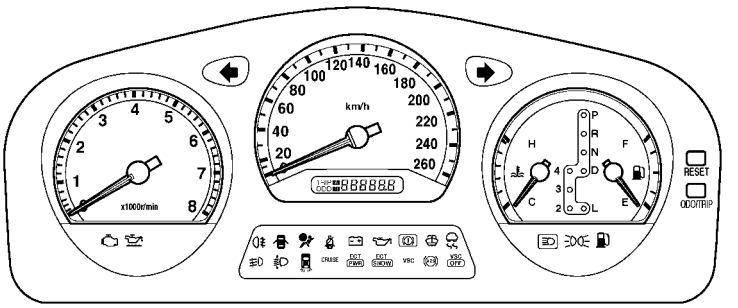
METER

■COMBINATION METER

The combination meter of new GS300 has the following features:

- Sporty, triple-lens independent electronic analog meters that offer superb visibility and a high-tech look have been adopted.



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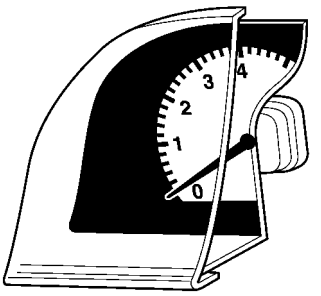
- In contrast to the meter used on the previous model in which the pointer and scale meter were illuminated, the new GS300 has adopted a system in which the pointer and scale are silhouetted against an illuminated dial plate.



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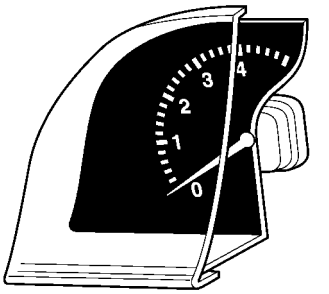
New



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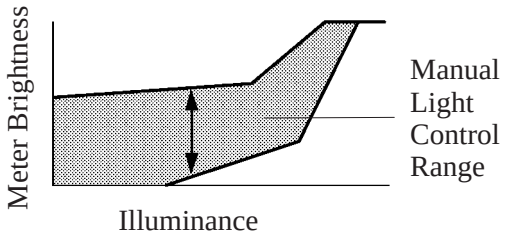
Previous

- To ensure an optimal meter brightness continuously from dusk to night, an automatic light control system that uses an automatic light control sensor has been newly adopted. In addition, a rheostat switch has been provided to enable the driver to adjust the meter brightness as desired.



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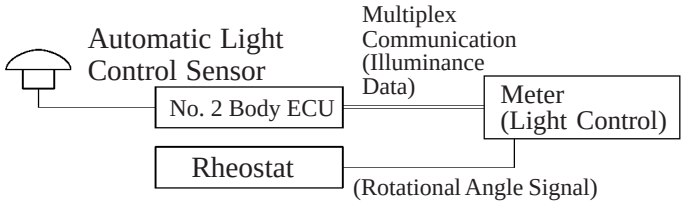
▶ System Diagram ◀



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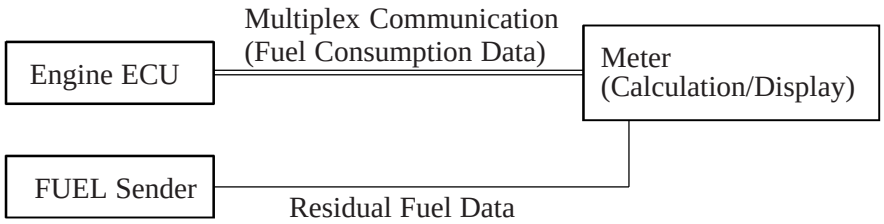
- To minimize the fluctuation of the fuel gauge needle while driving up or down hill or during cornering, the position of the fuel gauge needle of the new GS300 is determined by calculating the residual fuel data that is sent from the fuel sender to the meter, and the fuel consumption data that is sent from the engine ECU to the meter.

▶ System Diagram ◀



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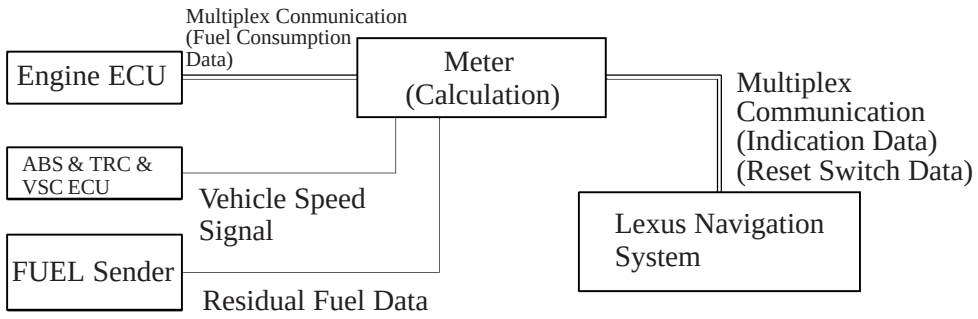
- A drive monitor has been adopted to show cruise information and warnings such as the average vehicle speed, average fuel consumption, etc., on the display of the Lexus navigation system.
  The drive monitor analyzes the various types of data that are sent from the engine ECU, ABS & TRC & VSC ECU, and fuel sender gauge to the meter and sends the results of the analysis to be shown on the display of the Lexus navigation system. The items that are shown on the display by this function are as follows.

Item	Details
Driven Distance After Refueling	If more than 10 liters is refueled, the meter detects that refueling has occurred based on the signals received from the fuel sender gauge, and resets the driven distance data that is stored in memory. Following the resetting of the data, the meter calculates the cumulative driven distance and sends this information to be shown on the display. The indication on the display is updated at 0.1km intervals.
Average Fuel Consumption After Refueling	If more than 10 liters is refueled, the meter detects that refueling has occurred based on the signals received from the fuel sender gauge and resets the average fuel consumption data that is stored in memory. Following the resetting of the data, the meter calculates the cumulative average fuel consumption and sends this information to be shown on the display. The indication on the display is updated at 10-second intervals.
Driven Distance After Engine Starting	The meter resets the driven distance data that is stored in memory each time the engine is started. Following the resetting of the data, the meter calculates the cumulative driven distance and sends this information to be shown on the display. The indication on the display is updated at 0.1km intervals.
Instant Fuel Consumption	The meter calculates the fuel consumption rate each time the engine makes 20 revolutions and sends this information to be shown on the display. The indication on the display is updated at 0.5-second intervals.
Average Fuel Consumption	When the reset switch is turned ON, the meter resets the average fuel consumption data that is stored in memory. Following the resetting of data, the meter calculates the cumulative average fuel consumption and sends this information to be shown on the display. The indication on the display is updated at 10-second intervals.
Average Speed	When the reset switch is turned ON, the meter resets the average vehicle speed data that is stored in memory. Following the resetting of data, the meter calculates the cumulative average vehicle speed and sends this information to be shown on the display. The indication on the display is updated at 10-second intervals.
Continuous Drivable Distance	The meter calculates the estimated continuous drivable distance (based on the residual fuel data that is sent from the fuel sender gauge to the meter and the fuel consumption data of the preceding ten and several km that is calculated by the meter and stored in memory) and sends this information to be shown on the display. The indication on the display is updated each time the estimated continuous drivable distance decreases by 1 km. Furthermore, if the fuel consumption rate for the preceding ten and several km changes suddenly, the data is updated and this information is sent to the display to update the indication on the display.

▶ System Diagram ◀



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- The functions described below have been provided to enable the hand-held tester to be used for diagnosis in case a malfunction occurs in the meter.

① Meter's functions to output its internal data to the hand-held tester

The following types of data are output via the No. 1 body ECU to the hand-held tester that is connected to the data link connector:

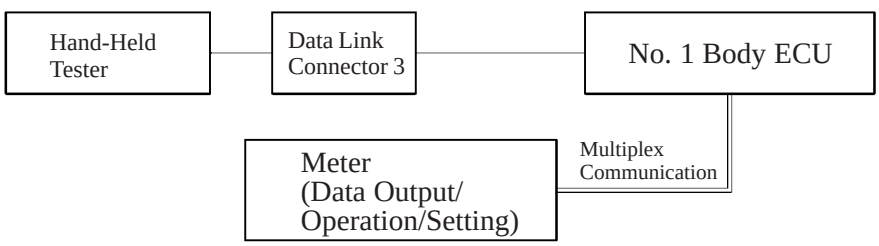
- Vehicle speed
- Engine rpm
- Signals input from the fuel sender gauge
- Signals input from the rheostat adjust switch
- Illumination light source (cold cathode tube) ambient temperature data

② Hand-held tester's functions for activating the various types of meters

The hand-held tester outputs the signals to activate the following types of meters for verifying their operation:

- Speedometer
- Tachometer
- Fuel Gauge
- Water Temperature Gauge
- Warning Lights

▶ System Diagram ◀



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