

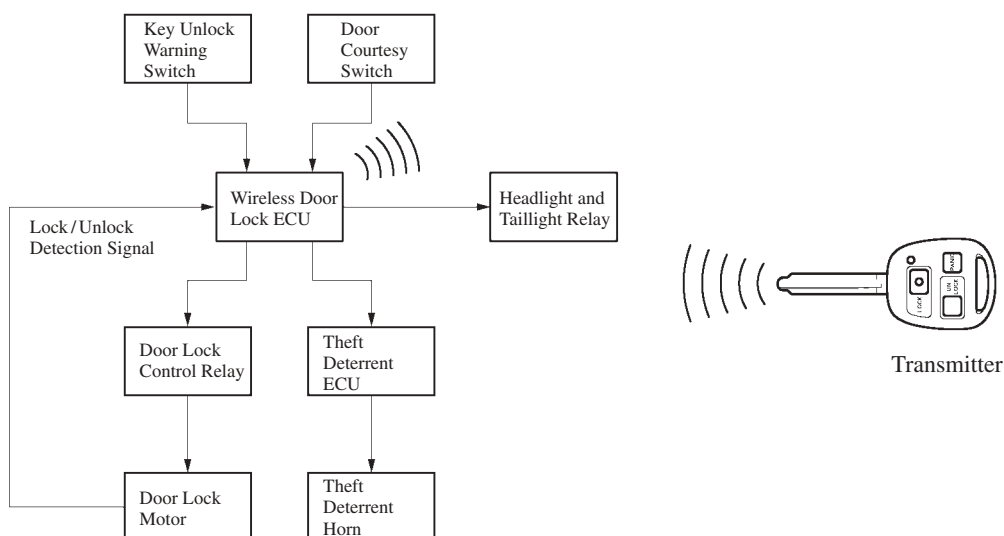
## ■ WIRELESS DOOR LOCK REMOTE CONTROL SYSTEM

### 1. General

The wireless door lock remote control system is a convenient system for locking and unlocking all the doors, at a distance. This system in the Land Cruiser has the following features:

- A multi-function type wireless door lock remote control system that provides a lock/unlock function for all doors, panic alarm operation function, etc. has been adopted.
- An easy-to-use key-integrated type transmitter has been adopted.
- An LED (Light Emitting Diode) is enclosed in the transmitter to monitor if the battery is discharged.
- A rolling code function has been adopted, which changes the recognition code each time the transmitter is pressed.
- To facilitate the verification of its operation, this system flashes the parking lights and taillights upon completion of each operation.

### ► System Diagram ◀

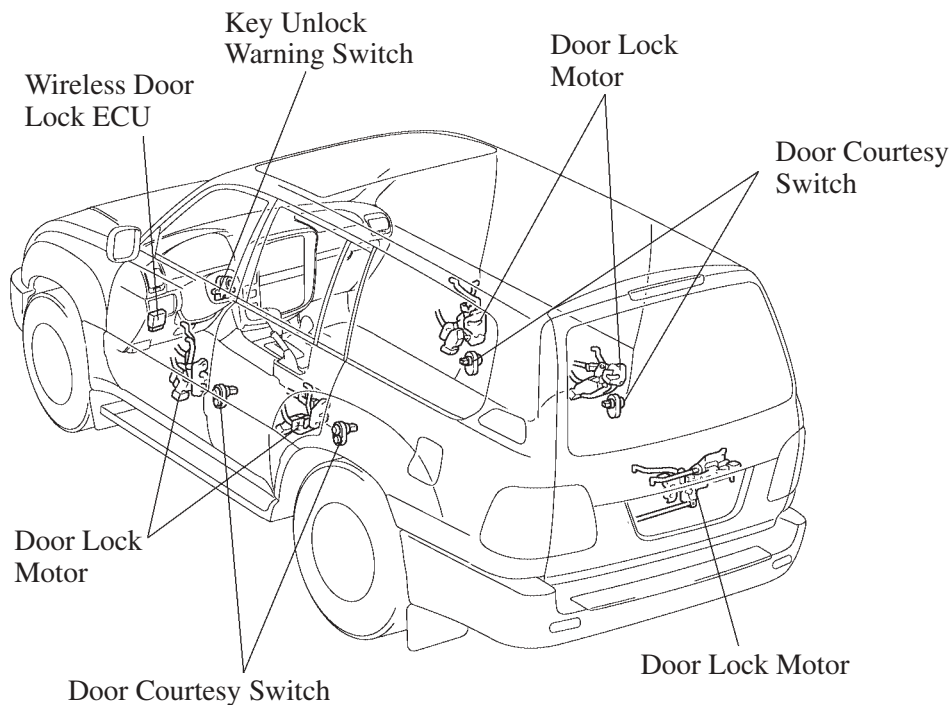


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Models for General Countries

## 2. Layout of Components

The major functional parts of the wireless door lock remote control system are shown below.



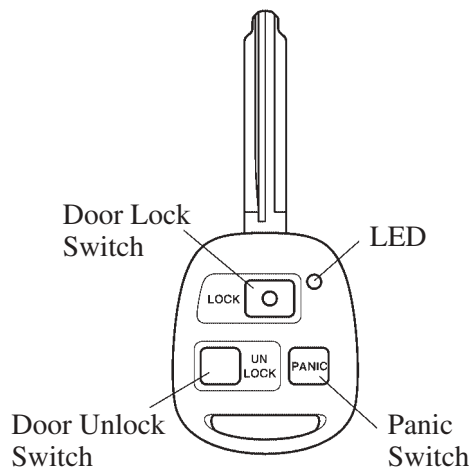
**LHD Model**

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## 3. Construction

### Transmitter

- To accommodate the multiple functions provided in the wireless door lock remote control system, the multi-function type transmitter has been enclosed in the key grip. As a result, a transmitter with excellent portability and ease of use has been realized.
- On models for General Countries, this transmitter is equipped with a panic switch which activates the security alarm of the theft deterrent system to activate.
- An LED (Light Emitting Diode) is enclosed in the key grip to monitor if the battery is discharged.
- The key mold portion and the transmitter module has been separated to improve their serviceability.



**Models for General Countries**

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### Wireless Door Lock ECU

- An antenna that receives the signals from the transmitter is enclosed in the ECU.
- The ECU outputs the control signals to the integration relay, buzzer, etc., in accordance with the signals received from the transmitter.
- The wireless door lock ECU is located in the instrument panel on the driver side.

## 4. Function

The wireless door lock remote control system in the Land Cruiser has the following functions.

### ► Availability ◀

Destination Function	Europe	Australia	G.C.C. Countries	General Countries
All Doors Lock Function	○	○	○	○
All Doors Unlock Function	○	○	○	○
Panic Alarm Function	–	–	–	○
Operation Verification Light Function	–	○	○	○
Auto Lock Function	○	○	○	○
Transmitter Switch Misoperation Prevention Function	○	○	○	○
Repeat Function	○	○	○	○
Security Function	○	○	○	○
Transmitter Recognition Code Registration Function	○	○	○	○
Self-Diagnosis Function	○	○	○	○

### All Doors Lock Function

Pressing the “door lock” switch of the transmitter locks all doors.

### All Doors Unlock Function

Pressing the “door unlock” switch of the transmitter unlocks all doors.

### Panic Alarm Function



Pressing the “panic” switch of the transmitter activates the alarm of the theft deterrent system (to sound the horn and flash the headlights and taillights).

### Operation Verification Light Function

When the doors are locked by the transmitter switch operation, the parking light and taillight flashes once to confirm that the operation has been completed.

Similarly, the parking light flashes twice when the doors are unlocked.

### ► Light Flash Patterns ◀

Lock	Light Flash	ON	 0.20 Sec.
		OFF	
Unlock		ON	
		OFF	

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### Auto Lock Function

If none of the doors are opened within 30 seconds after they are unlocked by the wireless door lock remote control, all the doors are locked again automatically.

### Transmitter Switch Misoperation Prevention Function

When an ignition key is in the ignition key cylinder or any of the doors is not closed completely, the wireless door lock remote control is temporarily cancelled to prevent misoperation.

### Repeat Function

If a door is not locked in response to the locking operation of the transmitter, the wireless door lock ECU will output a lock signal once after 2 seconds.

## Security Function

An operation signal is transmitted by a rolling code function in which the recognition code is changed each time the transmitter switch is pressed.

## Transmitter Recognition Code Registration Function

The table below shows the 4 special coded ID registration function modes (rewrite mode, add mode, confirm mode and prohibit mode) through which up to 4 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 Chassis and Body Repair Manual (Pub. No. RM616E) to register the codes correctly.

Mode	Function
Rewrite Mode	Erases all previously registered codes and registers only the newly received codes. This mode is used whenever a transmitter or the wireless door lock ECU is replaced.
Add Mode	Adds a newly received code while preserving any 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 Mode	Confirms how many codes are currently registered. When adding a new code, this mode is used to check how many codes already exist.
Prohibit Mode	To delete all the registered codes and to prohibit the wireless door lock function. This mode is used when the transmitter is lost.

## Self-Diagnosis Function

Determines whether or not the signals received from the transmitter during the diagnostic mode is normal and operates the taillights and the parking lights in accordance with the switches that have been pressed.