7. Diagnosis

Main body ECU and certification ECU can detect malfunctions in the entry and start system when the power source is in the ON (IG) mode.
When the ECUs detect a malfunction, the amber indicator light of the engine switch flashes to warn the driver. At the same time, the ECUs store 5-digit DTC (Diagnostic Trouble Code) in their memories.

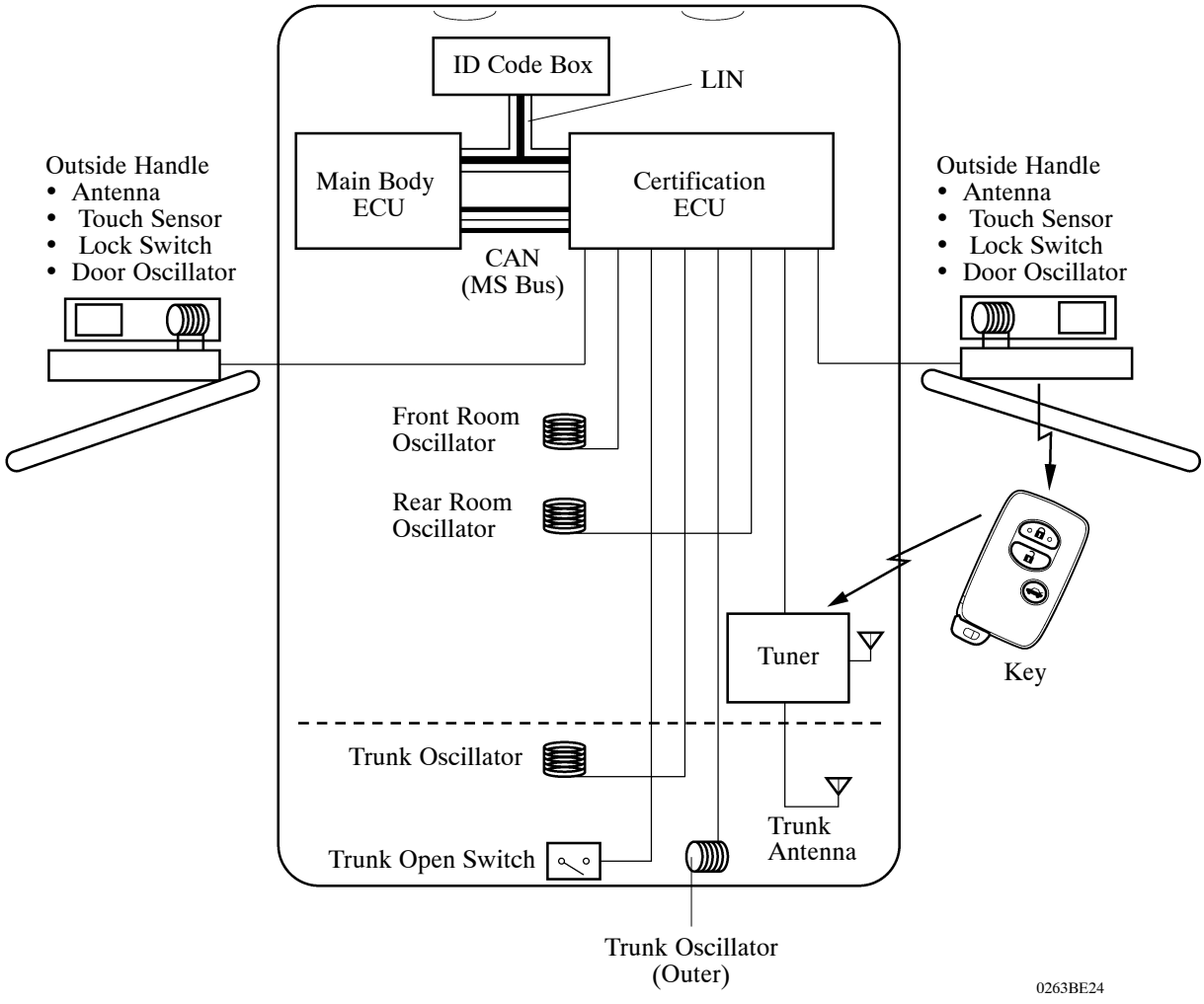
- The indicator light warning continues for 15 seconds even after the power source is switched to OFF.
- The DTC can be read by connecting an intelligent tester II to the DLC3.
- The entry and start system may not operate successfully if a malfunction occurs.

For details on DTC, refer to the CAMRY Repair Manual (Pub. No. RM0263E).

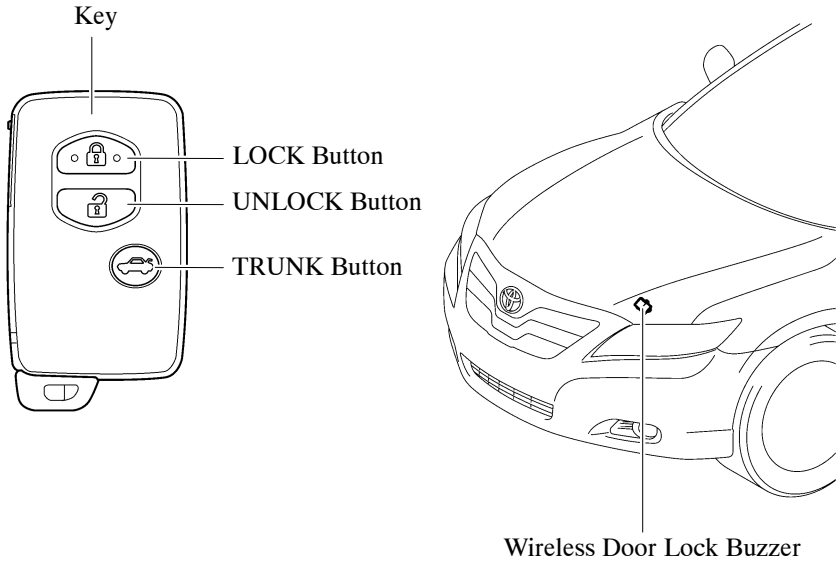
■ ENTRY FUNCTION

1. System Diagram

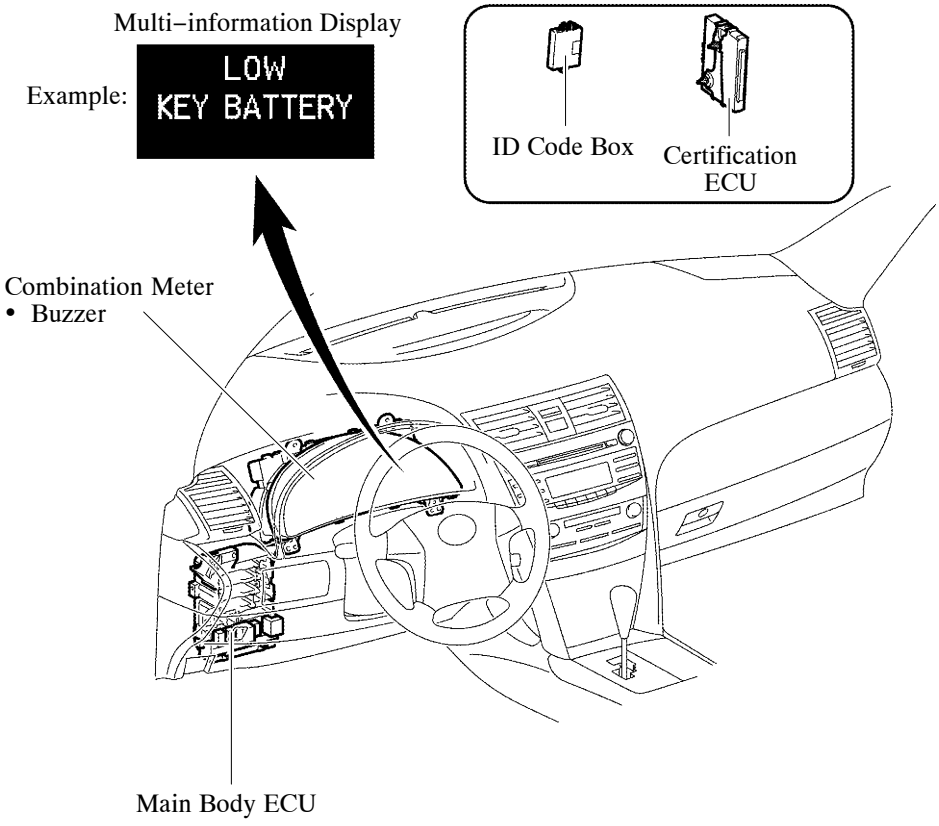
The certification ECU controls the entry function. The system diagram below shows the main components that relate to the function.



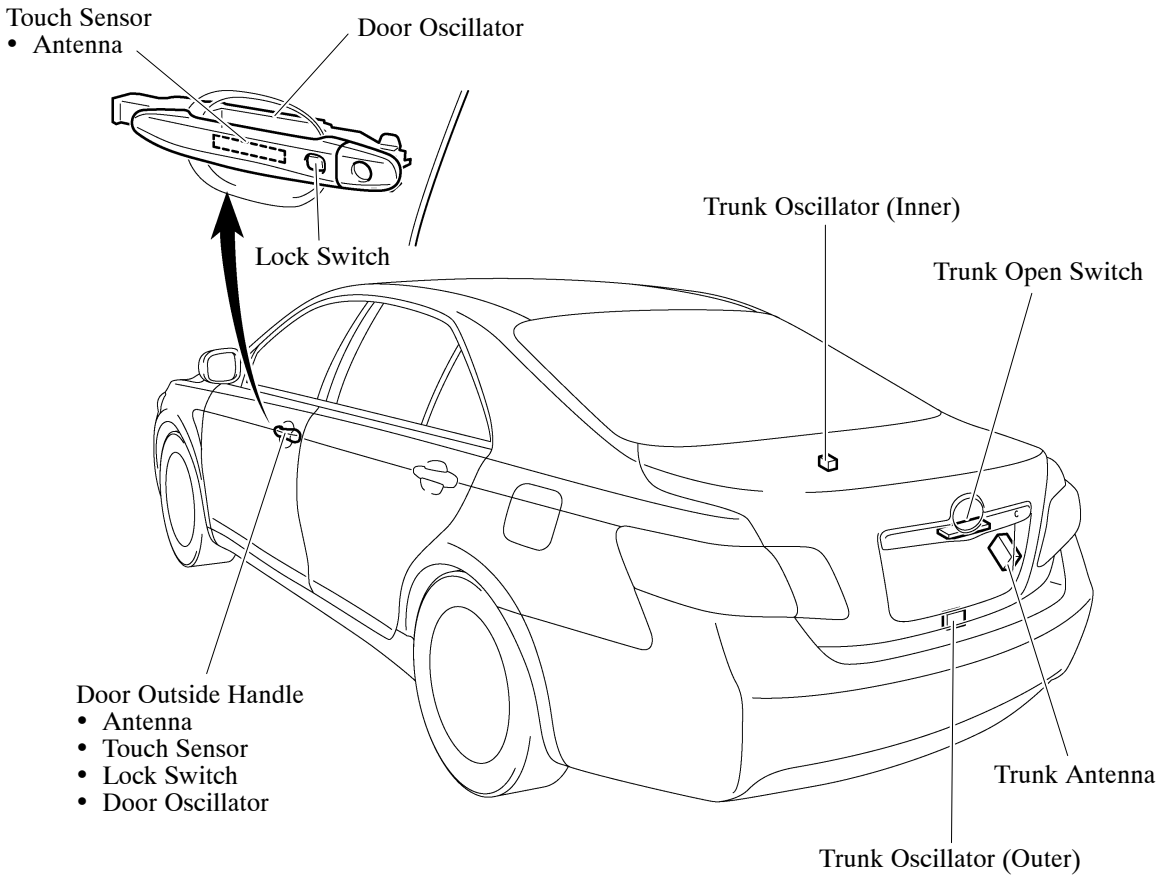
2. Layout of Main Components



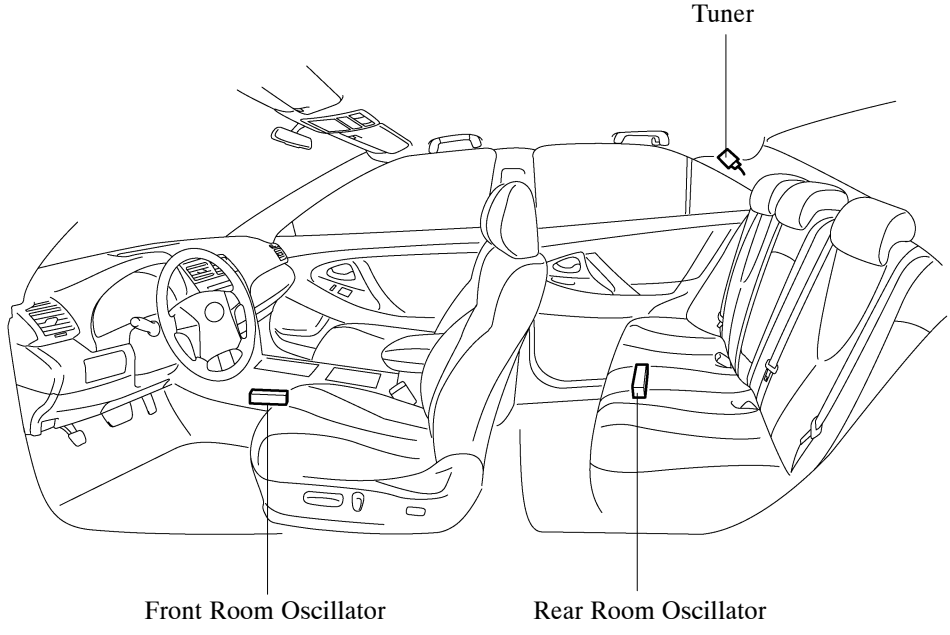
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3. Function of Main Components

Component		Function
Key		The electronic key consists of a mechanical key, the transmitter for the wireless door lock remote control, the transceiver for the entry and start system and a transponder chip for the engine immobilizer control.
Certification ECU		Controls the entry and start system in accordance with the signals from each oscillator, various switches, ECUs and the 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.
Main Body ECU		Controls the entry and 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. • Receives the request signal from the certification ECU and actuates the door lock motor to unlock or lock the door. • Transmits the condition each door to the certification ECU.
ID Code Box		Receives and certifies the engine immobilizer deactivation signal transmitted from the certification ECU, and sends it to the ECM.
Outside Handle (Front RH and LH)	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	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 trunk 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.
Trunk Open Switch		Transmits a trunk lid open request signal to certification ECU.
Wireless Door Lock Buzzer		Sounds as a warning or confirming.
Combination Meter	Multi-information Display	When the certification ECU detects human error, it warns the driver by sounding the wireless door lock buzzer and the buzzer in the combination meter, and by illuminating a warning on the multi-information display and the master warning light, in accordance with the request signal from the certification ECU.
	Master Warning Light	
	Buzzer	

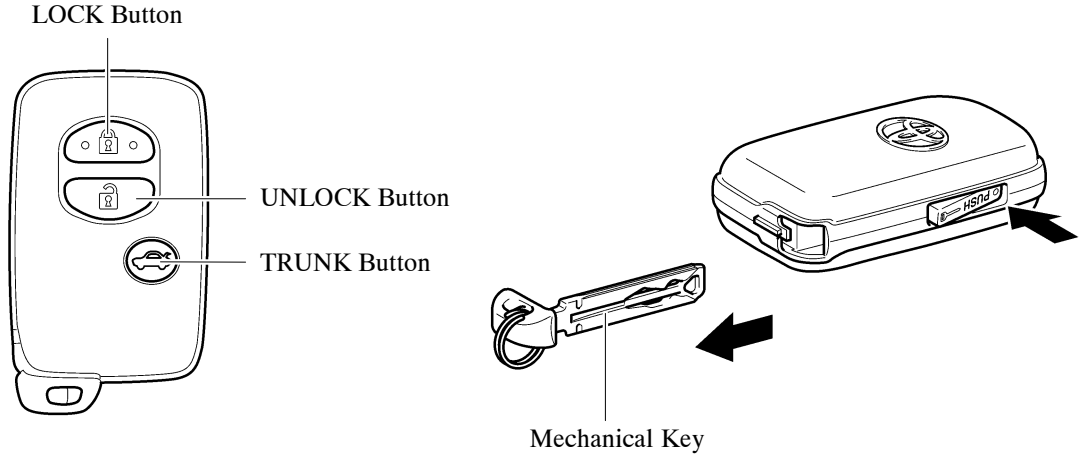
4. Construction and Operation

Key

The electronic key consists of a mechanical key, a transmitter for the wireless door lock remote control and a transceiver for the entry and start system, and a transponder chip for the engine immobilizer control.

- The transceiver function of the 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, and TRUNK 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, glove box lock cylinder and trunk storage extension lock cylinder but cannot be used to start the engine.

A total of four keys can be registered. For details on the recognition code registration procedure, refer to the Service Bulletin for the ENGINE IMMOBILISER SYSTEM (KEY REGISTRATION).



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

Each oscillator functions 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 the 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 the front doors, 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 51]	The key consists of a mechanical key, a transmitter for the wireless door lock remote control and a transceiver for the entry and start system, and a transponder chip for the engine immobilizer control.
Wireless Door Lock Remote Control [See page 53]	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 54]	When a key enters the actuation area of front door oscillators, the front interior light, and engine switch illumination illuminate.
Entry Unlock [See page 54]	When a key is located in the actuation area front door oscillators, the door will unlock after the inside of an outside door handle is touched.
Entry Unlock Mode Switching [See page 55]	Allows selection of one of two modes that can be operated with the entry unlock function. • Driver Door Mode • All Door Mode
Entry Lock [See page 56]	When a key is located in the actuation area of either front door oscillator and the power source is OFF, the door can be locked by merely pressing the lock switch on the outside door handle.
Trunk Open [See page 57]	When a key is in the actuation area of the trunk outer oscillator, the trunk can be opened by merely pressing the trunk open switch.
Prevention of Key Confinement [See page 58]	• Prevents the confinement of the key in the vehicle by the door being locked with 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 for 2 seconds during this period, the trunk lid can be opened.
Warning [See page 60]	When any of the situations below occur, the entry and start system causes the certification ECU to sound the buzzer in the combination meter and the wireless door lock buzzer, and indicate a warning on the multi-information display in order to the 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. • An exit warning if the shift lever is in P and the power source is a mode other than OFF. • 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 71]	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 72]	The following key functions can be cancelled by following certain procedures. • Entry unlock/lock • Trunk open • Prevention of key confinement • Warning
Key Code Registration [See page 72]	A total of four keys can be registered. 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

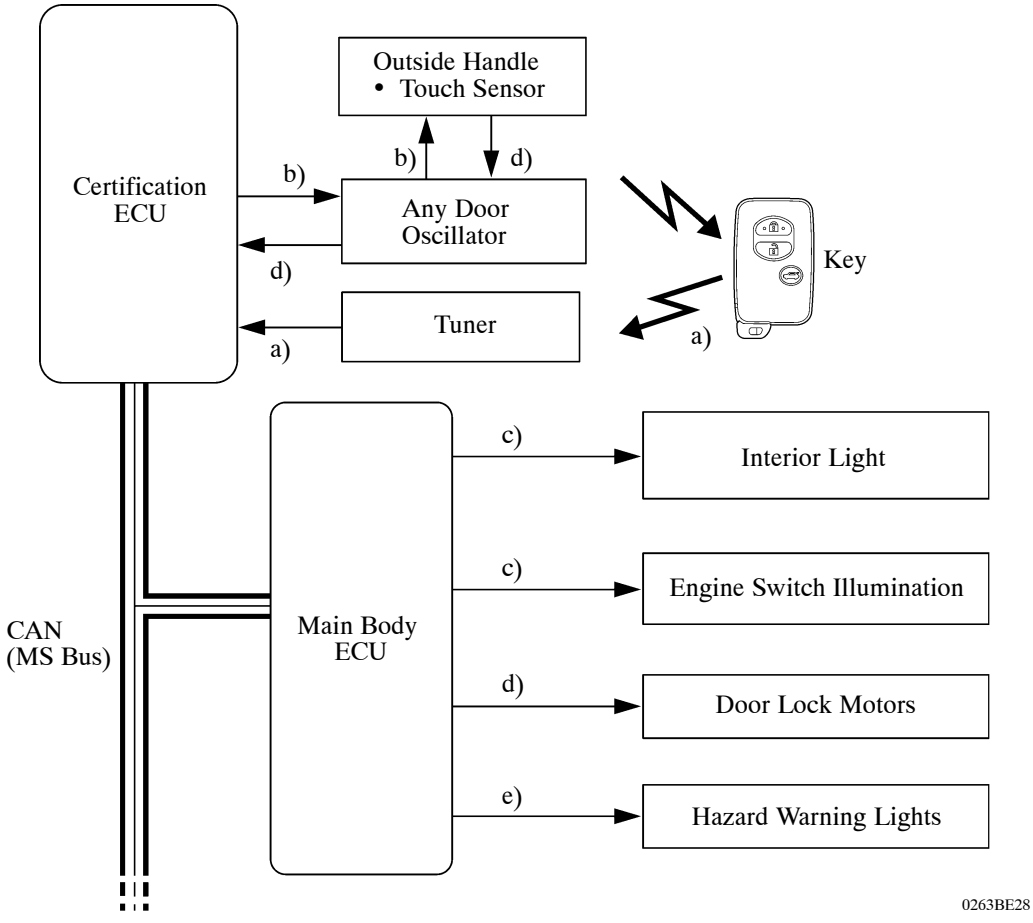
The wireless door lock remote control function has the following functions:

Function	Outline
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 3 seconds unlocks all the doors.
Trunk Opener*	Keeping the TRUNK button of the transmitter pressed longer than about 1 second opens the trunk lid.
Answer Back*	The hazard light flashes once when locking, and flashes twice when unlocking, to indicate that the operation has been completed.
Automatic Lock*	If none of the doors are opened within 30 seconds of being unlocked by the wireless door lock remote control, all the doors will be locked again automatically.
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.
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.
Security	Sends an operation signal as a rolling code.

*: The function setting can be changed using the customized body electronics system.

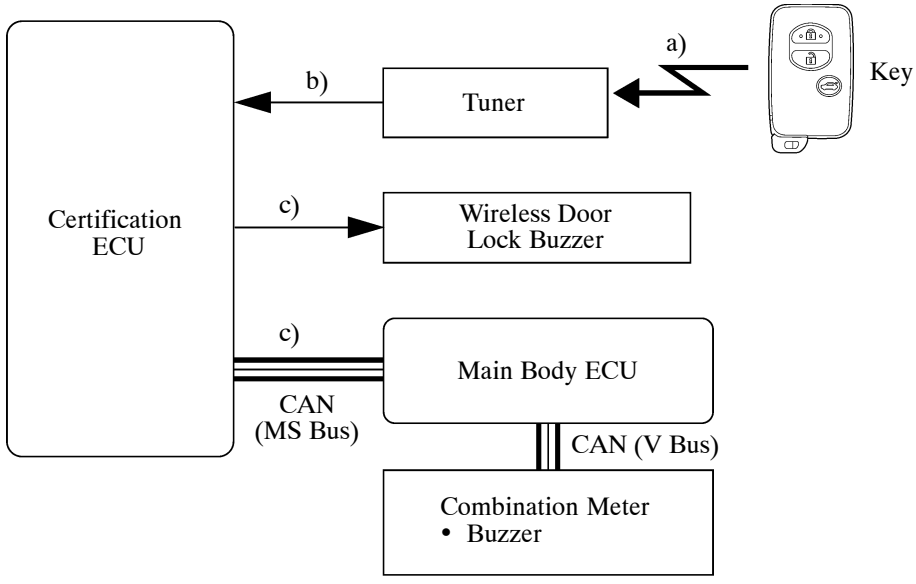
Entry Unlock

a) When a key enters any actuation area of the door oscillators, the certification ECU judges and certifies the key ID code received from the tuner.
b) After the key certification OK is confirmed, the certification ECU transmits an unlock stand-by signal to the touch sensor of the relevant door.
c) At the same time, the certification ECU transmits the lighting signals to the foot light on the outside rear view mirror and interior lights (engine switch illumination and interior light), and turns on these illuminations (Entry Illumination Function).
d) If the touch sensor is touched during this condition, the certification ECU transmits a door unlock signal to the main body ECU, and unlocks the door.
e) The main body ECU blinks the hazard warning light twice as an answerback for entry unlock.



Entry Unlock Mode Switching

a) When the power source is OFF, press the lock button and one of the other three buttons on the key at the same time for approximately 5 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 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, press the lock button and one of the other three buttons on the key at the same time for approximately 5 seconds after the LED of the key goes off.



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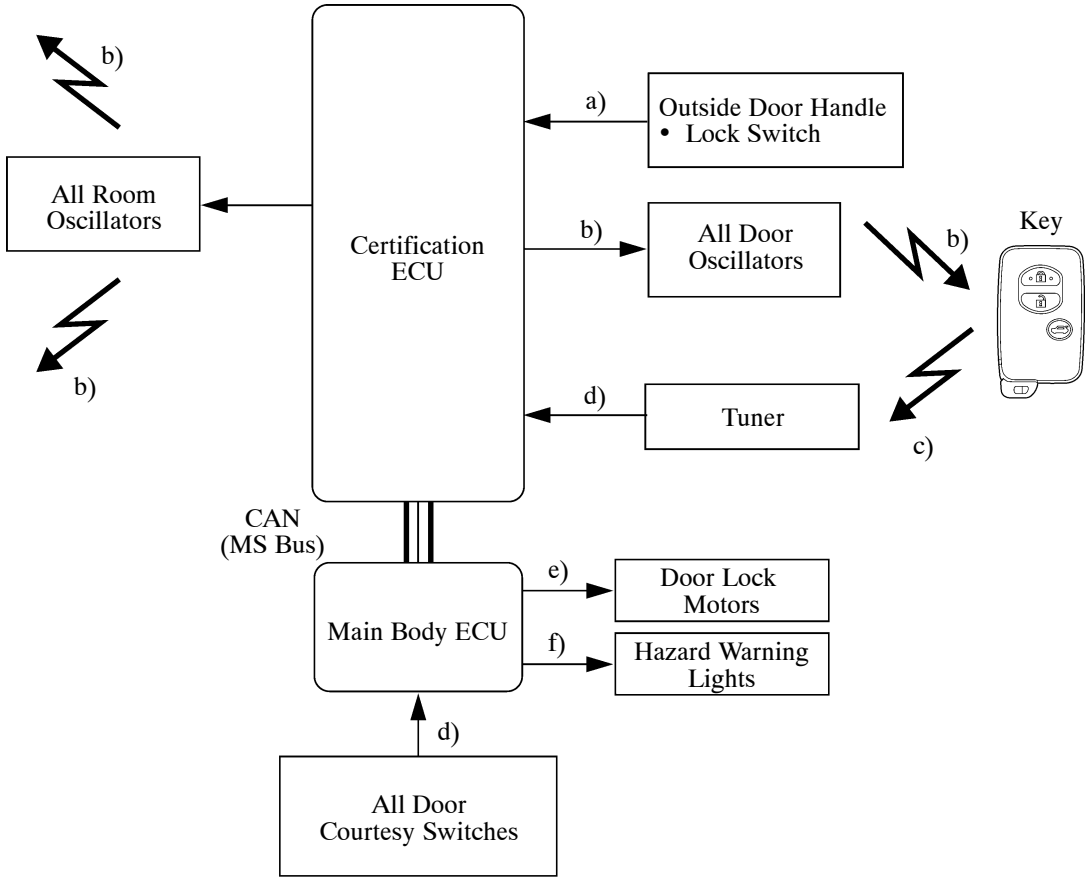
Mode	Wireless Door Lock Buzzer	Buzzer in Combination Meter	Multi-information Display
All Doors (Default)	Sounds twice	Sounds once	
Driver Door (Customized)	Sounds three times	Sounds once	

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NOTE: This function only switches the entry unlock mode of the entry and start system. It is not applied to the unlock function using the wireless door lock remote control.

Entry Lock Function

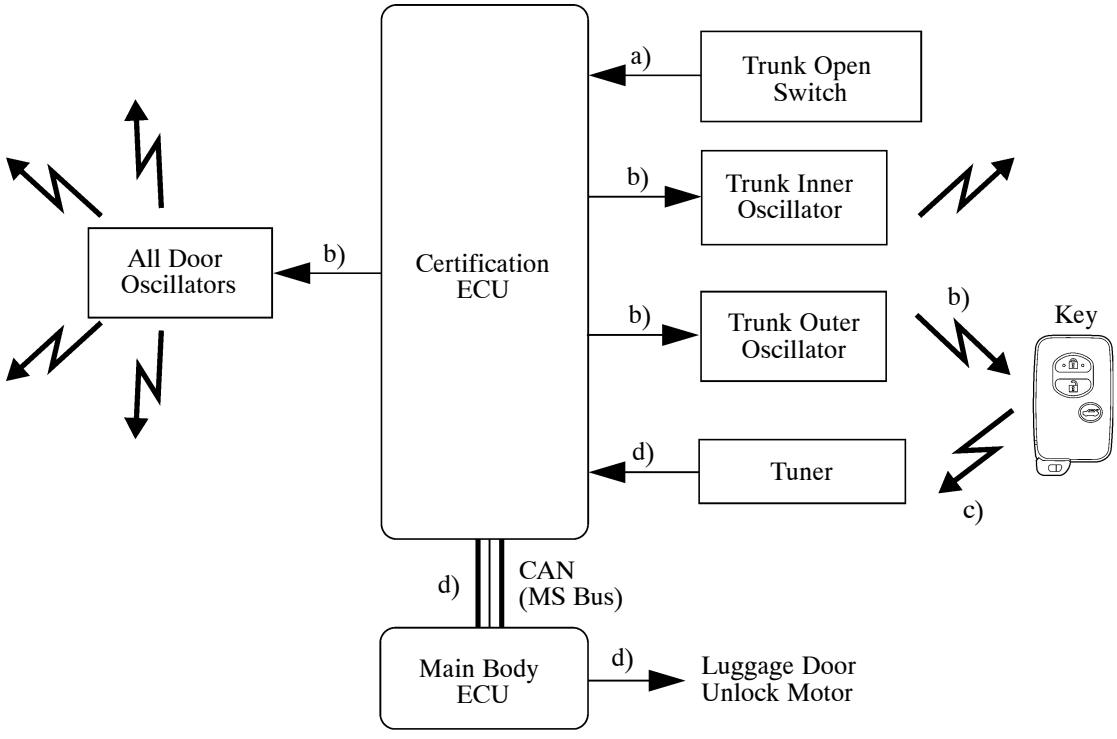
a) This signal is transmitted to the certification ECU when the driver (who has the key in their possession), exits the vehicle and presses the lock switch on the outside door handle.
b) The certification ECU transmits a request signal for all door and room oscillators to form actuation areas.
c) The key receives this signal and returns the ID code to the tuner.
d) The certification ECU judges and certifies the ID code from the tuner. It then checks the location of the key and, if all the doors are closed, the ECU transmits a door lock signal to the main body ECU.
e) The main body ECU receives this signal and actuates the door lock motors to lock the doors.
f) The main body ECU blinks hazard warning lights once as an answerback for the entry lock function.



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Trunk Open Function

a) 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.
b) The certification ECU transmits a request signal for all the room, trunk inner and outer oscillators to form actuation areas.
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 transmits a trunk open signal to the main body ECU.
e) The main body ECU receives this signal and actuates the luggage door unlock motor to open the trunk.



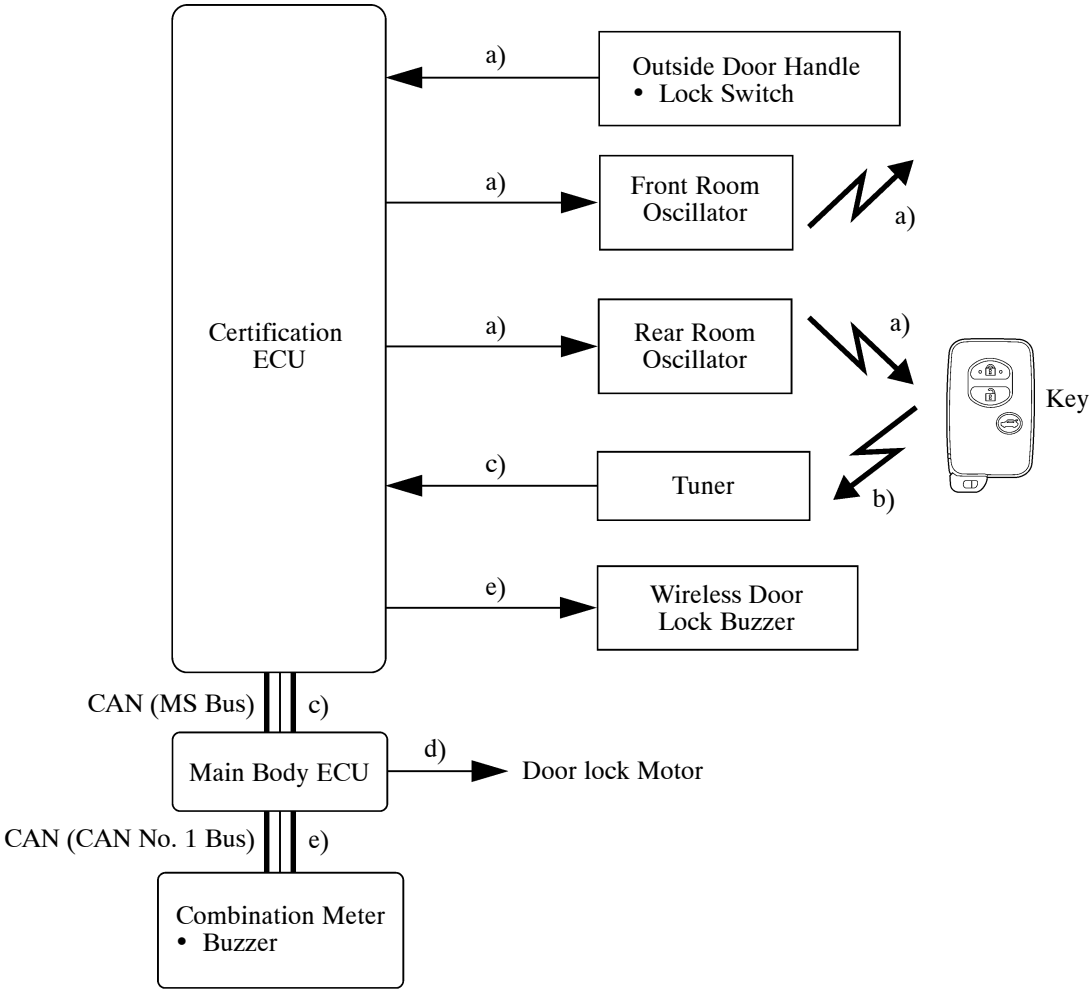
Prevention of Key Confinement

1) General

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

2) Inside Room

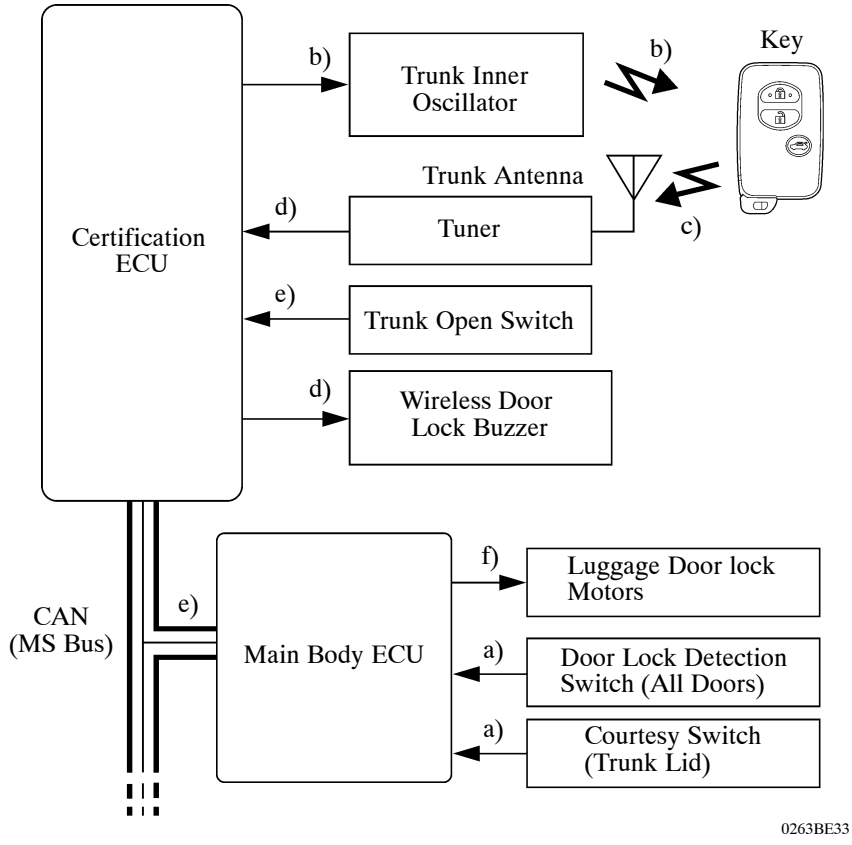
a) When the door is locked with the outside door handle while the key is still inside the vehicle, the certification ECU receives this signal and transmits a request signal for the front and rear room oscillators to form a actuation area.
b) The key receives this signal and returns the ID code to the tuner.
c) The certification ECU judges and certifies the ID code, and checks the location of the key. The ECU transmits a door unlock signal to the main body ECU.
d) The main body ECU 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 the unlock function that was performed.



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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.
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 2 seconds to inform the driver.
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.
f) The main body ECU receives the signal and operates the luggage door lock motor to open the trunk.



Warning

1) General

When any of the situations below occur, the entry and 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 the 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.
B	The key is left in the vehicle.
C	The engine is left running and the shift lever is in P when the driver gets out of the vehicle.
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 main body ECU is malfunctioning.
M	An engine start method is displayed.

2) Situation: A

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).
Combination Meter	Buzzer	Sounds continuously
	Multi-information Display	–
	Master Warning Light	–
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		–
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • Power source is OFF. • Shift lever is in P. • Vehicle speed is above 0 mph (0 km/h).

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:  025BE99P  025BE100P
	Master Warning Light	Blinks
Wireless Door Lock Buzzer		Sounds continuously
Engine Switch Indicator Light		–

Warning Stop Condition	• Key is in the vehicle.	• The wireless door lock buzzer stops. • Multi-information Display:  025BE99P
	• Vehicle speed is above 0 mph (0 km/h).	• The wireless door lock buzzer stops. • Multi-information Display:  025BE100P
	• 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 ON (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 (IG) 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 is met: • Power source is at ON (ACC) 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 Light		–
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • Power source is at ON (IG). • Driver door is closed. • Power source is in OFF mode and the steering is locked

4) Situation: C

There are two patterns for situation C.

- Pattern 1: When the engine is left running and the shift lever is in P, the driver closes the driver's door and attempts to leave the vehicle while 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 all of the following conditions are met: • Shift lever is in 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	 025BE100P
	Master Warning Light	Blinks
Wireless Door Lock Buzzer		Sounds three times
Engine Switch Indicator Light		–
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 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 2 seconds
Engine Switch Indicator Light		–
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • The power source 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 Light		–
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 since 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. • Door 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	 025BE100P
	Master Warning Light	Blinks
Wireless Door Lock Buzzer		Sounds 3 times
Engine Switch Indicator Light		–
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 (IG).
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	 025BE100P Displayed for 8 seconds (and then automatically turned off)
	Master Warning Light	Blinks
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		–
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 2 seconds
Engine Switch Indicator Light		–
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 2 seconds
Engine Switch Indicator Light		–
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		Entry and 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 ON (IG) for over 20 minutes. • Key battery voltage is low. • Key is in the vehicle.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 025BE101P
	Master Warning Light	Blinks
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		–
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	 025BE102P Displayed for 15 seconds (and then automatically turned off)
	Master Warning Light	Blinks
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		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	 025BE103P
	Master Warning Light	Blinks
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		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 main body ECU is detected.
In this situation, the following control is performed:

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

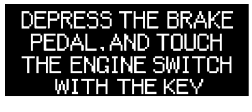
14) Situation: M

A warning message appears on the meter when the driver does not follow the proper procedure to start the vehicle.
There are tree patterns for situation M.
In this situation, the following control is performed:

Pattern 1.

Possible Effects without Warning		Usability function
Warning Condition		The warning is activated when all of the following conditions are met: • Power source is in a mode other than ON (ACC). • Any doors are closed → opened. • The power source is changed from OFF to ON (ACC) more than once with the engine off and brake pedal not depressed.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 025BE104P
	Master Warning Light	–
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		–
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • 10 seconds have elapsed since a warning message was displayed. • The engine switch is pushed with the brake pedal depressed.

Pattern 2.

Possible Effects without Warning		Usability function
Warning Condition		The warning is activated when all of the following conditions are met: • The door has been unlocked with the mechanical key, or the certification ECU has failed to detect the ID code signal twice in a row. • The engine immobilizer system is set. • Key is not in the vehicle. • Engine switch is pushed.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 0263BE34
	Master Warning Light	–
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		–
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • 60 seconds have elapsed since a warning message was displayed. • Certification ECU detects the key is in the vehicle.

Pattern 3.

Possible Effects without Warning		Usability function
Warning Condition		The warning is activated when all of the following conditions are met: • The door has been unlocked with the mechanical key, or the certification ECU has failed to detect the ID code signal twice in a row. • The engine immobilizer system is set. • Key is not in the vehicle. • Engine switch is pushed.
Combination Meter	Buzzer	Sounds once
	Multi-information Display	 0263BE35
	Master Warning Light	–
Wireless Door Lock Buzzer		–
Engine Switch Indicator Light		–
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • 60 seconds have elapsed since a warning message was displayed. • Certification ECU detects the key is in the vehicle.

Battery Saving

1) Vehicle Battery Saving Function

In the entry and start system, signals are emitted outside the vehicle at a prescribed interval (250 msec.) 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 msec. to 750 msec.
No response from key for more than 14 days	Automatically deactivates the entry and 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 entry and 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 entry and 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 condition:
- 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 5 seconds.
3) Unlock twice with the UNLOCK button of the key within 5 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 30 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 5 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 on the recognition code registration procedure, refer to the Service Bulletin for the ENGINE IMMOBILISER SYSTEM (KEY REGISTRATION).

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.
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.