

# TROUBLESHOOTING

## DESCRIPTION

BE21D-02

Description of Each System Mentioned in the DI Section Related to Gateway System.

HINT:

Master control means that the Control ECU becomes a master and controls each electric system.

The sub control system transmits to the Master Control ECU the signals of the switches that are connected to the ECU. It also operates the motor by receiving the command of the Master Control ECU.

### CRUISE CONTROL SYSTEM

| Control ECU                                                                                    | Master control system                                                     | Sub control system |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------|
| <ul style="list-style-type: none"> <li>• Engine and ECT ECU</li> <li>• Distance ECU</li> </ul> | <ul style="list-style-type: none"> <li>• Cruise control system</li> </ul> | –                  |

### STEERING LOCK SYSTEM (w/ Smart key system)

| Control ECU                                                                                         | Master control system                                                                                         | Sub control system                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Steering lock ECU</li> <li>• Engine and ECT ECU</li> </ul> | <ul style="list-style-type: none"> <li>• Steering lock system</li> <li>• Engine immobiliser system</li> </ul> | <ul style="list-style-type: none"> <li>• Smart key system</li> <li>• Light auto turn off system</li> <li>• Key remainder warning system</li> <li>• Door lock system (Key confinement prevention function)</li> <li>• Power tilt and power telescopic steering column</li> </ul> |

### ENGINE IMMOBILISER SYSTEM (w/o Smart key system)

| Control ECU                                                                                           | Master control system     | Sub control system                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Transponder key ECU</li> <li>• Engine and ECT ECU</li> </ul> | Engine immobiliser system | <ul style="list-style-type: none"> <li>• Light auto turn off system</li> <li>• Key remainder warning system</li> <li>• Door lock system (Key confinement prevention function)</li> <li>• Power tilt and power telescopic steering column</li> </ul> |

### COMBINATION METER SYSTEM

| Control ECU           | Master control system                                                                                                                                                                                                         | Sub control system                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Combination meter ECU | <ul style="list-style-type: none"> <li>• Combination meter system</li> <li>• Fuel gauge system</li> <li>• Buzzer (Key remainder warning, Seat belt warning, Light on-warning)</li> <li>• Multi information display</li> </ul> | <ul style="list-style-type: none"> <li>• Rader cruise control display</li> <li>• Headlight beam level control system</li> <li>• Door lock system (Automatically locked by vehicle speed)</li> <li>• Smart key system</li> <li>• Automatic light control system</li> <li>• LEXUS park assist system</li> <li>• Seat position memory system</li> <li>• Wiper system</li> </ul> |

### SLIDING ROOF SYSTEM

| Control ECU              | Master control system | Sub control system                                                                                                          |
|--------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sliding roof control ECU | Sliding roof system   | <ul style="list-style-type: none"> <li>• Wireless door lock control system</li> <li>• Combination meter (Buzzer)</li> </ul> |

**DRIVER SIDE J/B CONTROL SYSTEM**

| Control ECU                 | Master control system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Sub control system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Driver side J/B control ECU | <ul style="list-style-type: none"> <li>• Automatic light control system</li> <li>• Light auto turn off system</li> <li>• Illumination system (Switch illuminations, Combination meter illumination)</li> <li>• Driver side buckle illumination</li> <li>• Illuminated entry system</li> <li>• Rheostat light control system</li> <li>• Daytime running light system</li> <li>• Back-up light system</li> <li>• License plate light</li> <li>• Rear fog light system</li> <li>• Stop light system</li> <li>• Taillight system</li> <li>• Turn signal and hazard warning system</li> <li>• Front fog light system</li> <li>• Front clearance light</li> <li>• Headlight system</li> <li>• Side marker light</li> </ul> | <ul style="list-style-type: none"> <li>• Luggage compartment door opener system</li> <li>• Theft deterrent system</li> <li>• Combination meter (Pad wear indicator light)</li> <li>• Seat belt warning system</li> <li>• Remote control mirror system</li> <li>• Retract mirror system</li> <li>• Electric tension reducer system</li> <li>• Power shoulder belt anchorage system</li> <li>• Fuel lid opener system</li> <li>• Headlight cleaner system</li> <li>• Wiper system</li> <li>• Smart key system</li> </ul> |

**PASSENGER SIDE J/B CONTROL SYSTEM**

| Control ECU                    | Master control system                                                                                                                                                                                                                                                                                                                                               | Sub control system                                                                                                                                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Passenger side J/B control ECU | <ul style="list-style-type: none"> <li>• Illumination and interior light system (Vanity light, Interior light, Front personal light, Step light, Outer foot light (in outer mirror) Ignition key illumination, Door courtesy light)</li> <li>• Passenger side buckle illumination</li> <li>• Illuminated entry system</li> <li>• Wiper and washer system</li> </ul> | <ul style="list-style-type: none"> <li>• Headlight beam level control system</li> <li>• Combination meter (Pad wear indicator light)</li> <li>• LEXUS navigation system</li> <li>• Seat belt warning system</li> <li>• Power shoulder belt anchorage system</li> <li>• Rear sunshade system</li> </ul> |

**LUGGAGE ROOM J/B CONTROL SYSTEM**

| Control ECU                  | Master control system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Sub control system                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Luggage room J/B control ECU | <ul style="list-style-type: none"> <li>• Rear seat buckle illumination</li> <li>• Luggage compartment light</li> <li>• Luggage compartment door opener system</li> <li>• Luggage compartment door closer system</li> <li>• Rear sunshade system</li> <li>• Fuel lid opener system</li> <li>• Back-up light system</li> <li>• License plate light</li> <li>• Rear fog light system</li> <li>• Stop light system</li> <li>• Taillight system</li> <li>• Turn signal and hazard warning system</li> </ul> | <ul style="list-style-type: none"> <li>• Automatic light control system</li> <li>• Smart key system</li> <li>• Theft deterrent system</li> <li>• Wireless door lock control system</li> <li>• Combination meter (Fuel sender gauge)</li> <li>• Rear passenger's power seat system</li> <li>• Rear air conditioning system</li> <li>• Rear sunshade system</li> </ul> |

**FRONT LIGHT CONTROL SYSTEM**

| Control ECU             | Master control system                                                                                                                                                                       | Sub control system                                                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Front light control ECU | <ul style="list-style-type: none"> <li>• Front fog light system</li> <li>• Front clearance light</li> <li>• Headlight system</li> <li>• Side marker light</li> <li>• Horn system</li> </ul> | <ul style="list-style-type: none"> <li>• Combination meter (Washer fluid level warning light)</li> <li>• Light auto turn off system</li> <li>• Automatic light control system</li> </ul> |

**DRIVER DOOR CONTROL SYSTEM**

| Control ECU             | Master control system                                                                                                                                                                                                                                                                                                        | Sub control system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Driver door control ECU | <ul style="list-style-type: none"> <li>• Power window control system</li> <li>• Remote control mirror system</li> <li>• Retract mirror system</li> <li>• Door closer system</li> <li>• Automatic glare-resistant EC mirror system</li> <li>• Mirror heater system</li> <li>• Power shoulder belt anchorage system</li> </ul> | <ul style="list-style-type: none"> <li>• Light auto turn off system</li> <li>• Door courtesy light</li> <li>• Illuminated entry system</li> <li>• Combination meter (Door warning light)</li> <li>• Theft deterrent system</li> <li>• Wireless door lock control system</li> <li>• Outer foot light (in outer mirror)</li> <li>• Door lock system</li> <li>• Door lock system (Key confinement prevention function)</li> <li>• Double locking system</li> <li>• Smart key system</li> <li>• Key remainder warning system</li> <li>• Seat position memory system</li> </ul> |

**PASSENGER DOOR CONTROL SYSTEM**

| Control ECU                | Master control system                                                  | Sub control system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Passenger door control ECU | <ul style="list-style-type: none"> <li>• Door closer system</li> </ul> | <ul style="list-style-type: none"> <li>• Door courtesy light</li> <li>• Illuminated entry system</li> <li>• Outer foot light (in outer mirror)</li> <li>• Door lock system</li> <li>• Door lock system (Key confinement prevention function)</li> <li>• Double locking system</li> <li>• Power window control system</li> <li>• Smart key system</li> <li>• Key remainder warning system (Key unlock warning signal)</li> <li>• Automatic glare-resistant EC mirror system</li> <li>• Remote control mirror system</li> <li>• Retract mirror system</li> <li>• Mirror heater system</li> <li>• Wireless door lock control system</li> <li>• Power shoulder belt anchorage system</li> <li>• Combination meter (Door warning light)</li> <li>• Theft deterrent system</li> </ul> |

**REAR LEFT DOOR CONTROL SYSTEM**

| Control ECU                | Master control system                                                  | Sub control system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rear left door control ECU | <ul style="list-style-type: none"> <li>• Door closer system</li> </ul> | <ul style="list-style-type: none"> <li>• Door courtesy light</li> <li>• Illuminated entry system</li> <li>• Door lock system</li> <li>• Door lock system (Key confinement prevention function)</li> <li>• Double locking system</li> <li>• Power window control system</li> <li>• Smart key system</li> <li>• Key remainder warning system (Key unlock warning signal)</li> <li>• Rear passenger's power seat system</li> <li>• Combination meter (Door warning light)</li> <li>• Wireless door lock control system</li> </ul> |

**REAR RIGHT DOOR CONTROL SYSTEM**

| Control ECU                 | Master control system                                                  | Sub control system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rear right door control ECU | <ul style="list-style-type: none"> <li>• Door closer system</li> </ul> | <ul style="list-style-type: none"> <li>• Door courtesy light</li> <li>• Illuminated entry system</li> <li>• Door lock system</li> <li>• Door lock system (Key confinement prevention function)</li> <li>• Double locking system</li> <li>• Power window control system</li> <li>• Smart key system</li> <li>• Key remainder warning system (Key unlock warning signal)</li> <li>• Rear passenger's power seat system</li> <li>• Combination meter (Door warning light)</li> <li>• Wireless door lock control system</li> </ul> |

**THEFT DETERRENT SYSTEM**

| Control ECU         | Master control system                                                                                                                                                                                            | Sub control system                                                                                                                                                                                                                                                                                                                 |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Theft deterrent ECU | <ul style="list-style-type: none"> <li>• Theft deterrent system</li> <li>• Door lock system</li> <li>• Double locking system</li> <li>• Smart key system</li> <li>• Wireless door lock control system</li> </ul> | <ul style="list-style-type: none"> <li>• Power window control system (Jam protection system)</li> <li>• Steering lock system</li> <li>• Retract mirror control system</li> <li>• Light auto turn off system</li> <li>• Illuminated entry system</li> <li>• Luggage door opener system</li> <li>• Fuel lid opener system</li> </ul> |

**POWER SEAT CONTROL SYSTEM**

| Control ECU                                | Master control system                                                                                          | Sub control system |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------|
| Power seat control ECU (Seat position ECU) | <ul style="list-style-type: none"> <li>• Driver's power seat system</li> <li>• Seat position memory</li> </ul> | –                  |

**REAR RIGHT SEAT CONTROL SYSTEM**

| Control ECU                                                                                                   | Master control system                                                                                                        | Sub control system |
|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <ul style="list-style-type: none"> <li>• Rear right seat control ECU</li> <li>• Vibration seat ECU</li> </ul> | <ul style="list-style-type: none"> <li>• Rear passenger's (RH) power seat system</li> <li>• Vibration seat system</li> </ul> | –                  |

**REAR LEFT SEAT CONTROL SYSTEM**

| Control ECU                                                                                                  | Master control system                                                                                                        | Sub control system |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <ul style="list-style-type: none"> <li>• Rear left seat control ECU</li> <li>• Vibration seat ECU</li> </ul> | <ul style="list-style-type: none"> <li>• Rear passenger's (LH) power seat system</li> <li>• Vibration seat system</li> </ul> | –                  |

**COMBINATION SWITCH CONTROL SYSTEM**

| Control ECU        | Master control system | Sub control system                                                                                                                                                                                                                                                                                                                                            |
|--------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Combination switch | –                     | <ul style="list-style-type: none"> <li>• Front fog light system</li> <li>• Headlight system</li> <li>• Taillight system</li> <li>• Turn signal system</li> <li>• Wiper and washer system</li> <li>• Tilt and telescopic steering system</li> <li>• Auto wiper system</li> <li>• Automatic light control system</li> <li>• LEXUS park assist system</li> </ul> |

**STEERING PAD SWITCH SYSTEM**

| Control ECU         | Master control system | Sub control system                                                                                                                                                                       |
|---------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Steering pad switch | –                     | <ul style="list-style-type: none"> <li>• Multi information display</li> <li>• LEXUS navigation system</li> <li>• Cellular mobile telephone</li> <li>• Radio and player system</li> </ul> |

**LEXUS PARK ASSIST SYSTEM**

| Control ECU         | Master control system    | Sub control system |
|---------------------|--------------------------|--------------------|
| Clearance sonar ECU | LEXUS park assist system | –                  |

**RAIN SENSOR SYSTEM**

| Control ECU | Master control system  | Sub control system                                                           |
|-------------|------------------------|------------------------------------------------------------------------------|
| Rain sensor | Automatic wiper system | <ul style="list-style-type: none"> <li>• LEXUS park assist system</li> </ul> |

**REAR SEAT SWITCH SYSTEM**

| Control ECU      | Master control system                                                         | Sub control system                                                                                                             |
|------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Rear seat switch | <ul style="list-style-type: none"> <li>• Seat heater system (Rear)</li> </ul> | <ul style="list-style-type: none"> <li>• Rear air conditioning system</li> <li>• Rear passenger's power seat system</li> </ul> |

**GATEWAY SYSTEM**

| Control ECU | Master control system                    | Sub control system |
|-------------|------------------------------------------|--------------------|
| Gateway ECU | Multiplex communication (Gateway) system | –                  |

**LEXUS NAVIGATION SYSTEM**

| Control ECU                                                                                       | Master control system                                                                                            | Sub control system                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Navigation ECU</li> <li>• Multi display (ECU)</li> </ul> | <ul style="list-style-type: none"> <li>• LEXUS navigation system</li> <li>• Cellular mobile telephone</li> </ul> | <ul style="list-style-type: none"> <li>• LEXUS park assist system</li> <li>• Fuel sender gauge</li> <li>• Automatic light control system</li> <li>• A/C system</li> </ul> |

**SRS SYSTEM**

| Control ECU            | Master control system | Sub control system                                                                                                |
|------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------|
| Airbag sensor assembly | SRS system            | <ul style="list-style-type: none"> <li>• Fuel cut system</li> <li>• Passenger seat belt warning system</li> </ul> |

**ENGINE SYSTEM**

| Control ECU        | Master control system                                                                                                                                                     | Sub control system                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engine and ECT ECU | <ul style="list-style-type: none"> <li>• Engine control system</li> <li>• Automatic transmission control system</li> <li>• Fuel cut system when impact sensing</li> </ul> | <ul style="list-style-type: none"> <li>• Air conditioning system</li> <li>• Fuel gauge system</li> <li>• Remote control mirror system</li> <li>• Seat position memory system</li> <li>• Wiper system</li> <li>• Combination meter (Engine oil level warning)</li> <li>• Combination meter (Oil pressure warning)</li> <li>• Rear air conditioning system</li> <li>• Auto wiper system</li> </ul> |

**ABS SYSTEM**

| Control ECU      | Master control system                                                                                                                                                                                                                                   | Sub control system                                                                                                                                     |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skid control ECU | <ul style="list-style-type: none"> <li>• ABS system</li> <li>• VSC system</li> <li>• Brake assist system</li> <li>• Traction control system</li> <li>• Electric brake force distribution system</li> <li>• Progressive power steering system</li> </ul> | <ul style="list-style-type: none"> <li>• Combination meter (Parking brake warning)</li> <li>• Combination meter (Brake fluid level warning)</li> </ul> |

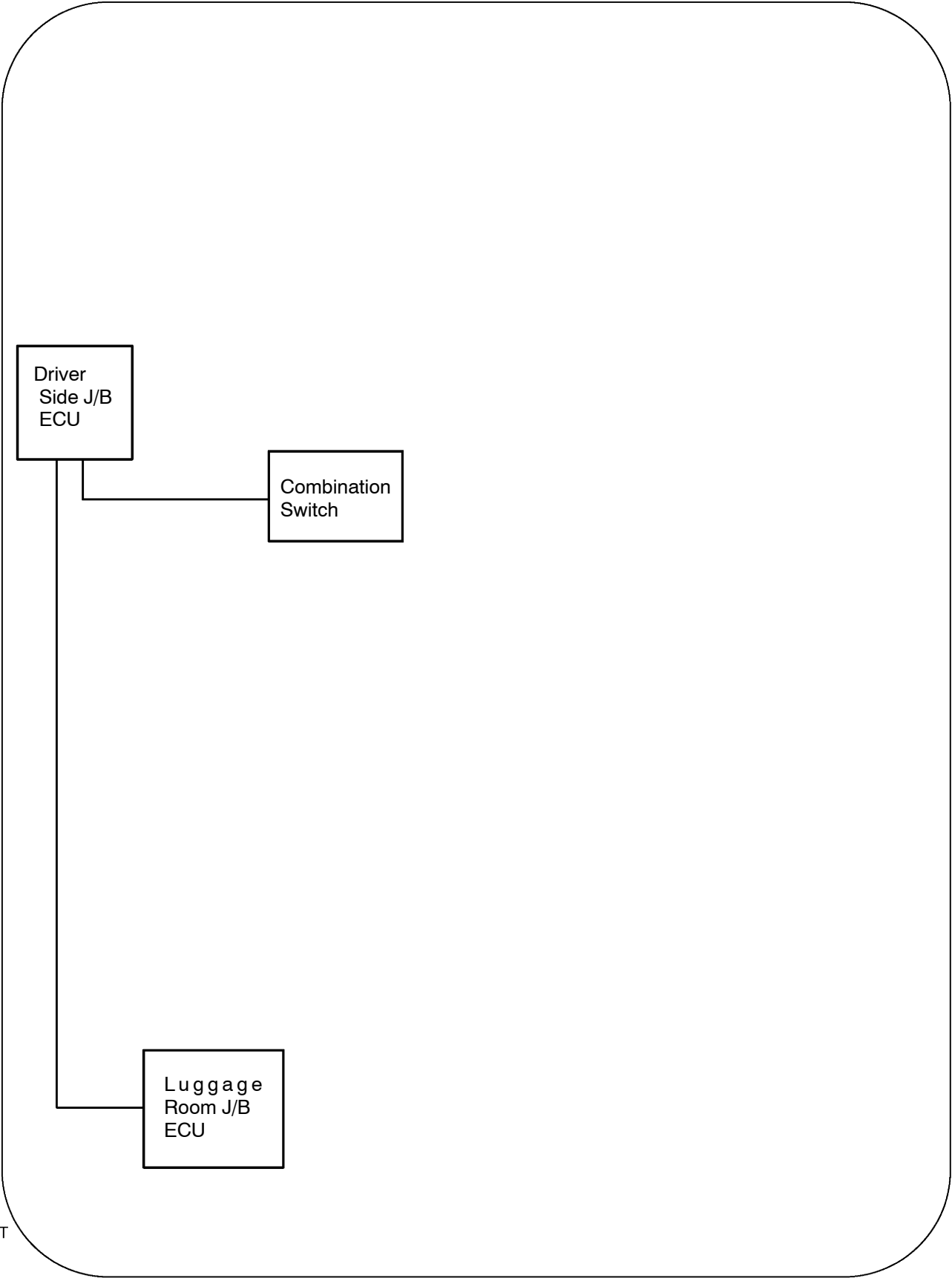
**A/C SYSTEM**

| Control ECU | Master control system                                                                                                                                                       | Sub control system                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| A/C ECU     | <ul style="list-style-type: none"> <li>• Air conditioning system</li> <li>• Clock</li> <li>• Rear air conditioning system</li> <li>• Rear window defogger system</li> </ul> | <ul style="list-style-type: none"> <li>• Mirror heater system</li> </ul> |

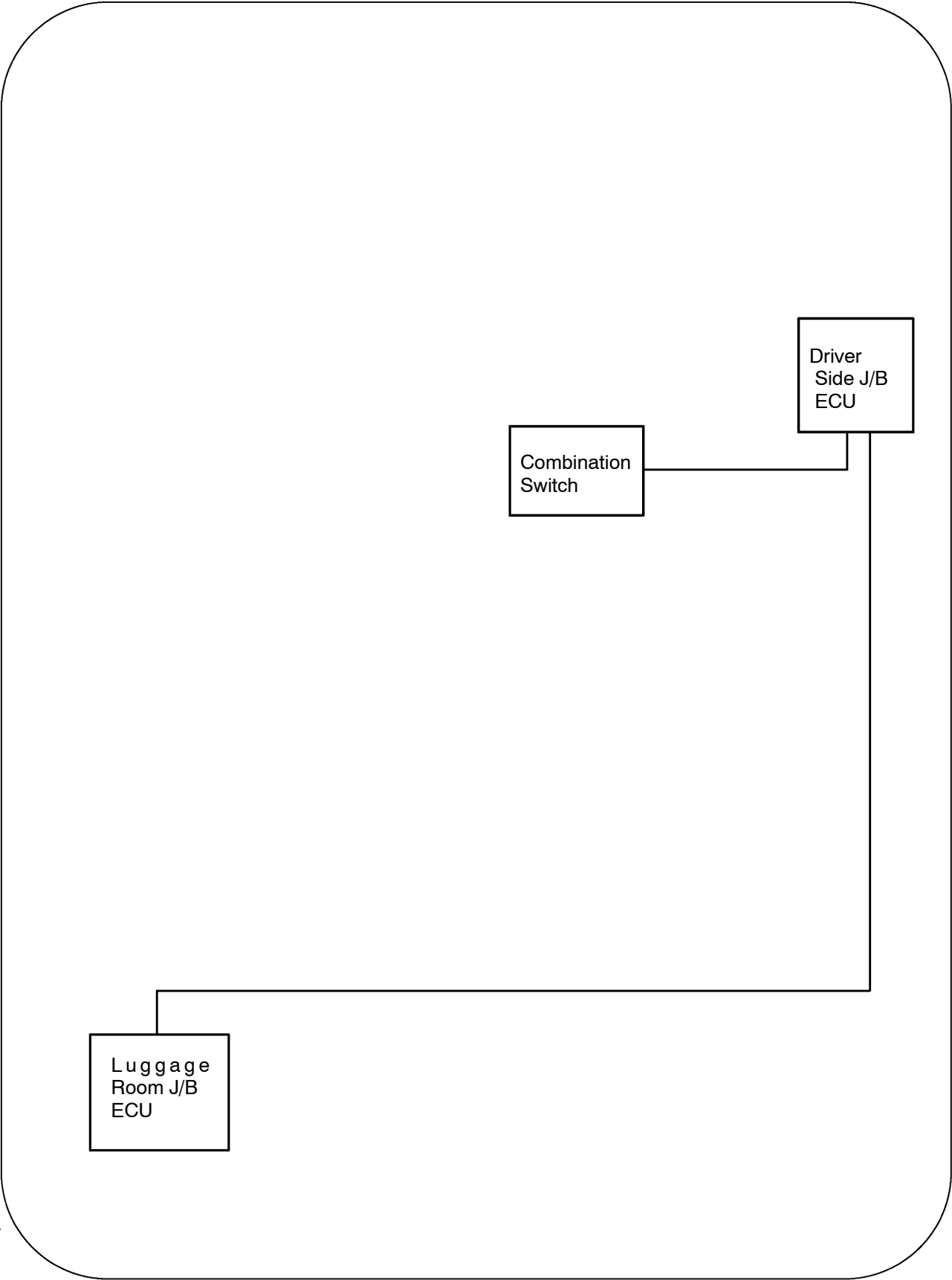
**TILT AND TELESCOPIC STEERING SYSTEM**

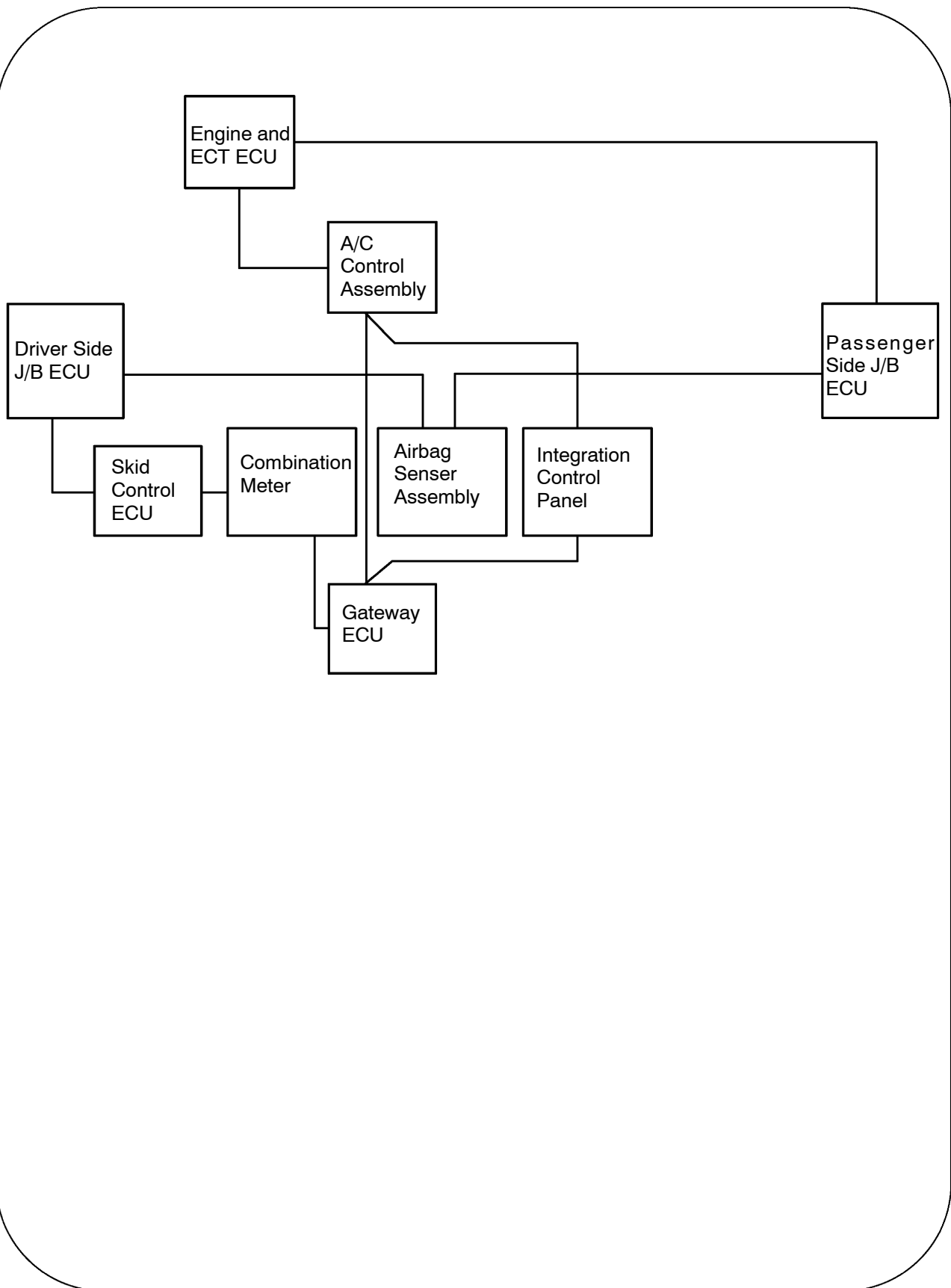
| Control ECU                      | Master control system               | Sub control system          |
|----------------------------------|-------------------------------------|-----------------------------|
| Tilt and telescopic steering ECU | Tilt and telescopic steering system | Seat position memory system |

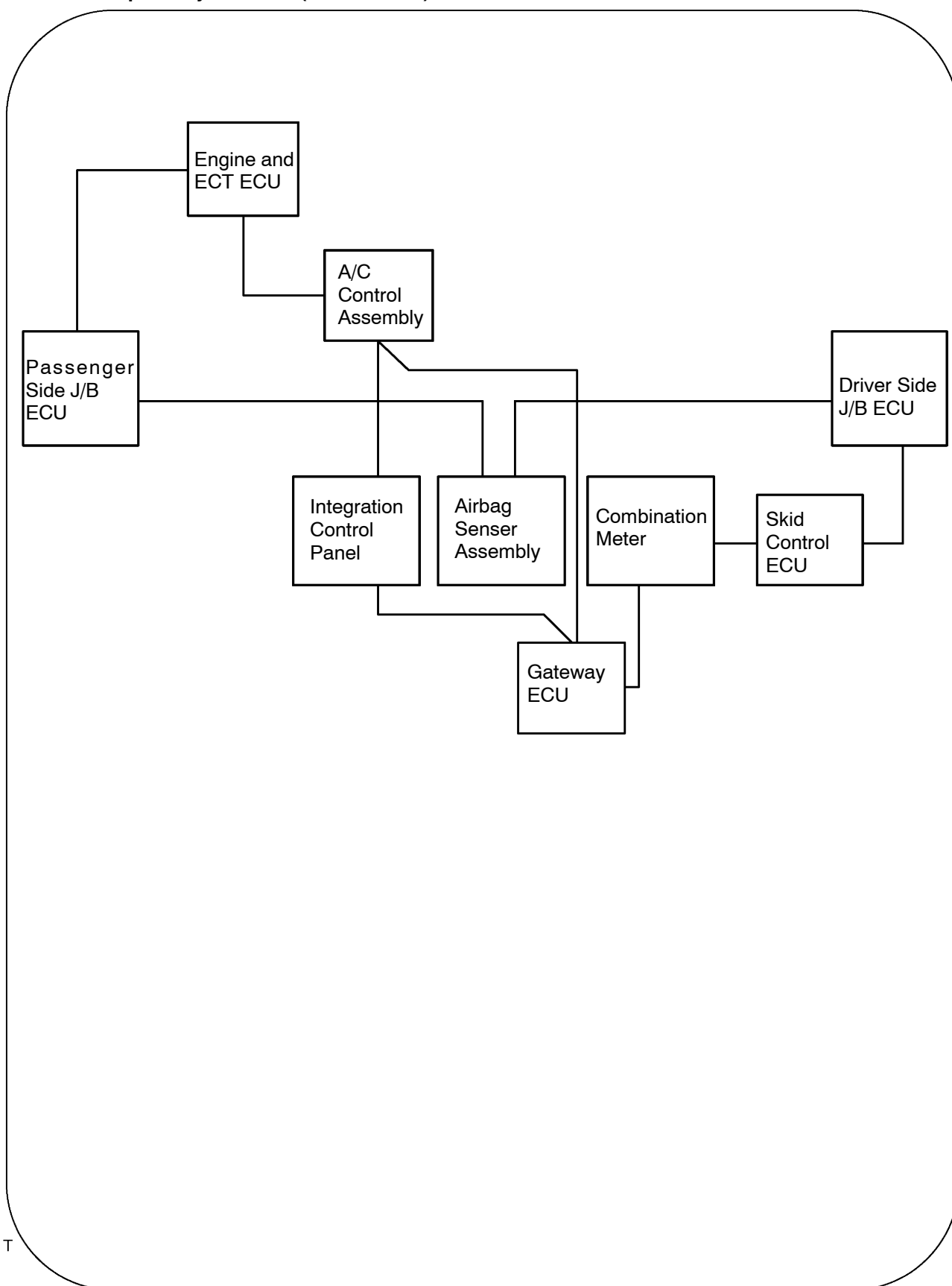
Light control back up bus (LHD models):



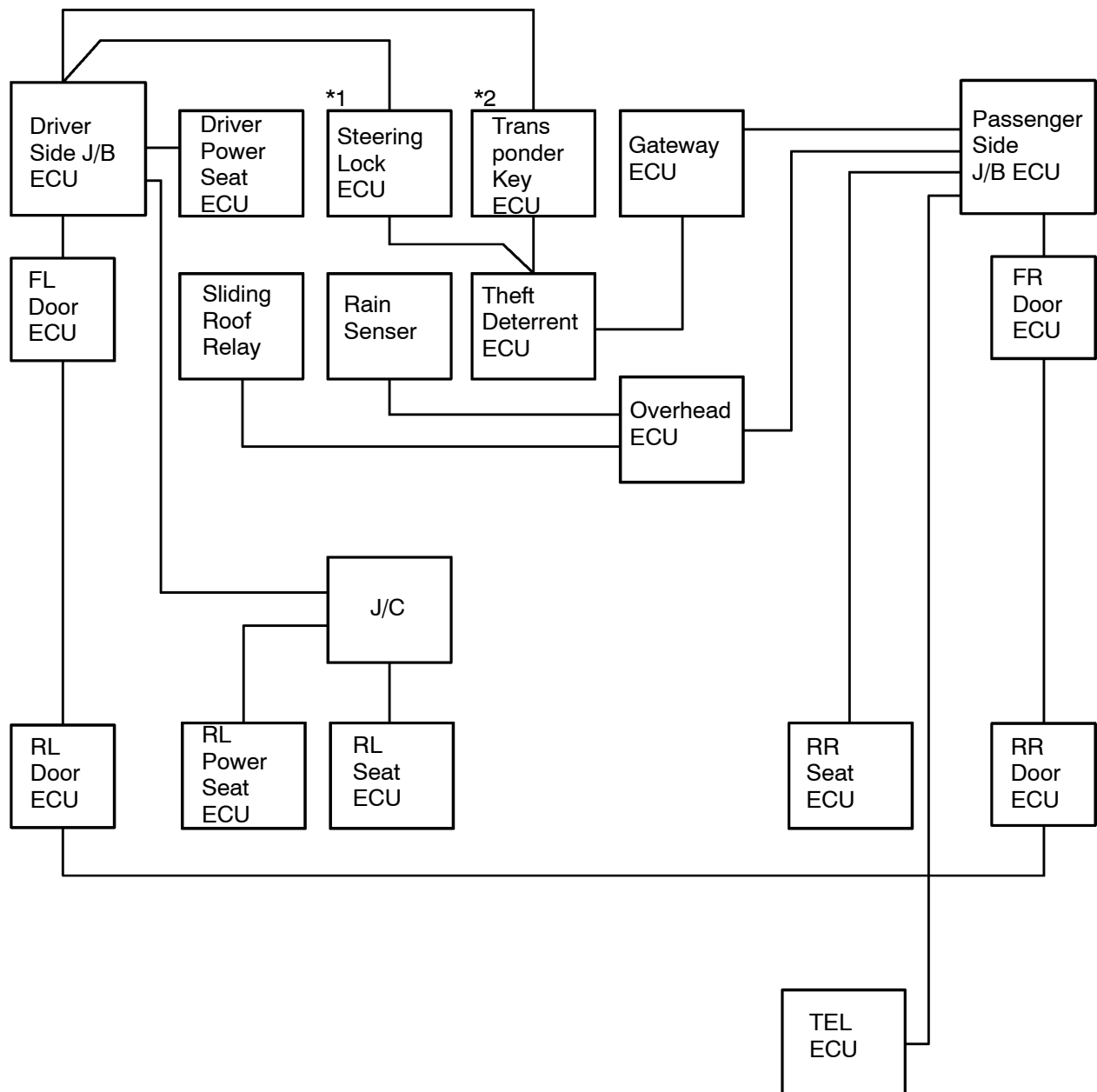
Light control back up bus (RHD models):



**Instrument panel system bus (LHD models):**

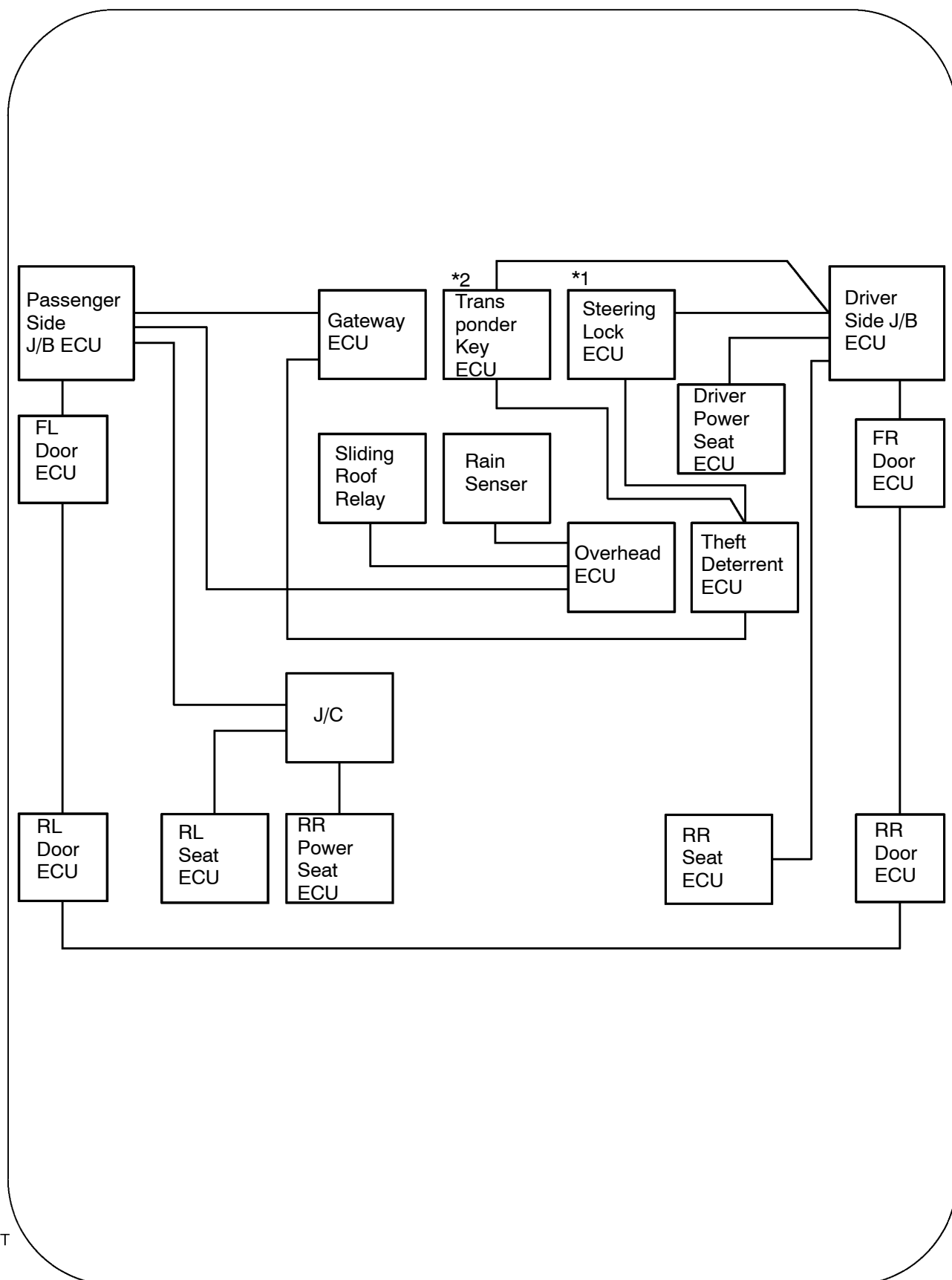
**Instrument panel system bus (RHD models):**

**Door system communication bus (LHD models):**



\*1: w/ Smart Key System  
\*2: w/o Smart Key System

## Door system communication bus (RHD models):



\*1: w/ Smart Key System

\*2: w/o Smart Key System