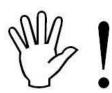
# Instruction Manual



## 30-7106/8H Infinity Hardware Specification



## STOP!

## THIS PRODUCT HAS LEGAL RESTRICTIONS. READ THIS BEFORE INSTALLING/USING!

THIS PRODUCT MAY BE USED <u>SOLELY</u> ON VEHICLES USED IN SANCTIONED COMPETITION WHICH MAY NEVER BE USED UPON A PUBLIC ROAD OR HIGHWAY, UNLESS PERMITTED BY SPECIFIC REGULATORY EXEMPTION. (VISIT THE "EMISSIONS" PAGE AT <u>HTTP://WWW.SEMASAN.COM/EMISSIONS</u> FOR STATE BY STATE DETAILS.)

IT IS THE RESPONSIBILITY OF THE INSTALLER AND/OR USER OF THIS PRODUCT TO ENSURE THAT IT IS USED IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THIS PRODUCT WAS PURCHASED IN ERROR, <u>DO NOT</u> INSTALL AND/OR USE IT. THE PURCHASER <u>MUST</u> ARRANGE TO RETURN THE PRODUCT FOR A FULL REFUND.

THIS POLICY ONLY APPLIES TO INSTALLERS AND/OR USERS WHO ARE LOCATED IN THE UNITED STATES; HOWEVER CUSTOMERS WHO RESIDE IN OTHER COUNTRIES SHOULD ACT IN ACCORDANCE WITH THEIR LOCAL LAWS AND REGULATIONS.

WARNING: This installation is not for the tuning novice! Use this system with EXTREME caution! The AEM Infinity Programmable EMS allows for total flexibility in engine tuning. Misuse or improper tuning of this product can destroy your engine! If you are not well versed in engine dynamics and the tuning of engine management systems DO NOT attempt the installation. Refer the installation to an AEM-trained tuning shop or call 800-423-0046 for technical assistance.

NOTE: All supplied AEM calibrations, Wizards and other tuning information are offered as potential starting points only. IT IS THE RESPONSIBILITY OF THE ENGINE TUNER TO ULTIMATELY CONFIRM IF THE CALIBRATION IS SAFE FOR ITS INTENDED USE. AEM holds no responsibility for any engine damage that results from the misuse or mistuning of this product!

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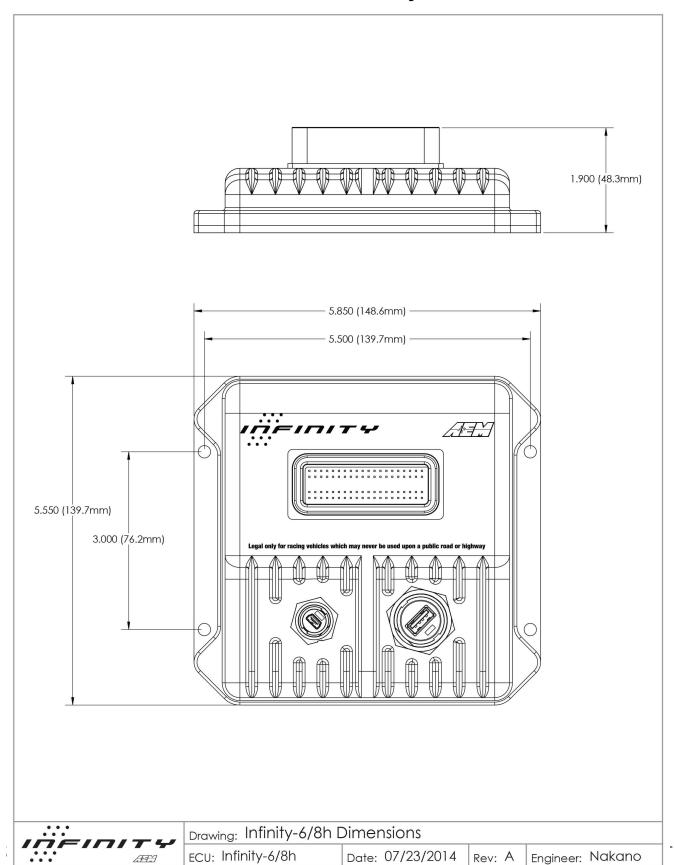
## **Hardware Infinity Hardware Specifications**

Specifications	Infinity-6	Infinity-8h	Infinity-8	Infinity-10	Infinity-812
Cylinders	Up to 6	Up to 8	Up to 8	Up to 10	Up to 12
Injectors, Low Impedance (Sequential)	6	N/A	8	10	12
Injectors High Impedance (Sequential)	Up to 6	Up to 8	8	10	12
Coils – 0–5V Falling Edge	6	8	8	10	10
Connector Pins	80	80	129	129	129
Drive-by-Wire	Single	Single	Dual	Dual	Dual
H-Bridge Channels	1	1	2	2	2
RS232 Channels*	1	1	1	1	1
CAN Channels	2	2	2	2	2
2-Stroke Engines	Yes	Yes	Yes	Yes	Yes
4-Stroke Engines	Yes	Yes	Yes	Yes	Yes
Knock Control	2-Channel	2-Channel	2-Channel	2-Channel	2-Channel
Analog Voltage Inputs	Up to 9	Up to 9	Up to 17	Up to 17	Up to 17
Analog Temp Inputs	Up to 3	Up to 3	Up to 6	Up to 6	Up to 6
VR/Mag Inputs	Up to 4	Up to 4	Up to 6	Up to 6	Up to 6
Digital Inputs	Up to 8	Up to 6	Up to 8	Up to 8	Up to 8
Internal Wideband UEGO Controller	1	1	2	2	2
High Side Outputs	1	1	Up to 2	Up to 2	Up to 2
Low Side Outputs	8	6	10	10	10

Specifications	Infinity-6	Infinity-8h	Infinity-8	Infinity-10	Infinity-812
4-Wire Stepper Motor Control	Yes	Yes	Yes	Yes	Yes
Boost Control (RPM, Time, Gear, VSS, Switch Input, Flex Fuel Content	Yes	Yes	Yes	Yes	Yes
Engine Protection	Yes	Yes	Yes	Yes	Yes
Variable Cam Control	Up to 2	Up to 2	Up to 4	Up to 4	Up to 4
Launch Control	Yes	Yes	Yes	Yes	Yes
Nitrous Control	Single Stage	Single Stage	Single Stage	Single Stage	Single Stage
Data Logging	Up to 64 GB	Up to 64 GB	Up to 64 GB	Up to 64 GB	Up to 64 GB
Traction Control	Up to 2-Wheel Speed	Up to 2-Wheel Speed	Up to 4-Wheel Speed	Up to 4-Wheel Speed	Up to 4-Wheel Speed
Weather Resistance	Yes, Sealed Enclosure with IP67 Connectors	Yes, Sealed Enclosure with IP67 Connectors			
Enclosure Dims	5.855"x5.55"x1. 8"	5.855"x5.55"x1. 8"	6.75"x6.00"x1.8"	6.75"x6.00"x1.8"	6.75"x6.00"x1.8
Weight	18.8 oz/476.27g	18.8 oz/476.27g	24oz/680g	24oz/680g	24oz/680g

<sup>\*\*</sup>Dual use pins. Tx and Rx shared with 2 digital inputs.

## **ECU Installation Dimensions Infinity-6/8h**



# Wiring, Pinouts and Schematics Wiring

## **Universal Pinout, Infinity-6/8h**

Infinity Pin	Hardware Ref.	Hardware Specification	Notes
C1-1	Lowside 4	Lowside switch, 1.7A max, NO internal flyback diode.	See Setup Wizard Page "Output Function Assignment" for setup options.
		12V pullup	
C1-2	Lowside 5	Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power.	See Setup Wizard Page "Output Function Assignment" for setup options.
		12V pullup	
C1-3*	Lowside 6 (*Infinity-6 Only)	Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power.	See Setup Wizard Page "Output Function Assignment" for setup options.
		No pullup	
C1-3**	Injector 7 (**Infinity-8H Only)	For use with high impedance (10-15 ohms) injectors only, 1.7A max.	Available on P/N 30-7108 only
C1-4*	Lowside 7 (*Infinity-6 Only)	Lowside switch, 6A max, NO internal flyback diode.  No pullup	See Setup Wizard Page "Output Function Assignment" for setup options.
C1-4**	Injector 8 (**Infinity-8H Only)	For use with high impedance (10-15 ohms) injectors only, 1.7A max.	Available on P/N 30-7108 only
C1-5	UEGO 1 Heat	Bosch UEGO controller	Lowside switch for UEGO heater control. Connect to pin 4 of Bosch UEGO sensor. NOTE that pin 3 of the Sensor is heater (+) and must be power by a fused/switched 12V supply.
C1-6	UEGO 1 IA		Trim Current signal. Connect to pin 2 of Bosch UEGO sensor
C1-7	UEGO 1 IP		Pumping Current signal. Connect to pin 6 of Bosch UEGO sensor
C1-8	UEGO 1 UN		Nernst Voltage signal. Connect to pin 1 of Bosch UEGO sensor
C1-9	UEGO 1 VM		Virtual Ground signal. Connect to pin
	1	L	1

Infinity Pin	Hardware Ref.	Hardware Specification	Notes
			5 of Bosch UEGO sensor.
C1-10	Battery Perm Power	Dedicated power management CPU	Full time battery power. MUST be powered before the ignition switch input is triggered (See C1-48).
C1-11	Coil 4	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-12	Coil 3	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-13	Coil 2	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-14	Coil 1	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-15	Coil 6	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-16	Coil 5	25 mA max source current	0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-17	Crankshaft Position Sensor VR+	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page Cam/Crank for options.
C1-18	Crankshaft Position Sensor VR-		See Setup Wizard page Cam/Crank for options.
C1-19	Camshaft Position Sensor 1 VR-	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page Cam/Crank for options.
C1-20	Camshaft Position Sensor 1 VR+		See Setup Wizard page Cam/Crank for options.
C1-21	Lowside 2	Lowside switch, 1.7A max, NO internal flyback diode.  No pullup	See Setup Wizard Page "Output Function Assignment" for setup options.

Infinity Pin	Hardware Ref.	Hardware Specification	Notes
C1-22	Lowside 3	Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power.	See Setup Wizard Page "Output Function Assignment" for setup options.
		No pullup	
C1-23	Analog Sensor Ground	Dedicated analog ground	Analog 0-5V sensor ground
C1-24	Analog Sensor Ground	Dedicated analog ground	Analog 0-5V sensor ground
C1-25	Crankshaft Position Sensor Hall	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page Cam/Crank for options.
C1-26	Camshaft Position Sensor 1 Hall	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page Cam/Crank for options.
C1-27	Digital 2	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page Cam/Crank for options.
C1-28	Dig3 [Hz] / Dig3 Duty	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page "Input Function Assignments" for setup options.
C1-29	Dig4 [Hz] / Dig4 Duty	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page "Input Function Assignments" for setup options.
C1-29	RS232 Rx	RS232 Line Driver/Receiver	Future expansion
C1-30	Digital 5	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page "Input Function Assignments" for setup options.
C1-30	RS232 Tx	RS232 Line Driver/Receiver	Future expansion
C1-31*	Dig6 [Hz] / Dig6_Duty (*Infinity-6 Only)	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page "Input Function Assignments" for setup options.
C1-31**	Coil 7 (**Infinity-8H Only)	25 mA max source current	Available on P/N 30-7108 only. 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-32*	Digital 7 (*Infinity-6 Only)	10K pullup to 12V. Will work with ground or floating switches.	See Setup Wizard page "Input Function Assignments" for setup options.
C1-32**	Coil 8 (**Infinity-8H Only)	25 mA max source current	Available on P/N 30-7108 only. 0-5V Falling edge fire. DO NOT connect

Infinity Pin	Hardware Ref.	Hardware Specification	Notes
			directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal.
C1-33	Battery Ground	Battery Ground	Connect directly to battery ground
C1-34	CANL A	Dedicated High Speed CAN Transceiver	Recommend twisted pair (one twist per 2") with terminating resistor. Contact AEM for additional information.
C1-35	CANH A	Dedicated High Speed CAN Transceiver	Recommend twisted pair (one twist per 2") with terminating resistor. Contact AEM for additional information.
C1-36	CanL B	Dedicated High Speed CAN Transceiver	Not used, reserved for future expansion.
C1-37	CanH B	Dedicated High Speed CAN Transceiver	Not used, reserved for future expansion.
C1-38	Analog Temp 1	12 bit A/D, 2.49K pullup to 5V	Default Coolant Temperature Input
C1-39	Analog Temp 2	12 bit A/D, 2.49K pullup to 5V	Default Air Temperature Input
C1-40	Analog Temp 3	12 bit A/D, 2.49K pullup to 5V	Default Oil Temperature Input. See Setup Wizard page "Input Function Assignments" for setup options.
C1-41	Lowside 0	Lowside switch, 1.7A max, NO internal flyback diode.  No pullup	See Setup Wizard Page "Output Function Assignment" for setup options.
C1-42	Lowside 1	Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power.	See Setup Wizard Page "Output Function Assignment" for setup options.
		No pullup	
C1-43	Battery Ground	Battery Ground	Connect directly to battery ground
C1-44	Knock Sensor 1	Dedicated knock signal processor	See Setup Wizard page Knock Setup for options.
C1-45	Knock Sensor 2	Dedicated knock signal processor	See Setup Wizard page Knock Setup for options.
C1-46	Battery Ground	Battery Ground	Connect directly to battery ground

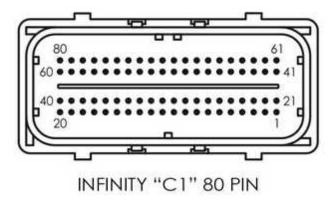
C1-47   EFI Main Relay Switched Ground Output   O.7A max ground sink for external relay control   will activate at key on and at key off according to the configuration settings. Output	Infinity Pin	Hardware Ref.	Hardware Specification	Notes
Analog sensor Power   Regulated, fused +5V supply for sensor power	C1-47	Switched Ground		
Sensor power   Regulated, fused +5V supply for sensor power	C1-48	Ignition Switch	10K pulldown	available at C1-10 before this input is
C1-51 Analog 7  12 bit A/D, 100K pullup to 5V  Default primary Throttle Position sensor inpur.  0-5V analog signal. Use +5V Out pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard Set Throttle Range page for automatic min/max calibration. Monitor the Throttle [%] channel. Also DB1_TPSA [%] for DBW applications.  C1-52 Analog 8  12 bit A/D, 100K pullup to 5V  Default Manifold Pressure Sensor input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-53 Analog 9  12 bit A/D, 100K pullup to 5V  Default Fuel Pressure Sensor Input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-53 Analog 9  15 bit A/D, 100K pullup to 5V  Default Fuel Pressure Sensor Input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-54 VR+ 2  Differential Variable Reluctance Zero Cross Detection  Default Fuel Pressure Sensor Input Function Assignments* for setup options.	C1-49	+5V Sensor Power	1 -	Analog sensor power
sensor inpur.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard Set Throttle Range page for automatic min/max calibration. Monitor the Throttle [%] channel. Also DB1_TPSA [%] for DBW applications.  C1-52 Analog 8  12 bit A/D, 100K pullup to 5V  Default Manifold Pressure Sensor input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-53 Analog 9  12 bit A/D, 100K pullup to 5V  Default Fuel Pressure Sensor Input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-54 VR+ 2  Differential Variable Reluctance Zero Cross Detection  See Setup Wizard page "Input Function Assignments" for setup options.	C1-50	+5V Sensor Power		Analog sensor power
as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard Set Throttle Range page for automatic min/max calibration. Monitor the Throttle [%] channel. Also DB1_TPSA [%] for DBW applications.  C1-52 Analog 8	C1-51	Analog 7	12 bit A/D, 100K pullup to 5V	sensor inpur.
input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-53 Analog 9 12 bit A/D, 100K pullup to 5V Default Fuel Pressure Sensor Input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-54 VR+ 2 Differential Variable Reluctance Zero Cross Detection  See Setup Wizard page "Input Function Assignments" for setup options.				as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard Set Throttle Range page for automatic min/max calibration. Monitor the Throttle [%] channel. Also DB1_TPSA [%] for
O-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.  C1-54 VR+ 2 Differential Variable Reluctance Zero Cross Detection See Setup Wizard page "Input Function Assignments" for setup options.				input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.
Zero Cross Detection Function Assignments" for setup options.	C1-53	Analog 9	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the
C1-55 VR- 2	C1-54	VR+ 2		Function Assignments" for setup
	C1-55	VR- 2		

Infinity Pin	Hardware Ref.	Hardware Specification	Notes
C1-56	VR- 3	Differential Variable Reluctance Zero Cross Detection	See Setup Wizard page "Input Function Assignments" for setup options.
C1-57	VR+ 3		
C1-58	Highside 0	2.6A max, High Side Solid State Relay	See Setup Wizard Page "Output Function Assignment" for setup options.
C1-59	Stepper 1B	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only.
C1-60	Stepper 2B	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only.
C1-61	DBW1 Motor -	5.0A max Throttle Control Hbridge Drive	+12V to close
C1-62	DBW1 Motor +	5.0A max Throttle Control Hbridge Drive	+12V to open
C1-63	Main Relay Power Input	12 volt power from relay	12 volt power from relay. Relay must be controlled by +12V Relay Control signal, pin C1-47 above.
C1-64	Injector 6	Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106)	Injector 6
C1-65	Injector 5	Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106)	Injector 5
C1-66	Injector 4	Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106)	Injector 4
C1-67	Battery Ground	Battery Ground	Connect directly to battery ground
C1-68	Main Relay Power Input	12 volt power from relay	12 volt power from relay. Relay must be controlled by +12V Relay Control signal, pin C1-47 above.
C1-69	Analog 19	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground

Infinity Pin	Hardware Ref.	Hardware Specification	Notes
			pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options.
C1-70	Analog 18	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options.
C1-71	Analog 16	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options.
C1-72	Flash Enable	10K pulldown	Not usually needed for automatic firmware updates through Infinity Tuner. If connection errors occur during update, connect 12 volts to this pin before proceeding with upgrade. Disconnect the 12 volts signal after the update.
C1-73	Analog 13	12 bit A/D, 100K pullup to 5V	Default Oil Pressure Sensor input.  0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU.
C1-74	Analog 11	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options.
C1-75	Analog 10	12 bit A/D, 100K pullup to 5V	0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground

Infinity Pin	Hardware Ref.	Hardware Specification	Notes
			pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options.
C1-76	Injector 3	Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106)	Injector 3
C1-77	Injector 2	Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106)	Injector 2
C1-78	Injector 1	Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106)	Injector 1
C1-79	Stepper 2A	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only.
C1-80	Stepper 1A	Automotive, Programmable Stepper Driver, up to 28V and ±1.4A	Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only.

## **Connector Views Infinity-6/8h**



## **Example System Schematics**

Custom wiring harness projects should only be undertaken by experienced harness builders. If in doubt, please contact AEM for recommendations.

For users wishing to build their own wiring harnesses from scratch, the following kits are available to help.

#### 30-3701 Infinity-8/10/12 Plug & Pin Kit

Bare necessities to begin a custom wire harness design. Includes 73- and 56-pin Molex MX123 harness connectors, terminals and sealing plugs, main relay and relay socket.

#### 30-3702 Infinity-8/10/12 Mini-harness

This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements. It allows the harness builder to populate the ECU connector with only the features needed by the application. Includes 100 96" preterminated leads.

#### 30-3703 Infinity-8/10/12 Mini-harness

This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements. It allows the harness builder to populate the ECU connector with only the features needed by the application.

#### 30-3704 Infinity-6/8h Plug & Pin Kit

Bare necessities to begin a custom wire harness design. Includes 80-pin Molex MX123 harness connector, terminals and sealing plugs, main relay and relay socket.

#### 30-3805 Universal modular V8 harness system for Infinity-8/10 systems

The Infinity Universal Modular V8 Harness system consists of a universal core harness and optional application specific extensions. It was designed with flexibility in mind. The harness system includes many features and it can be used in many different applications.

#### 30-3809 Universal modular V8 harness system for Infinity-6/8h systems

The Infinity Universal Modular V8 Harness system consists of a universal core harness and optional application specific extensions. It was designed with flexibility in mind. The harness system includes many features and it can be used in many different applications.

#### 30-3705 Universal Mini Harness for Infinity-6/8h systems

This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements. It allows the harness builder to populate the ECU connector with only the features needed by the application.

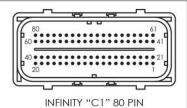
#### 30-3706 Universal Mini Flying Lead for Infinity-6/8h systems

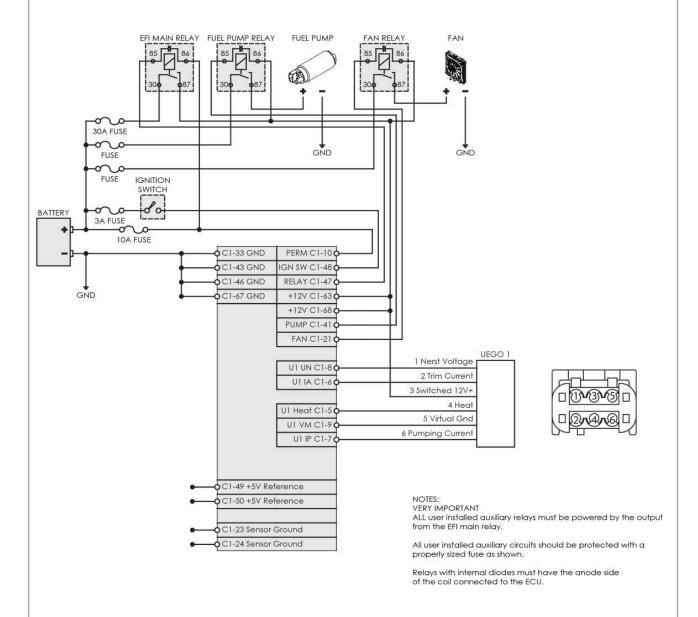
This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements.

The following schematics show examples for wiring a basic Infinity system. Examples are included for both Infinity-6/8h and Infinity-8/10/12 hardware platforms. *The power, ground and accessory relay sections of the following schematics must be strictly followed to avoid inconsistent power sequencing and possible ECU damage.* 

## Power Distribution, Infinity-6/8h

NAME	NCTION		
GND	Battery ground		
PERM	Fused connection to battery positive terminal (+12V, always hot)		
IGN SW	Fused connection to vehicle ignition switch (+12V in RUN/CRANK only		
RELAY	Switched ground from ECU connected to relay coil primary negative		
+12V	2V Relay driven +12V power source for ECU power and auxiliary output		
+5V Reference	+5V supplied by ECU		
Sensor Ground	Analog ground used as ground point for sensors		

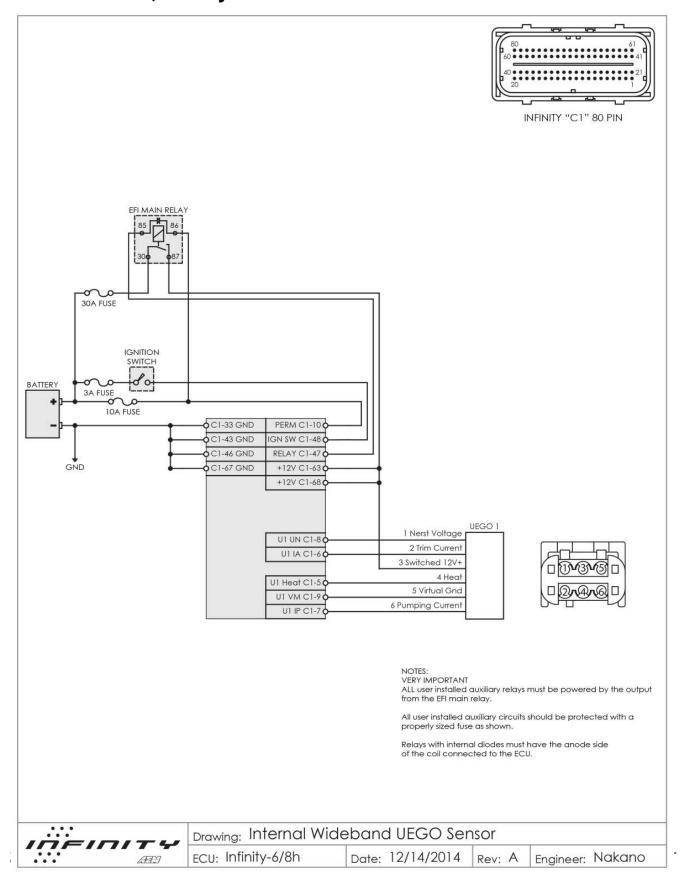




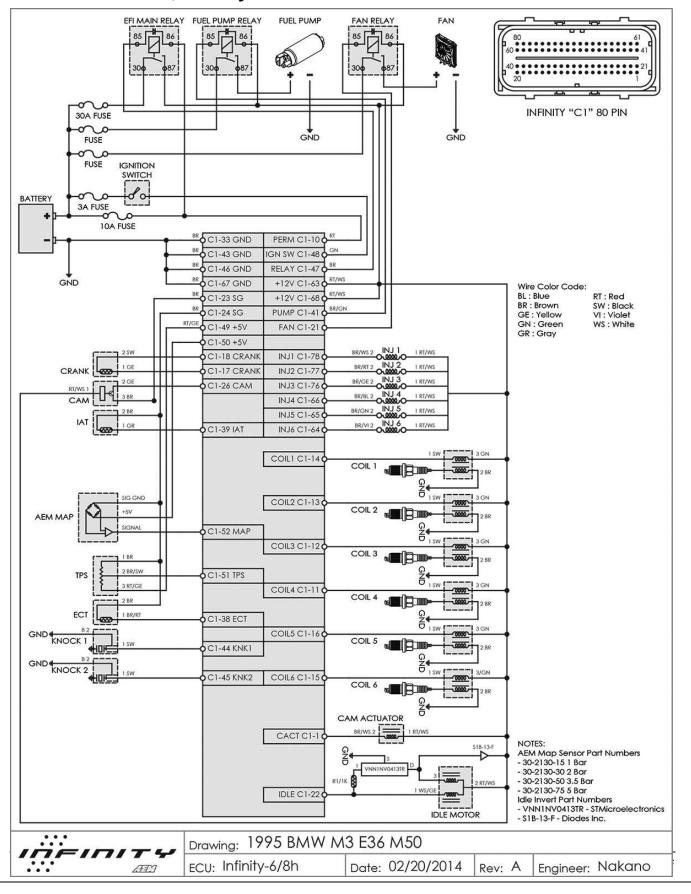
Drawing: Power Distribution

ECU: Infinity-6/8h Date: 12/14/2014 Rev: B Engineer: Nakano

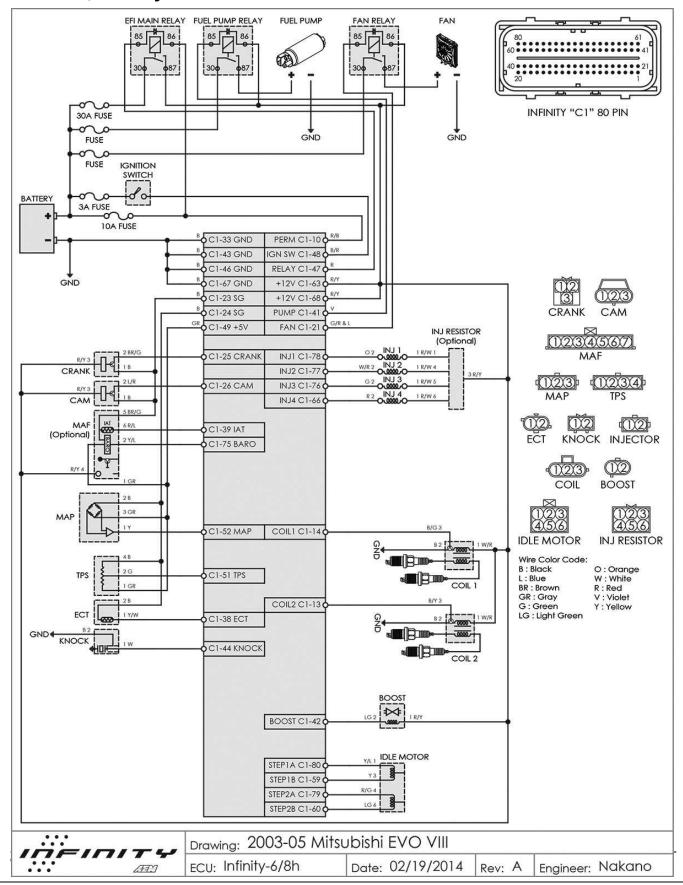
## Internal UEGO, Infinity-6/8h



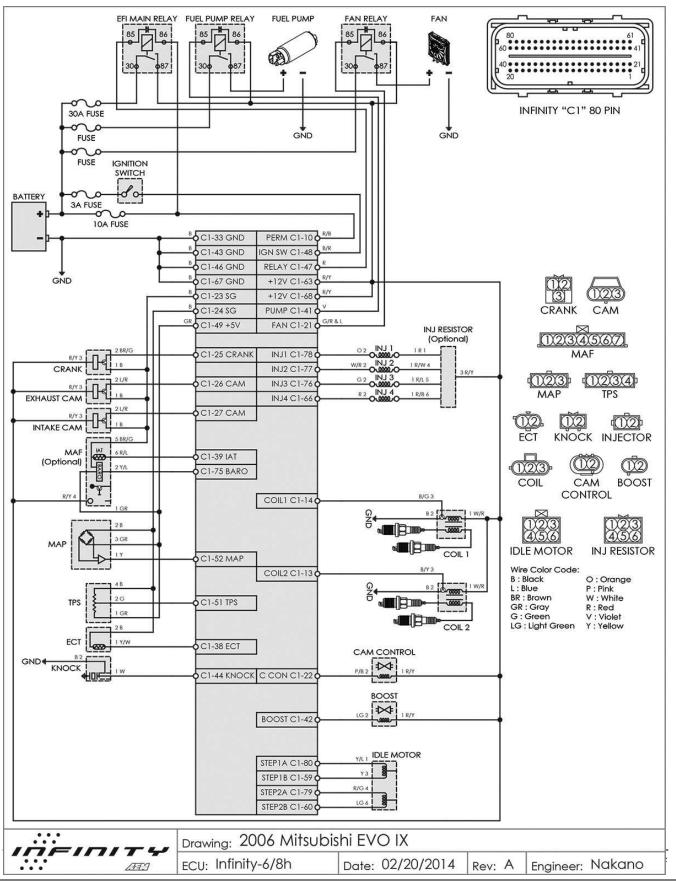
## 95 BMW E36 M3, Infinity-6/8h



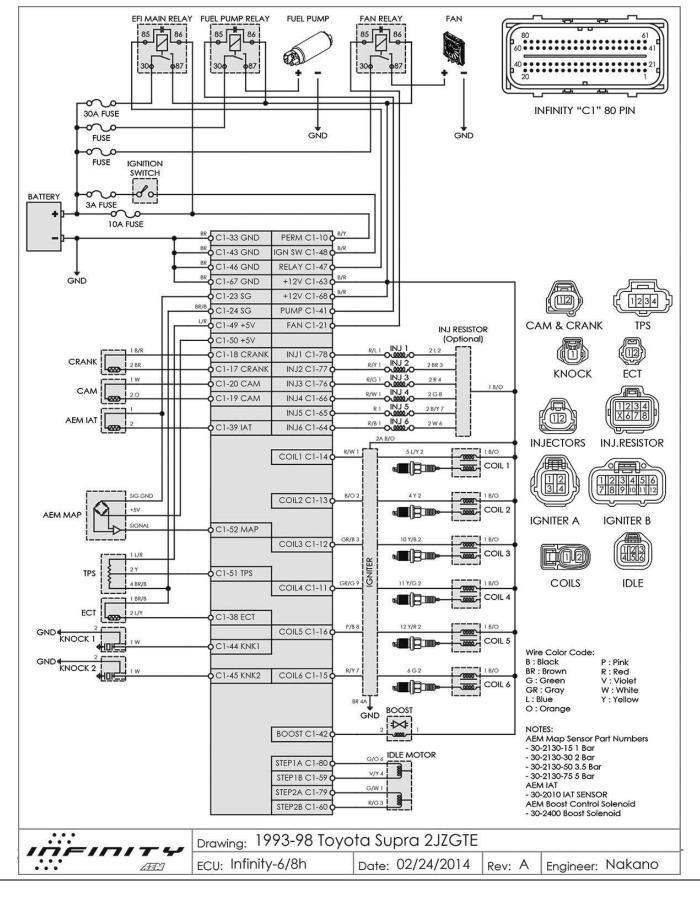
## **EVO VIII, Infinity-6/8h**



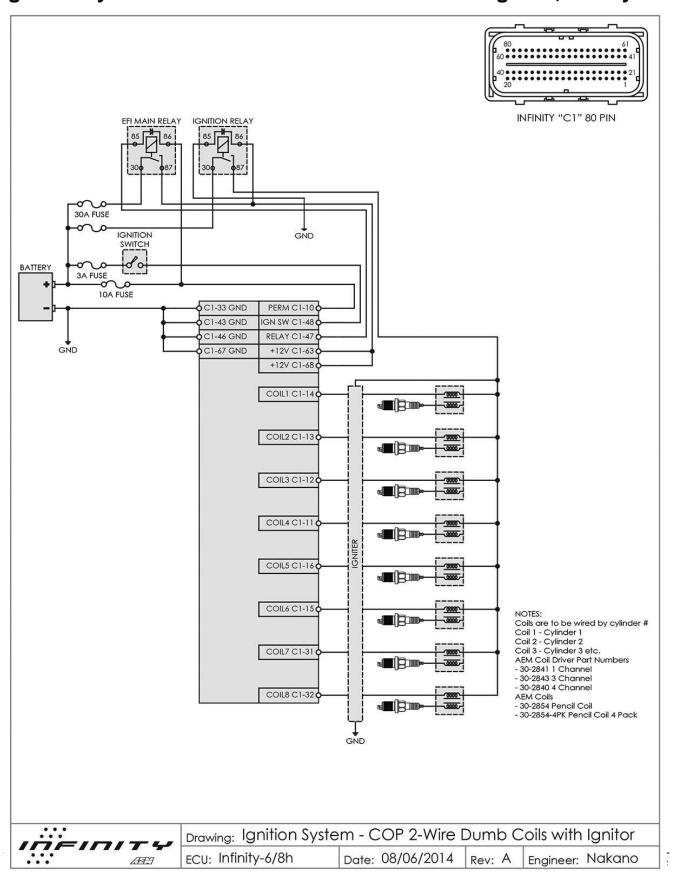
### **EVO IX Pinout, Infinity-6/8h**



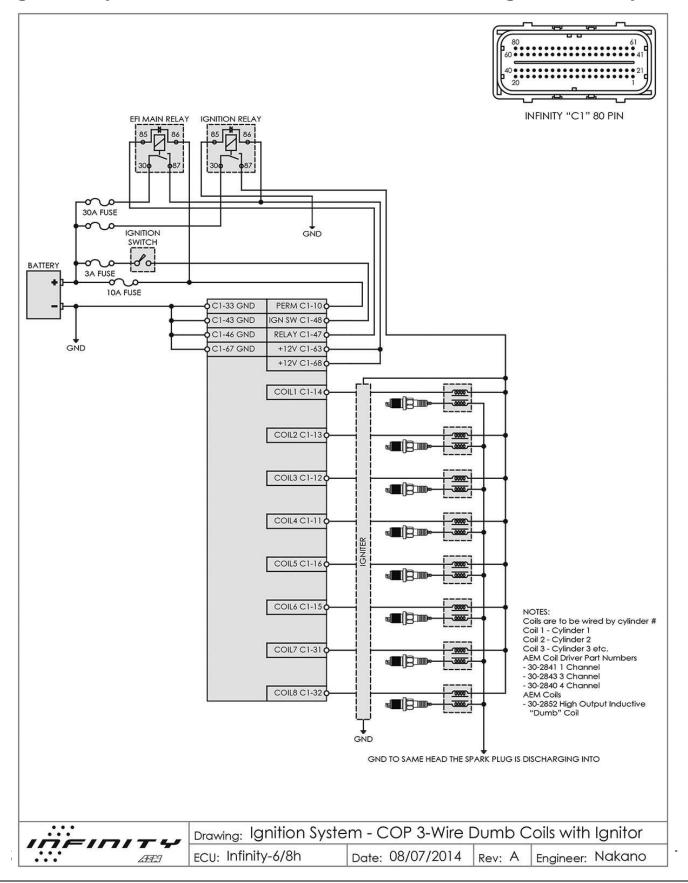
### 93-98 Toyota Supra 2JZGTE, Infinity-6/8h



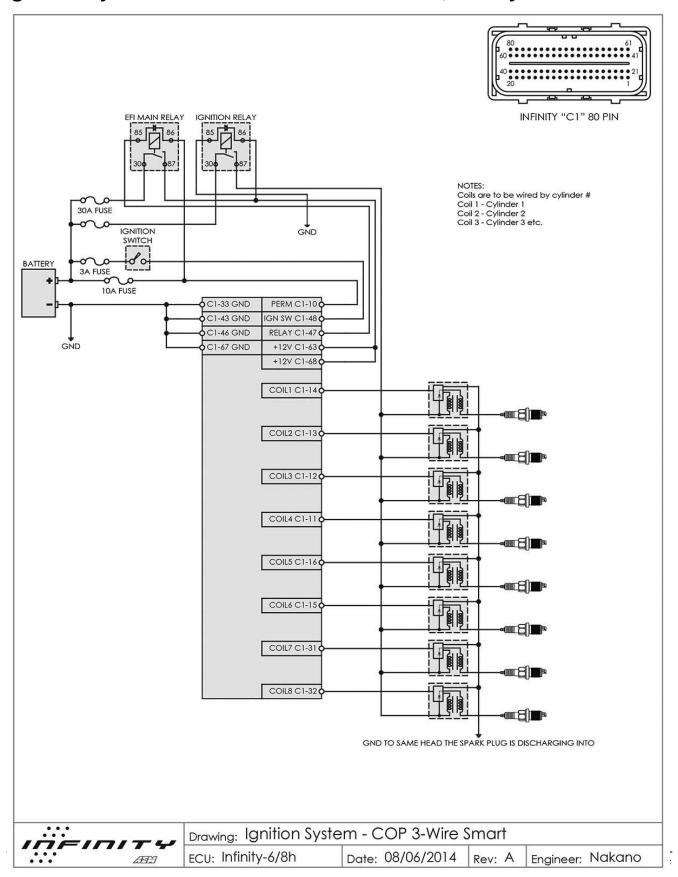
## Ignition System - COP 2 Wire "Dumb" Coils with Ignitor, Infinity-6/8h



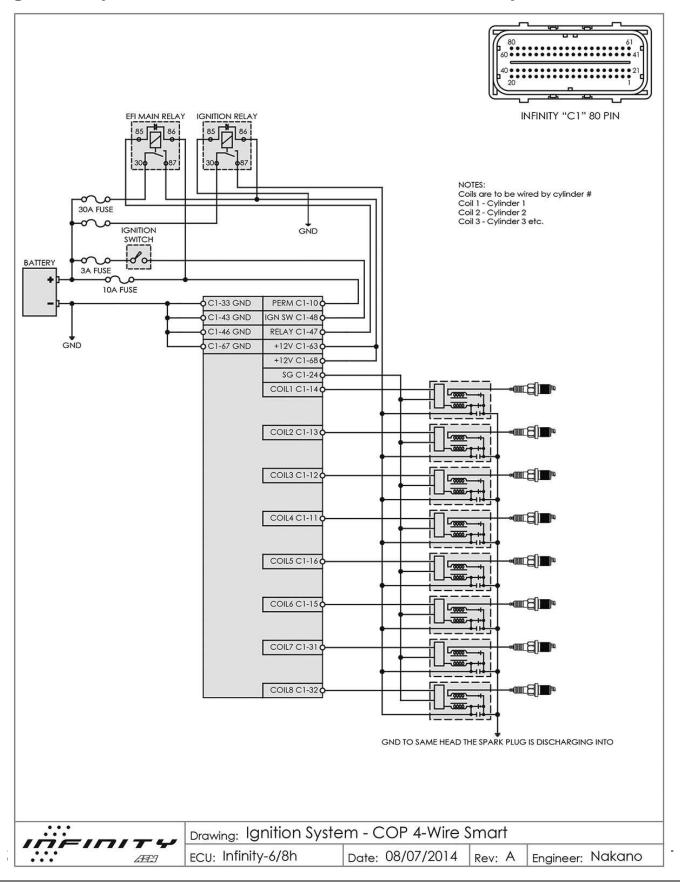
## Ignition System - COP 3 Wire "Dumb" Coils with Ignitor, Infinity-6/8h



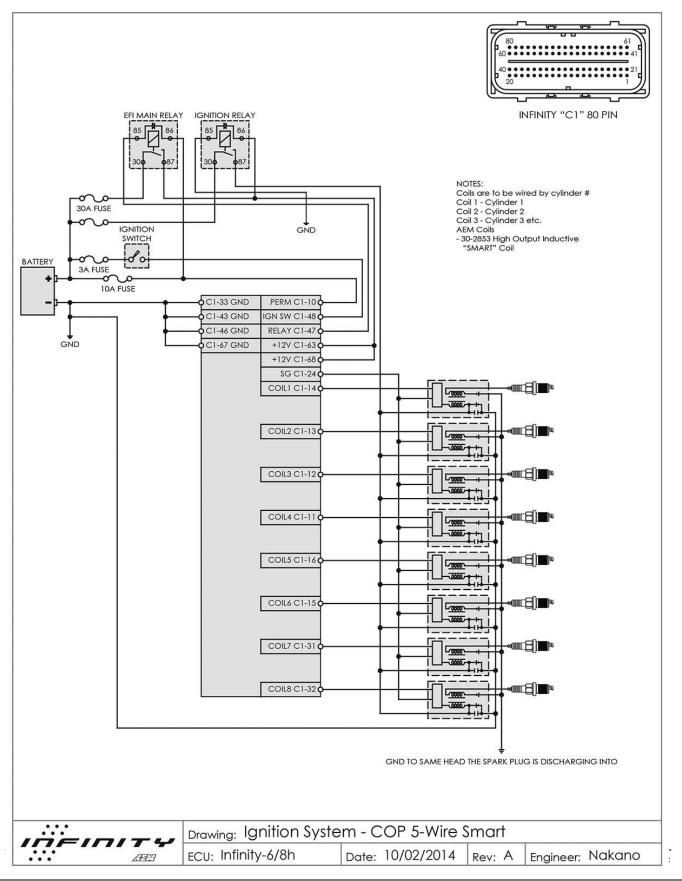
## Ignition System - COP 3 Wire "Smart" Coils, Infinity-6/8h



## Ignition System - COP 4 Wire "Smart" Coils, Infinity-6/8h

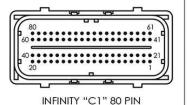


## Ignition System – COP 5 Wire "Smart" Coils, Infinity-6/8h



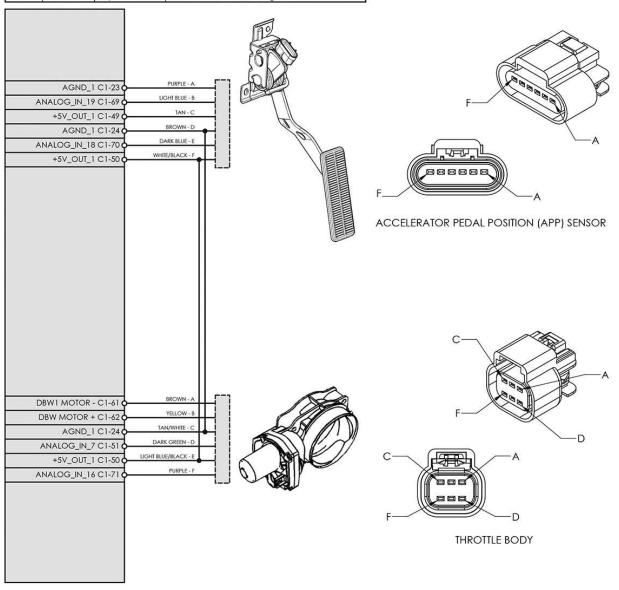
## **GM LS3 DBW Wiring, Infinity-6/8h**

#### ACCELERATOR PEDAL POSITION (APP) SENSOR GM PIN INFINITY PIN WIRE COLOR FUNCTION C1-23 Purple Sensor Ground Accelerator Pedal Position (APP) Sensor 2 Signal C1-69 Light Blue C1-49 +5 Volt Reference Tan C1-24 D Brown Sensor Ground C1-70 Dark Blue Accelerator Pedal Position (APP) Sensor 1 Signal White/Black C1-50 +5 Volt Reference



#### THROTTLE BODY

GM PIN	INFINITY PIN	WIRE COLOR	FUNCTION
Α	C1-61	Brown	Throttle Acuator Control (TAC) Motor Control - 2
В	C1-62	Yellow	Throttle Acuator Control (TAC) Motor Control - 1
С	C1-24	Tan/White	Sensor Ground
D	C1-51	Dark Green	Throttle Position Sensor 1 Signal
Е	C1-50	Light Blue/Black	+5 Volt Reference
F	C1-71	Purple	Throttle Position Sensor 2 Signal



Drawing: GM LS3 ACCELERATOR PEDAL & DBW THROTTLE BODY

ECU: Infinity-6/8h

Date: 08/04/2014 Rev: A Engineer: Nakano

## Mazda RX7 FD Wiring, Infinity 6

