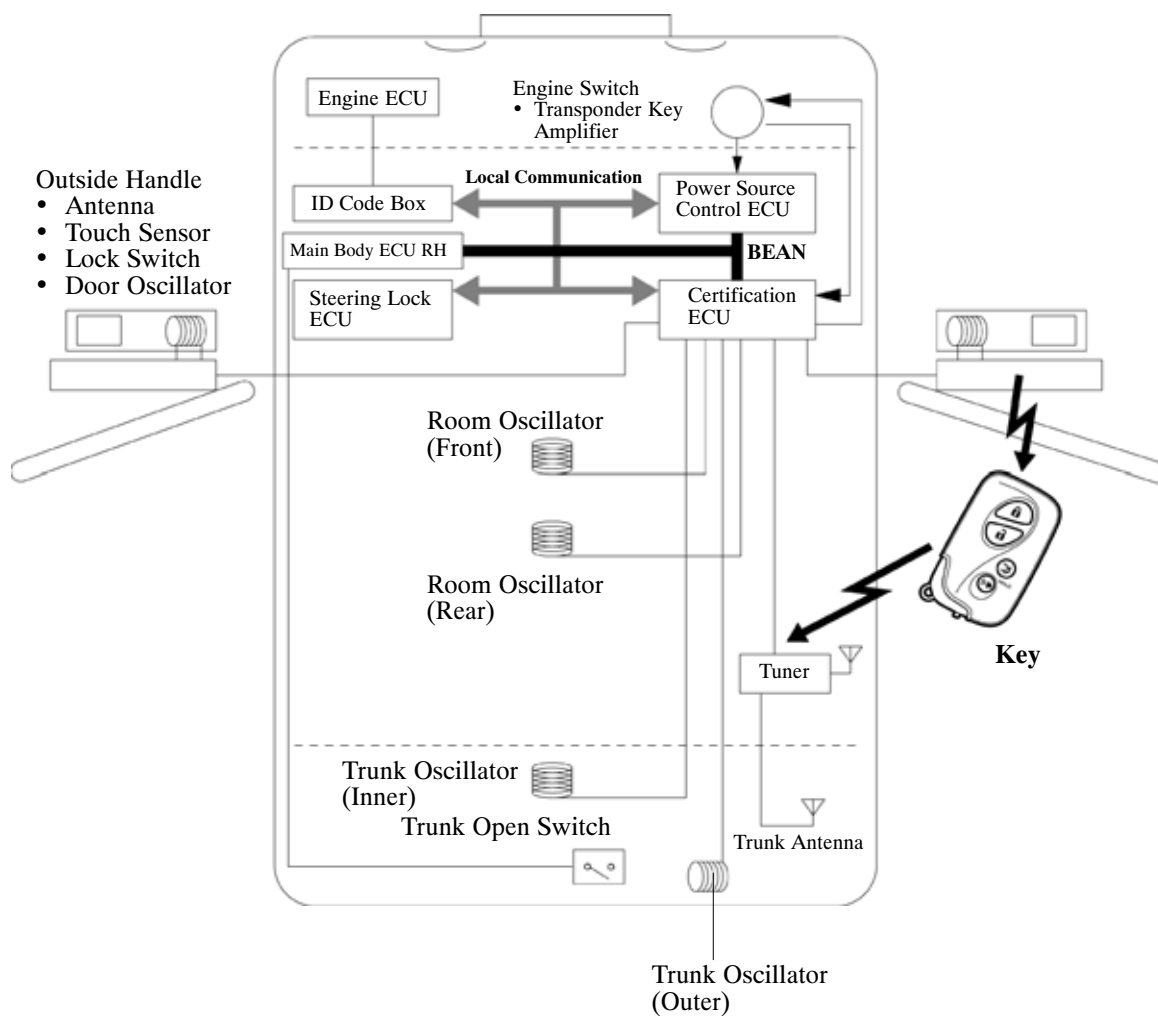


■ ENTRY FUNCTION

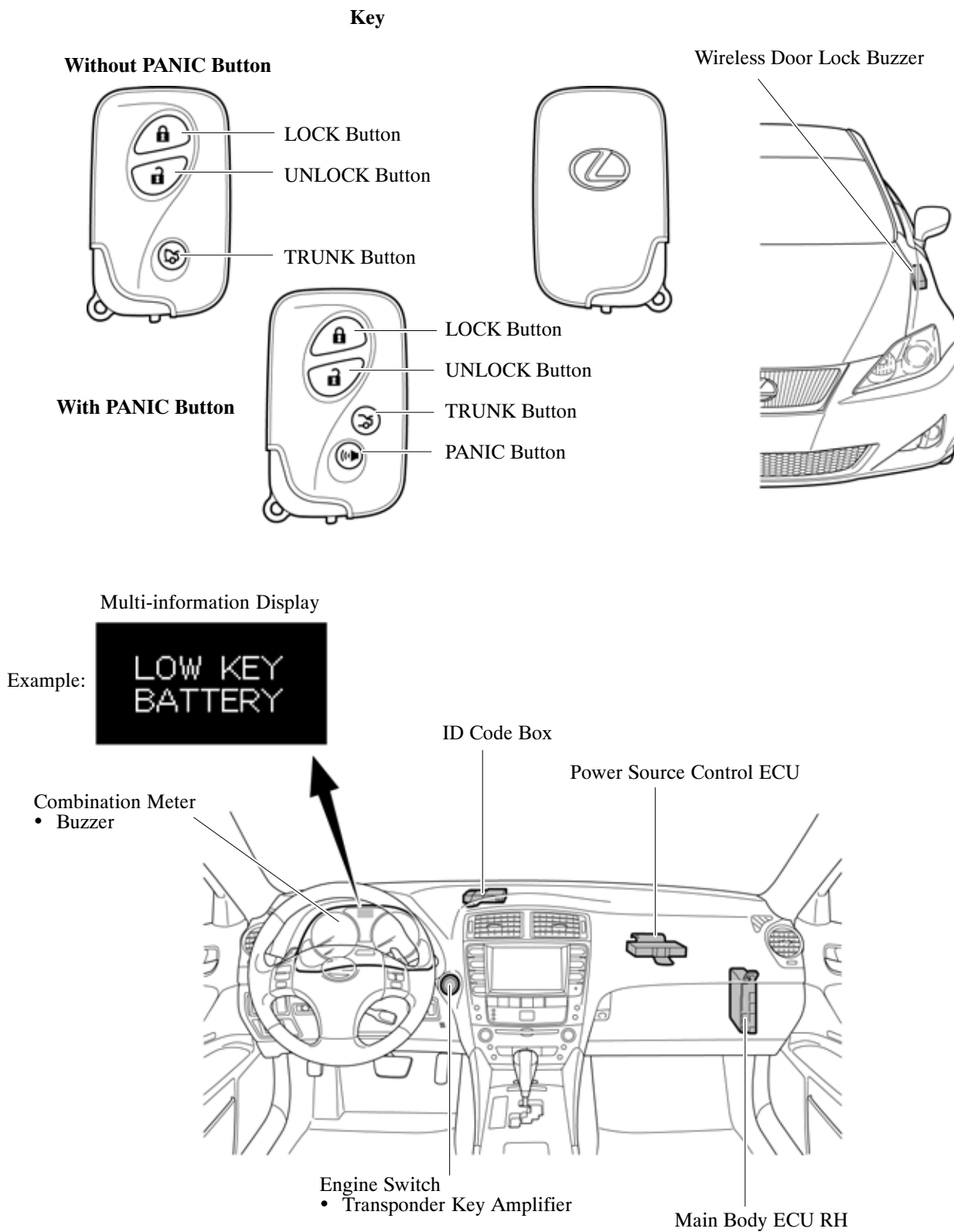
1. System Diagram

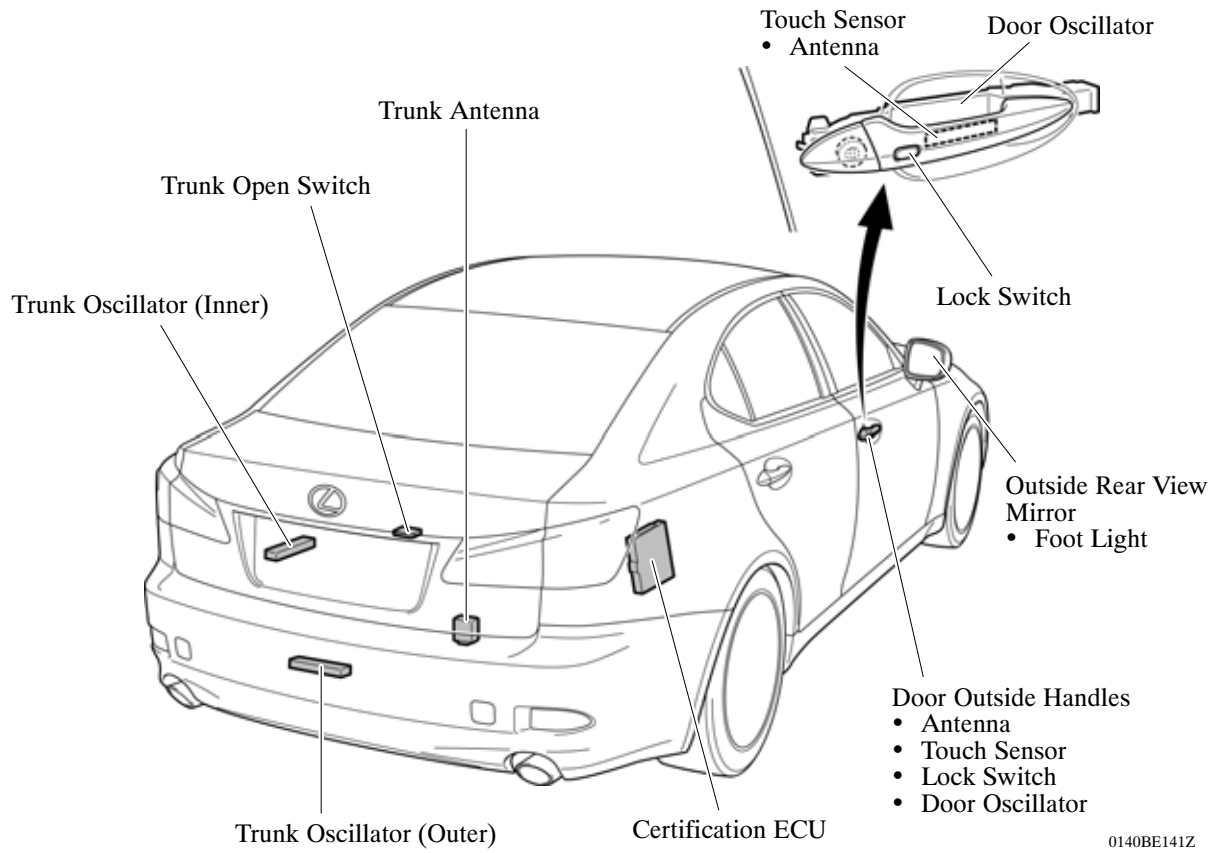
The Certification ECU controls the entry function. The system diagram below shows the main components that relate to the function.



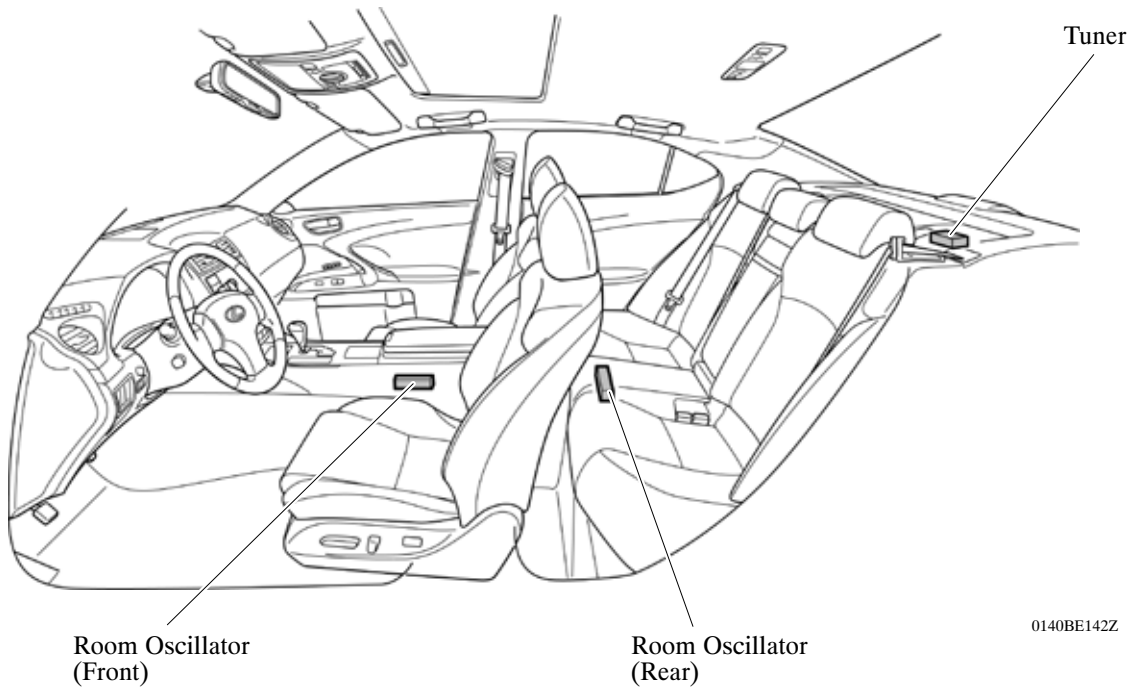
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2. Layout of Main Components





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3. Function of Main Component

Component		Function
Key		The key consists of a mechanical key, the transmitter for the wireless door lock remote control and the transceiver for the smart entry & start system with push button start, and a transponder chip for the engine immobilizer control.
Certification ECU		Controls the smart entry & start system with push button start in accordance with the signals from each oscillator, various switches, ECUs and key. - Judges and certifies the ID code from the tuner. - Transmits the engine immobilizer deactivation signal to the ID code box. - Transmits steering unlock signals to the Steering Lock ECU.
Power Source Control ECU		Controls the push button start system in accordance with the signals from the various switches, ECUs and combination meter. Transmits the key certification request signal to the Certification ECU in accordance with the engine switch signal, and turns the relays ON and OFF.
ID Code Box		Receives the steering unlock or engine immobilizer deactivation signals from the Certification ECU, certifies them, and transmits each deactivation signal to the Steering Lock ECU or Engine ECU.
Main Body ECU RH		- Receives the request signal from the Certification ECU and actuates the door lock motor to unlock or lock the door. - Transmits each door condition to the Certification ECU.
Outside Handle	Antenna	Transmits the request signals.
	Touch Sensor	Detects when a person touches the inside of an outer door handle.
	Lock Switch	Transmits door lock request signals to the Certification ECU.
	Door Oscillator • Front RH and LH	Receives the request signal from the Certification ECU, and creates an actuation area around front door.
Room Oscillator • Front and Rear		Receives the request signal from the Certification ECU, and forms the actuation area in the vehicle interior.
Trunk Oscillator • Inner		Receives the request signal from the Certification ECU, and forms the actuation area in the trunk.
Trunk Oscillator • Outer		Receives the request signal from the Certification ECU, and forms the actuation area around the trunk lid.
Tuner		- Receives the ID code from the key in the actuation area and transmits it to Certification ECU. - Receives the ID code from the key in the luggage room and transmits it to Certification ECU.
Trunk Antenna		Receives the ID code from the key in the luggage room and transmits it to the tuner.
Outside Rear View Mirror	Foot Light	When the key enters the exterior actuation area, the foot lights are illuminated in accordance with the request signals of the Certification ECU.

(Continued)

Component		Function
Trunk Open Switch		Transmits a trunk lid open request signal to Certification ECU.
Stop Light Switch		Outputs the state of the brake pedal to the Power Source Control ECU.
Wireless Door Lock Buzzer		Sounds as an answerback for entry lock or unlock to inform the driver.
Combination Meter	Multi-information Display	When the Certification ECU detects human errors such as those below, it warns the driver by sounding the wireless door lock buzzer, illuminating the multi-information display and sounding the buzzer in accordance with the request signal from the ECU. Example: • The key is taken outside the vehicle at an inappropriate time. • The driver gets out (with the key) while the engine is still running. • The driver gets out while the shift lever is in a position other than “P”.
	Buzzer	

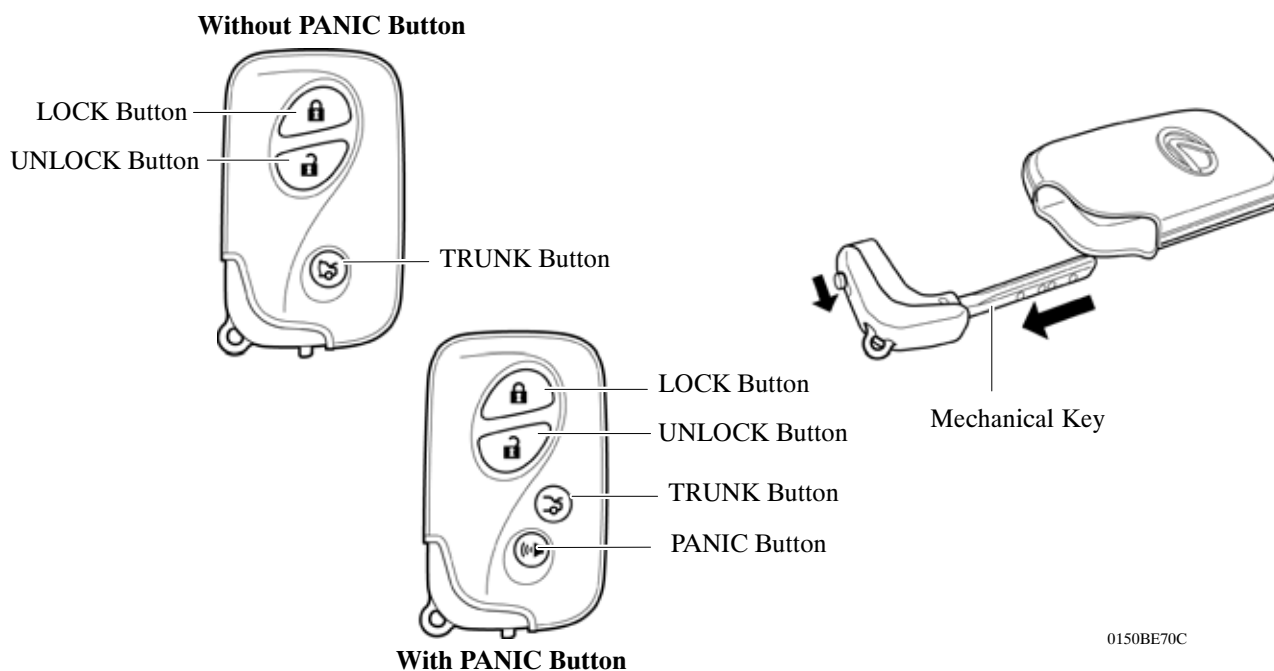
4. Construction and Operation

Key (Mechanical Key)

The key consists of a mechanical key, a transmitter function for the wireless door lock remote control and a transponder chip for the engine immobilizer control.

- The transceiver function of the smart entry & start system key receives the signals from the oscillators and returns the ID code to the tuner.
- The transmitter function for the wireless door lock remote control has a LOCK button, UNLOCK button, TRUNK button, and PANIC button.
- The transponder chip in the key for the engine immobilizer control returns a signal to the engine switch as a response to the radio wave it received from the engine switch.
- This mechanical key operates the driver door lock cylinder, trunk storage extension lock cylinder and glove box lock cylinder, but cannot be used to start the engine.

A total of four keys can be registered. For details, see the LEXUS IS250 Repair Manual (Pub. No. RM0150E).



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Oscillator (Driver and Front Passenger Door, Front and Rear Rooms, Trunk Inner, Trunk Outer)

Each oscillator transmits based on a request signal received from the Certification ECU, and creates a key actuation area that is used to detect the presence of a key.

The actuation area formed by front door oscillator and trunk outer oscillator is approximately 0.7 to 1.0 m (2.3 to 3.3 ft.) from the outside handle of front door, or the center of the rear bumper.

- The actuation area of front door oscillator is formed by transmitting a request signal every 0.25 seconds while the engine switch is OFF and each door is locked. In this way it detects the proximity of a key. When locking the door using the lock switch on the outer door handle, the actuation area is formed when the lock switch is pressed.
- The actuation area of the trunk outer oscillator is formed when the trunk open switch is ON. It is formed twice to allow the key to be verified.
- The actuation area of the front and rear room oscillator is formed when the driver door is opened or closed, when the start button is pressed, when a warning is activated, or when the lock switch is ON.
- The actuation area of the trunk inner oscillator forms when the trunk lid is closed or the trunk open switch is pressed, and is formed twice to allow the key to be verified.

5. Entry Function Operation

General

The entry function has the following functions.

Function	Outline
Mechanical Key [See page BE-164]	The operation is same as mechanical key.
Wireless Door Lock Remote Control [See page BE-164]	This function is a convenient system for locking and unlocking all the doors or trunk, at a distance. The operation is same as wireless door lock remote control system.
Entry Illumination [See page BE-167]	When a key enters any actuation area of the front door oscillators, the foot light, the front interior light, and engine switch illumination illuminate.
Entry Unlock [See page BE-167]	When a key is located in any actuation area of the front door oscillators, the door will unlock after touching of the inside of an outside door handle.
Entry Unlock Mode Switching [See page BE-168]	Allows selecting one of two modes that can be operated with the entry unlock function. • Driver Door Mode • All Door Mode
Entry Lock [See page BE-169]	When a key is located in the actuation area of either front door oscillator and the power source is OFF, the door will be locked by merely pressing the lock switch on the outside door handle.
Trunk Open [See page BE-170]	When a key is in the actuation area of the trunk outer oscillator, the trunk opens by merely pressing the trunk open switch.
Memory Call [See page BE-171]	This function operates the driving position memory system in accordance with key ID.
Prevention of Key Confinement [See page BE-175]	• Prevents the confinement of the key in the vehicle if the door is locked from the outside door handle while the key is still inside the vehicle. • If the trunk lid is closed while the key is still in the luggage compartment, the warning buzzer sounds. If the trunk open switch is operated in two seconds during this period, the trunk lid can be opened.
Warning [See page BE-177]	When any of the situations below occur, the smart entry & start system causes the Certification ECU to sound the buzzer in the combination meter and the wireless door lock buzzer, and illuminate the multi-information display in order to alert the driver. • An exit warning if the shift lever is in a position other than “P” and the power source is a mode other than “OFF”. (A/T models) • An exit warning if the shift lever is in “P” and the power source is a mode other than “OFF”. (A/T models) • A warning if the occupant leaves with the key in inappropriate circumstances. • A warning if the engine switch is operated while the key is outside the actuation area. • A warning if the entry lock button on the door handle is operated while the key is inside the vehicle. • A warning if the key battery is weak.
Battery Saving [See page BE-187]	If the key remains within the actuation area of the front door oscillators, the system maintains periodic communication with key. Therefore, if the vehicle remains parked in that state for a long time, the key battery and the vehicle battery could be drained.
Key Cancel [See page BE-188]	The following key functions can be cancelled by following certain procedures. • Entry Unlock/Lock • Trunk Open • Memory Call • Prevention of Key Confinement • Warning
Key Code Registration [See page BE-188]	The total number of keys can be registered is four. Enables the registering (writing and storing) of transmitter recognition codes in the EEPROM that is contained in the Certification ECU.

Wireless Door Lock Remote Control Function

The wireless door lock remote control function has the following functions:

Function	Outline	Customize
All Doors Lock	Pressing the LOCK button of the transmitter locks all doors.	—
All Doors Unlock	Pressing the UNLOCK button of the transmitter (key) unlocks all doors.	—
All Doors Unlock (2-step Unlock)	Pressing the UNLOCK button of the transmitter once unlocks the driver's door, and pressing it again within three seconds unlocks all the doors.	*1
Trunk Opener	Keeping the TRUNK button of the transmitter pressed longer than about 0.8 of a second opens the trunk lid.	*2
Answer Back	The hazard light flashes once when locking, and flashes twice when unlocking, to inform that the operation has been completed.	*1
Panic Alarm	Keeping the PANIC button of the transmitter pressed longer than about 0.8 of a second causes the following functions of the alarm to activate. • Sounds the horn and security horn. • Flashes the hazard lights, headlights, and taillights. • Illuminates the front interior light (If the interior light Switch is in the DOOR position).	*1
Automatic Lock	If none of the doors are opened within 30 seconds after they are unlocked by the wireless door lock remote control, all the doors will be locked again automatically.	*3
Door Ajar Warning	If any door is open or ajar, pressing the LOCK button of the transmitter will cause the wireless door lock buzzer to sound for about ten seconds.	*1
Repeat	If a door is not locked in response to the locking operation of the transmitter, the integration relay will output a lock signal after approximately 1 second.	—
Illuminated Entry	When all the doors are locked, pressing the UNLOCK button causes the interior lights to illuminate simultaneously with the unlock operation.	*4
Security	Sends an operation signal as a rolling code.	—
Wireless Buzzer	The wireless door lock buzzer sounds when the theft deterrent system performs warning operations.	*1

*1: Default setting is ON: The setting can be turned ON/OFF using the customized body electronics system.

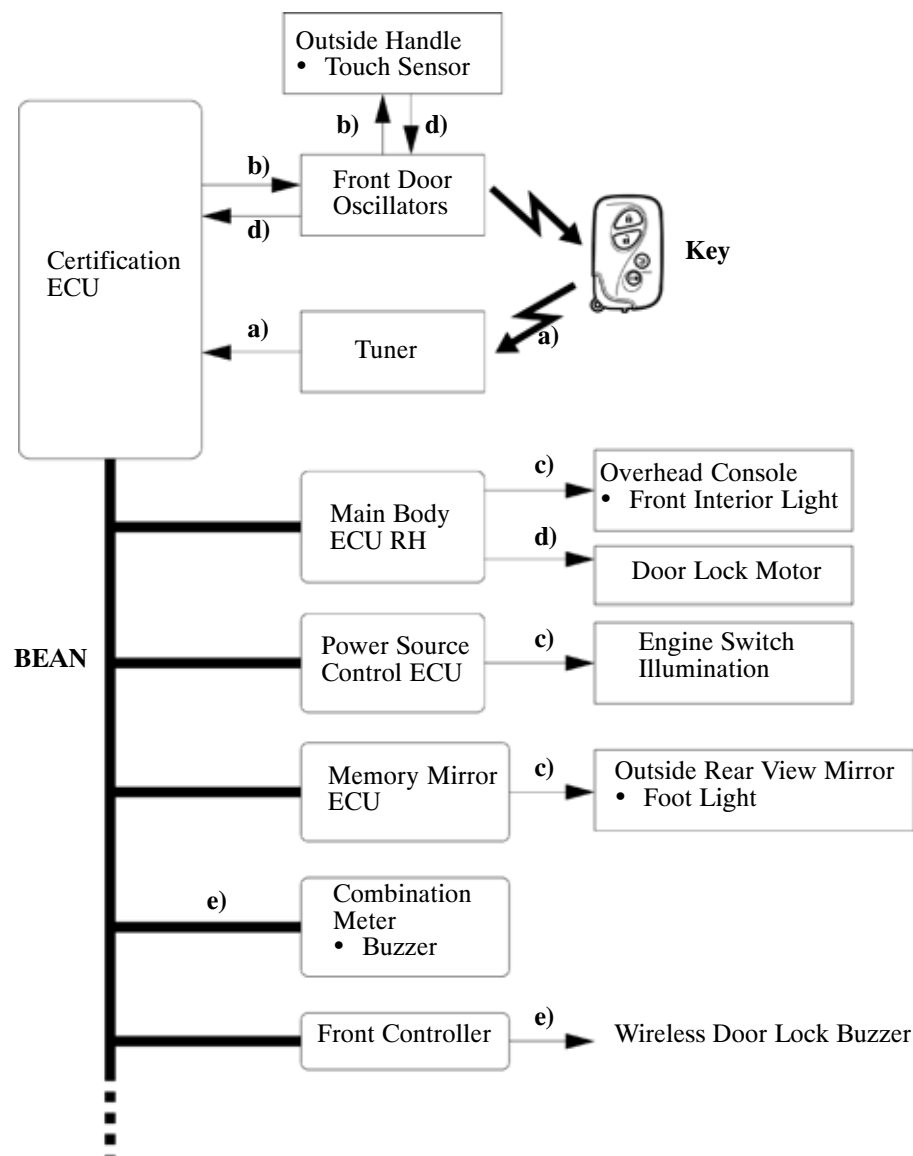
*2: Default setting is 0.8 seconds: The setting can be selected from 1 time/2 times/0.8 seconds/OFF using the customized body electronics system.

*3: Default setting is 30 seconds: The setting can be changed to 60 seconds using the customized body electronics system.

*4: Default illumination time is 15 seconds: The setting can be selected from 7.5/15/30 seconds using the customized body electronics system.

Entry Unlock

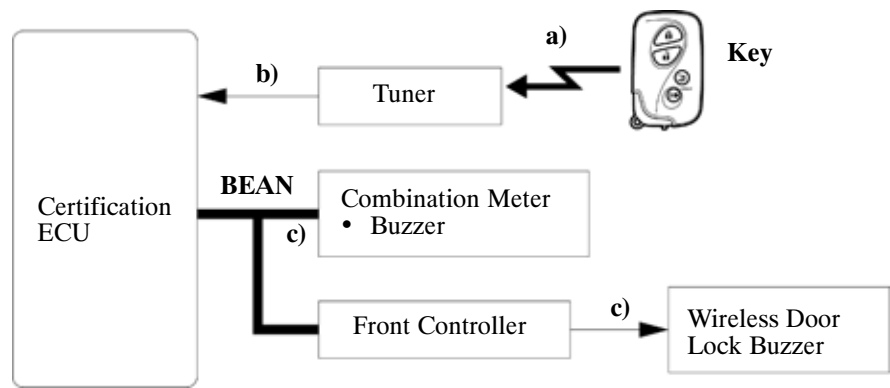
- When a key enters any actuation area of the front door oscillators, the Certification ECU judges and certifies the key ID code received from the tuner.
- After the key certification OK is confirmed, the Certification ECU transmits an unlock stand-by signal to the touch sensor of the relevant door.
- At the same time, the Certification ECU transmits a lighting signal for each illumination (foot light of the outside rear view mirror, engine switch illumination and front interior light), and turns ON these illuminations. (Entry Illumination Function)
- If the touch sensor is touched when this condition is present, the Certification ECU transmits a door unlock signal to the Main Body ECU RH, and unlocks the door.
- The Certification ECU sounds the wireless door lock buzzer and the buzzer of the combination meter as an answerback for entry unlock.



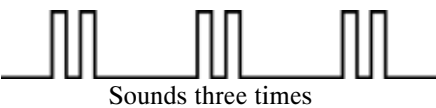
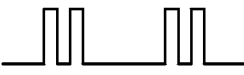
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Entry Unlock Mode Switching

- a) When the power source is OFF, press any two of the buttons on the key at the same time for approximately five seconds while the key is in the actuation area.
- b) The Certification ECU receives this signal from the tuner and switches the entry unlock mode.
- c) The Certification ECU sounds the wireless door lock buzzer and the buzzer of the combination meter to inform the user that the mode has been switched.
- d) If the entry unlock mode needs to be switched again, push any two of the buttons on the key at the same time for approximately five seconds after the LED of the key goes off.



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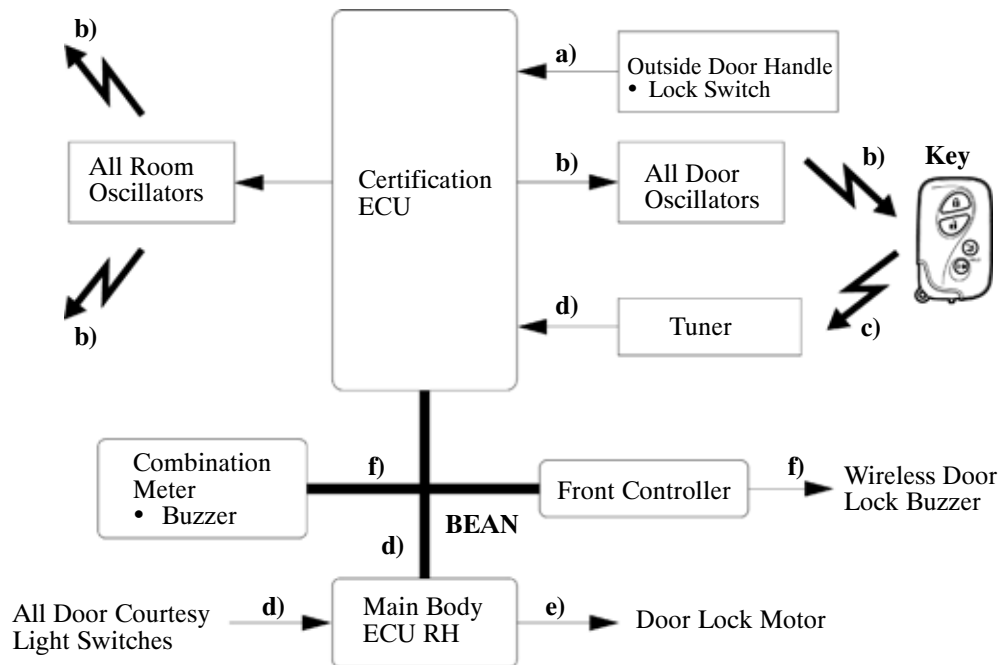
Mode	Wireless Door Lock Buzzer	Buzzer in Combination Meter
Driver Door (Default)	 Sounds three times 285BE88	Sounds once
All Doors (Customized)	 Sounds twice 189BE179	Sounds once

NOTE

The function only switches the entry unlock function of the smart entry & start system. It does not change the unlocking that occurs using the wireless door lock remote control.

Entry Lock Function

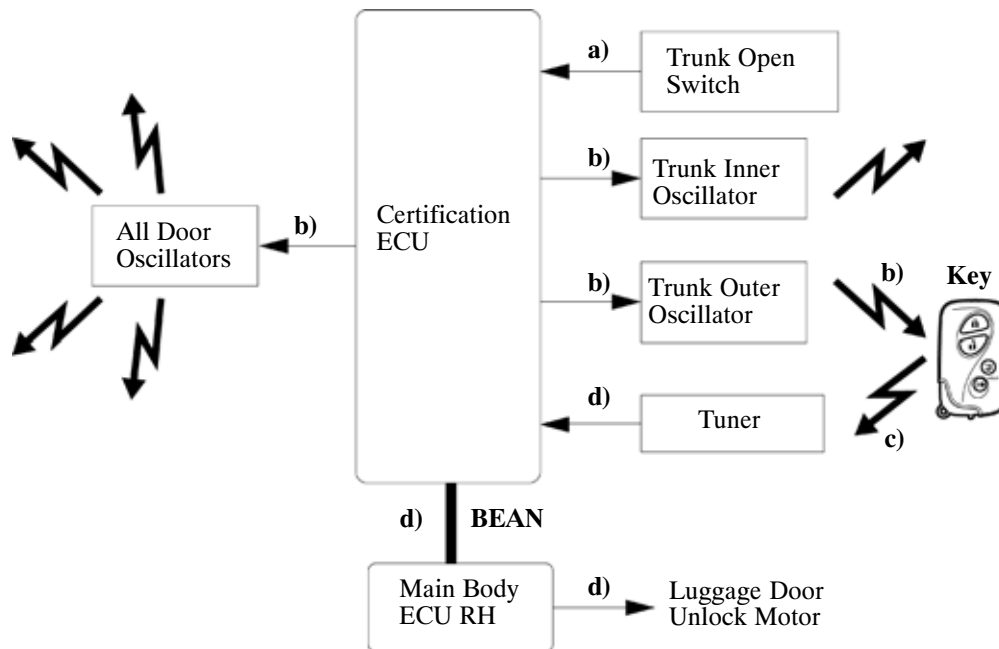
- This signal is transmitted to the Certification ECU when the driver (who has the key in their possession), exits the vehicle and presses the lock switch on the outer door handle.
- The Certification ECU transmits a request signal for all door and room oscillators to form actuation areas.
- The key receives this signal and returns the ID code to the tuner.
- The Certification ECU judges and certifies the ID code from the tuner. It then checks the location of the key, and if all doors are closed, the ECU transmits a door lock signal to the Main Body ECU RH.
- The Main Body ECU RH receives this signal and actuates the door lock motors to lock the doors.
- The Certification ECU sounds the wireless door lock buzzer and the buzzer of the combination meter as an answerback for the entry lock function.



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Trunk Open Function

- This signal is transmitted to the Certification ECU when the driver (who has the key in their possession) pushes the trunk open switch on the outside of the trunk lid.
- The Certification ECU transmits a request signal for all the room, trunk inner and outer oscillators to form actuation areas.
- The key receives this signal and returns the ID code to the tuner.
- The Certification ECU judges and certifies the ID code, and checks the location of the key. The ECU transmits a trunk open signal to the Main Body ECU RH.
- The Main Body ECU RH receives this signal and actuates the luggage door unlock motor to open the trunk.



Memory Call Function

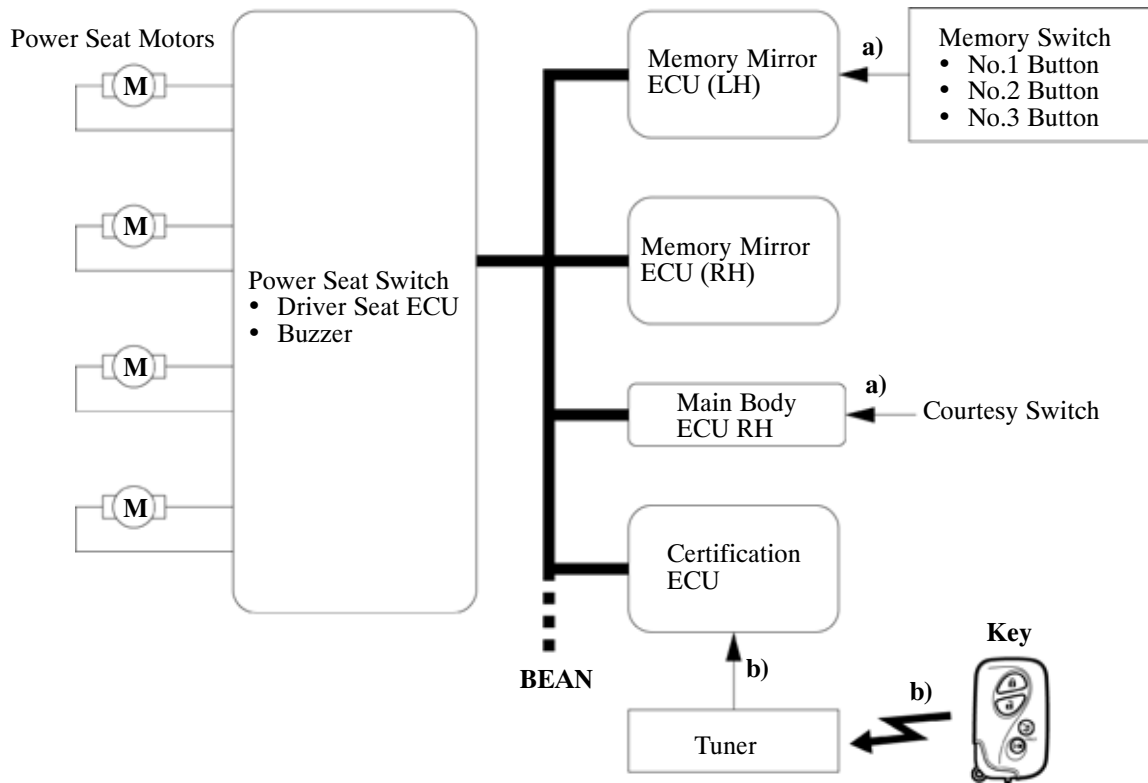
1) General

The memory call function using a key utilizes the key ID to restore the seat position (driving position memory system), and outside rear view mirror position, automatically, which increases driver convenience.

Condition	Outline
Memory Registration	When all the following conditions are met, the key ID is recorded. • Power source mode is “OFF”. • Driver door closed. • Memory No. (1, 2 or 3) button pressed and held. • LOCK or UNLOCK button in the key pressed and held.
Memory Call Operation	After the door is unlocked using the function of the smart entry & start system or the wireless door lock remote control function, if the driver door is opened, the memory call function is operated.
Memory Call Cancel	When all the following conditions are met, the memory call function can be disabled. • Power source mode is “OFF”. • Driver door closed. • SET button pressed and held. • LOCK or UNLOCK button on the key is pressed and held.

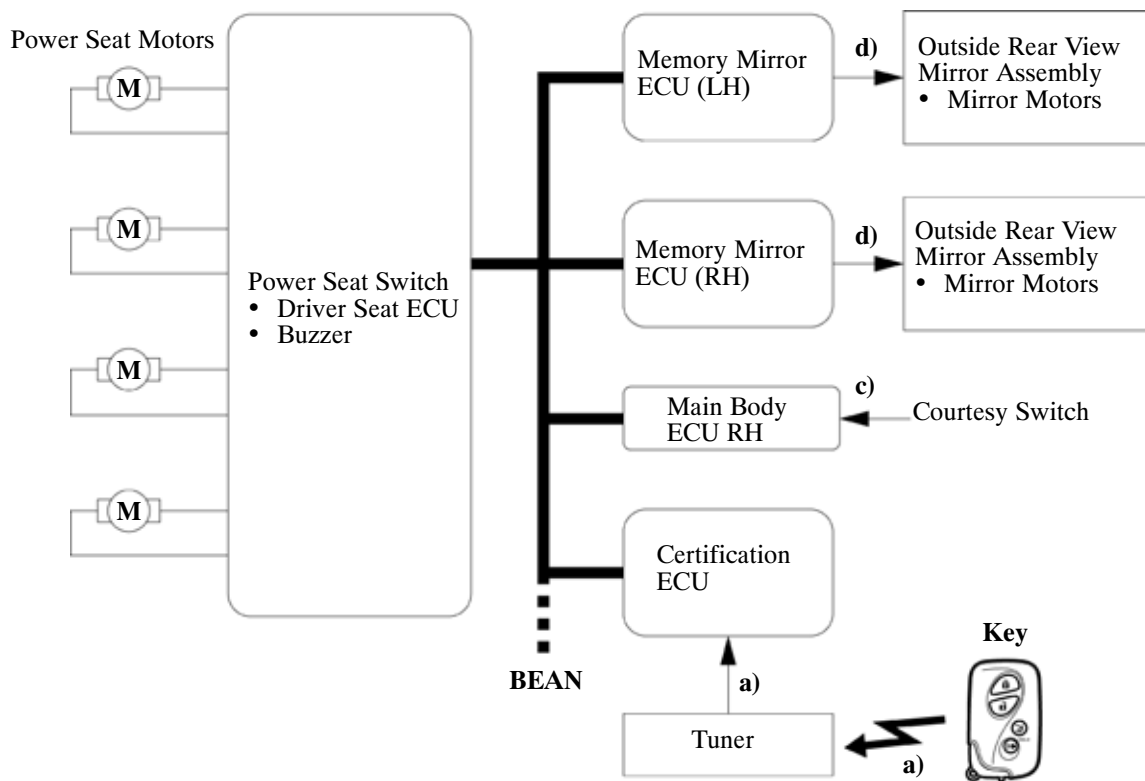
2) Memory Registration

- a) The Driver Seat ECU enters the key ID registration mode (linking mode), if the seat memory No. 1, No. 2 or No. 3 button is pressed with the power source OFF and driver door closed.
- b) In this condition, when the LOCK or UNLOCK button on the key is pressed, the key ID is transmitted from Certification ECU to the Driver Seat ECU.
- c) The Driver Seat ECU records the key ID and each position into the memory.
- d) When the Driver Seat ECU completes recording, it keeps the buzzer in the Driver Seat ECU once as an answer back.



3) Memory Call Operation

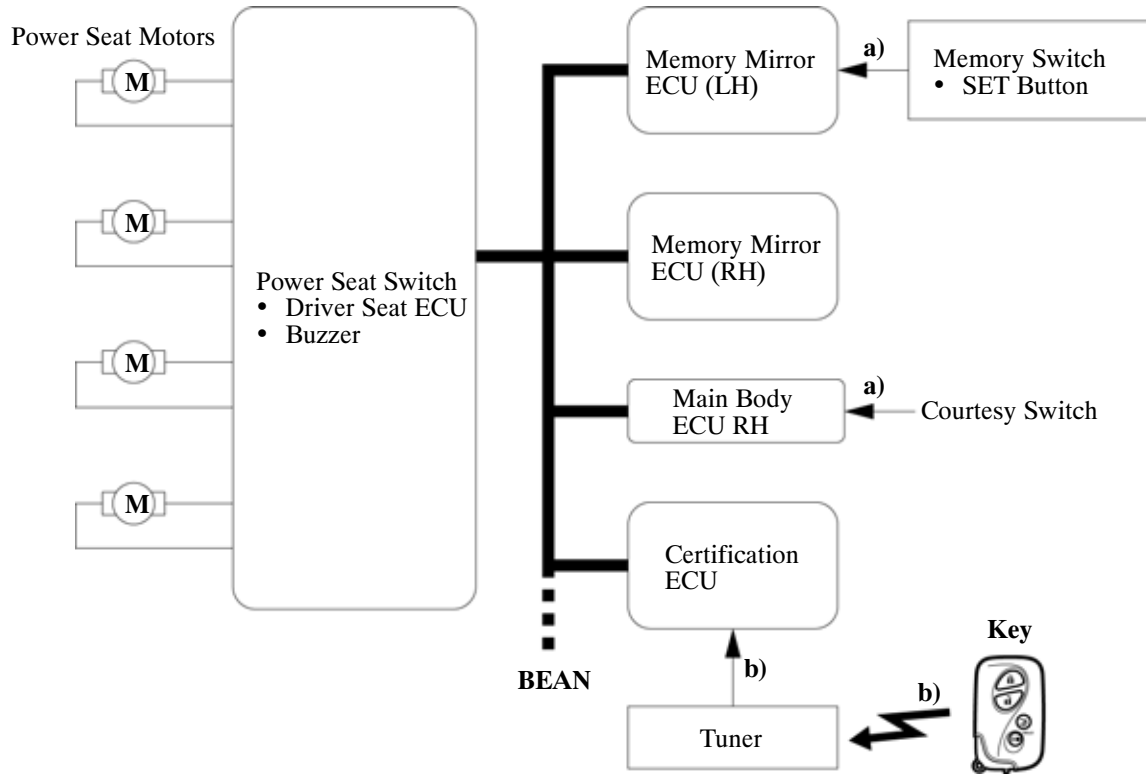
- a) When the UNLOCK button on the key is pressed or the key enters the actuation area, the key ID is input to Certification ECU through the tuner.
- b) The Certification ECU transmits the key ID to the Driver Seat ECU.
- c) If the driver door is opened, the Driver Seat ECU outputs a key ID memory restoration signal from Certification ECU to each ECU and activates the drive seat motors.
- d) When each ECU receives this signal, it activates each actuator.



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4) Memory Call Cancel

- a) If the SET button is pressed when the power source is OFF and the driver door is closed, the Driver Seat ECU enters the memory call cancel mode.
- b) In this condition, when LOCK or UNLOCK button in a key is pressed, the key ID is transmitted from Certification ECU to the Driver Seat ECU.
- c) If the key ID has already been registered, the Driver Seat ECU will cancel the key ID memory call function. To perform key ID memory call function again, it is necessary to register the key ID.
- d) When the Driver Seat ECU completes switching, it beeps buzzer in the Driver Seat ECU twice as an answer back.



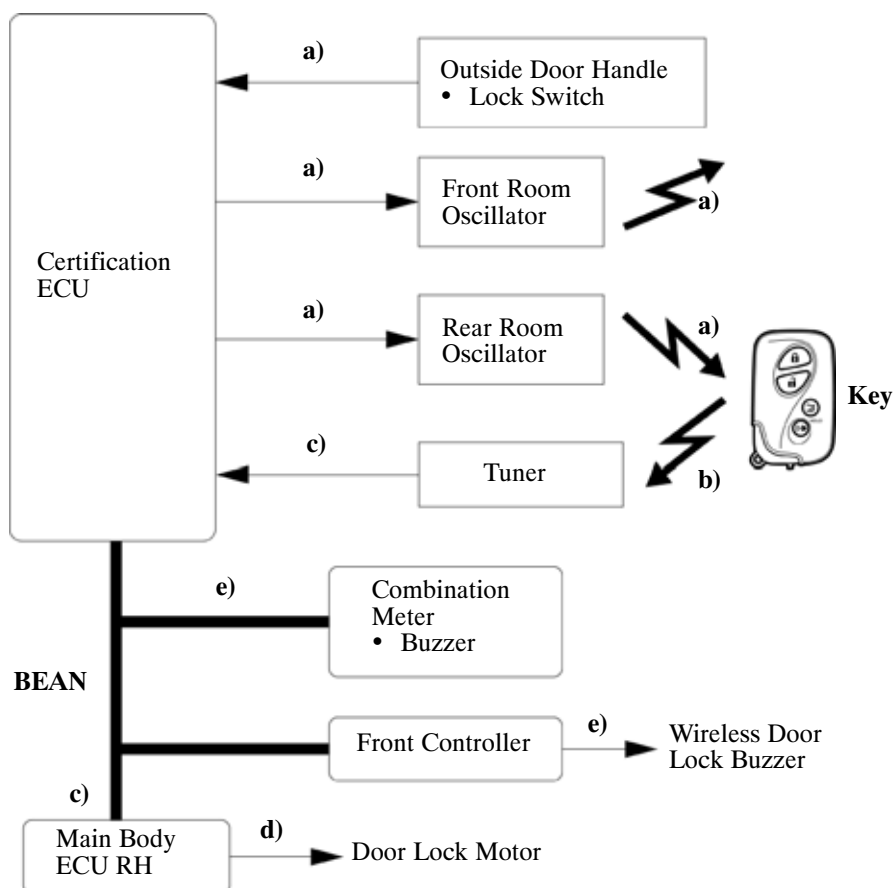
Prevention of Key Confinement

1) General

This function has two system operations: inside room (cabin) and inside luggage compartment.

2) Inside Room

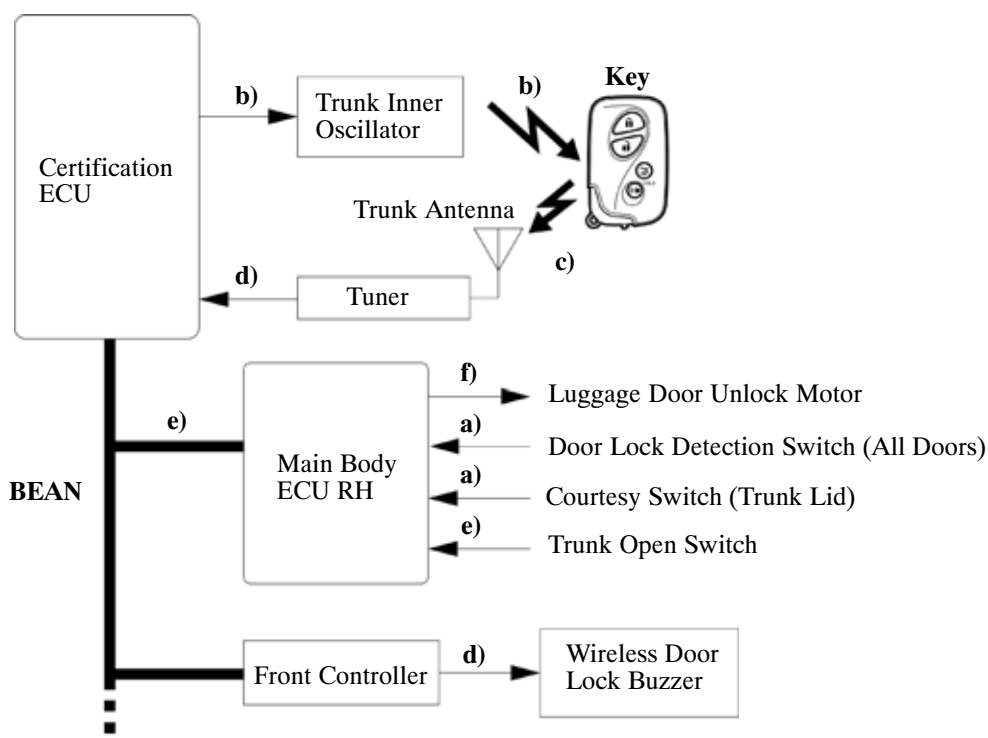
- a) When the door is locked from the outside door handle while the key is still inside the vehicle, the Certification ECU receives this signal and transmits a request signal for the front and rear room oscillators to form an actuation area.
- b) The key receives this signal and returns the ID code to the tuner.
- c) The Certification ECU judges and certifies the ID code, and checks the position of the key. The ECU transmits a door unlock signal to the Main Body ECU RH.
- d) The Main Body ECU RH receives the signal and operates each door lock motor to unlock the doors.
- e) The Certification ECU sounds the wireless door lock buzzer and the buzzer of the combination meter as an answerback for unlock.



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3) Inside Luggage Room

- a) When the trunk lid is closed while the key is still inside the luggage room and all doors are locked, the Certification ECU recognizes that a trunk lid close condition has occurred based on signals from the Main Body ECU RH.
- b) The Certification ECU receives this signal, and transmits a request signal for the trunk inner oscillator to form an actuation area.
- c) The key receives this signal and returns the ID code to the tuner.
- d) The Certification ECU judges and certifies the ID code, and checks the location of the key. The ECU sounds the wireless door lock buzzer for two seconds to inform the user.
- e) If the trunk open switch is turned ON (pressed) while the key is inside the luggage room, the Certification ECU sends another request signal for the trunk inner oscillator to form an actuation area. The ECU judges and certifies the key and checks its location, before transmitting a trunk open signal to the Main Body ECU RH.
- f) The Main Body ECU RH receives the signal and operates the luggage door unlock motor to open the trunk.



Warning**1) General**

When any of the situations below occur, the smart entry & start system causes the Certification ECU to sound a buzzer in the combination meter and the wireless door lock buzzer, and illuminate the multi-information display in order to alert the driver.

Situation	Condition
A	The engine is left running and the shift lever is in a position other than P when the driver gets out of the vehicle. (A/T models)
B	The key remainder.
C	The engine is left running and the shift lever is in the P position when the driver gets out of the vehicle. (A/T models)
D	A door is ajar.
E	The engine is left running when a passenger gets out of the vehicle holding the key.
F	The key is not within the actuation areas.
G	The key is left in the cabin.
H	The key is left in the luggage room.
I	The key battery is weak.
J	Steering lock does not release.
K	The steering lock mechanism is malfunctioning.
L	The Power Source Control ECU is malfunctioning.
M	An engine start method is displayed.
N	The clutch start switch is malfunctioning. (M/T models)

2) Situation: A (A/T models)

There are two patterns for situation A.

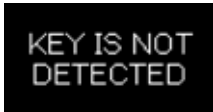
- Pattern 1: When the engine is left running and the shift lever is in a position other than P, the driver opens the door and attempts to get out of the vehicle.
- Pattern 2: Under the conditions of pattern 1, the driver closes the door and attempts to leave the vehicle holding the key.

In these situations, the following control is performed.:

Pattern 1.

Possible Effects without Warning		Sudden vehicle start, Vehicle theft, Vehicle roll-away
Warning Condition		The warning is activated when all of the following conditions are met: • Power source is in a mode other than “OFF”. • Shift lever is in any position except “P”. • Vehicle speed is 0 mph (0 km/h). • Driver door is opened.
Combination Meter	Buzzer	Continuous sound
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • Power source is “OFF”. • Shift lever is in the “P” position. • Vehicle speed is above 0 mph (0 km/h). • Driver door is closed.

Pattern 2.

Possible Effects without Warning		Sudden vehicle start, Vehicle theft, Vehicle roll-away
Warning Condition		The warning is activated when all of the following conditions are met: • Shift lever is in any position except “P”. • Power source is in a mode other than “OFF”. • Vehicle speed is 0 mph (0 km/h). • Key is not in the vehicle. • Driver door is opened → closed.
Combination Meter	Buzzer	Continuous sound
	Multi-information Display	The following warnings are alternately displayed:  0140BE187C  0140BE186C
	Master Warning Light	Flash
Wireless Door Lock Buzzer		Sounds continuously
Engine Switch Indicator		—

Warning Stop Condition	Key is in the vehicle.
	- The wireless door lock buzzer stops. - Multi-information Display:  0140BE187C
	Vehicle speed is above 0 mph (0 km/h).
	- The wireless door lock buzzer stops. - Multi-information Display:  0140BE186C
	Power source is “OFF”.
	All warning operations stop.

3) Situation: B

There are two patterns for situation B.

- Pattern 1: When the driver’s door is open, the driver changes the power source mode to ACC and attempts to leave the vehicle.
- Pattern 2: When the driver’s door is open, the driver changes the power source mode from ON to OFF and attempts to leave the vehicle.

In these situations, the following control is performed.:

Pattern 1. and Pattern 2.

Possible Effects without Warning		Vehicle theft
Warning Condition		The warning is activated when one of the following conditions are met.: • Power source is in “ACC” mode and the driver door is opened. • Power source is in “OFF”, mode the steering is unlocked, and the driver door is opened.
Combination Meter	Buzzer	Continues to sound at short and even intervals
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • Power source is in “ON” mode. • Driver door is closed. • Power source is in “OFF” mode and the steering is locked

4) Situation: C (A/T models)

There are two patterns for situation C.

- Pattern 1: When the engine is left running and the shift lever is in the P position, the driver closes the driver's door and attempts to leave the vehicle holding the key.
- Pattern 2: Under the conditions of pattern 1, the driver presses the lock switch on the door outside handle.

In these situations, the following control is performed.:

Pattern 1.

Possible Effects without Warning		Vehicle theft, Engine cannot be restarted, Discharged battery
Warning Condition		The warning is activated when under all of the following conditions.: • Shift lever is in any position except "P". • Power source is in a mode other than "OFF". • Key is not in the vehicle. • Driver door is opened → closed.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 0140BE186C
	Master Warning Light	Flashes
Wireless Door Lock Buzzer		Sounds three times
Engine Switch Indicator		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • Power source is "OFF" • Key is in the vehicle.

Pattern 2.

Possible Effects without Warning		Vehicle theft, Discharged battery
Warning Condition		The warning is activated when all of the following conditions are met: • Shift lever is in any position except “P”. • Power source is in a mode other than “OFF”. • All doors are closed. • The key is outside the vehicle (within one of the actuation areas). • Lock switch on the door outside handle is “ON”
Combination Meter	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		Sounds for two seconds
Engine Switch Indicator		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • The power source mode is OFF and the key is not within the actuation areas. • Key is in the vehicle.

5) Situation: D

The lock switch on the door outside handle is pressed to perform entry lock with a door open.
In this situation, the following control is performed.:

Possible Effects without Warning		Vehicle theft
Warning Condition		The warning is activated when all of the following conditions are met: • Power source is “OFF”. • Any doors are opened. • Entry lock button on the outer door handle is operated.
Combination Meter	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		Sounds continuously
Engine Switch Indicator		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • Power source is in a mode other than “OFF” • All doors are closed. • Wireless door lock remote function is unlocked. • Entry unlock is operated • 10 seconds have elapsed after the wireless door lock buzzer was activated.

6) Situation: E

When the engine is left running, a passenger leaves the vehicle holding the key.

In this situation, the following control is performed.:

Possible Effects without Warning		Engine cannot be restarted
Warning Condition		The warning is activated when all of the following conditions are met: • Power source is in a mode other than “OFF”. • Except driver door is opened → closed. • Vehicle speed is 0 mph (0 km/h). • Key is not in the vehicle.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 0140BE186C
	Master Warning Light	Flashes
Wireless Door Lock Buzzer		Sounds three times
Engine Switch Indicator		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • Power source is “OFF” • Vehicle speed is above 0 mph (0 km/h). • Key is in the vehicle.

7) Situation: F

When the key is not in the cabin or the key battery is dead, the driver attempts to start the engine or change the power mode to ON.

In this situation, the following control is performed.:

Possible Effects without Warning		Confuses the user
Warning Condition		The warning is activated when all of the following conditions are met: • Engine switch is pushed. • Key is not in the vehicle.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 0140BE186C Displayed for 8 seconds (and then automatically turned off)
	Master Warning Light	Flashes
Wireless Door Lock Buzzer		—
Engine Switch Indicator		—
Warning Stop Condition		Check if the key is in the detection area. If the key is in the detection area, press the wireless door lock switch and confirm that the indicator comes on. If the indicator does not come on, replace the key battery with a new one.

8) Situation: G

The lock switch on the door outside handle is pressed to perform entry lock with the key left in the cabin.
In this situation, the following control is performed.:

Possible Effects without Warning		Vehicle theft
Warning Condition		The warning is activated when all of the following conditions are met: • Power source is “OFF”. • All doors are closed. • Key is in the vehicle. • Lock switch on the door outside handle switch is “ON”.
Combination Meter	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		Sounds for two seconds
Engine Switch Indicator		
Warning Stop Condition		The key is removed from the cabin and the lock switch on the door outside handle is pressed again.

9) Situation: H

The luggage door is closed with the key left in the luggage room.
In this situation, the following control is performed.:

Possible Effects without Warning		Key Confinement
Warning Condition		The warning is activated when all of the following conditions are met: • Vehicle speed is 0 mph (0 km/h). • All doors are closed. • Trunk open function is available.
Combination Meter	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		Sounds for two seconds
Engine Switch Indicator		—
Warning Stop Condition		The luggage room is opened using the trunk open function and the key is removed from the luggage room.

10) Situation: I

The vehicle is driven using a key that has a low battery.

In this situation, the following control is performed:

Possible Effects without Warning		Smart entry & start system does not function
Warning Condition		The warning is activated when all of the following conditions are met: • Power source switches to OFF after being left in IG-ON for over 20 minutes. • Key battery voltage is low. • Key is in the vehicle.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 0140BE188C
	Master Warning Light	Flashes
Wireless Door Lock Buzzer		—
Engine Switch Indicator		—
Warning Stop Condition		The key battery is replaced with a new one.

11) Situation: J

Steering lock cannot be released.

In this situation, the following control is performed.:

Possible Effects without Warning		Steering usability function
Warning Condition		The Steering lock cannot be released, thus the engine is prevented from starting.
Combination Meter	Buzzer	—
	Multi-information Display	 0140BE189C
	Master Warning Light	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator		The green indicator blinks at 1-second intervals (goes off automatically in 15 seconds).
Warning Stop Condition		The engine switch is pressed while the steering wheel is turned left and right, and the steering lock successfully disengages.

12) Situation: K

A malfunction of the Steering Lock ECU is detected.

In this situation, the following control is performed:

Possible Effects without Warning		Malfunction detection
Warning Condition		A malfunction of the Steering Lock ECU is detected.
Combination Meter	Buzzer	—
	Multi-information Display	 0140BE185C
	Master Warning Light	Flash
Wireless Door Lock Buzzer		—
Engine Switch Indicator		The amber indicator blinks at 2-second intervals.
Warning Stop Condition		The Steering Lock ECU returns to normal.

13) Situation: L

A malfunction of the Power Source Control ECU is detected.

In this situation, the following control is performed:

Possible Effects without Warning		Malfunction detection
Warning Condition		A malfunction in the Power Source Control ECU is detected.
Combination Meter	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator		The amber indicator blinks at 2-second intervals.
Warning Stop Condition		The Power Source Control ECU returns to normal.

14) Situation: M

A warning message appears on the meter when the driver does not follow the proper procedure to start the vehicle.

In this situation, the following control is performed:

Possible Effects without Warning		Usability function
Warning Condition		The warning is activated when under all of the following conditions.: • Power source is in a mode other than “ON”. • Any doors is are closed → opened. • A/T models: The power source is changed from OFF to ACC more than once with the engine off and brake pedal not depressed. • M/T models: The power source is changed from OFF to ACC more than once with the engine off and clutch pedal not depressed.
Combination Meter	Buzzer	Buzzer sound
	Multi-information Display	A/T models:  0140BE191C M/T models:  0140BE190C
	Master Warning Light	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • 10 seconds have elapsed after a warning message was displayed. • A/T models: The engine switch is pushed with the brake pedal depressed. • M/T models: The engine switch is pushed with the clutch pedal depressed.

15) Situation: N (M/T models)

A malfunction of the clutch start switch is detected.
In this situation, the following control is performed:

Possible Effects without Warning		Malfunction detection
Warning Condition		The warning is activated when under all of the following conditions.: • Power source is “OFF”. • Any doors is are closed → opened. • The clutch start switch remaining ON for 5 minutes or more is detected.
Combination Meter	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator		The green indicator blinks at 1-second intervals (goes off automatically in 15 seconds).
Warning Stop Condition		The warning is stopped when one of the following conditions is met.: • 15 seconds have elapsed after the engine switch indicator started blinking. • The clutch start switch returns to normal.

Battery Saving**1) Vehicle Battery Saving Function**

In the smart entry & start system, signals are emitted outside of the vehicle at a prescribed interval (250 ms) when the doors are locked. Therefore, the vehicle battery could be drained if the vehicle remains parked for a long time. For this reason, the controls listed below are effected.

Condition	Control
No response from key for more than 5 days	Signal transmission interval is extended from 250 ms to 750 ms.
No response from key for more than 14 days	Automatically deactivates the smart entry & start system.

► Reinstatement Conditions ◀

- A wireless door lock remote control signal (lock, unlock, or trunk lid open) is input and the ID matches.
- A user carries the key and pushes a lock switch signal for the outside door handle.
- A door is locked or unlocked using the mechanical key.

2) Key Battery and Vehicle Battery Saving Function

In the smart entry & start system, if the key is constantly located within the vehicle exterior actuation area of the doors, the system will maintain periodic communication with the key. Therefore, if the vehicle remains parked in that state for a long time, the key battery and the vehicle battery could be drained. For this reason, if this state continues longer than 10 minutes, the smart entry & start system automatically becomes deactivated.

► Reinstatement Conditions ◀

- A wireless door lock remote control signal (lock, unlock, or trunk lid open) is input and the ID matches.
- A user who has the key in their possession pushes a lock switch signal on an outside handle.
- A door is locked or unlocked using the mechanical key.

Key Cancel

Key cancel is operated when certain operations are performed with the vehicle in the following conditions.

- Power source is OFF.
- Driver door is closed.
- Driver door is unlocked.

The operation procedure is as follows:

- 1) Unlock once with the UNLOCK button of the key.
- 2) Open the driver door within five seconds.
- 3) Unlock twice with the UNLOCK button of the key within five seconds.
- 4) Repeat open → close twice for the driver door within 30 seconds, and open again.
(Driver Door: Open → Close → Open → Close → Open)
- 5) Unlock twice with the UNLOCK button of the key within five seconds.
- 6) Repeat open → close once for the driver door within 30 seconds, and open again.
(Driver Door: Open → Close → Open)
- 7) Close the driver door within five seconds.

When key cancel is activated, the wireless door lock buzzer sounds once.

To return to the original condition, perform the procedures again. When key cancel is returned, the wireless door lock buzzer sounds twice.

Key Code Registration Function

The table below shows the four special coded ID registration function modes through which up to four different codes can be registered. The codes are electronically registered (written to and stored) in the EEPROM. For details of the recognition code registration procedure, refer to the LEXUS IS250 Repair Manual (Pub. No. RM0150E).

Mode	Function
Rewrite	Erases all previously registered codes and registers only the newly received codes. This mode is used whenever a transmitter or the integration relay is replaced.
Add	Adds a newly received code while preserving previously registered codes. This mode is used when adding a new transmitter. If the number of codes exceeds 4, the oldest registered code is erased first (oldest code will be “bumped”).
Confirm	Confirms how many codes are currently registered. When adding a new code, this mode is used to check how many codes already exist.
Prohibit	To delete all the registered codes and to prohibit the wireless door lock function. This mode is used when a transmitter (key) is lost.