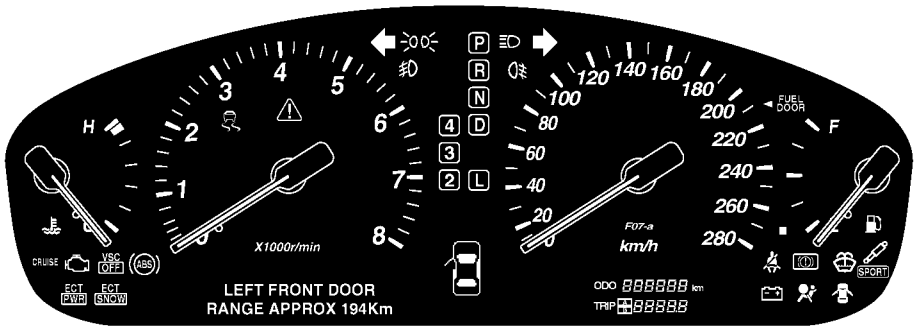
METER

■COMBINATION METER

1. General

- An optitron display type combination meter has been adopted. The optitron display type meter realizes excellent visibility through the use of smoke acylic in the protective panel, and LEDs (Light Emitting Diodes) that is vary bright and has high contrast for illuminating the indicator and the dial (see-through illumination). Its face is black when no current is applied.
- An odometer and trip meter which used VFD (Vacuum Fluorescent Display) have been adopted.
- A meter ECU and buzzer are enclosed in the combination meter. This ECU maintains communication with other ECUs through the BEAN (Body Electronics Area Network).
- A multi-information display has been adopted in the combination meter. On the new LS430, the following displays have been added: the clean air filter (for the front A/C) clogging display, smart key system display and LEXUS park assist system display.



LHD Models for Europe

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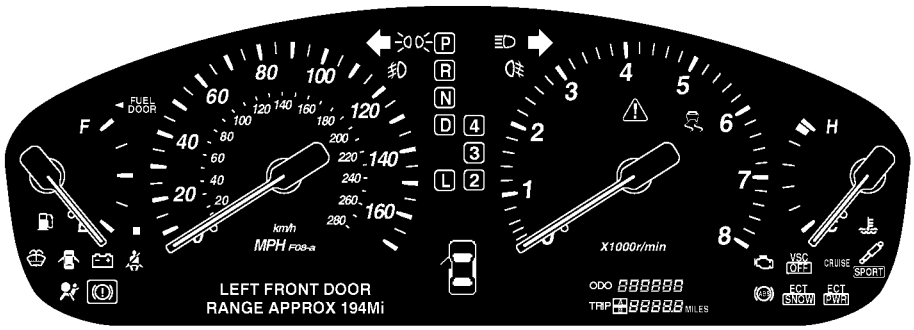

RHD Models for Europe

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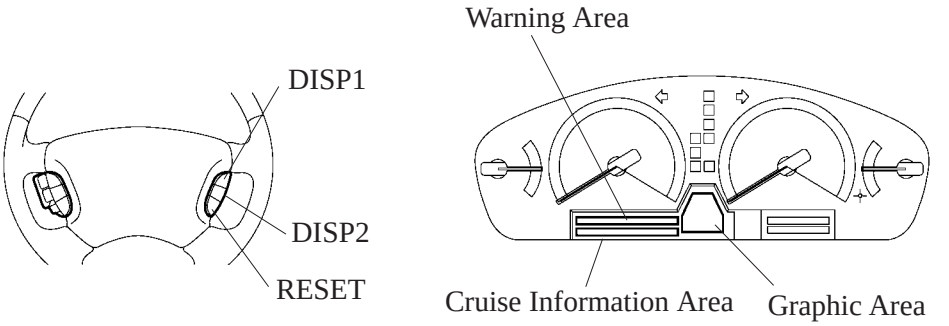
2. Multi-information Display

General

- The multi-information display consists of three display areas: the Cruise information area, graphic area, and warning area. These areas display the contents given in the table below.
- A steering pad switch (for multi-information display) that switches the contents of the multi-information display has been provided on the steering wheel.



Steering Pad Switch (for Multi-information Display)

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Cruise Information Area	Displays cruise information. In addition, the contents of the display can be switched by operating the DISP1 portion of the steering pad switch.
Graphic Area	Displays the following information: LEXUS park assist system, door ajar, and outside temperature. In addition, the outside temperature and blank displays can be switched by operating the DISP2 portion of the steering pad switch.
Warning Area	Displays the warning message. These messages appear only if an abnormal signal has been input by a system.

Steering Pad Switch (for Multi-information Display)

1) General

The steering pad switch (for multi-information display) changes the contents that are displayed on the multi-information display. If consists of three switches: DISP1, DISP2, and reset switches.

2) DISP1 Switch

Operating the DISP1 switch in the cruise information display switches between display items such as the continuous drivable distance, overage fuel consumption, instant fuel consumption, average fuel consumption after refueling, driven distance after refueling, running time, average speed and blank.

3) DISP2 Switch

The driver can switch between the outside temperature and blank displays by operating the DISP 2 switch.

4) Reset Switch

Operating the reset switch resets the numerical value that is being displayed as cruise information. The resetting of a numerical value is applicable only to the item that is being displayed while operating the switch.

Cruise Information Area

The cruise information area displays cruise information. By operating the DISP 1 portion of the multi-information display switch, the contents of the display can be switched.
The multi-information display provides the following cruise information.

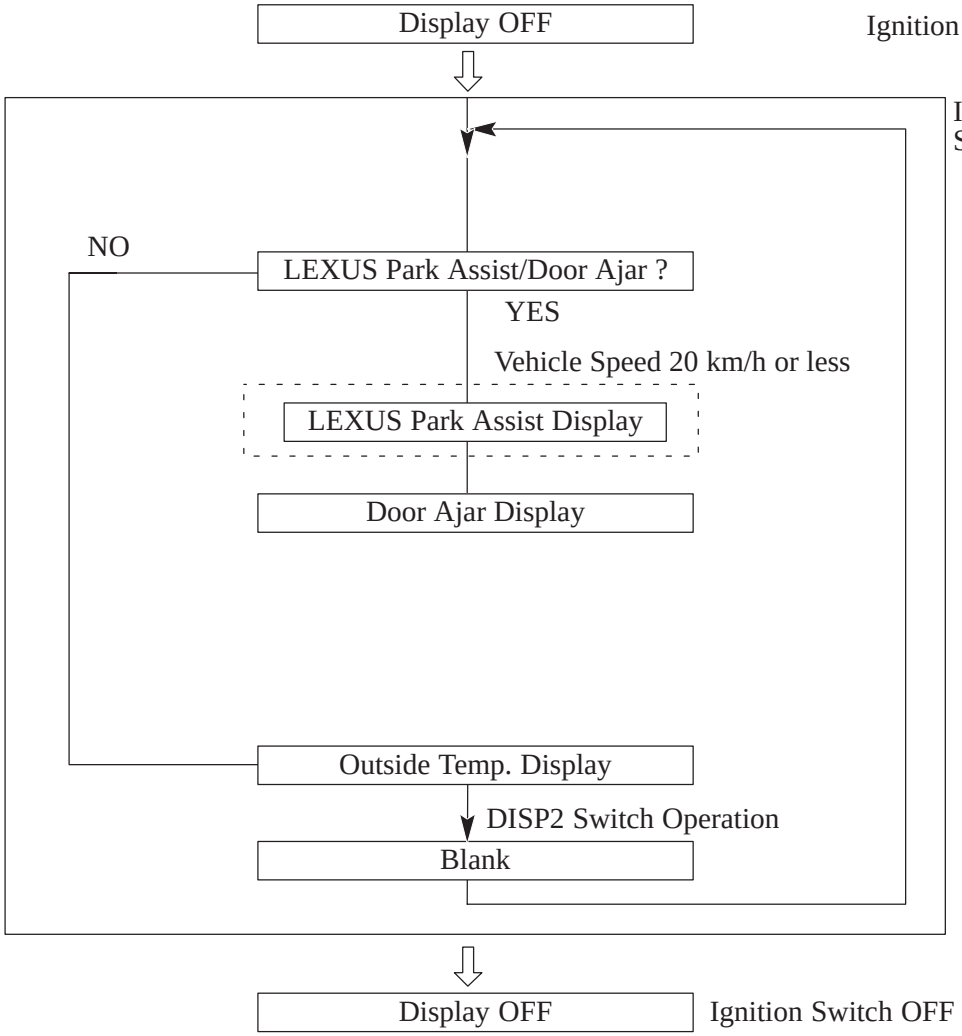
Item	Details
Continuous Drivable Distance	During engine operation, the continuous drivable distance data (which is based on the fuel consumption rate and the residual fuel data that are calculated at 3 km intervals) is shown on the display in the form of a continuous drivable distance. The indication on the display is updated at 1 km intervals. Moreover, the fuel consumption data, which forms the basis of the calculation, is acquired by obtaining the amount of fuel that is used per 6 km of driving from the residual fuel data that is updated every 3 km; this value is then used for calculating the fuel consumption rate for every 3 km of driving.
Average Fuel Consumption	The average fuel consumption data, which has been calculated by the CPU based on the cumulative driven distance and the cumulative fuel consumption volume from engine start to engine stop is displayed in the form of average fuel consumption. The display on the screen is updated every 10 seconds, and the data that forms the basis of the calculation is renewed every 10 seconds. Even after the engine is turned off, the fuel consumption data is stored in memory as cumulative data until the data is clear.
Instant Fuel Consumption	The instant fuel consumption data, which has been calculated by the CPU based on the driven distance and the fuel consumption volume that are checked every 2 seconds after the engine was started, is displayed in the form of instant fuel consumption. The display on the screen is updated every 2 seconds and the data that forms the basis of the calculation is renewed every 2 seconds.
Average Fuel Consumption After Refueling	The average fuel consumption data after refueling, which has been calculated by the CPU based on the cumulative driven distance and the cumulative fuel consumption volume following the detection of refueling, from the time that the engine is started to the time that it is stopped, is displayed. The display on the screen is updated every 10 seconds, and the data that forms the basis of the calculation is renewed every 10 seconds. Even after the engine is turned off, the fuel consumption data is stored in the memory as cumulative data until the data is clear.
Driven Distance After Refueling	The cumulative driven distance following the detection of refueling, from the time that the engine is started to the time that it is stopped, which has been calculated by the CPU based on the vehicle speed pulse, is displayed. The display on the screen is updated every mile or kilometer and the data that forms the basis of the calculation is renewed every 0.1 mile or 0.1 km.
Running Time	The running time from the time that the engine is started to the time that it is stopped is calculated by the timer in the CPU and displayed. The calculation is performed in 1-minute increments and the display on the screen is updated every minute.
Average Speed	The average speed, which has been calculated by the CPU based on the cumulative driven distance and the cumulative elapsed time from the time that the engine is started to the time that it is stopped, is calculated and displayed. The display on the screen is updated every 10 seconds and the data that forms the basis of the calculation is renewed every 10 seconds.

Graphic Area

1) General

The graphic area displays the LEXUS park assist system, door ajar, and outside temperature. Also, by operating the DISP2 switch on the steering pad, the display can be switched among the compass, outside temperature, and blank displays. The chart below shows the display flow of the systems.

▶ Display Flow ◀



2) LEXUS Park Assist System Display

Displays the clearance sonar if the clearance sonar ECU has detected an obstacle.

▶ **Display Design** ◀

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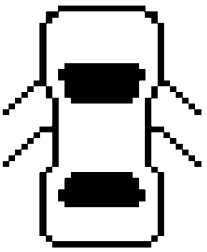
3) Door Ajar Display

Displays when a door ajar condition has been detected.

▶ **Display Design** ◀



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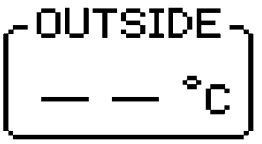
4) Outside Temperature Display

Displays the outside temperature upon receiving the signals from the air conditioner ECU.

▶ **Display Design** ◀



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Warning Area

The warning area displays a warning message.
If the CPU detects a malfunction in the system, the multi-information display provides the messages listed below. On certain types of warnings, the buzzer sounds along with the message which is displayed.

Message	Buzzer	Description
LOW OIL PRESSURE	○	This message shows that the engine oil pressure becomes too low.
BRAKE WEAR*1	○	This message shows that the brake pads are worn enough to require replacement.
LEFT FRONT DOOR	—	These messages show that any door or trunk lid is open with the ignition switch turned on.
RIGHT FRONT DOOR		
LEFT REAR DOOR		
RIGHT REAR DOOR		
TRUNK OPEN		
CHECK VSC	○	This message appears if the skid control ECU has determined that a malfunction has occurred in the VSC system.
TAILLAMP FAILURE	○	This message appears if any of the conditions listed below exist. • The light control switch is engaged in the tail or head position when one or more taillight or brake bulbs are blown. • The brake pedal is pressed when one or more taillight or brake bulbs are blown.
LOW ENG OIL LEVEL	○	This message shows that the engine oil level is too low.
LOW WASHER FLUID	○	This message shows that the washer fluid level in the tank becomes nearly empty.
MOONROOF OPEN	○	This message shows that the moon roof is open with the ignition switch turned off and driver's side door open.
HEADLIGHT LEVELING	○	This message shows that there is a problem somewhere in the automatic headlight leveling system.
PARK BRAKE	○	This message shows that the parking brake has not been released.
CHECK ENGINE*2	○	This message appears when the engine ECU determines that there is a malfunction in the engine control system.
CHANGE A/C FILTER	○	This message appears when the A/C ECU has determined that the clean air filter (for front A/C) has become clogged based on the inlet (RECIRC/FRESH) mode, outlet mode, and airflow volume.
A/C FILTER RESET	○	The clogging judgment value for the clean air filter (for A/C) becomes reset when the A/C OFF button on the center cluster panel is pressed for 4 seconds or longer. When this reset is completed, the buzzer sounds and this message appears.
HEIGHT HI	—	This message appears when the height control switch is set to HI.

*1: Only on the LHD models for Europe and models for the G.C.C. countries
*2: Only on models for the G.C.C. countries and Australia

Smart Key System Warning

If the CPU detects a malfunction in the smart key system, the multi-information display provides the massages listed below.

Message	Buzzer	Description
KEY IS NOT DETECTED	○	This message appears in case the key is taken out of the vehicle, as described below. • The key is taken out of the vehicle by the driver or by an occupant. • The key is taken out of the vehicle when the shift lever is in a position other than "P" and the ignition switch is in the ACC or IG position. • The key is taken out of the vehicle through a window. • The key has been placed outside of the area in which the engine can be started.
SHIFT TO P RANGE	○	This message appears in case the key is taken out of the vehicle when the shift lever is in a position other than "P" and the ignition switch is in the ACC or IG position.
LOW KEY BATTERY	○	This message appears in case the voltage of the key battery is low.
KEY IS DIFFERENT	○	This message appears if a key with a different ID code is used.