This manual provides information on the electrical circuits installed on vehicles by dividing them into a circuit for each system.

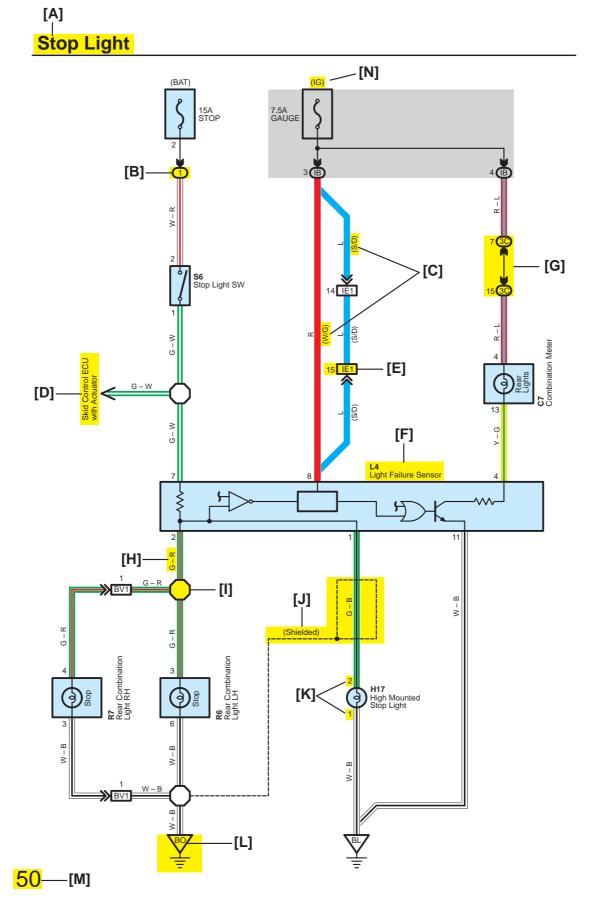
The actual wiring of each system circuit is shown from the point where the power source is received from the battery as far as each ground point. (All circuit diagrams are shown with the switches in the OFF position.)

When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Point section). See the System Outline to understand the circuit operation.

When the circuit operation is understood, begin troubleshooting of the problem circuit to isolate the cause. Use Relay Location and Electrical Wiring Routing sections to find each part, junction block and wiring harness connectors, wiring harness and wiring harness connectors and ground points of each system circuit. Internal wiring for each junction block is also provided for better understanding of connection within a junction block.

Wiring related to each system is indicated in each system circuit by arrows (from\_\_\_, to\_\_\_). When overall connections are required, see the Overall Electrical Wiring Diagram at the end of this manual.

\* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.



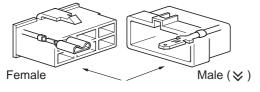
В

- [A] : System Title
- [B] : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B

Example: 1 Indicates Relay Block No.1

- [C] : ( ) is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.
- [D] : Indicates related system.
- [E] : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows ( ≥ ).

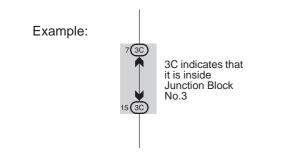
Outside numerals are pin numbers.



The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

When more than one code has the first and second letters in common, followed by numbers (e.g, IH1, IH2), this indicates the same type of wiring harness and wiring harness connector.

- [F] : Represents a part (all parts are shown in sky blue). The code is the same as the code used in parts position.
- **[G]** : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts.

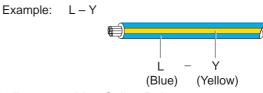


[H] : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

В	= Black	W	= White	BR = Brown
L	= Blue	V	= Violet	SB = Sky Blue
R	= Red	G	= Green	LG = Light Green
Ρ	= Pink	Υ	= Yellow	GR = Gray
0	= Orange			

The first letter indicates the basic wire color and the second letter indicates the color of the stripe.



[I] : Indicates a wiring Splice Point

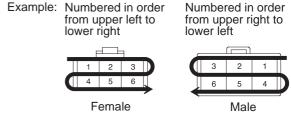
Example:



[J] : Indicates a shielded cable.



[K] : Indicates the pin number of the connector. The numbering system is different for female and male connectors.



[L] : Indicates a ground point.

The first letter of the code for each ground point(s) indicates the component's location, e.g, "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

- [M] : Page No.
- [N] : Indicates the ignition key position(s) when the power is supplied to the fuse(s).

## [O] \_\_\_\_\_ System Outline

Current is applied at all times through the STOP fuse to TERMINAL 2 of the stop light SW. When the ignition SW is turned on, current flows from the GAUGE fuse to TERMINAL 8 of the light failure sensor, and also flows through the rear lights warning light to TERMINAL 4 of the light failure sensor.

### Stop Light Disconnection Warning

When the ignition SW is turned on and the brake pedal is pressed (Stop light SW on), if the stop light circuit is open, the current flowing from TERMINAL 7 of the light failure sensor to TERMINALS 1, 2 changes, so the light failure sensor detects the disconnection and the warning circuit of the light failure sensor is activated.

As a result, the current flows from TERMINAL 4 of the light failure sensor to TERMINAL 11 to GROUND and turns the rear lights warning light on. By pressing the brake pedal, the current flowing to TERMINAL 8 of the light failure sensor keeps the warning circuit on and holds the warning light on until the ignition SW is turned off.

## [P] O : Parts Location

Code	See Page	Code	See Page	Code	See Page
C7	34	L4	36	R7	37
H17	36	R6	37	S6	35

## [Q] : Relay Blocks

Code	See Page	Relay Blocks (Relay Block Location)
1	18	R/B No.1 (Instrument Panel Brace LH)

## [R] \_\_\_\_\_: Junction Block and Wire Harness Connector

Code	See Page	Junction Block and Wire Harness (Connector Location)
3C	22	Instrument Panel Wire and J/B No.3 (Instrument Panel Brace LH)
IB	20	Instrument Panel Wire and Instrument Panel J/B (Lower Finish Panel)

### [S] : Connector Joining Wire Harness and Wire Harness

Code	See Page	Joining Wire Harness and Wire Harness (Connector Location)
IE1	42	Floor Wire and Instrument Panel Wire (Left Kick Panel)
BV1	50	Luggage Room Wire and Floor Wire (Luggage Room Left)

## [T] **Ground Points**

Code	See Page	Ground Points Location
BL	50	Under the Left Center Pillar
BO	50	Back Panel Center

- **[O]**: Explains the system outline.
- [P] : Indicates the reference page showing the position on the vehicle of the parts in the system circuit.
  - Example : Part "L4" (Light Failure Sensor) is on page 36 of the manual.
    - \* The letter in the code is from the first letter of the part, and the number indicates its order in parts starting with that letter.

Example : <u>L</u> 4 Parts is 4th in order Light Failure Sensor

- [Q]: Indicates the reference page showing the position on the vehicle of Relay Block Connectors in the system circuit.
  - Example : Connector "1" is described on page 18 of this manual and is installed on the left side of the instrument panel.
- [R] : Indicates the reference page showing the position on the vehicle of J/B and Wire Harness in the system circuit.
  - Example : Connector "3C" connects the Instrument Panel Wire and J/B No.3. It is described on page 22 of this manual, and is installed on the instrument panel left side.
- **[S]** : Indicates the reference page describing the wiring harness and wiring harness connector (the female wiring harness is shown first, followed by the male wiring harness).

Example : Connector "IE1" connects the floor wire (female) and Instrument panel wire (male). It is described on page 42 of this manual, and is installed on the left side kick panel.

[T] : Indicates the reference page showing the position of the ground points on the vehicle.Example : Ground point "BO" is described on page 50 of this manual and is installed on the back panel center.

# **B HOW TO USE THIS MANUAL**

The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points ( $\sqrt{E^A}$ ,  $\sqrt{E}$  and  $\sqrt{C}$  shown below) can also be checked this way.

#### W–B W-E W-E FAN MAIN Relay Cigarette Lighter A/C Control Assembly ▶ 5 W–B W-E FAN MAIN Relay O/D Main SW Blower Motor W–B W–В A/C Relay No.2 Clock Blower SW W-E W–B A/C Relay No.3 Parking Brake SW -5J 1 W–B Junction Connector Radiator Fan Motor W–B W–B Headlight Cleaner Relay -**3**3B Combination Meter W–B W–E Headlight LH Combination SW W–B W–B Headlight RH 30 W-B W-B W–B Front Fog Light RH Front Turn Signal Light RH Cruise Control ECU W–B W-B W–B W-B Front Clearance Light RH Front Fog Light LH Remote Control Mirror SW W-B W-B W-B Front Turn Signal Light LH Brake Fluid Level SW Turn Signal Flasher W–B W–B Front Clearance Light LH Defogger SW 3E W–B W–B W–B IA1 🕊 -) Œ Door Lock Control SW Combination SW W–E W–B W–B Door Courtesy SW RH N= W-B W-B W–B W–B Door Lock Motor RH Unlock Warning SW 10 EA2 W–B W-E Door Lock Control Relay W-B Power Window Master SW ower Window Contro W-E Blower Resistor W-B Door Courtesy SW LH W-B W–B W-E Idle-Up SW Door Lock Control SW W–B W–E A/C Amplifie Door Lock Motor LH N-B W-B(4A-GZE) Fuel Control SW W–B BR W–B Radio and Playe Woofer Speaker Amplifier 4 (4)BR HEATER Relay Combination Meter BR BR Auto Antenna Motor BA1 (4)Combination Meter BR W-B Fuel Sender BR

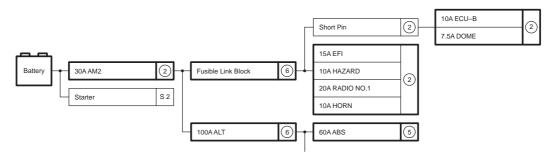
I GROUND POINT

\* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

The "Current Flow Chart" section, describes which parts each power source (fuses, fusible links, and circuit breakers) transmits current to. In the Power Source circuit diagram, the conditions when battery power is supplied to each system are explained. Since all System Circuit diagrams start from the power source, the power source system must be fully understood.

# J POWER SOURCE (Current Flow Chart)

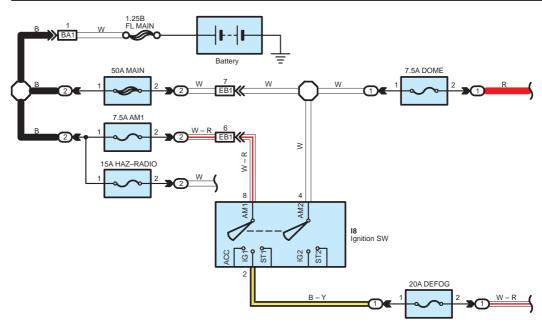
The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fues, etc.) and other parts



## Engine Room R/B (See Page 20)

Fuse		System	Page
		ABS ABS and Traction Control	194 187
20A	STOP	Cruise Control	180
ZUA STOP		Electronically Controlled Transmission	166
		Multiplex Communication System	210
		Cigarette Lighter	214
		Combination Meter	230
		Headlight	112
10A	DOME	Interior Light	122
		Key Reminder and Seat Belt Warning	
Light Auto Turn Off System			

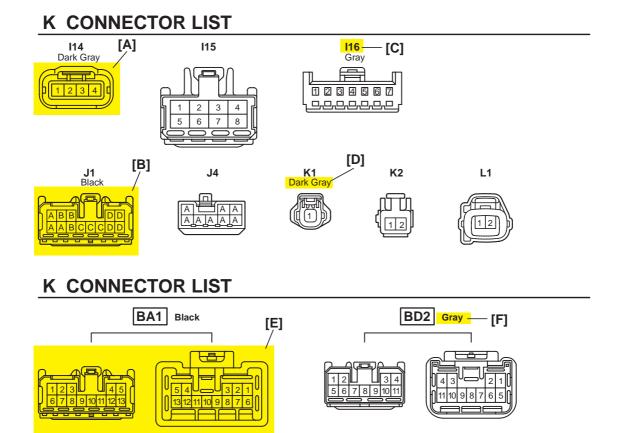
## **Power Source**



\* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the SYSTEM CIRCUITS SECTION.

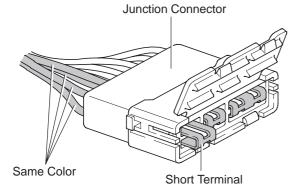
# SCION xB (EM0090U)

Β



- [A] : Indicates connector to be connected to a part. (The numeral indicates the pin No.)
- [B] : Junction Connector

Indicates a connector which is connected to a short terminal.



Junction connector in this manual include a short terminal which is connected to a number of wire harnesses. Always perform inspection with the short terminal installed. (When installing the wire harnesses, the harnesses can be connected to any position within the short terminal grouping. Accordingly, in other vehicles, the same position in the short terminal may be connected to a wire harness from a different part.)

Wire harness sharing the same short terminal grouping have the same color.

[C] : Parts Code

The first letter of the code is taken from the first letter of part, and the numbers indicates its order in parts which start with the same letter.

- [D] : Connector Color Connectors not indicated are milky white in color.
- [E] : Indicates the connector shapes which are used to join wire harnesses. On Left : Female connector shapes On Right : Male connector shapes Numbers indicate pin numbers.
- [F] : Indicates connector colors. (Connectors with not indicated colors are white)
- 10

# SCION xB (EM0090U)

Code	Part Name	Part Number	Code	Part Name	Part Number	
A 1	A/C Ambient Temp. Sensor	90980–11070	D 4	Diode (Courtesy)	90980-11608	
A 2	A/C Condenser Fan Motor	90980–11237	D 5	Diode (Interior Light)	90980-10962	
A 3	A/C Condenser Fan Relay	90980–10940	D 6	Diode (Moon Roof)	90980–11608	
A 4	A/C Condenser Fan Resistor	90980–10928	D7	Door Lock Control Relay	90980-10848	
A 5	A/C Magnetic Clutch	90980-11271	D 8	Door Lock Control SW LH	00080 11148	
A 6	A/T Oil Temp. Sensor	90980-11413	D 9	Door Lock Control SW RH	90980–11148	
[A]	ABS Actual [B]	909: <b>[C]</b> 151	D10	Door Courtesy SW LH	00080 11007	
A 8	ABS Actuator	90980–11009	D11	Door Courtesy SW RH	90980–11097	
A 9	ABS Speed Sensor Front LH	90980–10941	D12	Door Courtesy SW Front LH		
A10	ABS Speed Sensor Front RH	90980-11002	D13	Door Courtesy SW Front RH	90980-11156	
A11	Airbag Sensor Front LH	90980-11856	D14	Door Courtesy SW Rear LH	90980-11156	
A12	Airbag Sensor Front RH	90980-11856	D15	Door Courtesy SW Rear RH		
A13	Aint	90980–11194	D16	Unlock SW LH	00080 11170	
	$\sim$	90980-110	-	- PH	90980-11170	

# L PART NUMBER OF CONNECTORS

- [A] : Part Code
- [B] : Part Name
- **[C]** : Part Number Toyota Part Number are indicated.

Not all of the above part numbers of the connector are established for the supply.