

Air Conditioner Communication System

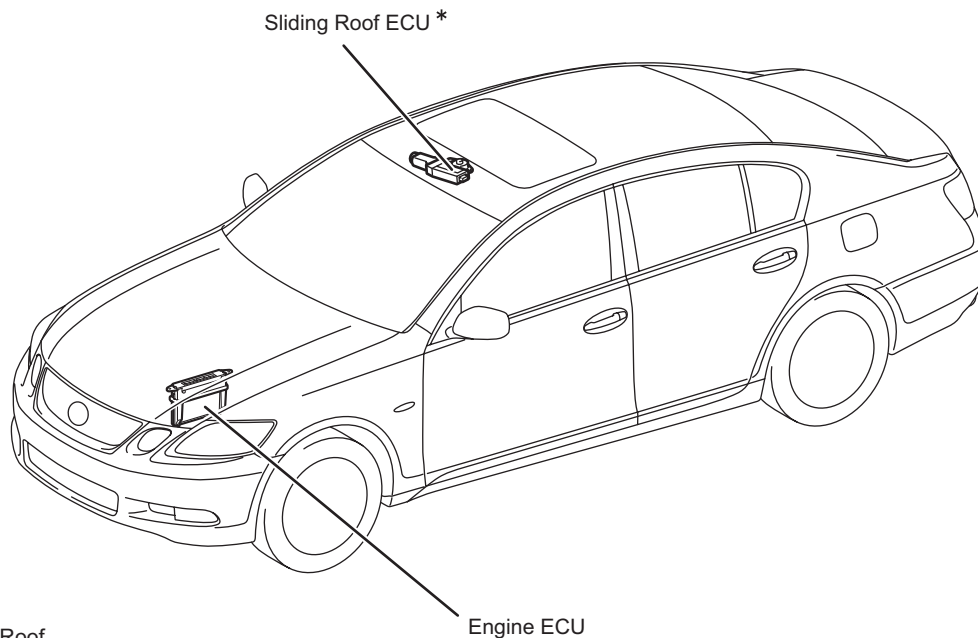
- The onboard multiplex communication that controls the entire vehicle system is a gateway configuration that includes the Body Electronics Area Network [BEAN*1] (which consists of three buses: door system bus, instrument panel system bus, and column system bus); Audio Visual Communication - Local Area Network [AVC-LAN*2]; and the Controller Area Network [CAN*3] communication system that transmits and receives high-speed data pertaining to the driving of the vehicle. They share only the communication data they need. The front air conditioner ECU, which controls the entire air conditioner, is connected to the instrument panel system bus. It receives the inputs of signals from various sensors and switches via dedicated lines. In addition, it receives the inputs of signals that are necessary for controlling the air conditioner from the engine ECU and MPX rear junction block ECU via the respective communication lines. Thus, the front air conditioner ECU is able to effect air conditioner control that is finely tuned to the operating conditions of the vehicle. Similarly, the front air conditioner ECU outputs signals pertaining to the air conditioner to other ECUs via the respective communication lines. For details on the Body Electronics Area Network, refer to the Control System Section.

❖REFERENCE❖

*1"BEAN" is an abbreviation for Body Electronics Area Network, which is Toyota Motor Corporation's proprietary bi-directional multiplex communication network that is used among various control ECUs of the body system.

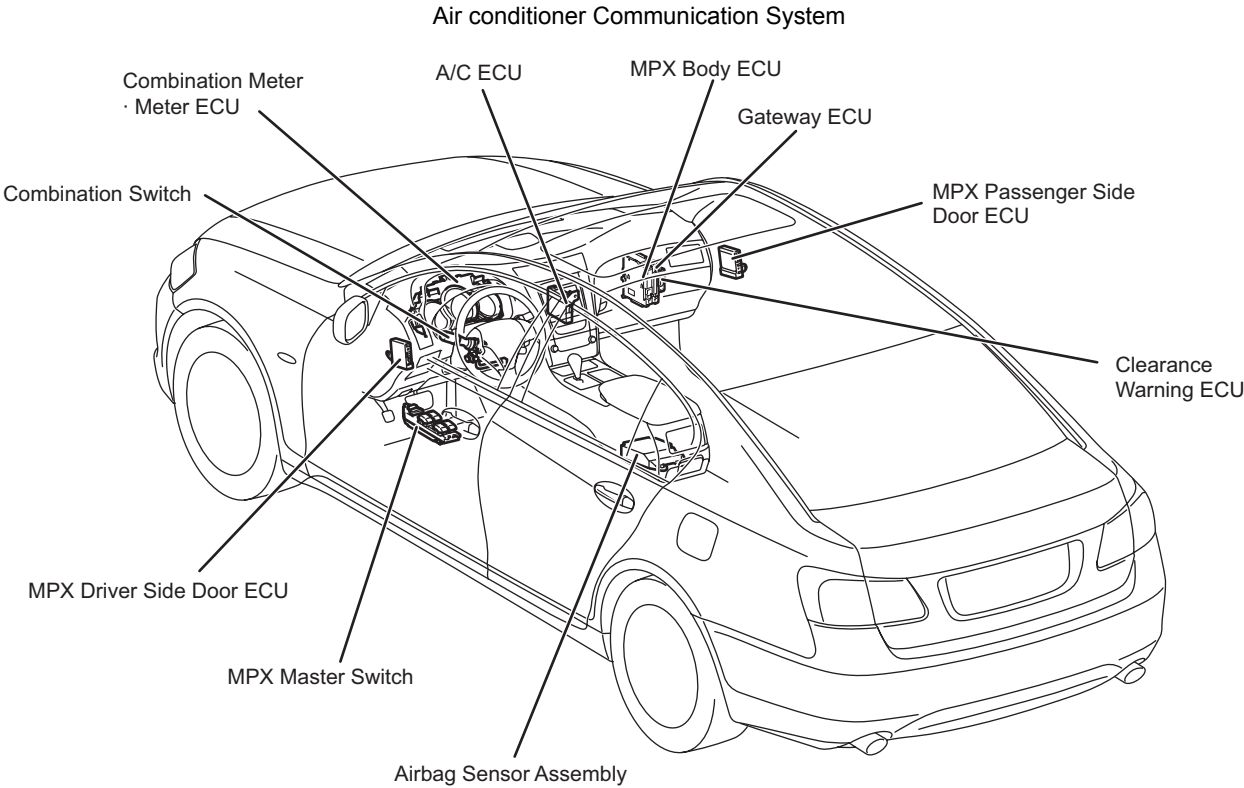
*2"AVC-LAN" is an abbreviation for Audio Visual Communication - Local Area Network. This communication network establishes communication among the audio and visual devices, and is commonly used by various device manufacturers.

*3"CAN" is an abbreviation for Controller Area Network, which is serial communication that complies with the ISO (International Organization for Standardization) standards.



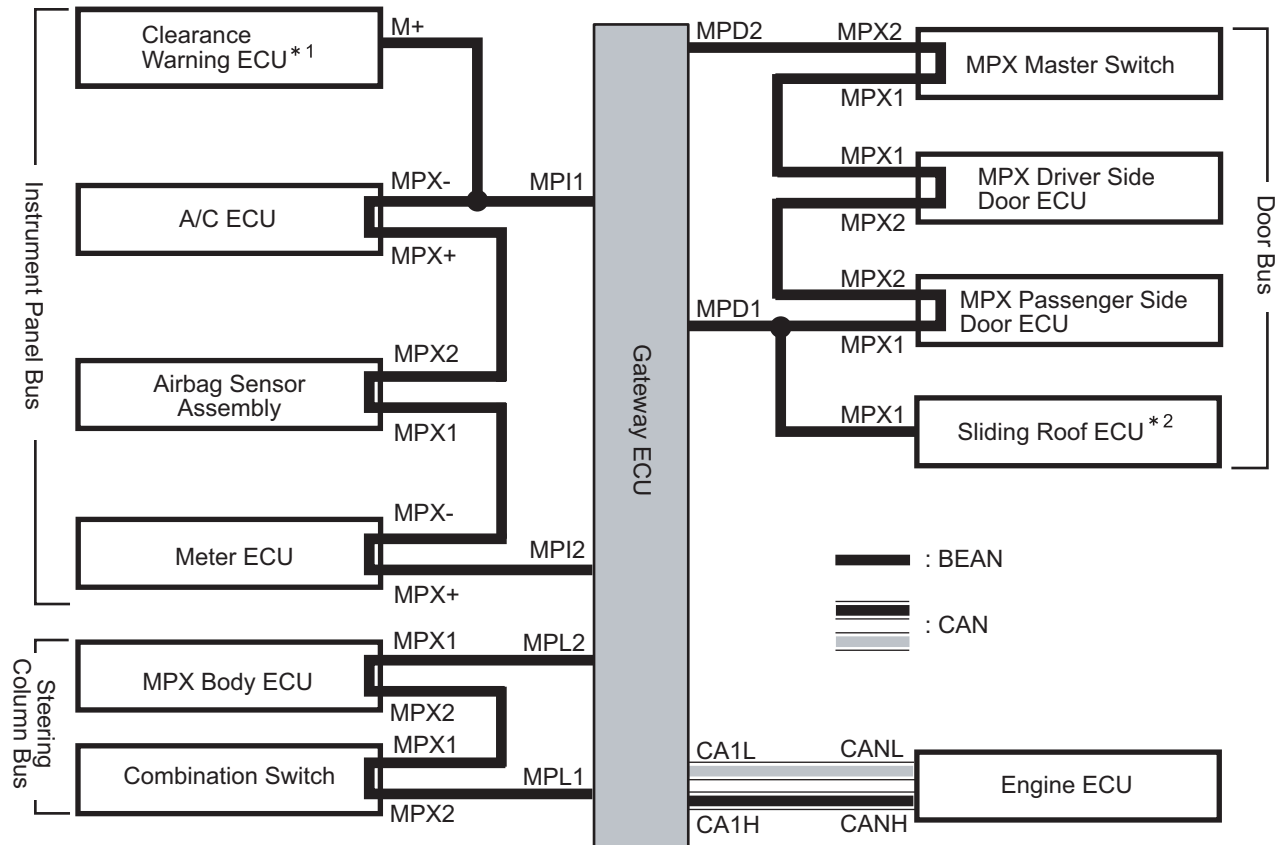
* : with Moon Roof

Engine ECU



A4270003E

Air conditioner Communication Diagram



AC

* 1 : with Front & Clearance Sonar System
* 2 : with Moon Roof