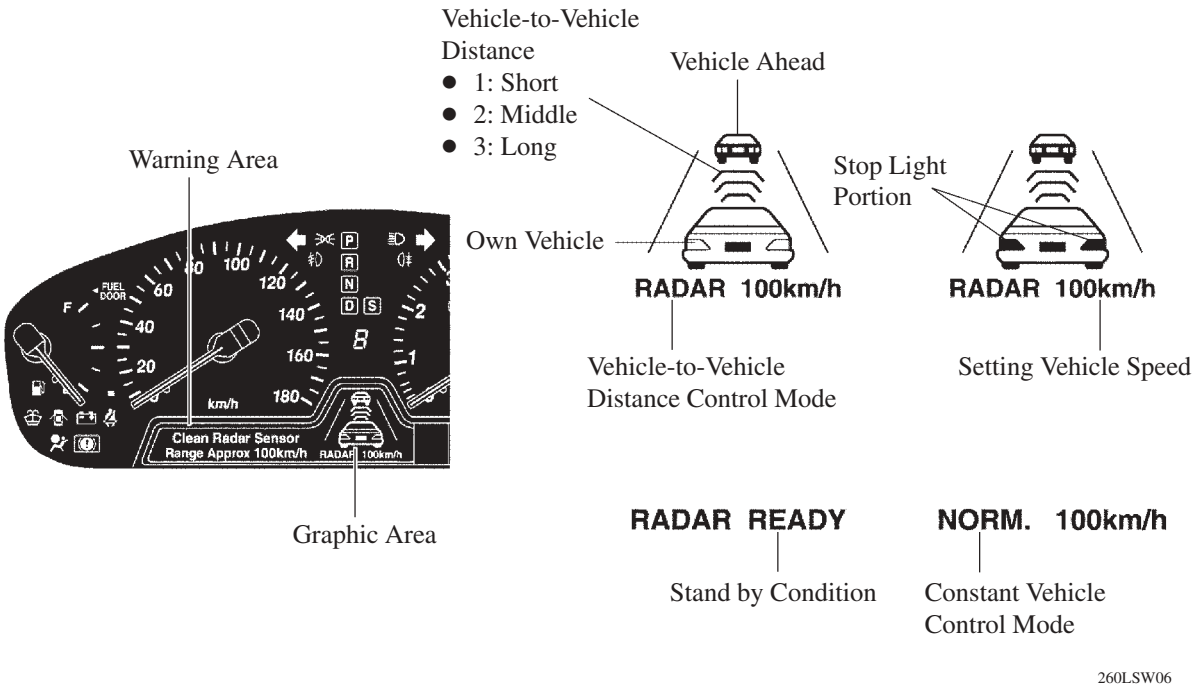
5. Construction and Operation

Multi-information Display

The warning area and the graphic area of the multi-information display inform or warn the driver of the conditions of the dynamic laser radar cruise system.

- While the system is in the vehicle-to-vehicle distance control mode, the graphic area displays the standby condition, own vehicle, vehicle ahead, set vehicle-to-vehicle distance, and set vehicle speed. If the driver applies the brakes during deceleration control, the stoplight portion of the driver's own vehicle turns ON to inform the driver.
- While the system is in the constant speed control mode, this area displays the set vehicle speed.



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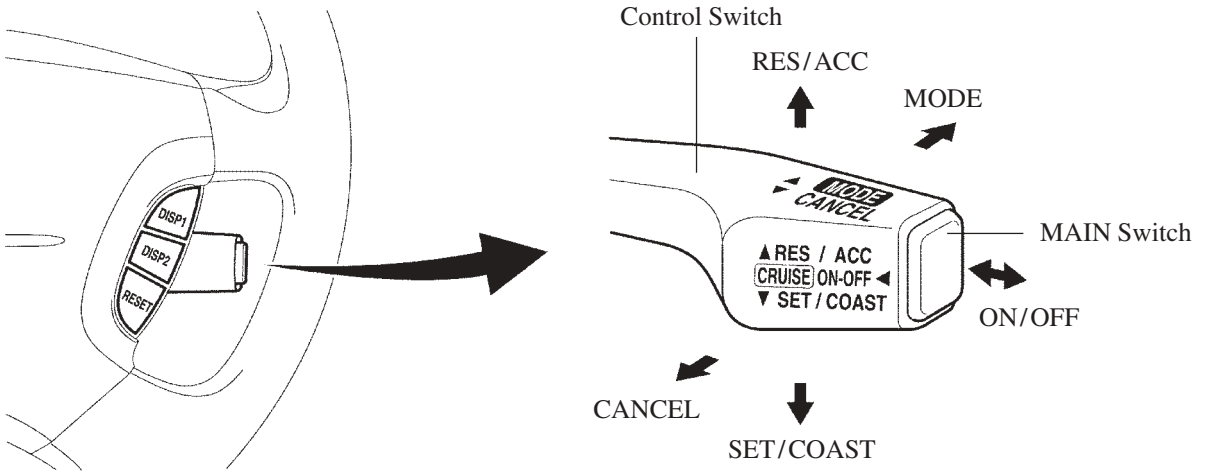
- The warning area displays three warning messages and the adjustment angle of the laser sensor.

Display	Outline
Clean Radar Sensor	This message appears if the distance control ECU has determined that the laser sensor is dirty.
Cruise not Available	This message appears when one of the following conditions exists. ● Pattern select switch is SNOW mode. ● During the raindrop sensing operation, the wipers operate at LO or HI. ● Wiper control switch is LO or HI position. ● The distance control ECU has determined that normal detection is not possible because the laser sensor is exposed to strong sunlight.
Check Cruise System	This message appears when the engine ECU or the distance control ECU detects a malfunction while the cruise control system is operating.
R/L --.--° U/D --.--°	Displays the adjustment angle that the distance control ECU has detected in the laser sensor adjustment mode.

Cruise Control Switch

Cruise control switch consists of the main switch and control switch. Main switch is push type and Control switch is lever type that operates in four directions (RESUME/ACCEL, MODE, SET/COAST, CANCEL).

- The control switch is an automatic reset type that turns ON only when the switch is being operated and turns OFF as soon as the driver is released. Furthermore, the functions of the control switch are active only when the main switch is turned ON.



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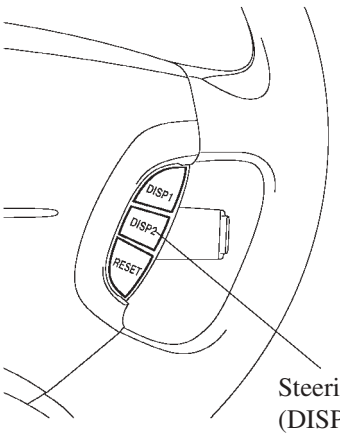
Steering Pad Switch (DISP2)

While the vehicle is being driven in the vehicle-to-vehicle distance control mode, the vehicle-to-vehicle distance setting can be changed each time the steering pad switch (DISP2) is pressed, as follows; long → middle → short.

- Immediately after the ignition switch is turned ON, the setting starts as “long”.
- The vehicle-to-vehicle distance is set as follows.



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Mode	Vehicle-to-Vehicle Distance*
Long	Approx. 75 m (245 ft)
Middle	Approx. 50 m (165 ft)
Short	Approx. 30 m (100 ft)

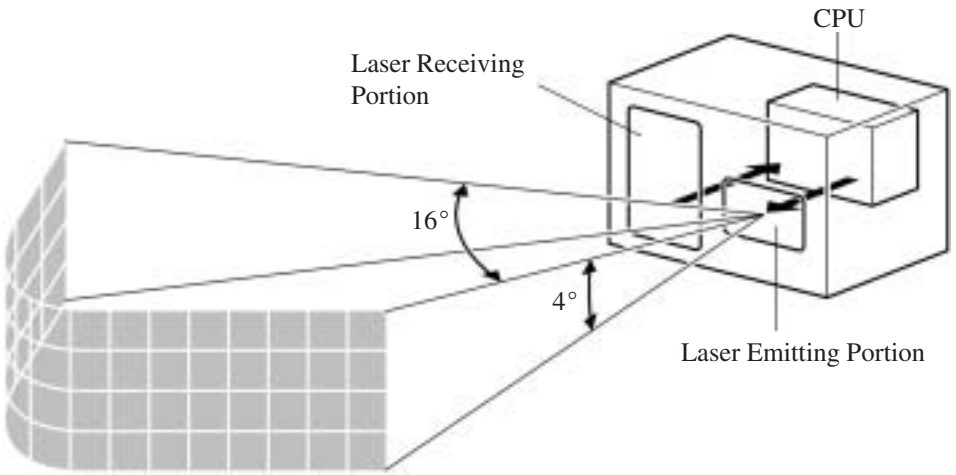
*: While driving at a vehicle speed of 90 km/h (55 mph).

Laser Sensor

The laser sensor consists of the laser emitting portion, laser receiving portion, and the CPU.

- The laser emitting portion radiates laser beams forward.
- The laser receiving portion receives the laser beams reflected by the vehicle ahead.
- The CPU calculates the information on the vehicle ahead in accordance with the duration and the input angle of the related beams, and transmits this information to the distance control ECU. The CPU is designed so that it does not react to non-moving objects.

▶ Image Diagram of Laser Sensor ◀



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Service Tip

When installing, removing or changing the laser sensor due to an accident or trouble diagnosis, be sure to adjust the laser beam axis. For details, see the LEXUS LS430 Repair Manual Supplement (Pub. No. RM1049E).