

METER

■ COMBINATION METER

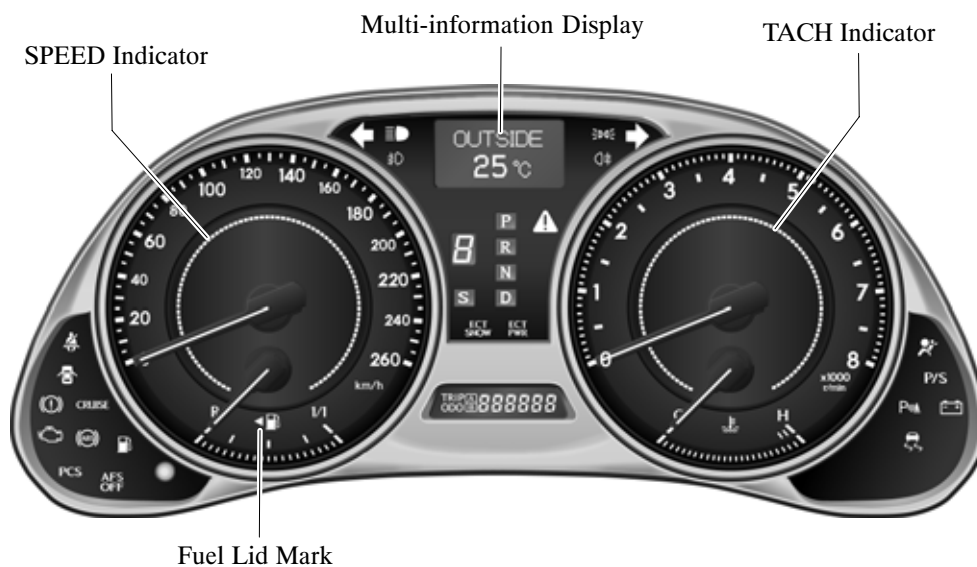
1. General

A combination meter with an Optitron type display is used. A three-dimensional structure and metal-like coating are used for the meter panel to provide a luxurious image.

- The combination meter has the following features:

Feature	Outline
Fun to Drive	• An illumination control which allows for anticipation of a pleasant drive is used. For details, see page BE-56. • The SPEED and TACH indicators are used to enhance the fun of driving. These indicators illuminate the ring of the speedometer or tachometer according to the vehicle or engine speed set by the driver. For details, see page BE-63.
Functionality	• Multi-information display that can display six modes (cruise information, warning, dynamic radar cruise display, LEXUS parking assist-sensor display, multi-switch, diagnosis) is used. For details, see page BE-57. • Using the satellite switch in combination with the multi-switch mode allows them to act as a switch for the maximum of five systems, thus reducing the number of the switches equipped on the vehicle. For details, see page BE-62.
Ease of Operation	• In the cruise information mode, the display can be switched by using the DISP switch on the steering wheel. For details, see page BE-59. • In the multi-switch mode, the display can be switched by using the satellite switch (LH switch, ON/OFF switch, RH switch). For details, see page BE-62.
User Friendliness	A fuel lid mark is used to point the side of the vehicle where the fuel lid is located.
Reduce consumption of electrical energy	LEDs (Light Emitting Diodes) for warning lights and indicator lights are used.

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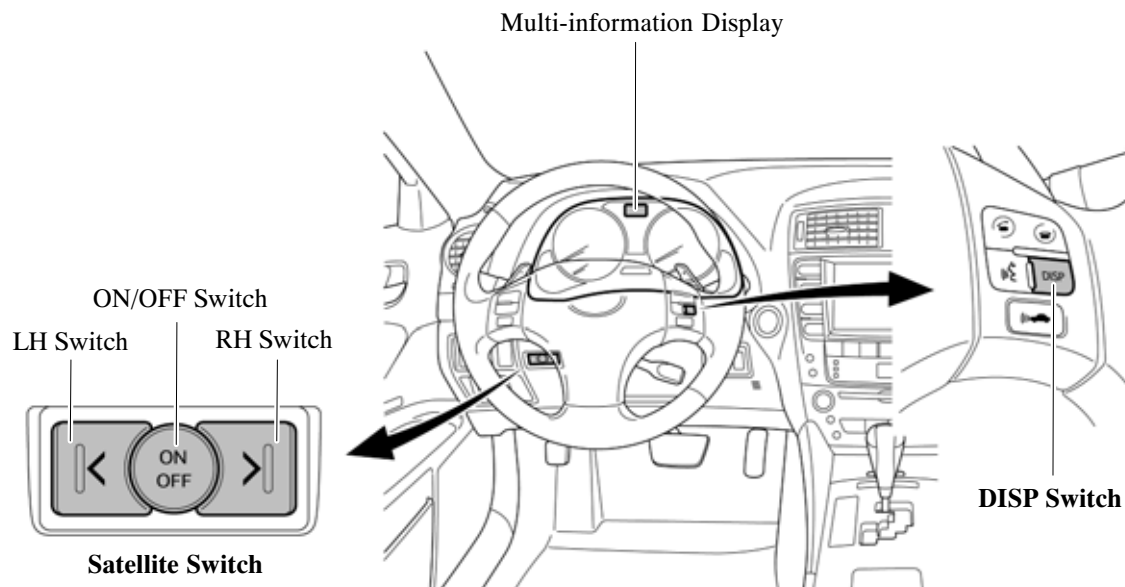
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LHD Models with 4GR-FSE Engine and Automatic Transmission



RHD Models with 4GR-FSE Engine and Automatic Transmission

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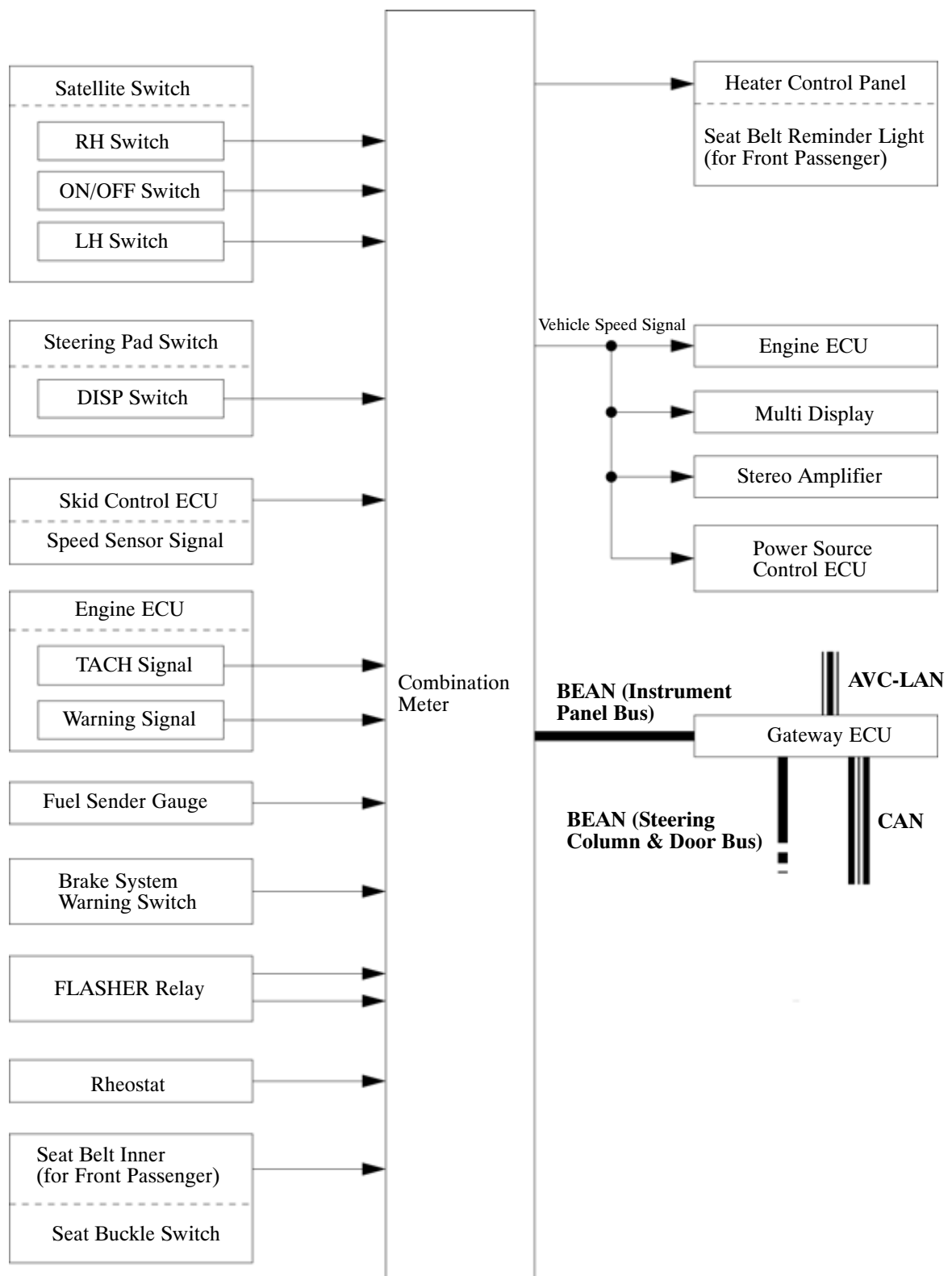


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Service Tip

If an LED malfunctions in the combination meter, the combination meter must be replaced as an assembly. For details, see the LEXUS IS250 Repair Manual (Pub. No. RM0150E).

2. System Diagram



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► Input and output communication signals of the combination meter ◀

Protocol	ECU	Input Signal	Output Signal
BEAN (Instrument Panel Bus)	Clearance Sonar ECU	• Display Request Signal • Indicator Signal • Area Signals (Front LH, Front RH, Rear LH, Rear RH, Rear Center) • Warning Request Signal	• ON/OFF Switch Signals • Vehicle Speed Signal
	AFS ECU	• AFS OFF Indicator Signal • AFS Warning Signal	• ON/OFF Switch Signals • Vehicle Speed Signal
	A/C ECU	Outside Temperature Signal	Vehicle Speed Signal
BEAN (Steering Column & Door Bus)	Main Body ECU RH	• Courtesy Switch Signals • Door Lock Detection Switch Signals	• ON/OFF Switch Signals • Diagnosis Signal • Vehicle Speed Signal • Rheostat Signal
	Main Body ECU LH	—	• Vehicle Speed Signal • Rheostat Signal
	Power Window Master Switch	Door Lock Detection Switch Signal	Vehicle Speed Signal
	Power Source Control ECU	Power Source Control ECU Information Signal	Vehicle Speed Signal
	Front Controller	• Washer Fluid Level Warning Signal • HI Beam Signal • Taillight Illuminate Signal	—
	Tilt & Telescopic ECU	—	Vehicle Speed Signal
	Seat ECU (D)	—	Vehicle Speed Signal
	Seat ECU (P)	—	Vehicle Speed Signal
	Certification ECU	• Warning Signal • Steering Lock Signal	Vehicle Speed Signal
	Sliding Roof ECU	Sliding Roof Position Signal	Vehicle Speed Signal
	Rain Sensor	—	Vehicle Speed Signal

(Continued)

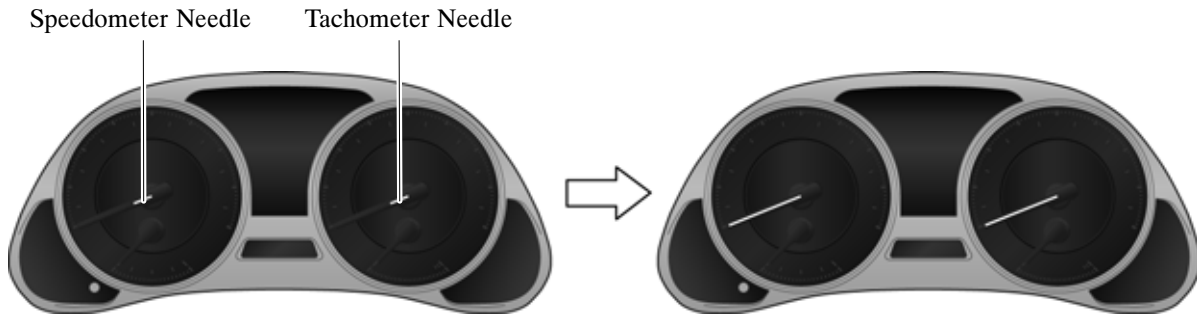
Protocol	ECU	Input Signal	Output Signal
CAN	Engine ECU	• Water Temp. Signal • Charge Warning Signal • Fuel Injection Information Signal • S Mode Indicator Signal • Pattern Select Indicator Signals • Downshift Warning Signal • Shift Position Signals (6, 5, 4, 3, 2, 1) • Current Gear Position Signal • Target Detection Signal* • Target Approach Signal* • Distance Time Signal* • Warning Message Signals* • Warning Buzzer Signal	Vehicle Speed Signal
	Skid Control ECU	• Brake System Warning Signal • SLIP Warning Signal • Parking Brake Switch Signal • ABS Warning Signal • VSC Warning Signal	–
	Airbag Sensor Assembly	• Seat Belt Reminder Signal (for Front Passenger) • SRS Warning Signal	Vehicle Speed Signal
	EPS ECU	P/S Warning Signal	–
	Seat Belt Control ECU	PCS Warning Signal	–
	Television Camera ECU	–	Vehicle Speed Signal
AVC-LAN	Multi Display	–	Vehicle Speed Signal

*: For Dynamic Radar Cruise Control

3. Illumination Control

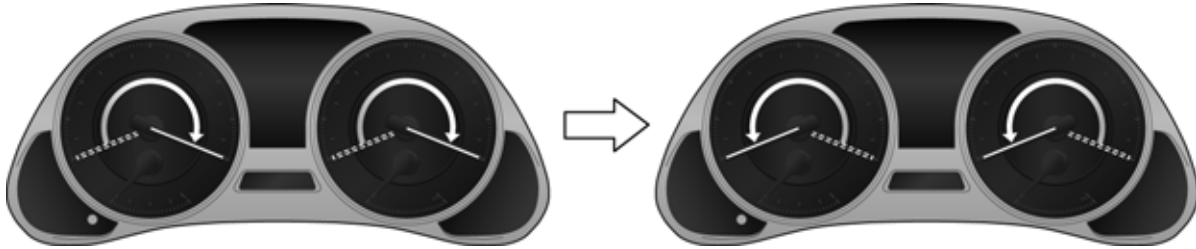
If the power source is switched to IG-ON, the illumination control operates as follows. However, all illuminations other than the tachometer needle turn off while cranking the engine.

- (1) The speedometer and tachometer needles illuminate starting from the base of the needles and moving to their tips.



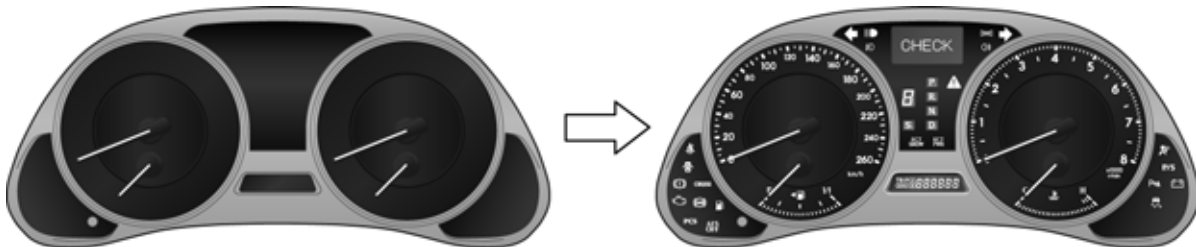
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- (2) These needles move to their maximum position and return to zero.



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- (3) The fuel gauge and water temperature gauge light up.
- (4) The warning lights, indicator lights, LCD (Liquid Crystal Display), and meter panel illumination come on.



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4. Multi-information Display

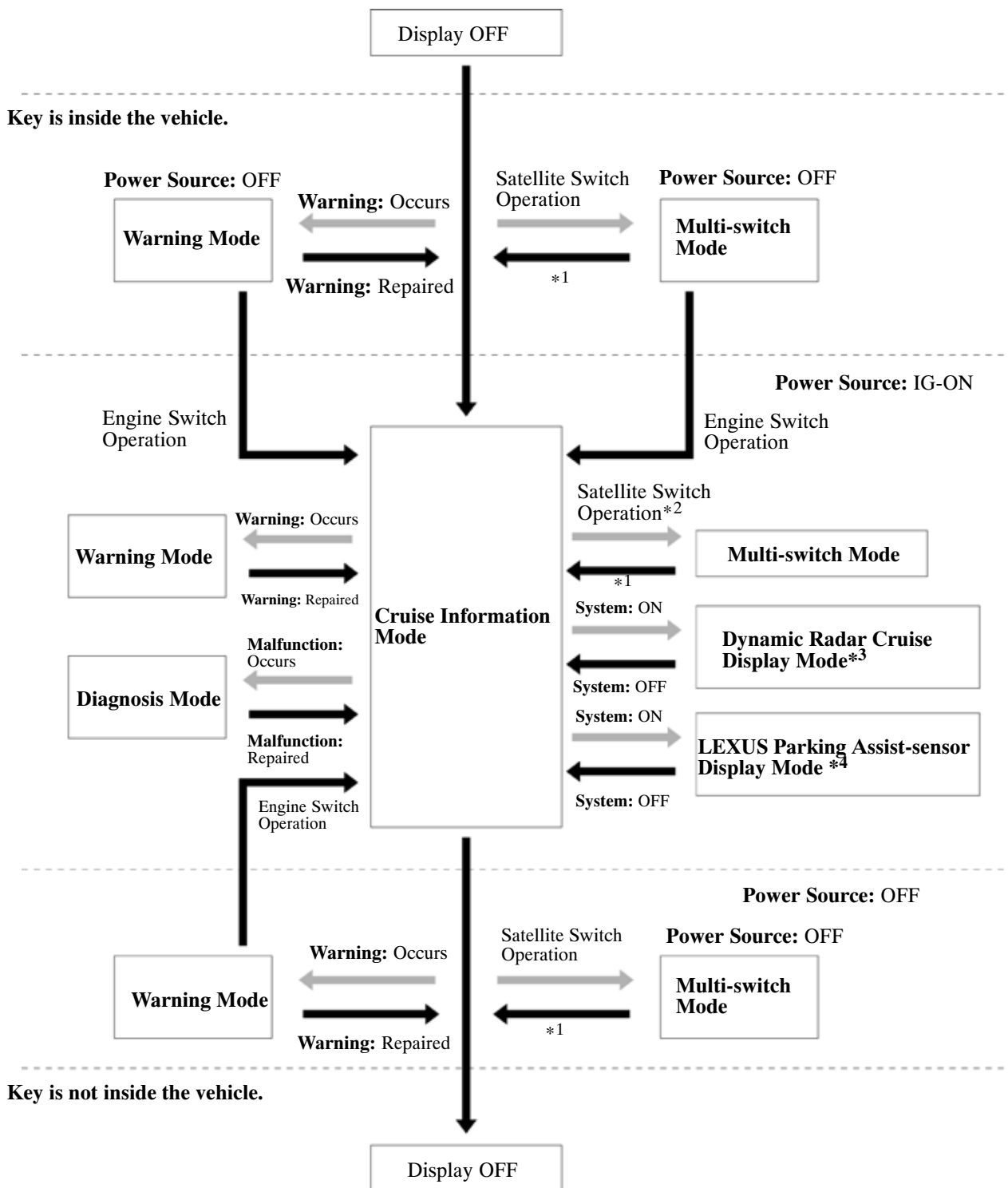
General

The multi-information display has six modes:

Mode	Outline
Cruise Information (See page BE-59)	- In the cruise information mode, seven types of information (Outside Temperature, Driving Range, Average Fuel Consumption, Average Fuel Consumption After Refueling, Current Fuel Consumption, Average Speed, and Gear Position) can be displayed. - The display can be switched by using the DISP switch.
Warning (See page BE-60)	The warning mode display will interrupt the multi-information display immediately when a warning occurs.
Multi-switch (See page BE-62)	- In the multi-switch mode, five switches (Intrusion Sensor ON/OFF, Sonar ON/OFF, AFS ON/OFF, SPEED Indicator ON/OFF, TACH Indicator ON/OFF) can be displayed. - The switches can be changed using the satellite switch (RH switch, ON/OFF switch, LH switch).
Dynamic Radar Cruise Display (See page BE-246)	Displays the operating condition of the dynamic radar cruise control.
LEXUS Parking Assist-sensor Display (See page BE-131)	Displays the location of an obstacle and the approximate distance between the vehicle and the obstacle and displays malfunction warning messages about sensor freezing or presence of dirt on the sensors.
Diagnosis	DTCs (Diagnostic Trouble Codes) for the brake control system (TRC and VSC) can be displayed. For details, see page CH-103.

The multi-information display modes can be switched as shown in the flow chart below:

Key is not inside the vehicle.



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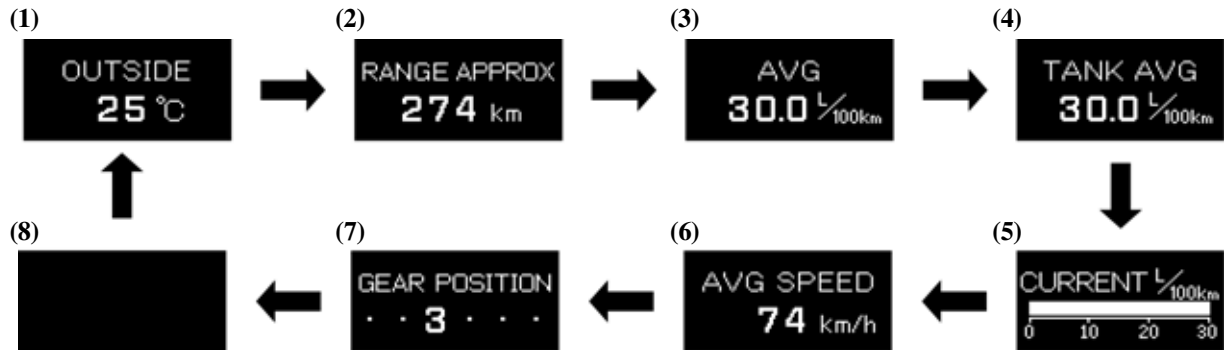
*1: Automatically returns to the previous display 6 seconds after the satellite switch is operated, or returns to the previous display immediately if the DISP switch is operated.

*2: Vehicle speed is 5 km/h (3 mph) or less. However, the SONAR switch will be displayed regardless of the vehicle speed.

*3: For details, see [page BE-246](#). *4: For details, see [page BE-131](#).

Cruise Information Display

The cruise information is displayed in the following order each time the DISP switch is pressed.



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Information		Outline
(1)	Outside Temperature	Displays outside temperature in accordance with the outside temperature sensor signal from the A/C ECU.
(2)	Driving Range	- Displays a value that has been calculated by the combination meter. When IG-ON has been selected, the combination meter calculates the range based on continuously monitoring and storing information on fuel consumption data, and the residual fuel volume. - This display is updated every ten seconds.
(3)	Average Fuel Consumption	- Displays a value that has been calculated by the combination meter, which is based on the distance driven and the fuel consumption volume (fuel injection signal from the No. 1 cylinder). - This display is updated every ten seconds.
(4)	Average Fuel Consumption After Refueling	- Displays a value that has been calculated by the combination meter, which is based on the distance driven after refueling and the fuel consumption volume (fuel injection signal from the No. 1 injector). - The combination meter determines that the vehicle has been refueled in accordance with the signal from the fuel sender gauge. - This display is updated every ten seconds.
(5)	Current Fuel Consumption	- Displays a value that has been calculated by the combination meter. When IG-ON has been selected, the combination meter calculates this value based on the distance driven and the fuel consumption volume (fuel injection signal from the No. 1 injector). - This display is updated every 0.5 seconds.
(6)	Average Speed	- Calculates and displays the elapsed time since the engine start signal and vehicle speed signal were received by the combination meter. - This display is updated every ten seconds.
(7)	Gear Position (AT models)	The gear position currently in use is displayed as a number and the available shift range is displayed using dots. The above illustration shows that the vehicle is in 3rd gear, and the shift range selected is D or S-6.

Warning Display

When a warning is necessary, the warning display interrupts the multi-information display.

- The master warning light may illuminate or flash and the buzzer may sound depending on the item in the multi-information display.

Warning	Detail	Warning	Detail
  : Flash Buzzer: Sound 0140BE194C	The key is not inside the vehicle.	  : Flash Buzzer: Sound 0140BE195C	The driver door is opened with the shift lever in any position other than P.
  : Flash Buzzer: Sound 0140BE196C	Steering lock has not released within 3 seconds of pressing the engine switch.	  : Flash Buzzer: Sound 0140BE197C	Steering lock is malfunctioning.
 Buzzer: Sound 0140BE198C	The power source is switched from OFF to ACC twice with the brake pedal released.	 Buzzer: Sound 0140BE199C	The power source is switched from OFF to ACC twice with the clutch pedal released.
  : Flash 0140BE200C	Key battery is low	 Displayed for 8 sec. Buzzer: Sound 0140BE201C	The sliding roof is open and the driver door is open.
     : Flash*  : Illuminate Buzzer: Sound* 0140BE202C	Any door is open. *: The vehicle having reached a speed of 5 km/h (3 mph).	  : Flash* Buzzer: Sound* 0140BE203C	Engine hood is open. *: The vehicle having reached a speed of 5 km/h (3 mph).
		  : Flash*  : Illuminate Buzzer: Sound* 0140BE204C	Luggage compartment door is open. *: The vehicle having reached a speed of 5 km/h (3 mph).

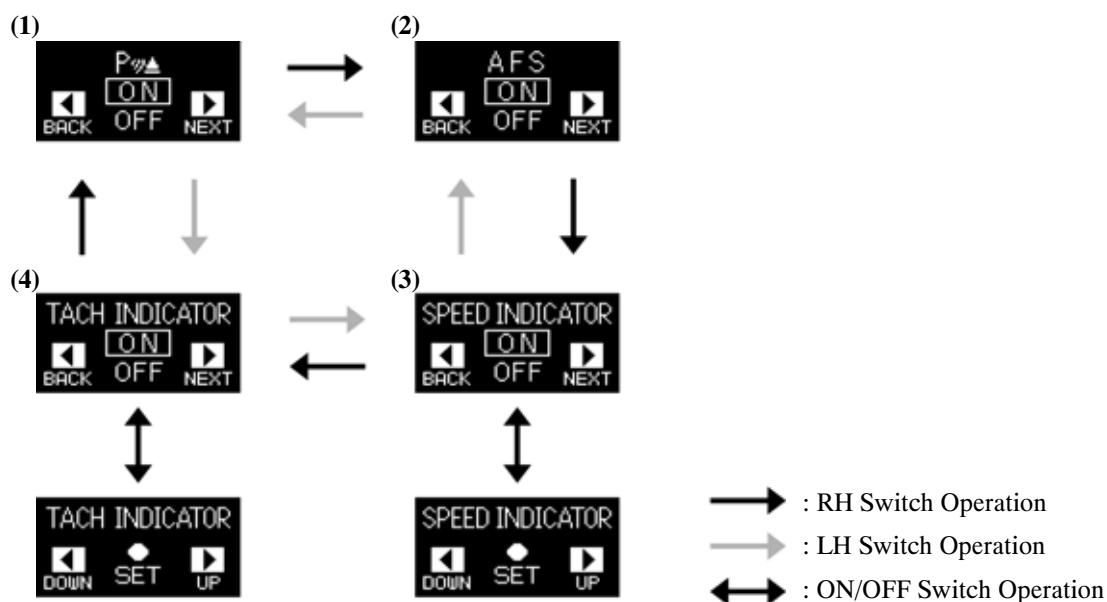
Warning	Detail	Warning	Detail
 ⚠ : Flash Buzzer: Sound 0140BE205C	Engine oil pressure is low.	 ⚠ : Flash Buzzer: Sound 0140BE206C	Parking brake is still engaged with the vehicle having reached a speed of 5 km/h (3 mph).
 ⚠ : Illuminate Buzzer: Sound 0140BE207C	LEXUS parking assist-sensor is dirty or covered with ice.	 ⚠ : Illuminate Buzzer: Sound Display is flashing and then continuously on. 0140BE208C	A LEXUS parking assist-sensor is malfunctioning.
 CRUISE : Flash ⚠ : Illuminate Buzzer: Sound 0140BE209C	Millimeter wave radar sensor is dirty or covered with ice.	 CRUISE : Flash ⚠ : Illuminate Buzzer: Sound 0140BE210C	Dynamic radar cruise control system is unable to judge vehicle-to vehicle distance.
 CRUISE : Flash ⚠ : Illuminate Buzzer: Sound 0140BE211C	Dynamic radar cruise control system is malfunctioning.	 ⚠ : Illuminate 0140BE212C	TRAC and VSC are malfunctioning.
 PCS ⚠ : Illuminate Buzzer: Sound 0140BE215C	Pre-collision safety system is not currently functional.	 PCS ⚠ : Illuminate Buzzer: Sound 0140BE216C	Pre-crash safety system is malfunctioning.
 ⚠ : Illuminate Buzzer: Sound 0140BE214C	Engine oil level is low.	 ⚠ : Illuminate Buzzer: Sound 0140BE221C	Washer fluid level is low.

Multi-switch Mode

In the multi-switch mode, 5 different switch functions can be displayed and changed using the satellite switch (RH switch, ON/OFF switch, LH switch).

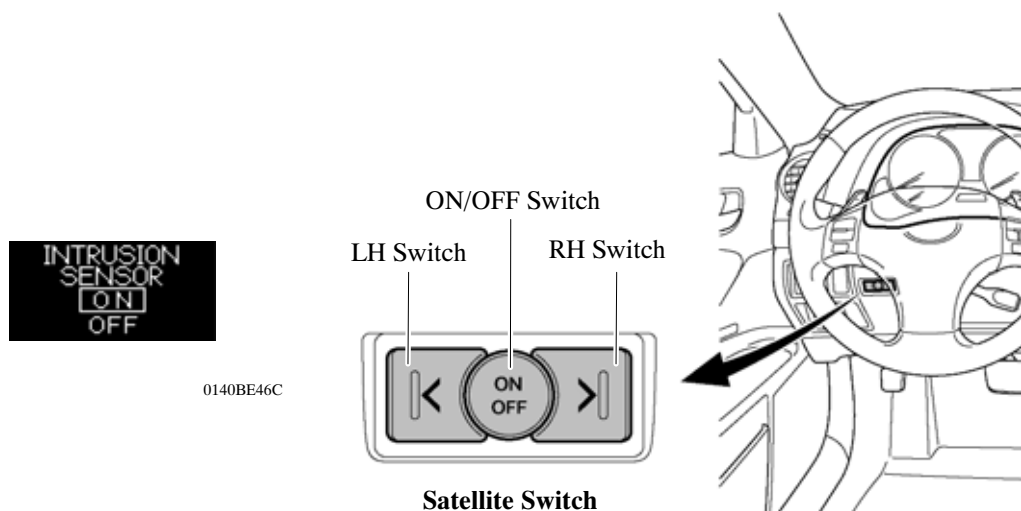
- When the power source is IG-ON, four switch functions are displayed. When the power source is OFF, one switch function is displayed.
- When the power source is IG-ON and while driving at 3 mph (5 km/h) or less (or stopped), the switch function can be displayed. However, the SONAR switch will be displayed regardless of the vehicle speed.
- The switch functions displayed are changed in the order shown below using the satellite switch (RH switch, LH switch). The function can be set using the ON/OFF switch.
- The display automatically returns to the previous display 6 seconds after the satellite switch is operated. It will return to the previous display immediately if the DISP switch is operated.

► Power Source: IG-ON ◀



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► Power Source: OFF ◀



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5. SPEED and TACH Indicators

The SPEED indicator and TACH indicator come on when the vehicle speed or engine speed reaches the speed set using the satellite switch. The setting ranges of these indicators are shown in the table below.

- Vehicle speed or engine speed can be set using the satellite switch and multi-switch mode of the multi-information display.
- These indicators consist of yellow and red dots that are arranged to form indicator rings.
- When the set vehicle speed or engine speed is reached while driving, the yellow will turn on.
- If the vehicle or engine speed is set to the maximum speed of the indicator setting range, and the speed reaches this set speed, red will illuminate the indicator ring.



LHD Models with 4GR-FSE Engine

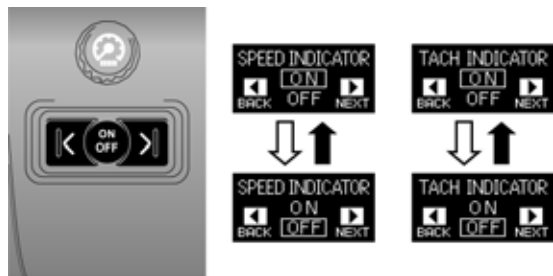
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SPEED Indicator		
Model	Setting Range	Initial Setting
LHD	50 to 200 km/h	130 km/h
RHD	30 to 100 mph	75 mph
TACH Indicator		
Engine	Setting Range	Initial Setting
4GR- FSE	2000 to 6500 rpm	5000 rpm

Service Tip**SPEED or TACH Indicator Setting**

- (1) Select the SPEED INDICATOR or TACH INDICATOR of the multi-switch mode using the satellite switch (RH or LH switch).
- (2) Turn the SPEED INDICATOR or TACH INDICATOR function on or off by using the ON/OFF switch



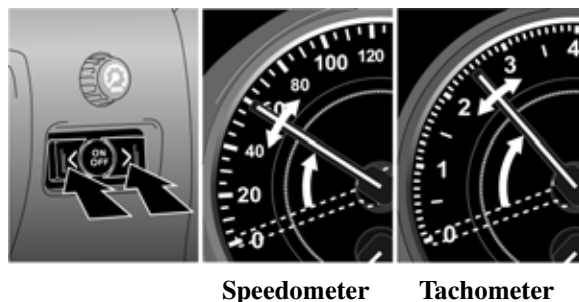
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- (3) Turn the SPEED INDICATOR or TACH INDICATOR function on using the ON/OFF switch. Leave the display on for one second to allow it to change to the SET display.



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- (4) The speedometer needle or tachometer needle moves to indicate the previously set vehicle speed and then stops.
- (5) Push the LH or RH switch within 6 seconds of the speedometer needle or tachometer needle moving in order to allow setting of the SPEED or TACH indicator set point.
 - The speedometer needle or tachometer needle moves by 1 degree each time the LH or RH switch is pushed.
 - Pushing and holding the switch change values at a faster rate.
- (6) When the ON/ OFF switch is pushed, the speedometer or tachometer needle stays at the setting value for one second and the SPEED or TACH indicator illuminates only momentarily one time in yellow.



Speedometer

Tachometer

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6. Buzzer

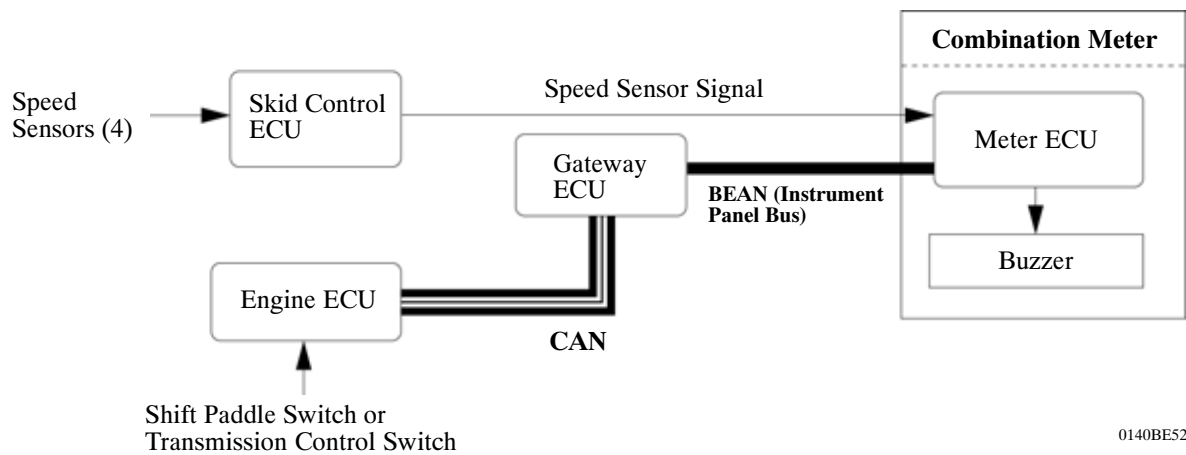
General

The table below shows the warning and reminder functions of the buzzer.

Function	Item
Warning	• Brake System Warning • Door Open Warning • Shift Down Warning (only for AT models) • Sliding Roof Warning • Dynamic Radar Cruise Control Warning (See page BE-246)
Reminder	• Key Reminder (See page BE-177) • Seat Belt Reminder (See page BE-212) • Light Reminder

Downshift Warning

When downshifting is attempted on automatic transmission vehicles while driving at a vehicle speed at which downshifting is impossible, the buzzer sounds twice (approx. 0.25 sec. × 2) as a warning and the downshift is prohibited.



- The maximum speeds at which downshifting is possible are shown in the table below.

Shift Operation	Max. Vehicle Speed
6th → 5th	—
5th → 4th	182 km/h (113 mph)
4th → 3rd	132 km/h (82 mph)
3rd → 2nd	91 km/h (56 mph)
2nd → 1st	34 km/h (23 mph)

Light Reminder

The light reminder is operated to prevent leaving the vehicle with the exterior lights on. When the following conditions are met, the Meter ECU sounds the buzzer once (approx. one sec.).

- Light control switch is TAIL or HEAD.
- Power source is OFF.
- Driver door is opened.

