



TOYOTA STARLET EP82

Wiring connections, Connector IDs & Loom Layouts

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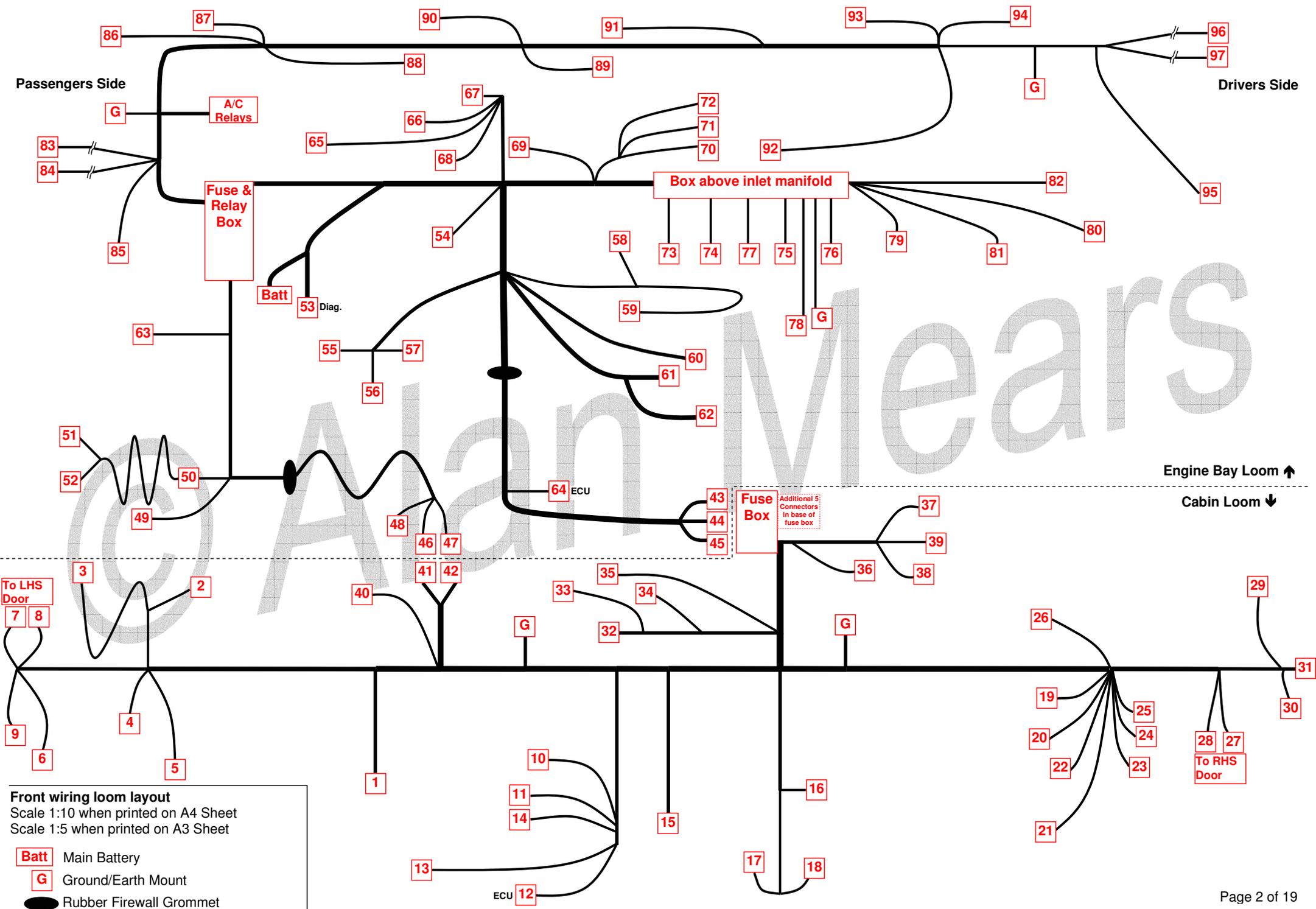
This document details a large amount of wiring information which I could ascertain from the two main wiring looms (Cabin & Engine Bay) that was provided with a 1991 (Gen 1) EP82 Toyota Starlet GT (4E-FTE) front cut, however much of the wiring layout and information will be appropriate to later Toyota Starlet models (with eg slightly different connectors or wiring colours).

Please note that there are no specific details of wiring connections and connectors in the doors, nor rear wiring loom of the car - due to those parts of the car not included with the front cut. The front cut was a Manual Transmission 4E-FTE which was not fitted with TEMS or ABS, so no specific details of those components could be provided.

To advise of any corrections, please contact me on the above email address.

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Front wiring loom layout
 Scale 1:10 when printed on A4 Sheet
 Scale 1:5 when printed on A3 Sheet

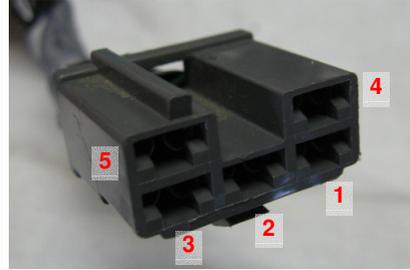
Batt Main Battery
G Ground/Earth Mount
 Rubber Firewall Grommet

Connector ID Quick Reference Table

#	Cabin Loom	#	Engine Bay Loom	#	Engine Bay Loom
1	Circuit Opening Relay	43	To Cabin Fuse Box	85	A/C Pressure Switch
2	Fan/Blower	44	To Cabin Fuse Box	86	Front-Left Main Light
3	Fan/Heater Assembly	45	To Cabin Loom	87	Front-Left Park Light
4	TEMS Computer / Module	46	To Cabin Loom (Connector 41)	88	Radiator Fan
5	LHD Speaker (Cabin)	47	To Cabin Loom (Connector 42)	89	A/C Condenser Fan
6	Interior Light Door Switch (Left Door)	48	HVAC Module	90	Ambient Temperature Sensor
7	To Power Windows (Left Door)	49	Windscreen Wiper Motor (Front)	91	Horn
8	To Power Mirrors (Left Door)	50	Sub-harness Connector	92	A/C Compressor
9	Roof / Dome / Interior Light	51	Vacuum Switch Valve	93	Front-Right Main Light
10	Heater & A/C Dash Controls (Fan, Vent Direction, Recirc/Fresh Air)	52	Idle up Valve	94	Front-Right Park Light
11	Air vent Direction Motor	53	Diagnostics Port (Hardwired)	95	Windscreen Washer Pump
12	ECU	54	Reverse Switch on Gearbox	96	Front-Right Indicator
13	Cigarette Lighter	55	Ignitor	97	Front-Right Fog Light
14	Stereo Rear plug	56	Coil		
15	Clock (Upper Dash)	57	Unknown		
16	Instrument Cluster (Blue Connector)	58	Throttle Position Sensor		
17	Instrument Cluster (White Connector)	59	Boost Pressure / MAP Sensor		
18	Instrument Cluster (Boost Pressure Gauge & Lo/Hi Light)	60	Starter Motor Solenoid (Main Voltage)		
19	Turn Signal / Indicator Flasher Module	61	Starter Motor Solenoid (Trigger)		
20	Relay Light Reminder Module	62	Alternator		
21	Brake Pedal Switch	63	Unknown		
22	Door Control Module	64	ECU		
23	RHS Speaker (Cabin)	65	Oil Pressure Sender		
24	Fog Light On/Off Switch	66	Catalytic Converter Overheat Sensor		
25	TEMS Switch	67	Oxygen / O2 Sensor		
26	Relay (hardwired) Power Windows	68	Coolant Sensor (To HVAC module)		
27	To Power Windows (Right Door)	69	Coolant Switch (For Radiator Thermofan)		
28	To Power Mirrors (Right Door)	70	Coolant Temperature Sensor (For Dash Temp Gauge)		
29	Interior Light Door Switch (Right Door)	71	Coolant Temperature Sensor (To ECU)		
30	To Rear Wiring Loom	72	Distributor		
31	Power Window Control Buttons	73	Injector 4		
32	Hazard Light Button	74	Injector 3		
33	Lo/Hi Boost Button	75	Injector 2		
34	Rear Window Demister Button	76	Injector 1		
35	Power Mirrors Adjustment Buttons	77	Inlet Manifold Temperature Sensor		
36	Ignition Barrel	78	Idle Adjust Valve		
37	Steering column combination switch (Rear Wiper)	79	Vacuum Solenoid Valve		
38	Steering column combination switch (Front Wipers)	80	Knock Sensor		
39	Steering column combination switch (Lights & Indicators)	81	Low Level Brake Fluid Reservoir Switch		
40	Foot/Lower Air Direction Motor	82	Unknown		
41	To Engine Bay Loom (Connector 46)	83	Front-Left Indicator		
42	To Engine Bay Loom (Connector 47)	84	Front-Left Fog Light		

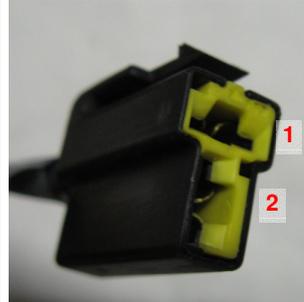
Connectors are referenced in the following pages with a 'C-' prefix eg C-12 for Connector 12

1. Circuit Opening Relay



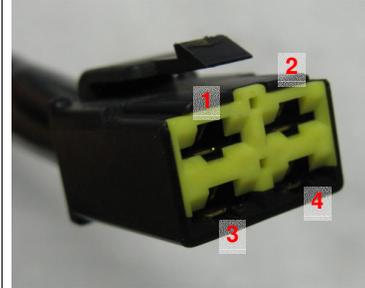
1. Fuel Pump 12V (Blue-White)
2. 12V via EFI Relay & ECU 'BATT' (Black-Red)
3. ECU 'STA'; Connector 36 'ST1' & Starter Motor Solenoid (Black)
4. ECU 'FC' (Green)
5. GND (White-Black)

2. Fan / Blower



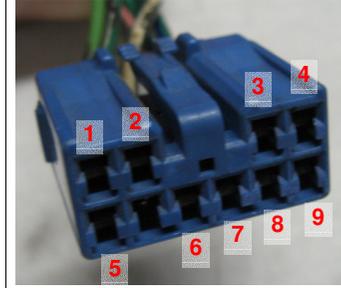
1. Dash Fan Switch via C-10 (Blue-Red)
2. From 'Heater' Fuse (Blue-White)

3. Fan/Heater Assembly



1. Blue-Red
 2. Blue-Yellow
 3. Blue-Black
 4. White-Red
- All wires from C-10 (Dash Buttons)

4. TEMS Computer / Module



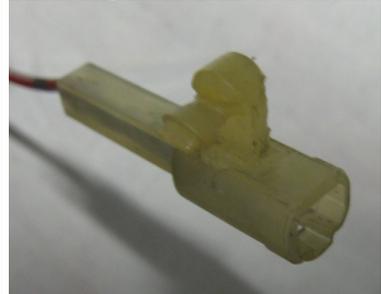
1. ECU CON-2 Pin 12 (Yellow-Black)
2. Green-White
3. Green-Yellow
4. From 'Ignition' Fuse (Blue-Green)
5. Light Green
6. GND (White-Black)
7. To Dash LED C-17 A5 (Pink-White)
8. Green-Red
9. To Dash LED C-17 A7 (Pink-Black)

5. LHS Speaker (Cabin)



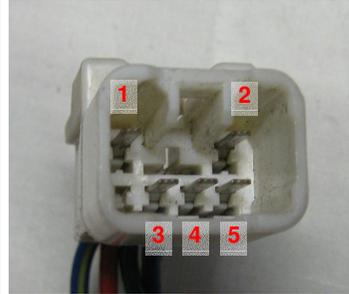
- To C-14
Pink & Dark Pink

6. Interior Light Door Switch (Left Door)



- To Roof Mounted Light C-9 (Red-White)

7. To Power Windows (Left Door)



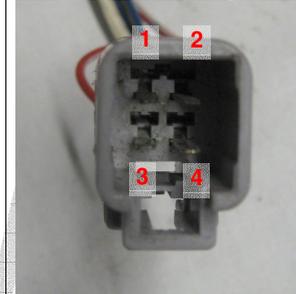
1. Red
 2. Green
 3. Blue-Yellow
 4. Blue-Red
 5. Blue-Green
- (all thicker gauge wire – to C-22)

8. To Power Mirrors (Left Door)



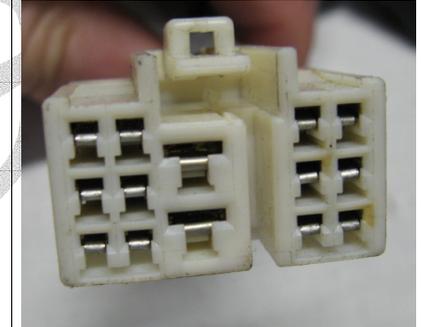
1. Light Green
 2. Pink-Black
 3. Pink-White
 4. Green-Black
 5. Red-Black
- 1,2,3 to C-35
4,5, to C-31

9. Roof / Dome Interior Light

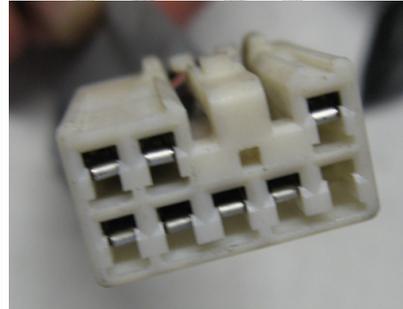


1. Blue-Green
 2. White-Black
 3. To C-6 (Blue-Yellow)
 4. From 'Dome' Fuse (Red-White)
- 1 & 2 not connected (for sunroof?)

10. Heater & A/C Dash Controls (Fan, Vent Direction, Recirc)



11. Air Vent Direction Motor



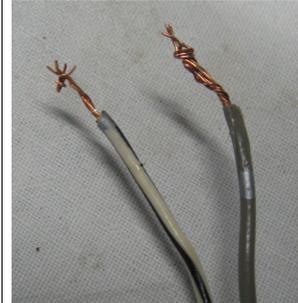
- All wires lead to C-10

12. ECU



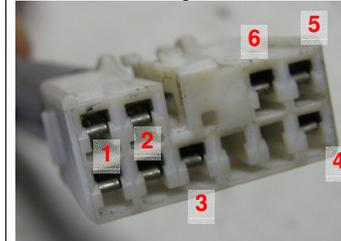
- ECU Connector 'CON-2'

13. Cigarette Lighter Wires (no connectors shown)



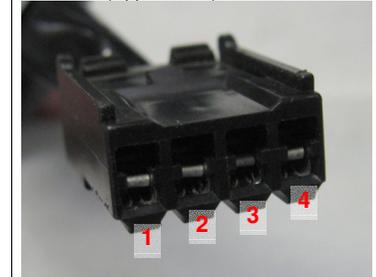
- GND (White-Black)
12V Acc (Grey) From 'Radio' Fuse

14. Stereo Rear Plug



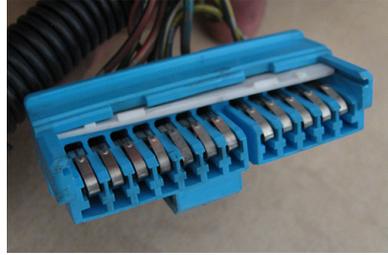
1. Left Speakers (Pink & Dark Pink)
2. Right Speakers (Light Green & Blue)
3. GND (Brown)
4. Park lights lighting signal (Green)
5. 12V Constant from 'Dome' Fuse (Blue-Yellow)
6. 12V Acc From 'Radio' Fuse (Grey)

15. Clock (Upper Dash)



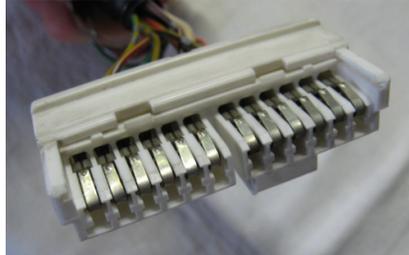
1. Park lights lighting signal (Green)
2. 12V Constant from 'Dome' Fuse (Blue-Yellow)
3. GND (White-Black)
4. 12V Acc (Grey) From 'Radio' Fuse

16. Instrument Cluster



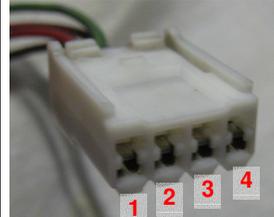
For Connections, See Page 15

17. Instrument Cluster



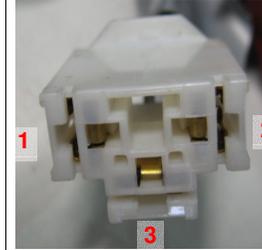
For Connections, See Page 15

18. Instrument Cluster (Boost pressure Gauge (Lo/Hi))



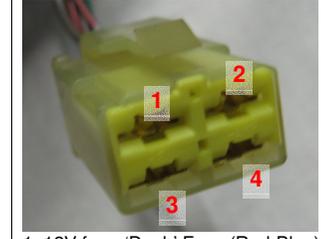
1. From 'Instrument/Dash' Fuse (Red-Blue)
2. Hi/Lo Boost Mode from C-59 (Light Green)
3. Boost Press Signal C-33 (Light Green-Red)
4. GND (Brown)

19. Turn Signal / Indicator Flasher module



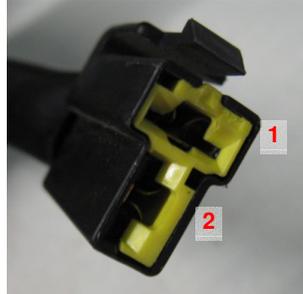
1. GND (White-Black)
2. 'F' C-32 (Light Green)
3. 'TB' C-32 & C-39 (Green-Blue)

20. Relay Light Reminder module



1. 12V from 'Dash' Fuse (Red-Blue)
2. 12V Acc from 'Radio' Fuse (Grey)
3. Park lights lighting signal (Green)
4. Door Switch C-29 (Red-Green)

21. Brake Pedal

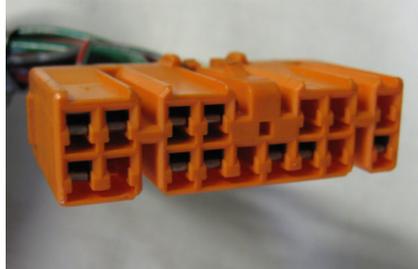


Pedal Switch N/O (Normally Open)

1. 12V from 'Stop Lights' Fuse (Green-Red)
2. To rear of car via C-30 (Green-White)

Pedal Switch N/O (Normally Open)

22. Door Control module



Top Row 1-4 Bottom Row 5-10

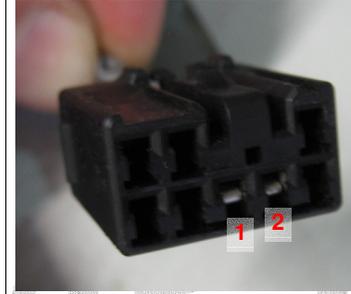
- | | |
|--|---|
| 1. Red-Blue | 2. Red-Green |
| 3. Red (Thicker gauge) | 4. Green (Thick gauge) |
| 5. From Power Window Fuse (Blue Thick gauge) | 6. Green-Red |
| 7. Red-White | 8. Red-Green (From 'Dash' Fuse via Diode) |
| 9. Green (Thick gauge) | 10. GND (White-Black Thick gauge) |

23. RHS Speaker (Cabin)



To C-14
Light Green & Blue

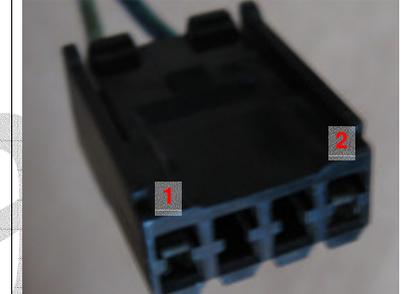
24. Fog Light On/Off Switch



1. To Fog Lights (Red)
2. 'T' C-39 (Green)

Switch N/O (Normally Open)

25. TEMS Switch



1. C-4 Light Green
2. From 'Ignition' Fuse (Blue-Green)

26. Relay (hardwired – no connector) – for power windows



30Amp Fuse :

1. Ignition 'AM1' (White)
2. To C-22 (Blue – Thicker gauge)

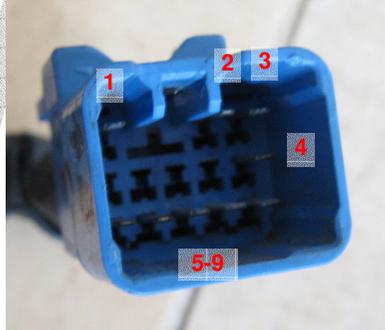
Relay Coil :

3. From C-22 (Blue-Green)
4. GND (White-Black)

Relay Contact Wires :

5. From C-22 (Blue – Thick gauge)
6. From C-27 (Blue-Green – Thick gauge)

27. To Power Windows (Right Door)



1. Blue-Red (Thicker gauge)
 2. White-Black (Thicker gauge)
 3. Green (Thicker gauge)
 4. Blue-Yellow (Thicker gauge)
 5. Green-Red
 6. Red-White
 7. Red (Thicker gauge)
 8. Green (Thicker gauge)
 9. Blue-Green (Thicker gauge)
- All wires to C-22

28. To Power Mirrors (Right Door)



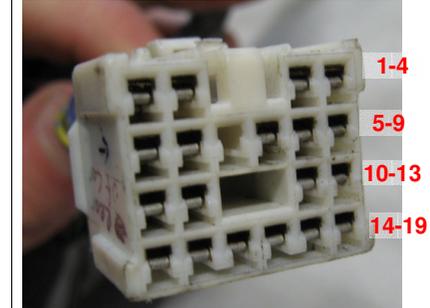
1. Light Green-Black
 2. Blue-Black
 3. Light Green-Red
 4. Light Green-Black
 5. Light Green
- 1,2 to C-31
3,4,5 to C-35

29. Interior Light Door Switch (Right Door)



Light Reminder Module & Dome Light via Diode
To C-20
(Red-Green)

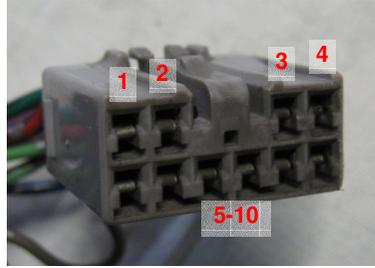
30. To Rear wiring loom



- | | |
|---------------------|------------------|
| 1. Red-Blue | 2. Green-Black |
| 3. Green-Yellow | 4. Green-Yellow |
| 5. Red-Yellow | 6. Yellow-Red |
| 7. Black | 8. Green |
| 9. Green-Red 2 Dot | 10. Blue-White |
| 11. Green-White | 12. Red-Black |
| 13. Blue-Red | 14. Yellow-Black |
| 15. Yellow-Blue | 16. Blue |
| 17. Blue-Black | 18. Blue-Yellow |
| 19. Green-red 1 Dot | |

For Connections, See Page 11

31. Power Window Control buttons



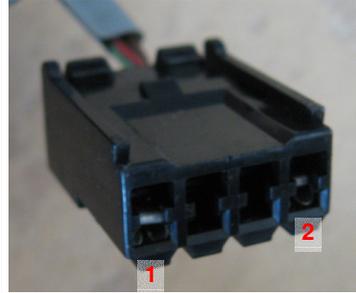
1. Red-Black
2. Light Green
3. Blue
4. Light Green-Black
5. Green-Black
6. Pink
7. Dark Pink
8. From 'Radio' Fuse (Grey)
9. Blue-Yellow
10. Blue-Black

32. Hazard Light Button



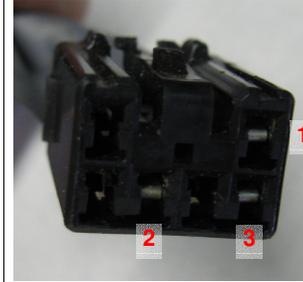
1. Park lights lighting signal (Green)
2. GND (White-Black)
3. 'TL' (Green-Black)
4. 'TR' (Green-Yellow)
5. 'F' (Light Green)
6. 'B2' From 'Haz/Horn' Fuse (Green-White)
7. 'TB' (Green-Blue)
8. 'B1' From 'Turn Signals' Fuse (Red-Blue)

33. Lo/Hi Boost Button



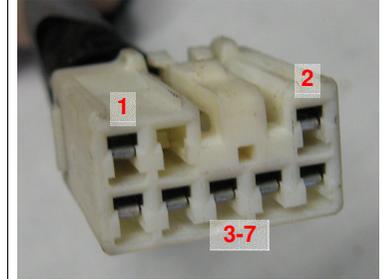
1. GND (Brown)
2. ECU 'BC' (Light Green-Red) & Dash boost indicator via C-18

34. Rear Screen Demister Button



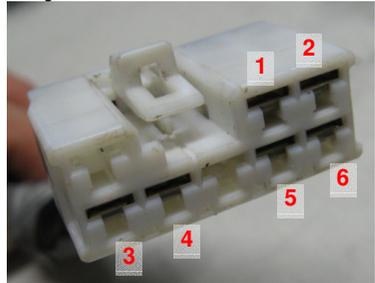
1. GND (White-Black)
2. From 'Rear Demister' Fuse (Light Green)
3. To Demister via C-30 (Black)

35. Power Mirrors adjustment button(s)



1. RHS Mirror (Light Green-Red)
2. GND (White-Black)
3. From 'Radio' Fuse (Grey)
4. RHS Mirror (Light Green-Black)
5. LHS Mirror (Pink-Black)
6. LHS & RHS Mirror (Light Green)
7. LHS Mirror (Pink-White)

36. Ignition Barrel



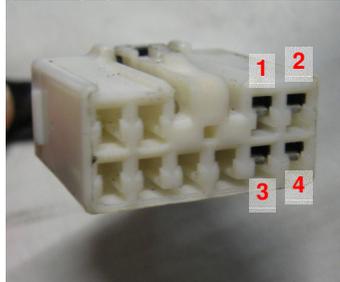
All thick gauge wires lead to Cabin Fuse Box

1. 'AM2' (White-Red)
2. 'IG2' (Black-Red)
3. 'IG1' (Black-Yellow)
4. 'ACC' (Blue-Red)
5. 'AM1' (White)
6. 'ST1' ECU 'NSW' & ECU 'STA' (Black-White)

Missing pin (top left - N/C) is 'ST2'

See Page 11 for Conductions

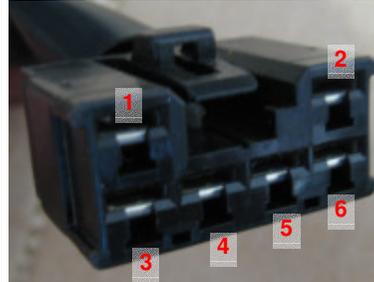
37. Steering column combination switch (Rear Wiper)



1. 'I' C-30 (Blue-Yellow)
2. 'E' GND (White-Black)
3. '+1' C-30 (Blue-Black)
4. 'W' C-95 (Blue-White)

See Page 11 for Conductions

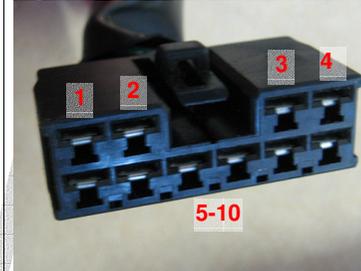
38. Steering column combination switch (Front Wipers)



1. '+1' C-49 (Blue-Black)
2. '+2' C-49 (Blue-Orange)
3. 'EW' GND (White-Black)
4. 'W' C-95 Washer (White-Blue)
5. '+B' C-49 (Blue) From 'Wipers' Fuse
6. '+S' C-49 (Blue-Yellow)

See Page 11 for Conductions

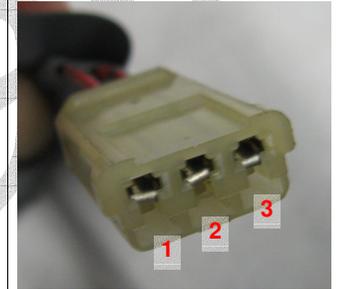
39. Steering column combination switch (Lights & Indicators)



1. 'E' GND (White-Black)
2. 'TL' Turn Signals Left (Green)
3. 'TB' Turn Signals 12V (Green-Blue) from 'Turn Signals' fuse
4. 'TR' Turn Signals Right Green-Yellow (1 Dot)
5. 'HU' Headlights High Beam (Red-Yellow)
6. 'RF' ECU 'ELS' (Red-Green)
7. 'HL' Headlights Low Beam (Red-White)
8. 'TI' To Park Lights (Green)
9. 'BO' From 'Tail Lights' Fuse (Green-White)
10. 'HO' Horn (Green-Yellow 2 Dot) - Horn button shorts this pin to GND

See Page 11 for Conductions

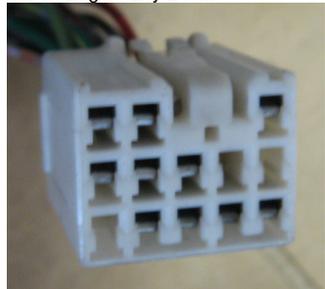
40. Foot/Lower Air Direction Motor



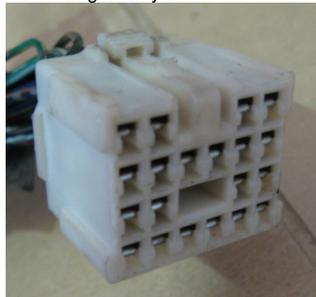
All wires lead to C-48

1. Dark Pink-Green
2. Dark Pink-Red
3. Red-Blue

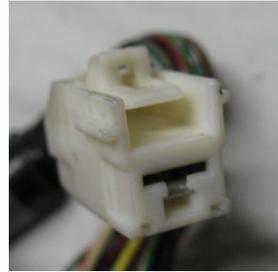
41. To Engine Bay Loom



42. To Engine Bay Loom

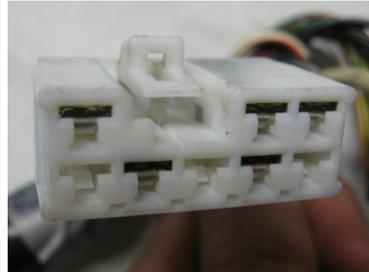


43. To Cabin Fuse Box



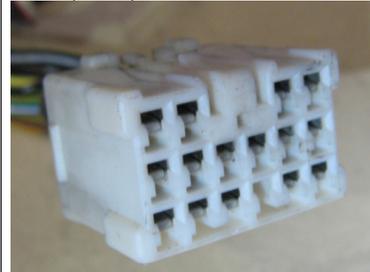
'AM1' Single thick gauge wire – 12V (White)

44. To Cabin Fuse Box



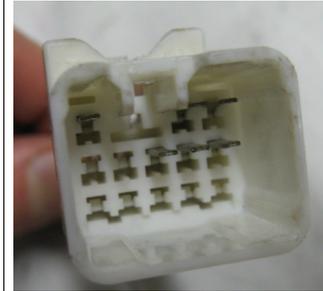
Ignition wiring from Connector 36

45. To (side of) Cabin Fuse Box

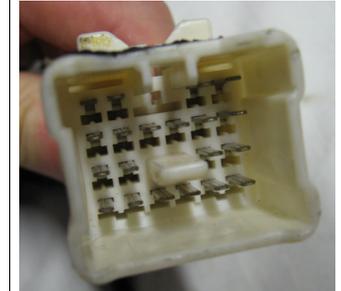


Bypasses fuse box and connects to Cabin loom

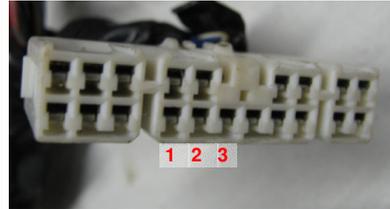
46. To Cabin Loom



47. To Cabin Loom



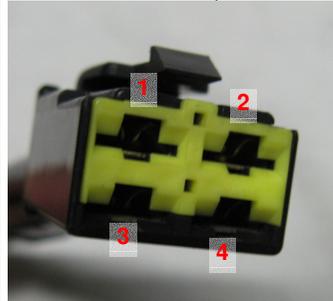
48. HVAC module



1. ECU 'AC2' 2. ECU 'AC1' 3. ECU 'ACT'

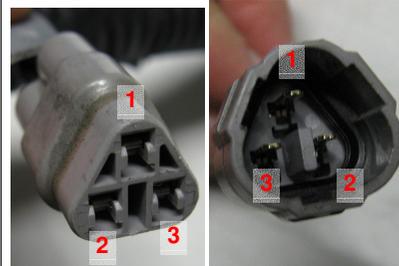
Wires connect to
 C-40 C-51
 C-52 C-68
 C-85 C-90
 C-92

49. Front Windscreen Wiper Motor



1. Blue-Orange (Fast wiper speed)
 2. Blue-Black (Slow wiper speed)
 3. Blue-Yellow (Intermittent/Park)
 4. Blue (12V Constant - From 'Wipers' Fuse)
 All wires to C-38. GND on wiper motor case.

50. Sub-harness connector to sensors (mounted above Ignitor on firewall)



To sensors C-51 & C52
 Green ----- 1 --- Green-Blue
 Black ----- 2 --- Black-Yellow
 Grey ----- 3 --- Green-Red

51. RHS Sensor above Ignitor (Vacuum switch valve) Used by HVAC module



1. GND (Black-Yellow)
 2. To HVAC Module C-48 (Green-Blue)

52. LHS Sensor above Ignitor (Idle up Valve) Used by HVAC module

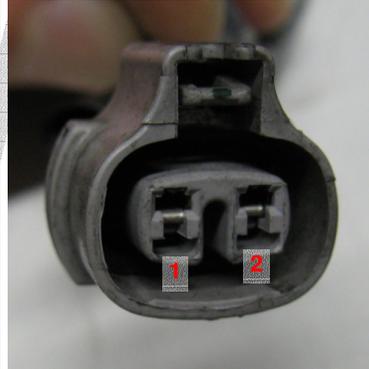


1. GND (Black-Yellow)
 2. To HVAC Module C-48 (Green-Red)

53. Diagnostics Port (hardwired – no connector) For Connections, See Page 11



54. Reverse Switch on gearbox



1. To Reverse Light (Red-Black)
 2. 12V from 'Instrument/Dash Cluster' fuse (Red-Blue)

55. Ignitor



1. ECU 'IGF' (Grey-Black)
 2. ECU 'IGT' (Light Green-White)
 3. 'IG2' Ignition (Black-Red)
 4. Diagnostics Socket 'IG-' (Black)
 5. Pin 2 on Coil C-56 (Black-White)

56. Coil (Under Ignitor)



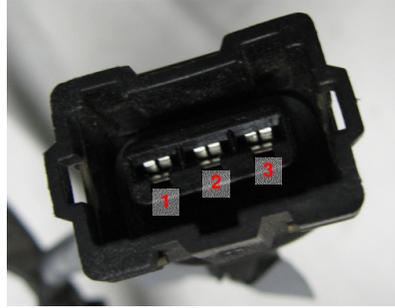
1. 'IG2' Ignition (Black-Red)
 2. Pin 5 on Ignitor C-55 (Black-White)

57. Unknown



1. 'IG2' Ignition (Black-Red)
 2. ECU CON-2 'IPV' (White-Black)
 'IPV' is Vacuum Switching Valve on Gen2 EP82 models (unused on Gen 1 EP82)

58. Throttle Position Sensor



- 1. ECU 'IDL' (Yellow-Red)
- 2. ECU 'E2' (GND - Brown)
- 3. ECU 'PSW' (Yellow-Green)

59. Boost Pressure / MAP Sensor



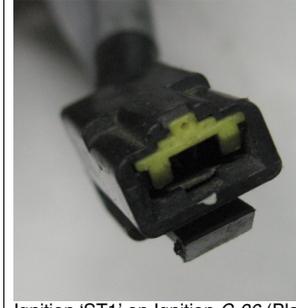
- 1. ECU 'E2' (Brown)
- 2. ECU 'PIM' (Green)
- 3. ECU 'VCC' (Green-Red)

60. Starter Motor Solenoid (Main Voltage)



Single black wire (heavy gauge) – connected directly to Battery

61. Starter Motor Solenoid (Trigger)



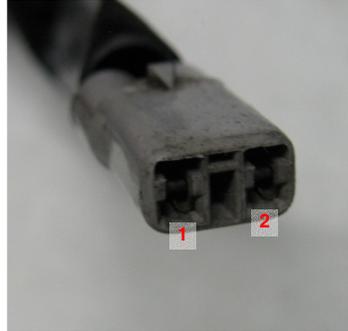
Ignition 'ST1' on Ignition C-36 (Black-White)

62. Alternator



- 1. From 'Instrument/Dash Cluster' Fuse (Red-Black)
- 2. Connection to Battery via AM1 fuse (White)
- 3. To C-17 A4 Battery Light in instrument cluster (Yellow-Black)
- 4. Connection to Battery via AM1 fuse (White)

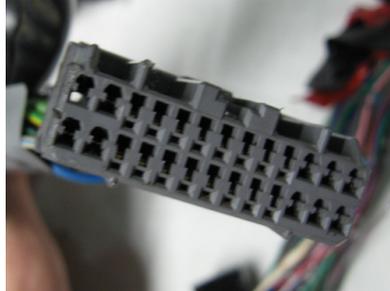
63. Unknown



Same wires as C-82

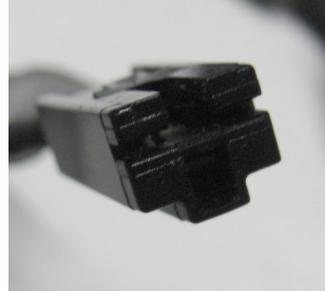
- 1. Green-Red
- 2. Green-Yellow (To Rear of Car C-30)

64. ECU



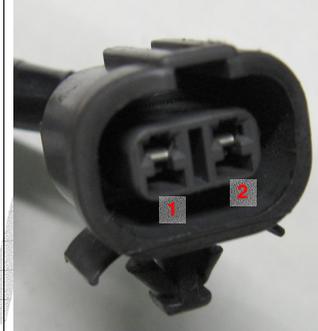
Connector CON-1

65. Oil Pressure Sensor



Single wire (Yellow)
Connects to Instrument cluster C-17 A8

66. Cat Converter Overheat sensor



- 1. ECU CON-2 Pin 3 'CCO?' (Grey-Green)
- 2. Ground (Brown)

67. Oxygen Sensor



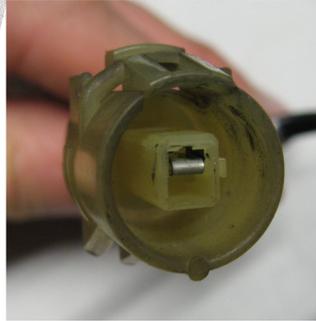
ECU 'OX' (White)

68. Coolant Sensor (To HVAC module)



Connector on short (10cm) sub-harness
Wire in White in sub-harness;
Blue-Yellow in main loom
To HVAC module C-48

69. Coolant Switch – For Radiator Thermofan



To C-85 (Light Green)
Temperature Switch Normally Closed (N/C)

70. Coolant Temperature Sensor (To Instrument cluster temperature gauge)



To Instrument cluster C-17 A12 (Yellow-Green)

71. Coolant Temperature Sensor (To ECU)



- 1. GND – ECU 'E2' (Brown)
- 2. ECU 'THW' (Green-Black)

72. Distributor



- 1. ECU 'NE' (White-Blue)
- 2. ECU 'G1' (Orange-Blue)
- 3. ECU 'G2' (Blue-Green)
- 4. ECU 'G-' (Blue-Yellow)

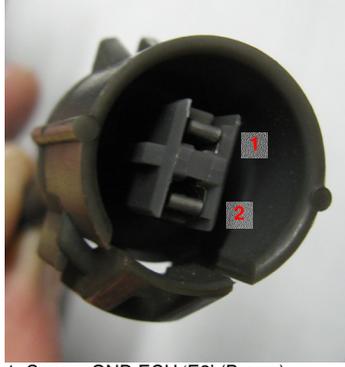


73-76. Injectors



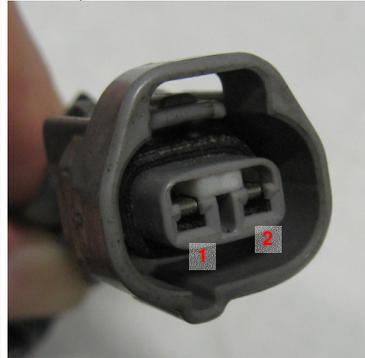
1. Injector 1 & 3 ECU '#10' (Green)
Injector 2 & 4 ECU '#20' (Yellow)
2. Ignition IG2 (Black-Red)

77. Inlet Manifold Temperature Sensor



1. Sensor GND ECU 'E2' (Brown)
2. ECU 'THA' (Light Green-Black)

78. Idle Adjust Valve (mounted to side on inlet manifold)



1. ECU 'DISC' (Pink-Black)
2. 12V via EFI Relay (Black-Red)

79. Vacuum Solenoid Valve (Controls pressure to wastegate actuator)



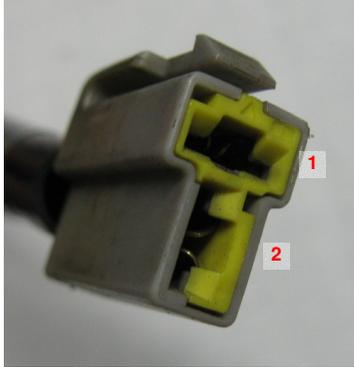
1. 12V via EFI Relay (Black-Red)
2. ECU 'VSV1' (Pink-White)

80. Knock Sensor (Rear of block)



- ECU 'KNK' (Black)

81. Low Level Brake Fluid Reservoir Switch



1. Instrument cluster C-17 A3 (Yellow-Red)
2. GND (White-Black)
N/O circuit. At low fluid level, circuit is shorted.

82. Unknown (in front of brake fluid reservoir)



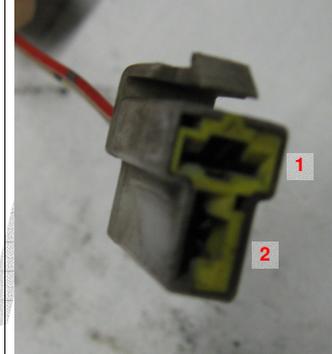
- Same wires as C-63
1. Green-Yellow
 2. Green-Red

83. FL Indicator



1. GND (White-Black)
2. 'TL' (Green-Black)

84. FL Foglight

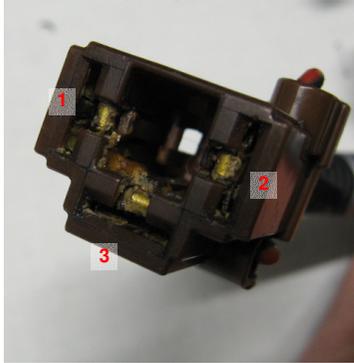


1. 12V From Fog Light Switch (Red)
2. GND (White-Black)

85. A/C Pressure Switch

Mounted in A/C Piping (no connectors shown).
Switch Normally Closed (N/C)
Light Green – C-69 (Coolant Sensor)
Light Green-Red – to 'Cooling Fan' relay, 'A/C Fan No. 2' relay & HVAC Module C-48

86. FL Main Light/High Beam



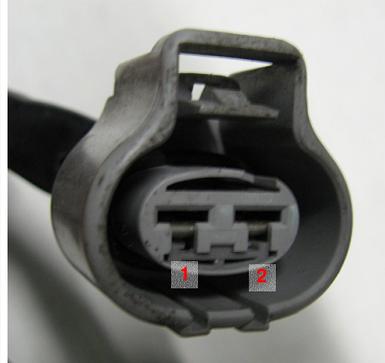
1. From 'Headlights Left' Fuse (Red)
2. 'HU' High Beam (Red-Yellow)
3. 'HL' Low Beam (Red-White)

87. FL Park Light



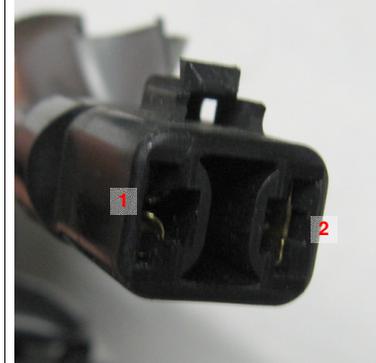
1. GND (White-Black)
2. Lights Signal (Green)

88. Radiator Fan



1. GND (White-Black)
2. 12V from 'Cooling Fan' or 'A/C Fan No.2' Relay (Blue-Black)

89. A/C Condenser Fan

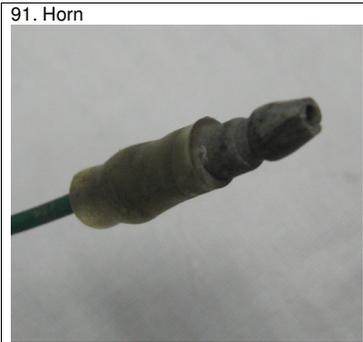


1. To 'A/C Fan No. 2' relay (Blue-White)
2. To 'Cooler Fan' relay (Blue)

90. Ambient Temperature Sensor (To HVAC module)

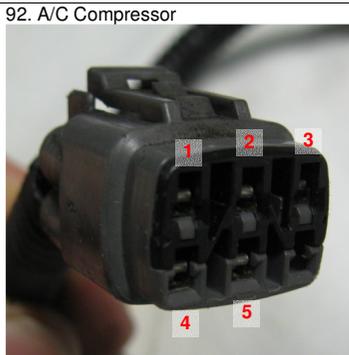


1. White-Green
 2. Green-Yellow
- To HVAC module C-48



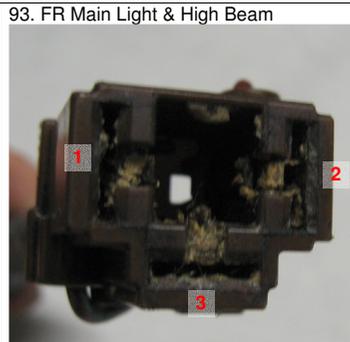
91. Horn

From 'Horn Relay' (Green-Red)



92. A/C Compressor

- 1. Black-Red
 - 2. Blue-Black
 - 3. Green-Red
 - 4. Yellow-red
 - 5. White-Yellow
- All wires to HVAC module C-48



93. FR Main Light & High Beam

- 1. From 'Headlights Right' Fuse (Red-Green)
- 2. 'HU' High Beam (Red-Yellow)
- 3. 'HL' Low Beam (Red-White)



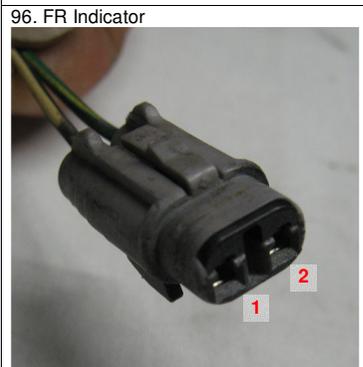
94. FR Park Light

- 1. GND (White-Black)
- 2. Lights Signal (Green)



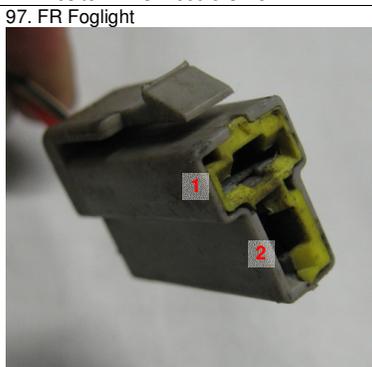
95. Windscreen Washer Pump

- 1. Rear Washer To C-37 (Blue-White)
- 2. Front Washer To C-38 (White-Blue)
- 3. 12V Constant - From 'Wipers' Fuse (Blue)



96. FR Indicator

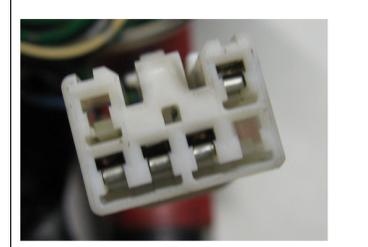
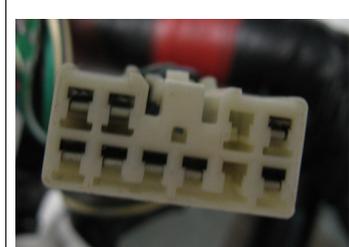
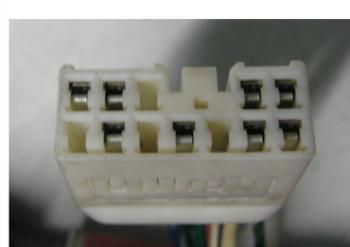
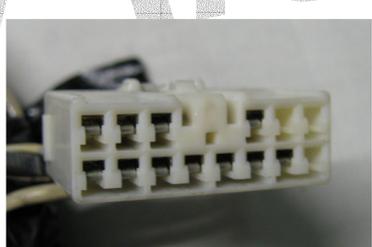
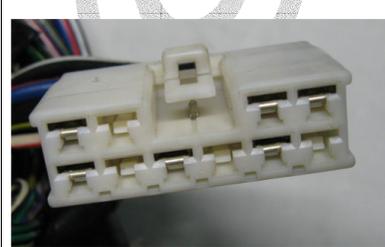
- 1. GND (White-Black)
- 2. 'TR' (Green-Black)



97. FR Foglight

- 1. 12V From Fog Light Switch (Red)
- 2. GND (White-Black)

Connectors plugged into the base of Cream-coloured Cabin Fuse Box



Connector Pinouts & Conduction Details

Conduction Code Legend :

B1	Battery Source 1
B2	Battery Source 2
F	Flasher
TB	Turn Signal Battery / Power
TL	Turn Left Signals
TR	Turn Right Signals
B / BI / +B	Battery (12V)
E / EW	Earth/Ground
HL	Headlight – Low Beam
HU	Headlight – Upper/High Beam
RF	Signal to ECU ('ELS')
TI	Taillights (and front Park lights)
+S	Wiper Park/Intermittent
+1	Slow/Low Wiper Speed
+2	Fast/High Wiper Speed
W	Washer Pump

Diagnostics Connector 53 :

Pin	Wire Colour	Connection / Function
F _P	Blue-White	12V to Fuel Pump
CC _O	Grey-Green	ECU 'CCO'
+B	Black-Red	12V (via EFI relay)
W	N/C	-
T _{E1}	Green-Blue	ECU 'T'
T _{E2}	N/C	-
V _{F1}	Green-Yellow	ECU 'VF'
V _{F2}	N/C	-
E ₁	Brown	ECU 'E1' (Ground)
OX ₁	White	ECU 'OX' (Oxygen Sensor)
OX ₂	N/C	-
IG-	Black	Ignitor Connector 55, Pin 4
AB	N/C	-
CC ₂	N/C	-
T _S	Red-Blue	Not Connected to anything
O _{PT}	Red-Yellow	To HVAC module
T _C	Red-Black	Not Connected to anything
T _T	N/C	-

Connector 30 :

Pin	Wire Colour	Function
1	Red-Blue	From 'Instrument/Dash' Fuse
2	Green-Black	Left Indicator 'TL'
3	Green-Yellow	Right Indicator 'TR'
4	Green-Yellow	Unknown – From C-63 & C-82
5	Red-Yellow	N/C to Engine Bay Loom
6	Yellow-Red	Handbrake Ground
7	Black	Demister Power
8	Green	Rear Park Lights 'T'
9	Green-Red (2Dot)	Unknown – From C-63 & C-82
10	Blue-White	Fuel Pump
11	Green-White	Rear Brake Lights
12	Red-Black	Reverse Light
13	Blue-Red	N/C to Engine Bay Loom
14	Yellow-Black	Low Fuel Warning Signal
15	Yellow-Blue	Fuel Level Signal
16	Blue	Rear wiper power
17	Blue-Black	Rear Wiper – Slow speed
18	Blue-Yellow	Rear Wiper – Intermittent
19	Green-Red (1Dot)	N/C to Engine Bay Loom

○—○ : Conduction between pins

Connector 32 : Hazard Switch

Pin →	8	6	5	7	3	4
Switch Position ↓	B1	B2	F	TB	TL	TR
OFF	○—○	○—○				
ON		○—○	○—○	○—○	○—○	

Connector 36 : Ignition

Pin →	5	4	3	6	1	2
Key Position ↓	AM1	ACC	IG1	ST1	AM2	IG2
LOCK						
ACC	○—○	○—○				
ON	○—○	○—○	○—○		○—○	○—○
START	○—○	○—○	○—○	○—○	○—○	○—○

Connector 37 : Rear Wiper

Pin →	2	1	3	4
Switch Position ↓	E	I	+1	W
OFF				
INT	○—○			
ON	○—○	○—○	○—○	
WASH	○—○	○—○	○—○	○—○

Connector 38 : Front Wipers

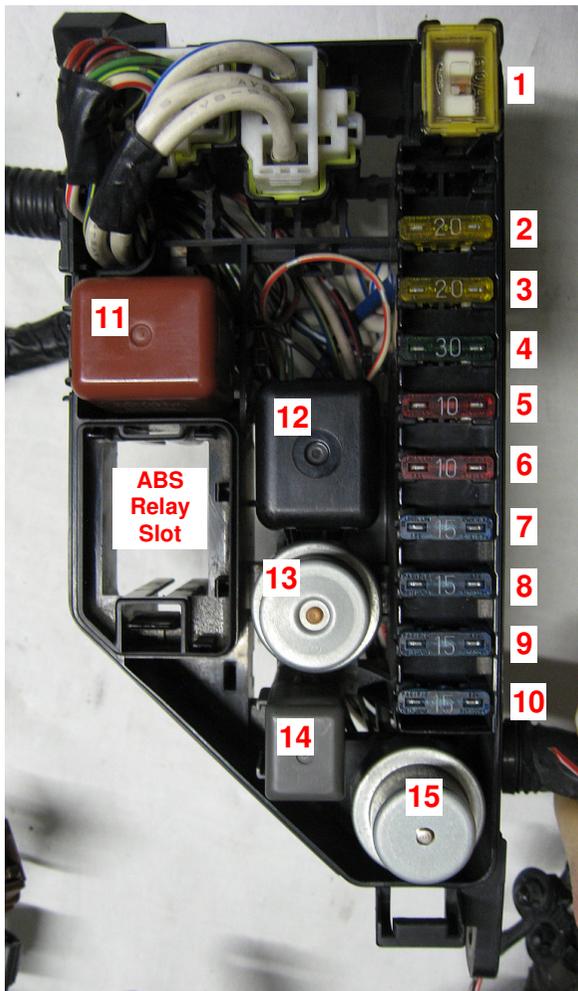
Pin →	5	6	1	2	3	4
Switch Position ↓	+B	+S	+1	+2	EW	W
INT		○—○				
LOW	○—○	○—○				
HIGH	○—○	○—○	○—○			
WASH					○—○	○—○

Connector 39 : Lights & Indicators

Pin →		9	8	6	1	5	7
Switch Position ↓		BI	TI	RF	E	HU	HL
OFF							
High Beam Flash/Pass					○—○		
Park Lights			○—○	○—○			
High Beam Flash/Pass			○—○	○—○	○—○	○—○	
Main Lights			○—○	○—○	○—○	○—○	○—○
High Beam Flash/Pass			○—○	○—○	○—○	○—○	○—○

Connector 39 : Turn Signals

Pin →	2	3	4
Switch Position ↓	TL	TB	TR
LEFT	○—○		
OFF			
RIGHT		○—○	



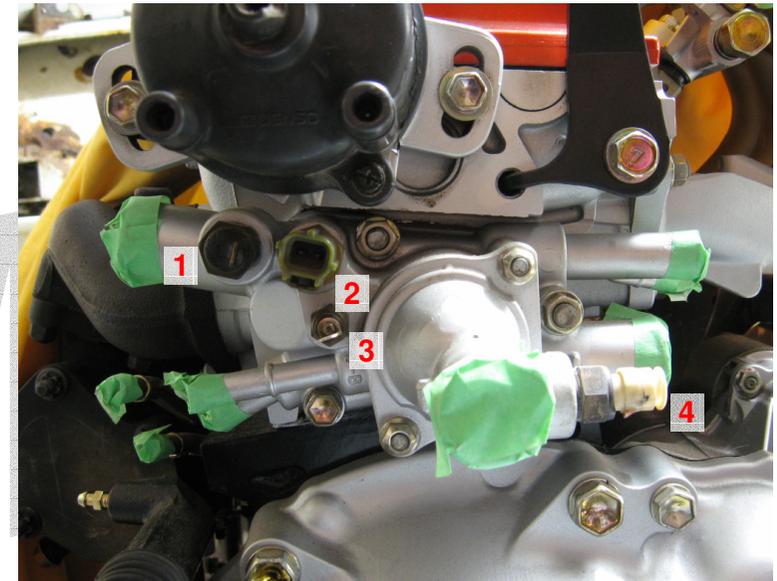
Engine Bay Fuse Box

1	AM1	60A
2	A/C Condenser Fan (CDS)	20A
3	Radiator Fan	20A
4	Heater	30A
5	Headlights (Left)	10A
6	Headlights (Right)	10A
7	Interior Dome Light	20A
8	AM2	15A
9	Hazard/Horn	15A
10	EFI	15A
11	Main Relay	-
12	'Cooler' Relay	-
13	EFI Relay	-
14	Horn Relay	-
15	'Cooling Fan' Relay	-



Cabin Fuse Box

1	Radio	10A
2	Tail Lights	15A
3	Stop Lights	10A
4	N/C	-
5	Rear Demister	30A
6	Wipers	20A
7	Turn Signals	7.5A
8	A/C	10A
9	Instrument/Dash Cluster	7.5A
10	Ignition	15A

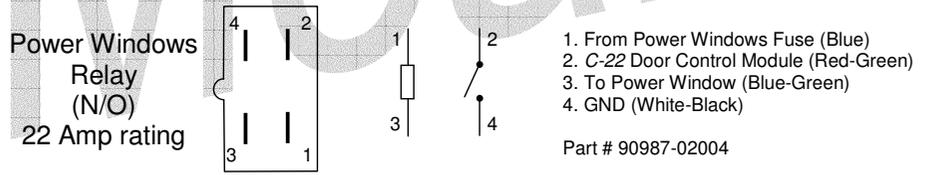
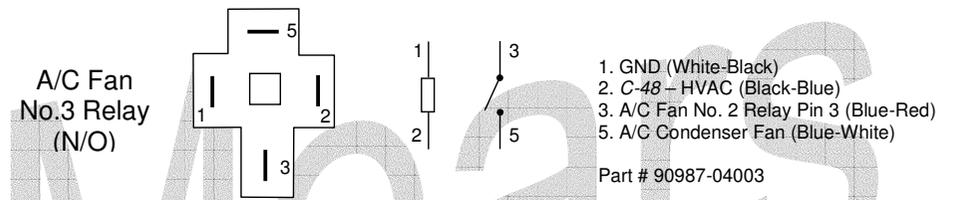
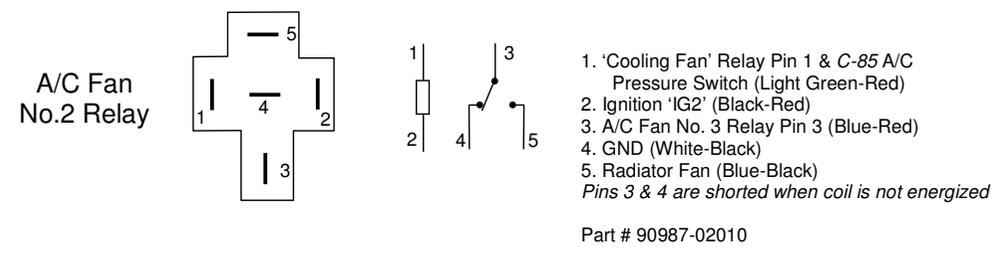
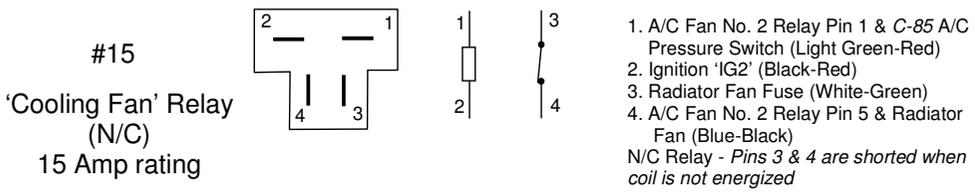
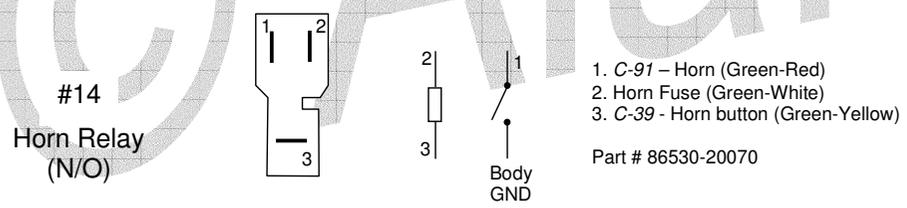
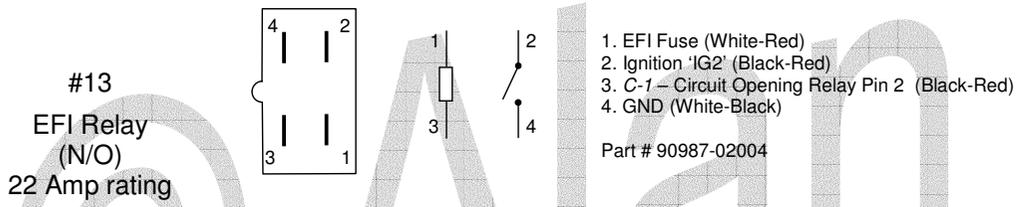
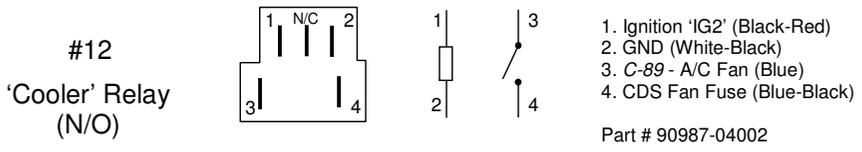
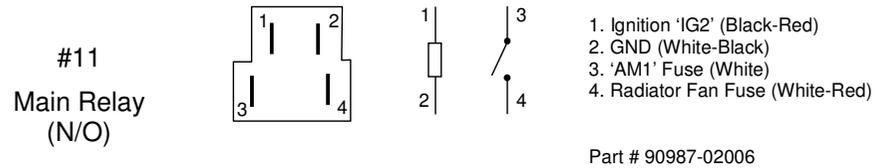


Sensors/Switches relating to coolant around thermostat housing :

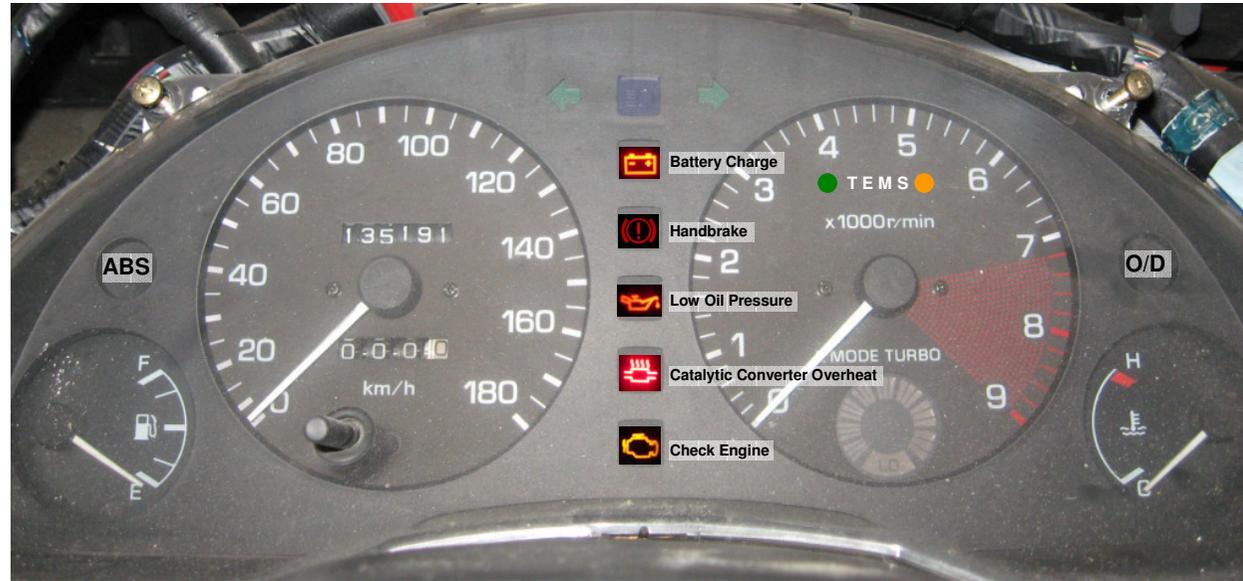
- 1 – Connector 68. To HVAC Module
- 2 – Connector 71. To ECU
- 3 – Connector 70. To Dash Gauge
- 4 – Connector 69. Temperature Switch for Radiator Fan

Radiator Fan Switch (4) has internal switch :
 Conduction when Coolant < 93°C
 No Conduction when Coolant > 93°C

Relay Connection & Pin Details

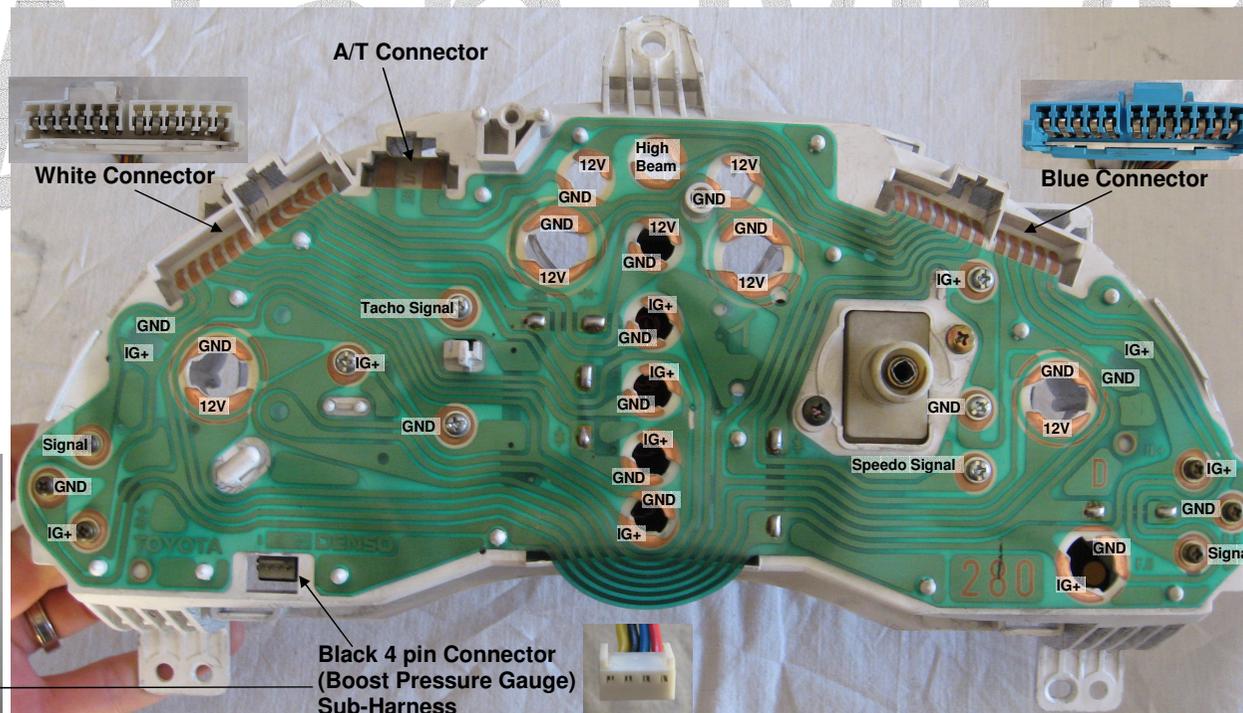


N.B. Diagrams are of relay plugs as viewed from above fuse box, not underside of actual relays

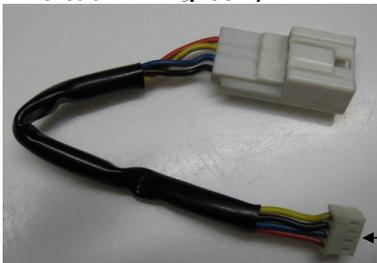


Note : photos are from 1991 (Gen 1) M/T 4E-FTE with no ABS or TEMS

ABS, TEMS & A/T Overdrive LED/light locations have been indicated



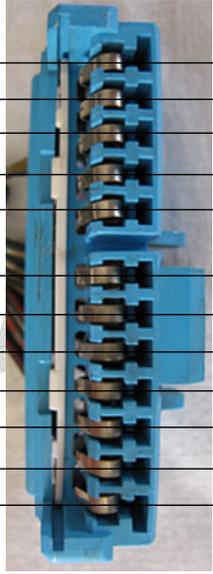
Boost Pressure Gauge Sub-Harness (connects between instrument cluster & cabin wiring loom)



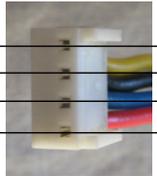
Instrument/Gauge cluster wiring



- Lights (Positive) — A1 Green 'T'
- Battery Charge (Positive) — A2 Black-Red 'IG2'
- Handbrake Light (Ground) — A3 Yellow-Red
- Battery Light (Ground) from Alternator — A4 Mustard-Black (1 Silver dot on wire)
- TEMS 'N' (Power) — A5 Pink-White
- Tacho Signal (IG-) — A6 White
- TEMS 'S' (Power) — A7 Pink-Black
- Oil Pressure Light (Ground) — A8 Mustard
- Cat Converter Overheat (Ground) — A9 Grey-Black (ECU Pin 'EGW')
- Engine Check Light (Ground) — A10 Green-White (ECU Pin 'W')
- O/D OFF (Ground) — A11 Red-Yellow
- Temperature Gauge Signal — A12 Yellow-Green

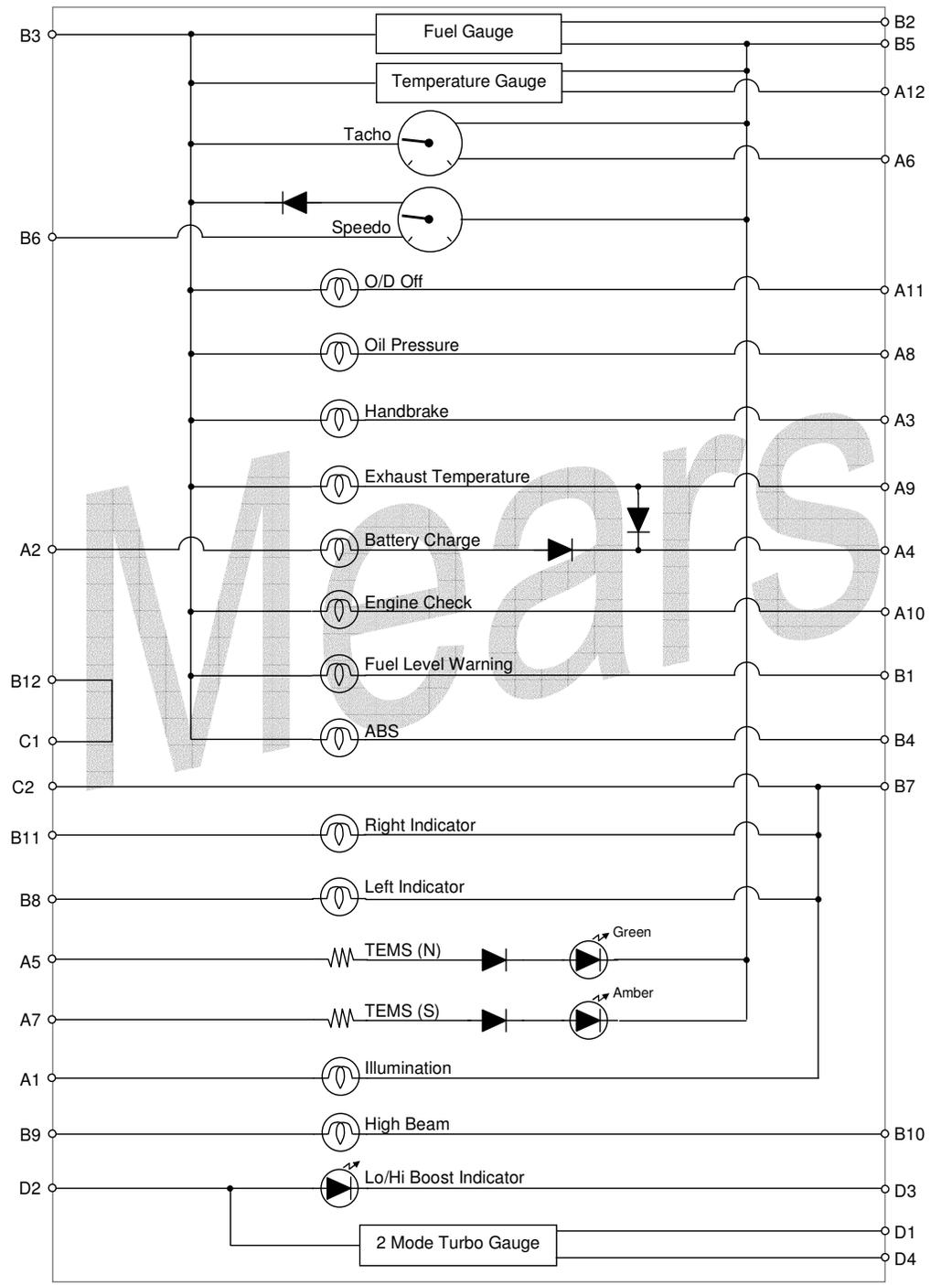


- Fuel Level Warning Light (Ground) — B1 Mustard-Black (2 Silver dots on wire)
- Fuel Level Gauge Signal — B2 Mustard-Blue
- Ignition (From 'Dash' Fuse) — B3 Red-Blue
- ABS (Ground) — B4 Red-Yellow (2 Silver dots on wire)
- Ground (Gauges only) — B5 Brown
- Speedo Signal — B6 Yellow-Blue (ECU Pin 'SPD')
- Ground (Indicators & Lights) — B7 White-Black
- LHS Indicator (Power) — B8 Green-Black
- High Beam 12V (From 'H/Lights Right' Fuse) — B9 Red-Green
- High Beam (Ground) — B10 Red-Yellow (1 Silver dot on wire) 'HU'
- RHS Indicator (Power) — B11 Green-Yellow
- A/T Reverse — B12 Red-Black

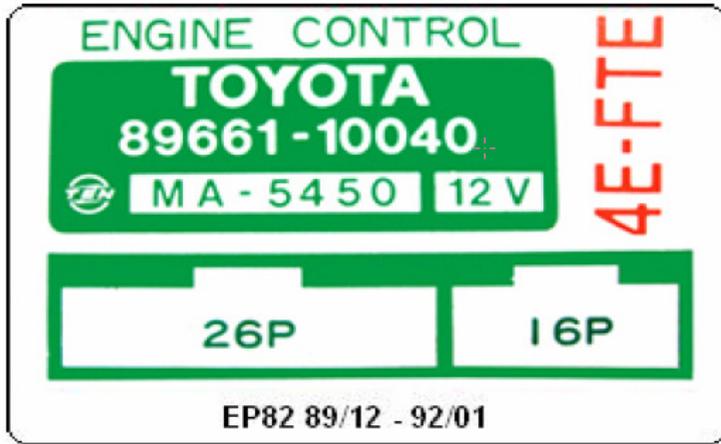


- 2 Mode (Lo/Hi Boost) — D1 Yellow
- Ground — D2 Black
- Signal — D3 Blue
- Ignition (IG+) — D4 Red

Automatic Transmission Connector – C1 & C2



NOTE : The details on this page have been sourced from publicly accessible PDF detailing all EP82 & EP91 ECU's and pinouts <http://street-legal-starlet.nl/Sagittarius/ecu's.pdf>. The details are copyrighted to StreetLegalStarlet forums <http://www.street-legal-starlet.nl/forum/>, documented by Sagittarius®. These details are taken as a screenshot of the single PDF page relating to the Gen1 (Dec 1989 – Jan 1992) EP82 Toyota Starlet GT. ECU details for later models can be obtained from the PDF.



Green Sticker
P/N: 89661-10040
MA - 5450

EP82 AT + MT (both same ecu)
(89/12 - 92/01)

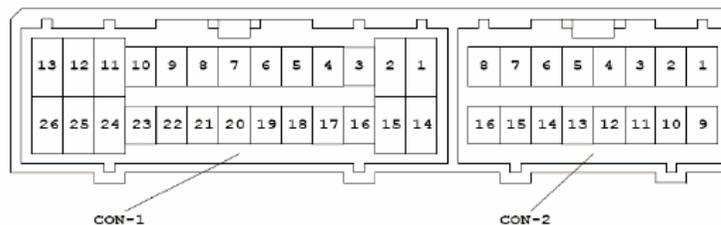
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All pinouts archived and checked with the original ecu's by Sagittarius®

E01	#10	STA	OX	G-	G1	IGF	IGT	THA	PIM	THW	NSW	
E02	#20	E1	KNK	E21	NE	G2	IDL	VC	PSW	E2	VSV1	DISC

T	BC	AC2	ELS	FC	CCO	BATT	+B1
VF	AC1	ACT	SPD		EGW	W	+B

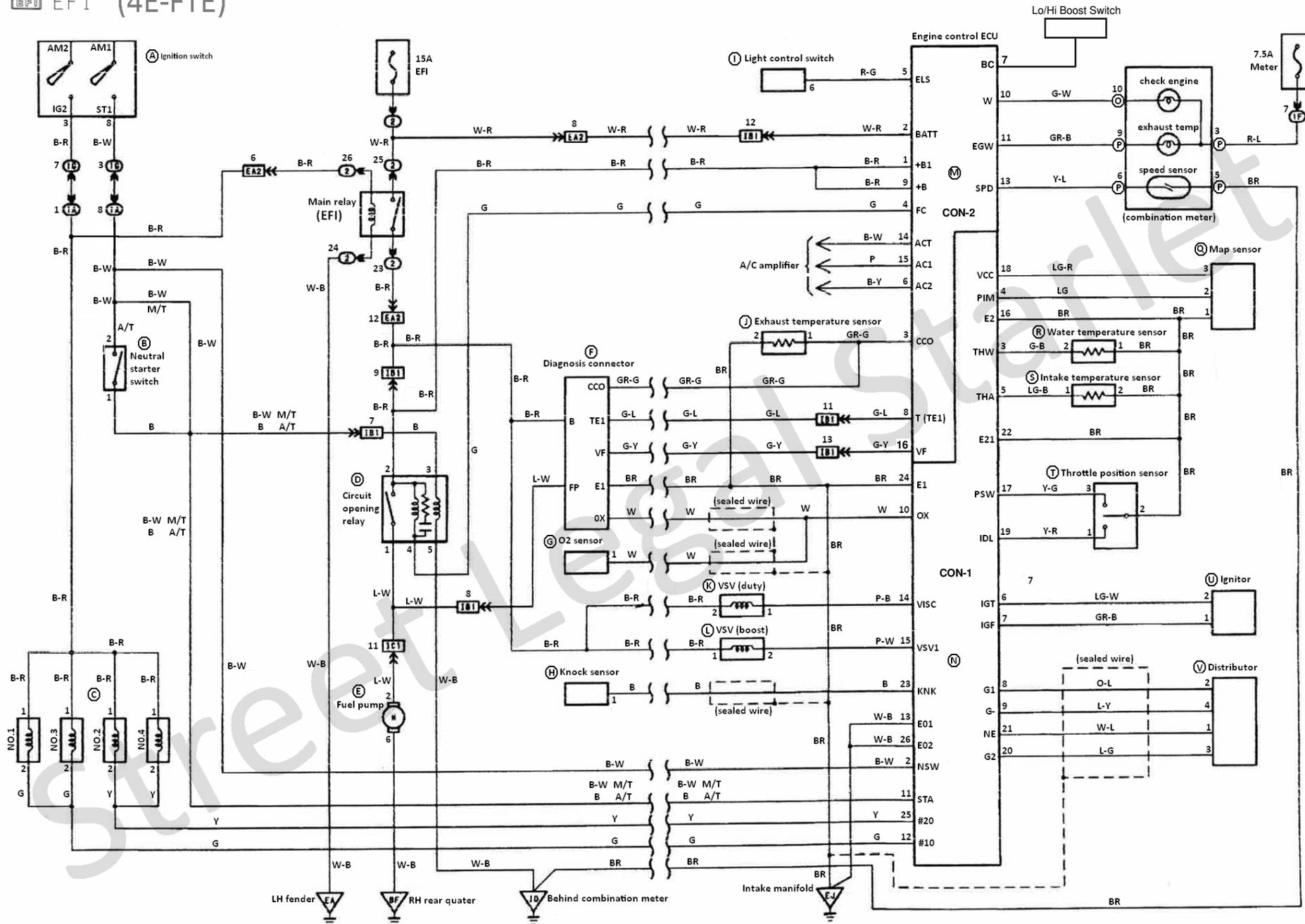
Connector 1		
pin	name	function
1	---	---
2	NSW	Neutral Starter Switch
3	THW	Water temp signal
4	PIM	Pressure Intake Manifold (boost or vacuum)
5	THA	Intake Air temp
6	IGT	Ignition Timing
7	IGF	Ignition Feedback
8	G1	Distributor
9	G-	Distributor Crank Angle
10	OX	Oxygen sensor (lambda)
11	STA	Engine Cranking Signal (starter switch)
12	#10	Injector signal 1+3
13	E01	Computer Ground
14	DISC	Aux. Control Valve or Idle-Up System Vacuum Switching Valve
15	VSV1	Air Control Vacuum Switching Valve (hi-lo boost solenoid)
16	E2	Sensor Ground
17	PSW	Throttle Position Sensor (VTA = PSW)
18	VC	Throttle Position Sensor (pin 1) (also known as VCC)
19	IDL	Throttle Position Sensor (Signals ECU throttle position is at idle)
20	G2	Distributor
21	NE	Part of the IIA (Intergrated Ignition Assembly) (RPM)
22	E21	Sensor Ground
23	KNK	Knock Sensor
24	E1	Computer Ground
25	#20	Injector signal 2+4
26	E02	Computer Ground

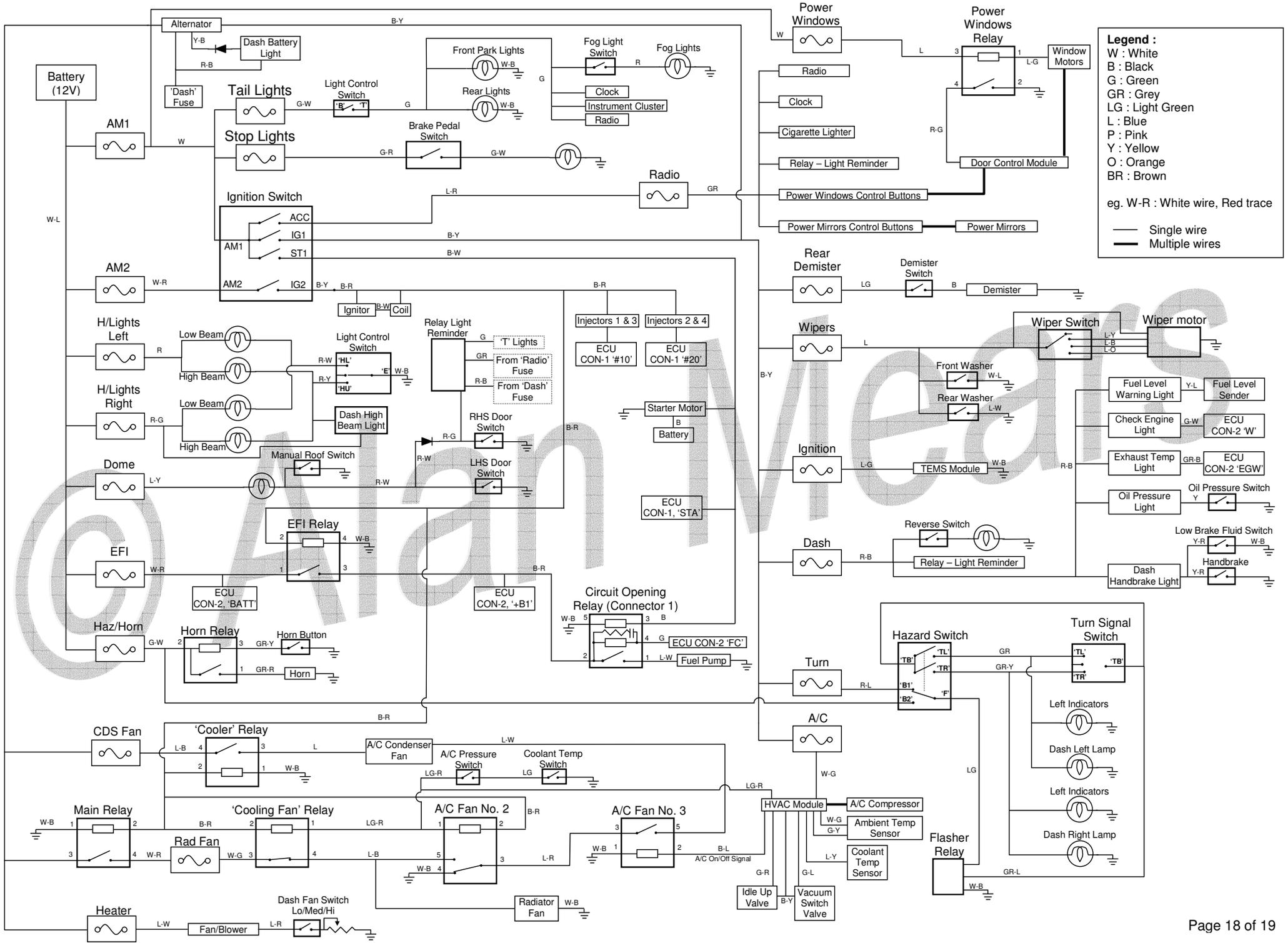
Connector 2		
pin	name	function
1	+B1	Switched Battery Power (12V)
2	BATT	Switched Battery Power (+12V) (EFI Main Relay)
3	CCO	Check Connector Outputs
4	FC	Circuit Opening Relay (Fuel Cut)
5	ELS	Electrical Load Signal System Taillight Relay
6	AC2	12V To Aircon Computer
7	BC	Boost Control
8	T	Check Connector (Same as TE1)
9	+B	Switched Battery Power (12V)
10	W	Warning Light
11	EGW	Catalytic Converter Temperature Warning Light (Combination Meter)
12	---	---
13	SPD	Speed Signal
14	ACT	A/C Cut Control System
15	AC1	A/C Switch Signal System (12V to Aircon Computer)
16	VF	Check Connector Outputs



NOTE : The details on this page have been sourced from publicly accessible JPG detailing the EP82 (Zenki) ECU wiring diagram. The original JPG is copyrighted to StreetLegalStarlet forums <http://street-legal-starlet.nl/Sagittarius/Wiring/SLS%20-%20EP82%20Wiring%20diagram%20%28zenki%29.jpg>. Corrections made to the original JPG : 'VF' Pin number corrected from CON-1 Pin 15 to 16; CON-2 Pin 7 'BC' added; Coil input for Main EFI relay moved from 'ST1' to 'IG2' line

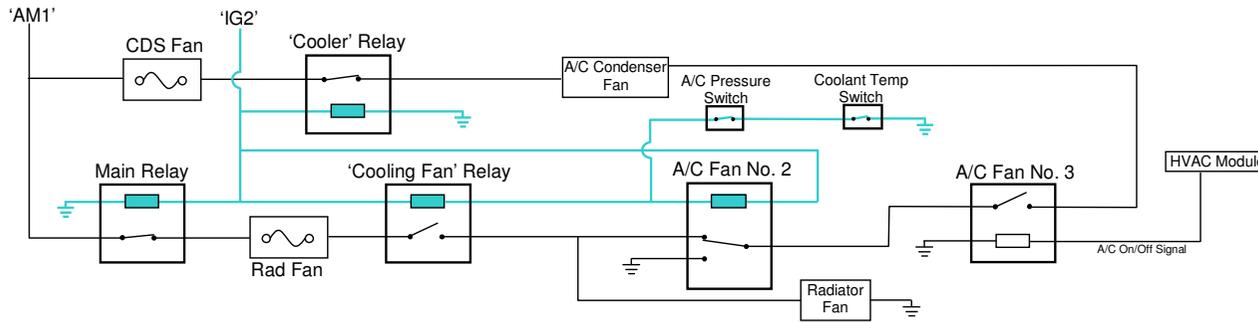
EFI (4E-FTE)





A/C Condenser Fan & Radiator Fan Relay Configurations

This page details the current flow through the relay coils and switches in various configurations

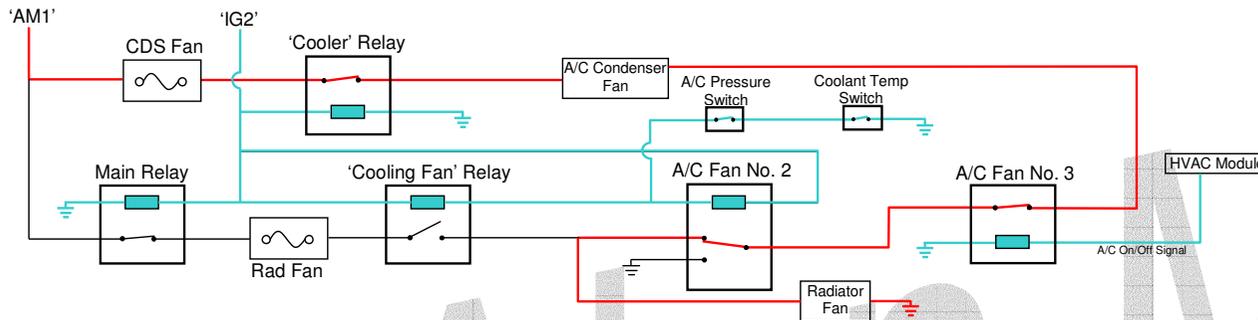


Legend :

- █ Coil Energised
- Current Flow through relay coils
- Current Flow through relay contacts

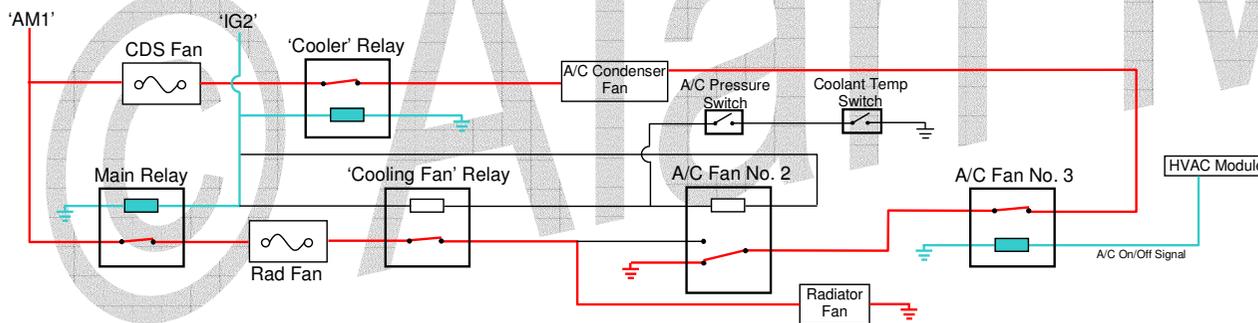
- Ignition On
- A/C Off
- Normal Coolant Temperature
- Normal A/C Pressure

No fans running



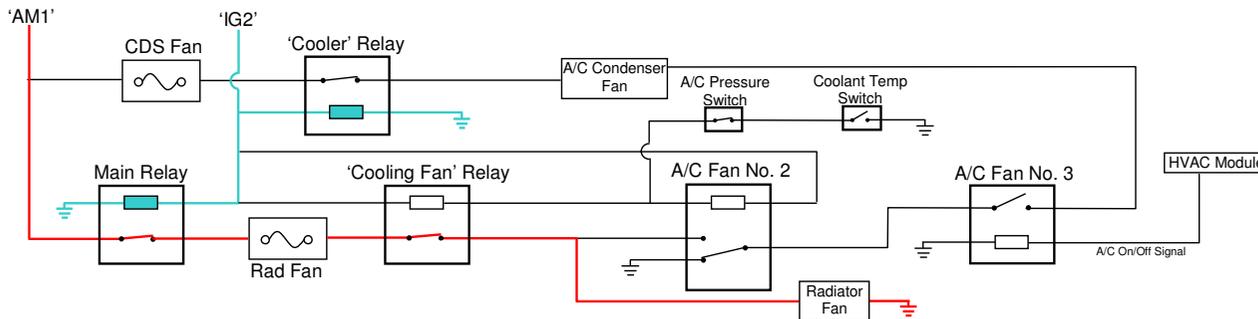
- Ignition On
- A/C On
- Normal Coolant Temperature
- Normal A/C Pressure

Both fans powered in series and both run at low speed



- Ignition On
- A/C On
- High Coolant Temperature or High A/C Pressure

Fans powered in parallel through separate fuses and run at high (full) speed



- Ignition On
- A/C Off
- High Coolant Temperature
- Normal A/C Pressure

A/C Condenser fan not running. Radiator Fan runs as high (full) speed