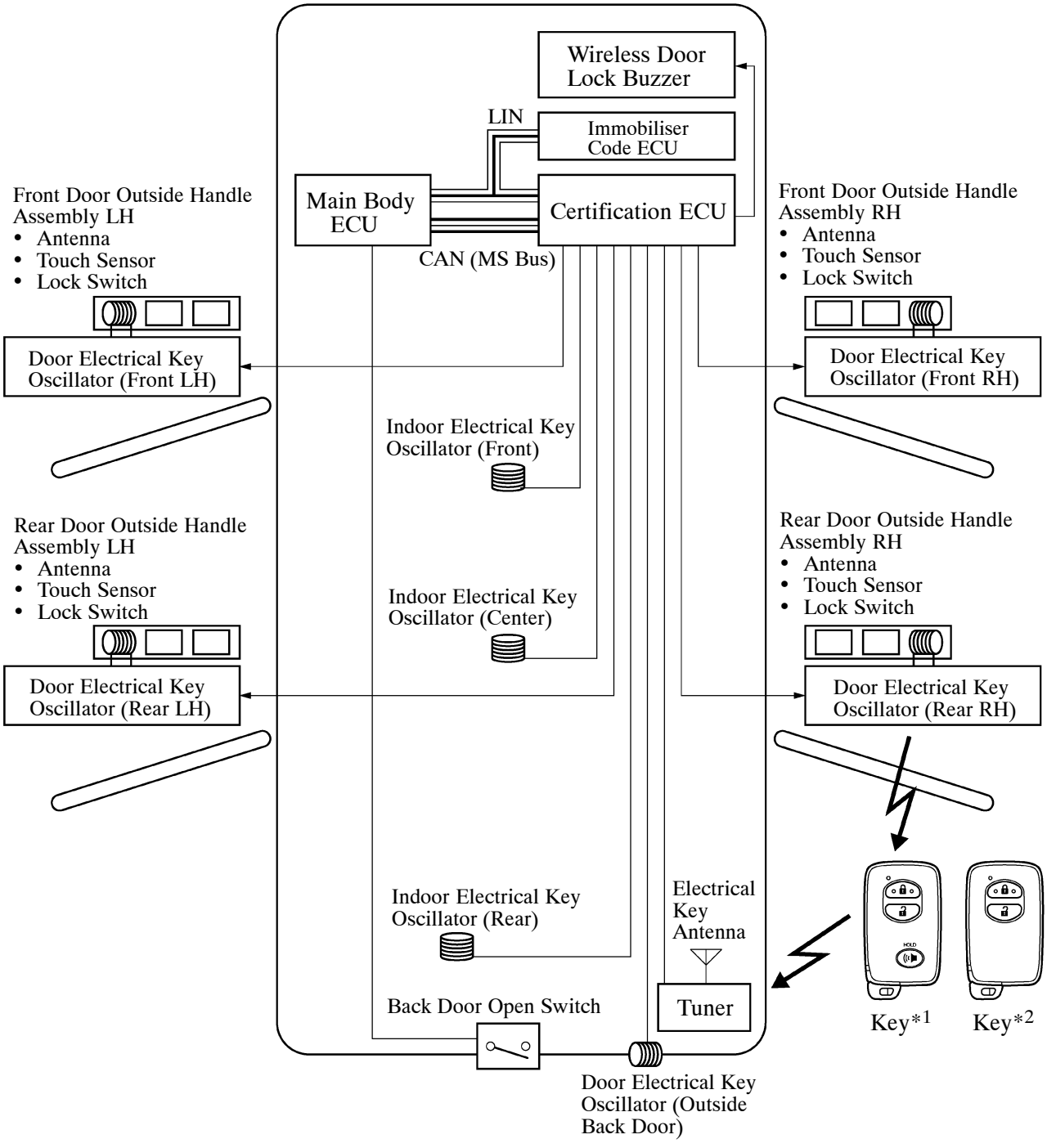
■ ENTRY FUNCTION

1. System Diagram

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

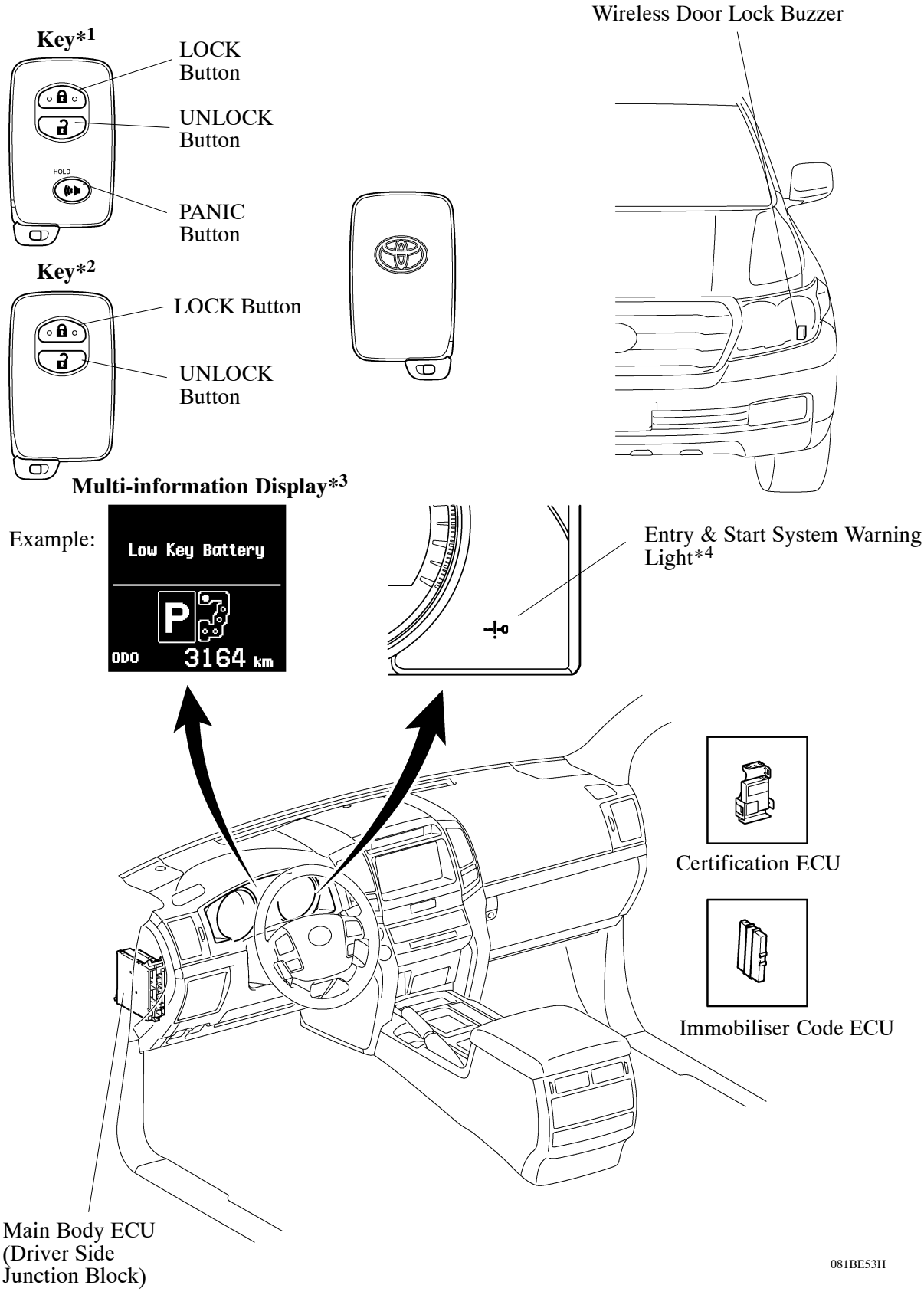


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*1: Models with the PANIC control

*2: Models without the PANIC control

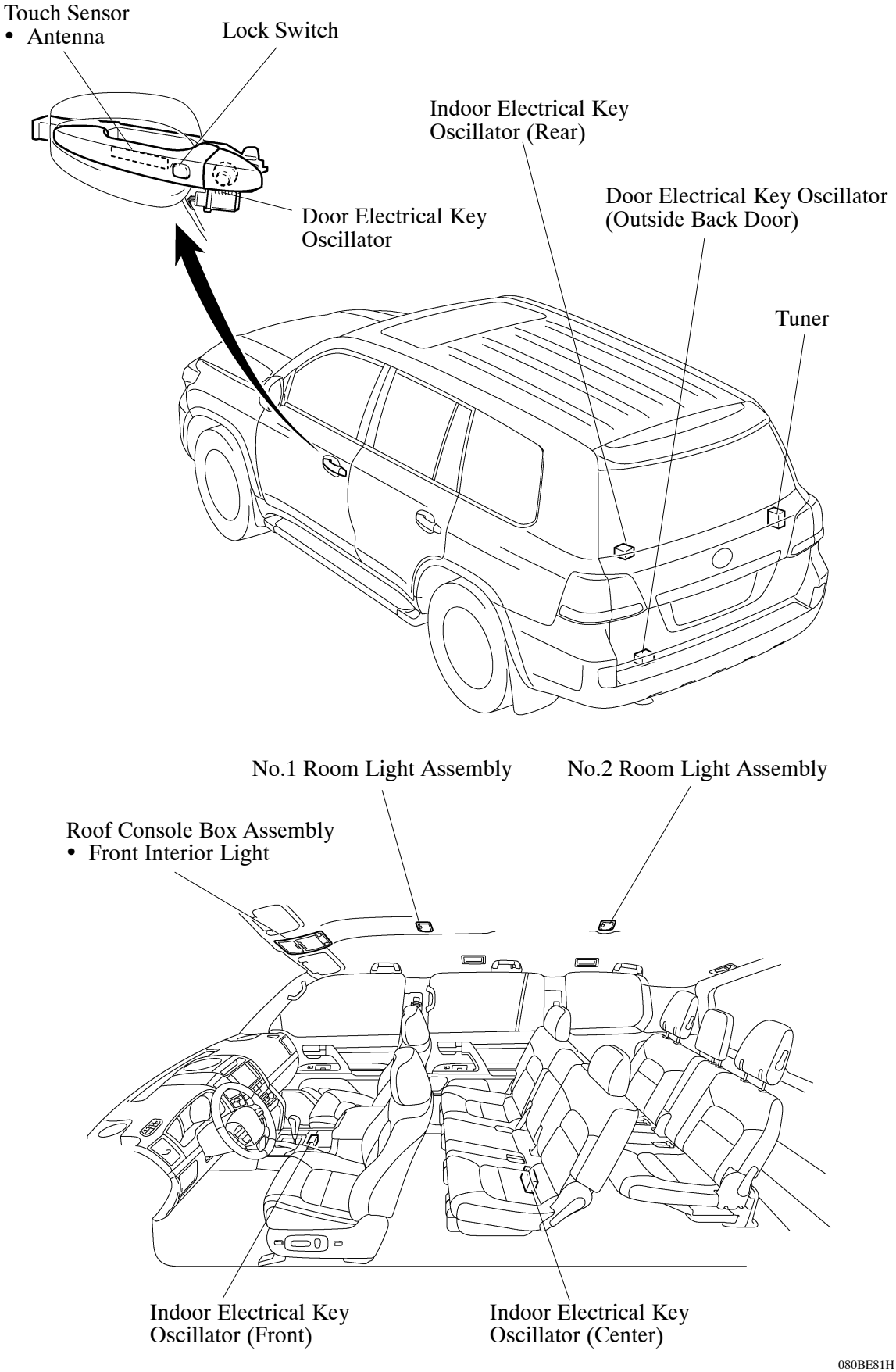
2. Layout of Main Components



*1: Models with the PANIC control
*2: Models without the PANIC control
*3: Models with optitron type combination meter assembly
*4: Models with analog type combination meter assembly

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Door Outside Handle Assembly



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3. Function of Main Components

Component		Function
Key		The key consists of a mechanical key, a transmitter for the wireless door lock remote control, a transceiver for the entry and start system, and a transponder chip for the engine immobiliser 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 immobiliser deactivation signal to the immobiliser code ECU. • 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 the combination meter assembly. • Transmits the key certification request signals to the certification ECU in accordance with the engine switch signals, and turns the relays ON and OFF. • Receives the request signals from the certification ECU and actuates the door lock motor to unlock or lock the door.
Immobiliser Code ECU		Receives and certifies the engine immobiliser deactivation signals transmitted from the certification ECU, and sends it to the ECM.
Door Outside Handle Assembly	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 (All Doors)	Receives the request signals from the certification ECU, and creates an actuation area around the door.
Indoor Electrical Key Oscillator (Front, Center and Rear)		Receives the request signals from the certification ECU, and forms an actuation area in the vehicle interior.
Door Electrical Key Oscillator (Outside Back Door)		Receives the request signals from the certification ECU, and forms an actuation area around the back door.
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 cabin and transmits it to certification ECU.
Back Door Open Switch		Transmits a back door open request signal to the certification ECU via the main body ECU.
Wireless Door Lock Buzzer*1		Sounds as an answerback for entry lock or unlock to inform the driver.
Combination Meter Assembly	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 assembly, and by illuminating a warning on the multi-information display, the master warning light and the entry and start system warning light*2, in accordance with the request signal from the certification ECU.
	Entry and Start System Warning Light*2	
	Master Warning Light	
	Buzzer	

*1: Except for European, Chinese, South African and New Caledonian models
*2: Models with analog type combination meter

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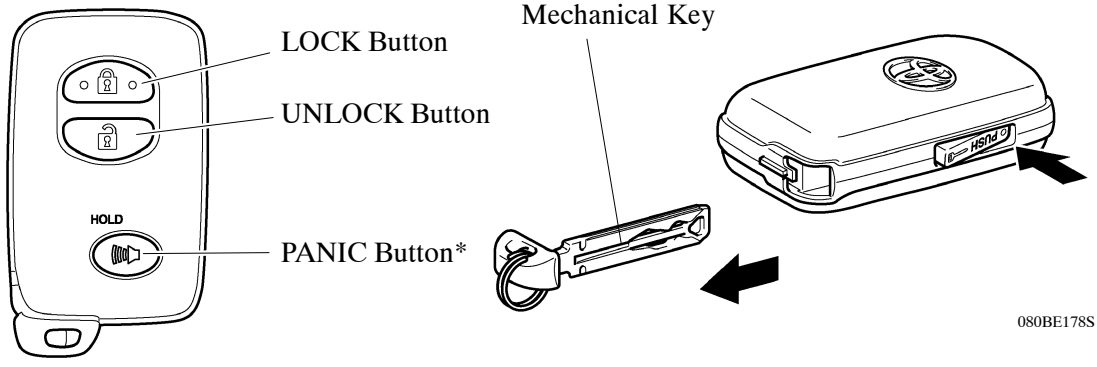
4. Construction and Operation

Key

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 immobiliser control.

- The transceiver function of the key receive 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 PANIC button.*
- The transponder chip in the key for the engine immobiliser 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, and glove box lock cylinder, but cannot be used to start the engine. When the mechanical key is used, the cap on the driver door lock cylinder must be removed.

A total of four keys can be registered. For details, see the Land Cruiser (Station Wagon) Repair Manual (Pub. No. RM0810E).



*: Models with the PANIC control

Oscillator (Each Door, Font, Center and Rear, and Outside Back Door)

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 door electrical key oscillator (front door and outside back door) 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 each 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 door electrical key oscillator (outside back door) is formed when the back door open switch is ON. It is formed twice to allow the key to be verified.
- The actuation area of the indoor electrical key oscillator (front, center and rear) 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.

5. Entry Function Operation

General

The entry function has the following functions.

Function	Outline
Mechanical Key [See page BE-172]	The operation is the same as a usual mechanical key.
Wireless Door Lock Remote Control [See page BE-175]	This function is a convenient system for locking and unlocking the doors at a distance. The operation is same as a standard wireless door lock remote control system.
Entry Illumination [See page BE-32]	When a key enters the actuation area of any door oscillator, the front interior light, rear interior light, and engine switch illumination illuminate.
Entry Unlock [See page BE-176]	When a key is located in the actuation area any door oscillator, the door will unlock after the inside of an outside door handle is touched.
Entry Unlock Mode Switching [See page BE-177]	Allows selection of one of two modes that can be activated with the entry unlock function. • Driver Door Mode • All Door Mode
Entry Lock [See page BE-178]	When a key is located in the actuation area of any door oscillator and the engine switch is OFF, the door can be locked by merely pressing the lock switch on the outside door handle.
Back Door Open [See page BE-179]	When a key is in the actuation area of the door electrical key oscillator (outside back door), the back door can be opened by merely pressing the back door open switch.
Window and Sliding Roof Close [See page BE-180]	With the key in the actuation area of any door oscillators, all open windows and the sliding roof are closed when the lock switch on the door outside handle is pressed for 3 seconds or more.
Memory Call [See page BE-181]	This function operates the driving position memory system in accordance with the key ID.
Prevention of Key Confinement [See page BE-185]	Prevents the key from being confined in the vehicle when a door is locked with the outside door handle while the key is still inside the vehicle.
Warning [See page BE-186]	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 driver. • An exit warning if the shift lever is in a position other than P and the engine switch is in a mode other than OFF. • An exit warning if the shift lever is in P and the engine switch is in 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. • A warning if any door is ajar.

(Continued)

Function	Outline
Battery Saving [See page BE-200]	If the key remains within the actuation area of any door oscillator, 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-201]	The following key functions can be cancelled by following certain procedures. • Entry Unlock/Lock • Back Door Open • Memory Call • Prevention of Key Confinement • Warning
Key Code Registration [See page BE-201]	A total of 7 keys can be registered. Enables the registering (writing and storing) of transmitter recognition codes in the EEPROM that is contained in the certification ECU.

*: Except for European, Chinese, South African and New Caledonian models

Wireless Door Lock Remote Control Function

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

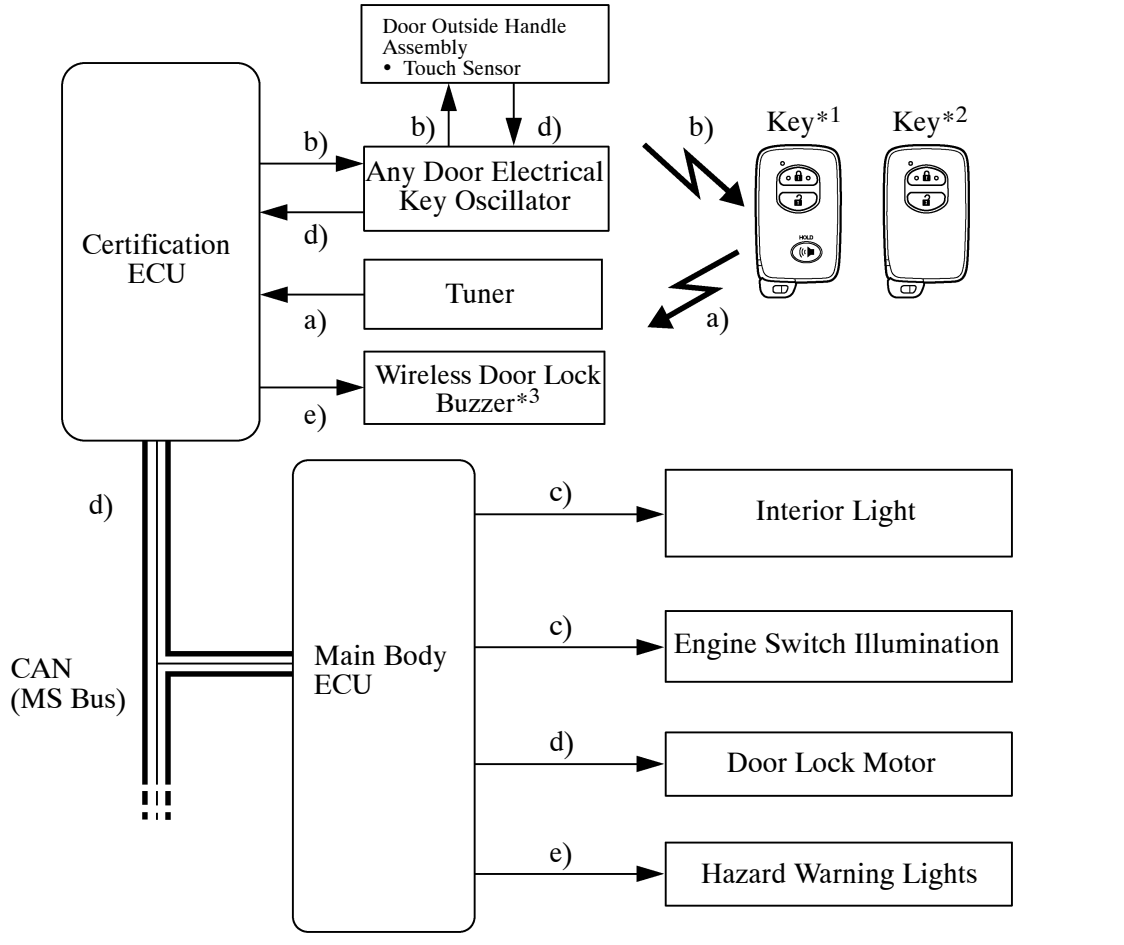
Function	Outline
All Doors Lock	Pressing the LOCK button on the key locks all doors.
All Doors Unlock	Pressing the UNLOCK button on the key unlocks all doors.
All Doors Unlock (2-step Unlock)*1	Pressing the UNLOCK button on the key once, unlocks the driver's door, and pressing it again within three seconds unlocks all the doors.
Answer Back*1	The hazard lights flash once when locking, and flash twice when unlocking, to indicate that the operation has been completed.
Panic Alarm	Keeping the PANIC button on the key pressed for 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 and rear interior light (If the interior light switch is in the DOOR position).
Automatic Lock	If none of the doors are opened within 30 seconds*1 of being unlocked by the wireless door lock remote control, all the doors will be locked again automatically.
Door Ajar Warning*1	If any door is open or ajar, pressing the LOCK button of the key will cause the wireless door lock buzzer to sound for about 10 seconds.
Repeat	If a door is not locked in response to the locking operation of the key, 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.
Wireless Buzzer*2	The wireless door lock buzzer sounds when the theft deterrent system performs warning operations.

*1: The function settings can be changed using the customized body electronics system. For details, refer to "Customized Body Electronics System" section on page BE-17.

*2: Except for European, Chinese, South African and New Caledonian models

Entry Unlock Function

a) When a key enters the actuation area of any door oscillator, 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) 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.
d) At the same time, the main body ECU transmits the lighting signals to the engine switch illumination and interior lights (front and rear), and turns ON these illuminations (Illuminated Entry Function).
e) The certification ECU sounds the wireless door lock buzzer twice*3 and main body ECU flashes the hazard warning lights twice as an answerback for entry unlock.

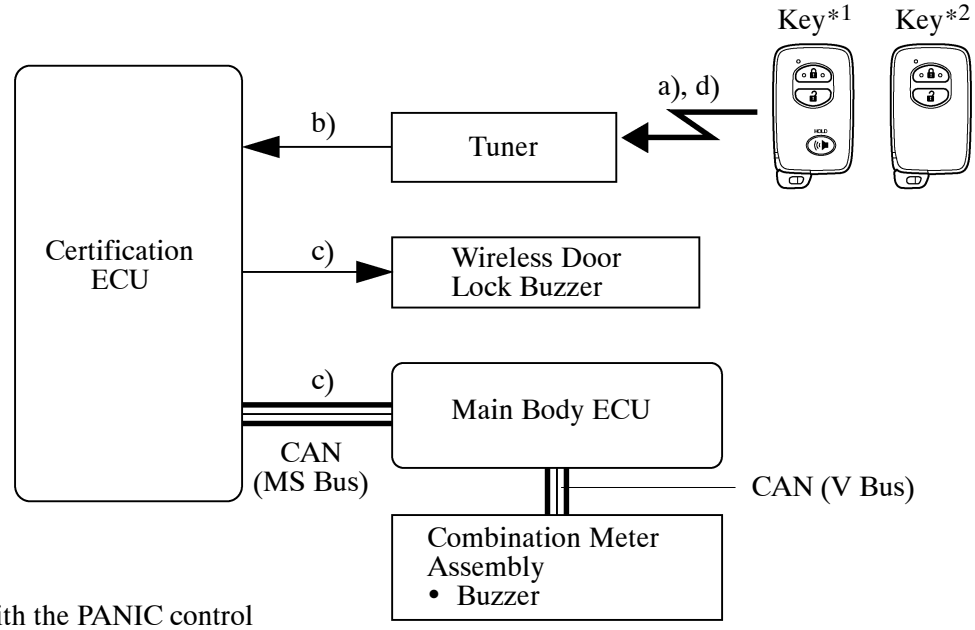


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*1: Models with the PANIC control
*2: Models without the PANIC control
*3: Except for European, Chinese, South African and New Caledonian models

Entry Unlock Mode Switching

a) When the engine switch is OFF, press the lock button and one of the other 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 the buzzer of the combination meter assembly 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 buttons on the key at the same time for approximately 5 seconds after the LED of the key goes off, thereby the mode changes in the following sequence: Driver Door and All Doors.



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*1: Models with the PANIC control
*2: Models without the PANIC control

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

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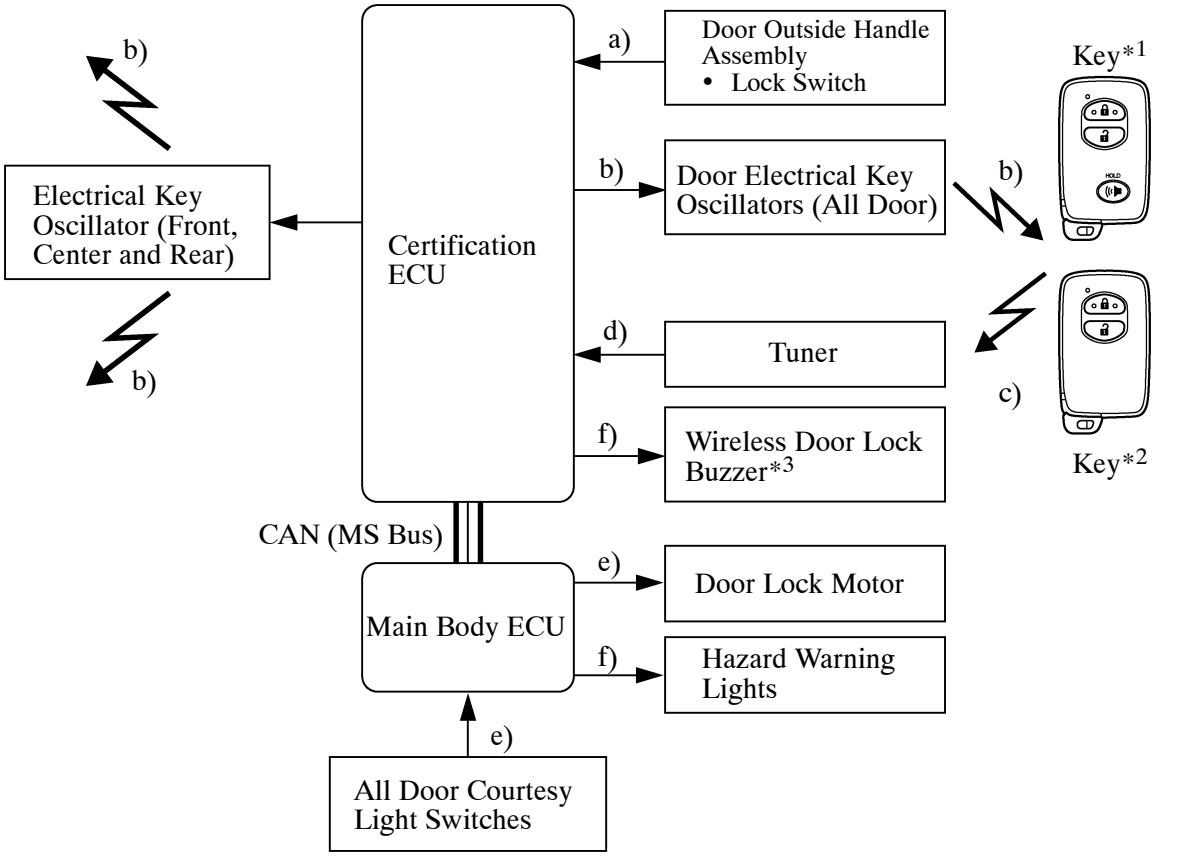
*: Displayed for 4 seconds (and then automatically turned off)

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.

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Entry Lock Function

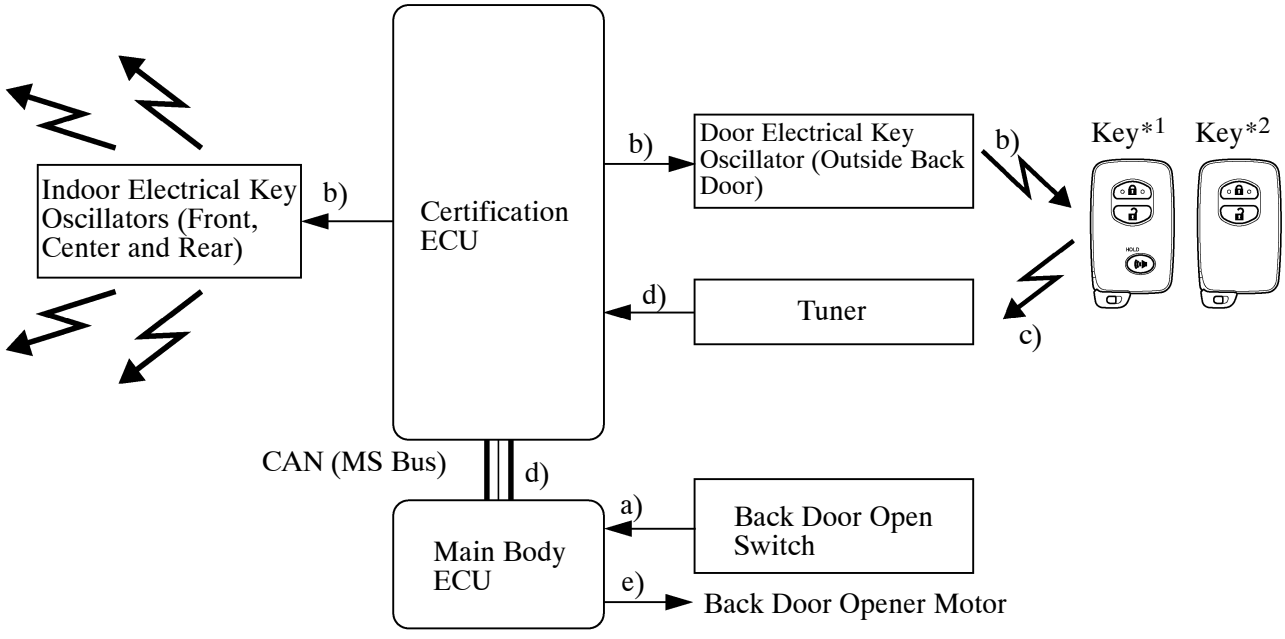
a) This signal is transmitted to the certification ECU when the driver (who has the key in their possession), exits the vehicle and presses the lock switch on the outside door handle.
b) The certification ECU transmits a request signal for all door and indoor oscillators to form actuation areas.
c) The 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) When the main body ECU receives the signal and judges that all the doors are closed, it actuates the door lock motors to lock the doors.
f) The main body ECU blinks hazard warning lights once and the certification ECU sounds the wireless door lock buzzer once as an answerback for the entry lock function.*3



*1: Models with the PANIC control
*2: Models without the PANIC control
*3: Except for European, Chinese, South African and New Caledonian models

Entry Back Door Open

a) The unlock signal is transmitted to the certification ECU when the driver pushes the back door open switch with the key carried in the driver's possessions.
b) The certification ECU transmits a request signal for electrical key oscillators (front, center, rear and outside back door) to form actuation areas.
c) The key transmits 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 back door open signal to the main body ECU.
e) The main body ECU receives this signal and actuates the back door opener motor to open the back door.

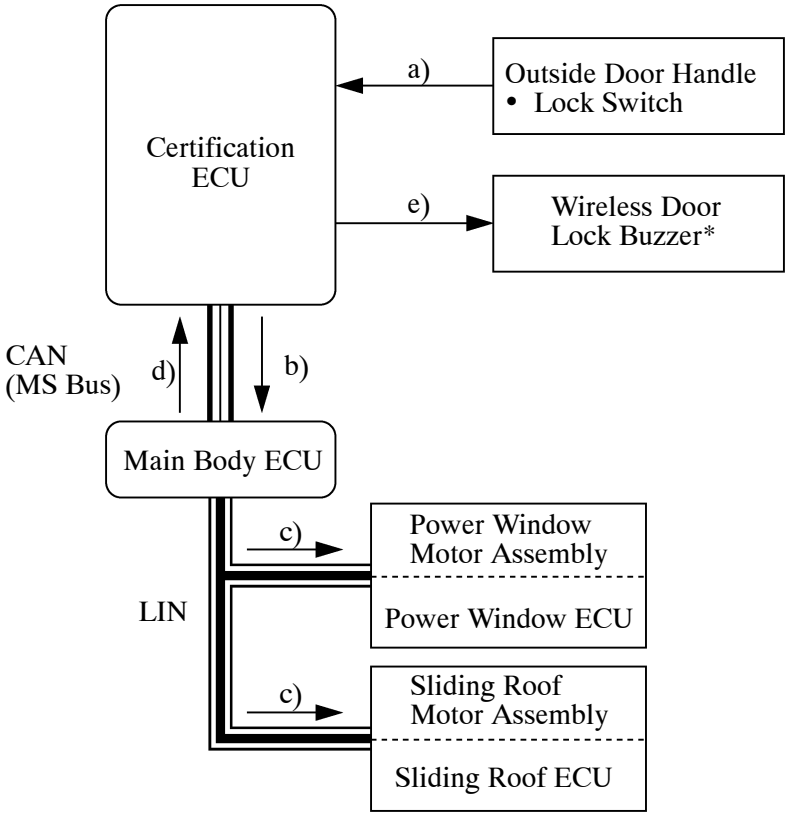


*1: Models with the PANIC control
*2: Models without the PANIC control

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Window and Sliding Roof Close Function

a) After all the doors have been locked, and the driver keeps pressing the lock switch on the outside door handle for approximately 3 seconds, the certification ECU receives continuous door lock switch ON signals.
b) The certification ECU transmits these signals to the main body ECU.
c) The main body ECU transmits the window and sliding roof close request signals to the power window master switch and sliding roof ECU built into the sliding roof motor assembly. The power window master switch transmits the window close request signals to the power window ECU built into the power window motor assembly. These ECUs operate their motors to close windows and sliding roof.
d) The certification ECU sounds the wireless door lock buzzer as an answer back for the window and sliding roof close function.



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*: Except for European, Chinese, South African and New Caledonian models

Memory Call Function

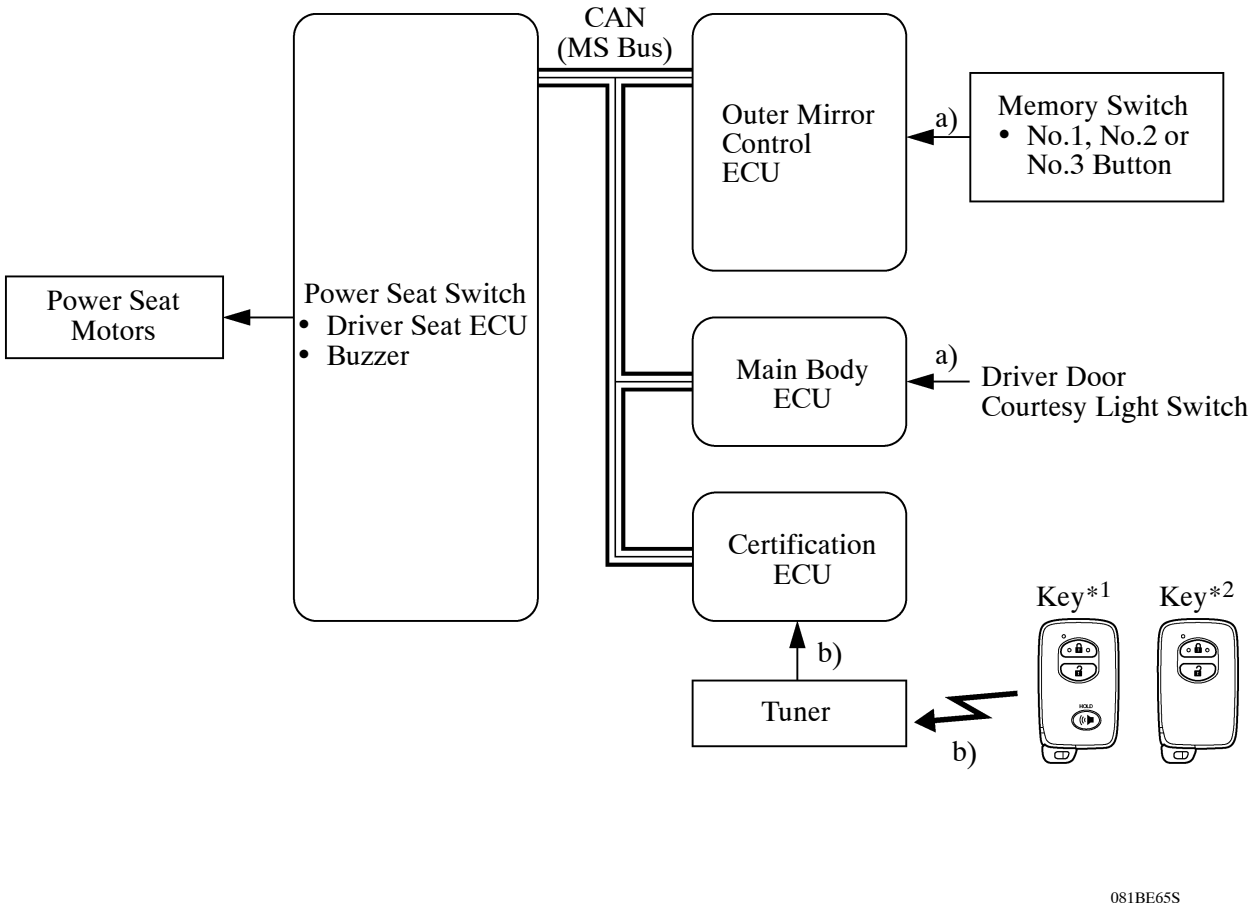
1) General

The memory call function while using a key utilizes the key ID to restore the driver seat position (driving position memory system), steering column position and outer 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. • Engine switch is OFF. • Driver door is closed. • Memory No. (1, 2 or 3) button is pressed and held. • LOCK or UNLOCK button in the key pressed and held.
Memory Call Operation	After the door is unlocked using the entry and start system function 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. • Engine switch is OFF. • Driver door is closed. • SET button is 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 engine switch 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 beeps the buzzer in the driver seat ECU once as an answer back.

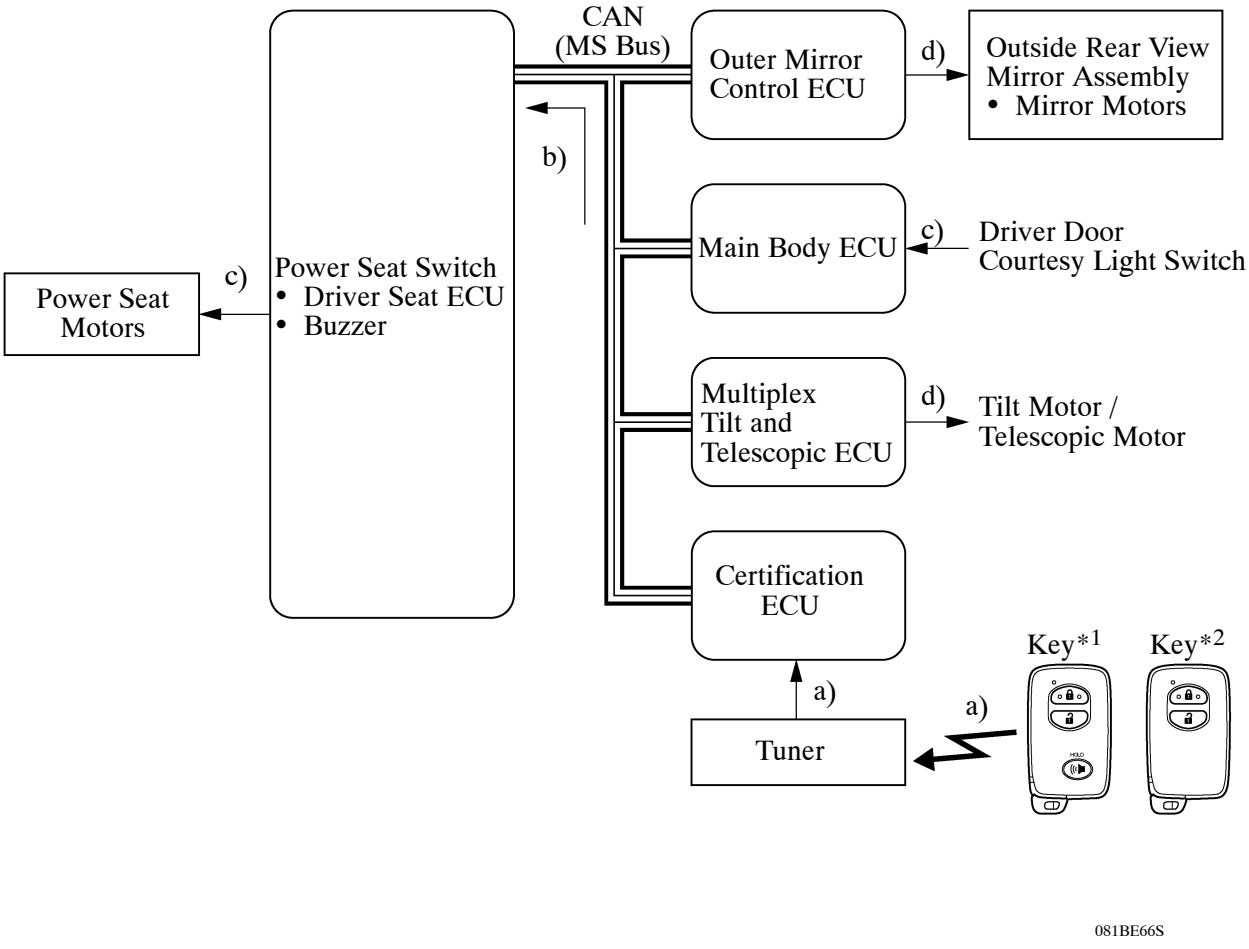


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*1: Models with the PANIC control
*2: Models without the PANIC control

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.

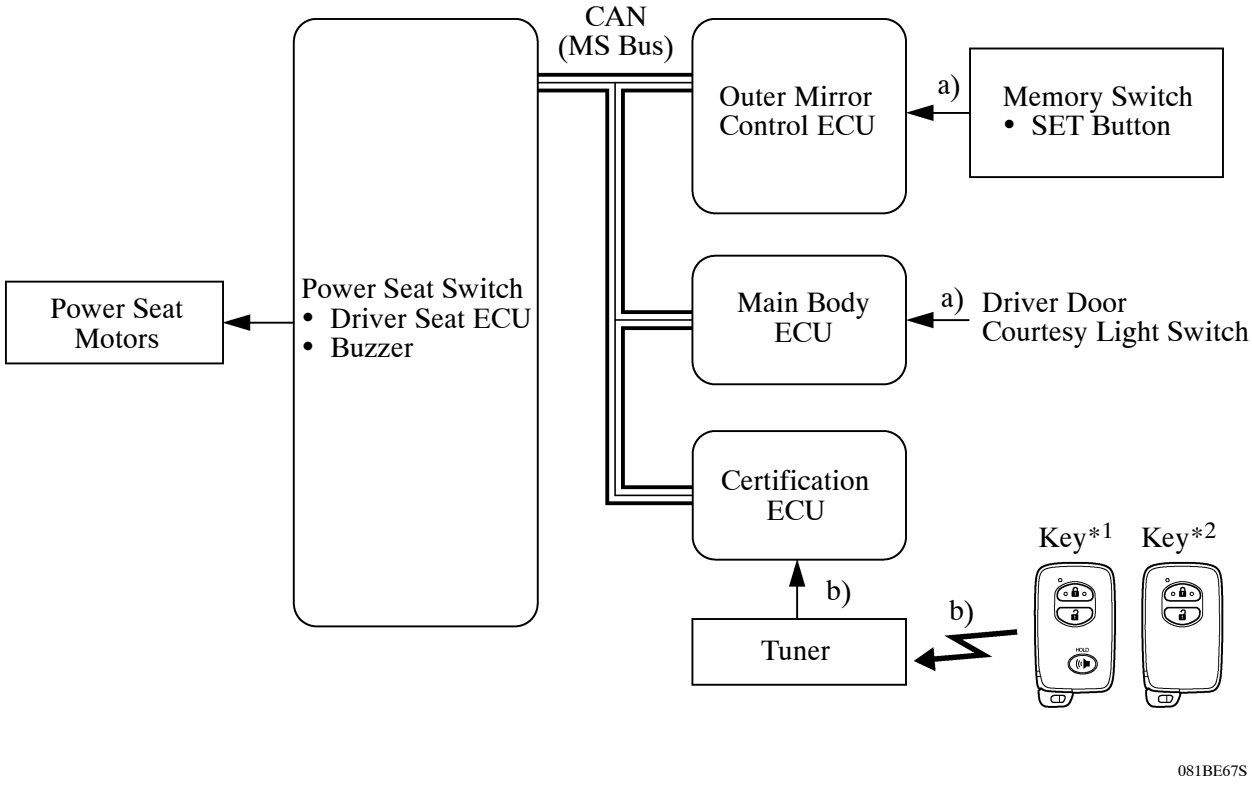


*1: Models with the PANIC control
*2: Models without the PANIC control

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4) Memory Call Cancel

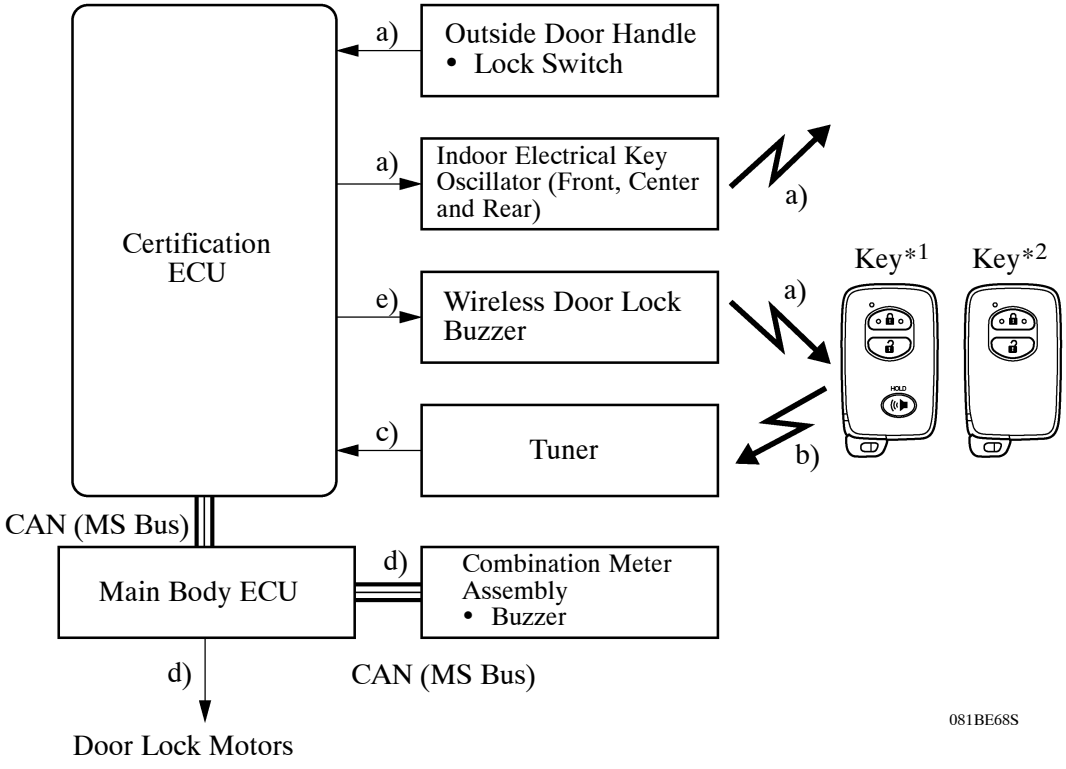
a) If the SET button is pressed when the engine switch is OFF and the driver door is closed, the driver seat ECU enters the memory call cancel mode.
b) In this condition, when LOCK or UNLOCK button in a key is pressed, the key ID is transmitted from certification ECU to the driver seat ECU.
c) If the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



*1: Models with the PANIC control
*2: Models without the PANIC control

Prevention of Key Confinement

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 indoor electrical key oscillators (front, center and rear) 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*3 and the buzzer of the combination meter assembly as an answerback for the unlock function that was performed.



*1: Models with the PANIC control
*2: Models without the PANIC control
*3: Except for European, Chinese, South African and New Caledonian models

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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 assembly and the wireless door lock buzzer, and illuminate the multi-information display or the entry and start system warning light in order to the alert the driver.

Situation	Condition
A*	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 shift lever is in the P position when the driver gets out of the vehicle.
D	A door is ajar.
E	Any passenger carries the key out of the vehicle.
F	The key is not within the actuation areas.
G	The key is left in the cabin.
H	The key battery is low.
I	Steering lock does not release.
J	The steering lock mechanism is malfunctioning.
K	The main body ECU is malfunctioning.
L	The engine start method is displayed.

*: Only for models with automatic transmission

2) Situation: A

There are two patterns for situation A.

- Pattern 1: When 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.

<table>
<tr><td colspan="2">Possible Effects without Warning</td><td>Sudden vehicle start, Vehicle theft, Vehicle roll-away</td></tr>
<tr><td colspan="2">Warning Condition</td><td>The warning is activated when all of the following conditions are met:
• Engines switch is in a mode other than OFF.
• Shift lever is in any position except P.
• Vehicle speed is 0 km/h (0 mph).
• Driver door is opened.</td></tr>
<tr><td rowspan="4">Combination Meter Assembly</td><td>Buzzer</td><td>Continuous sound</td></tr>
<tr><td>Multi-information Display</td><td>

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<tr><td>Master Warning Light</td><td>—</td></tr>
<tr><td>Entry and Start System Warning Light*</td><td>—</td></tr>
<tr><td colspan="2">Wireless Door Lock Buzzer</td><td>—</td></tr>
<tr><td colspan="2">Engine Switch Indicator Light</td><td>—</td></tr>
<tr><td colspan="2">Warning Stop Condition</td><td>The warning is stopped when one of the following conditions is met:
• Engine switch is OFF.
• Shift lever is in the P position.
• Vehicle speed is above 0 km/h (0 mph).
• Driver door is closed.</td></tr>
</table>

*: Models with analog type combination meter assembly

Pattern 2.

<table>
<tr><td colspan="2">Possible Effects without Warning</td><td>Sudden vehicle start, Vehicle theft, Vehicle roll-away</td></tr>
<tr><td colspan="2">Warning Condition</td><td>The warning is activated when all of the following conditions are met:
• Shift lever is in any position except P.
• Engine switch is in a mode other than OFF.
• Vehicle speed is 0 km/h (0 mph).
• Key is not in the vehicle.
• Driver door is opened → closed.</td></tr>
<tr><td rowspan="4">Combination Meter Assembly</td><td>Buzzer</td><td>Sounds continuously</td></tr>
<tr><td>Multi-information Display</td><td>The following warnings are alternately displayed:


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<tr><td>Master Warning Light</td><td>Flash</td></tr>
<tr><td>Entry and Start System Warning Light*1</td><td>Illuminate</td></tr>
<tr><td colspan="2">Wireless Door Lock Buzzer*2</td><td>Sounds continuously</td></tr>
<tr><td colspan="2">Engine Switch Indicator Light</td><td>—</td></tr>
<tr><td colspan="2" rowspan="3">Warning Stop Condition</td><td>• Key is in the vehicle.
• The wireless door lock buzzer stops.
• Multi-information Display:


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<tr><td>• Vehicle speed is above 0 km/h (0 mph).
• The wireless door lock buzzer stops.
• Multi-information Display:


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<tr><td>• Engine switch is OFF.
All warning operations stop.</td></tr>
</table>

*1: Models with analog type combination meter assembly
*2: Except for European, Chinese, South African and New Caledonian models

3) Situation: B

There are two patterns for situation B.

- Pattern 1: While the driver's door is open, the driver changes the power source mode to ACC and attempts to leave the vehicle.
- Pattern 2: While 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 is met: • Engine switch is in ACC mode and the driver door is opened. • Engines switch is in OFF mode the steering is unlocked, and the driver door is opened.
Combination Meter Assembly	Buzzer	Continues to sound at short and even intervals
	Multi-information Display	—
	Master Warning Light	—
	Entry and Start System 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: • Engine switch is in IG-ON mode. • Driver door is closed. • Engine switch is in OFF mode and the steering is locked.

*: Models with analog type combination meter assembly

4) Situation: C

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 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, The engine cannot be restarted, Discharged battery
Warning Condition		The warning is activated when all of the following conditions are met: • Shift lever is P.*1 • Engine switch is in a mode other than OFF. • Key is not in the vehicle. • Driver door is opened → closed.
Combination Meter Assembly	Buzzer	Sounds once
	Multi-information Display	 080BE195S
	Master Warning Light	Flash
	Entry and Start System Warning Light*2	Illuminate
Wireless Door Lock Buzzer*3		Sounds three times
Engine Switch Indicator Light		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • Engine switch is OFF. • Key is in the vehicle.

*1: Models with automatic transmission
*2: Models with analog type combination meter assembly
*3: Except for European, Chinese, South African and New Caledonian models

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 P. *1 • Vehicle speed is 0 km/h. • Engine switch 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 Assembly	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
	Entry and Start System Warning Light*2	—
Wireless Door Lock Buzzer*3		Sounds for 60 seconds
Engine Switch Indicator Light		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • The engine switch is OFF and the key is not within the actuation areas. • Key is in the vehicle. • Vehicle speed is above 0 km/h.

*1: Models with automatic transmission
*2: Models with analog type combination meter assembly
*3: Except for European, Chinese, South African and New Caledonian models

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: • Engine switch is OFF. • Any doors are opened. • Entry lock button on the outer door handle is operated.
Combination Meter Assembly	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
	Entry and Start System Warning Light*1	—
Wireless Door Lock Buzzer*2		Sounds for 10 seconds
Engine Switch Indicator Light		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • Engine switch 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.

*1: Models with analog type combination meter assembly
*2: Except for European, Chinese, South African and New Caledonian models

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		The engine cannot be restarted
Warning Condition		The warning is activated when all of the following conditions are met: • Engine switch is in a mode other than OFF. • Door except driver door is opened → closed. • Vehicle speed is 0 km/h (0 mph). • Key is not in the vehicle.
Combination Meter Assembly	Buzzer	Sounds once
	Multi-information Display	 080BE195S
	Master Warning Light	Flash
	Entry and Start System Warning Light*1	Illuminate
Wireless Door Lock Buzzer*2		Sounds 3 times
Engine Switch Indicator Light		—
Warning Stop Condition		The warning is stopped when one of the following conditions is met: • Engine switch is OFF. • Vehicle speed is above 0 km/h (0 mph). • Key is in the vehicle.

*1: Models with analog type combination meter assembly
*2: Except for European, Chinese, South African and New Caledonian models

7) Situation: F

When the key is not in the cabin or the key does not operate properly, the driver attempts to start the engine or change the engine switch 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 Assembly	Buzzer	Sounds once
	Multi-information Display	 080BE195S Displayed for 10 seconds(and then automatically turned off)
	Master Warning Light	Flash
	Entry and Start System Warning Light*	Illuminate
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.

*: Models with analog type combination meter assembly

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: • Engine switch is OFF. • All doors are closed. • Key is in the vehicle. • Lock switch on the door outside handle switch is ON.
Combination Meter Assembly	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
	Entry and Start System Warning Light*1	—
Wireless Door Lock Buzzer*2		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.

*1: Models with analog type combination meter assembly
*2: Except for European, Chinese, South African and New Caledonian models

9) Situation: H

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: • Engine switch to OFF after being left in IG-ON for over 20 minutes. • Key battery voltage is low. • Key is in the vehicle.
Combination Meter Assembly	Buzzer	Sounds once
	Multi-information Display	 Displayed for 10 seconds (and then automatically turned off) 080BE196S
	Master Warning Light	Illuminate
	Entry and Start System Warning Light*	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator Light		—
Warning Stop Condition		The key battery is replaced with a new one.

*: Models with analog type combination meter assembly

10) Situation: I

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 Assembly	Buzzer	—
	Multi-information Display	 080BE197S Displayed for 15 seconds (and then automatically turned off)
	Master Warning Light	Illuminate
	Entry and Start System Warning Light*	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator Light		The green indicator blinks at 1 second intervals (goes off automatically in 30 seconds).
Warning Stop Condition		The power switch is pressed while the steering wheel is turned left and right, and the steering lock successfully disengages.

*: Models with analog type combination meter assembly

11) Situation: J

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 Assembly	Buzzer	Sounds once
	Multi-information Display	 080BE19Y
	Master Warning Light	Illuminate
	Entry and Start System Warning Light*	—
Wireless Door Lock Buzzer		—
Engine Switch Indicator Light		The amber indicator blinks at 2 second intervals.(goes off automatically in 15 seconds)
Warning Stop Condition		The steering lock ECU returns to normal.

*: Models with analog type combination meter assembly

12) Situation: K

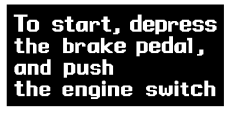
A malfunction of the main body ECU is detected.
In this situation, the following control is performed:

Possible Effects without Warning		Malfunction detection
Warning Condition		A malfunction in the main body ECU is detected.
Combination Meter Assembly	Buzzer	—
	Multi-information Display	—
	Master Warning Light	—
	Entry and Start System 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.

*: Models with analog type combination meter assembly

13) Situation: L

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 all of the following conditions are met: • Engine switch is in a mode other than ON. • Any doors are closed → opened. • The engine switch is changed from OFF to ACC more than once with the power off and brake pedal not depressed.
Combination Meter Assembly	Buzzer	Sounds once
	Multi-information Display	 080BE15Y
	Master Warning Light	—
	Entry and Start System 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 or the engine switch is OFF.

*: Models with analog type combination meter assembly

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 10 to 14 days	Signal transmission interval is extended from 250 msec. to 750 msec.
No response from key for 15 to 30 days	Signal transmission interval is extended from 750 msec. to 2250 msec.
No response from key for more than 31 days	Automatically deactivates entry and start system.

▶ Reinstatement Conditions ◀

- A wireless door lock remote control signal (lock and unlock) is input and the ID matches.
- A user is carrying the key and pushes a lock switch on an door outside 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 deactivates.

▶ Reinstatement Conditions ◀

- A wireless door lock remote control signal (lock and unlock) is input and the ID matches.
- A user who has the key in their possession pushes a lock switch on an door 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:
- Engine switch is OFF.
- Driver door is closed.
- Driver door is unlocked.

The operation procedure is as follows:
1) Unlock once with the UNLOCK button on the key.
2) Open the driver door within 5 seconds.
3) Unlock twice with the UNLOCK button on 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 on 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 twice.
To return to the original condition, perform the procedures again. When it is returned to its original condition, the wireless door lock buzzer sounds once.

Key Code Registration Function

The table below shows the four special coded ID registration function modes through which up to seven 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 Land Cruiser (Station Wagon) Repair Manual (Pub. No. RM0810E).

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.