



Elite 2500 Plug 'n' Play Adaptor Harness HT-141332

Supported Models

MITSUBISHI EVOLUTION 9 (All Regions)
MITSUBISHI EVOLUTION 8 MR (6 Speed) (Excluding USDM)

Package Contents

THIS MITSUBISHI EVOLUTION 9 PACKAGE CONTAINS THE FOLLOWING:

- MITSUBISHI EVOLUTION 9 ELITE 2500 PLUG 'N' PLAY ADAPTOR (HT-141332)
- ELITE SERIES PLUG 'N' PLAY ADAPTOR HARNESS (HT-130201)
- HALTECH AIR TEMPERATURE SENSOR (HT-010200)



Application Notes

THIS MITSUBISHI EVOLUTION 9 ELITE 2500 PLUG 'N' PLAY ADAPTOR HARNESS IS SUITABLE FOR USE WITH A HALTECH ELITE 2500 ECU ONLY.

ENSURE THAT THE CORRECT BASEMAP IS LOADED BEFORE STARTING THE VEHICLE.

THE BASEMAP IS ONLY FOR USE AS A STARTING POINT AND THE ECU WILL REQUIRE APPROPRIATE TUNING.

HALTECH WILL NOT BE HELD RESPONSIBLE FOR ENGINE DAMAGE DUE TO THE IMPROPER USE OF BASEMAPS.

THE 16 PIN AUXILIARY CONNECTOR PROVIDES A NUMBER OF ADDITIONAL INPUT/OUTPUT LINKS TO THE HALTECH ELITE ECU. THIS KIT IS SUPPLIED WITH SPARE PINS FOR USE WITH THE 16 PIN AUXILIARY CONNECTOR.

AN APPROPRIATE CRIMPING TOOL IS RECOMMENDED TO USE THE 16 PIN AUXILIARY CONNECTOR.

A CRIMPING TOOL KIT (PART # HT-070300) CAN BE PURCHASED AT WWW.HALTECH.COM

AFTER THE INSTALLATION OF THIS PLUG 'N' PLAY KIT, FACTORY PANELS MAY BE RE-INSTALLED.

Elite 2500 Basemaps

MAKE	MODEL	CODE	ENGINE	BASEMAP
MITSUBISHI	EVOLUTION	9	4G63T	HT-141332 - Mitsubishi Evolution 9 4G63T MAP.e2500
MITSUBISHI	EVOLUTION	8 MR	4G63T	HT-141332 - Mitsubishi Evolution 8 MR 4G63T MAP.e2500

Basemap Notes

THE BASEMAPS SUPPLIED WITH THIS PRODUCT HAVE BEEN SETUP USING THE ELITE ECU INTERNAL 3 BAR MAP SENSOR.

PLEASE CONNECT THE ELITE ECU INTERNAL MAP SENSOR TO THE INTAKE MANIFOLD PRIOR TO STARTING THE VEHICLE.

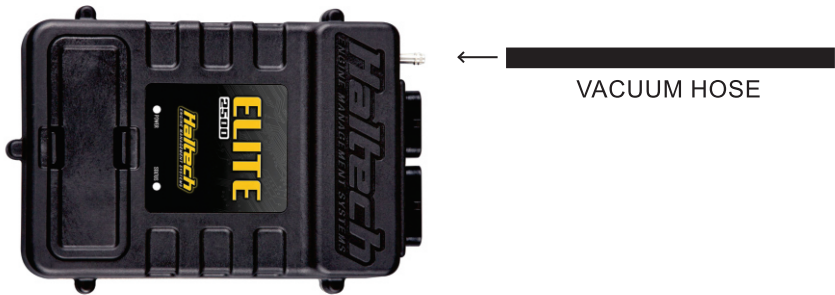


Figure 1 - Elite ECU internal MAP sensor

Air Temperature Sensor

An air temperature sensor is a required sensor used in Volumetric Efficiency (VE) tuning to compensate for changes in air density due to air temperature. Cold air has a higher density than warm air and therefore requires a greater volume of fuel to maintain the same air/fuel ratio.

The Haltech ECU can automatically compensate the fuel delivery for changes in air density based on temperature using the signal received from the air temperature sensor.

On many vehicles the OEM air temperature sensor is located either within the mass airflow sensor or molded into the intake air manifold, however in performance applications the airflow sensor and air intake piping are often modified, removed or replaced. For this reason an air temperature sensor (HT-010200) is provided for use as a substitute to the factory air temperature sensor.

This sensor should be mounted to provide the best representation of the actual temperature of the air entering the combustion chamber, i.e. after any turbocharger, supercharger and intercooler.

The sensor needs to be in the moving air stream to give fast response times and reduce heat soak effects. Be aware in some situations, mounting the sensor into the inlet manifold (especially at the rear) may cause heat soak problems (where the sensor reads the temperature of the manifold itself rather than the air that is moving through the manifold into the engine).

Once a suitable position has been located for the air temperature sensor to be installed, a hole should be drilled and tapped to accept the sensor. The intake manifold or inlet piping should be removed from the engine before this is done to prevent any metal shavings or swarf entering the engine.

This package includes an air temperature sensor (HT-010200). This air temperature sensor should be installed by utilising an auxiliary Analogue Voltage Input (AVI) and signal ground located on the 16 pin auxiliary connector.

Please refer to the auxiliary connector pinout table and sensor wiring diagram below.

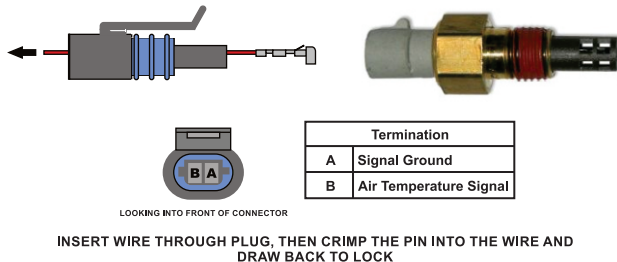
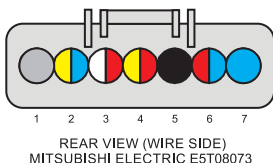


Figure 2 - Air Temperature Sensor wiring

Mass Air Flow Sensor



PIN	COLOUR	FUNCTION
1	GREY	+5V Sensor Power
2	YELLOW/BLUE	Barometer Signal
3	WHITE/RED	Mass Air Flow Signal
4	YELLOW/RED	+12V Switched Power
5	BLACK	Sensor Ground
6	RED/BLUE	Intake Air Temperature Signal
7	BLUE	Reset

IF THE FACTORY **MAF** SENSOR IS REMOVED, AN **INTAKE AIR TEMPERATURE (IAT)** SENSOR CAN BE INSTALLED BY UTILISING PINS 5 (**SENSOR GROUND**) AND 6 (**AVI 7**) OF THE FACTORY MAF SENSOR CONNECTOR.

ECU Location

MITSUBISHI EVOLUTION 9

THE FACTORY MITSUBISHI EVOLUTION 9 ECU IS LOCATED ON THE PASSENGER SIDE OF THE VEHICLE, BEHIND THE GLOVE COMPARTMENT. REMOVING THE GLOVE COMPARTMENT, WILL ALLOW FOR THE INSTALLATION OF THIS HALTECH PLUG 'N' PLAY PRODUCT. THE GLOVE COMPARTMENT CAN STILL BE USED AFTERWARDS.



Figure 3 - Glove Compartment Removal



Figure 4 - Factory ECU Location

Auxiliary Connector



AUXILIARY CONNECTOR (16 PIN)
REAR VIEW (WIRE SIDE)

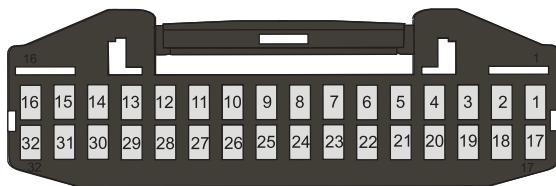
An auxiliary connector allows easy connection of additional ECU inputs and outputs.
Please see pinout information below for spare inputs and outputs available to this application.

Position (16 Pin Plug)	Connection	Function	Notes
1	From Haltech ECU (A9)	+5V	+5V DC Sensor Supply (50mA Max)
2	From Haltech ECU (A15)	AVI 9	* Spare Analogue Voltage Input
3	From Mitsubishi Harness (79)	Additional I/O	** ACD Input
4	From Haltech ECU (B14, B15, B16)	SIGNAL GROUND	Signal Ground For Input Sensors
5	From Haltech ECU (B17)	IGN 7	Spare Output
6	From Haltech ECU (B18)	IGN 8	Spare Output
7	From Haltech ECU (B8)	SPI 1	Spare SPI (Optional Flex Fuel Input)
8	From Haltech ECU (A26)	+12V (INJ)	+12V DC Supply for Relays and Solenoids (500mA Max)
9	From Haltech ECU (A9)	+5V	+5V DC Sensor Supply (50mA Max)
10	From Haltech ECU (B3)	-	Not Used
11	From Haltech ECU (A2)	AVI 4	Spare Analogue Voltage Input
12	From Haltech ECU (B14, B15, B16)	SIGNAL GROUND	Signal Ground for Input Sensors
13	From Haltech ECU (A29)	INJ 7	Secondary Air Control
14	From Haltech ECU (A30)	INJ 8	Spray Indicator Output
15	From Haltech ECU (A17)	-	Not Used
16	From Haltech ECU (A26)	+12V (INJ)	+12V DC Supply for Relays and Solenoids (500mA Max)

NOTES

- * Only vehicle variants without a factory MAP sensor can utilise this as a spare analogue voltage input (AVI 9).
- ** Additional I/O connections are available for use if desired but an I/O Expander 12 box may be required to utilize them.

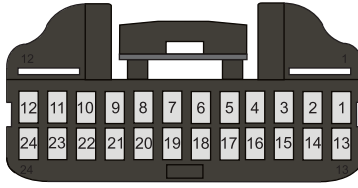
Main Connectors



CONNECTOR (32 PIN)
REAR VIEW (WIRE SIDE)

Position (32 Pin Plug)	ECU Connector (34 Pin Plug)	Function	Description
1	A1	DPO 2	Thermofan Speed Control
2	A2	AVI 4	Spare Analogue Voltage Input
3	A3	IGN 1	Ignition Coil #1 and #4
4	A4	IGN 2	Ignition Coil #2 and #3
5	A5	IGN 3	Cam Control (MIVEC)
6	A6	IGN 4	A/C Control
7	A7	IGN 5	Thermofan (Low Speed)
8	A8	IGN 6	O2 Heater
9	A9	+5V	+5V DC Sensor Supply
10	A10	BATTERY GROUND	Battery Negative
11	A11	BATTERY GROUND	Battery Negative
12	A12	+8V	+8V DC Sensor Supply
13	A13	IGNITION INPUT	Ignition Switch
14	A14	AVI 10	Throttle Position Sensor
15	A15	AVI 9	*Manifold Pressure Signal (JDM and US only)
16	A16	AVI 2	Power Steering Switch
17	A17	AVI 3	Clutch Switch (US only)
18	A18	DPO 1	Tachometer
19	A19	INJ 1	Injector #1
20	A20	INJ 2	Injector #2
21	A21	INJ 3	Injector #3
22	A22	INJ 4	Injector #4
23	A23	DPO 3	Check Engine Light
24	A24	DPO 5	Fuel Pump Relay
25	A25	DPO 6	ECCS Relay
26	A26	+12V (INJ)	Fused Power
27	A27	INJ 5	Purge Control (EVAP)
28	A28	INJ 6	Wastegate Solenoid 2
29	A31	STEP1 P1	Idle Control Valve (B1)
30	A32	STEP2 P2	Idle Control Valve (B2)
31	A33	STEP3 P3	Idle Control Valve (A1)
32	A34	STEP4 P4	Idle Control Valve (A2)

* For variants without factory MAP Sensor, an external sensor can be fitted, utilising AVI 9 on auxiliary connector. For connector pinout information please refer to the auxiliary connector pinout table.



CONNECTOR (24 PIN)
REAR VIEW (WIRE SIDE)

Position (24 Pin Plug)	ECU Connector (26 Pin Plug)	Function	Description
1	B1	TRIGGER	Crankshaft Sensor (+)
2	B2	HOME	Exhaust Camshaft Position Sensor
3	B3	AVI 7	Air Temperature Sensor
4	B4	AVI 8	Coolant Temperature Sensor
5	B5	TRIGGER -	Not Used
6	B6	HOME -	Not Used
7	B7	SPI 4	Intake Camshaft Position Sensor (MIVEC)
8	B8	SPI 1	Spare SPI (Optional Flex Fuel Input)
9	B9	SPI 2	Mass Air Flow Signal
10	B10	SPI 3	Vehicle Speed Sensor
11	B11	+12V (ECU)	Fused Power
12	B12	AVI 6	O2 Sensor
13	B13	AVI 1	A/C Request
14	B14	SIGNAL GROUND	Signal Ground for Input Sensors
15	B15	SIGNAL GROUND	Signal Ground for Input Sensors
16	B16	SIGNAL GROUND	Signal Ground for Input Sensors
17	B23	CAN HIGH	Not Used
18	B24	CAN LOW	Not Used
19	B19	DPO 4	Thermofan (High Speed)
20	B20	AVI 5	Spray Manual Switch Input
21	B21	KNOCK 1	Knock Sensor Signal
22	B22	KNOCK 2	Not Used
23	B25	DBW 1	Intercooler Water Spray Output
24	B26	DBW 2	Wastegate Solenoid 1



WARNING - HALTECH OFF-ROAD USAGE POLICY

It may be unlawful to tamper with your vehicle's emissions equipment. This ECU is designed and sold for Sanctioned Offroad/Competition Non-Emissions Controlled Vehicles only. Using this product for street / road use on public highways may be prohibited by law. It is the responsibility of the installer and/or user of this product to ensure compliance with all applicable local and federal laws and regulations. Please check with your local vehicle authority before using this product.

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