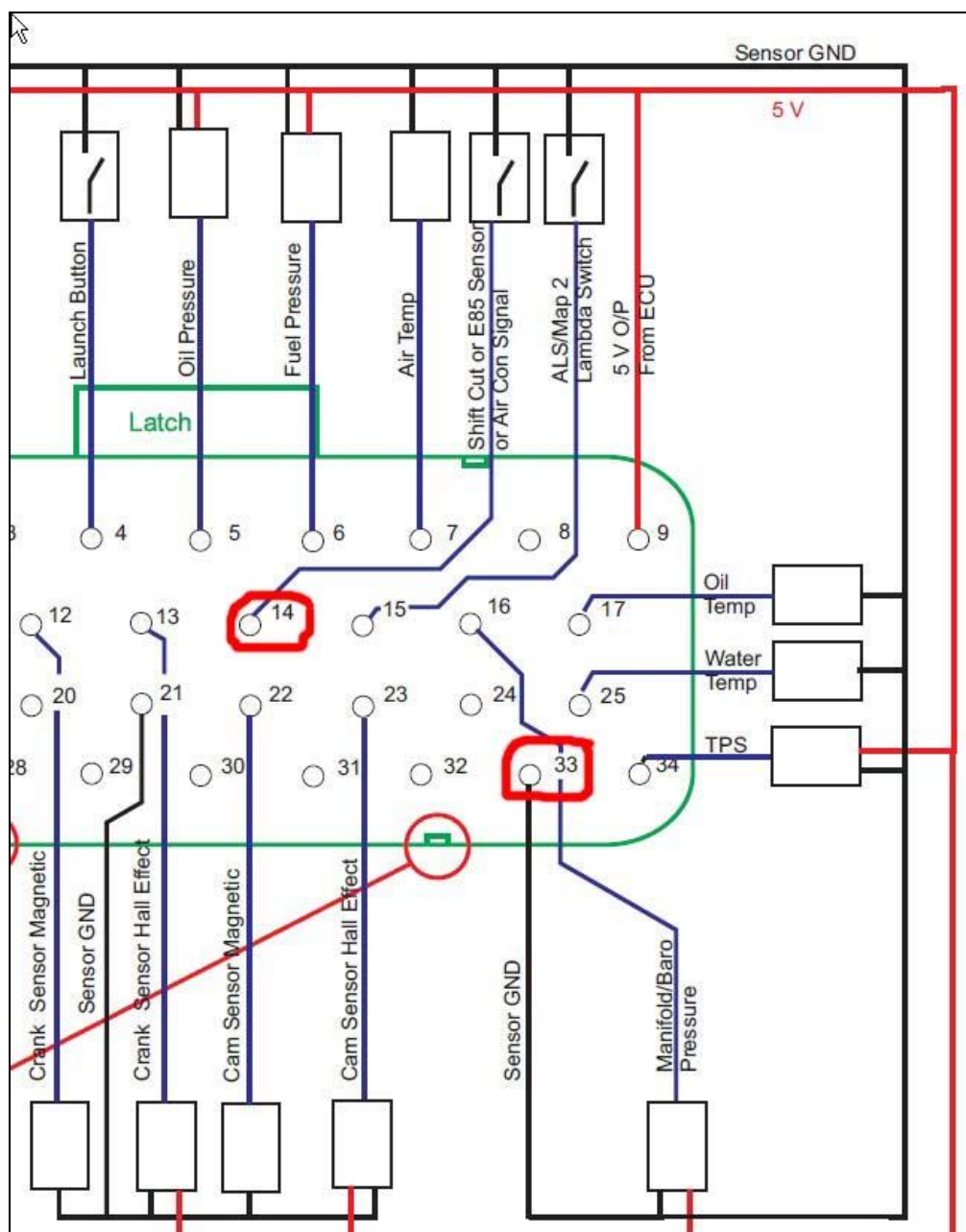
ECU versus TTT802 Gearshift Controller

Wire connections

Use extension cable (TTT Part # 12-650-6) to interface the DTA with the TTT802 cable harness (TTT Part # 12-630-8).

Red – Cut Open Collector – connect to DTA pin 14

Blue – Cut Gnd – connect to DTA pin 33



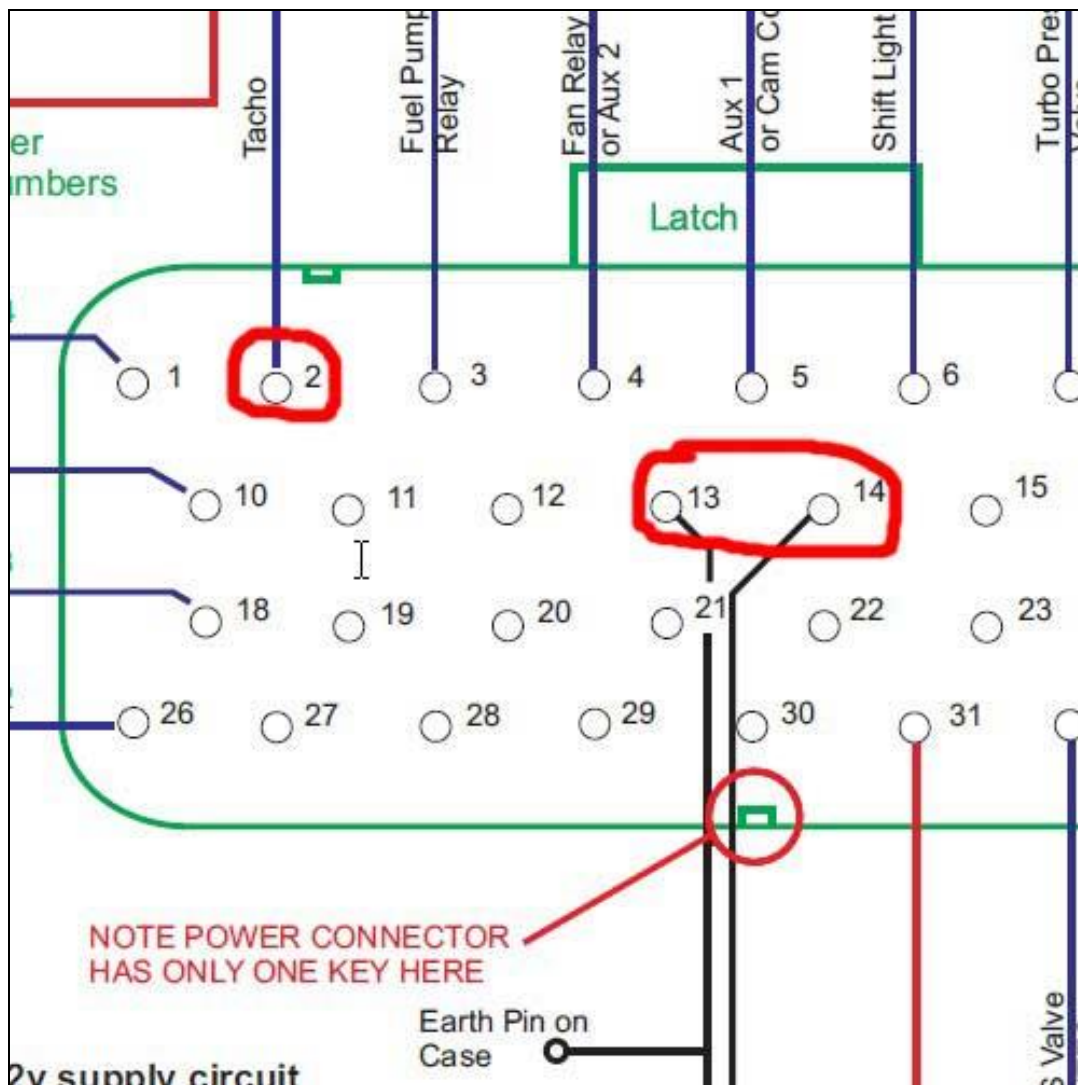
Interfacing TTT802 Flatshift to DTA S60, S80



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White – Ign pulse – connect to DTA pin 2

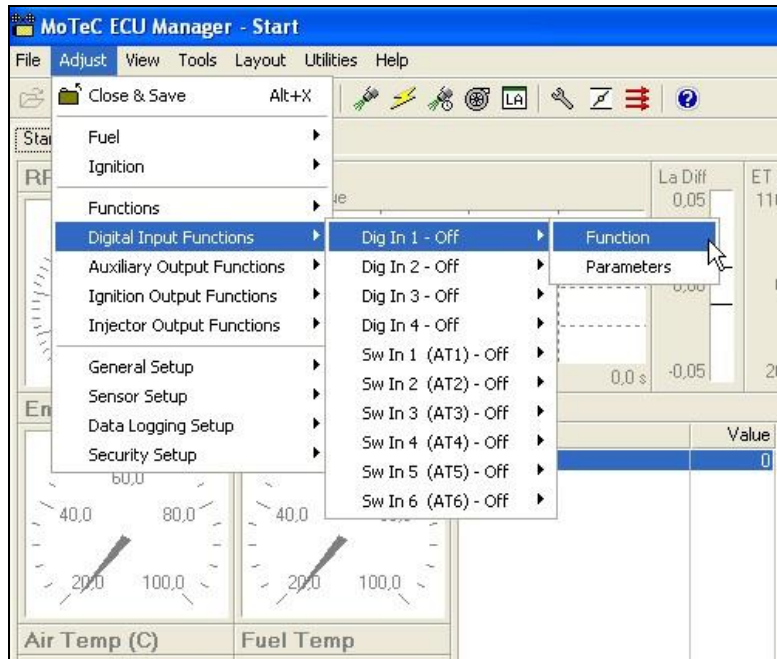
Black - Gnd Ign pulse – connect to DTA pin 13 or 14



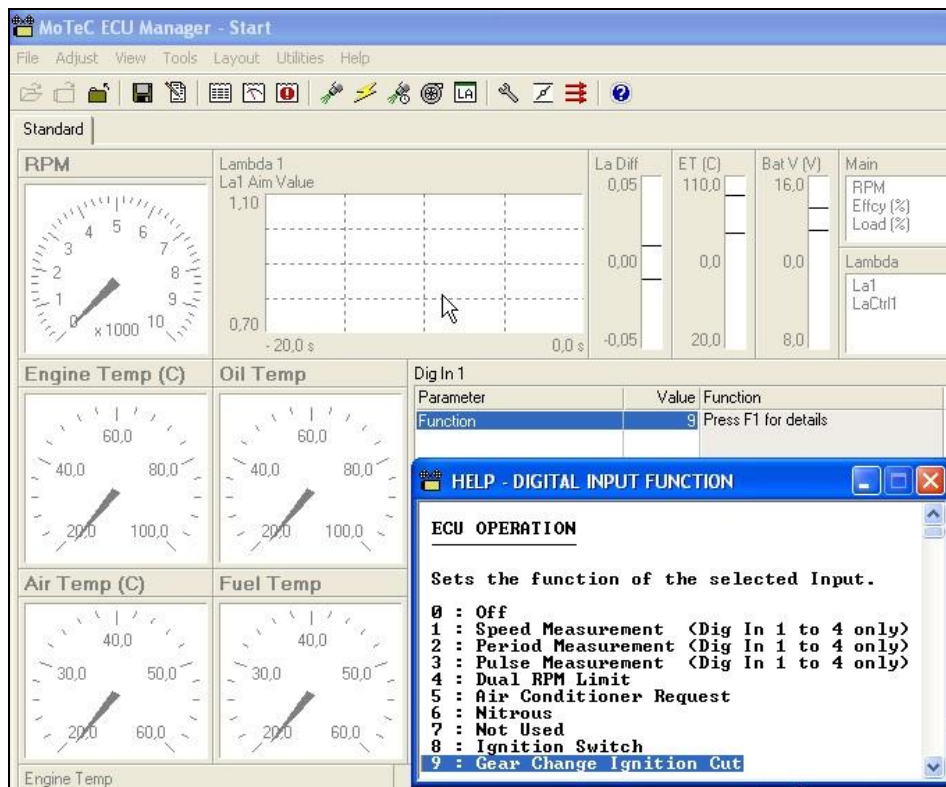
Interfacing TTT802 Flatshift to MoTeC M400 > M880

Adjust Shift Cut Settings following the pictures below...

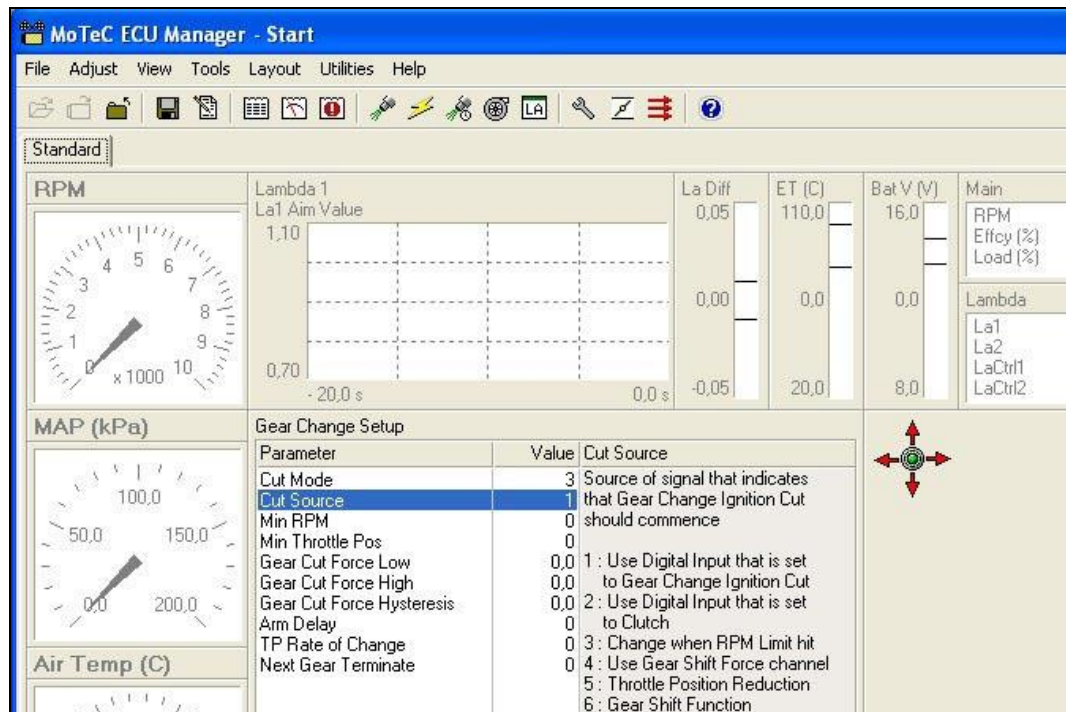
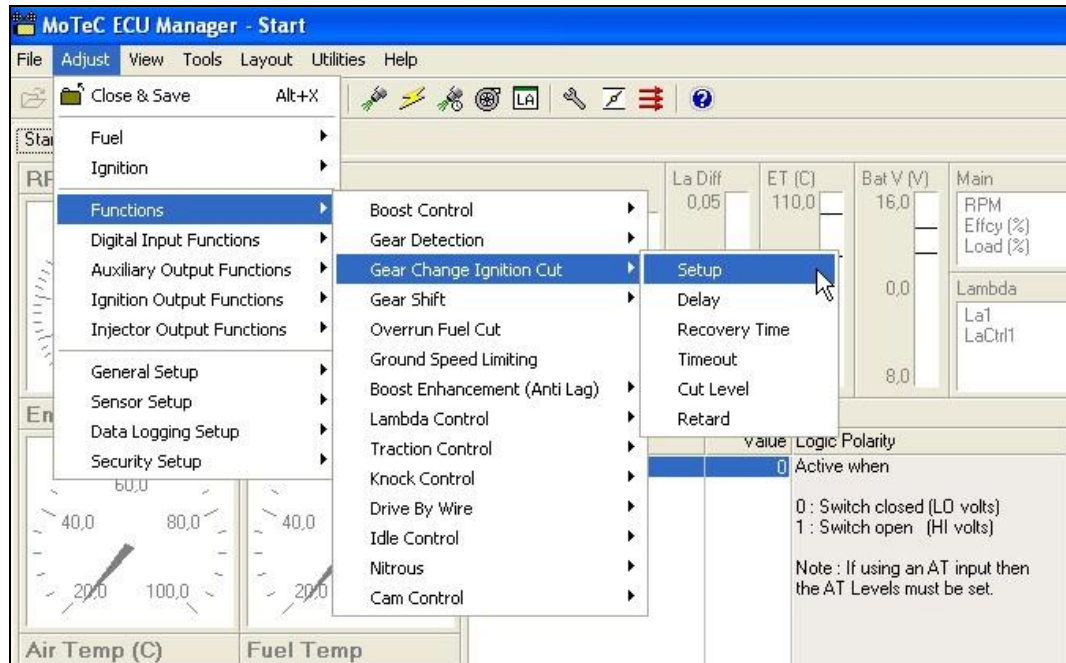
ECU versus TTT802 Gearshift Controller



In this example we use Dig In 1 as "GearCut" input.



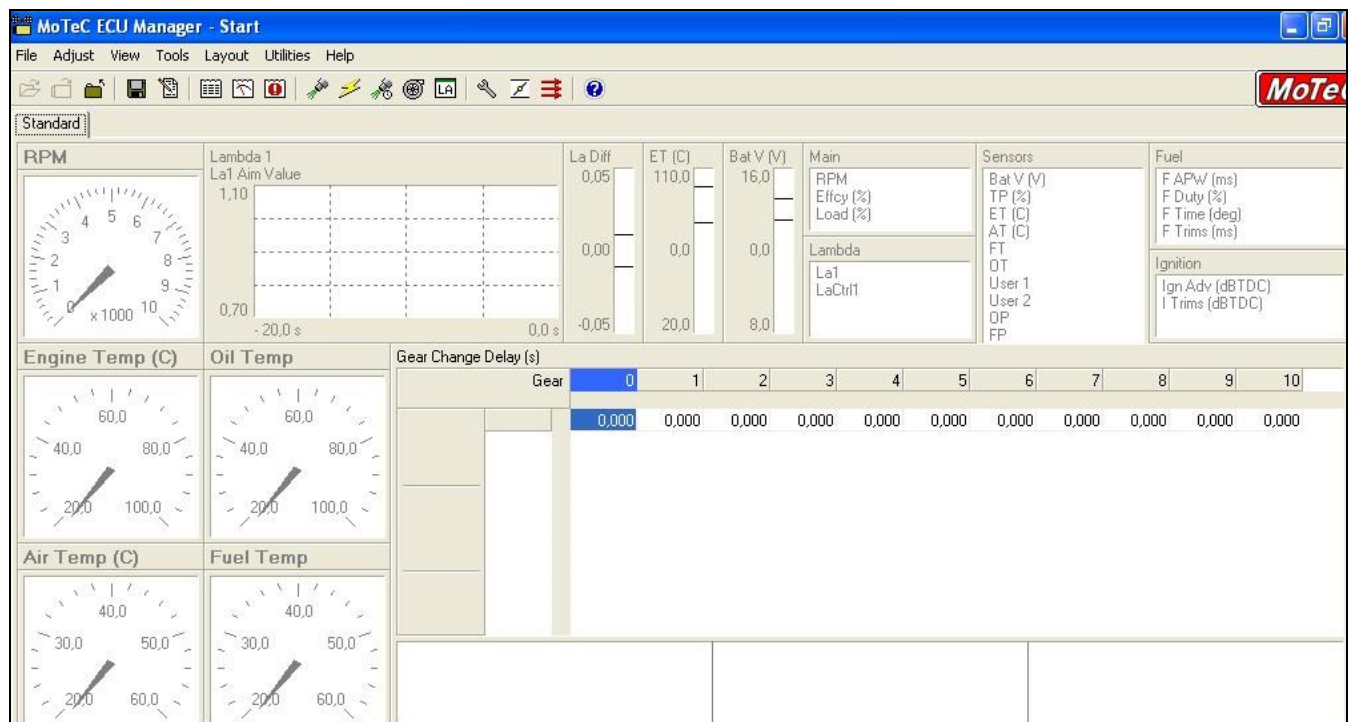
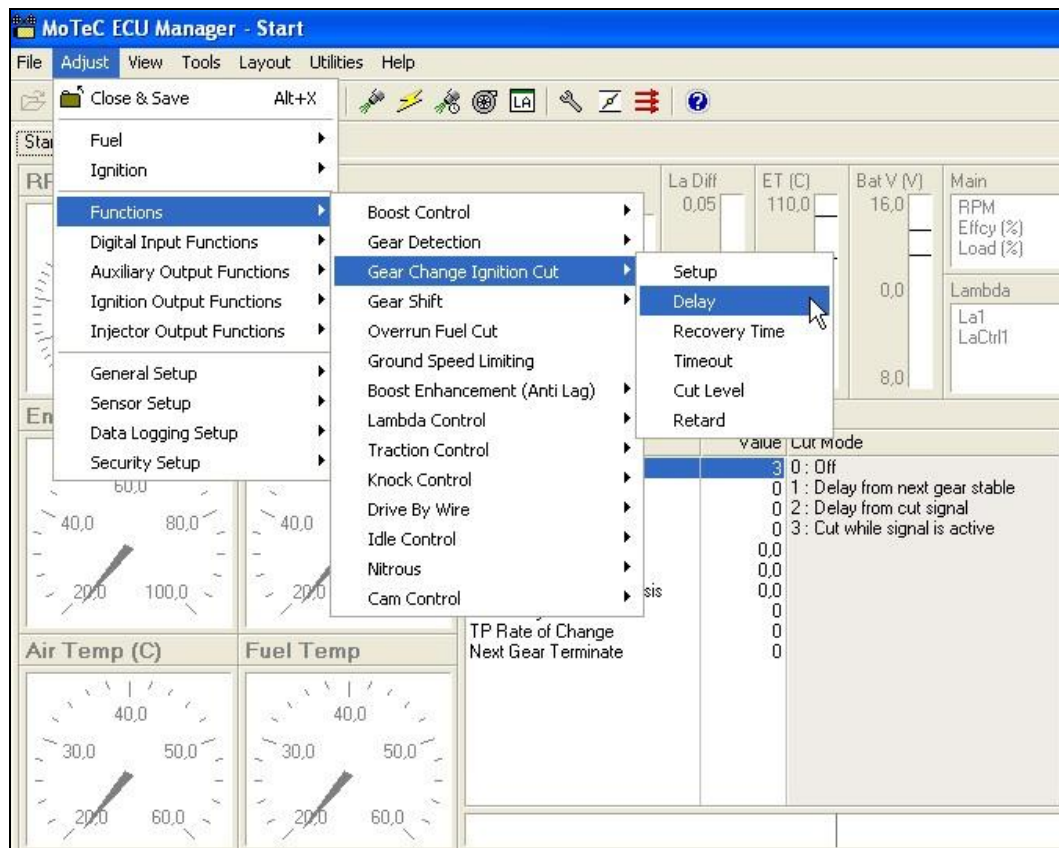
ECU versus TTT802 Gearshift Controller



Cut Mode=3. Cut Source=1. All other settings =0. The Rpm limit from where the gearcut function is enabled is setup in the TTT802 instead of using settings "Min RPM" and "Min Throttle Pos" which both should be set to 0 in the ECU.

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rsus TTT802 Gearshift Controller





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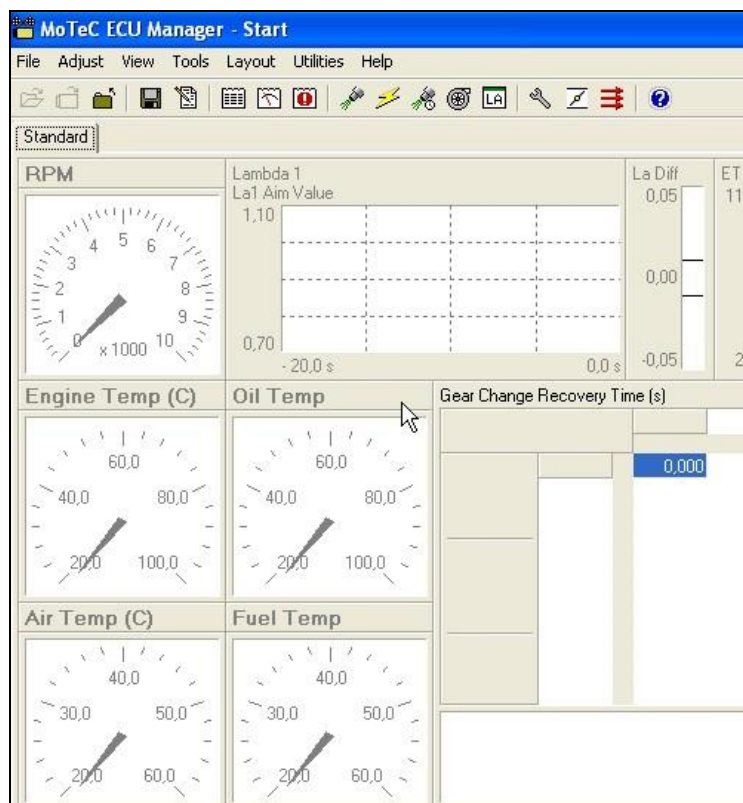
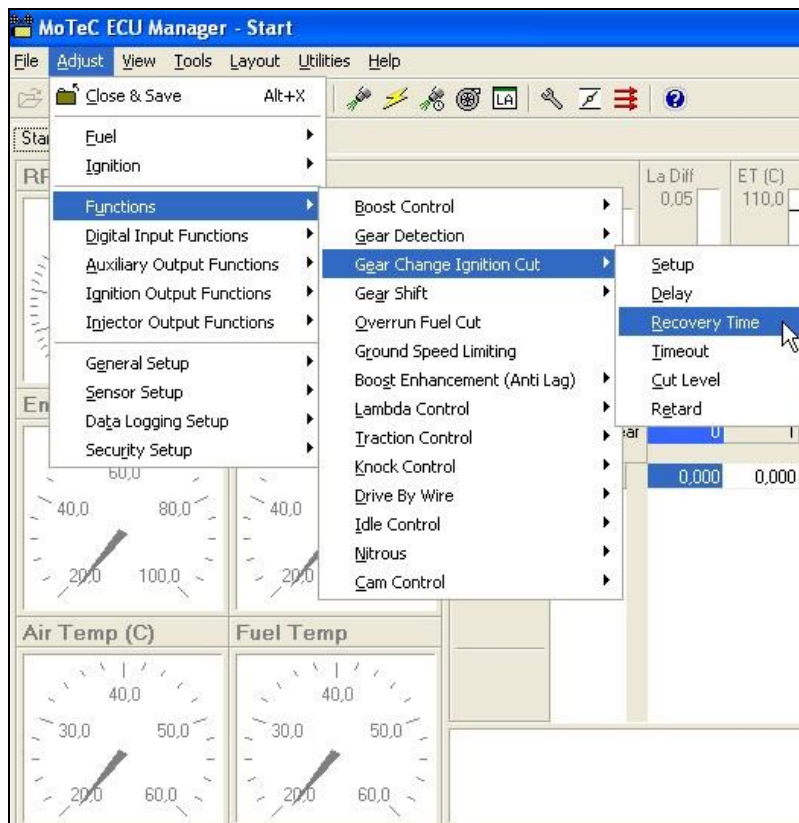
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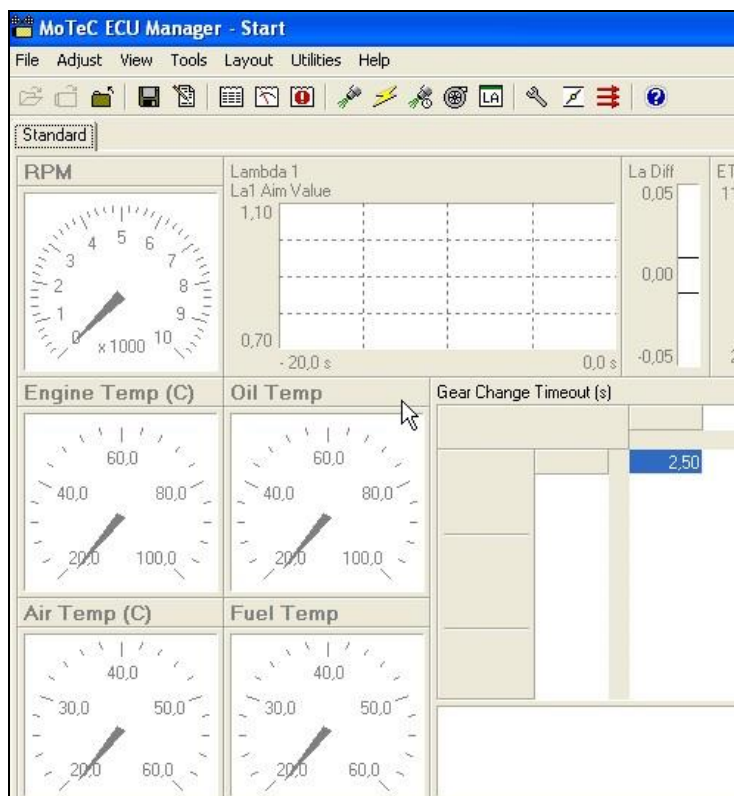
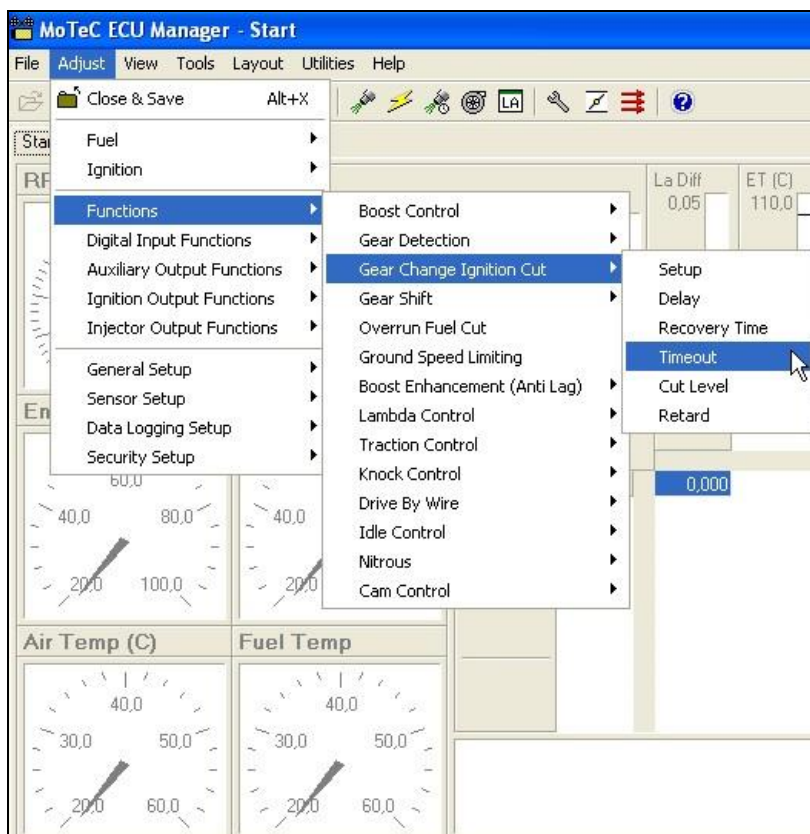
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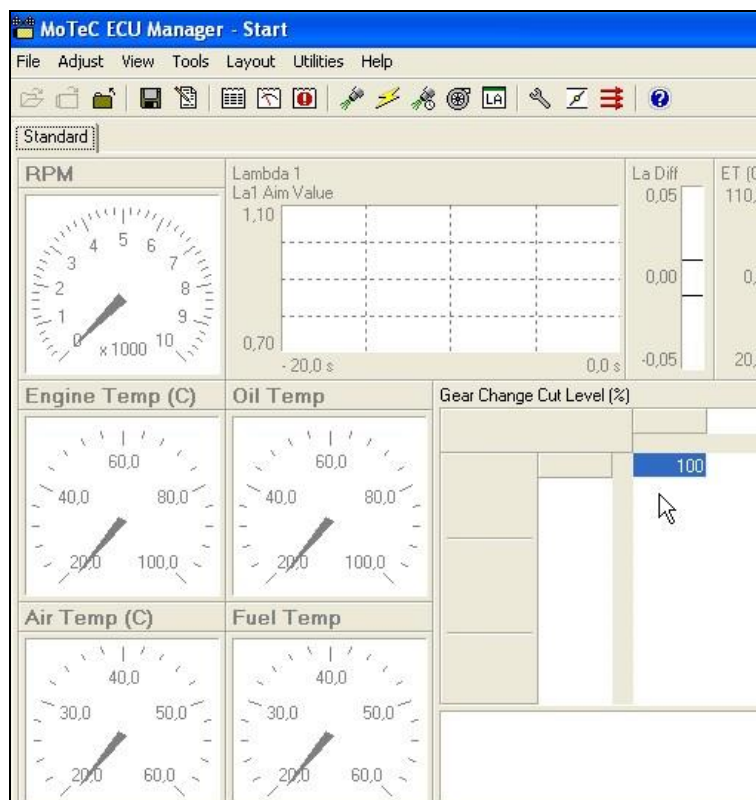
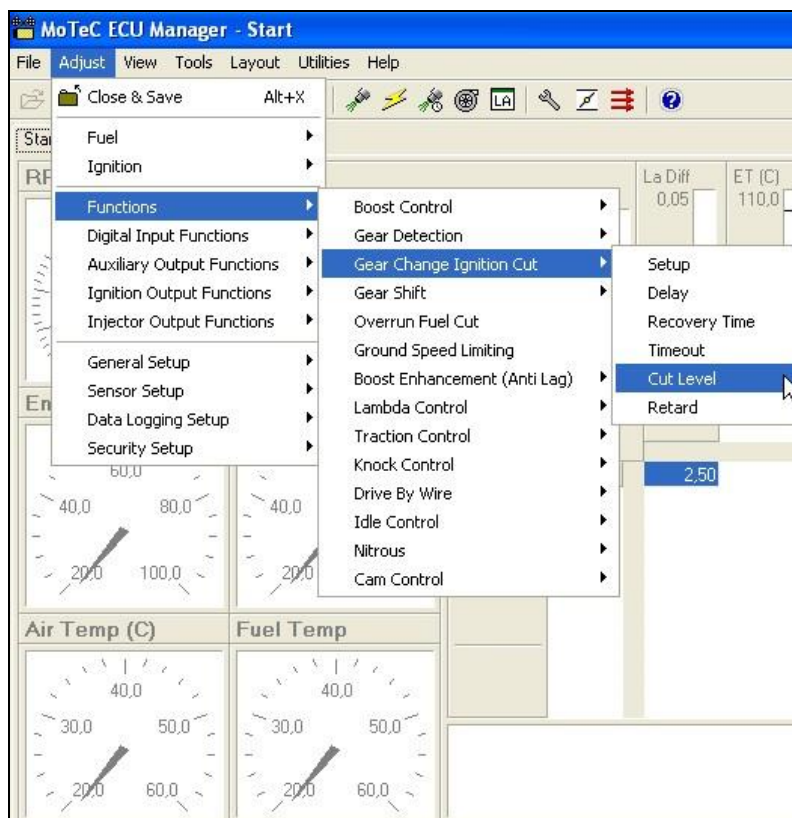
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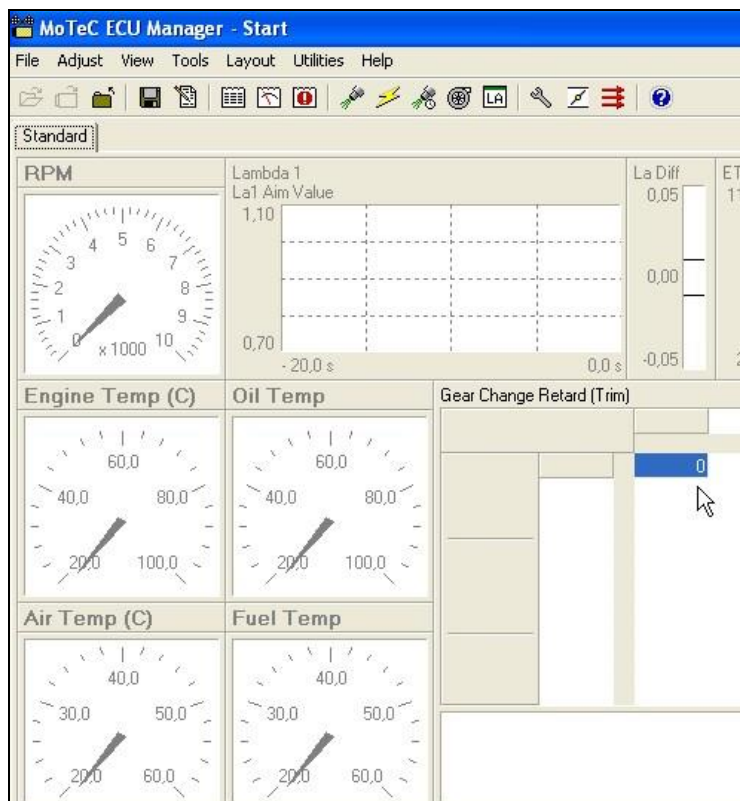
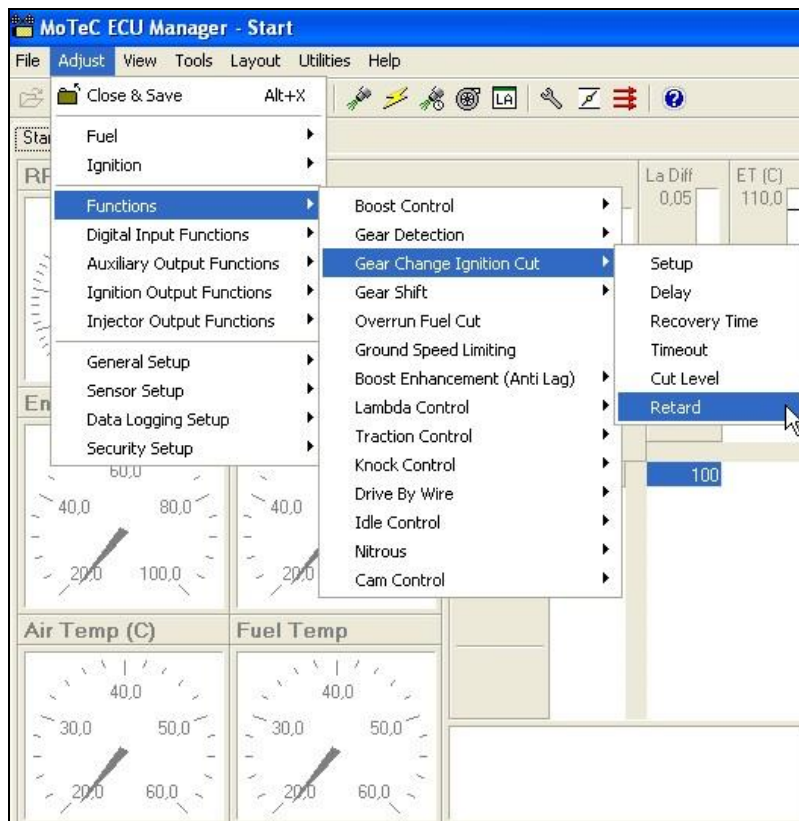




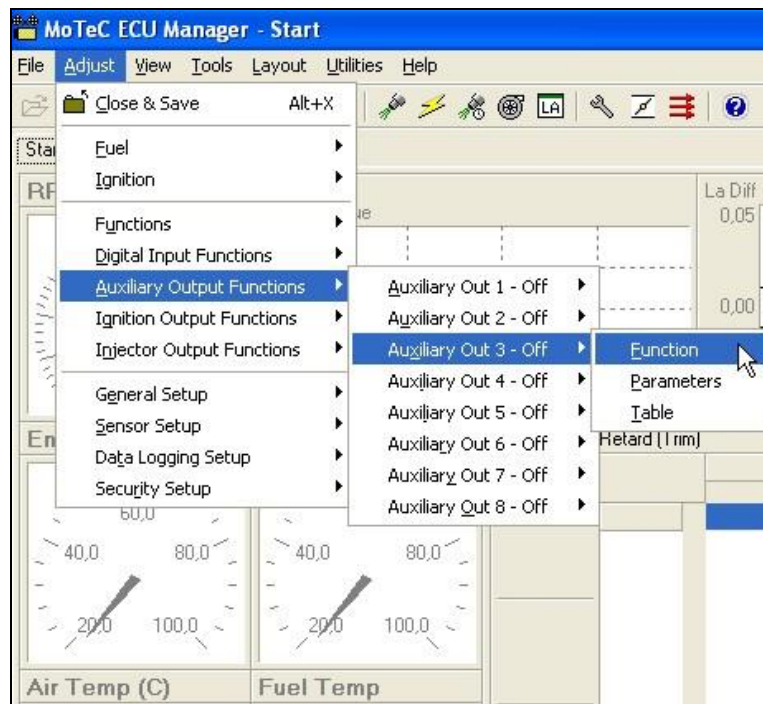
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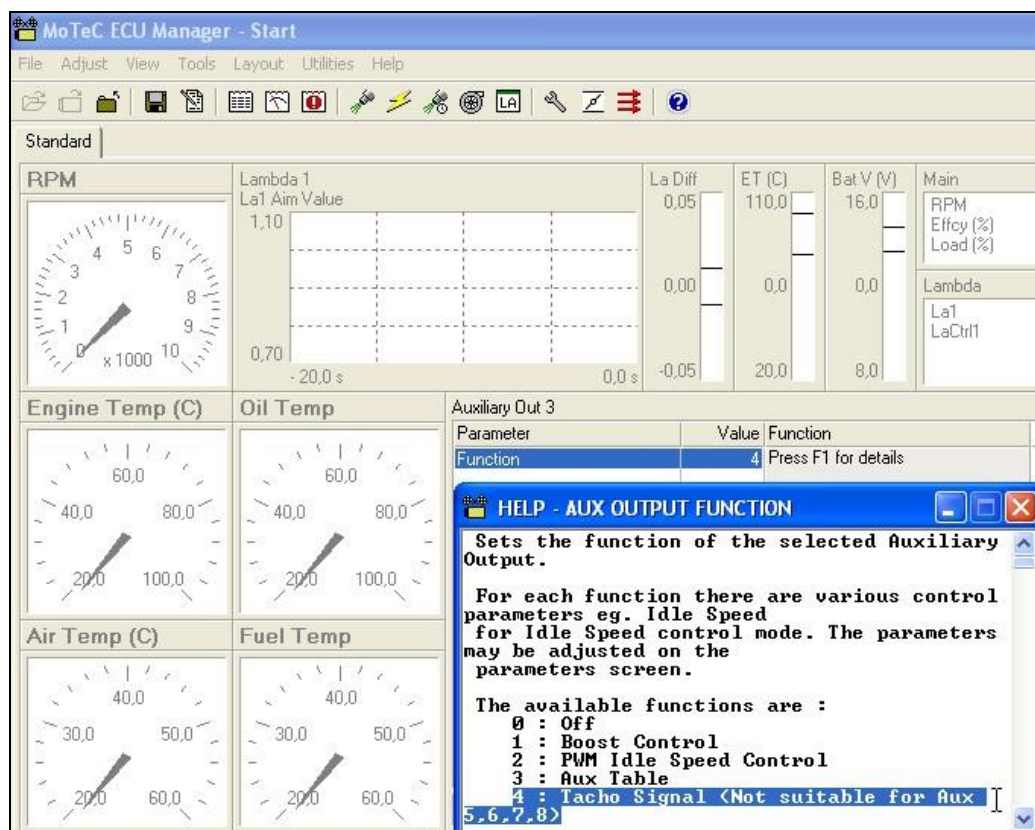
ECU versus TTT802 Gearshift Controller



ECU versus TTT802 Gearshift Controller



In this example we use Aux Out 3 as RPM signal to TTT802. Not used Injection outputs or Ignition outputs can also be used.





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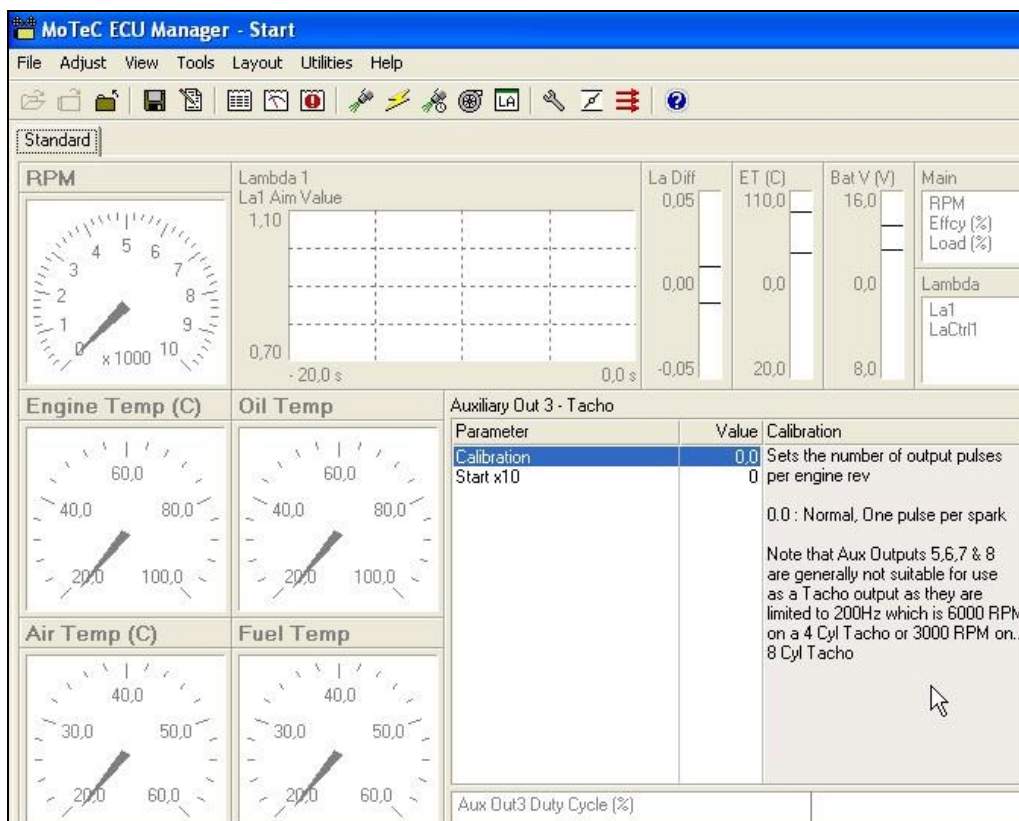
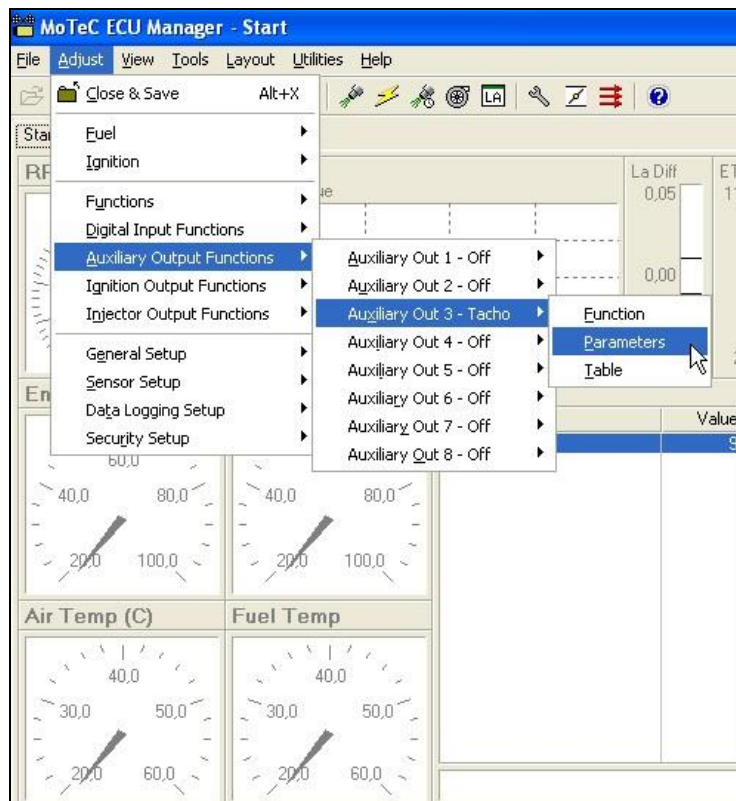
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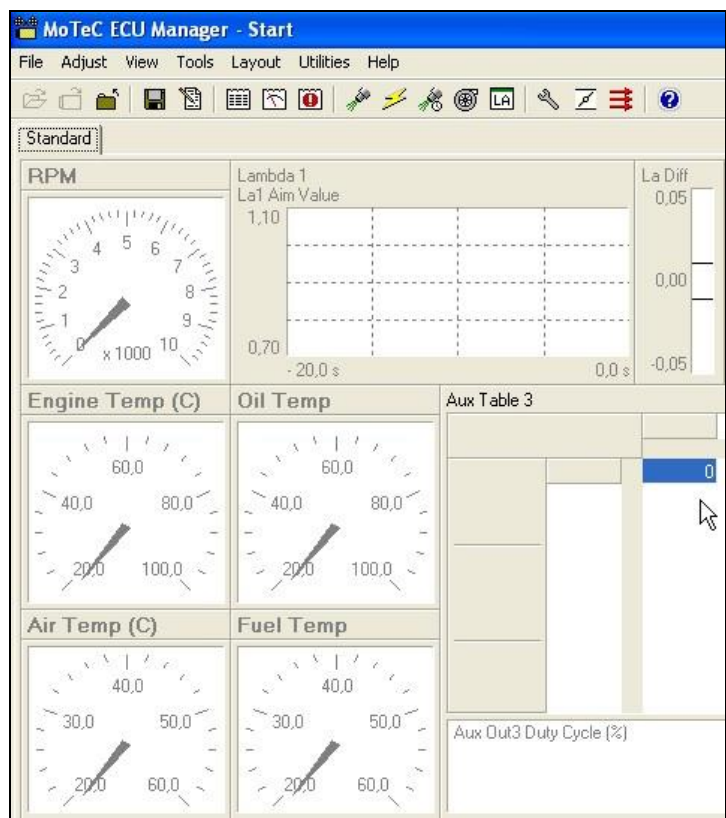
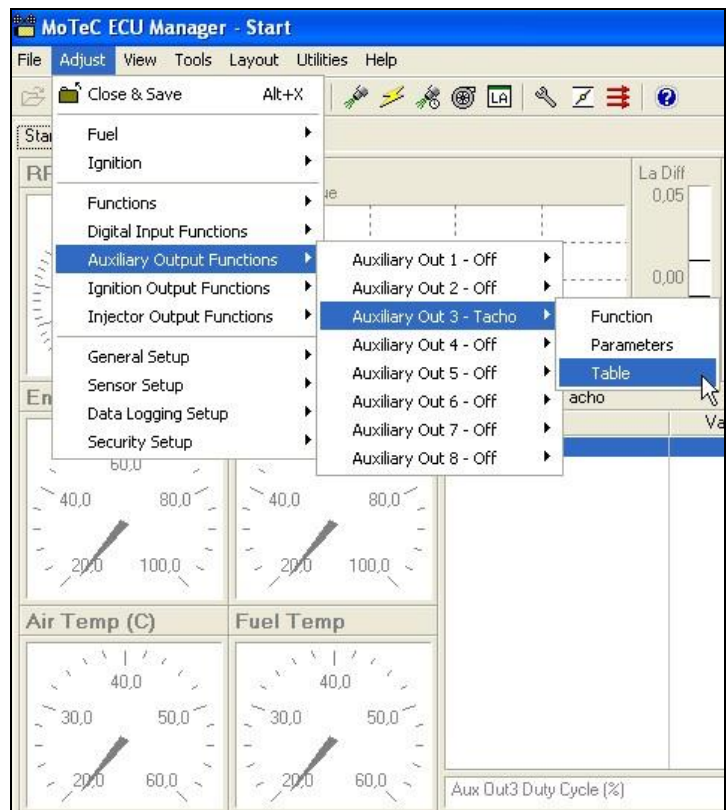




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Wire connections when using Dig In 1 and Aux 3

Use extension cable (TTT Part # 12-650-6) to interface the MoTeC with the TTT802 cable harness (TTT Part # 12-630-8).

For MoTeC M400 to M800

Red – Cut Open Collector – connect to MoTeC Dig In 1 / Pin B8

Blue – Cut Gnd – connect to MoTeC 0V Aux Power / Pin B15

White – Ign pulse – connect to MoTeC Aux 3 / Pin A23

Black - Gnd Ign pulse – connect to MoTeC GND / Pin A10 or A11

For MoTeC M880

Red – Cut Open Collector – connect to MoTeC Dig In 1 / Pin 46

Blue – Cut Gnd – connect to MoTeC 0V Aux Power / Pin 11

White – Ign pulse – connect to MoTeC Aux 3 / Pin 43

Black - Gnd Ign pulse – connect to MoTeC GND / Pin 14, 15, 19, 20, 21 or 22



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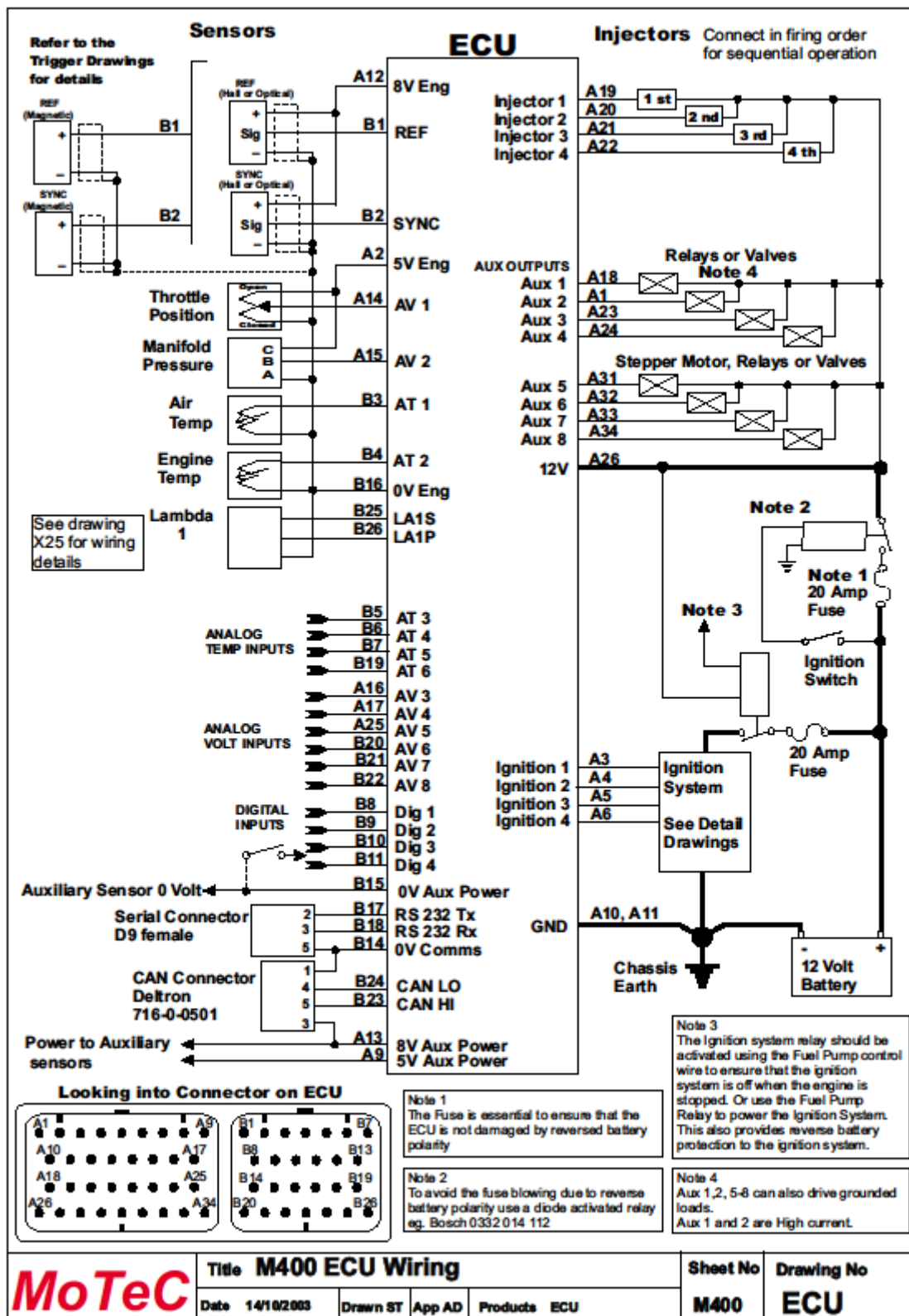
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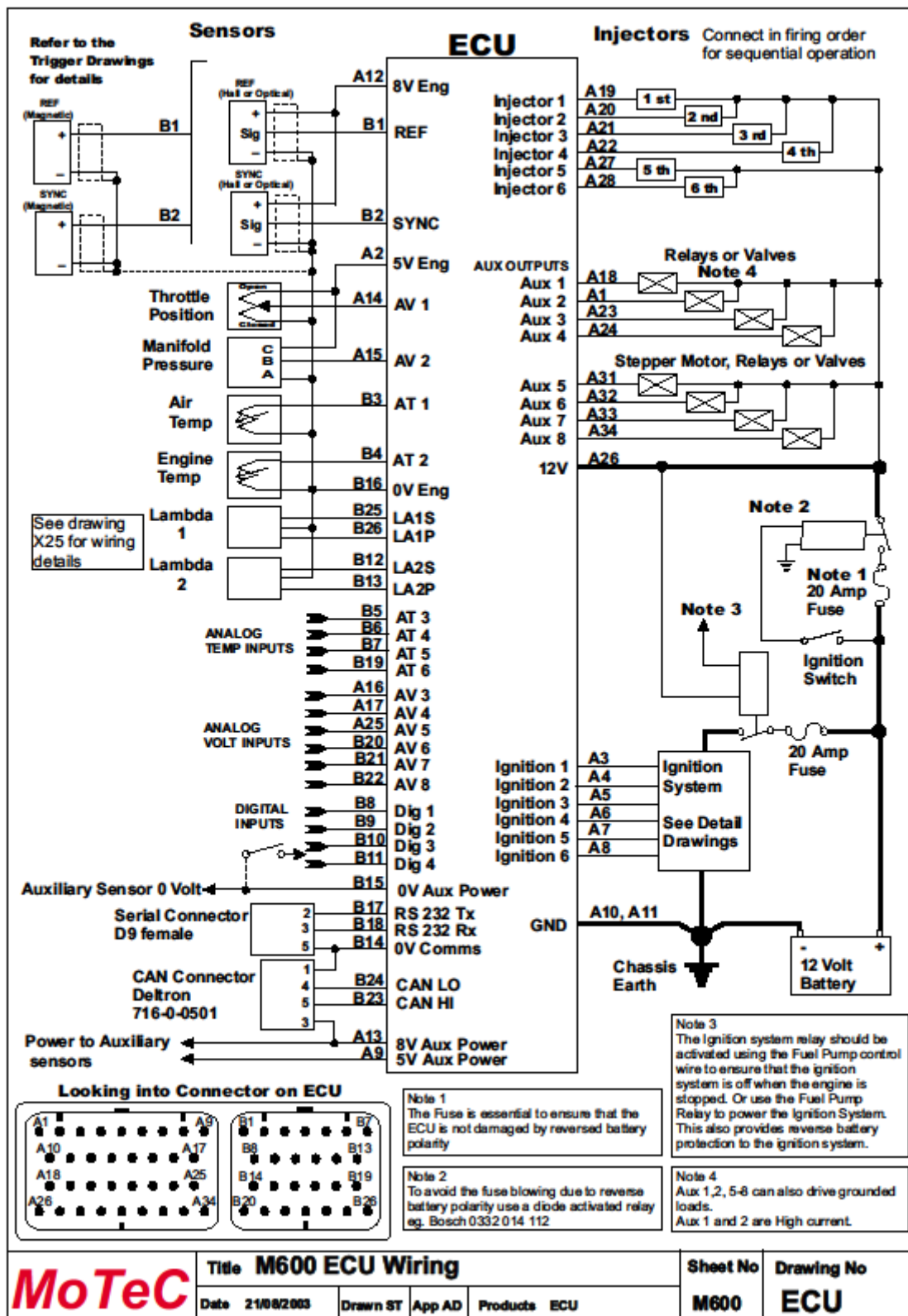
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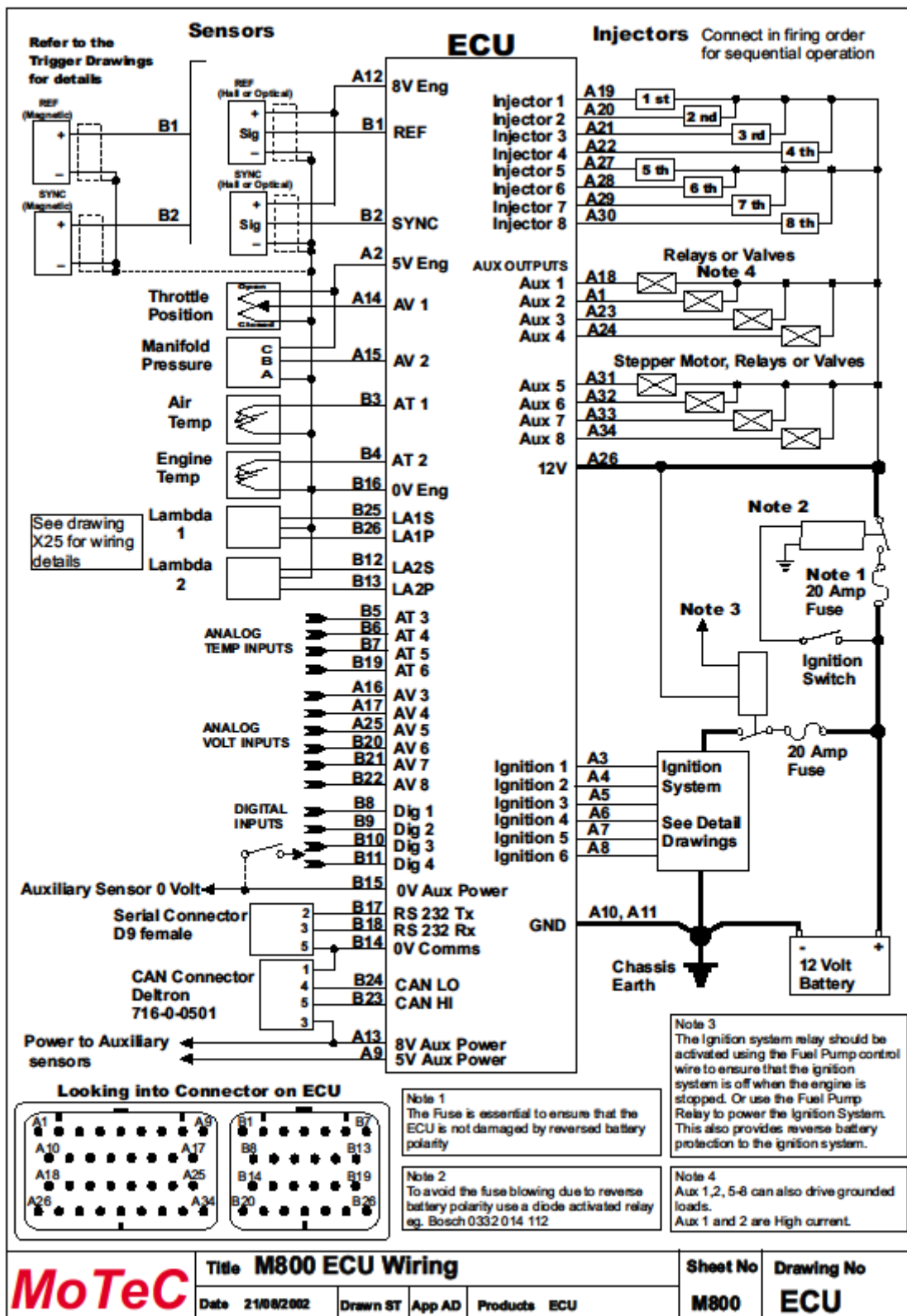
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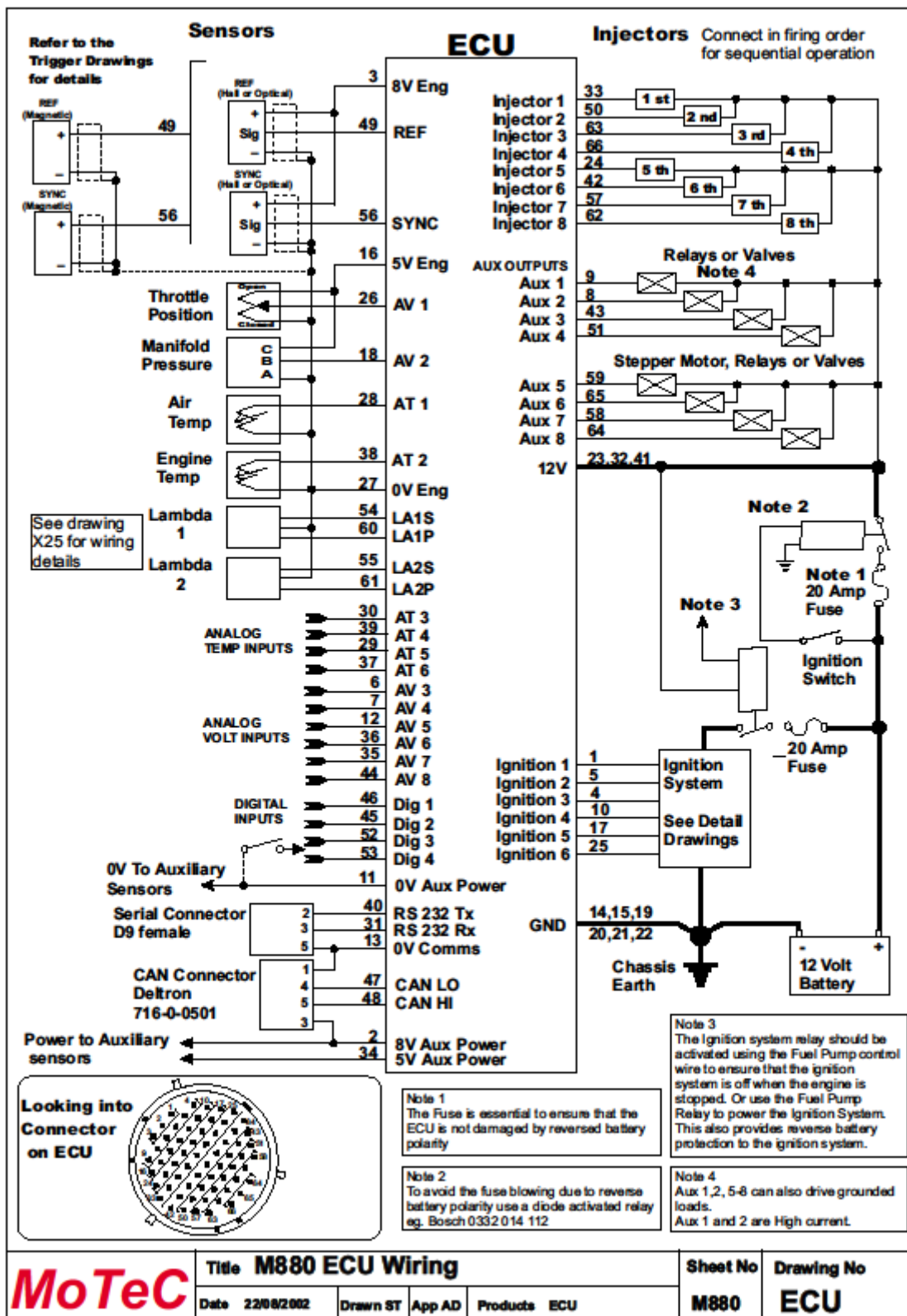
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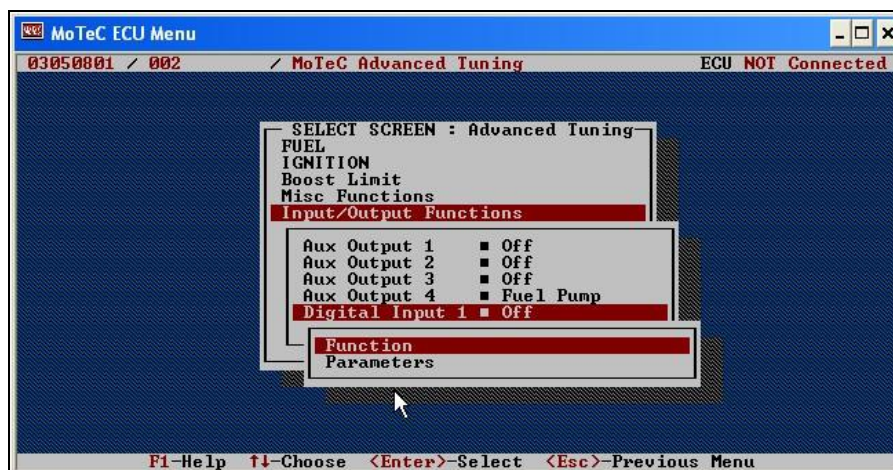
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Interfacing TTT802 Flatshift to MoTeC M4 / M4-8

Adjust Shift Cut Settings following the pictures below...



In this example we use Dig In 1 as "GearCut" input.





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ECU versus TTT802 Gearshift Controller

MoTeC ECU Menu

03050801 / 002 / MoTeC Advanced Tuning ECU NOT Connected

Digital Input 1	Value
Function	* 9

FUNCTION

0 ■ Off

1 ■ Speed or MassFlow Measurement

2/3 ■ Period / Pulse Measurement

4 ■ Dual RPM Limit

5 ■ Air Conditioner Request

6/7 ■ Nitrous / Nit + Dual RPM Lim

8 ■ Ignition Switch

9 ■ Gear Change Ign Cut *ADU*

10 ■ Brake

11 ■ Logging Enable

12 ■ Clutch

13 ■ Overrun Boost *ADU*

14 ■ Traction Control Enable *ADU*

15 ■ TC Mux

16 ■ Ground Speed Limit *ADU*

17 ■ Power Steering

18 ■ Telemetry Control

Press F1 for more help

F1-Help F9-Function PgUp/Dn-Adj Ctrl-Fast Enter-Set Esc-Screen/End

MoTeC ECU Menu

03050801 / 002 / MoTeC Advanced Tuning ECU NOT Connected

Digital Input 1	Value
Function	

SELECT SCREEN : Advanced Tuning

FUEL

IGNITION

Boost Limit

Misc Functions

Input/Output Functions

Aux Output 1 ■ Off

Aux Output 2 ■ Off

Aux Output 3 ■ Off

Aux Output 4 ■ Fuel Pump

Digital Input 1 ■ Gear Ign Cut

Function

Parameters

FUNCTION

0 ■ Off

1 ■ Speed or MassFlow Measurement

2/3 ■ Period / Pulse Measurement

4 ■ Dual RPM Limit

5 ■ Air Conditioner Request

6/7 ■ Nitrous / Nit + Dual RPM Lim

8 ■ Ignition Switch

9 ■ Gear Change Ign Cut *ADU*

10 ■ Brake

11 ■ Logging Enable

12 ■ Clutch

13 ■ Overrun Boost *ADU*

14 ■ Traction Control Enable *ADU*

15 ■ TC Mux

16 ■ Ground Speed Limit *ADU*

17 ■ Power Steering

18 ■ Telemetry Control

Press F1 for more help

F1-Help f↓-Choose <Enter>-Select <Esc>-Previous Menu

MoTeC ECU Menu

03050801 / 002 / MoTeC Advanced Tuning ECU NOT Connected

Digital Input 1	Value
Logic Polarity	0

GEAR IGN CUT ■ LOGIC POLARITY

Active when

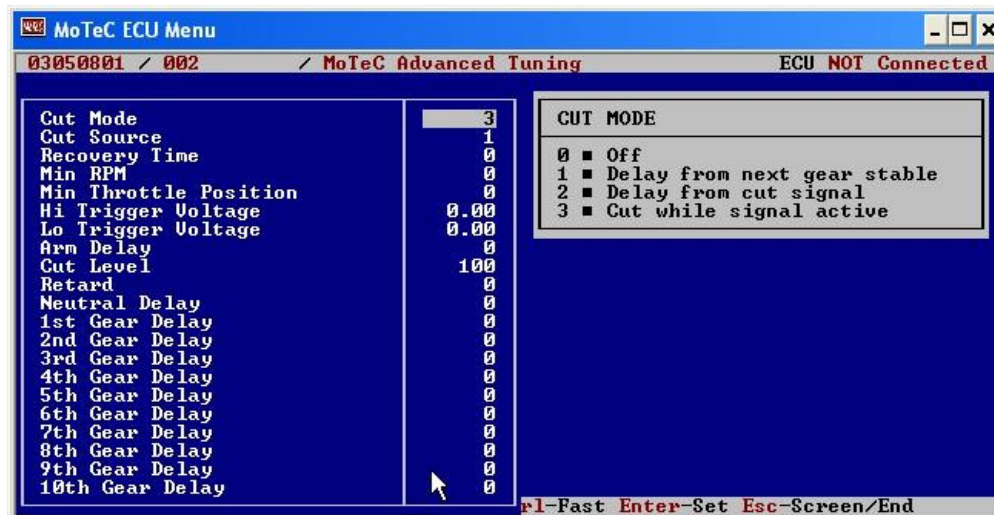
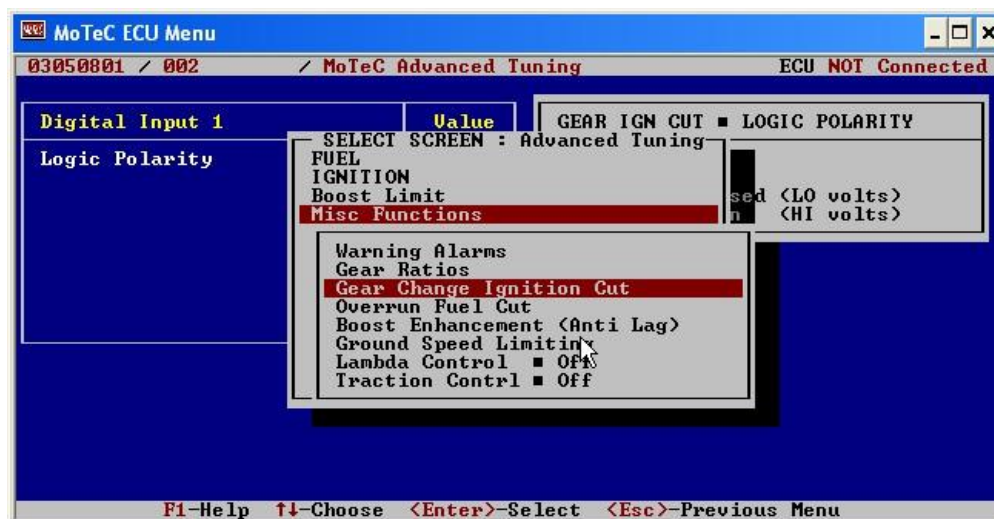
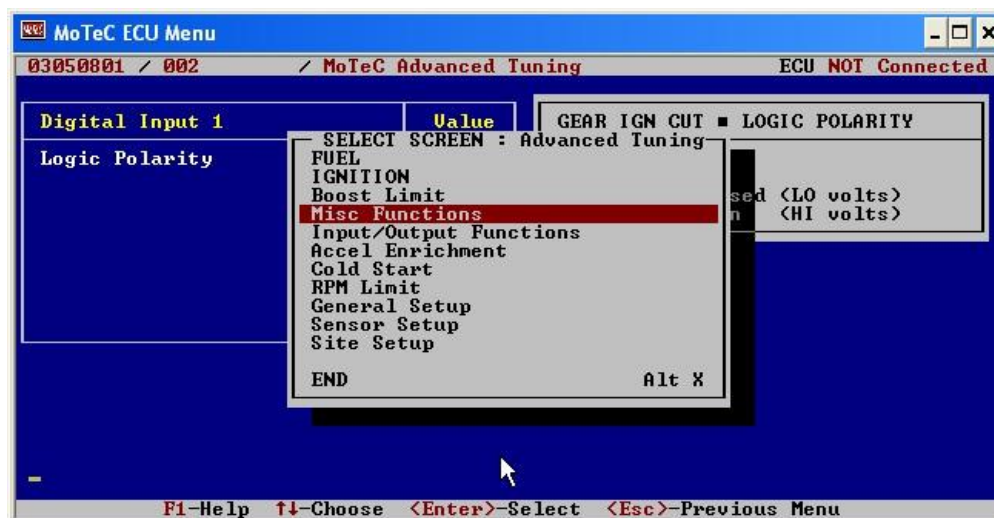
0 ■ Switch closed <LO volts>

1 ■ Switch open <HI volts>

F1-Help F9-Function PgUp/Dn-Adj Ctrl-Fast Enter-Set Esc-Screen/End



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MoTeC ECU Menu

03050801 / 002 / MoTeC Advanced Tuning ECU NOT Connected

Cut Mode	3
Cut Source	1
Recovery Time	0
Min RPM	0
Min Throttle Position	0
Hi Trigger Voltage	0.00
Lo Trigger Voltage	0.00
Arm Delay	0
Cut Level	100
Retard	0
Neutral Delay	0
1st Gear Delay	0
2nd Gear Delay	0
3rd Gear Delay	0
4th Gear Delay	0
5th Gear Delay	0
6th Gear Delay	0
7th Gear Delay	0
8th Gear Delay	0
9th Gear Delay	0
10th Gear Delay	0

CUT SOURCE

Source of signal that indicates that Gear Change Ignition Cut should commence

- 1 ■ Use Digital Input that is set to Gear Change Ignition Cut
- 2 ■ Use Digital Input that is set to Clutch
- 3 ■ Use Aux U Input
- 4 ■ Use Aux I Input

Note ■ Ignition Cut will stop if this signal goes inactive

rl-Fast Enter-Set Esc-Screen/End

MoTeC ECU Menu

03050801 / 002 / MoTeC Advanced Tuning ECU NOT Connected

Cut Mode	3
Cut Source	1
Recovery Time	0
Min RPM	0
Min Throttle Position	0
Hi Trigger Voltage	0.00
Lo Trigger Voltage	0.00
Arm Delay	0
Cut Level	100
Retard	0
Neutral Delay	0
1st Gear Delay	0
2nd Gear Delay	0
3rd Gear Delay	0
4th Gear Delay	0
5th Gear Delay	0
6th Gear Delay	0
7th Gear Delay	0
8th Gear Delay	0
9th Gear Delay	0
10th Gear Delay	0

MIN RPM

RPM below which cut is not allowed

rl-Fast Enter-Set Esc-Screen/End

MoTeC ECU Menu

03050801 / 002 / MoTeC Advanced Tuning ECU NOT Connected

Cut Mode	3
Cut Source	1
Recovery Time	0
Min RPM	0
Min Throttle Position	0
Hi Trigger Voltage	0.00
Lo Trigger Voltage	0.00
Arm Delay	0
Cut Level	100
Retard	0
Neutral Delay	0
1st Gear Delay	0
2nd Gear Delay	0
3rd Gear Delay	0
4th Gear Delay	0
5th Gear Delay	0
6th Gear Delay	0
7th Gear Delay	0
8th Gear Delay	0
9th Gear Delay	0
10th Gear Delay	0

MIN THROTTLE POSITION

Throttle Position below which cut is not allowed

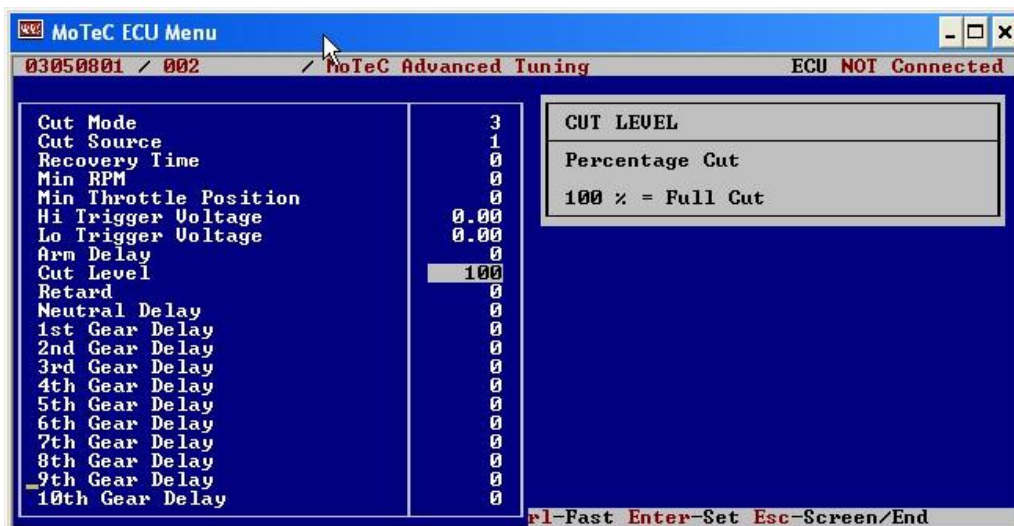
rl-Fast Enter-Set Esc-Screen/End



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Document and Product Description

ECU versus TTT802 Gearshift Controller





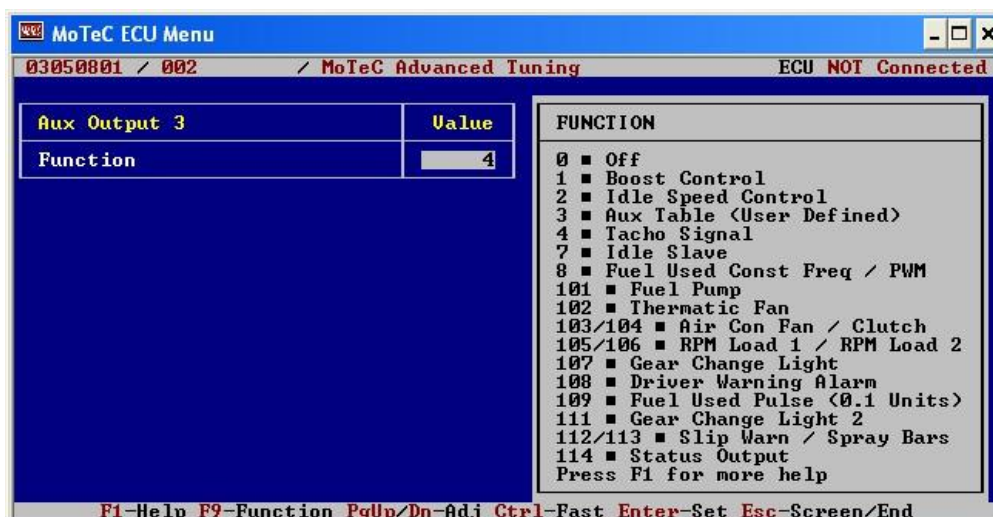
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Document and Product Description

ECU versus TTT802 Gearshift Controller



In this example we use Aux Out 3 as RPM signal to TTT802.

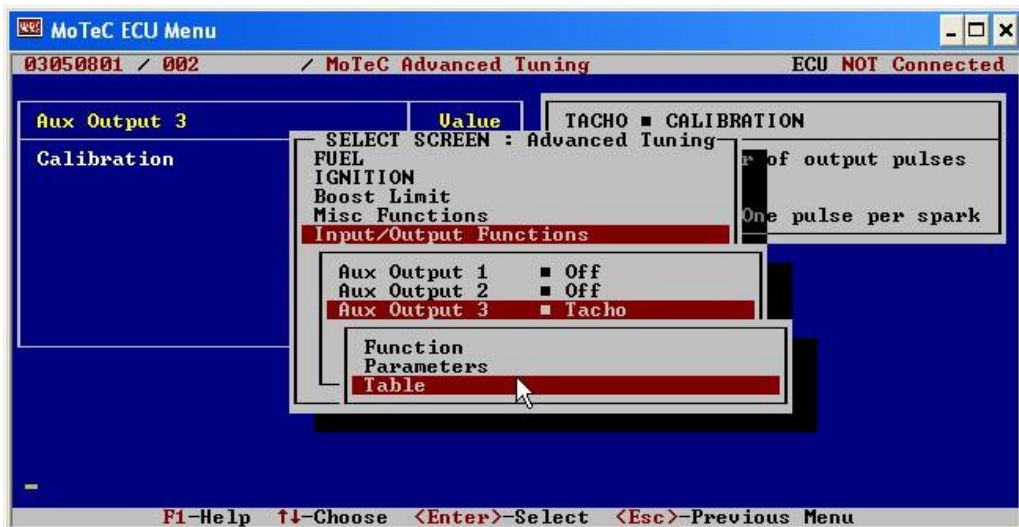
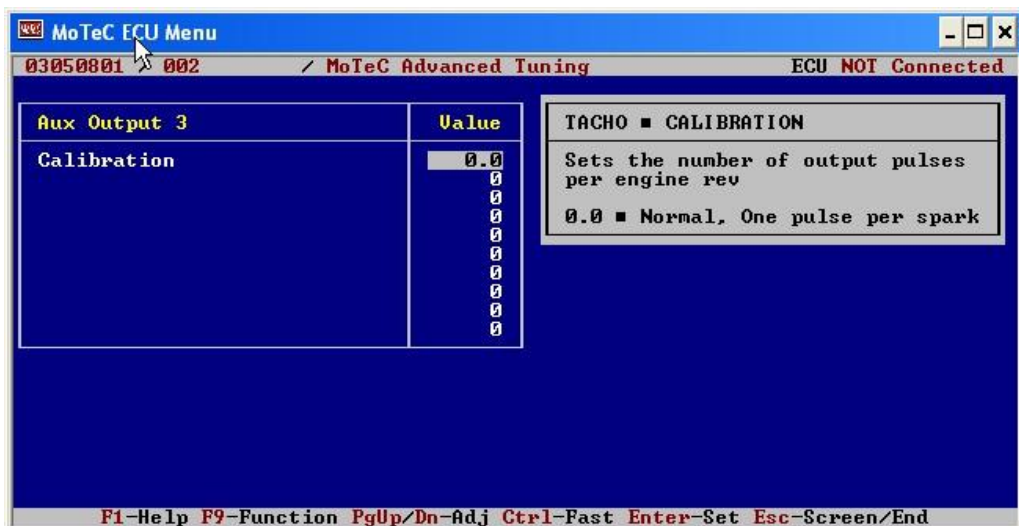
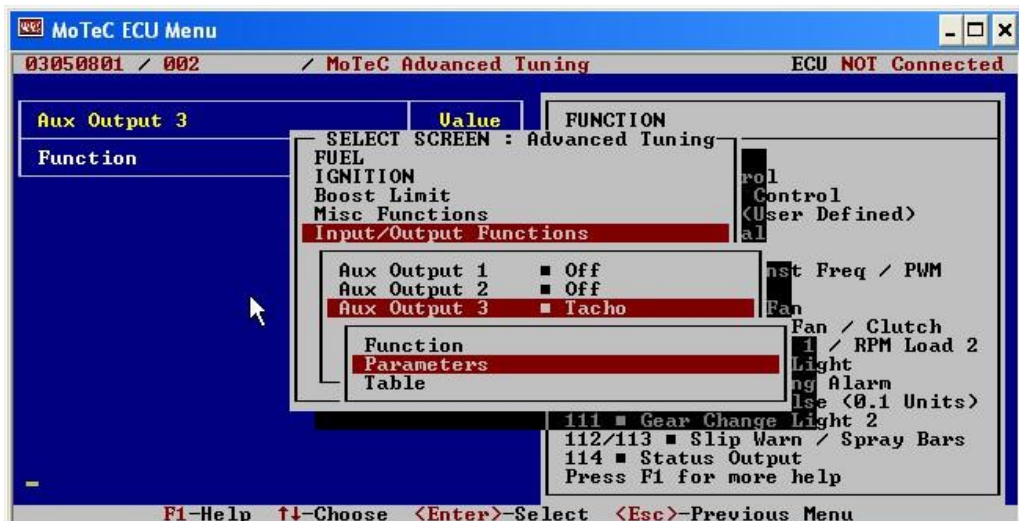




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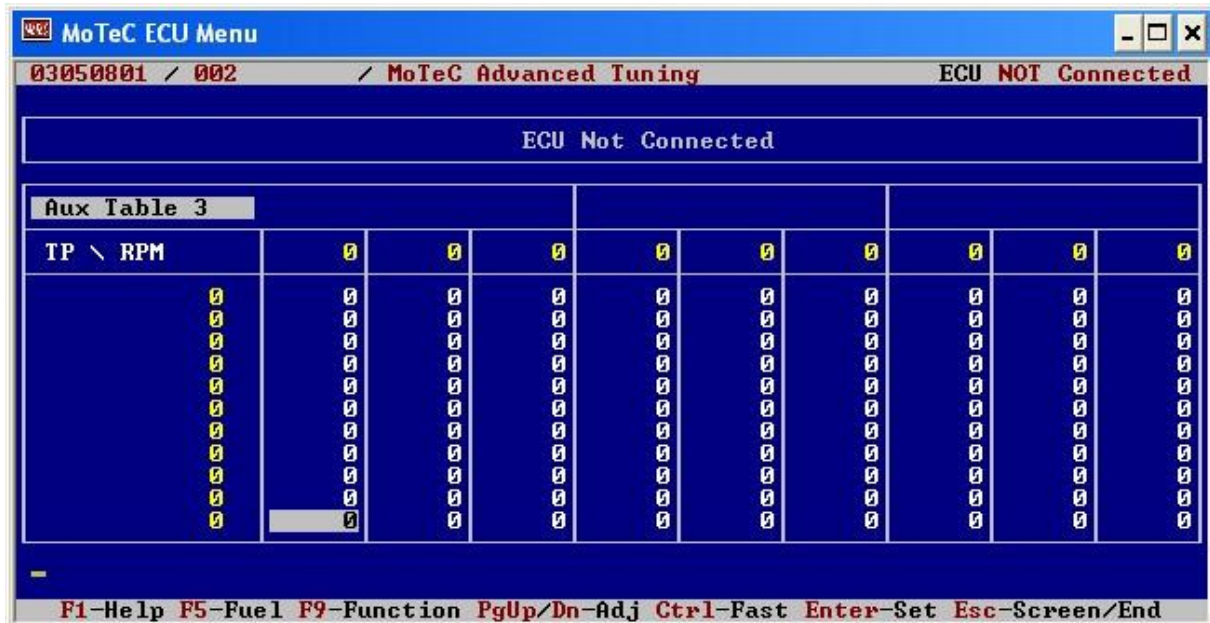
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ECU versus TTT802 Gearshift Controller





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Wire connections when using Dig Input 1 and Aux 3

Use extension cable (TTT Part # 12-650-6) to interface the MoTeC with the TTT802 cable harness (TTT Part # 12-630-8).

For MoTeC M4 / M4-8

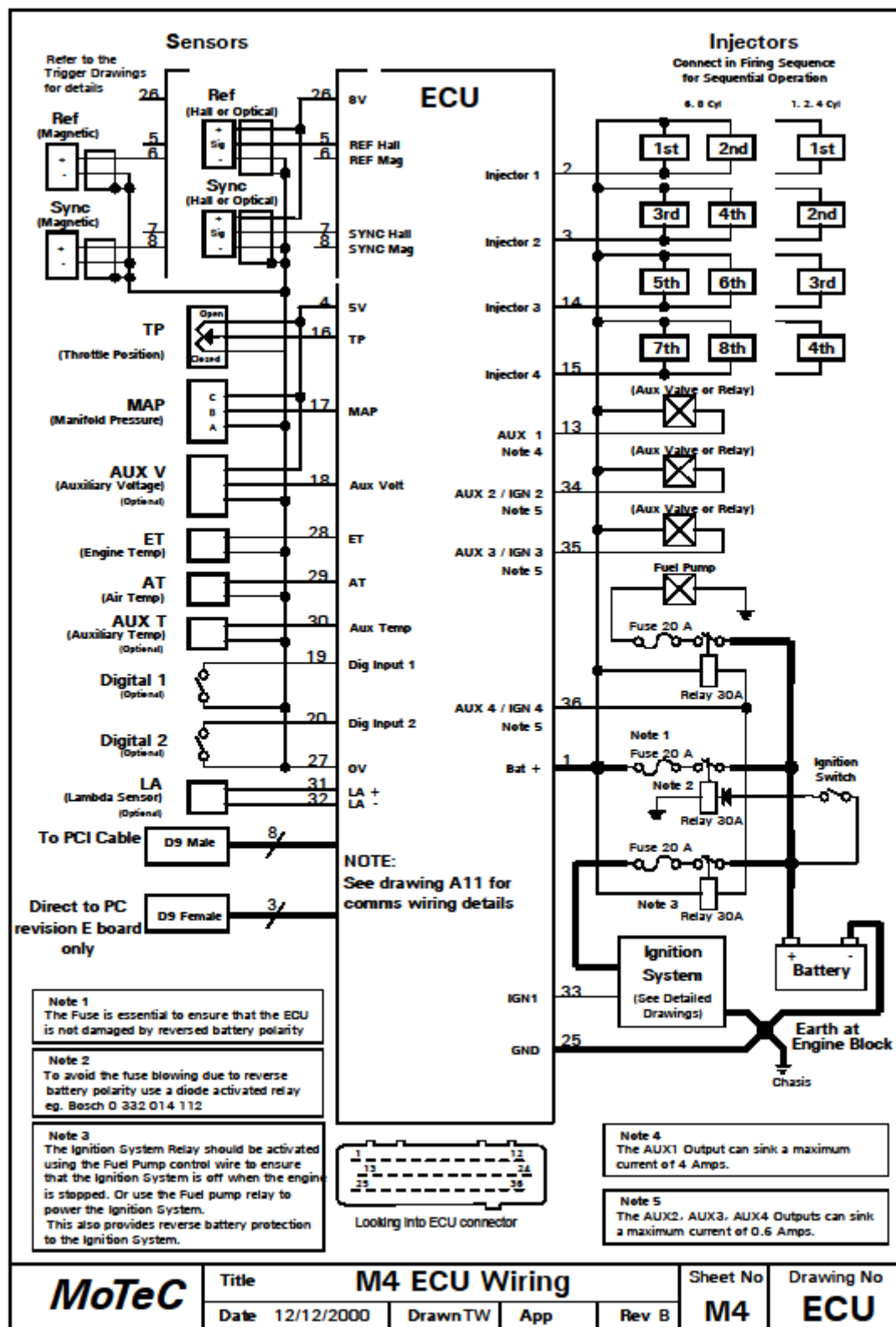
Red – Cut Open Collector – connect to MoTeC Dig Input 1 / Pin 19

Blue – Cut Gnd – connect to MoTeC 0V / Pin 27

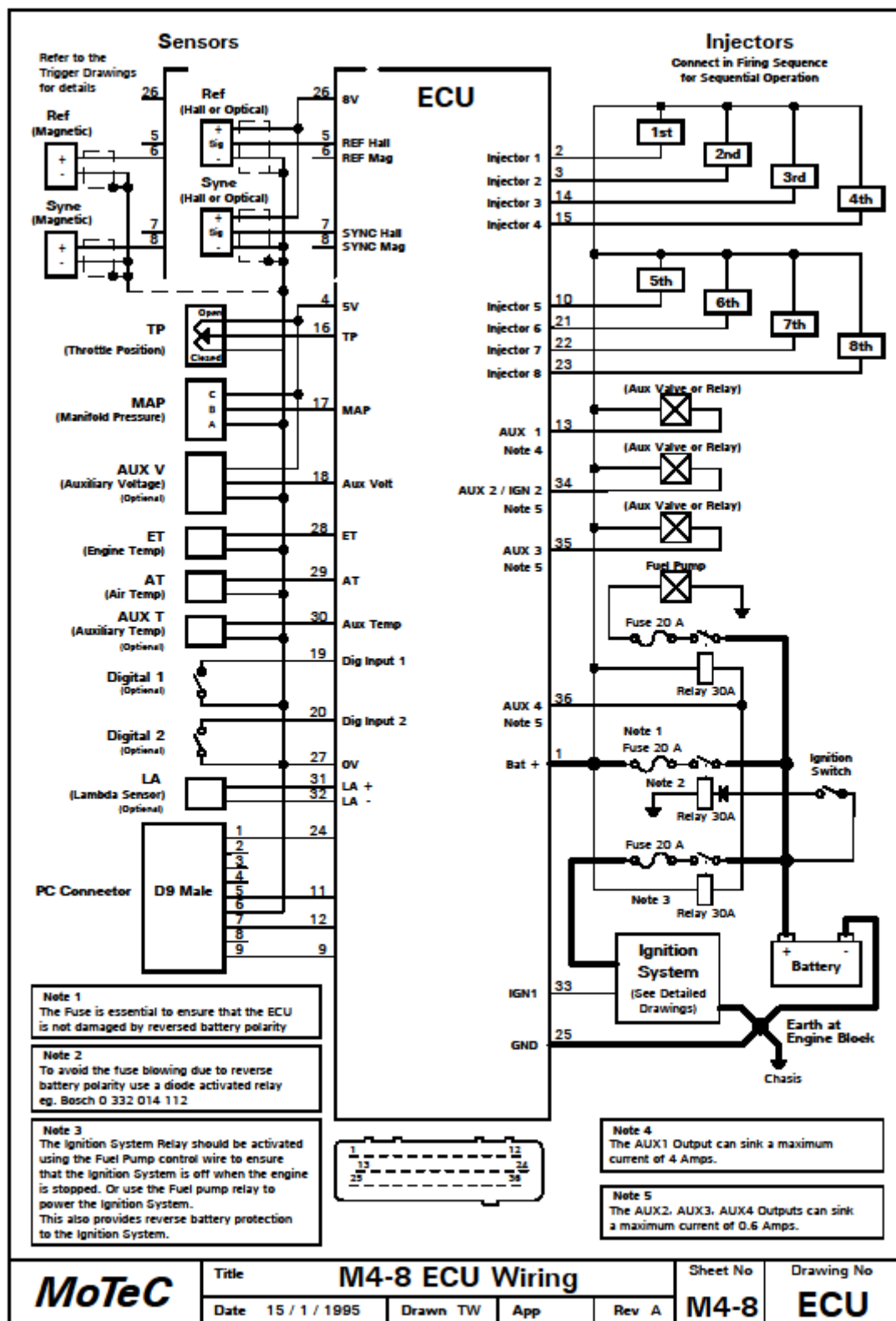
White – Ign pulse – connect to MoTeC Aux 3 / Pin 35

Black - Gnd Ign pulse – connect to MoTeC GND / Pin 25

ECU versus TTT802 Gearshift Controller



ECU versus TTT802 Gearshift Controller

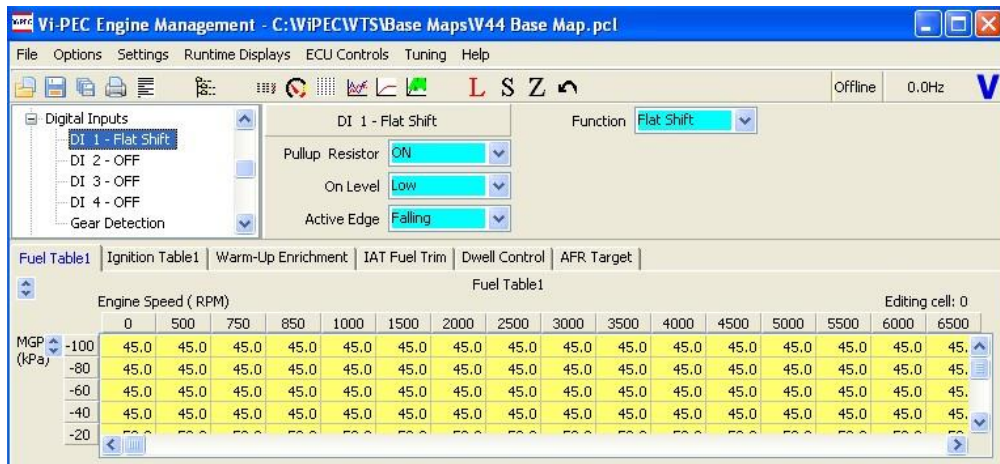




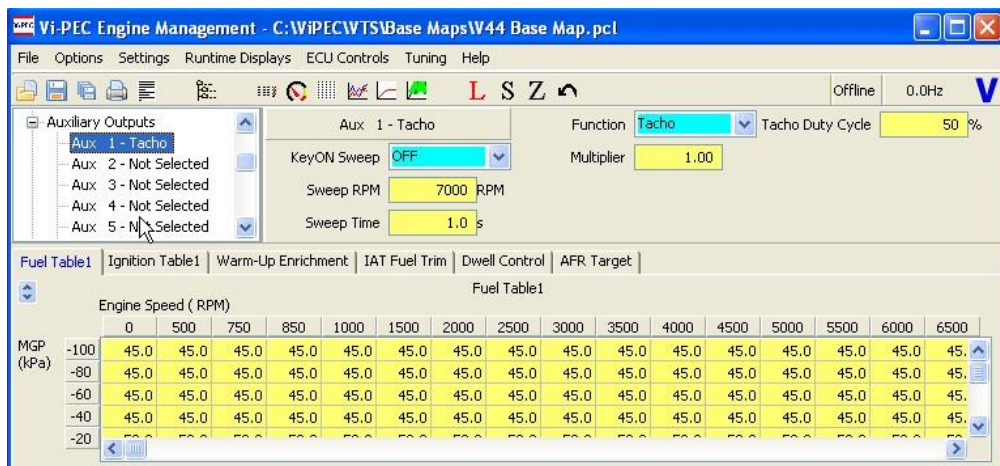
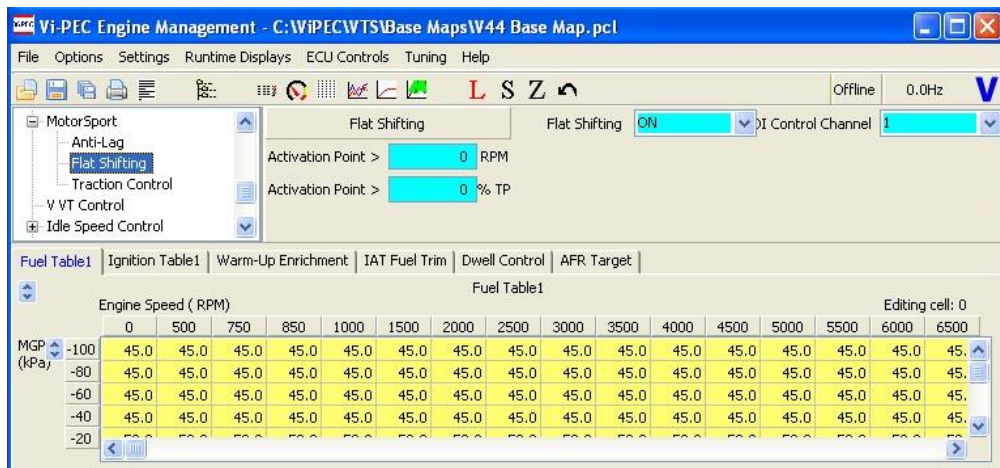
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Interfacing TTT802 Flatshift to Vi-PEC V44

Adjust Shift Cut Settings following the pictures below...



In this example we use DI 1 for Flat shift and AUX 1 for Tacho



Wire connections when using Dig Input 1 and Aux 3



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Use extension cable (TTT Part # 12-650-6) to interface the Vi-PEC with the TTT802 cable harness (TTT Part # 12-630-8).

For Vi-PEC 44

Red – Cut Open Collector – connect to Vi-PEC Dig Input 1 / Pin A30

Blue – Cut Gnd – connect to Vi-PEC Gnd ECU / Pin A25

White – Ign pulse – connect to Vi-PEC Aux 3 / Pin A19

Black - Gnd Ign pulse – connect to Vi-PEC Gnd ECU / Pin A25

A

B

Diagram of connector A showing pins 1-34 arranged in two columns. Pins 1-10 are on the left, 11-20 in the middle, 21-30 on the right, and 31-34 on the far right. Pin 1 is at the bottom, 34 at the top.

B

A1	INJ 4 O/P	Brown/Orange
A2	INJ 3 O/P	Brown/Red
A3	INJ 2 O/P	Brown
A4	INJ 1 O/P	Brown/Black
A5	ECU +12V	Red
A6	+8V SUPPLY	Red/White
A7	SIELD GND	Green
A8	TRIGGER 1 I/P	Black
A9	TRIGGER 2 I/P	Red
A10	IGN 4 O/P	Blue/Orange
A11	IGN 3 O/P	Blue/Red
A12	IGN 2 O/P	Blue/Brown
A13	IGN 1 O/P	Blue
A14	VOLT 4	White/Black
A15	TEMP 1	Yellow
A16	TEMP 2	Yellow/Brown
A17	VOLT 1	Yellow/Blue
A18	AUX 4	Orange
A19	AUX 3	Orange/Red
A20	AUX 2	Orange/Brown
A21	AUX 1	Orange/Black
A22	VOLT 2	White/Brown
A23	DIGITAL 3	Grey/Red
A24	GND OUT	Green
A25	GND ECU	Black
A26	AUX 8	Orange/Purple
A27	AUX 7	Orange/Blue
A28	AUX 6	Orange/Green
A29	AUX 5	Orange/Yellow
A30	DIGITAL 1	Grey/Black
A31	DIGITAL 2	Grey/Brown
A32	+5V SUPPLY	Red/Blue
A33	VOLT 3	Yellow/Black
A34	GND ECU	Black

B1	INJ 8 O/P	Brown/Purple
B2	INJ 7 O/P	Brown/Blue
B3	INJ 6 O/P	Brown/Green
B4	INJ 5 O/P	Brown/Yellow
B5	+12V AUX 9/10	Red
B6	TEMP 3	Yellow/Red
B7	TEMP 4	Yellow/Orange
B8	KNOCK 2	Blue
B9	KNOCK 1	Blue
B10	IGN 8 O/P	Blue/Purple
B11	IGN 7 O/P	Blue/Black
B12	IGN 6 O/P	Blue/Green
B13	IGN 5 O/P	Blue/Yellow
B14	N/C	
B15	VOLT 6	White/Red
B16	VOLT 7	White/Orange
B17	SIELD GND	Green
B18	AUX 9	Purple
B19	DIGITAL 6	Grey/Green
B20	DIGITAL 5	Grey/Yellow
B21	DIGITAL 4	Grey/Orange
B22	GND OUT	Green
B23	VOLT 8	White/Yellow
B24	VOLT 9	White/Green
B25	GND ECU	Black
B26	AUX 10	Purple/White
B27	DIGITAL 10	Grey/Purple
B28	DIGITAL 9	Grey/White
B29	DIGITAL 8	Grey
B30	DIGITAL 7	Grey/Blue
B31	VOLT 10	White/Blue
B32	VOLT 11	White
B33	VOLT 5	Yellow/Green
B34	GND ECU	Black

Diagram of connector B showing pins 1-34 arranged in two columns. Pins 1-10 are on the left, 11-20 in the middle, 21-30 on the right, and 31-34 on the far right. Pin 1 is at the bottom, 34 at the top.

A

V44 uses A connector

V88 uses A and B connector.

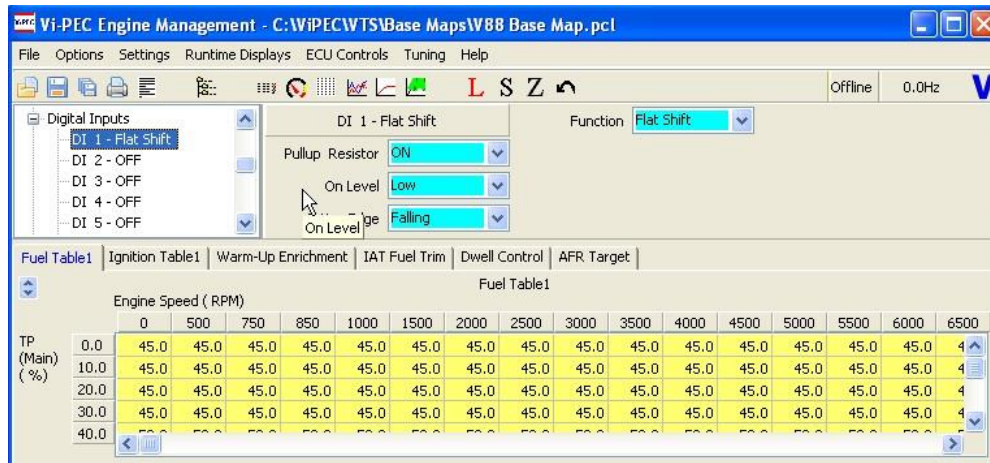
Note: V44 pin A22 can be VOLT 2 or DIGITAL 4

Interfacing TTT802 Flatshift to Vi-PEC V88

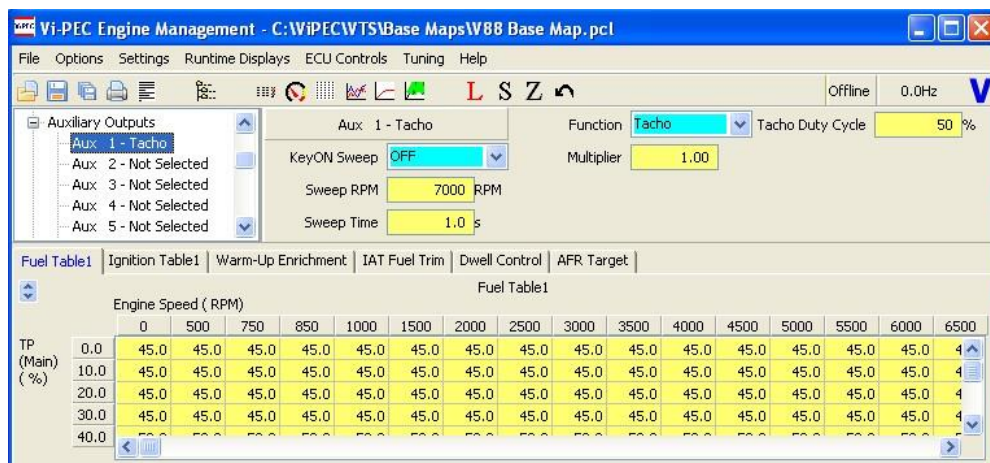
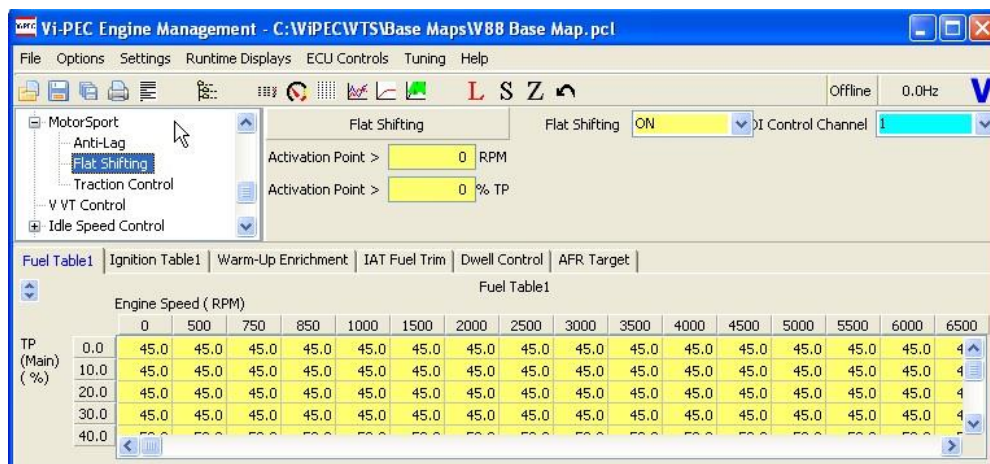


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Adjust Shift Cut Settings following the pictures below...



In this example we use DI 1 for Flat shift and AUX 1 for Tacho



Wire connections when using Dig Input 1 and Aux 3



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Use extension cable (TTT Part # 12-650-6) to interface the Vi-PEC with the TTT802 cable harness (TTT Part # 12-630-8).

For Vi-PEC 88

Red – Cut Open Collector – connect to Vi-PEC Dig Input 1 / Pin A30

Blue – Cut Gnd – connect to Vi-PEC Gnd ECU / Pin A25

White – Ign pulse – connect to Vi-PEC Aux 3 / Pin A19

Black - Gnd Ign pulse – connect to Vi-PEC Gnd ECU / Pin A25

A

Diagram of connector A showing pins 1-34 arranged in two columns. Pins 1-10 are on the left, 11-20 in the middle, 21-30 on the right, and 31-34 on the far right. Pin 1 is at the bottom, 34 at the top.

B

Diagram of connector B showing pins 1-34 arranged in two columns. Pins 1-10 are on the left, 11-20 in the middle, 21-30 on the right, and 31-34 on the far right. Pin 1 is at the bottom, 34 at the top.

A

A1	INJ 4 O/P	Brown/Orange
A2	INJ 3 O/P	Brown/Red
A3	INJ 2 O/P	Brown
A4	INJ 1 O/P	Brown/Black
A5	ECU +12V	Red
A6	+8V SUPPLY	Red/White
A7	SIELD GND	Green
A8	TRIGGER 1 I/P	Black
A9	TRIGGER 2 I/P	Red
A10	IGN 4 O/P	Blue/Orange
A11	IGN 3 O/P	Blue/Red
A12	IGN 2 O/P	Blue/Brown
A13	IGN 1 O/P	Blue
A14	VOLT 4	White/Black
A15	TEMP 1	Yellow
A16	TEMP 2	Yellow/Brown
A17	VOLT 1	Yellow/Blue
A18	AUX 4	Orange
A19	AUX 3	Orange/Red
A20	AUX 2	Orange/Brown
A21	AUX 1	Orange/Black
A22	VOLT 2	White/Brown
A23	DIGITAL 3	Grey/Red
A24	GND OUT	Green
A25	GND ECU	Black
A26	AUX 8	Orange/Purple
A27	AUX 7	Orange/Blue
A28	AUX 6	Orange/Green
A29	AUX 5	Orange/Yellow
A30	DIGITAL 1	Grey/Black
A31	DIGITAL 2	Grey/Brown
A32	+5V SUPPLY	Red/Blue
A33	VOLT 3	Yellow/Black
A34	GND ECU	Black

B

B1	INJ 8 O/P	Brown/Purple
B2	INJ 7 O/P	Brown/Blue
B3	INJ 6 O/P	Brown/Green
B4	INJ 5 O/P	Brown/Yellow
B5	+12V AUX 9/10	Red
B6	TEMP 3	Yellow/Red
B7	TEMP 4	Yellow/Orange
B8	KNOCK 2	Blue
B9	KNOCK 1	Blue
B10	IGN 8 O/P	Blue/Purple
B11	IGN 7 O/P	Blue/Black
B12	IGN 6 O/P	Blue/Green
B13	IGN 5 O/P	Blue/Yellow
B14	N/C	
B15	VOLT 6	White/Red
B16	VOLT 7	White/Orange
B17	SIELD GND	Green
B18	AUX 9	Purple
B19	DIGITAL 6	Grey/Green
B20	DIGITAL 5	Grey/Yellow
B21	DIGITAL 4	Grey/Orange
B22	GND OUT	Green
B23	VOLT 8	White/Yellow
B24	VOLT 9	White/Green
B25	GND ECU	Black
B26	AUX 10	Purple/White
B27	DIGITAL 10	Grey/Purple
B28	DIGITAL 9	Grey/White
B29	DIGITAL 8	Grey
B30	DIGITAL 7	Grey/Blue
B31	VOLT 10	White/Blue
B32	VOLT 11	White
B33	VOLT 5	Yellow/Green
B34	GND ECU	Black

V44 uses A connector

V88 uses A and B connector.

Note: V44 pin A22 can be VOLT 2 or DIGITAL 4

Interfacing TTT802 Flatshift to Autronic SM4



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Adjust Settings according to pictures below...

Select input for gearcut signal from TTT802. I/P Switches.

AUTRONIC [S/N-8774 SM4-1.09][SM4 base calibration]-SM4CAL.CAL

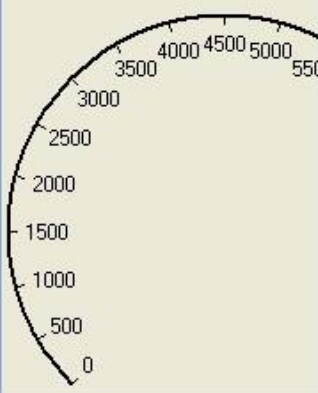
OFF LINE COM1 19.2kbps

FileCal Edit-Window M0 M1 M2 M3 M4 M5 M6 Logger Win Help(F1)

Monitor-Normal

A/F ratio
A/F set point

Engine speed-(Rpm)



Base settings

Ignition setup
Ignition dwell table
Injectors

I4 O/P 8Cyl WS
I-ve edge (DWELL)
Bosch 0280150901

I/P Cylinder & sync
I/P Switches

I/O Switch to var 1
I/O Switch to var 2
I/O Switch to var 3
I/O Switch to var 4

O/P setup
I/P Analogs
I/P HSI

Variable cam config
Gear/Speed cal
Air flow sensor
Limp home tables

M1 tables axis setup

Baro & MAP

Cylinder pulses

Disabled
Disabled
Disabled
Disabled

->
->
->
->

In this example HSI1 is selected and the connection pin = 10. HSI2 or HSI3 could be chosen instead if HSI1 already are in use.



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Document and Product Description

ECU versus TTT802 Gearshift Controller

AUTRONIC [S/N-8774 SM4-1.09][SM4 base calibration]-SM4CAL.CAL

OFF LINE COM1 19.2kbps

FileCal Edit-Window M0 -M1- M2 M3 M4 M5 M6 Lc

I/P Switches

Parameters	Value	Was: I
1 I/P Water spray	Disabled	Wid
2 I/P Anti-lag 1	Disabled	Wid
3 I/P Anti-lag 2	Disabled	Wid
4 I/P Air con	Disabled	May
5 I/P Traction control	Disabled	NO
6 I/P TC Wet	Disabled	La
7 I/P Rev limit 2	Disabled	
8 I/P Boost SW1	Disabled	
9 I/P Boost SW2	Disabled	
10 I/P Nos	Disabled	
11 I/P Launch	Disabled	
12 I/P WOT	I/P HSI 1	
13 I/P Ign mod1 switch	Continuous	
14 I/P Knock	Disabled	

I/P WOT (Single-select I/P)

Invert I/P	Type	Pin	Color
Disabled			
Continuous			
☐ I/P HSI 1	u	010	BLU
☐ I/P HSI 2	u	024	GRN
☐ I/P HSI 3	u	039	GRY
☐ I/P Analog 1		008	GRY/BLU
☐ I/P Analog 2		038	GRN/BLK
☐ I/P Analog 3		038	GRN/BLK
☐ I/P TPS		021	ORG
☐ I/P O2		037	BLU
☐ I/P Intake	u	023	WHT
☐ I/P Coolant	u	009	PNK
☐ I/P Batt		015	RED
☐ I/P Analog 1		008	GRY/BLU
☐ I/P Analog 2		038	GRN/BLK
☐ I/P Analog 3		038	GRN/BLK
☐ I/P TPS		021	ORG
☐ I/P O2		037	BLU
☐ I/P Intake	u	023	WHT
☐ I/P Coolant	u	009	PNK
☐ I/P Batt		015	RED
☐ I/P SW 1	u	018	BLU/BLK
☐ I/P SW 2	u	003	GRY/BLU
☐ I/P SW 3	u	002	BLU/RED
☐ I/P Sfw.SW 1		INT	
☐ I/P Sfw.SW 2		INT	
☐ I/P Sfw.SW 3		INT	
☐ I/P Sfw.SW 4		INT	
☐ Output 1	m	007	RED/GRN
☐ Output 2	m	034	BLK/WHT
☐ Output 3	m	020	ORG/WHT
☐ Output 4	m	035	BRN/BLK
☐ Output 5	m	027	PNK/YEL
☐ Output 6	m	013	BLU
☐ Output 7	m	042	GRN/ORG
☐ Output 8	m	012	GRY/BLK
☐ Sfw Out 1		INT	
☐ Sfw Out 2		INT	
☐ Sfw Out 3		INT	
☐ Sfw Out 4		INT	
☐ Sfw Out 5		INT	
☐ Sfw Out 6		INT	
☐ Sfw Out 7		INT	
☐ Sfw Out 8		INT	
☐ O/P Inj 2	m	032	ORG/BLK
☐ O/P Inj 3	m	031	BLU/WHT
☐ O/P Inj 4	m	016	GRN/WHT
☐ O/P Inj 5	m	004	GRN/YEL
☐ O/P Inj 6	m	018	BLU/BLK

A/F ratio :1

A/F set point :1

10.00

Engine speed (Rpm)

Throttle po

0.0

LOAD

Manifold pressure

Ign. Angle-MEAN-

Inj. Time-MEAN-

Inj. Duty-MEAN-

Inj. End

Inj. Start

Intake temp

Coolant temp

ECU FRONT

Setup the WOT shift function

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rsus TTT802 Gearshift Controller

[illegible]

Set WOT cut mode to Ign & fuel cut
Set WOT shift duration to 2.01 sec



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**Set all other WOT parameters to 0
(Se picture below)**

AUTRONIC [S/N-8774 SM4-1.09][SM4 base calibration]-SM4CAL.CAL

OFF LINE COM1 19.2kbps

FileCal Edit-Window M0 M1 M2 M3 M4 -M5- M6 Logger Win Help(F1)

WOT shift

	Parameters	Value	
1	WOT cut mode	*Ign & fuel cut	Time that "WOT cut mode" is applied for. Typical Dog box<0.15 Normal =(2.01)Cut when switch I/P closed.
2	WOT rpm inhibit	0 Rpm	
3	WOT tps inhibit	0.0 %	
4	WOT kph inhibit	0.0 Kph	
5	WOT Time source	WOT shift duration	NOTE Larger then 2.00 seconds is continuous cut while switch I/P is closed.
6	WOT shift duration	2.01 Sec	
7	WOT shift retard	0.0 Degrees	

Setup output for tacho. O/P Setup.



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AUTRONIC [S/N-8774 SM4-1.09][SM4 base calibration]-SM4CAL.CAL

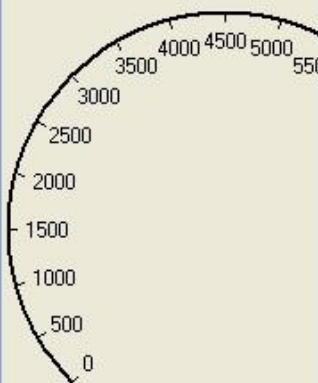
OFF LINE COM1 19.2kbps

FileCal Edit-Window M0 M1 M2 M3 M4 M5 M6 Logger Win Help(F1)

Monitor-Normal

A/F ratio
A/F set point

Engine speed-[Rpm]



Base settings

Baro & MAP

Ignition setup
Ignition dwell table
Injectors

I4 O/P 8Cyl WS
I-ve edge (DWELL)
Bosch 0280150901

I/P Cylinder & sync
I/P Switches

I/O Switch to var 1
I/O Switch to var 2
I/O Switch to var 3
I/O Switch to var 4

Disabled
Disabled
Disabled
Disabled

O/P setup
I/P Analogs
I/P HSI

->
->

Variable cam config
Gear/Speed cal
Air flow sensor
Limp home tables

->
->
->
->

M1 tables axis setup

Chose output for tacho. The Output 8 is hardwired so there are no actual choice but make sure properties for Output 8 is set to 1.0mS pulse. Output 8 is on pin 12 on the connector.



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AUTRONIC [S/N-8774 SM4-1.09][SM4 base calibration]-SM4CAL.CAL

OFF LINE COM1 19.2kbps

FileCal Edit-Window M0 -M1- M2 M3 M4 M5 M6 Logger Win Help(F1)

O/P setup				
	O/P type	H-Bridge setup	O/P	Pin Properties
O/P IAC control	DIRECT to pin		☐ O/P PWM 1	028 305 Hz
O/P Boost	DIRECT to pin		☐ O/P PWM 2	014 19 Hz
O/P Anti lag	Disabled			
O/P Air con	Disabled			
O/P GPC 1	Disabled			
O/P GPC 2	Disabled			
O/P GPC 3	Disabled			
O/P GPC 4	Disabled			
O/P GPC 5	Disabled			
O/P GPC 6	Disabled			
O/P GPC 7	Disabled			
O/P GPC 8	Disabled			
O/P GPC 9	Disabled			
O/P GPC 10	Disabled			
O/P GPC 11	Disabled			
O/P GPC 12	Disabled			
O/P GPC 13	Disabled			
O/P NOS	Disabled			
O/P Knock	Disabled			
O/P Fan 1	DIRECT to pin		☐ Output 5	027
O/P Fan 2	Disabled			
O/P Water spray	Disabled			
O/P Tumble valve 1	Disabled			
O/P Tumble valve 2	Disabled			
O/P Error light	Disabled			
O/P Fuel used	Disabled			
O/P Fuel pump	DIRECT to pin		☐ Output 6	013
O/P Tacho	DIRECT to pin		☐ Output 8	012 1.0 msec pulse
O/P TC	Disabled			
O/P Force 1	Disabled			
O/P Force 2	Disabled			
I/O Switch to var 1	Disabled			
I/O Switch to var 2	Disabled			
I/O Switch to var 3	Disabled			
I/O Switch to var 4	Disabled			

Wire connections when using HSI 1 and Output 8

Use extension cable (TTT Part # 12-650-6) to interface the Autronic SM4 with the TTT802 cable harness (TTT Part # 12-630-8).



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For Autronic SM4

Red – Cut Open Collector – connect to Autronic HSI1 / Pin 10

Blue – Cut Gnd – connect to Autronic Gnd / Pin 29

White – Ign pulse – connect to Autronic Output 8 / Pin 12

Black - Gnd Ign pulse – connect to Autronic Gnd / Pin 29

ECU Connector pin function.

SM4 PIN	FUNCTION	WIRE COLOUR
1	IGN SW I/P	PUR
2	INJ 8 O/P (SW3)	BLUE/RED
3	INJ 7 O/P (SW2)	GRY/BLUE
4	INJ 5 O/P	GRN/YEL
5	IGN 1 O/P	PNK/WHT
6	IGN 2 O/P	PNK/BLK
7	OUTPUT 1 / STEPPER	RED/GRN
8	ANALOG 1 I/P	GRY/BLU
9	COOLANT I/P	PNK
10	HIGH SPEED 1 I/P	BLU
11	TRIGGER SUPPLY	RED/BLK
12	OUTPUT 8 / TACHO	GRY/BLK
13	OUTPUT 6	BLU
14	PWM 2 O/P	BRN/WHT
15	+12v SUPPLY I/P	RED
16	INJ 4 O/P	GRN/WHT
17	INJ 1 O/P I	PNK/BLK
18	INJ 6 O/P (SW1)	BLU/BLK
19	IGN 3 O/P	YEL/BLK
20	OUTPUT 3 / STEPPER	ORG/WHT
21	TPS I/P	ORG

SM4 PIN	FUNCTION	WIRE COLOUR
22	SENSOR GROUND	BLK
23	AIR TEMP I/P	WHT
24	HIGH SPEED 2 I/P	BLU
25	CYLINDER +VE I/P	WHT
26	SYNC +VE I/P	WHT
27	OUTPUT 5	PNK/YEL
28	PWM 1 O/P	RED/YEL
29	GROUND	BLK
30	+12v RAM I/P	RED
31	INJ 3 O/P	BLU/WHT
32	INJ 2 O/P	ORG/BLK
33	IGN 4 O/P	RED/WHT
34	OUTPUT 2 / STEPPER	BLK/WHT
35	OUTPUT 4 / STEPPER	BRN/BLK
36	+5v TPS SUPPLY O/P	RED/WHT
37	O2 I/P	BLU
38	ANALOG 2 - 3 I/P	GRN/BLK
39	HIGH SPEED 3 I/P	GRY
40	CYLINDER -VE I/P	BLK
41	SYNC -VE I/P	BLK
42	OUTPUT 7	GRN/ORG

ECU Connector.

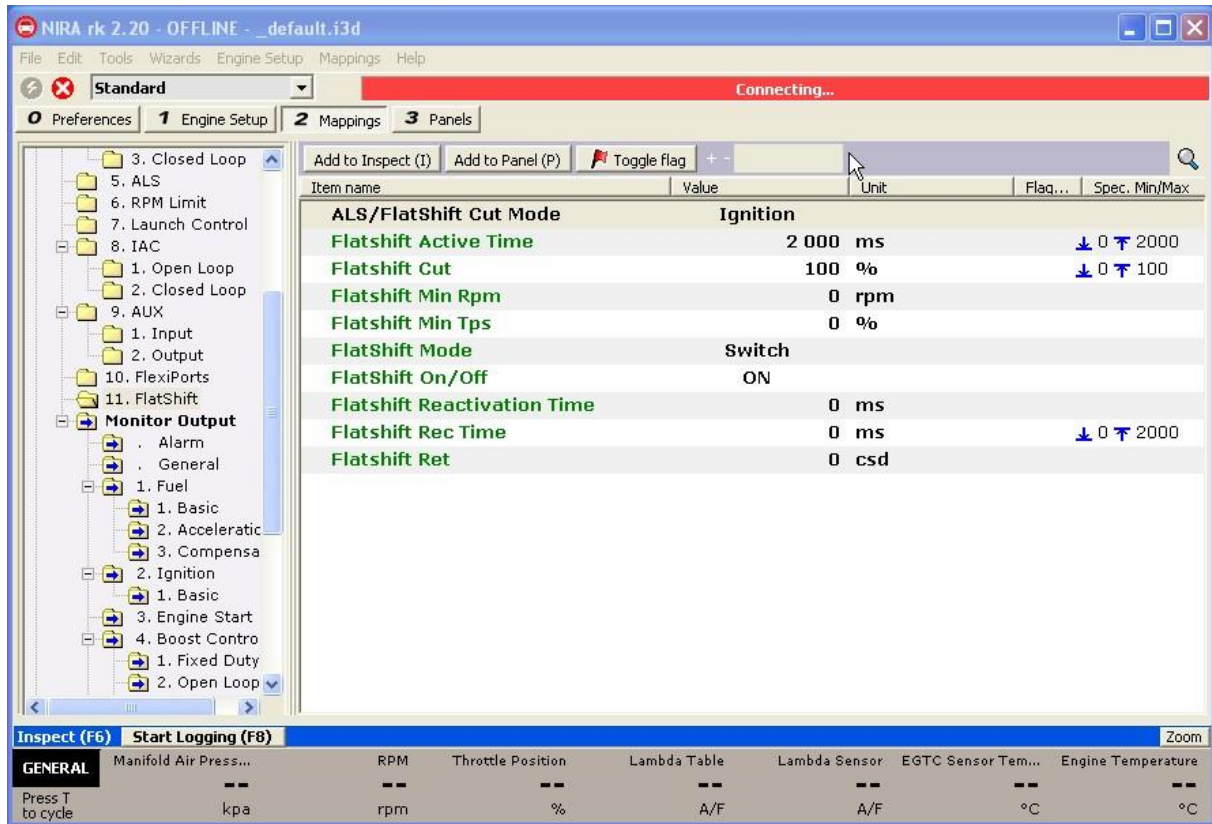
ECU versus TTT802 Gearshift Controller





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Adjust Settings in the Nira i3+ according to this information...



Note: Flatshift Min Rpm is now controlled by the TTT802

Wire connections.

Use extension cable (TTT Part # 12-650-6) to interface the Nira i3+ with the TTT802 cable harness (TTT Part # 12-630-8).

Red – Cut Open Collector – connect to Nira i3+ Flatshift switch in / Pin 18

Blue – Cut Gnd – connect to Nira i3+ Engine Gnd / Pin 11 or Pin 12

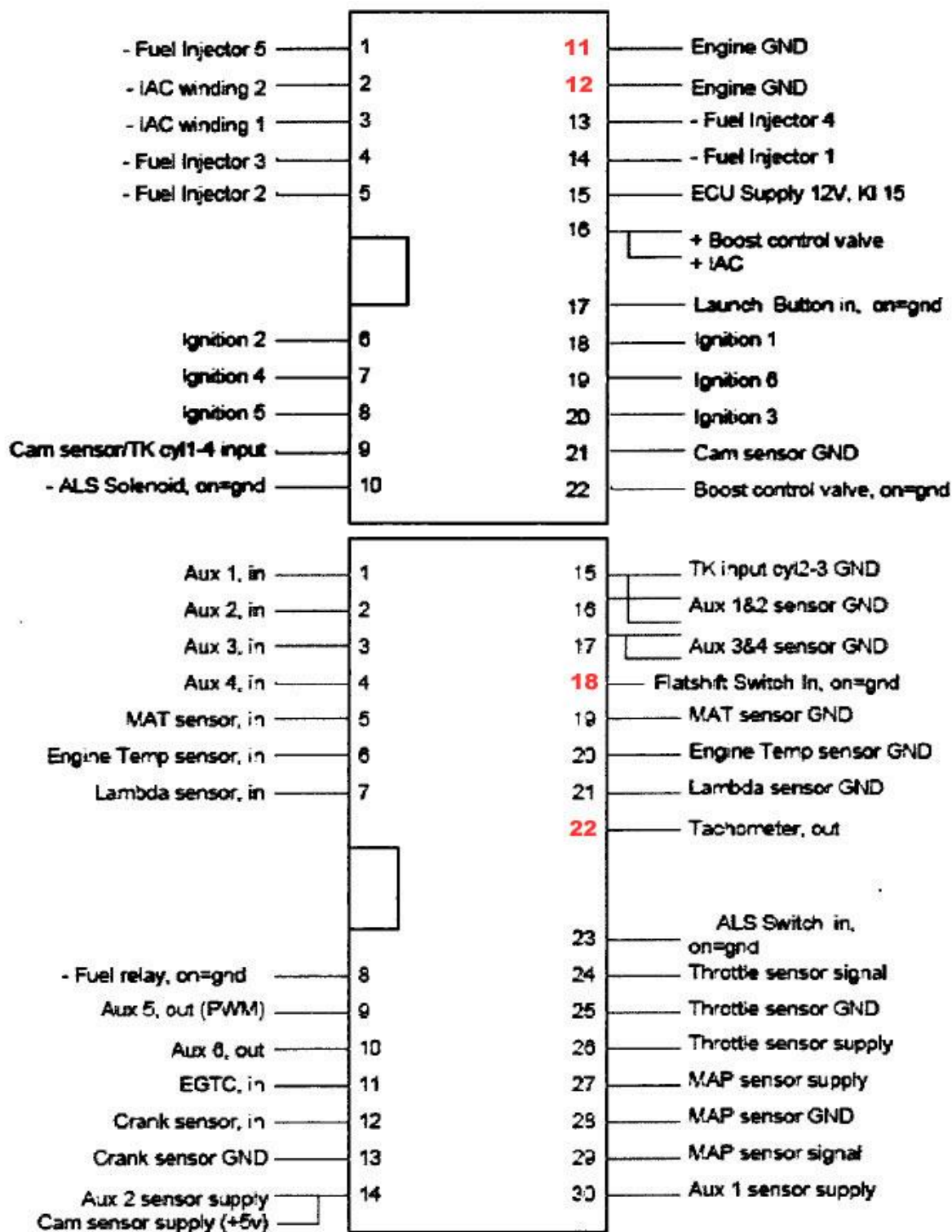
White – Ign pulse – connect to Nira i3+ Tachometer out / Pin 22

Black - Gnd Ign pulse – connect to Nira i3+ Engine Gnd / Pin 11 or Pin 12

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Document and Product Description

ECU versus TTT802 Gearshift Controller

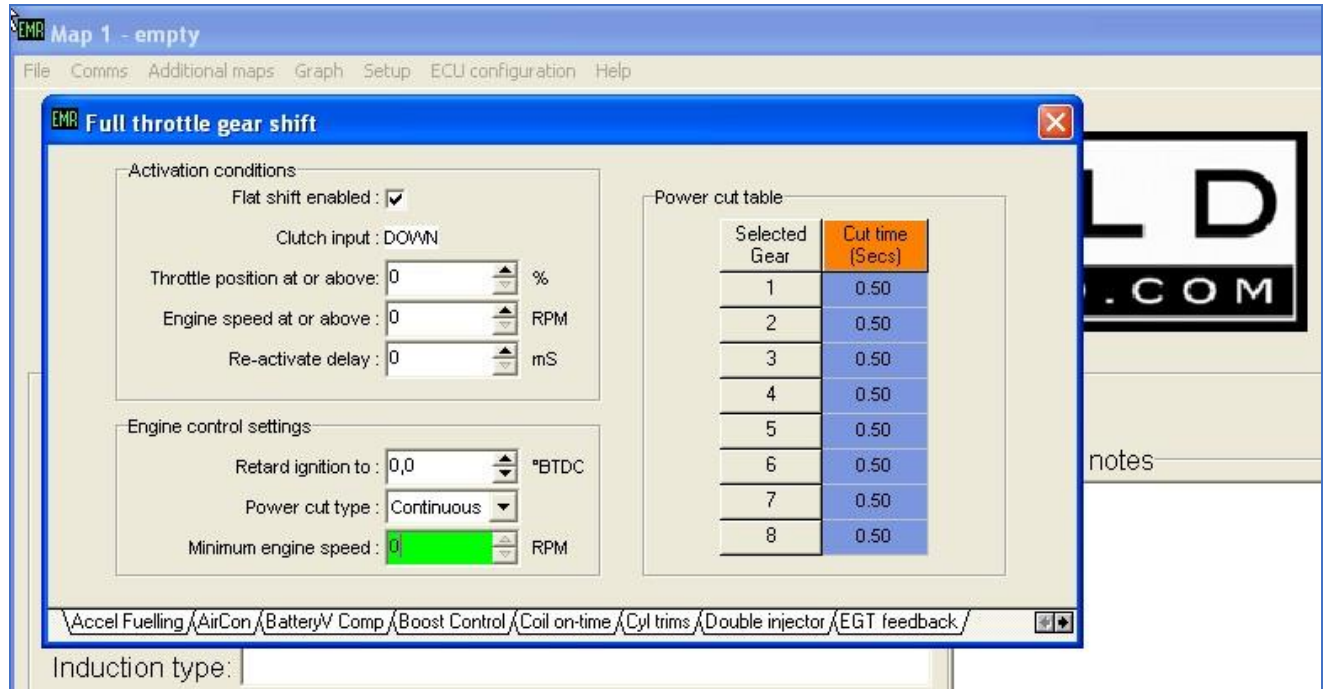




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Adjust Settings in the Emerald K3 according to this information...

Setup Activation conditions and Engine control settings as on the picture below:



Note: Both Engine speed at or above & Minimum engine speed is now controlled by the TTT802. The "Retard ignition to" setting might needs some adjustment. You can retard as far as -30 degrees BTDC (30 degrees ATDC).

Note: The Power cut table is not used because we set the "Power cut type" to Continuous.



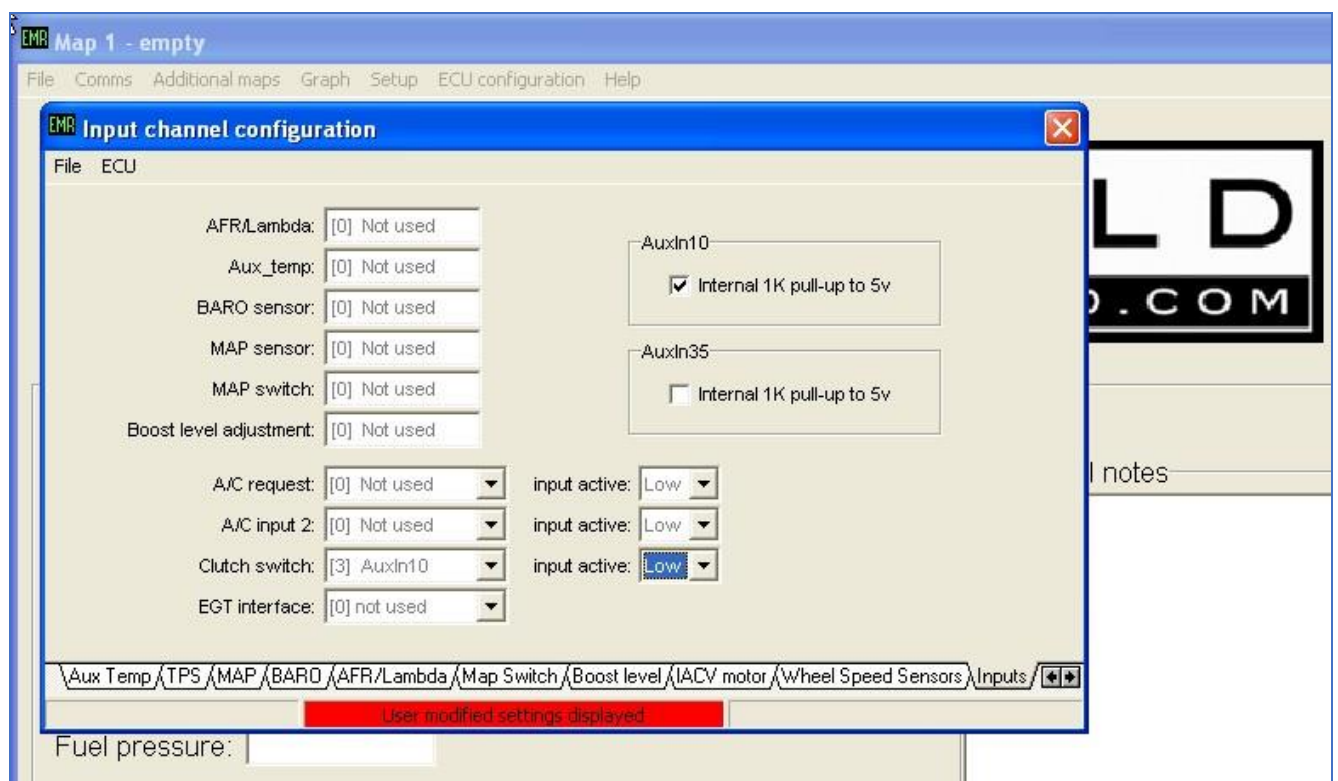
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Setup Input channel configuration:

Select Clutch switch = AuxIn10. (The clutch switch is our flatshift function input)

Set input active = Low.

Mark box Internal 1K pull-up to 5v.



Note. In this example we use AuxIn10 as the flatshift input. It is also possible to use AuxIn35.



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Wire connections.

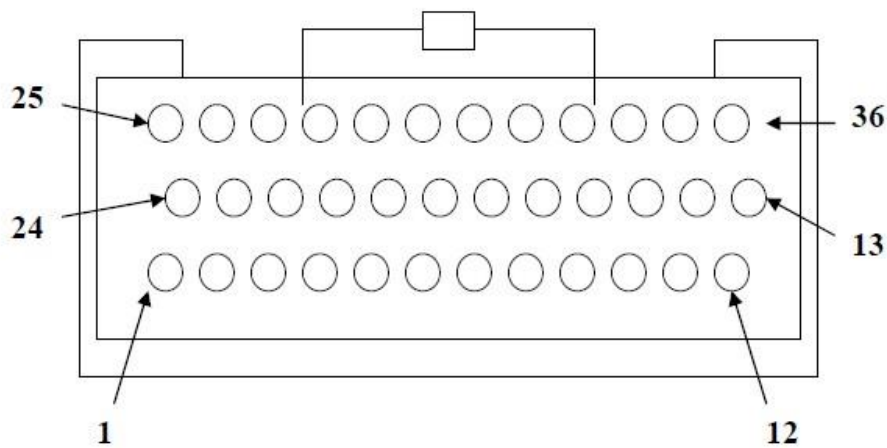
Use extension cable (TTT Part # 12-650-6) to interface the Emerald K3 with the TTT802 cable harness (TTT Part # 12-630-8).

Red – Cut Open Collector – connect to Emerald K3 AuxIn10 / Pin 10

Blue – Cut Gnd – connect to Emerald K3 ECU Earth / Pin 29

White – Ign pulse – connect to Emerald K3 Tacho output signal / Pin 12

Black - Gnd Ign pulse – connect to Emerald K3 ECU Earth / Pin 29



Rear view of connector
(wire side)



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Pin no.	Connection	Comments
1	Injector driver 4 / AuxOut1	Injector driver 4 or user assigned output
2	IACV2 / AuxOut2	IACV stepper motor channel 2 or user assigned output
3	IACV1 / IACV-PWM / AuxOut3	IACV stepper motor channel 1, IACV pwm control or user assigned output
4	Ignition driver 3 / Main Relay Control	Ignition driver 3 or main relay control output according to ECU configuration
5	Ignition driver 2 / AuxOut5	Ignition driver 2 or user assigned output
6	Cooling fan relay control	Output switches to earth to activate relay & fan
7	Oxygen sensor signal input	0-1v input from narrow band sensor
8	Throttle pot signal input	0-5v input from throttle position sensor
9	+5v sensor supply	5v output, 100mA max supply for sensors such as TPS, MAP, etc
10	AuxIn10	User assigned 0-5v input. An internally switched pull-up resistor can be enabled on this input.
11	Ignition sense input	+12v supply via ignition switch
12	Tacho output signal	0-12v pulsed output
13	Immobilisor/EGT digital input	Digital input from a Lucas 5AS immobilisor or VAG EGT sensor interface
14	+8v sensor supply	+8v supply for external sensors
15	Cam phase or custom input	Cam sensor input (if required)
16	Air temperature signal input	NTC temperature sensor input
17	Injector driver 5 / Ignition driver 4 / AuxOut17	Injector driver 5, Ignition driver 4 or user assigned output according to ECU configuration
18	Oxygen sensor signal earth	
19	Shift-light driver / AuxOut19	Shift-light output (switched earth) or user assigned output according to ECU configuration
20	Fuel pump relay driver	Switched earth
21	Injector driver 6 / AuxOut3	Injector driver 6 or user assigned output
22	IACV3 / AuxOut22	IACV stepper motor control or user assigned output
23	Injector driver 2	
24	Injector driver 1	
25	Ignition driver 1	
26	Injector driver 3 / AuxOut26	Injector driver 3 or user assigned output
27	IACV 4 / AuxOut27	IACV stepper motor control or user assigned
28	+12v Ignition supply	Supply from main relay or common with pin 11
29	ECU earth	Good earth (direct to battery)
30	Sensor earth	Common earth for air, coolant & throttle sensors
31	Main trigger signal input	Crank sensor or digital distributor input signal
32	Main trigger sensor earth	Earth return for main/cam trigger sensors
33	Coolant temp signal input	NTC temperature sensor input
34	AuxIn34	User assigned 0-5v input
35	AuxIn35	User assigned 0-5v input. An internally switched pull-up resistor can be enabled on this input for temperature sensors.
36	AuxIn36 / AuxOut36	User configurable input or output pin

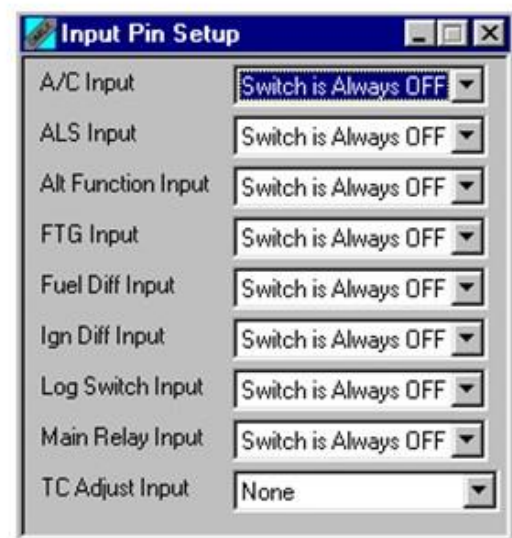
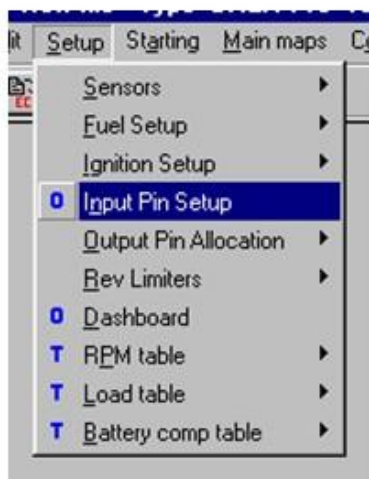


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Adjust Settings in the Omex 710 according to this information...

Select FTG input on the Omex 710 for the gearcut signal from TTT802.

Switch inputs

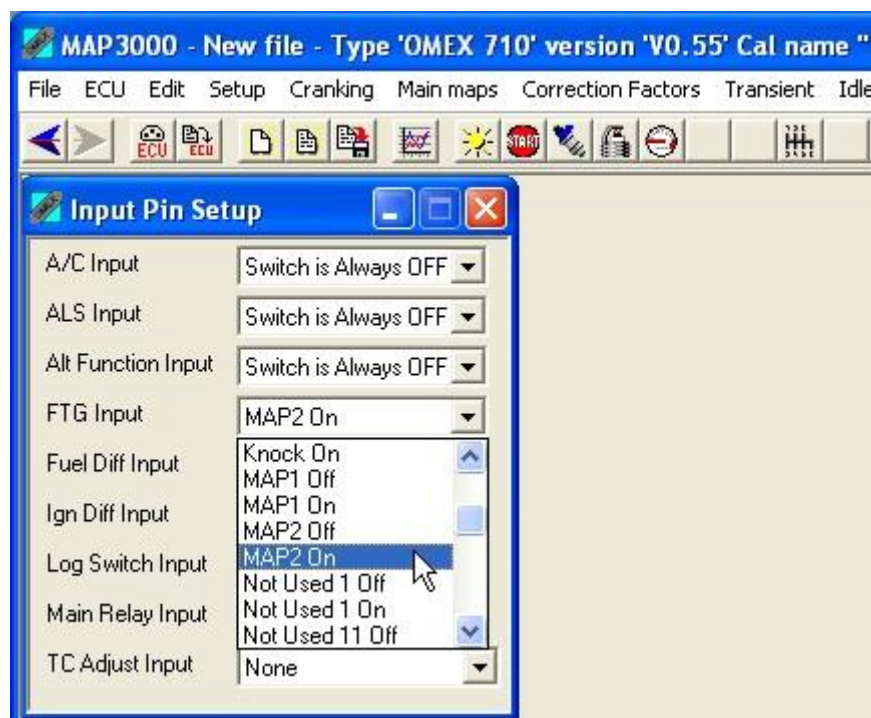


Switch input pins are selected using the drop-down options. A switch input function can have any of the input pins on the list assigned to it so long as they are not being used already by sensors. (eg. If an oxygen sensor is being used on pin OX1, a switch clearly cannot be assigned to this pin). For a function to be active always without a physical switch to turn it on (sometimes this is the case with the Alt Function) select **Switch is Always ON**.



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In this example we assume that MAP2 is free to use so we setup the FTG function to use this input.

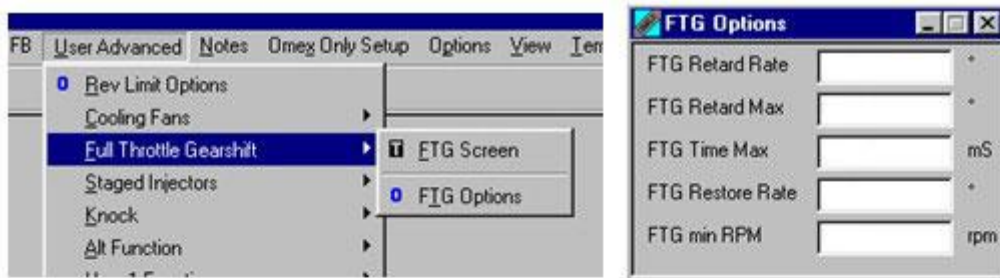




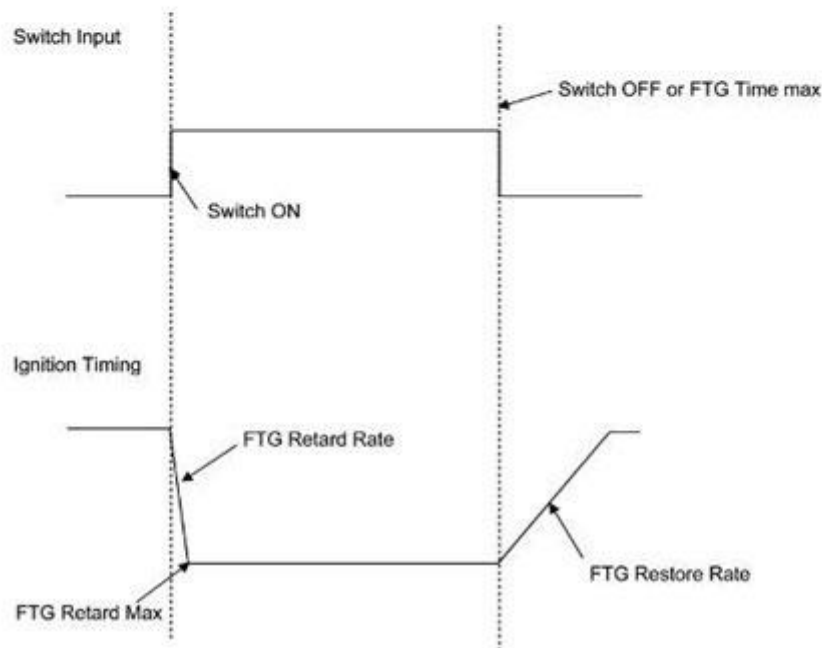
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Setup FTG function options. There are 5 values that needs to be input. We suggest you start with the following values.

FTG Retard Rate:	90	Input a high value to get fast cut response
FTG Retard Max	30	
FTG Time Max	3000	
FTG Restore Rate	30	Higher value = Faster Restore rate
FTG min RPM	0	Min. RPM is controlled by the TTT802



The full throttle gearshift is a switched ignition retard function. When the input for this function is satisfied (normally by a physical input switch on the clutch pedal or gearstick), the ECU retards the ignition at a rate, **FTG Retard Rate**, up to a maximum retard, **FTG Retard Max** (The maximum retard is relative to the current map value, not absolute). When the input switch changes to OFF, the ignition retard will be returned at a rate, **FTG Restore Rate**, until the normal ignition timing is reached. If the input does not go to OFF, the timing will be returned after a time set by **FTG Time max**. The retard rate is degrees per 4ms and would typically be very fast (10-15) then the advance slower (2-3). The option **FTG min RPM** is the minimum engine RPM at which a full throttle gearshift retard can be performed. This prevents the engine RPM from dipping when depressing the clutch whilst stationary.



Note! Retard max and restore rate needs to be evaluated.



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Wire connections when using MAP2 for FTG input.

Use extension cable (TTT Part # 12-650-6) to interface the Omex 710 with the TTT802 cable harness (TTT Part # 12-630-8).

Red – Cut Open Collector – connect to Omex 710 Battery Power / Pin 4A

Blue – Cut Gnd – connect to Omex 710 MAP2 / Pin 10A

White – Ign pulse – connect to Omex 710 Tacho / Pin 12C

Black - Gnd Ign pulse – connect to Omex 710 Power Ground 2 / Pin 7B

Omex 710 connection pins.

number	colour code	output name
1A	Yellow black	IGN1
2A	Yellow violet	IGN6
3A	Brown pink	FUEL8
4A	Red	Battery power
5A	Black	Power ground 1
6A	Grey	Sensor ground
7A	Black screened red	Crank sensor
8A		Timing ground
9A	White violet	Coolant temperature sensor
10A	White yellow	MAP2
11A	Red screened red	Cam Sensor
12A	Yellow grey	IGN2
1B	Yellow orange	IGN4
2B	Yellow green	IGN5
3B	Brown violet	FUEL6
4B	Brown black	FUEL1
5B	Brown green	FUEL5
6B	Blue white	MAP1
7B	Black	Power ground 2
8B	Brown grey	FUEL7
9B	White green	Air temperature sensor
10B	Grey screened	Knock sensor
11B	White orange	Oxygen sensor 2
12B	Yellow red	IGN3
1C	Blue grey	HIGHSIDE2
2C	Brown orange	FUEL4
3C	Brown yellow	FUEL2
4C		
5C	Blue black	HIGHSIDE1
6C	Brown red	FUEL3
7C	White red	Oxygen sensor 1
8C	Orange	Throttle position sensor
9C	Pink	5V out
10C	Blue screened red	Road speed sensor
11C	White pink	ALT POWER
12C	Blue yellow	Tacho



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Adjust Settings in the Ecu Master EMU according to this information...

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Interfacing Ecu Master EMU Classic to TTT802 Gearshift Controller



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Interfacing Ecu Master EMU to TTT802 Gearshift Controller



- Page 67-70

Interfacing Ecu Master Black to TTT802 Gearshift Controller





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Ecumaster EMU CLASSIC Client

File Edit Desktops Tools Window Help

Configuration

- Sensors setup
- Engine start
- Enrichments
- Fueling
- Ignition
- Knock sensors
- Idle
- Outputs
- Boost
- DBW
- Traction control
- VVT
- Sport**
 - Shift light
 - Launch control
 - Flat shift
 - Gear Cut**
 - ALS
 - Pit limiter
 - 2nd engine TR
 - Rolling antilag
 - Pit limiter torq

logs | cranking | triggers | ignition

Basic

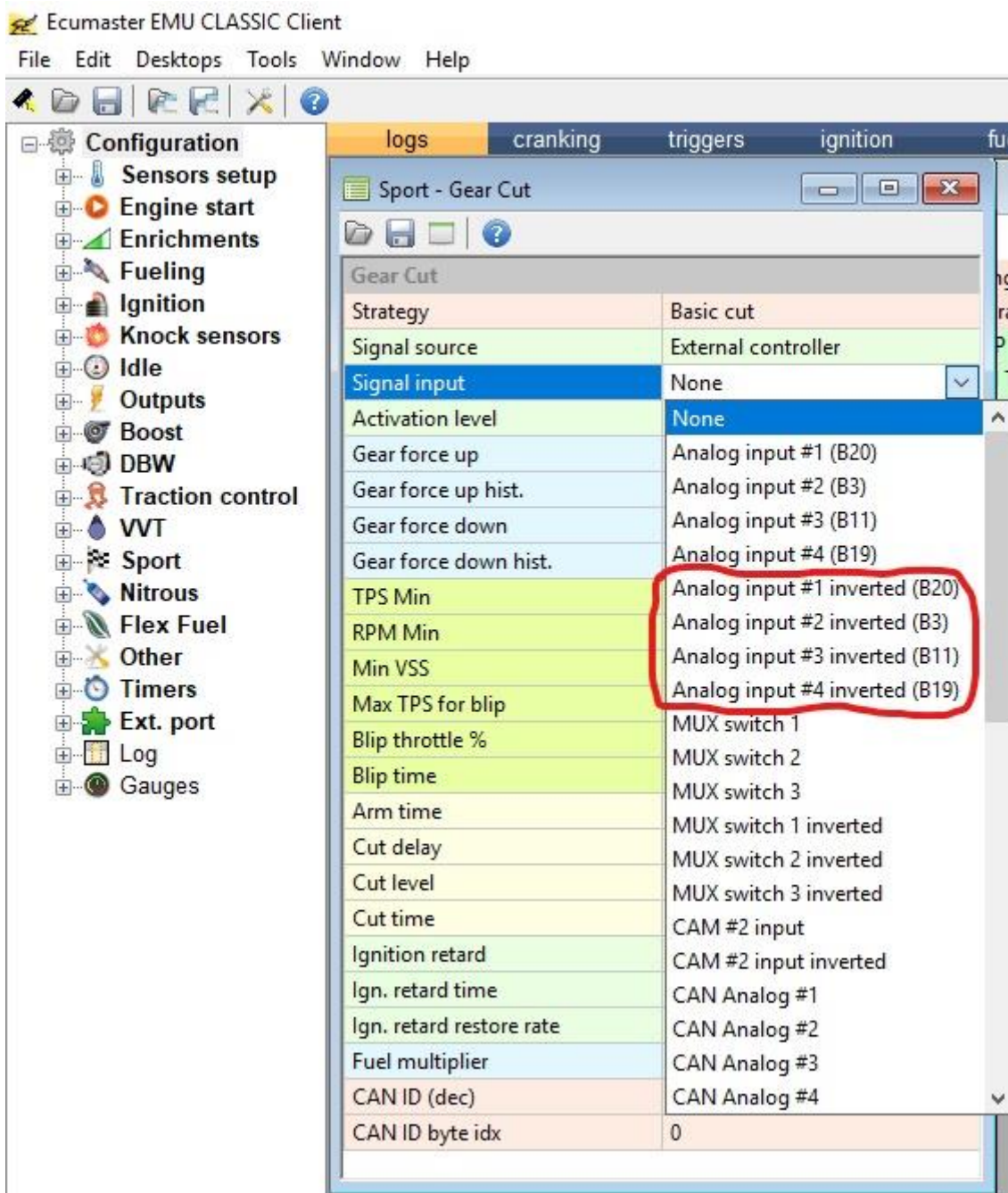
Name	Value	Unit
RPM	0	RPM
MAP	0	kPa
BARO	0	kPa
TPS	0	%
IAT	0	°C
CLT	0	°C
Battery voltage	0	V
Oil pressure	0	Bar
Oil temperature	0	°C
Fuel pressure	0	Bar
Fuel level	0	%
ECU State	0	
ECU Reset	0	

Boost

Name	Value	Unit
------	-------	------



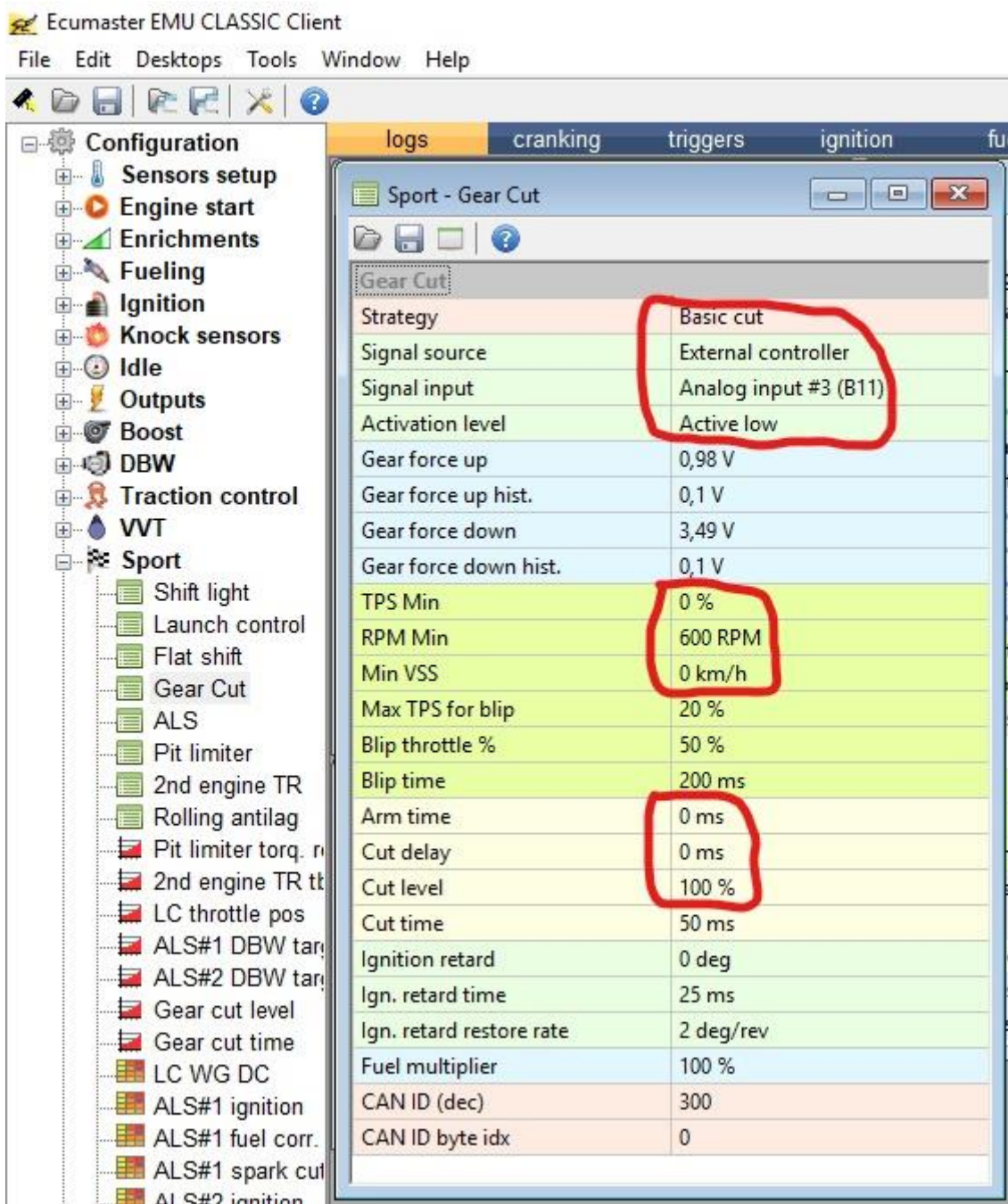
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Use one of the four Analog inputs inverted for the Cut output from TTT802



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Wire connections.

Use extension cable (TTT Part # 12-650-6) to interface the Ecu Master EMU with the TTT802 cable harness (TTT Part # 12-630-8 or 12-631-7 or 12-633-5).

Red – Cut Open Collector – connects to one of the Ecu Master EMU Analog input Inverted Pin B20, B3, B11, B19, also connect a 2k2 resistor from the used input to +5V supply B23.



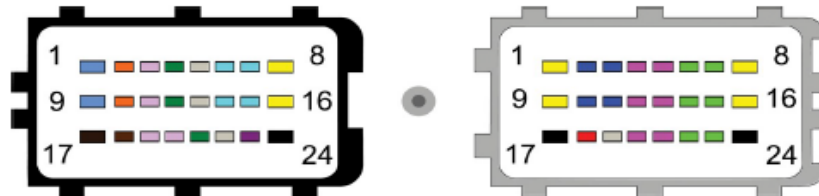
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Blue – Cut Gnd – connect to Ecu Master EMU Sensor Ground Pin B18

White – Ign pulse – connect to Ecu Master EMU Tacho Output Pin G20 Aux 4

Black - Gnd Ign pulse – connect to Ecu Master EMU ECU Ground Pin B17

CONNECTOR PINOUT DETAILS

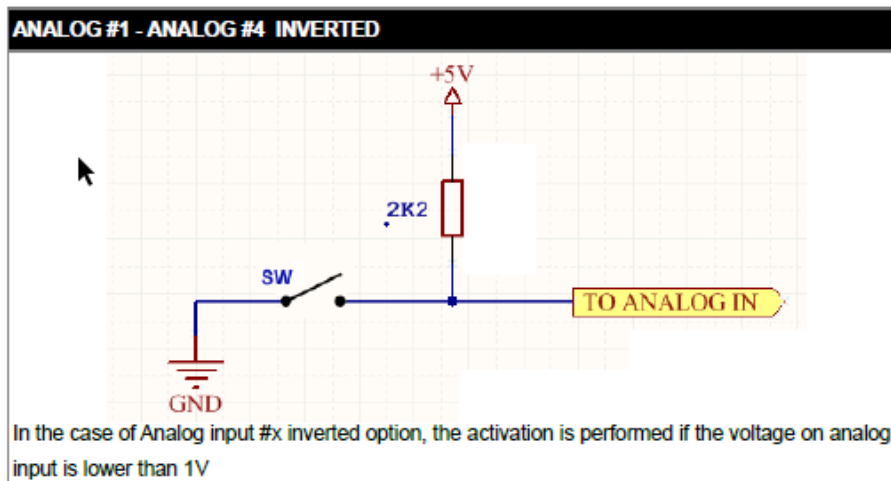


Device View

BLACK		GRAY	
1	EGT In #1	1	Ignition coil #6
2	Knock Sensor In #1	2	Stepper motor #1 winding A
3	Analog In #2	3	Stepper motor #2 winding A
4	CLT In	4	AUX 6
5	WBO Vs	5	AUX 3
6	Camsync In #2	6	Injector #4
7	Primary trigger In	7	Injector #1
8	Ignition coil #5	8	Ignition coil #1
9	EGT In #2	9	Ignition coil #3
10	Knock Sensor In #2	10	Stepper motor #1 winding B
11	Analog In #3	11	Stepper motor #2 winding B
12	TPS In	12	AUX 5
13	WBO Ip	13	AUX 2
14	VSS In	14	Injector #5
15	Camsync #1	15	Injector #2
16	Ignition coil #4	16	Ignition coil #2
17	ECU Ground	17	Power Ground
18	Sensor Ground	18	Power +12V
19	Analog In #4	19	WBO Heater
20	Analog In #1	20	AUX 4 / Tacho
21	IAT In	21	AUX 1
22	WBO Vs/Ip	22	Injector #6
23	+5V supply	23	Injector #3
24	Power Ground	24	Power Ground



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Ecumaster EMU CLASSIC Client

File Edit Desktops Tools Window Help

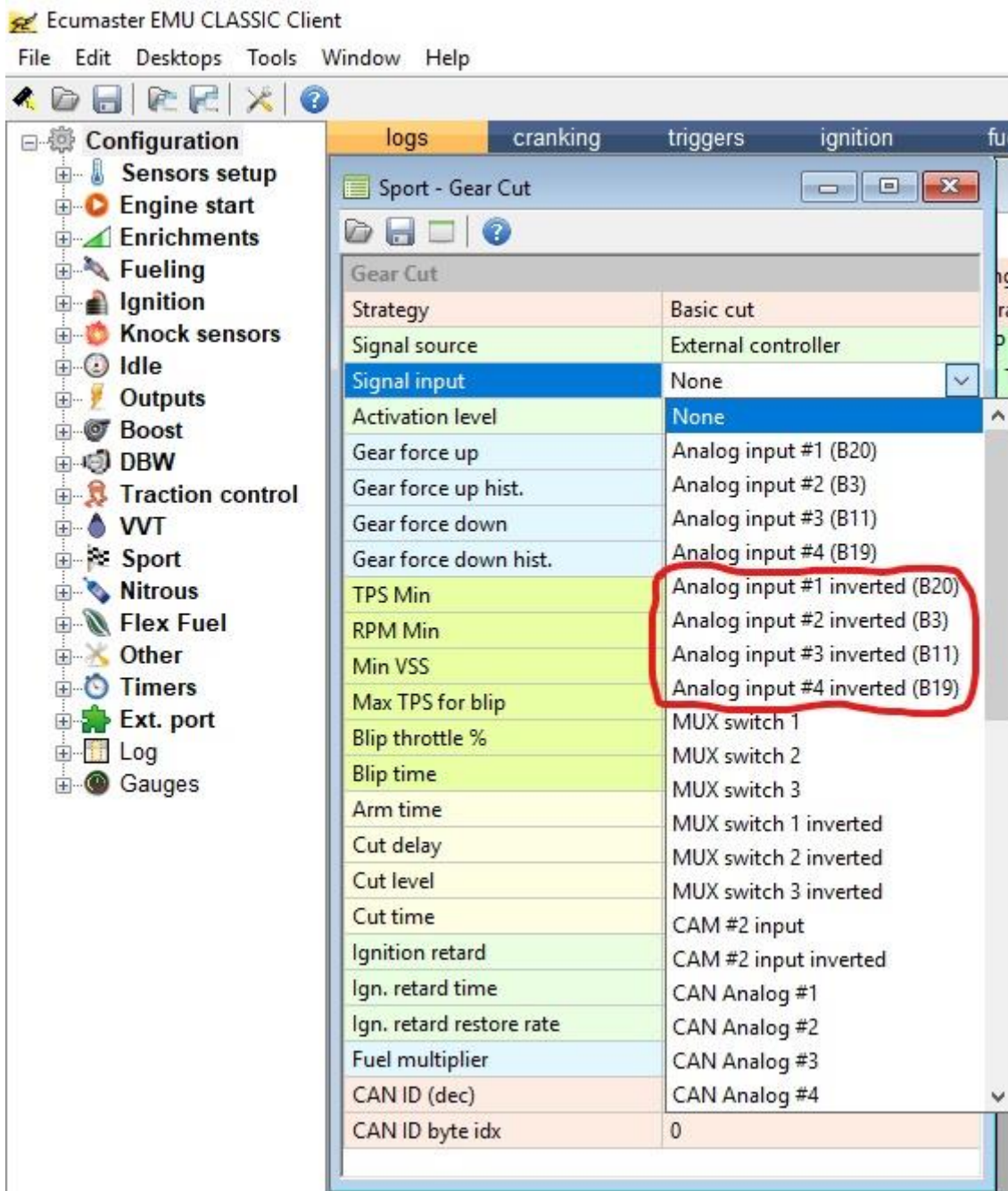
The screenshot shows the Ecumaster EMU CLASSIC Client interface. On the left is a configuration tree with various settings. The 'Sport' option is highlighted with a red circle. Below it, 'Gear Cut' is also highlighted with a red circle. The main window displays a 'logs' tab with a table of sensor data. The table has three columns: Name, Value, and Unit. The data is as follows:

Name	Value	Unit
RPM	0	RPM
MAP	0	kPa
BARO	0	kPa
TPS	0	%
IAT	0	°C
CLT	0	°C
Battery voltage	0	V
Oil pressure	0	Bar
Oil temperature	0	°C
Fuel pressure	0	Bar
Fuel level	0	%
ECU State	0	
ECU Reset	0	

Below the table, there is a 'Boost' tab which is partially visible, showing a similar table structure with columns for Name, Value, and Unit.



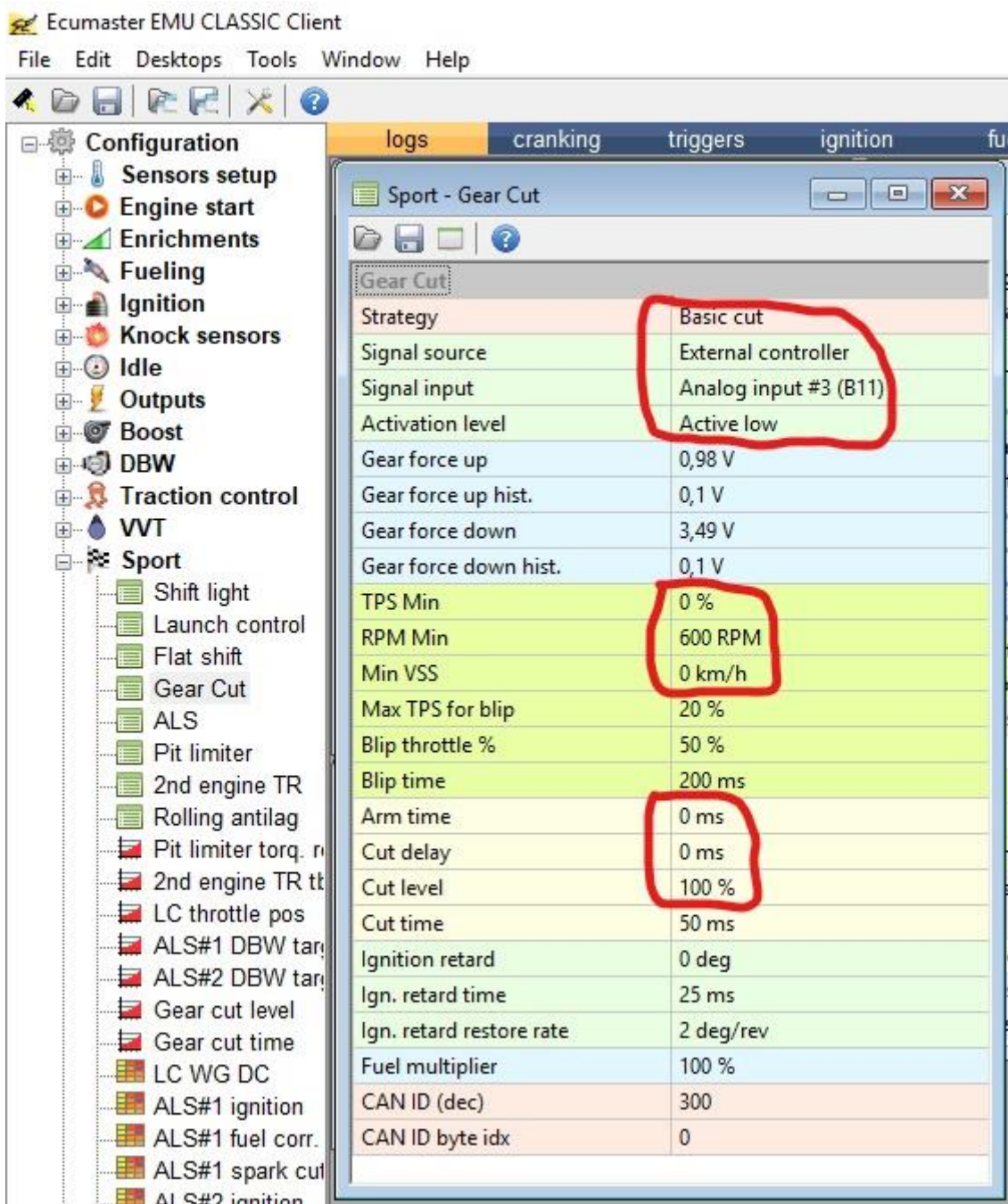
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Use one of the four Analog inputs inverted for the Cut output from TTT802



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Wire connections.

Use extension cable (TTT Part # 12-650-6) to interface the Ecu Master EMU with the TTT802 cable harness (TTT Part # 12-630-8 or 12-631-7 or 12-633-5).

Red – Cut Open Collector – connects to one of the Ecu Master EMU Analog input Inverted Pin B20, B3, B11, B19, also connect a 2k2 resistor from the used input to +5V supply B23.



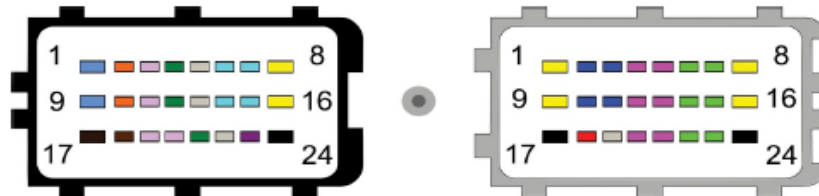
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Blue – Cut Gnd – connect to Ecu Master EMU Sensor Ground Pin B18

White – Ign pulse – connect to Ecu Master EMU Tacho Output Pin G20 Aux 4

Black - Gnd Ign pulse – connect to Ecu Master EMU ECU Ground Pin B17

CONNECTOR PINOUT DETAILS

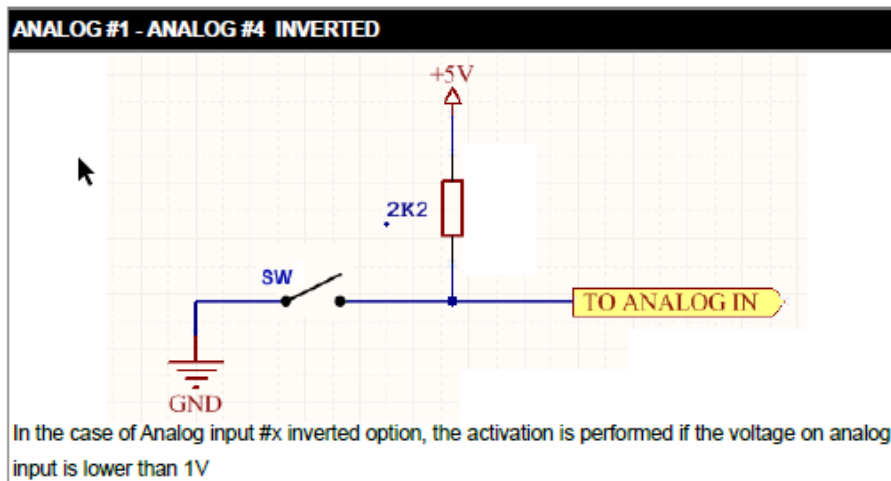


Device View

BLACK		GRAY	
1	EGT In #1	1	Ignition coil #6
2	Knock Sensor In #1	2	Stepper motor #1 winding A
3	Analog In #2	3	Stepper motor #2 winding A
4	CLT In	4	AUX 6
5	WBO Vs	5	AUX 3
6	Camsync In #2	6	Injector #4
7	Primary trigger In	7	Injector #1
8	Ignition coil #5	8	Ignition coil #1
9	EGT In #2	9	Ignition coil #3
10	Knock Sensor In #2	10	Stepper motor #1 winding B
11	Analog In #3	11	Stepper motor #2 winding B
12	TPS In	12	AUX 5
13	WBO Ip	13	AUX 2
14	VSS In	14	Injector #5
15	Camsync #1	15	Injector #2
16	Ignition coil #4	16	Ignition coil #2
17	ECU Ground	17	Power Ground
18	Sensor Ground	18	Power +12V
19	Analog In #4	19	WBO Heater
20	Analog In #1	20	AUX 4 / Tacho
21	IAT In	21	AUX 1
22	WBO Vs/Ip	22	Injector #6
23	+5V supply	23	Injector #3
24	Power Ground	24	Power Ground



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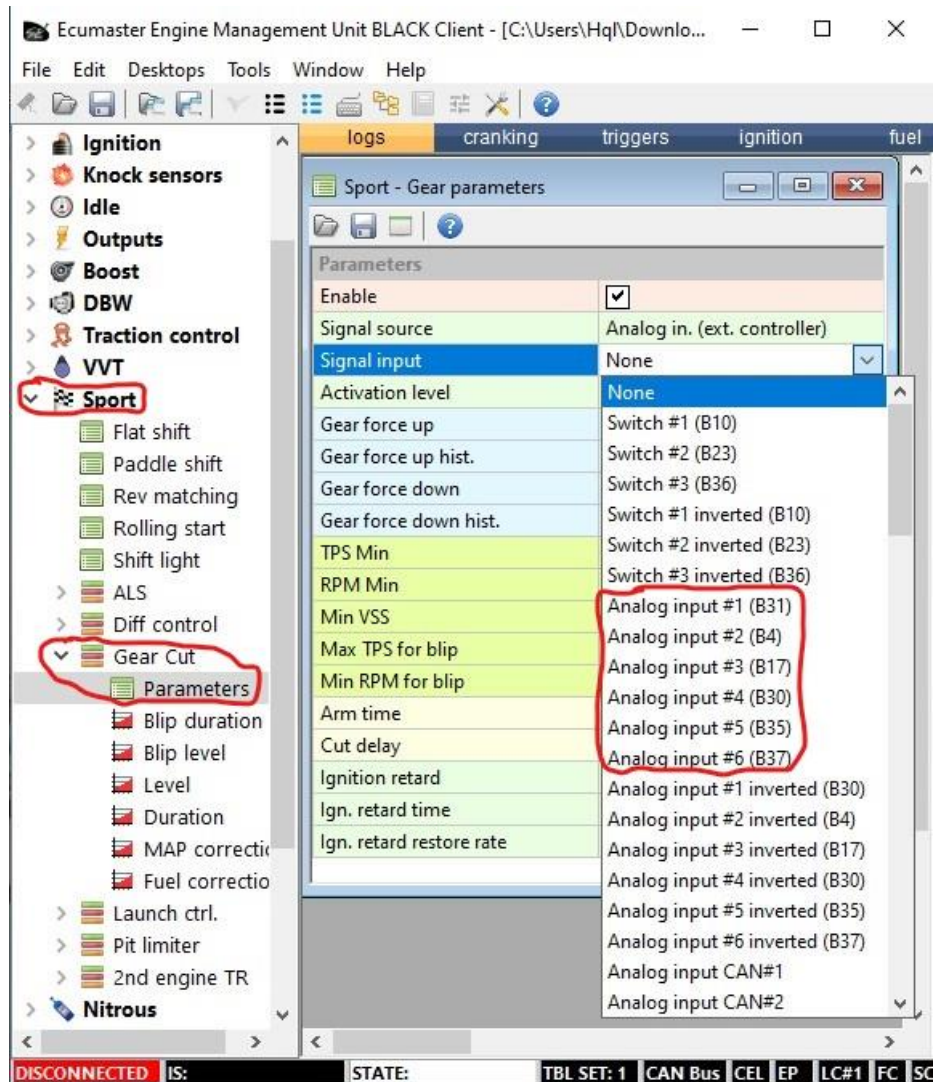




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Interfacing Ecu Master EMU Black to TTT802 Gearshift Controller

Adjust Settings in the Ecu Master EMU Black according to this information...



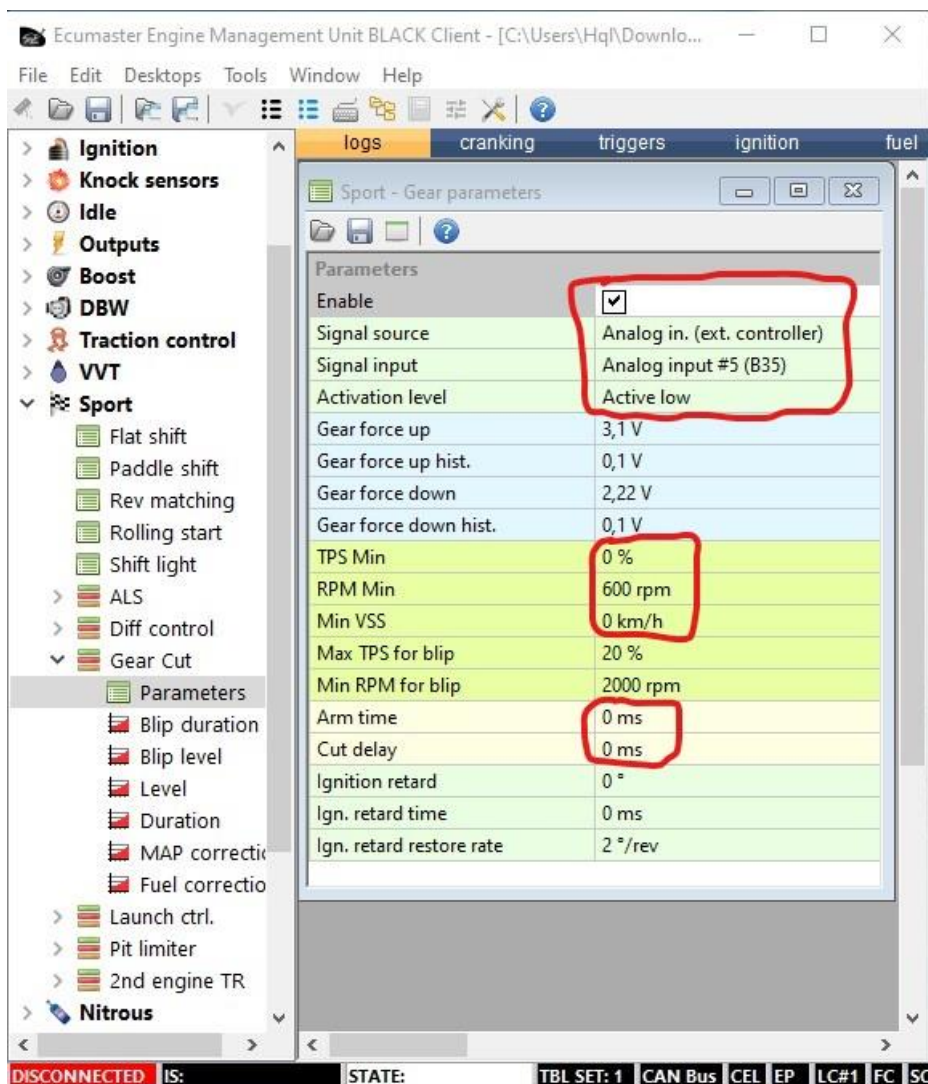
Use one of the six Analog inputs for the Cut output from TTT802



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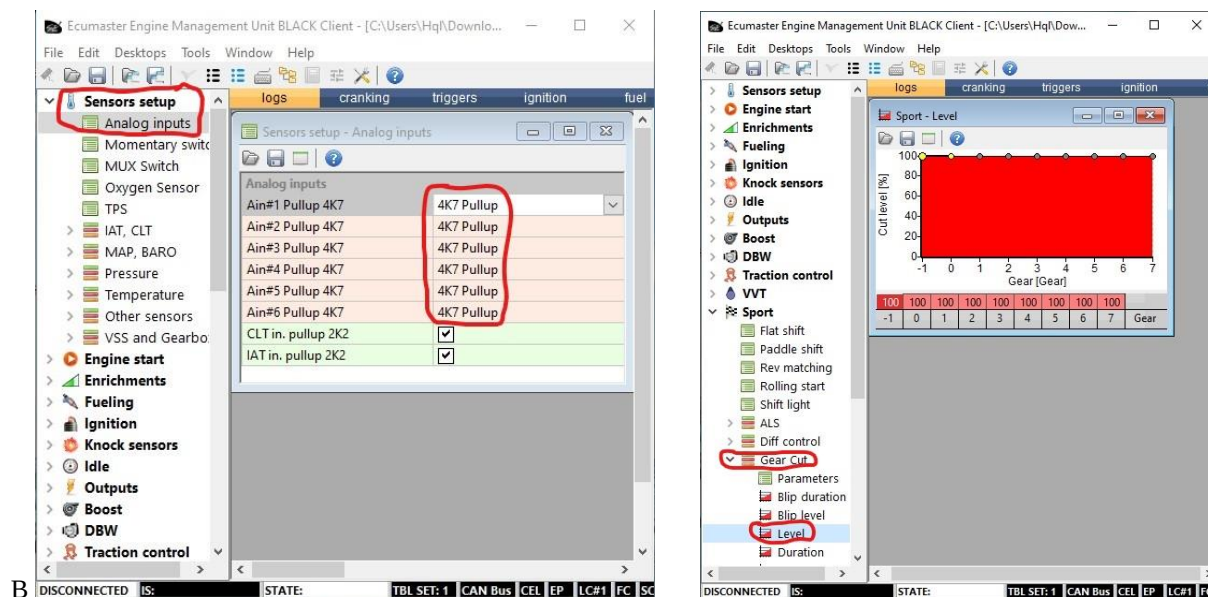
Document and Product Description

ECU versus TTT802 Gearshift Controller





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Wire connections.

Use extension cable (TTT Part # 12-650-6) to interface the Ecu Master EMU with the TTT802 cable harness (TTT Part # 12-630-8).

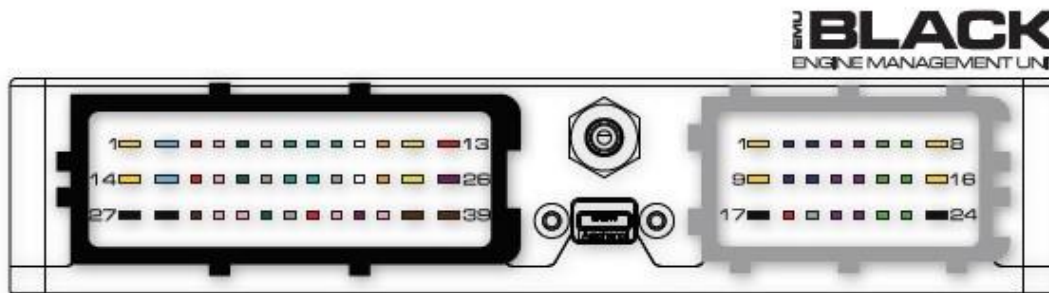
Red – Cut Open Collector – connects to one of the Ecu Master EMU Black Analog input Pin 31, 4, 17, 30, 35, 37.

Blue – Cut Gnd – connect to Ecu Master EMU Black ECU Sensor Ground Pin 29, 38, 39.

White – Ign pulse – connect to Ecu Master EMU Black Aux 4 / Tacho Pin 20

Black - Gnd Ign pulse – connect to Ecu Master EMU Black ECU Ground Pin 28.

ECU versus TTT802 Gearshift Controller



Black 39pin connector	1	Ignition coil #5	14	Ignition coil #4	27	Power Ground
	2	EGT in #1	15	EGT in #2	28	Ecu Ground
	3	Knock Sensor in #1	16	Knock Sensor in #2	29	Sensor Ground
	4	Analog In #2	17	Analog In #3	30	Analog In #4
	5	CLT In	18	TPS In	31	Analog In #1
	6	WBO Vs	19	WBO Ip	32	IAT In
	7	Camsync In #2	20	VSS In	33	WBO VGND
	8	Primary trigger	21	Camsync In #1	34	+5V supply
	9	Flex Fuel In	22	WBO Rcal	35	Analog In #5
	10	Switch #1 In	23	Switch #2 In	36	Switch #3 In
	11	RS232 TXD	24	RS232 RXD	37	Analog In #6
	12	CAN H	25	CAN L	38	Sensor Ground
	13	Battery +12V	26	+5V supply	39	Sensor Ground
Grey 24pin connector	1	Ignition coil #6	9	Ignition coil #3	17	Power Ground
	2	H-Bridge #1 Winding A	10	H-Bridge #1 winding B	18	Ignition +12V
	3	H-Bridge #2 Winding A	11	H-Bridge #2 winding B	19	WBO Heater
	4	AUX 6	12	AUX 5	20	AUX 4 / Tacho
	5	AUX 3	13	AUX 2 / Injector #8	21	AUX 1 / Injector #7
	6	Injector #4	14	Injector #5	22	Injector #6
	7	Injector #1	15	Injector #2	23	Injector #3
	8	Ignition coil #1	16	Ignition coil #2	24	Power Ground



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Adjust Settings in the Link G4 ... according to this information.





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G4 PCLink Engine Management - C:\Link G4\PCLink G4+\Base Maps\G4+ Fury Sample.pclr

File Options ECU Controls Display Mode Layout View Logging Tuning Help

The screenshot shows the PCLink Engine Management software interface. On the left, the 'ECU Settings' tree is expanded to 'Digital Inputs', which is circled in red. The list of digital inputs includes: DI 1 - GearCut Input, DI 2 - Clutch Switch, DI 3 - Ethanol Sensor, DI 4 - LF Wheel Speed, DI 5 - Launch Switch, DI 6 - RF Wheel Speed, DI 7 - LR Wheel Speed, DI 8 - RR Wheel Speed, DI 9 - Brake Switch NO, DI 10 - Power Steer Sw, and Ethanol Sensor. On the right, the 'DI 1 - GearCut Input' configuration window is open, showing the following settings:

Function	GP Input
Label	GearCut Input
Input Latch	OFF
Pullup Resistor	ON
On Level	Low
Active Edge	Falling

Use one of the first three Digital inputs (Di 1, Di 2, Di 3) for the Cut output from TTT802



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PCLink Engine Management - C:\Link G4\PCLink G4+\Base Maps\G4+ Fury Sample.pclr

File Options ECU Controls Display Mode Layout View Logging Tuning Help

The screenshot shows the PCLink Engine Management software interface. On the left, the 'ECU Settings' window is open, displaying a tree view of configuration options. Under 'Auxiliary Outputs', 'Aux 7 - Tacho' is highlighted with a red circle. On the right, the 'Aux 7 - Tacho' configuration window is open, showing a table with columns 'Function' and 'Tacho'. The table is currently empty.

Function	Tacho
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Use Aux 7 for RPM signal to TTT802



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G4 PCLink Engine Management - C:\Link G4\PCLink G4+\Base Maps\G4+ Fury Sample.pclr

File Options ECU Controls Display Mode Layout View Logging Tuning Help

The screenshot shows the PCLink Engine Management software interface. On the left, the 'ECU Settings' tree is expanded, with 'Gear Shift Control' highlighted. On the right, the 'Gear Shift Control' parameters are displayed in a table:

Gear Shift Control	
Start Shift Mode	Digital Input
End Shift Mode	Digital Input
Cut Mode	Ign % Cut
Up Shift Digital Input	DI 1
Down Shift Digital Input	OFF
RPM Lockout	0 RPM
TP Low Lockout	0 % TP
Speed Lockout	0 kph
End Of Gears Lockout	OFF
Max Shift Time	1000 ms
Start Shift Validation Time	2 ms
Re-Activation Timeout	0 ms
Drive/Overrun TP	0 % TP
Blip End Mode	Shift End
└ Driven Up Shift	
Driven Up Shift Torque Introduction 1	[Grid]
Driven Up Shift Cut	[Grid]
Driven Up Shift Ignition Trim	[Grid]
Driven Up Shift Fuel Trim	[Grid]
└ Overrun Down Shift	
Overrun Down Shift Throttle Trim	[Grid]
Maximum Down Shift RPM Lockout	[Grid]
Blip Response Time	[Grid]

Wire connections.

Use extension cable (TTT Part # 12-650-6) to interface the Link G4+ Fury with the TTT802 cable harness (TTT Part # 12-630-8 or 12-631-7 or 12-633-5).

Red – Cut Open Collector – connects to one of the Digital inputs Di 1, Di 2 or Di 3 on connector A pin 30, 31 or 23.

Blue – Cut Gnd – connect to Ground on connector A pin 25 or 34.

White – Ign pulse – connect to Aux 7 on connector A pin 27.

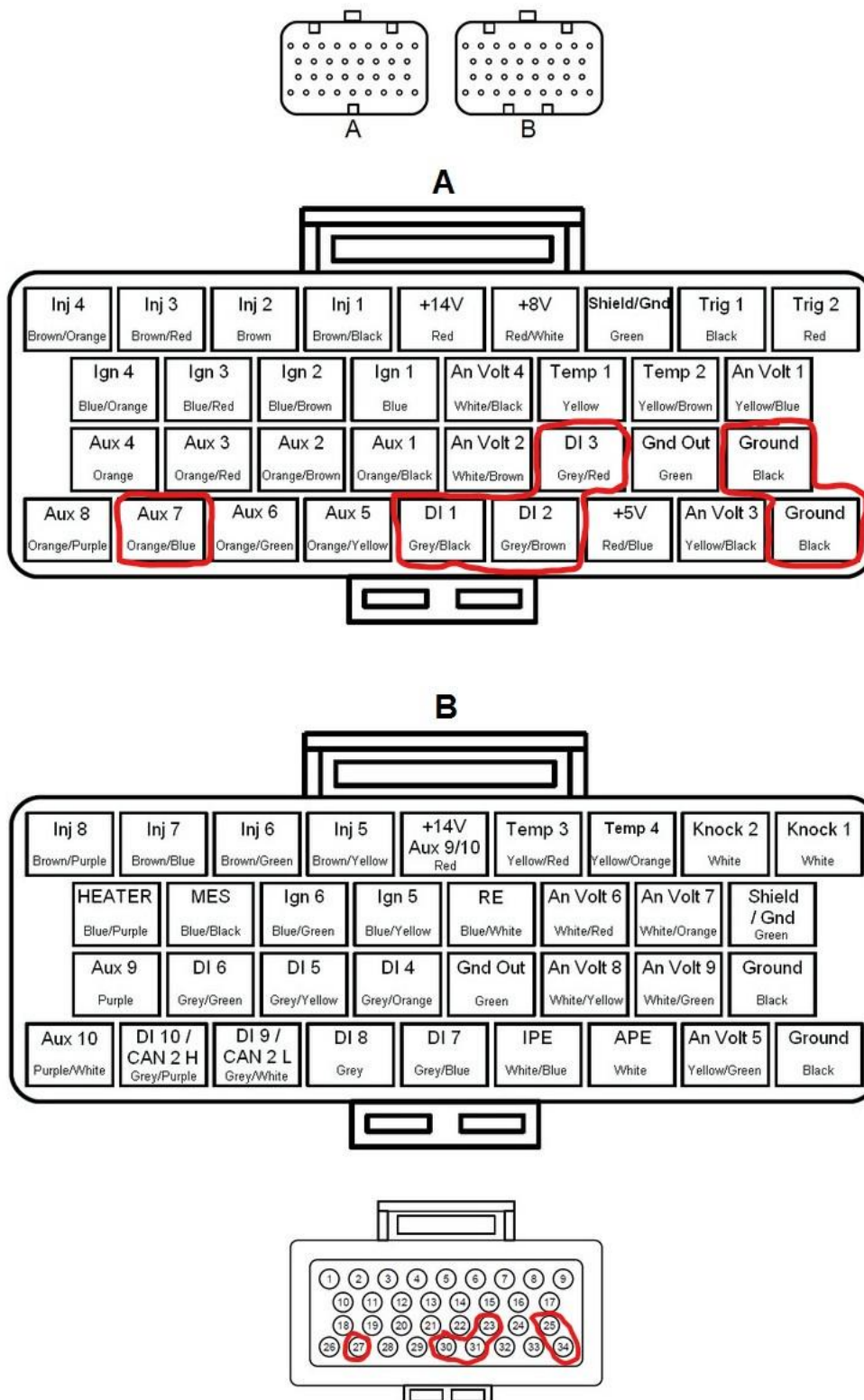
Black - Gnd Ign pulse – connect to Ground on connector A pin 25 or 34.



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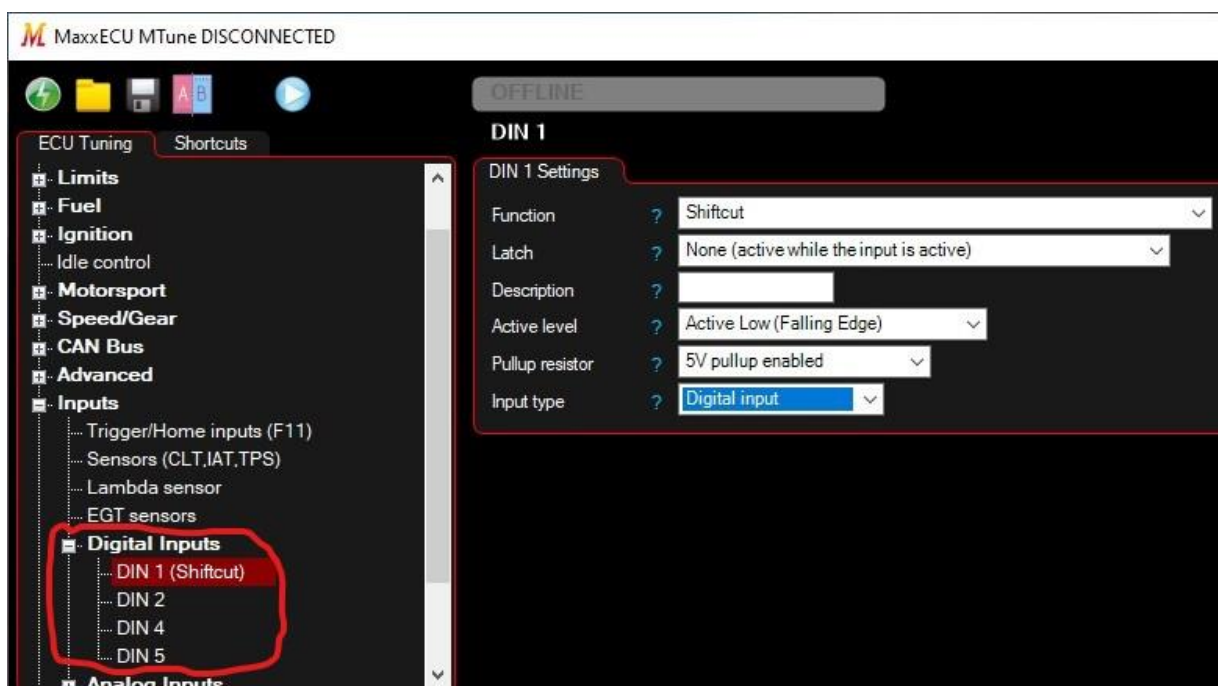
ECU versus TTT802 Gearshift Controller





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Interfacing MaxxECU Race to TTT802 Gearshift Controller
Adjust Settings in the MaxxECU M Tune according to this information...



Use one of the four Digital inputs for the Cut output from TTT802



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MaxxECU MTune DISCONNECTED

Shiftcut

Shiftcut

Enable shiftcut ? Enabled

Shiftcut mode ? Input controlled (Shiftcut input)

Cut output ? Cut Ignition

Shiftcut conditions

Enable cut above TPS ? 0.0 %

Enable cut above RPM ? 800

Activation delay time ? 0.000 sec

Reactivation time ? 0.000 sec

Max cut time ? 2.0

Shiftcut ignition retard

Retard angle

		Ignition retard (degrees)									
100.0	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	0.0	0.0	0.0	0.0	0.0	0.0	
	2000	2750	3500	4250	5000	5750	6500	7250	8000		
	RPM (rpm)										

Ramp back time

		Ramp time (sec)									
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	2000	2750	3500	4250	5000	5750	6500	7250	8000		
	RPM (rpm)										

Wire connections.

Use extension cable (TTT Part # 12-650-6) to interface the MaxxECU Race with the TTT802 cable harness (TTT Part # 12-630-8).

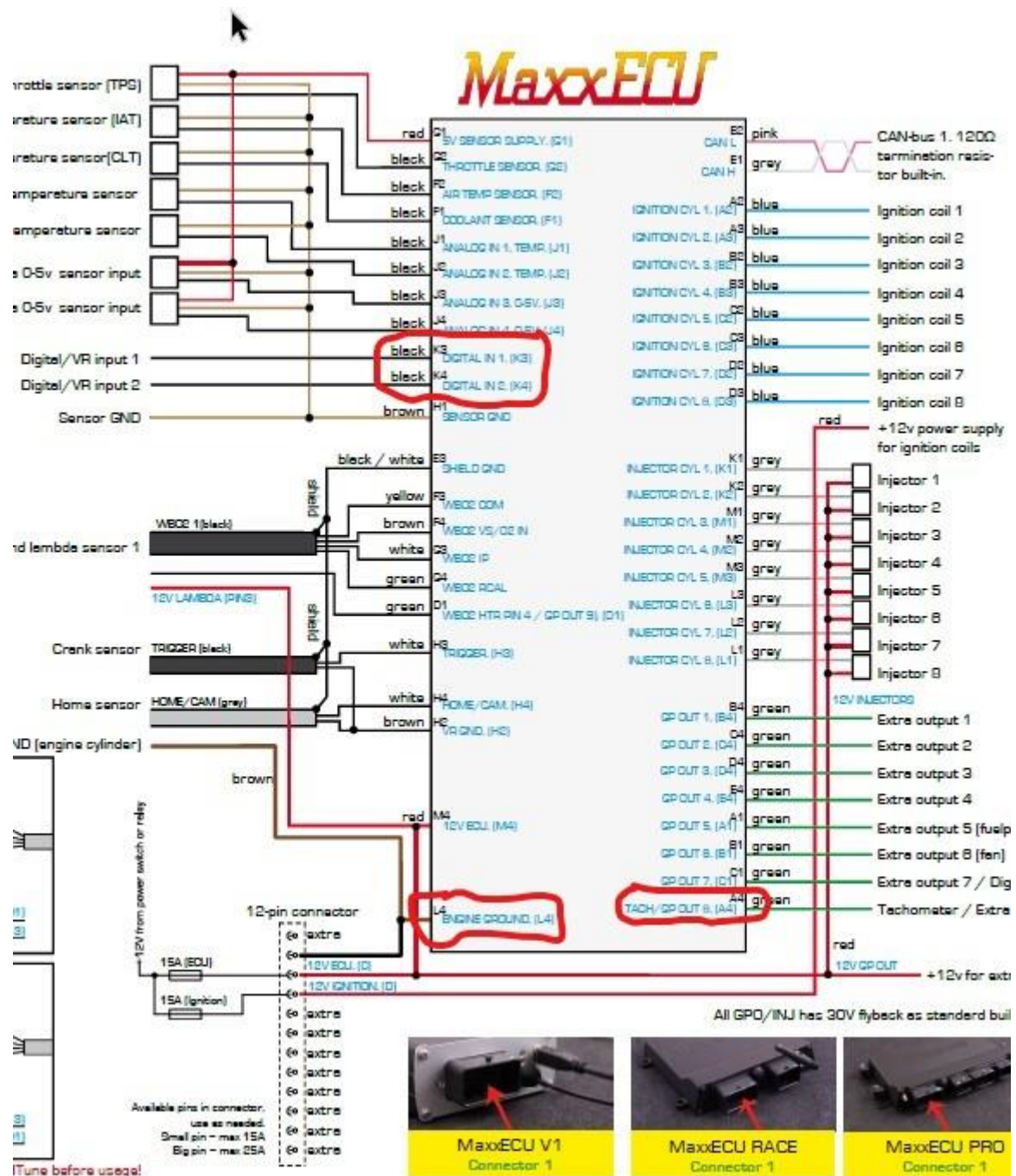
Red – Cut Open Collector – connects to one of the MaxxECU Race Digital Input **Pin K3, K4** connector 1, **Pin F3, F4** connector 2.

Blue – Cut Gnd – connects to MaxxECU Race Engine Ground **Pin L4**

White – Ign pulse – connects to MaxxECU Race Tachometer / Extra Output **Pin A4**

Black - Gnd Ign pulse – connect to MaxxECU Race Engine Ground **Pin L4**

ECU versus TTT802 Gearshift Controller





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