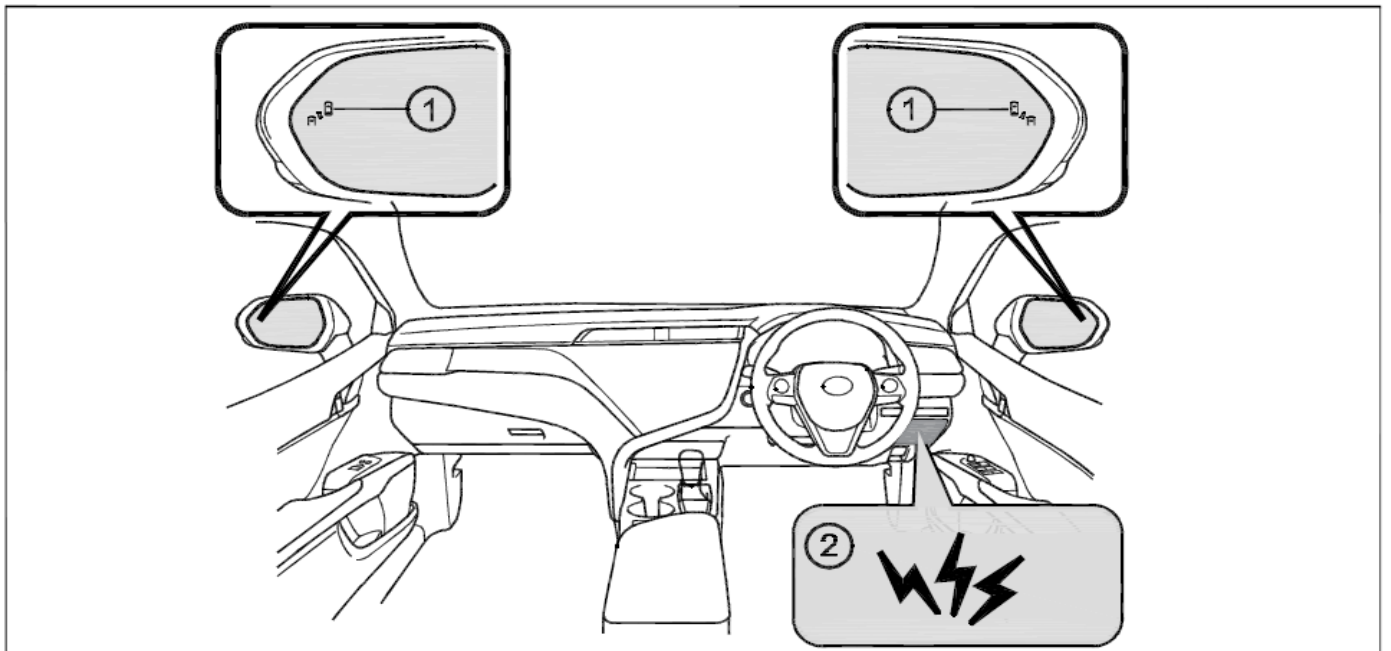




# BLIND SPOT MONITORING SYSTEM (BSM)

## OWNER'S MANUAL



Please read this manual for proper operation and keep it for future reference.



# TABLE OF CONTENTS

## Blind Spot Monitor

Section	Title	Page
1.0	Summary of the Blind Spot Monitor	1
2.0	Turning the BSM function ON	2
3.0	BSM function	3
4.0	RCTA function	6

Please read this manual for proper operation and keep it for future reference.

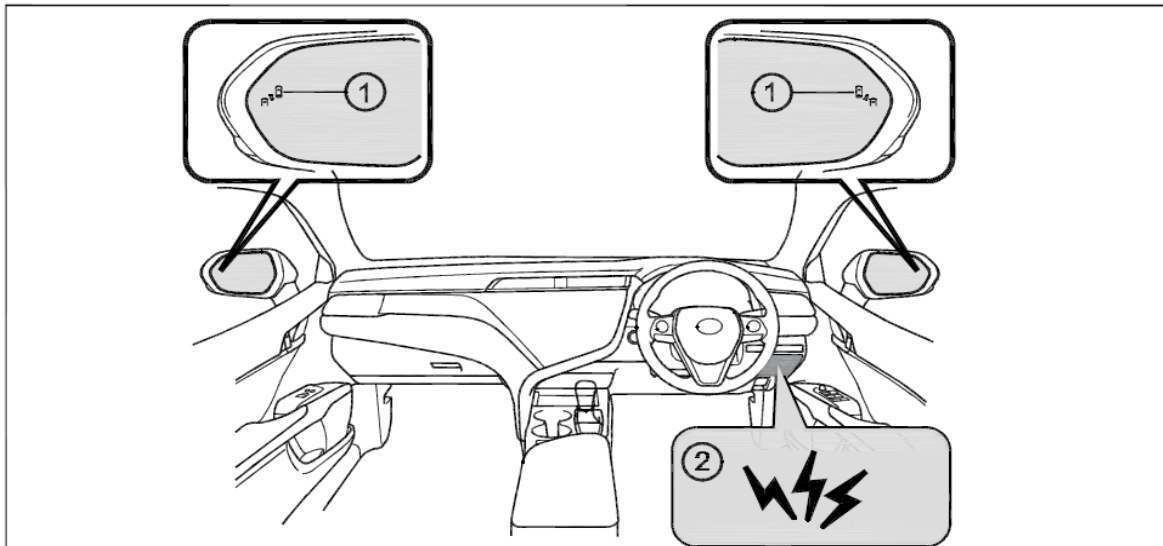


# SECTION 1.0

## Summary of the Blind Spot Monitor

### 1.1 The Blind Spot Monitor is a system that has 2 functions;

- The BSM (Blind Spot Monitor) function  
Assists the driver while being passed by other vehicle
- The RCTA (Rear Cross Traffic Alert) function Assists the driver when reversing These functions use same sensors.



#### ① Outside rear view mirror indicators

BSM function:

When a vehicle is detected in the blind spot, the outside rear view mirror indicator lights up while the turn signal lever is not operated. And the outside rear view mirror indicator flashes when the turn signal lever is operated.

RCTA function:

When a vehicle approaching from the right or left rear of the vehicle is detected, a buzzer sounds from under the steering wheel.

#### ② Buzzer (RCTA function only)

When a vehicle approaching from the right or left rear of the vehicle is detected, a buzzer sounds from under the steering wheel.



# SECTION 2.0

## Turning the BSM function ON

### 2.1 Turning the BSM function ON

- ① Set the Ignition to ON by pressing the 'ENGINE START STOP' button twice.
- ② The outside rear view mirror indicators will light up.
- ③ Buzzer will produce a single Power ON beep warning.
- ④ The outside rear view mirror indicators will then turn OFF.
- ⑤ BSM is now in Standby mode.

- The outside rear view mirror indicators visibility When under strong sunlight,
- the outside rear view mirror indicator may be dif-ficult to see.

#### ■ Buzzer hearing

Buzzer sound may be difficult to hear over loud noises such as high audio volume.

#### ■ When there is an abnormality in the Blind Spot Monitor

Ice, snow, mud, etc., may be attached to the rear bumper around the sensors. The system should return to normal operation after removing the ice, snow, mud, etc. from the rear bumper.

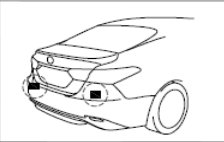
Additionally, the sensors may not operate normally when driving in extremely hot or cold environments.

**⚠ WARNING**

■ **Handling the radar sensor**  
 One Blind Spot Monitor sensor is installed inside the left and right side of the vehicle rear bumper respectively. Observe the following to ensure the Blind Spot Monitor can function correctly.

- Keep the sensor and its surrounding area on the bumper clean at all times. If a sensor or its surrounding area on the rear bumper is dirty or covered with mud, the Blind Spot Monitor may not operate.

In this situation, clear off the dirt or mud and drive the vehicle with the operation conditions of the BSM function satisfied for approximately 60 minutes. If the BSM is still not functioning, have the vehicle inspected by your Toyota dealer



- Do not subject a sensor or its surrounding area on the rear bumper to a strong impact.  
 If a sensor is moved even slightly off position, the system may malfunction and vehicles may not be detected correctly.  
 In the following situations, have your vehicle inspected by your Toyota dealer.
  - A sensor or its surrounding area is subject to a strong impact.
  - If the surrounding area of a sensor is scratched or dented, or part of them has become disconnected.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor or surrounding area on the bumper.
- Do not modify the sensor or surrounding area on the bumper.
- Do not paint the rear bumper any color other than an official Toyota color.

Figure 2.1



# SECTION 3.0

## BSM function

### 3.1 BSM function

The BSM function uses radar sensors to detect vehicles that are traveling in an adjacent lane in the area that is usually not reflected in the outside rear view mirror (the blind spot), and advises the driver of the vehicles existence via the outside rear view mirror indicator.

#### 3.1.1 BSM function detection areas

The areas that vehicles can be detected in are outlined below. The range of the detection area

- ① Approximately 3 m (9.8 ft.) from the side of the vehicle
- ② Approximately 5 m (16.4 ft.) from the rear bumper

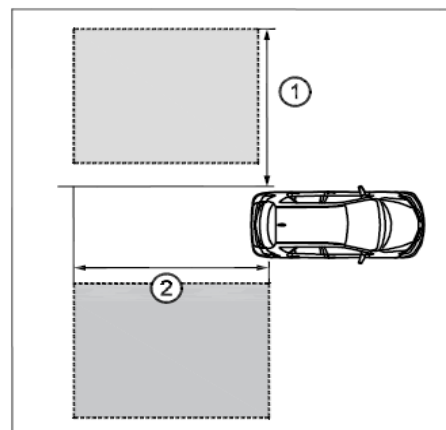
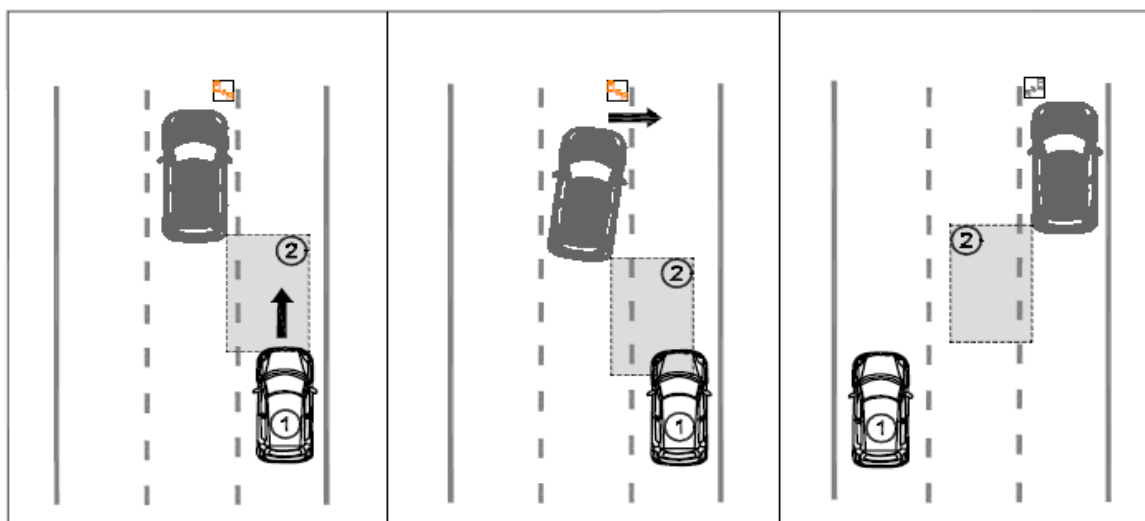


Figure 3.1.1



① Approaching vehicles

② Detection areas



## SECTION 3.0

### BSM function

#### **WARNING**

##### ■ Cautions regarding the use of the system

The driver is solely responsible for safe driving. Always drive safely, taking care to observe your surroundings.

The BSM function is a supplementary function which alerts the driver that a vehicle is present in the blind spot.

Do not overly rely on the BSM function.

The function cannot judge if it is safe to change lanes, therefore over reliance could cause an accident resulting in death or serious injury.

According to conditions, the system may not function correctly. Therefore the driver's own visual confirmation of safety is necessary.

#### 3.1.2 The BSM function is operational when

- Vehicle speed is greater than approximately 16 km/h (10 mph).
- The BSM function will detect a vehicle when
- A vehicle in an adjacent lane overtakes your vehicle.
- Another vehicle enters the detection area when it changes lanes.
- Conditions under which the BSM will not detect a vehicle

#### 3.1.3 The BSM function is not designed to detect the following types of vehicles and/or objects:

- Small motorcycles, bicycles, pedestrians, etc.\*
- Vehicles traveling in the opposite direction
- Guardrails, walls, signs, parked vehicles and similar stationary objects\*
- Following vehicles that are in the same lane\*
- Vehicles driving 2 lanes across from your vehicle\*
- Conditions under which the BSM may not function correctly
- The BSM function may not detect vehicles correctly in the following conditions:
- When the sensor is misaligned due to a strong impact to the sensor or its surrounding area



## SECTION 3.0

### BSM function

- During bad weather such as heavy rain, fog, storm, etc.
- When dirt or mud, etc., is attached to the rear bumper
- When driving on a road surface that is wet due to rain, standing water, etc.
- When there is a significant difference in speed between your vehicle and the vehicle that enters the detection area
- When a vehicle is in the detection area from a stop and remains in the detection area as your vehicle accelerates
- When driving up or down consecutive steep inclines, such as hills, a dip in the road, etc.
- When driving on roads with sharp bends, consecutive curves, or uneven surfaces
- When multiple vehicles approach with only a small gap between each vehicle
- When vehicle lanes are wide, and the vehicle in the next lane is too far away from your vehicle
- When the vehicle that enters the detection area is traveling at about the same speed as your vehicle
- When there is a significant difference in height between your vehicle and the vehicle that enters the detection area

#### **3.1.4 Instances of the BSM function unnecessarily detecting a vehicle and/or object may increase under the following conditions:**

- When the sensor is misaligned due to a strong impact to the sensor or its surrounding area
- When there is only a short distance between your vehicle and a guardrail, wall, etc.
- When there is only a short distance between your vehicle and a following vehicle
- When vehicle lanes are narrow and a vehicle driving 2 lanes across from your vehicle enters the detection area
- When items such as a bicycle carrier are installed on the rear of the vehicle

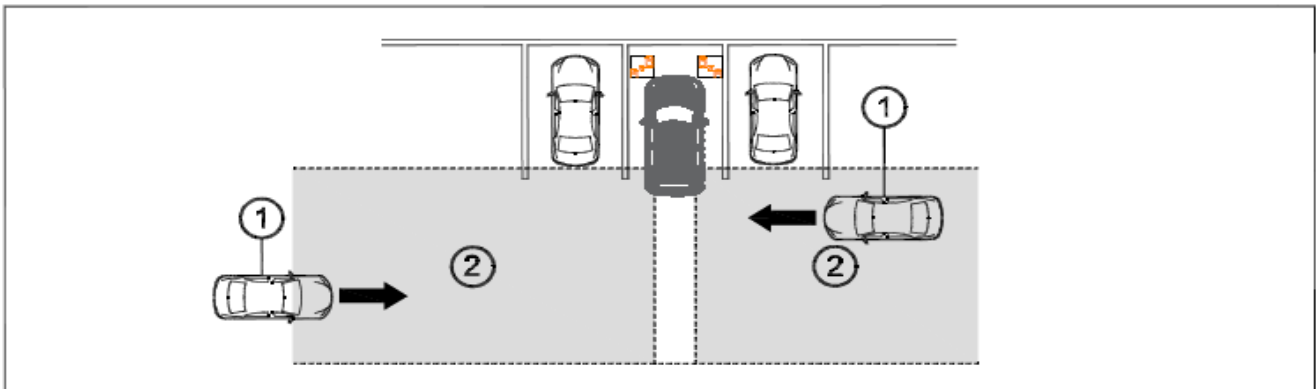


# SECTION 4.0

## RCTA function

### 4.1 RCTA function

The RCTA functions when your vehicle is in reverse. It can detect other vehicles approaching from the right or left rear of the vehicle. It uses radar sensors to alert the driver of the other vehicle's existence through flashing the outside rear view mirror indicators and sounding a buzzer.



① Approaching vehicles

② Detection areas

Figure 4.1



### WARNING

■ Cautions regarding the use of the system

The driver is solely responsible for safe driving. Always drive safely, taking care to observe your surroundings.

The RCTA function is only an assist and is not a replacement for careful driving. Driver must be careful when reversing up, even when using RCTA function. The driver's own visual confirmation of behind you and your vehicle is necessary and be sure there are no pedestrians, other vehicles, etc., before backing up. Failure to do so could cause death or serious injury.

According to conditions, the system may not function correctly. Therefore the driver's own visual confirmation of safety is necessary.





## SECTION 4.0

### RCTA function

#### 4.2 The RCTA function is operational when

- The shift lever is in R.
- Vehicle speed is less than approximately 5 km/h (3 mph).
- Approaching vehicle speed is between approximately 10 km/h (6 mph) and 30 km/h (19 mph).
- Conditions under which the RCTA function will not detect a vehicle
  - The RCTA function is not designed to detect the following types of vehicles and/or objects:
    - Small motorcycles, bicycles, pedestrians, etc.\*
    - Vehicles approaching from directly behind
    - Guardrails, walls, signs, parked vehicles and similar stationary objects\*
    - Vehicles moving away from your vehicle
    - Vehicles approaching from the parking spaces next to your vehicle\*
    - Vehicles backing up in the parking space next to your vehicle\*

\*: Depending on the conditions, detection of a vehicle and/or object may occur

#### 4.3 Conditions under which the RCTA may not function correctly

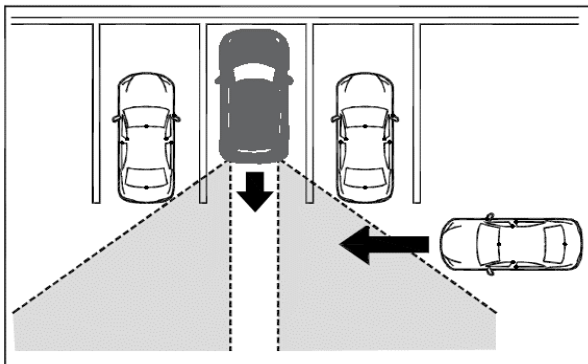
- The RCTA function may not detect vehicles correctly in the following conditions:
  - When the sensor is misaligned due to a strong impact to the sensor or its surrounding area
  - When dirt or mud etc. is attached to the rear bumper
  - During bad weather such as heavy rain, fog, storm, etc.
  - When multiple vehicles approach continuously
  - Shallow angle parking



# SECTION 4.0

## RCTA function

- When dirt or mud etc. is attached to the rear bumper
- During bad weather such as heavy rain, fog, storm, etc.
- When multiple vehicles approach continuously
- Shallow angle parking
- When a vehicle is approaching at high speed
- When parking on a steep incline, such as hills, a dip in the road, etc.
- Directly after the RCTA function is turned on
- Directly after the engine is started with the RCTA function on.
- Vehicles that the sensors cannot detect because of obstacles



- When items such as a bicycle carrier are installed on the rear of the vehicle
- Instances of the RCTA function unnecessarily detecting a vehicle and/or object may increase in the following situations:

- When a vehicle passes by the side of your vehicle
- When the parking space faces a street and vehicles are being driven on the street
- When the distance between your vehicle and metal objects, such as a guardrail, wall, sign, or parked vehicle, which may reflect electrical waves toward the rear of the vehicle, is short

