

# HALTECH™

ENGINE MANAGEMENT SYSTEMS

## E6X Series

Fuel & Ignition Control System

### E6X System Description

The HALTECH E6X is a powerful "real-time" programmable fuel injection and ignition computer designed to control most ignition type engines. Whether 1-6, 8, 10 or 12 cylinders, 1-2 rotors, naturally aspirated, turbocharged or supercharged, the HALTECH E6X can control it.

#### The E6X features:

- Up to 4 fuel and 4 ignition channels (internal toggle)
- 4 dedicated PWM outputs
- 1 auxiliary input
- 1 auxiliary output (tacho output)
- Dedicated closed loop idle control
- Dedicated closed loop O<sub>2</sub> correction
- 8 injector drivers as standard equipment
- An internal barometric pressure sensor
- New RA8 reductor adaptor
- Rev Limiter
- Deceleration fuel cut
- Datalogging to laptop
- Flatshift
- Dual Mapping
- High boost software (up to 65 pounds with optional MAP sensor)

The E6X is capable of controlling up to 8 low impedance or 16 high impedance injectors. If necessary an additional driver box can be added for more injector outputs. The E6X System optimizes engine performance by giving full control over fuel, ignition and auxiliary outputs.

#### PWM outputs are as follows:

*electronic boost control	*thermofan	*anti-lag	*VTEC
*engine control relay	*NOS enable	*BAC valve	*shiftlight
*intercooler fan	*turbo timer	*stall saver	*air con
*aux. fuel pump	*staging signal	*dual intake valve	
*torque convertor			

(not all functions are available at the same time)

The E6X is much more than a programmable fuel injection computer - it provides logging of engine data and allows access in real time to maximise performance and trouble-shoot problems in a vehicle while running.

#### Typical Applications:

- Conversion from carburetion to fuel injection
- Control of fuel injection on modified engines
- Race and rally applications of all descriptions
- Design and development purposes
- Educational use by universities and colleges
- Original equipment in cars and motorcycles.

The HALTECH E6X is easily programmed with an IBM compatible laptop. Our patented system allows the user to alter fuel and ignition timing at a particular load point by changing the height of the column in a bar graph.

### E6X Specifications

#### E6X Kit Contents:

- Electronic Control Unit (ECU)
- Main Wiring Loom (flying lead)
- 2x Power Relays
- Air Temperature Sensor (Extra)
- Coolant Temperature Sensor (Extra)
- Throttle Position Sensor (Extra)
- Communications Cable
- Programming Software
- Instruction Manual on CD
- Injector Loom (supplied with full harness kit only)

#### Accessories:

- MAP Sensor (1, 2 or 3 bar)
- Connector kit
- Idle Air Control Motor / Housing
- Electronic Boost Bleed Valve
- Boost/Fuel/Ignition Trim Module
- Ignition Module
- Ignition Coils
- Oxygen Sensor

#### System Features:

- Number of Cylinders 1-6,8,10,12 and 2 Rotors
- Max Operating RPM 16000 rpm
- RPM Range increments 500/1000 rpm
- Max. Range 10500/16000 rpm
- Number of Fuel Maps 22/17
- Number of Ignition Maps 22/17
- Number of Bars per Map 32

#### Fuel Correction Maps:

- Coolant Temperature
- Air Temperature
- Battery Voltage
- Cold Prime
- Zero Throttle
- Full Throttle
- Injector Phasing (Seq. only)
- Throttle Pump
- Injector Trim (Seq. only)
- Barometric Pressure

#### Ignition Correction Maps:

- Ignition Crank
- Air Temperature
- Coolant Temperature

#### Trigger Signal Type:

- Inductive Magnetic-(Internal Signal Conditioning)
- Hall Effect Sensor
- Optical Sensor

#### Trigger Pattern:

- Twin Trigger
- Multi-Tooth
- Subaru
- Single Pulse per Cycle
- Bosch Motronic (60t-2)
- Nissan
- Mazda
- Diahatu

#### Ignition Configuration:

- Twin Distributor
- Twin Rotor (Dist. or DF)
- Single Distributor
- Direct Fire: 1-4 Cylinder
- Waste Spark: 4, 6, 8 cylinder

#### Injector Firing Mode:

- Throttle Body (Batch)
- Sequential (up to 4 banks)
- Multi-Point
- Staged

#### ECU inputs:

- MAP Sensor
- Coolant Temperature
- Air Temperature
- Throttle Position
- Internal Barometric Sensor
- Primary Trigger
- Secondary Trigger
- Oxygen Sensor
- Spec Purpose Digital
- 2x Gen. Purpose Analog
- Roadspeed

#### ECU Outputs:

- Injector Drivers: 8
- Fuel Pump Relay Control
- Dedicated PWM Outputs (4)
- Idle Air Control (IAC)
- Ignition Output
- Spec. Purpose Digital (2)