High impedance injectors do not need ballast resistors
For 1 low impedance injector using an output then 1 resistor of 4R7 per output is required
For 2 low impedance injectors sharing an output then 1 resistor of 3R3 per output is required
Note - Outputs are in FIRING ORDER, NOT CYLINDER NUMBER
If stepper motor idle controls are used these pinouts will change.

Note 1	Can use any spare PWM output - FUEL5, 6, 7, 8, 11, 12
Note 2	Can use any spare PWM output - FUEL7, 8, 11, 12
Note 3	Can use any spare PWM output - FUEL5, 6, 7, 8
Note 4	Can use any spare PWM output - FUEL7, 8
Note 5	Can use FUEL4 and single wire idle only

		4 Injector			4 Injector			8 Injector			8 Injector			8 Injector		
		Inner semi sequential			Inner sequential			Inner semi sequential			Inner sequential			Inner sequential		
		No outer injectors			No outer injectors			Outer semi sequential			Outer semi sequential			Outer sequential		
		Cam sensor not required			Cam sensor is required			Cam sensor not required			Cam sensor is required			Cam sensor is required		
		Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug
FUNCTION	**NOTES**															
Ignition Coil 1		IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1
Ignition Coil 2		NA	IGN2 - A12	IGN2 - A12	NA	IGN2 - A12	IGN2 - A12	NA	IGN2 - A12	IGN2 - A12	NA	IGN2 - A12	IGN2 - A12	NA	IGN2 - A12	IGN2 - A12
Ignition Coil 3		NA	NA	IGN3 -B12	NA	NA	IGN3 -B12	NA	NA	IGN3 -B12	NA	NA	IGN3 -B12	NA	NA	IGN3 -B12
Ignition Coil 4		NA	NA	IGN4 - B1	NA	NA	IGN4 - B1	NA	NA	IGN4 - B1	NA	NA	IGN4 - B1	NA	NA	IGN4 - B1
Injector 1 Inner		FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4
Injector 2 Inner		FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3
Injector 3 Inner		FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL5 - B5	FUEL5 - B5	FUEL5 - B5	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL5 - B5	FUEL5 - B5	FUEL5 - B5	FUEL5 - B5	FUEL5 - B5	FUEL5 - B5
Injector 4 Inner		FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL6 - B3	FUEL6 - B3	FUEL6 - B3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL6 - B3	FUEL6 - B3	FUEL6 - B3	FUEL6 - B3	FUEL6 - B3	FUEL6 - B3
Injector 1 Outer		NA	NA	NA	NA	NA	NA	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2
Injector 2 Outer		NA	NA	NA	NA	NA	NA	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2
Injector 3 Outer		NA	NA	NA	NA	NA	NA	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL11 - B2	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8
Injector 4 Outer		NA	NA	NA	NA	NA	NA	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL12 - A2	FUEL8 - A3	FUEL8 - A3	FUEL8 - A3
Crank sensor		T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7
Cam sensor		NA	NA	NA	T2 - A11	T2 - A11	T2 - A11	NA	NA	NA	T2 - A11	T2 - A11	T2 - A11	T2 - A11	T2 - A11	T2 - A11
Fuel pump		B6	B6	B6	B6	B6	B6	B6	B6	B6	B6	B6	B6	B6	B6	B6
Tacho		TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12
Shift Light	12V out when active	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5
O2 sensor		OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7
Wastegate valve		FUEL8 - A3	FUEL8 - A3	See note 1	FUEL8 - A3	FUEL8 - A3	See note 2	FUEL8 - A3	FUEL8 - A3	See note 3	FUEL8 - A3	FUEL8 - A3	See note 4	See note 5	See note 5	See note 5
Knock input		KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10
MAP input		MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10
ALS switch input	12V IN to arm	C11	C11	C11	C11	C11	C11	C11	C11	C11	C11	C11	C11	C11	C11	C11
1 wire idle		FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6
2 wire idle		FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6
		FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2	FUEL4 - C2
12V power	Via ign switch	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4
5V sensor power		C9	C9	C9	C9	C9	C9	C9	C9	C9	C9	C9	C9	C9	C9	C9
Power GND		A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5
Power GND		B7	B7	B7	B7	B7	B7	B7	B7	B7	B7	B7	B7	B7	B7	B7
Sensor GND		A6	A6	A6	A6	A6	A6	A6	A6	A6	A6	A6	A6	A6	A6	A6
Timing GND		A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8
CTS		A9	A9	A9	A9	A9	A9	A9	A9	A9	A9	A9	A9	A9	A9	A9
ATS		B9	B9	B9	B9	B9	B9	B9	B9	B9	B9	B9	B9	B9	B9	B9
TPS wiper		C8	C8	C8	C8	C8	C8	C8	C8	C8	C8	C8	C8	C8	C8	C8

4 Cyl Pin Numbers

High impedance injectors do not need ballast resistors
For 1 low impedance injector using an output then 1 resistor of 4R7 per output is required
For 2 low impedance injectors sharing an output then 1 resistor of 3R3 per output is required
Note - Outputs are in FIRING ORDER, NOT CYLINDER NUMBER
If stepper motor idle controls are used these pinouts will change.
If MAP is used for load on a NA engine use internal sensor to free up MAP2 input for other uses

Note 1	Spare Outputs - [IGN4,5,6] [FUEL 4,5,6] [HS2]
Note 2	Spare Outputs - [FUEL 4,5,6] [HS2]
Note 3	Spare Outputs - [IGN4,5,6] [HS2]
Note 4	Spare Outputs - [HS2]

		6 Injector		**6 Injector**		**12 Injector**		**12 Injector**		**12 Injector**	
		Inner semi sequential		**Inner sequential**		**Inner semi sequential**		**Inner sequential**		**Inner semi sequential**	
		No outer injectors		**No outer injectors**		**Outer semi sequential**		**Outer semi sequential**		**Outer sequential**	
		Cam sensor not required		**Cam sensor is required**		**Cam sensor not required**		**Cam sensor is required**		**Cam sensor is required**	
		DIS	**Coil on plug**	**DIS**	**Coil on plug**	**DIS**	**Coil on plug**	**DIS**	**Coil on plug**	**DIS**	**Coil on plug**
FUNCTION	**NOTES**										
Ignition Coil 1		IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	IGN1 - A1	Not possible	IGN1 - A1	Not possible
Ignition Coil 2		IGN2 - A12	IGN2 - A12	IGN2 - A12	IGN2 - A12	IGN2 - A12	IGN2 - A12	IGN2 - A12	Not possible	IGN2 - A12	Not possible
Ignition Coil 3		IGN3 - B12	IGN3 - B12	IGN3 - B12	IGN3 - B12	IGN3 - B12	IGN3 - B12	IGN3 - B12	Not possible	IGN3 - B12	Not possible
Ignition Coil 4		NA	IGN4 - B1	NA	IGN4 - B1	NA	IGN4 - B1	NA	Not possible	NA	Not possible
Ignition Coil 5		NA	IGN5 - B2	NA	IGN5 - B2	NA	IGN5 - B2	NA	Not possible	NA	Not possible
Ignition Coil 6		NA	IGN6 - A2	NA	IGN6 - A2	NA	IGN6 - A2	NA	Not possible	NA	Not possible
Injector 1 Inner		FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	FUEL1 - B4	Not possible	IGN4 - B1	Not possible
Injector 2 Inner		FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	FUEL2 - C3	Not possible	IGN5 - B2	Not possible
Injector 3 Inner		FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	FUEL3 - C6	Not possible	IGN6 - A2	Not possible
Injector 4 Inner		FUEL1 - B4	FUEL1 - B4	FUEL4 - C2	FUEL4 - C2	FUEL1 - B4	FUEL1 - B4	FUEL4 - C2	Not possible	IGN4 - B1	Not possible
Injector 5 Inner		FUEL2 - C3	FUEL2 - C3	FUEL5 - B5	FUEL5 - B5	FUEL2 - C3	FUEL2 - C3	FUEL5 - B5	Not possible	IGN5 - B2	Not possible
Injector 6 Inner		FUEL3 - C6	FUEL3 - C6	FUEL6 - B3	FUEL6 - B3	FUEL3 - C6	FUEL3 - C6	FUEL6 - B3	Not possible	IGN6 - A2	Not possible
Injector 1 Outer		NA	NA	NA	NA	FUEL4 - C2	FUEL4 - C2	IGN4 - B1	Not possible	FUEL1 - B4	Not possible
Injector 2 Outer		NA	NA	NA	NA	FUEL5 - B5	FUEL5 - B5	IGN5 - B2	Not possible	FUEL2 - C3	Not possible
Injector 3 Outer		NA	NA	NA	NA	FUEL6 - B3	FUEL6 - B3	IGN6 - A2	Not possible	FUEL3 - C6	Not possible
Injector 4 Outer		NA	NA	NA	NA	FUEL4 - C2	FUEL4 - C2	IGN4 - B1	Not possible	FUEL4 - C2	Not possible
Injector 5 Outer		NA	NA	NA	NA	FUEL5 - B5	FUEL5 - B5	IGN5 - B2	Not possible	FUEL5 - B5	Not possible
Injector 6 Outer		NA	NA	NA	NA	FUEL6 - B3	FUEL6 - B3	IGN6 - A2	Not possible	FUEL6 - B3	Not possible
Crank sensor		T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	T1 - A7	Not possible	T1 - A7	Not possible
Cam sensor		NA	NA	T2 - A11	T2 - A11	NA	NA	T2 - A11	Not possible	T2 - A11	Not possible
Fuel pump		B6	B6	B6	B6	B6	B6	B6	Not possible	B6	Not possible
Tacho		TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	TACHO - C12	Not possible	TACHO - C12	Not possible
Shift Light	12V out when active	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	HS1 - C5	Not possible	HS1 - C5	Not possible
O2 sensor (1)		OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	OX1 - C7	Not possible	OX1 - C7	Not possible
O2 sensor (2)	For 'V' engines	OX2 - B11	OX2 - B11	OX2 - B11	OX2 - B11	OX2 - B11	OX2 - B11	OX2 - B11	Not possible	OX2 - B11	Not possible
SPARE OUTPUTS		See Note 1	See Note 2	See Note 3	See Note 4	See Note 3	See Note 4	See Note 4		See Note 4	
Knock input		KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	KNOCK - B10	Not possible	KNOCK - B10	Not possible
MAP input		MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	MAP2 - A10	Not possible	MAP2 - A10	Not possible
ALS switch input	12V IN to arm	C11	C11	C11	C11	C11	C11	C11	Not possible	C11	Not possible
1 wire idle		FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	Not possible	FUEL7 - B8	Not possible
2 wire idle		FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	FUEL7 - B8	Not possible	FUEL7 - B8	Not possible
		FUEL8 - A3	FUEL8 - A3	FUEL8 - A3	FUEL8 - A3	FUEL8 - A3	FUEL8 - A3	FUEL8 - A3	Not possible	FUEL8 - A3	Not possible
12V power	Via ign switch	A4	A4	A4	A4	A4	A4	A4	Not possible	A4	Not possible
5V sensor power		C9	C9	C9	C9	C9	C9	C9	Not possible	C9	Not possible
Power GND		A5	A5	A5	A5	A5	A5	A5	Not possible	A5	Not possible
Power GND		B7	B7	B7	B7	B7	B7	B7	Not possible	B7	Not possible
Sensor GND		A6	A6	A6	A6	A6	A6	A6	Not possible	A6	Not possible
Timing GND		A8	A8	A8	A8	A8	A8	A8	Not possible	A8	Not possible
CTS		A9	A9	A9	A9	A9	A9	A9	Not possible	A9	Not possible
ATS		B9	B9	B9	B9	B9	B9	B9	Not possible	B9	Not possible
TPS wiper		C8	C8	C8	C8	C8	C8	C8	Not possible	C8	Not possible

6 Cyl Pin Numbers

High impedance injectors do not need ballast resistors
For 1 low impedance injector using an output then 1 resistor of 4R7 per output is required
For 2 low impedance injectors sharing an output then 1 resistor of 3R3 per output is required
Note - Outputs are in FIRING ORDER, NOT CYLINDER NUMBER
If stepper motor idle controls are used these pinouts will change.
If MAP is used for load on a NA engine use internal sensor to free up MAP2 input for other uses

Note 1	Spare Outputs - [IGN5,6] [FUEL 5,6] [HS2]			
Note 2	Spare Outputs - [HS2]			
		8 Injector	**8 Injector**	**16 Injector**
		Inner semi sequential	**Inner sequential**	**Inner semi sequential**
		No outer injectors	**No outer injectors**	**Outer semi sequential**
		Cam sensor not required	**Cam sensor is required**	**Cam sensor not required**
		DIS	**DIS**	**DIS**
FUNCTION	**NOTES**			
Ignition Coil 1		IGN1 - A1	IGN1 - A1	IGN1 - A1
Ignition Coil 2		IGN2 - A12	IGN2 - A12	IGN2 - A12
Ignition Coil 3		IGN3 - B12	IGN3 - B12	IGN3 - B12
Ignition Coil 4		IGN4 - B1	IGN4 - B1	IGN4 - B1
Ignition Coil 5		NA	NA	NA
Ignition Coil 6		NA	NA	NA
Injector 1 Inner		FUEL1 - B4	FUEL1 - B4	FUEL1 - B4
Injector 2 Inner		FUEL2 - C3	FUEL2 - C3	FUEL2 - C3
Injector 3 Inner		FUEL3 - C6	FUEL3 - C6	FUEL3 - C6
Injector 4 Inner		FUEL4 - C2	FUEL4 - C2	FUEL4 - C2
Injector 5 Inner		FUEL1 - B4	FUEL5 - B5	FUEL1 - B4
Injector 6 Inner		FUEL2 - C3	FUEL6 - B3	FUEL2 - C3
Injector 7 Inner		FUEL3 - C6	IGN5 - B2	FUEL3 - C6
Injector 8 Inner		FUEL4 - C2	IGN6 - A2	FUEL4 - C2
Injector 1 Outer		NA	NA	FUEL5 - B5
Injector 2 Outer		NA	NA	FUEL6 - B3
Injector 3 Outer		NA	NA	IGN5 - B2
Injector 4 Outer		NA	NA	IGN6 - A2
Injector 5 Outer		NA	NA	FUEL5 - B5
Injector 6 Outer		NA	NA	FUEL6 - B3
Injector 7 Outer		NA	NA	IGN5 - B2
Injector 8 Outer		NA	NA	IGN6 - A2
Crank sensor		T1 - A7	T1 - A7	T1 - A7
Cam sensor		NA	T2 - A11	NA
Fuel pump		B6	B6	B6
Tacho		TACHO - C12	TACHO - C12	TACHO - C12
Shift Light	12V out when active	HS1 - C5	HS1 - C5	HS1 - C5
O2 sensor (1)		OX1 - C7	OX1 - C7	OX1 - C7
O2 sensor (2)	For 'V' engines	OX2 - B11	OX2 - B11	OX2 - B11
SPARE OUTPUTS		See Note 1	See Note 2	See Note 2
Knock input		KNOCK - B10	KNOCK - B10	KNOCK - B10
MAP input		MAP2 - A10	MAP2 - A10	MAP2 - A10
ALS switch input	12V IN to arm	C11	C11	C11
1 wire idle		FUEL7 - B8	FUEL7 - B8	FUEL7 - B8
2 wire idle		FUEL7 - B8	FUEL7 - B8	FUEL7 - B8
		FUEL8 - A3	FUEL8 - A3	FUEL8 - A3
12V power	Via ign switch	A4	A4	A4
5V sensor power		C9	C9	C9
Power GND		A5	A5	A5
Power GND		B7	B7	B7
Sensor GND		A6	A6	A6
Timing GND		A8	A8	A8
CTS		A9	A9	A9
ATS		B9	B9	B9
TPS wiper		C8	C8	C8

8 Cyl Pin Numbers

High impedance injectors do not need ballast resistors
For 1 low impedance injector using an output then 1 resistor of 4R7 per output is required
For 2 low impedance injectors sharing an output then 1 resistor of 3R3 per output is required
Note - Outputs are in FIRING ORDER, NOT CYLINDER NUMBER
If stepper motor idle controls are used these pinouts will change.

Note 1	Can use any spare PWM output - FUEL5, 6, 7, 8, 11, 12
Note 2	Can use any spare PWM output - FUEL7, 8, 11, 12
Note 3	Can use any spare PWM output - FUEL5, 6, 7, 8
Note 4	Can use any spare PWM output - FUEL7, 8
Note 5	Can use FUEL4 and single wire idle only

		4 Injector			4 Injector			8 Injector			8 Injector			8 Injector		
		Inner semi sequential			Inner sequential			Inner semi sequential			Inner sequential			Inner sequential		
		No outer injectors			No outer injectors			Outer semi sequential			Outer semi sequential			Outer sequential		
		Cam sensor not required			Cam sensor is required			Cam sensor not required			Cam sensor is required			Cam sensor is required		
		Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug	Distributor	DIS	Coil on plug
FUNCTION	**NOTES**															
Ignition Coil 1		Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black
Ignition Coil 2		NA	Yellow grey	Yellow grey	NA	Yellow grey	Yellow grey	NA	Yellow grey	Yellow grey	NA	Yellow grey	Yellow grey	NA	Yellow grey	Yellow grey
Ignition Coil 3		NA	NA	Yellow red	NA	NA	Yellow red	NA	NA	Yellow red	NA	NA	Yellow red	NA	NA	Yellow red
Ignition Coil 4		NA	NA	Yellow orange	NA	NA	Yellow orange	NA	NA	Yellow orange	NA	NA	Yellow orange	NA	NA	Yellow orange
Injector 1 Inner		Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black
Injector 2 Inner		Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow
Injector 3 Inner		Brown black	Brown black	Brown black	Brown green	Brown green	Brown green	Brown black	Brown black	Brown black	Brown green		Brown green	Brown green	Brown green	Brown green
Injector 4 Inner		Brown yellow	Brown yellow	Brown yellow	Brown violet	Brown violet	Brown violet	Brown yellow	Brown yellow	Brown yellow	Brown violet	Brown violet	Brown violet	Brown violet	Brown violet	Brown violet
Injector 1 Outer		NA	NA	NA	NA	NA	NA	Yellow green	Yellow green	Yellow green	Yellow green	Yellow green	Yellow green	Yellow green	Yellow green	Yellow green
Injector 2 Outer		NA	NA	NA	NA	NA	NA	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Yellow violet
Injector 3 Outer		NA	NA	NA	NA	NA	NA	Yellow green	Yellow green	Yellow green	Yellow green	Yellow green	Yellow green	Brown grey	Brown grey	Brown grey
Injector 4 Outer		NA	NA	NA	NA	NA	NA	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Yellow violet	Brown pink	Brown pink	Brown pink
Crank sensor		Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen
Cam sensor		NA	NA	NA	Red screen	Red screen	Red screen	NA	NA	NA	Red screen	Red screen	Red screen	Red screen	Red screen	Red screen
Fuel pump		Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white
Tacho		Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow
Shift Light	12V out when active	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black
O2 sensor		White red	White red	White red	White red	White red	White red	White red	White red	White red	White red	White red	White red	White red	White red	White red
Wastegate valve		Brown pink	Brown pink	See note 1	Brown pink	Brown pink	See note 2	Brown pink	Brown pink	See note 3	Brown pink	Brown pink	See note 4	See note 5	See note 5	See note 5
Knock input		Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen
MAP input		White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow
ALS switch input	12V IN to arm	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink	White pink
1 wire idle		Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red
2 wire idle		Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red
		Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange	Brown orange
12V power	Via ign switch	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
5V sensor power		Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink	Pink
Power GND		Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Power GND		Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Sensor GND		Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Timing GND		A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8	A8
CTS		White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet	White violet
ATS		White green	White green	White green	White green	White green	White green	White green	White green	White green	White green	White green	White green	White green	White green	White green
TPS wiper		Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange

4 Cyl Colour Codes

High impedance injectors do not need ballast resistors
For 1 low impedance injector using an output then 1 resistor of 4R7 per output is required
For 2 low impedance injectors sharing an output then 1 resistor of 3R3 per output is required
Note - Outputs are in FIRING ORDER, NOT CYLINDER NUMBER
If stepper motor idle controls are used these pinouts will change.
If MAP is used for load on a NA engine use internal sensor to free up MAP2 input for other uses

Note 1	Spare Outputs - [IGN4,5,6] [FUEL 4,5,6] [HS2]
Note 2	Spare Outputs - [FUEL 4,5,6] [HS2]
Note 3	Spare Outputs - [IGN4,5,6] [HS2]
Note 4	Spare Outputs - [HS2]

		6 Injector		6 Injector		12 Injector		12 Injector		12 Injector	
		Inner semi sequential		**Inner sequential**		**Inner semi sequential**		**Inner sequential**		**Inner semi sequential**	
		No outer injectors		**No outer injectors**		**Outer semi sequential**		**Outer semi sequential**		**Outer sequential**	
		Cam sensor not required		**Cam sensor is required**		**Cam sensor not required**		**Cam sensor is required**		**Cam sensor is required**	
		DIS	**Coil on plug**	**DIS**	**Coil on plug**	**DIS**	**Coil on plug**	**DIS**	**Coil on plug**	**DIS**	**Coil on plug**
FUNCTION	**NOTES**										
Ignition Coil 1		Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Yellow black	Not possible	Yellow black	Not possible
Ignition Coil 2		Yellow grey	Yellow grey	Yellow grey	Yellow grey	Yellow grey	Yellow grey	Yellow grey	Not possible	Yellow grey	Not possible
Ignition Coil 3		Yellow red	Yellow red	Yellow red	Yellow red	Yellow red	Yellow red	Yellow red	Not possible	Yellow red	Not possible
Ignition Coil 4		NA	Yellow orange	NA	Yellow orange	NA	Yellow orange	NA	Not possible	NA	Not possible
Ignition Coil 5		NA	Yellow green	NA	Yellow green	NA	Yellow green	NA	Not possible	NA	Not possible
Ignition Coil 6		NA	Yellow violet	NA	Yellow violet	NA	Yellow violet	NA	Not possible	NA	Not possible
Injector 1 Inner		Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Brown black	Not possible	Yellow orange	Not possible
Injector 2 Inner		Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Brown yellow	Not possible	Yellow green	
Injector 3 Inner		Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Brown red	Not possible	Yellow violet	Not possible
Injector 4 Inner		Brown black	Brown black	Brown orange	Brown orange	Brown black	Brown black	Brown orange	Not possible	Yellow orange	Not possible
Injector 5 Inner		Brown yellow	Brown yellow	Brown green	Brown green	Brown yellow	Brown yellow	Brown green	Not possible	Yellow green	Not possible
Injector 6 Inner		Brown red	Brown red	Brown violet	Brown violet	Brown red	Brown red	Brown violet	Not possible	Yellow violet	Not possible
Injector 1 Outer		NA	NA	NA	NA	Brown orange	Brown orange	Yellow orange	Not possible	Brown black	Not possible
Injector 2 Outer		NA	NA	NA	NA	Brown green	Brown green	Yellow green	Not possible	Brown yellow	Not possible
Injector 3 Outer		NA	NA	NA	NA	Brown violet	Brown violet	Yellow violet	Not possible	Brown red	Not possible
Injector 4 Outer		NA	NA	NA	NA	Brown orange	Brown orange	Yellow orange	Not possible	Brown orange	Not possible
Injector 5 Outer		NA	NA	NA	NA	Brown green	Brown green	Yellow green	Not possible	Brown green	Not possible
Injector 6 Outer		NA	NA	NA	NA	Brown violet	Brown violet	Yellow violet	Not possible	Brown violet	Not possible
Crank sensor		Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Black screen	Not possible	Black screen	Not possible
Cam sensor		NA	NA	Red screen	Red screen	NA	NA	Red screen	Not possible	Red screen	Not possible
Fuel pump		Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Blue white	Not possible	Blue white	Not possible
Tacho		Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Blue yellow	Not possible	Blue yellow	Not possible
Shift Light	12V out when active	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Blue black	Not possible	Blue black	Not possible
O2 sensor (1)		White red	White red	White red	White red	White red	White red	White red	Not possible	White red	Not possible
O2 sensor (2)	For 'V' engines	White orange	White orange	White orange	White orange	White orange	White orange	White orange	Not possible	White orange	Not possible
SPARE OUTPUTS		See Note 1	See Note 2	See Note 3	See Note 4	See Note 3	See Note 4	See Note 4		See Note 4	
Knock input		Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Grey screen	Not possible	Grey screen	Not possible
MAP input		White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	White yellow	Not possible	White yellow	Not possible
ALS switch input	12V IN to arm	White pink	White pink	White pink	White pink	White pink	White pink	White pink	Not possible	White pink	Not possible
1 wire idle		Brown grey	Brown grey	Brown grey	Brown grey	Brown grey	Brown grey	Brown grey	Not possible	Brown grey	Not possible
2 wire idle		Brown grey	Brown grey	Brown grey	Brown grey	Brown grey	Brown grey	Brown grey	Not possible	Brown grey	Not possible
		Brown pink	Brown pink	Brown pink	Brown pink	Brown pink	Brown pink	Brown pink	Not possible	Brown pink	Not possible
12V power	Via ign switch	Red	Red	Red	Red	Red	Red	Red	Not possible	Red	Not possible
5V sensor power		Pink	Pink	Pink	Pink	Pink	Pink	Pink	Not possible	Pink	Not possible
Power GND		Black	Black	Black	Black	Black	Black	Black	Not possible	Black	Not possible
Power GND		Black	Black	Black	Black	Black	Black	Black	Not possible	Black	Not possible
Sensor GND		Grey	Grey	Grey	Grey	Grey	Grey	Grey	Not possible	Grey	Not possible
Timing GND		A8	A8	A8	A8	A8	A8	A8	Not possible	A8	Not possible
CTS		White violet	White violet	White violet	White violet	White violet	White violet	White violet	Not possible	White violet	Not possible
ATS		White green	White green	White green	White green	White green	White green	White green	Not possible	White green	Not possible
TPS wiper		Orange	Orange	Orange	Orange	Orange	Orange	Orange	Not possible	Orange	Not possible

6 Cyl Colour Codes

High impedance injectors do not need ballast resistors
For 1 low impedance injector using an output then 1 resistor of 4R7 per output is required
For 2 low impedance injectors sharing an output then 1 resistor of 3R3 per output is required
Note - Outputs are in FIRING ORDER, NOT CYLINDER NUMBER
If stepper motor idle controls are used these pinouts will change.
If MAP is used for load on a NA engine use internal sensor to free up MAP2 input for other uses

Note 1	Spare Outputs - [IGN5,6] [FUEL 5,6] [HS2]			
Note 2	Spare Outputs - [HS2]			
		8 Injector	**8 Injector**	**16 Injector**
		Inner semi sequential	**Inner sequential**	**Inner semi sequential**
		No outer injectors	**No outer injectors**	**Outer semi sequential**
		Cam sensor not required	**Cam sensor is required**	**Cam sensor not required**
		DIS	**DIS**	**DIS**
FUNCTION	**NOTES**			
Ignition Coil 1		Yellow black	Yellow black	Yellow black
Ignition Coil 2		Yellow grey	Yellow grey	Yellow grey
Ignition Coil 3		Yellow red	Yellow red	Yellow red
Ignition Coil 4		Yellow orange	Yellow orange	Yellow orange
Ignition Coil 5		NA	NA	NA
Ignition Coil 6		NA	NA	NA
Injector 1 Inner		Brown black	Brown black	Brown black
Injector 2 Inner		Brown yellow	Brown yellow	Brown yellow
Injector 3 Inner		Brown red	Brown red	Brown red
Injector 4 Inner		Brown orange	Brown orange	Brown orange
Injector 5 Inner		Brown black	Brown green	Brown black
Injector 6 Inner		Brown yellow	Brown violet	Brown yellow
Injector 7 Inner		Brown red	Yellow green	Brown red
Injector 8 Inner		Brown orange	Yellow violet	Brown orange
Injector 1 Outer		NA	NA	Brown green
Injector 2 Outer		NA	NA	Brown violet
Injector 3 Outer		NA	NA	Yellow green
Injector 4 Outer		NA	NA	Yellow violet
Injector 5 Outer		NA	NA	Brown green
Injector 6 Outer		NA	NA	Brown violet
Injector 7 Outer		NA	NA	Yellow green
Injector 8 Outer		NA	NA	Yellow violet
Crank sensor		Black screen	Black screen	Black screen
Cam sensor		NA	Red screen	NA
Fuel pump		Blue white	Blue white	Blue white
Tacho		Blue yellow	Blue yellow	Blue yellow
Shift Light	12V out when active	Blue black	Blue black	Blue black
O2 sensor (1)		White red	White red	White red
O2 sensor (2)	For 'V' engines	White orange	White orange	White orange
SPARE OUTPUTS		See Note 1	See Note 2	See Note 2
Knock input		Grey screen	Grey screen	Grey screen
MAP input		White yellow	White yellow	White yellow
ALS switch input	12V IN to arm	White pink	White pink	White pink
1 wire idle		Brown grey	Brown grey	Brown grey
2 wire idle		Brown grey	Brown grey	Brown grey
		Brown pink	Brown pink	Brown pink
12V power	Via ign switch	Red	Red	Red
5V sensor power		Pink	Pink	Pink
Power GND		Black	Black	Black
Power GND		Black	Black	Black
Sensor GND		Grey	Grey	Grey
Timing GND		A8	A8	A8
CTS		White violet	White violet	White violet
ATS		White green	White green	White green
TPS wiper		Orange	Orange	Orange

8 Cyl Colour Codes