



Elite ECU Tester

Quick Start Guide

HT-070500

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Elite ECU Tester

Quick Start Guide

Congratulations on purchasing a Haltech Engine Management Elite ECU Tester. This product allows the users to:

- Check the functionality of their Haltech Elite ECUs by testing the inputs and outputs
- Diagnose an ECU to confirm if an ECU has an issue or the wiring has to be checked on a vehicle.

This quick start guide will walk you through installation and functionality of the Haltech Elite ECU Tester.

Included in Elite ECU Tester kit:

- Elite ECU Tester Unit
- Wiring Harness for Haltech Sport Series and Elite 1500/2500
- Wiring Harness for Haltech Elite 550/750
- 2 Pin Power up cable
- Quick start guide

Required Accessories

- Minimum 3 AMP, Recommended 5 AMP 12VDC Power Supply Unit

Powering up

The Elite ECU Tester requires a 12VDC power that needs to be connected through the supplied 2 wire power cables to a 12VDC power supply unit.

Red Connection is Positive (+) and Black Connection is Negative (-)



Example of a 12 VDC Power Supply Unit

Connecting to an ECU

Connect one end of the wiring harness that is included in the kit to the Elite ECU Tester's ECU Connection port and the other end to your ECU.



Example of Elite 550/750 Connection



Example of Elite 1500/2500 Connection

Functions



1. ON/OFF Switch
2. 10AMP Fuse
3. I/O Setup Switches
4. LEDs
5. ECU Connection
6. INJ/IGN Outputs
7. Sensors and AVIs Potentiometers
8. Ignition Switch and DPI
9. Cam Trim
10. RPM
11. Trigger select and display
12. Trigger/Home Output signal type

1. ON / OFF Switch

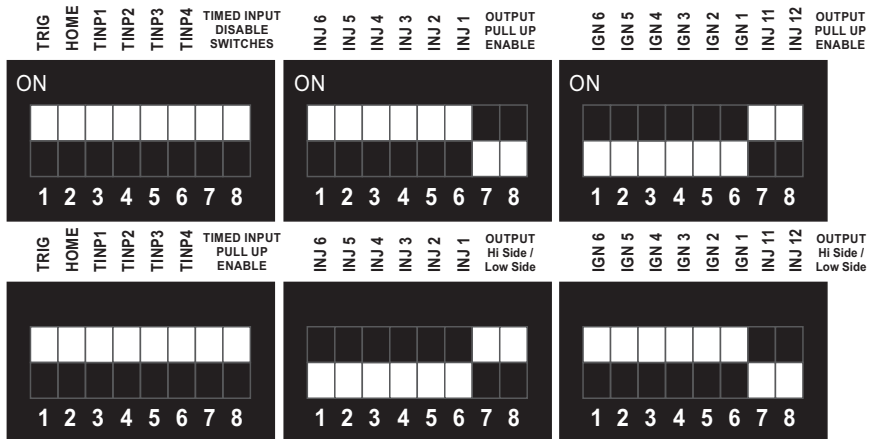
The ON/OFF switch to turn the system ON and OFF.

2. 10 AMP Fuse

Included in the box is a 10 AMP fuse to keep the board safe.

3. I/O Setup Switches

- Using I/O Setup switches on the left enables the user to turn SPI inputs on and off or enable a pull up in the selected inputs. (Pull up on the Elite ECU Tester not the ECU)
- Using I/O Setup switches on the middle and right enables the user to set pull up on Injector/Ignition outputs, lower switches give the option to switch between low and high side output.



I/O Setup Switches Default Setting

4. LED Lights

The LED lights indicate if an output is coming out of the ECU, for example +5V output, DPOs, Fuel Pump, INJ/IGN and etc.

They are useful to diagnose or to make sure if an output is coming out of the ECU correctly and at the right time.



5. ECU Tester Connectors

The ECU Connection 60 Pins are designed for a direct connection between the tester and the Haltech ECUs such as Elite 1500/2500 or Elite 550/750, all main input and outputs will be transferred through these pins.

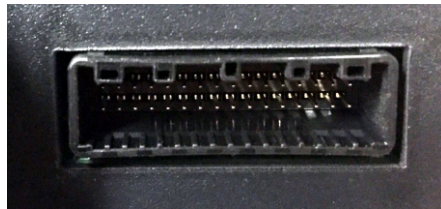


6. 32 Pin Injector/Ignition Outputs

This connector is used if the user wants to test the actual output of Injectors or Coils where they can wire it directly to an injector and check the pulsing.

Notes:

- An Igniter is required to test Ignition output for coils that don't have an Igniter.
- Should be tested on High Impedance Injectors only (Testing Low Impedance Injectors is not recommended)
- Optional Connector Required (**Haltech Part No. HT-030008**)



7. AVIs and Sensors Potentiometers

The user can use these potentiometers to increase/decrease the input values to the ECU and make sure all of them work properly. For example, the user can increase manifold pressure to ensure the fuel cut is occurring when exceeding the boost cut value.



8. Ignition Switch and DPI4

The Ignition Switch is used to toggle the power supply to pin A13 (Ignition Switch).

DPI4 switch is used to toggle 0 or 5v to the DPI/SPI4.

9. Cam Trim

This knob is used to advance/retard the cam sensor's angle input to the ECU.

This function is currently disabled

10. RPM

This RPM knob is used to increase or decrease the rpm signal so the user can go through different rpm scenarios, the HOLD button is used where the user needs to fix the rpm and keep it on a steady value.



11. Trigger Select and Display

This feature is used to simulate a number of different trigger/home types. The user can select a trigger type they would like to test on their ECU to verify running conditions accordingly.

The display shows the selected Hi and Lo values which can be changed using the buttons on the Left and Right side of the display.

(A complete list of Hi-Lo settings for Trigger types are printed in this manual)

Note: The I/O Setup switches for Trigger and Home must be turned on in I/O Setup Switch section to simulate a running engine and they can be turned off to do a firmware update on bench.



List of available trigger/home types

LED Hi	LED Lo	Trigger Name	Supported Engines/Vehicles Example
0	0	Standard 16 and 1	-
0	1	Standard 1 and 1	-
0	2	Standard 2 and 1	-
0	3	Standard 3 and 1	-
0	4	Standard 4 and 1	-
0	5	Standard 5 and 1	-
0	6	Standard 6 and 1	-
0	7	Standard 7 and 1	-
0	8	Standard 8 and 1	-
0	9	Standard 9 and 1	-
0	A	Standard 10 and 1	-
0	B	Standard 11 and 1	-
0	C	Standard 12 and 1	-
0	D	Standard 13 and 1	-
0	E	Standard 14 and 1	-
0	F	Standard 15 and 1	-

1	0	Multitooth 24 and 1	Toyota 4A-GE, 3S-GE, Honda B16A
1	1	Multitooth 24 and 2	Mazda 13B
1	2	Multitooth 24 and 1+1,1	-
1	3	Multitooth 24 and 3	S2000
2	0	Motronic 60-2 and 1	-
2	1	Motronic 36-1 and 1	-
2	2	Motronic 36-2 and 1	-
2	3	Motronic 48-2 and 1	Ducati
2	4	Motronic 24-2 and 1	Suzuki Hayabusa MY08
2	5	Motronic 24-1 on cam and 1	-
2	6	Motronic 60-4 and 1	-
2	7	Motronic 30-2 and 1	-
2	8	Motronic 36-1 and 2+1,2 (5 Home)	-
2	9	Motronic 60-2 and 3+1,3	-
2	A	Motronic 12-1 and 1	-
2	B	Motronic 36-2 and 3	1GRFE, 2JZ, 1ZR-FAE
2	C	Motronic 36-1 and 1+2,1	Ford BA I6, Ford Focus
2	D	Motronic 60-2 and 1 half moon	Hyundai Theta
2	E	Motronic 24-1 and 1	Kawasaki Z1000 MY03-MY09
2	F	Motronic 36-1 and 2,1	Mazda FS-DE, 2001 – 2003 protégé
3	0	Subaru Pre MY01	-
3	1	Subaru MY01 or RX8 (crank only)	-
3	2	Subaru H6	-
3	3	Subaru MY06	-
3	4	Daihatsu - K5-VE	Æ
8	3	Nissan VL for E11	-
4	4	Nissan 4 Cylinder for E11	-
4	6	Nissan 6 Cylinder for E11	-
4	7	Nissan VQ30	-
5	3	Nissan VL	RB30
5	4	Nissan 4 Cylinder	Nissan SR20, CA18

5	6	Nissan 6 Cylinder	Nissan RB26, RB25, RB20
6	0	LS1	-
6	1	Saturn 4 Cylinder	-
6	2	Motronic 60-2+4 Home	LS2, VW Golf, Alloytec, Ford XR5
6	3	Dodge Viper (1-2-1 cam)	-
6	4	Dodge Viper (half-moon cam)	-
6	5	Dodge Neon SRT-4	-
6	6	AMC 242 I6	Jeep 4.0L I6
6	7	AMC 150 I4	Jeep 2.5L I4
7	0	Mitsubishi Standard	Early 4G63 up to EVO 6
7	1	Mitsubishi Standard Inverted	EVO8 & EVO9 4G63
7	2	Mitsubishi VRX Lancer	-
7	3	Mitsubishi 36M4	-
7	4	Mitsubishi EVO X	-
7	5	Mitsubishi 6G72	-
7	6	Mitsubishi 4G15	Ralliart Colt
8	4	Nissan 350z 4 Cylinder	-
8	5	Nissan G37 6 Cylinder (1.)	-
8	6	Nissan 350z 6 Cylinder	-
8	7	Nissan R35 6 Cylinder (1.)	Nissan VR38DETT
8	8	Nissan 350z 8 Cylinder Variant 1(2.)	-
8	9	Nissan 350z 8 Cylinder Variant 2(2.)	-
8	A	Nissan 350z 8 Cylinder Variant 3(2.)	-
9	0	Honda DC5	-
9	1	Nissan K11	-
9	2	Daihatsu 3 Cyl with extra tooth	-
9	3	Yamaha F Series	-
A	0	Suzuki Jet Ski	-
A	1	Suzuki Swift Sport	Mazda MX5 NC
A	2	Suzuki K12	-
A	3	Suzuki Swift G13B	-
A	4	Suzuki G13BB	-

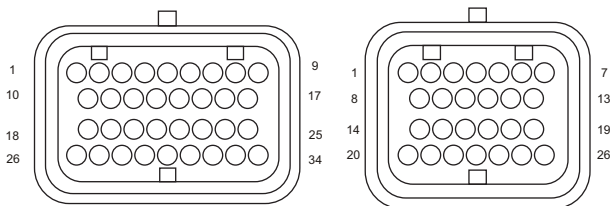
B	0	Mazda B	Mazda MX5 NB, Mazda BP engines
B	1	Mazda 323	-
B	2	Mazda / Ford Duratec	Mazda 2, Ford Focus
B	4	Toyota 1FZ-FE (non-distributor version)	-
B	5	Mazda MZI V6	-
C	0	Ford Coyote	-
C	4	Ford Cosworth	-
C	6	Ford PIP 6 Cylinder	-
C	8	Ford PIP 8 Cylinder	-
D	0	Lamborghini Gallardo	-
D	1	Lotus Elise, MGF	Rover K Series
D	2	Harley V Rod	-
D	3	BMW S54	BMW S62
D	4	BMW S85	-
E	0	Honda Jazz	L15A engine
E	1	Delorean	PRV V6
E	2	Hyundai Lambda Engine	Hyundai Genesis V6
E	3	Honda J35Z2	-
E	4	Honda J30	-

12. Trigger/Home output signal type

These two switches let the user to choose between Reluctor and Squarewave (Hall Effect) type Trigger and Home sensors

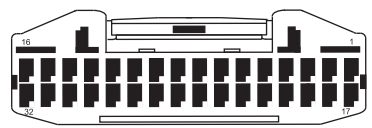


MAIN ECU CONNECTION PINOUT		
Pin	Connector A	Connector B
1	DPO 2	TRIGGER (+)
2	+5V DC (Sport Series)	HOME (+)
3	IGN 1	Air Temp (AVI 7)
4	IGN 2	Coolant Temp (AVI 8)
5	IGN 3	TRIGGER (-)
6	IGN 4	HOME (-)
7	IGN 5	DPI 1
8	IGN 6	DPI 2
9	+5V DC	DPI 3
10	BATTERY GROUND	DPI 4
11	BATTERY GROUND	+13.8V ECU POWER
12	+8V DC	AVIP(B) 6 **
13	Ignition Switch Output (12V)	AVIP(B) 1 **
14	TPS (AVI 10)	SENSOR GROUND
15	MAP (AVI 9)	SENSOR GROUND
16	AVI 2	SENSOR GROUND
17	AVI 3	IGN 7
18	DPO 1	IGN 8
19	INJ 1	DPO 4
20	INJ 2	AVI 5
21	INJ 3	KNOCK 1
22	INJ 4	KNOCK 2
23	DPO 3	CAN H
24	DPO 5 (Fuel Pump Relay)	CAN L
25	AVI4 (Sport Series)	DBW 1
26	+13.8V ECU / INJECTOR PWR	DBW 2
27	INJ 5	
28	INJ 6	
29	INJ 7	
30	INJ 8	
31	IDL 1	
32	IDL 2	
33	IDL 3	
34	IDL 4	



LOOKING INTO CONNECTOR ON ECU

INJ / IGN Ouput Connector Pinout	
Pin	Connection
1	IGNITION OUTPUT 1
2	IGNITION OUTPUT 2
3	IGNITION OUTPUT 3
4	IGNITION OUTPUT 4
5	IGNITION OUTPUT 5
6	IGNITION OUTPUT 6
7	INJECTOR OUTPUT 8
8	INJECTOR OUTPUT 7
9	INJECTOR OUTPUT 6
10	INJECTOR OUTPUT 5
11	INJECTOR OUTPUT 4
12	INJECTOR OUTPUT 3
13	INJECTOR OUTPUT 2
14	INJECTOR OUTPUT 1
15	+12V BATTERY (FUSED)
16	+12V BATTERY (FUSED)
17	IGNITION OUTPUT 1
18	IGNITION OUTPUT 2
19	IGNITION OUTPUT 3
20	IGNITION OUTPUT 4
21	IGNITION OUTPUT 5
22	IGNITION OUTPUT 6
23	IGNITION OUTPUT 8
24	IGNITION OUTPUT 7
25	INJECTOR OUTPUT 6
26	INJECTOR OUTPUT 5
27	INJECTOR OUTPUT 4
28	INJECTOR OUTPUT 3
29	INJECTOR OUTPUT 2
30	INJECTOR OUTPUT 1
31	+12V BATTERY (FUSED)
32	+12V BATTERY (FUSED)



MAIN CONNECTOR
(From harness side)



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