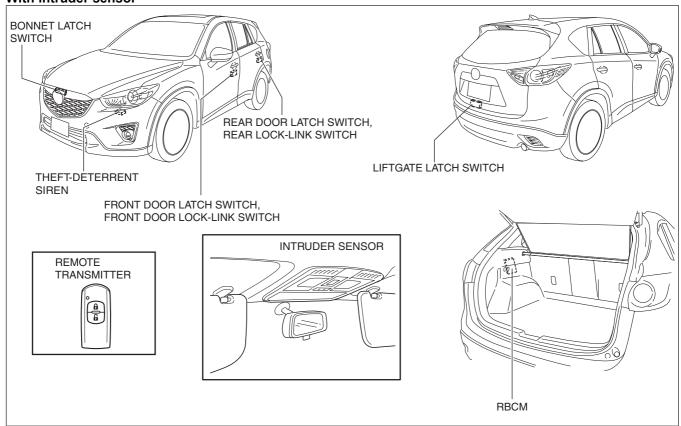
# THEFT-DETERRENT SYSTEM

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#### **Outline**

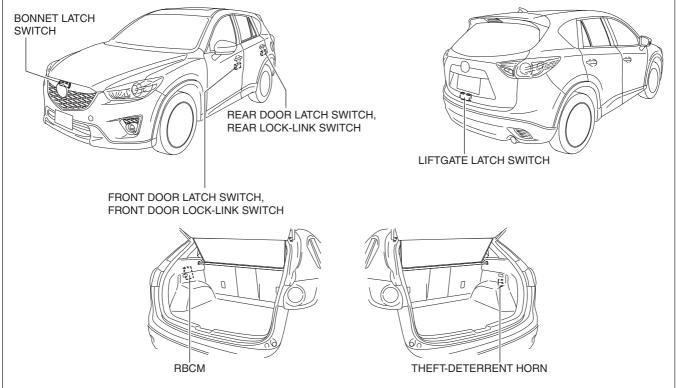
- The theft-deterrent system operates the theft-deterrent siren or theft-deterrent horn and hazard warning lights if a door, liftgate or the bonnet is improperly opened.
- An answer-back function has been adopted which allows visual verification of the theft-deterrent system
  operation.
- Signal input/output of the theft-deterrent system is controlled by the rear body control module (RBCM).
- The rear body control module (RBCM) performs theft-deterrent system fail-safe. (See REAR BODY CONTROL MODULE (RBCM).)

# Structural View With intruder sensor



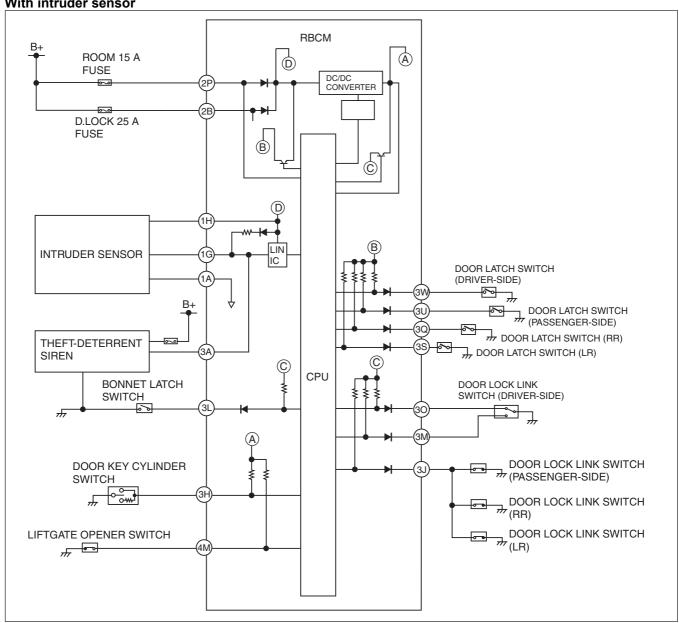
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# Without intruder sensor



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# System Wiring Diagram With intruder sensor



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# Without intruder sensor **RBCM** ROOM 15 A A **FUSE** DC/DC CONVERTER R.WIPER 15 A FBCM **FUSE** D.LOCK 25 A **FUSE** \$€ B Й (C) THEFT-DETERRENT (A)**HORN** DOOR LATCH SWITCH (DRIVER-SIDE) DOOR LATCH SWITCH (PASSENGER-SIDE) DOOR LATCH SWITCH (RR) DOOR LATCH SWITCH (LR) CPU DOOR LOCK LINK SWITCH (DRIVER-SIDE) DOOR LOCK LINK SWITCH DOOR KEY CYLINDER (PASSENGER-SIDE) **SWITCH** DOOR LOCK LINK SWITCH デ(RR) LIFTGATE OPENER SWITCH DOOR LOCK LINK SWITCH 元 (LR) BONNET LATCH SWITCH

# **Function**

#### **Answer back function**

- When a locking operation is performed using the keyless entry remote transmitter is in stand-by preparation mode, stand-by mode, the hazard warning lights flash once.
- When a unlocking operation is performed using the keyless entry remote transmitter is in initial mode, the hazard warning lights flash twice.

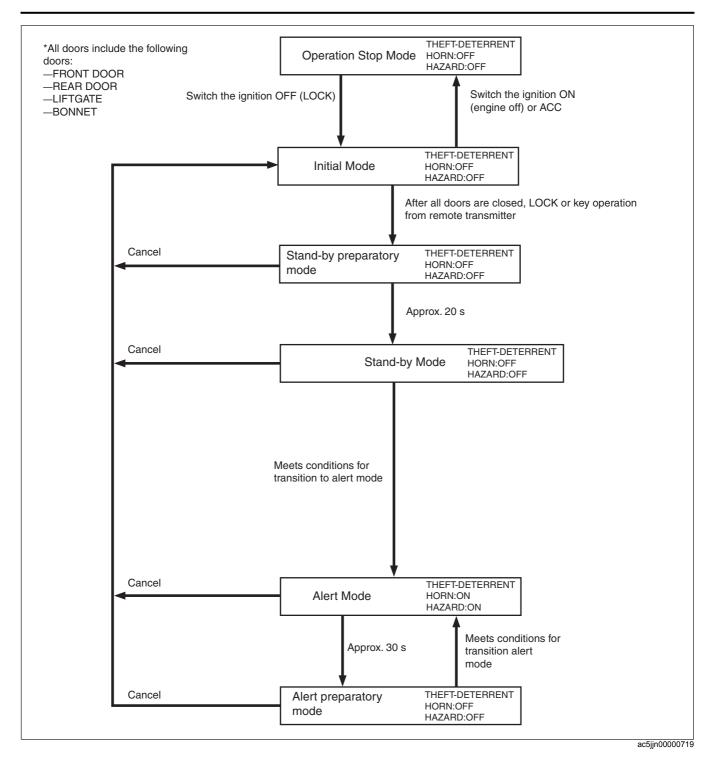
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# Intruder sensor cancel function

• An intruder sensor cancel button has been installed on the keyless entry remote transmitter. If the intruder sensor cancel button is on while the theft-deterrent system is pre-armed, intruder sensor ultrasonic wave output is cut, and movement detection is stopped.

# Operation (Without Intruder Sensor) Mode transition

• The rear body control module (RBCM) switches the theft-deterrent system mode based on the ignition switch and door conditions.



# Operation stop mode

- In this mode, all theft-deterrent system operations are stopped.
- The system changes to the operation stop mode when any of the following conditions are met.
  - Switch the ignition to ACC or ON (engine off).

#### Initial mode

• This mode is the preparatory mode before changing to the stand-by mode. The system does not change directly to the alert mode from this mode.

## Transition condition to the initial mode

- The system changes from the operation stop mode to the initial mode if all of the following conditions are met.
   Switch the ignition OFF (LOCK)
- The system transitions from stand-by preparatory mode, stand-by mode, alert mode, and alert preparatory mode to the initial mode if the cancel conditions in each mode are met.

# Transition condition to the stand-by preparatory mode

The system changes to the stand-by preparatory mode if any of the following conditions are met.

 A lock operation was performed using the remote transmitter lock button or key with all the doors, liftgate, and bonnet closed.

## Stand-by preparatory mode

- This is mode prior to the stand-by mode.
- If the cancel conditions are met, the system changes to the initial mode.

## Transition condition to the stand-by mode

• If the stand-by preparatory mode continues for approx. 20 s, the system changes to the stand-by mode.

## **Cancel conditions**

- If any of the following conditions are met, the stand-by preparation mode is canceled and the system changes to the initial mode.
  - Any front door latch switch on (door is open), or any rear door latch switch on (rear door is open), or liftgate latch switch on (liftgate is open), or bonnet latch switch off (bonnet is open)
  - Any door lock-link switch UNLOCK
  - Switch the ignition to ACC or ON (engine off)
  - Unlock operation using remote transmitter
  - The driver-side door key cylinder is unlocked
  - Open the liftgate using the liftgate opener switch (With advanced keyless entry system)

#### Stand-by mode

- The system starts monitoring approx. 20 s after the doors are locked for unauthorized door opening/closing. If any unauthorized operation is detected, the system changes to the alert mode.
- If the cancel conditions are met, the system changes to the initial mode.

## Transition condition to the alert mode

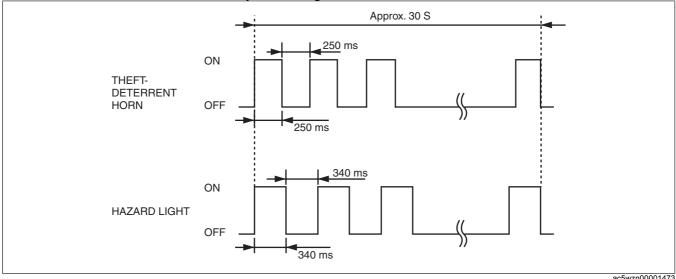
- If any of the following conditions are met, the system changes to the alert mode.
  - Switch the ignition ON (engine off)
  - Door latch switch on (door is open)
  - Liftgate latch switch on (liftgate is open)
  - Bonnet latch switch off (bonnet is open)
  - Door lock-link switch UNLOCK

#### **Cancel condition**

- If any of the following conditions are met, the stand-by mode is canceled and the system changes to the initial mode.
  - Unlock operation using remote transmitter
  - Switch the ignition to ACC or ON (engine off).
  - The driver-side door key cylinder is unlocked

#### Alert mode

- In this mode, the theft-deterrent horn and hazard warning lights are operated to alert the surrounding area.
- When the alarm period (approx. 30 s) has elapsed, the system changes to the alert preparatory mode.
- If the cancel conditions are met, the system changes to the initial mode.



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# Transition condition to the alert preparatory mode

- When the alarm period (approx. 30 s) has elapsed, the system changes to the alert preparatory mode.
- The alarm period is not extended even if a transition condition to alert mode is met again during an alarm period. **Cancel condition**
- If any of the following conditions are met, the alert mode is canceled, and the system changes to the initial mode.

- Unlock operation using remote transmitter
- Switch the ignition ON (engine off), and engine start
- The driver-side door key cylinder is unlocked
- Open the liftgate using the liftgate opener switch (With advanced keyless entry system)

## Alert preparatory mode

- In the alert preparatory mode, the theft-deterrent horn and hazard warning light are not operated, however, the alarm triggers immediately if the condition is changed.
- If the cancel conditions are met, the system changes to the initial mode.

# Transition condition to alert mode

- The system changes to the alert mode if any of the following conditions are met.
  - The ignition is switched from ON to off, or from off to ON
  - The door latch switch is turned from on (door is open) to off (door is closed), or from off (door is closed) to on (door is open)
  - The liftgate latch switch is turned from on (liftgate is open) to off (liftgate is closed), or from off (liftgate is closed) to on (liftgate is open)
  - The bonnet latch switch is turned from off (bonnet is open) to on (bonnet is closed) or from on (bonnet is closed) to off (bonnet is open)
  - The door lock-link switch is locked from unlock, or unlocked from lock

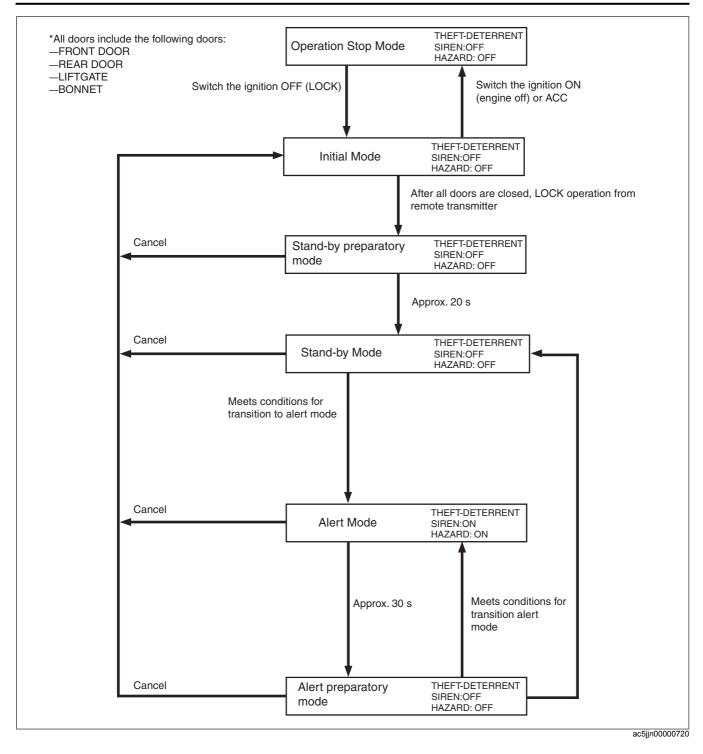
#### **Cancel condition**

- If any of the following conditions are met, the alert preparatory mode is canceled and the system changes to the initial mode.
  - Unlock operation using remote transmitter
  - Switch the ignition ON, and engine start
  - Unlock operation using front door key cylinder
  - Open the liftgate using the liftgate opener switch (With advanced keyless entry system)

# **Operation (With Intruder Sensor)**

#### Mode transition

• The rear body control module (RBCM) switches the theft-deterrent system mode based on the ignition switch and door conditions.



## Operation stop mode

- In this mode, all theft-deterrent system operations are stopped.
- The system changes to the operation stop mode when any of the following conditions are met.
  - Switch the ignition to ACC or ON (engine off).

# **Initial mode**

This mode is the preparatory mode before changing to the stand-by mode. The system does not change directly
to the alert mode from this mode.

# Transition condition to the initial mode

- The system changes from the operation stop mode to the initial mode if all of the following conditions are met.
   Switch the ignition OFF (LOCK)
- The system transitions from stand-by preparatory mode, stand-by mode, alert mode, and alert preparatory mode to the initial mode if the cancel conditions in each mode are met.

## Transition condition to the stand-by preparatory mode

The system changes to the stand-by preparatory mode if any of the following conditions are met.

 A lock operation was performed using the remote transmitter lock button with all the doors, liftgate, and bonnet closed.

# Stand-by preparatory mode

- This is mode prior to the stand-by mode.
- If the cancel conditions are met, the system changes to the initial mode.

# Transition condition to the stand-by mode

If the stand-by preparatory mode continues for approx. 20 s, the system changes to the stand-by mode.

# **Cancel conditions**

- If any of the following conditions are met, the stand-by preparatory mode is canceled and the system changes to the initial mode.
  - Any door latch switch on (door is open), or liftgate latch switch on (liftgate is open), or bonnet latch switch off (bonnet is open)
  - Any door lock-link switch UNLOCK
  - Switch the ignition to ACC or ON (engine off).
  - Unlock operation using remote transmitter
  - Open the liftgate using the liftgate opener switch (With advanced keyless entry system)

## Stand-by mode

- The mode monitors for unauthorized door opening/closing approx. 20 s after the doors are locked. If any unauthorized operation is detected, the system changes to alert mode.
- If the cancel conditions are met, the system changes to the initial mode.

# Transition condition to the alert mode

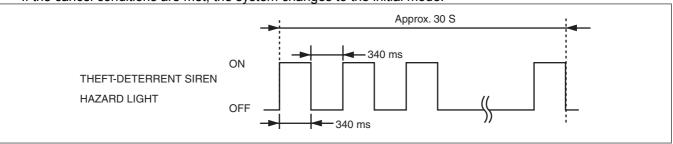
- If any of the following conditions are met, the system changes to the alert mode.
  - Switch the ignition ON (engine off)
  - Door latch switch on (door is open)
  - Liftgate latch switch on (liftgate is open)
  - Bonnet latch switch off (bonnet is open)
  - Door lock-link switch UNLOCK
  - Intrusion into vehicle is detected by intruder sensor

#### **Cancel condition**

- If any of the following conditions are met, the stand-by mode is canceled and the system changes to the initial mode.
  - Unlock operation using remote transmitter
  - Switch the ignition to ON (engine off), and engine start
  - Open the liftgate using the liftgate opener switch (With advanced keyless entry system)

#### Alert mode

- In this mode, the theft-deterrent siren and hazard warning lights are operated to alert the surrounding area.
- When the alarm period (approx. 30 s) has elapsed, the system changes to the alert preparatory mode.
- · If the cancel conditions are met, the system changes to the initial mode.



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## Transition condition to the alert preparatory mode

- When the alarm period (approx. 30 s) has elapsed, the system changes to the alert preparatory mode.
- The alarm period is not extended even if a transition condition to alert mode is met again during an alarm period.

## **Cancel condition**

- If any of the following conditions are met, the alert mode is canceled, and the system changes to the initial mode.
  - Unlock operation using remote transmitter
  - Switch the ignition to ON (engine off), and engine start
  - Open the liftgate using the liftgate opener switch (With advanced keyless entry system)

#### Alert preparatory mode

- In the alert preparatory mode, the theft-deterrent siren and hazard warning light are not operated, however, the alarm triggers immediately if the condition is changed.
- If the cancel conditions are met, the system changes to the initial mode.

# Transition condition to alert mode

- The system changes to the alert mode if any of the following conditions are met.
  - Switch the ignition ON (engine off)
  - Door latch switch on (door is open)
  - Liftgate latch switch on (liftgate is open)
  - Bonnet latch switch off (bonnet is open)
  - Door lock-link switch UNLOCK
  - Intrusion into vehicle is detected by intruder sensor

# Transition condition to the stand-by mode

• If there is no transition to cancel or alert mode for a period of 5 s after warning stand-by mode is established, the system switches to stand-by mode.

# **Cancel condition**

- If any of the following conditions are met, the alert preparatory mode is canceled and the system changes to the initial mode.
  - Unlock operation using keyless entry remote transmitter
  - Switch the ignition ON (engine off), and engine start
  - Open the liftgate using the liftgate opener switch (With advanced keyless entry system)