

■ POWER WINDOW SYSTEM

1. General

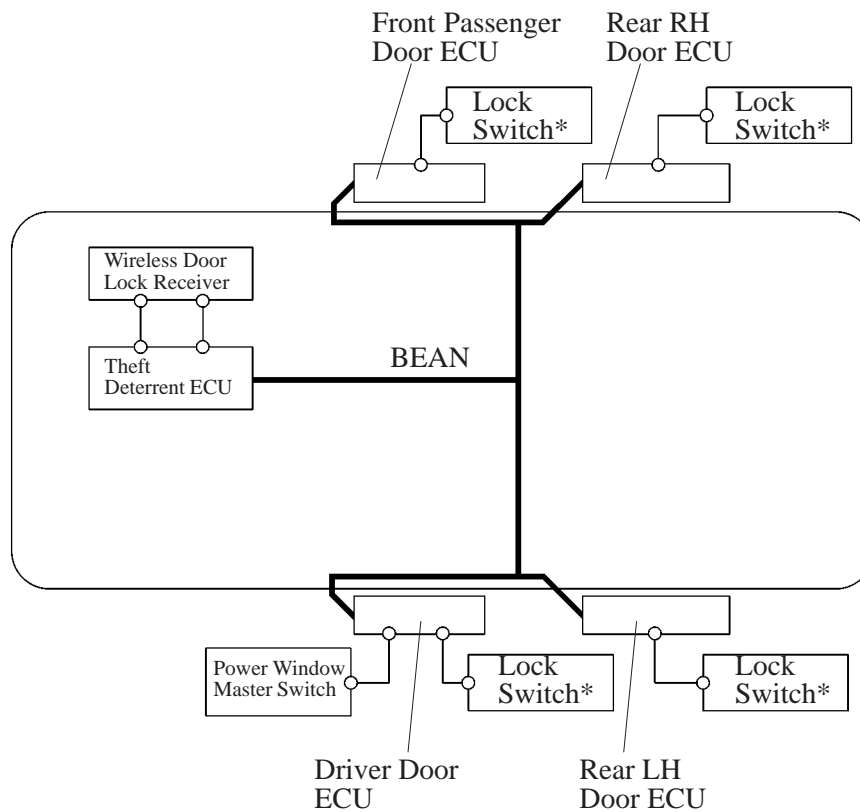
- As in the previous LS400, “all-door one-touch auto up-and-down”, “one-touch auto up-and-down remote control”, “jam protection”, “key-linked up-and-down”, “key-off operation”, and “transmitter-linked up-and-down” functions have been used.

However, on the models for Australia, the “one-touch auto up-and-down” function is provided for the driver’s door only, and there is no provision for the “one-touch auto up-and-down remote control” function.

Also, “transmitter (or smart key)-linked up-and-down” function is provided for the down function only.

- A “lock switch-linked up” function has been newly added on the models with the smart key system. This function moves the windows of all the doors when the lock switch is kept pressed for 3 seconds or longer.
- The power window control by the door switches is controlled by the respective door ECU, and the power window control by the wireless door lock remote control is controlled by the theft deterrent ECU. Their signals are transmitted via the BEAN (Body Electronics Area Network) to the driver door ECU, then the signal will be transmitted from the driver door ECU to each door ECU via the BEAN.

► System Diagram ◀



189BE32

*: Models with Smart Key System

2. Function

- The power window system has following features:

□ : New

Function	Outline
All-door one-touch auto up-and-down*1	When the driver door ECU detects the control signal for one-touch auto-up or auto-down that is output by the power window master switch, the door ECU controls the power window motor in accordance with the control signal to execute an auto-up or auto-down operation. This function is also provided for the front passenger and rear windows. The operation of those windows is basically the same as that of the driver's window. The door ECU of the respective door detects the control signal from the switch to execute an auto-up or auto-down window operation.
Driver's door one-touch auto up-and-down*2	When the driver door ECU detects the control signal for one-touch auto-up or auto-down that is output by the power window master switch, the door ECU controls the power window motor in accordance with the control signal to execute an auto-up or auto-down operation.
One-touch auto up-and-down remote control*1	This function of the front passenger and rear windows can be controlled by operating the power window master switch. When the power window master switch is operated to control the front passenger or the rear windows, the control signal is transmitted via the driver's door ECU to the target door ECU. The target door ECU that receives the control signal controls the motor in accordance with the signal.
Jam protection	This function has been adopted to the closing window operation of the all doors. If a foreign object becomes jammed in the window during "all-door one-touch auto-up", "one-touch auto-up remote control", "driver's door key-linked up", "key-off operation", or "transmitter-linked up", this function automatically stops the power window and moves it downward so that there will be a window opening of 200 mm (7.9 in.) or more.
Key-linked up-and-down	When the ignition key is not in the key cylinder, the driver's door is locked, and the key in the driver door is turned and maintained in the lock direction for 1.5 seconds or more, the driver's door ECU activates the power window motor to raise the all-door windows while the key is turned. Similarly, when the driver's door is unlocked, turning and maintaining the driver's door key in the unlock direction for 1.5 seconds or more will cause the all-door windows to be lowered.
Key-off operation	This function makes it possible to operate the power windows for approximately 43 seconds after the ignition switch is turned to the ACC or LOCK position, if the front doors are not opened.
Transmitter (or smart key)-linked up-and-down*4	When the theft deterrent ECU receives an lock/unlock signal from the transmitter continuously for longer than 3 seconds, the theft deterrent ECU transmits a power window control signal to the driver door ECU, then the signal will be transmitted from the driver door ECU to each door ECU via the BEAN. Upon receiving the control signal, the door ECUs control their power window motors in accordance with the signal to close/open the windows.
Lock switch-linked up*3	When the door ECU detects that the doors have been locked through the operation of the lock switch, and that the lock switch is kept pressed for 3 seconds or longer, this function operates the power window motors to raise the windows of all the doors. This function can be executed by operating the lock switch at any of the doors.

*1: Except Models for Australia

*2: Models for Australia

*3: Models with Smart Key System

*4: Models for Australia is down function only.

BE