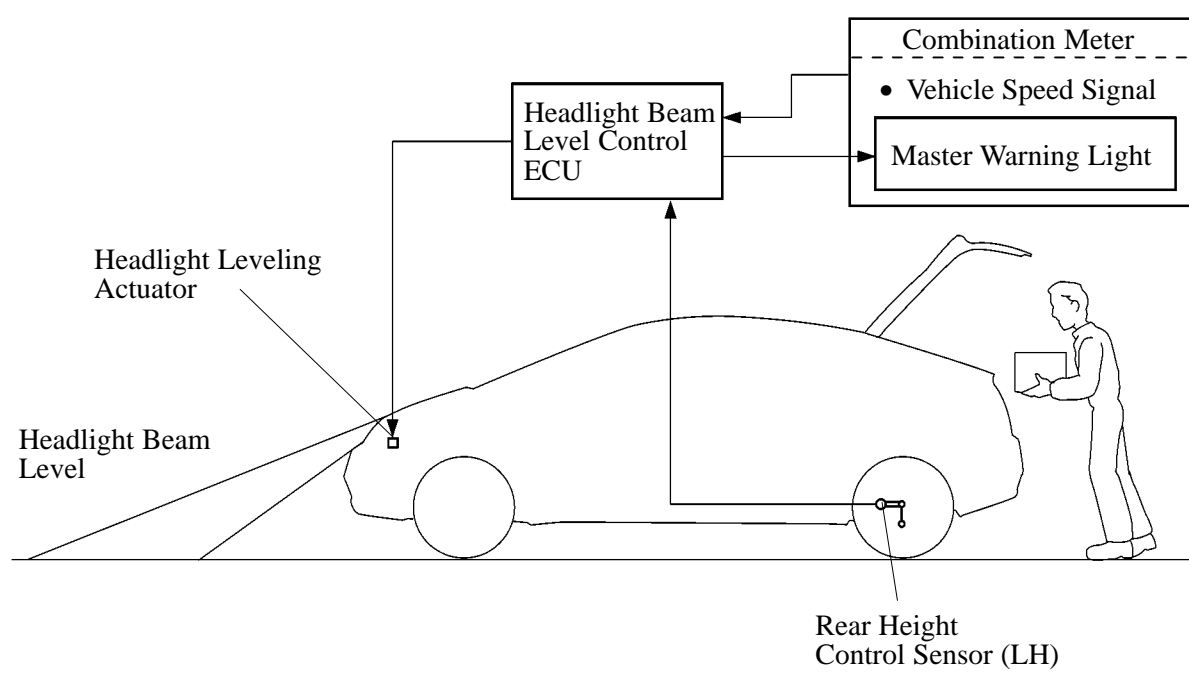


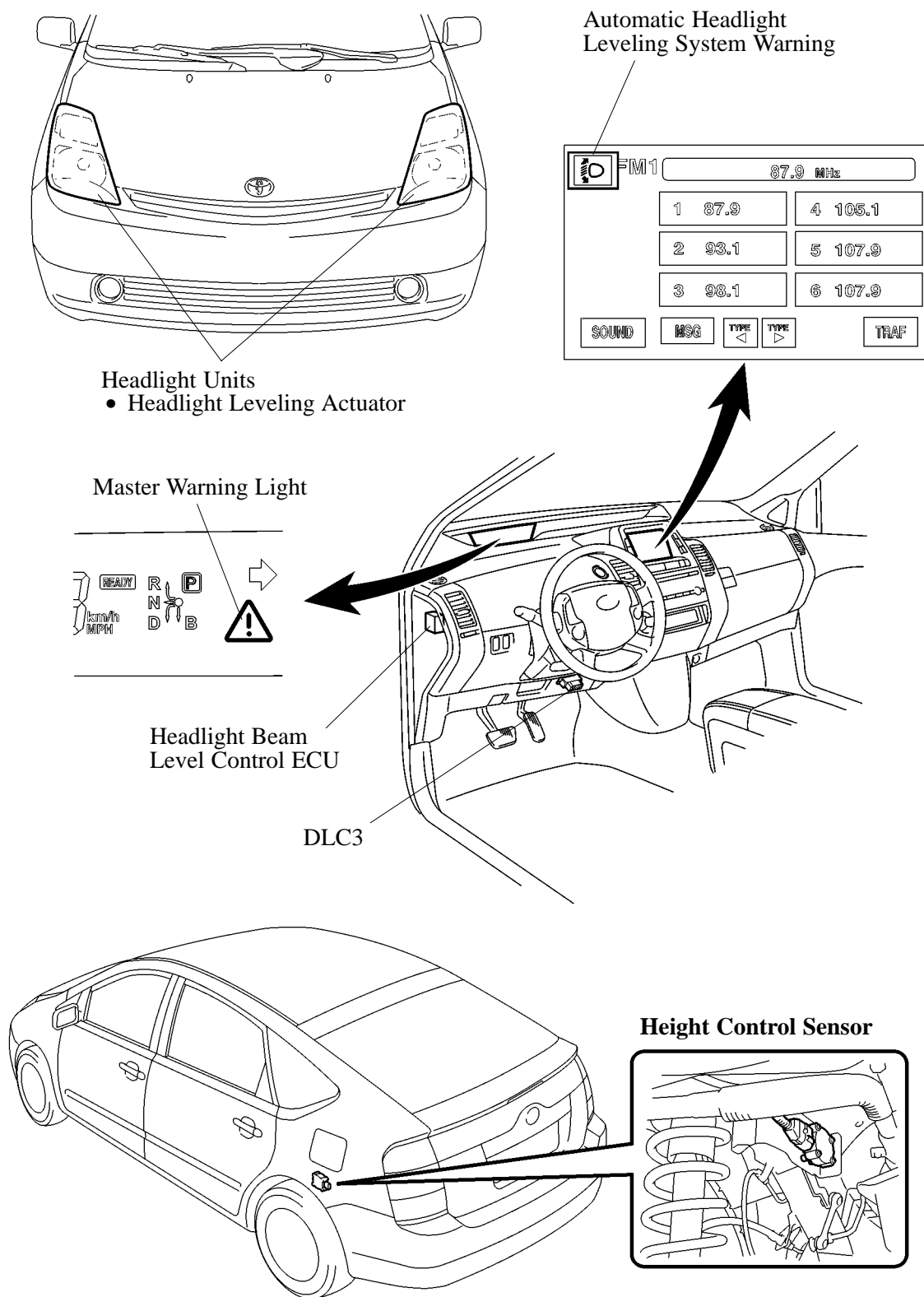
■ AUTOMATIC HEADLIGHT BEAM LEVEL CONTROL SYSTEM**1. General**

- The automatic headlight beam level control system maintains the headlight beams at a constant level.
- This system is controlled by the headlight level control ECU. This ECU detects the vehicle posture via the rear height control sensor, and detects the vehicle speed via the combination meter. The ECU then controls the headlight leveling actuator based on these pieces of information, in order to change the headlight reflector angle.

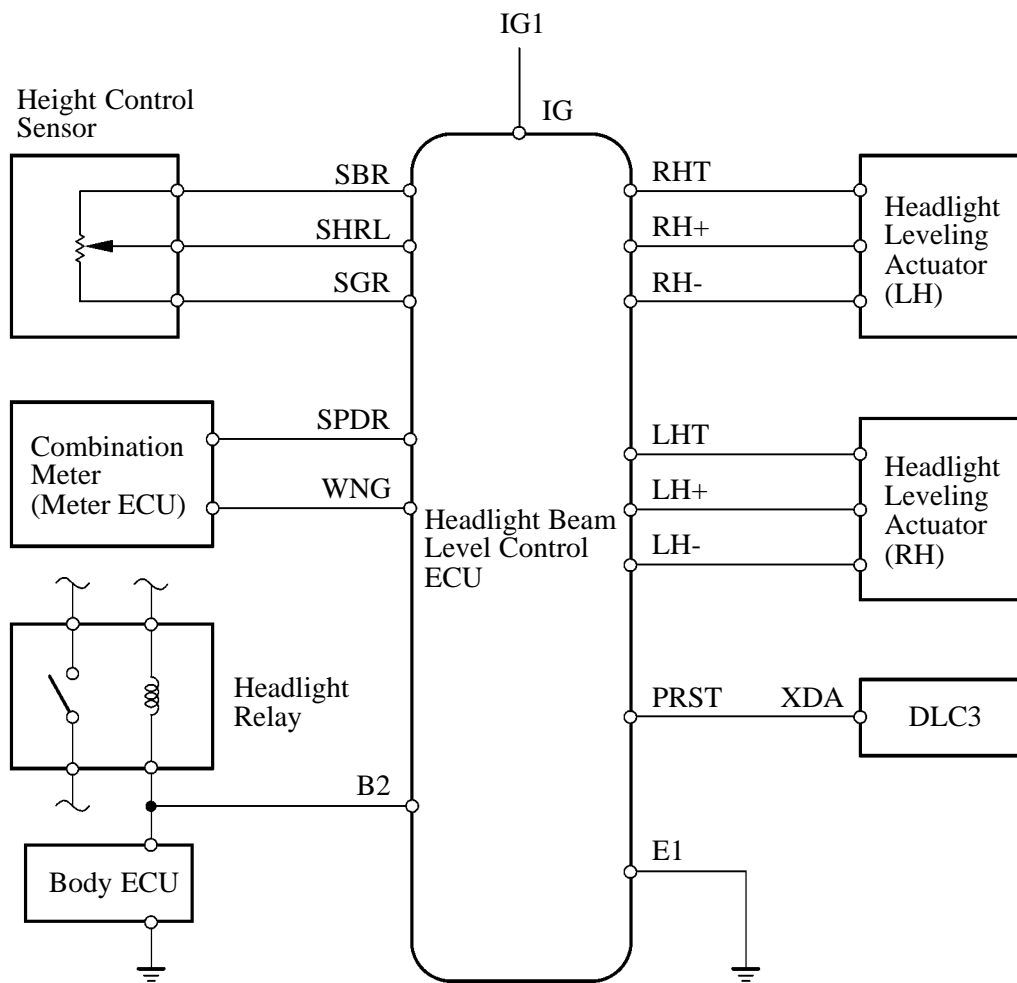
► System Diagram ◀

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2. Layout of Main Components



3. Wiring Diagram



4. Function and Construction of Main Components

Components	Function and Construction
Headlight Beam Level Control ECU	<ul style="list-style-type: none"> • Based on the signals that are transmitted by height control sensor and the combination meter, this ECU detects the amount of variance of the vehicle posture. • Based on the detected value, this ECU outputs control signal to the height leveling actuator. • When the ECU detects a malfunction, it outputs a request signal to illuminate the automatic headlight leveling system warning light to the combination meter. • This ECU provides initial set control and fail-safe function.
Headlight Leveling Actuator	<ul style="list-style-type: none"> • Based on the signals received from the headlight beam level control ECU, each headlight leveling actuator moves the reflector in the headlight to vary its beam. • This actuator uses a step motor to precisely regulate the angle of the reflector.
Height Control Sensor	<p>The height control sensor detects the amount of variance of the vehicle height and outputs this amount in the form of signal to the headlight beam level control ECU.</p>
Combination Meter	<ul style="list-style-type: none"> • Outputs the vehicle speed signal to the headlight beam level control ECU. • When the headlight beam level control ECU detects malfunction in the automatic headlight beam level control system, the headlight beam level control ECU illuminates the master warning light on the combination meter. • Once the master warning light is illuminated, the meter ECU sends a signal to the multi display to indicate the automatic headlight leveling system warning.
DLC3	<ul style="list-style-type: none"> • Sets the headlight beam level control ECU in the initial mode. • If an operation involving the removal and reinstallation of the height control sensor or the headlight beam level control ECU has been performed, the headlight beam level control ECU must be initialized. This is accomplished by connecting the SST (09843-18040) between the XDA and CG terminals of the DLC3 connector and operating the light control switch. For details, see the 2004 Prius Repair Manual (Pub. No. RM1075U).

5. Fail-Safe Function

The headlight beam level control ECU operates in the fail-safe mode if an abnormal condition such as those listed below has been detected, and illuminates the automatic headlight leveling system warning light in the combination meter.

Item	Abnormality Detection Condition	Description of Control
Headlight Leveling Actuator	Open or Short	Holds the beam at the position of the headlight leveling actuator when the abnormality has been detected.
Height Control Sensor	Signal Level Abnormality	Holds the beam at the position of the headlight leveling actuator when an abnormality has been detected.
Headlight Beam Level Control ECU	When an abnormal processing of the CPU has been detected.	Holds the beam at position of the headlight leveling actuator when the abnormality has been detected.