

Door Oscillator Circuit (Front LH, RH and Rear LH, RH)

CIRCUIT DESCRIPTION

The Theft Deterrent ECU sends a signal through the CLG terminal and the Door ECUs to activate the door oscillator. The following lists are the operations of components under the smart unlock and lock conditions. (The CLG terminal-related operations are marked with ○.).

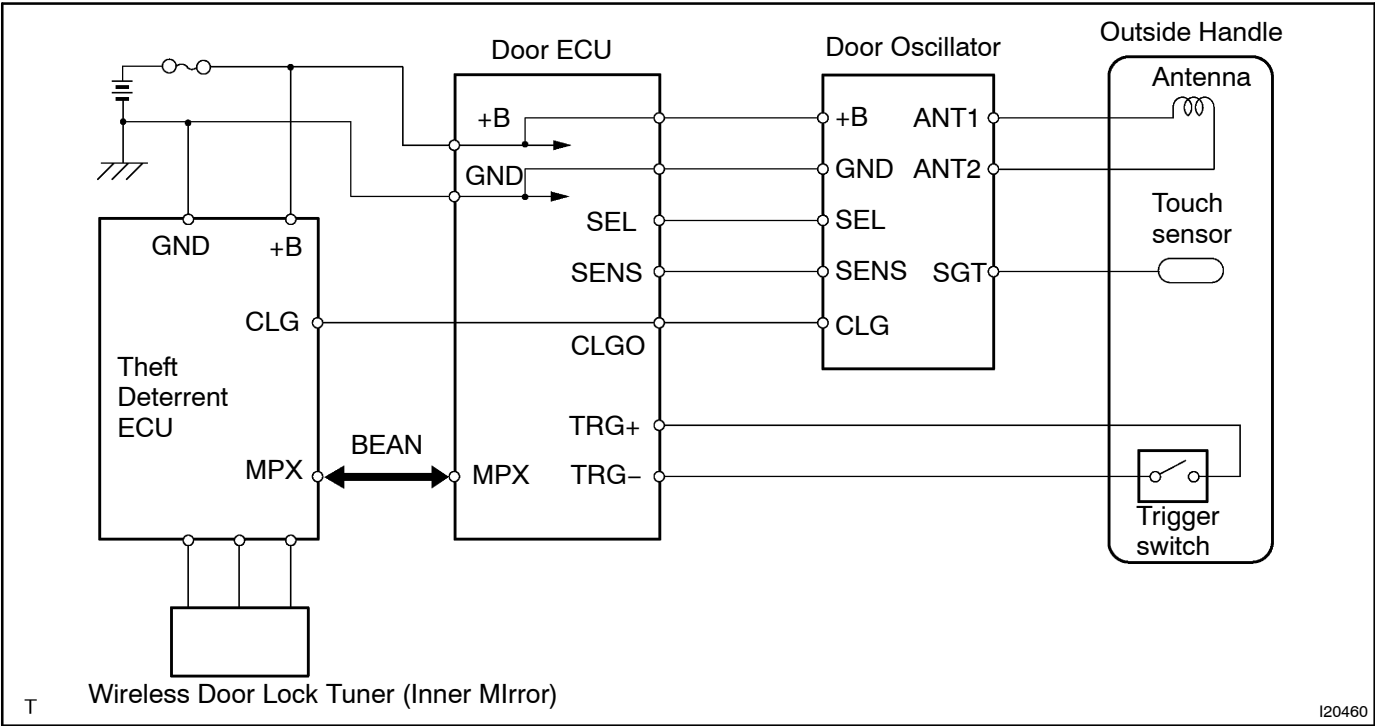
The door oscillator circuits in D, P, RL and RR doors have the same wiring. If troubles occur, check the corresponding circuit.

Smart unlock:

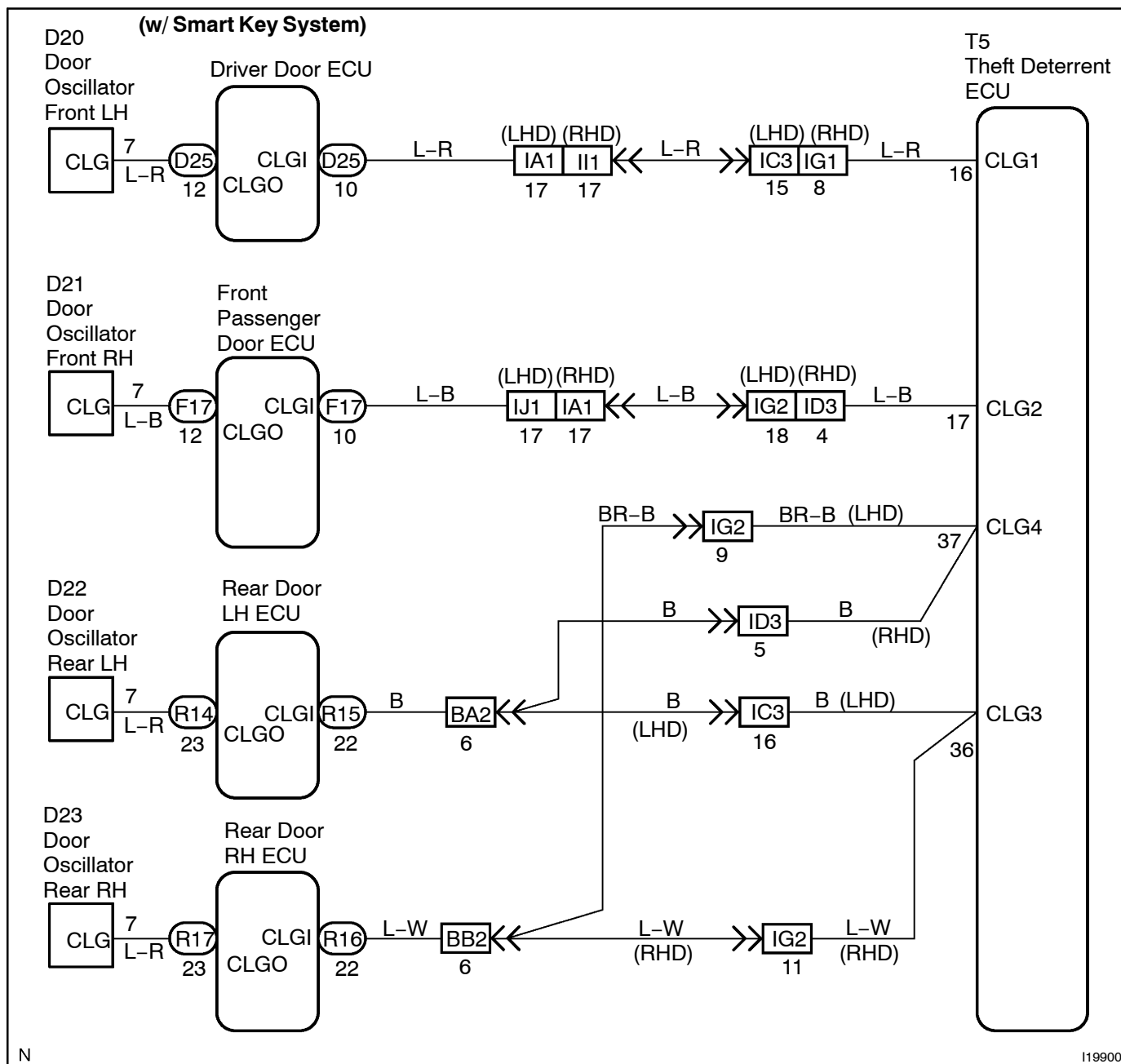
	Component	Operation	
1	• Theft Deterrent ECU	• Activates the door oscillator through the Door ECU (through the CLGO terminals)	○
2	• Door Oscillator	• Activates the electrical antenna to send the wave outside the vehicle.	
3	• Smart Key	• Receives the wave from the electrical antenna and sends the smart key code to the wireless tuner.	
4	• Theft Deterrent ECU	• If the wireless tuner receives a registered smart key code, the Theft Deterrent ECU sends the activation demand of the touch sensor through the BEAN to the Door ECU.	
5	• Door ECU	• Receives the demand from the Theft Deterrent ECU and sends the "LO" signal through the SEL terminal to the door ECU.	
6	• Door Oscillator	• Receives the "LO" signal to activate the touch sensor.	
7		• At this time the vehicle is in the unlock standby condition (which is that the vehicle is on standby to unlock the door when the outside handle is touched by hand).	

Smart Lock:

	Component	Operation	
1	• Door ECU	• Sends the ON signal of the door handle's trigger SW through BEAN to the Theft Deterrent ECU.	
2	• Theft Deterrent ECU	• Activates the door oscillator through the Door ECU on the door with the trigger SW pressed.	○
3	• Door oscillator	• Activates the electrical antenna to send the wave outside the vehicle.	
	• Room oscillator	• Activates the electrical antenna to send the wave inside the vehicle.	
4	• Smart Key	• Receives the wave from the oscillator and sends the smart key code to the wireless tuner.	
5	• Theft Deterrent ECU	• Sends the lock demand to all the Door ECUs through BEAN if it judges that the key is outside the vehicle.	
6	• Door ECU	• Locks the door according to the demand from the Theft Deterrent ECU	



WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

In case of using the LEXUS hand-held tester, start the inspection from step 1 and in case of not using the LEXUS hand-held tester, start from step 2.

1 Check door oscillator using LEXUS hand-held tester.

PREPARATION:

Connect the LEXUS hand-held tester to the DLC 3.

CHECK:

Check the door oscillator can be opened in ACTIVE TEST.

OK:

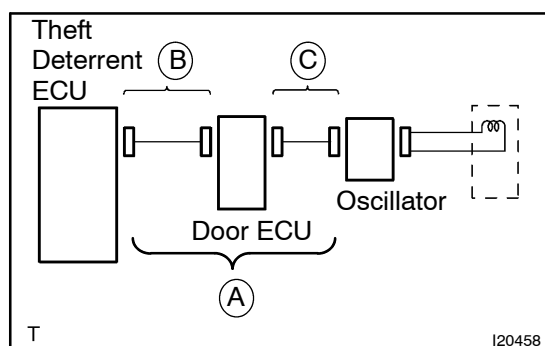
When the smart key is brought close to the door oscillator that is turned ON, the indicator on the smart key-lights.

OK

Proceed to next inspection shown on problem symptoms table ([See page DI-810](#)).

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2 Check wire harness and connector between door oscillator and Theft deterrent ECU.



CHECK:

Check the wire harness in (A). (The Door ECU is included.)

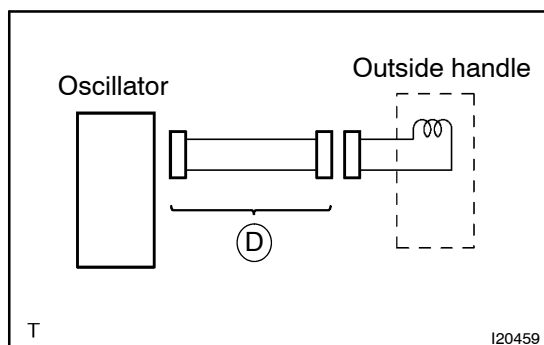
HINT:

If troubles are detected in (A), check the wire harnesses in (B) and (C) and identify the troubled part. If there is no trouble in wire harness in (B) and (C), it is suspected that the Door ECU has a trouble.

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Repair or replace wire harness or connector.

OK

3 Check wire harness and connector between antenna and door oscillator.**PREPARATION:**

Disconnect the connectors of the outside handle and the door oscillator.

CHECK:

Check the wireharness in (D).

NG**Repair or replace wire harness or connector.****OK****4 Check door oscillator.****CHECK:**

Replace the door oscillator and make sure that the system returns to the normal operation.

OK:

It recovered normally.

OK**The replaced door oscillator trouble.****NG****5 Check antenna.****CHECK:**

Replace the outside handle and make sure that the system returns to the normal operation.

OK:

It recovers normally.

OK**The replaced outside handle trouble.****NG**

**Proceed to next inspection shown on problem symptoms table
(See page DI-810).**