

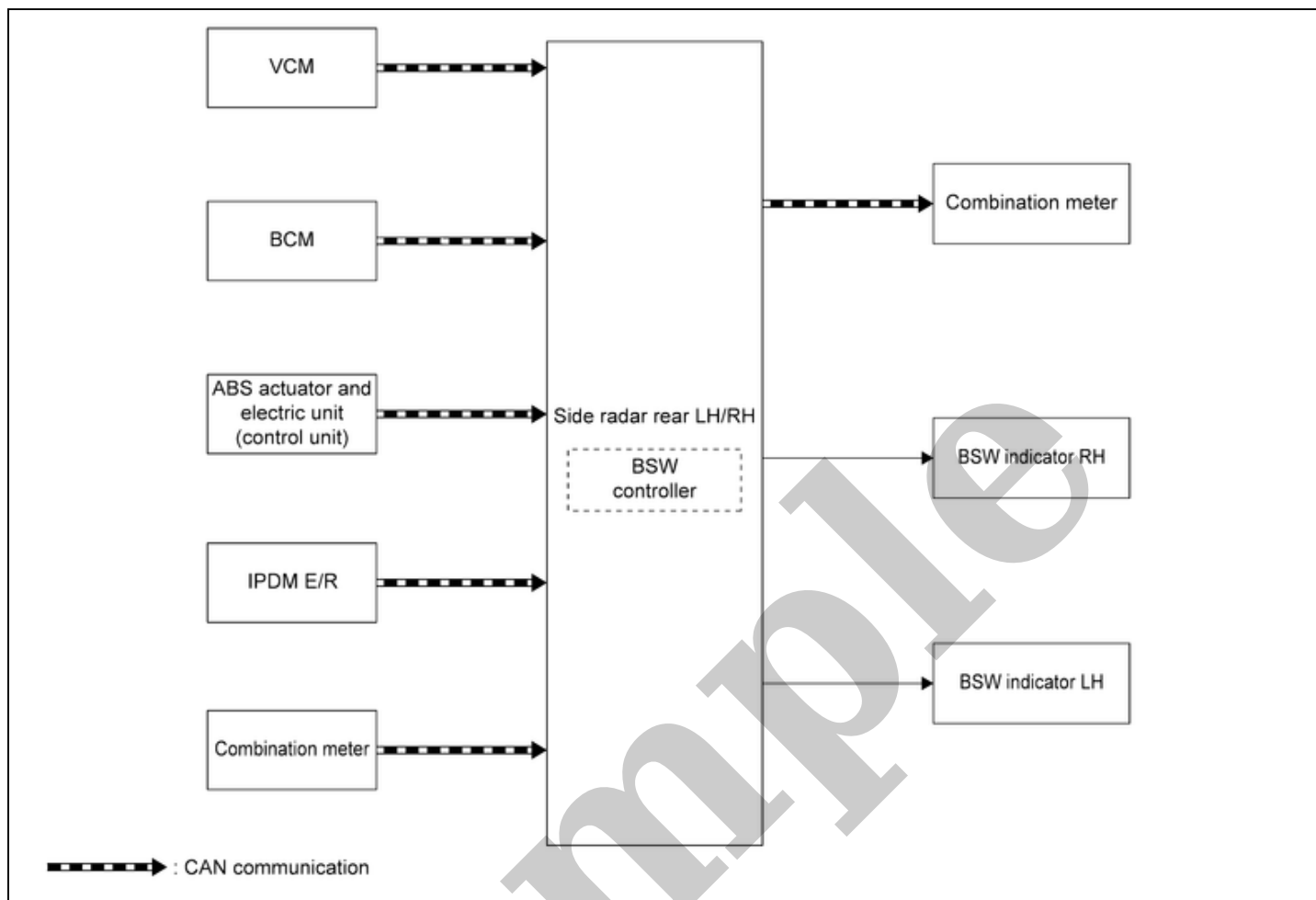
# Your Ultimate Source for OEM Repair Manuals

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## 2021 NISSAN Grand Livina Service and Repair Manual

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## SYSTEM DIAGRAM



SIEMD-7109449-01-000425403

Component	Description
BCM	<a href="#">System Description</a>
ABS actuator and electric unit (control unit)	<a href="#">Component Description</a>
VCM	<a href="#">Component Description</a>
IPDM E/R	<a href="#">System Description</a>
Combination meter	<a href="#">Combination Meter</a>
Side radar rear LH/RH	<a href="#">Component Description</a>
BSW indicator LH, RH	<a href="#">BSW Indicator LH/RH</a>

## SIDE RADAR INPUT/OUTPUT SIGNAL ITEM

### Input Signal Item

Transmit unit	Signal name		Description
IPDM E/R	CAN communication	Shift position signal	Receives a select lever position
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels

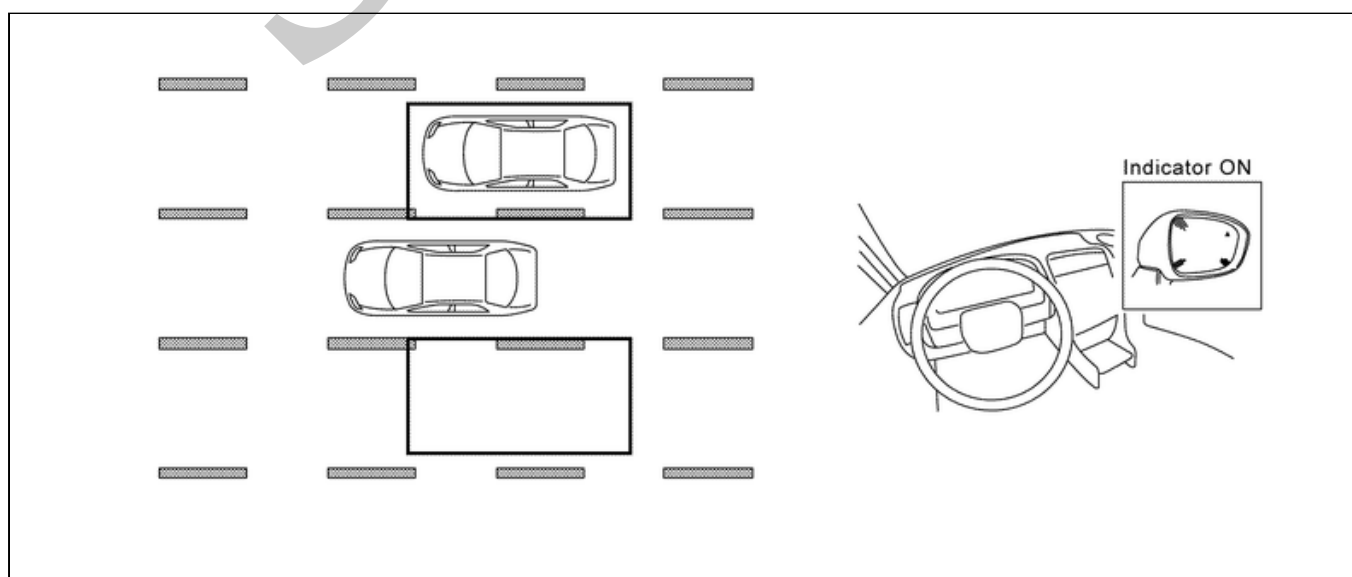
Transmit unit	Signal name		Description
BCM	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
		Dimmer signal	Receives ON/OFF state of dimmer signal
		READY status signal	Receives READY status
Combination meter	CAN communication	System selection signal	Receives a selection state of each item selected with the information display
VCM	CAN communication	Accelerator pedal position signal	Receives accelerator pedal position (angle)

## Output Signal Item

Reception unit	Signal name		Description
Combination meter	CAN communication	Meter display signal	Transmits a signal to display a state of the system on the information display
		Buzzer output signal	Transmits a signal to activate buzzer
BSW indicator LH, RH	BSW indicator signal		Transmits a BSW indicator signal to turn ON the BSW indicator
	BSW indicator dimmer signal		Transmits a BSW indicator dimmer signal to dimmer BSW indicator

## FUNCTION DESCRIPTION

- The Blind Spot Warning (BSW) system can help alert the driver of other vehicles in adjacent lanes when changing lanes.
- The BSW system uses side radar installed near the rear bumper to detect vehicles in an adjacent lane.
- The side radar can detect vehicles on either side of vehicle within the detection zone shown as illustrated.
- This detection zone starts from the outside mirror of vehicle and extends approximately 10 ft (3.0 m) behind the rear bumper, and approximately 10 ft (3.0 m) sideways.
- The BSW system operates above approximately 32 km/h (20 MPH).
- If the side radar detects vehicles in the detection zone, the BSW indicator illuminates.



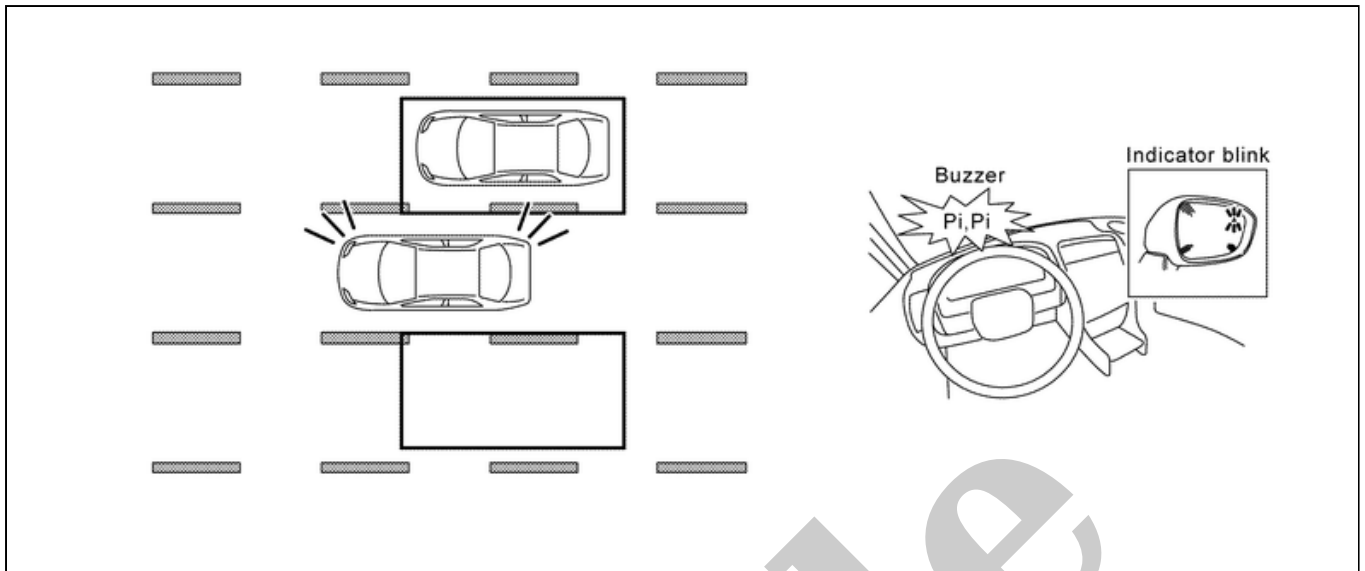
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- If the driver then activates the turn signal, a buzzer sounds twice and the BSW indicator blinks.



**NOTE:**

A buzzer sounds if the side radar have already detected vehicles when the driver activates the turn signal. If a vehicle comes into the detection zone after the driver activates the turn signal, then only the BSW indicator blinks and no buzzer sounds.



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## OPERATION DESCRIPTION

- Side radar enables BSW system.
- The side radar turns on the BSW system when the turned ON by information display.
- Side radar detects a vehicle in the adjacent lane.
- Side radar starts the control as follows, based on a vehicle detection signal, turn signal and dimmer signal transmitted from BCM via CAN communication:
  - Transmits BSW indicator signal and BSW indicator dimmer signal to BSW indicator.
  - Transmits a buzzer output signal to combination meter.

## OPERATION CONDITION

Side radar performs the control when the following conditions are satisfied.

- BSW system: ON
- Vehicle speed: Approximately 32 km/h (20 MPH) or more



### NOTE:

- **ON/OFF of BSW system is performed with the information display.**
- **After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 29 km/h (18 MPH)**
- **The BSW system may not function properly, depending on the situation. Refer to [Handling Precaution](#).**

## CANCEL CONDITION

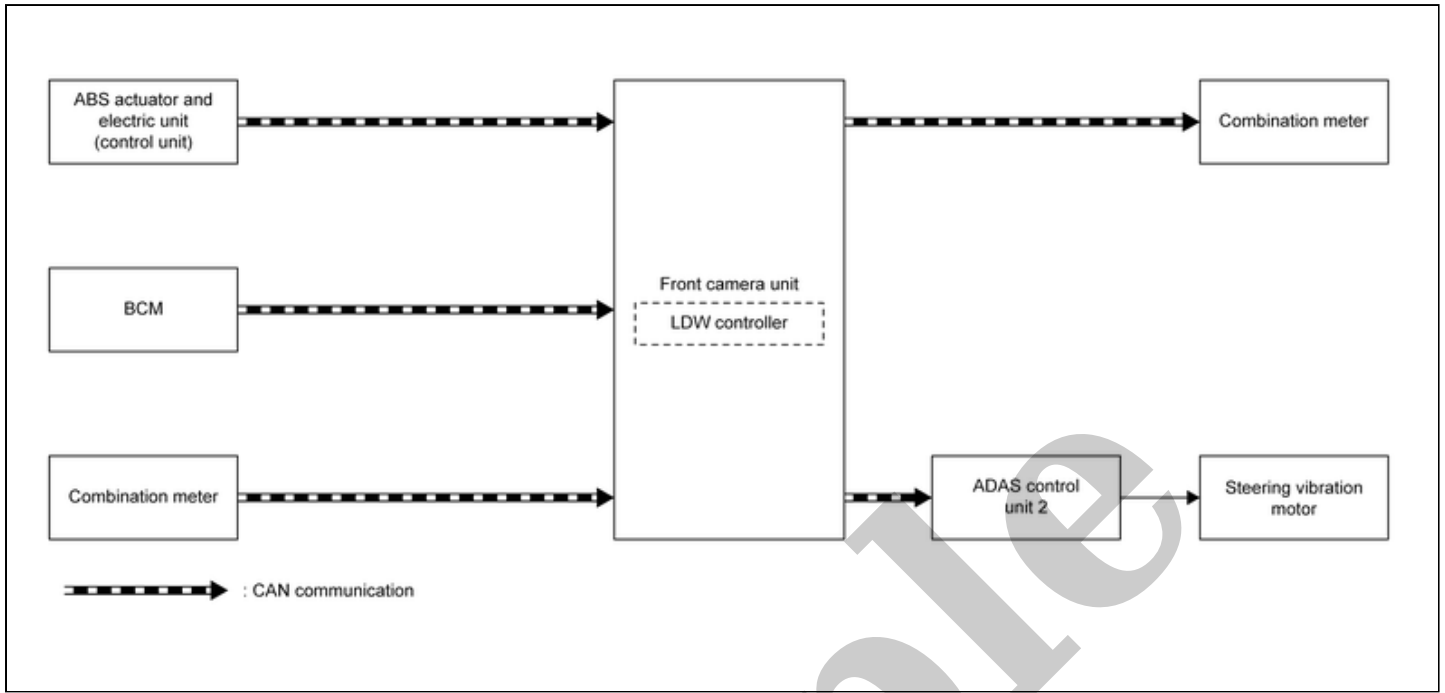
The side radar cancels the operation when the system is under any conditions of the operation cancellation condition.

- When the system malfunction occurs.

- When the area around the side radar is dirty.

Sample

## SYSTEM DIAGRAM



SIEMD-7109803-01-000425401

Component	Description
ABS actuator and electric unit (control unit)	<a href="#">Component Description</a>
BCM	<a href="#">System Description</a>
Front camera unit	<a href="#">Front Camera Unit</a>
ADAS control unit 2	<a href="#">ADAS Control Unit 2</a>
Combination meter	<a href="#">Combination Meter</a>
Steering vibration motor	<a href="#">Steering Vibration Motor</a>

## FRONT CAMERA UNIT INPUT/OUTPUT SIGNAL ITEM

### Input Signal Item

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives wheel speeds of four wheels
BCM	CAN communication	Turn indicator signal	Receives an operational state of the turn signal lamp and the hazard lamp
Combination meter	CAN communication	System selection signal	Receives a selection state of each item selected with the information display

### Output Signal Item

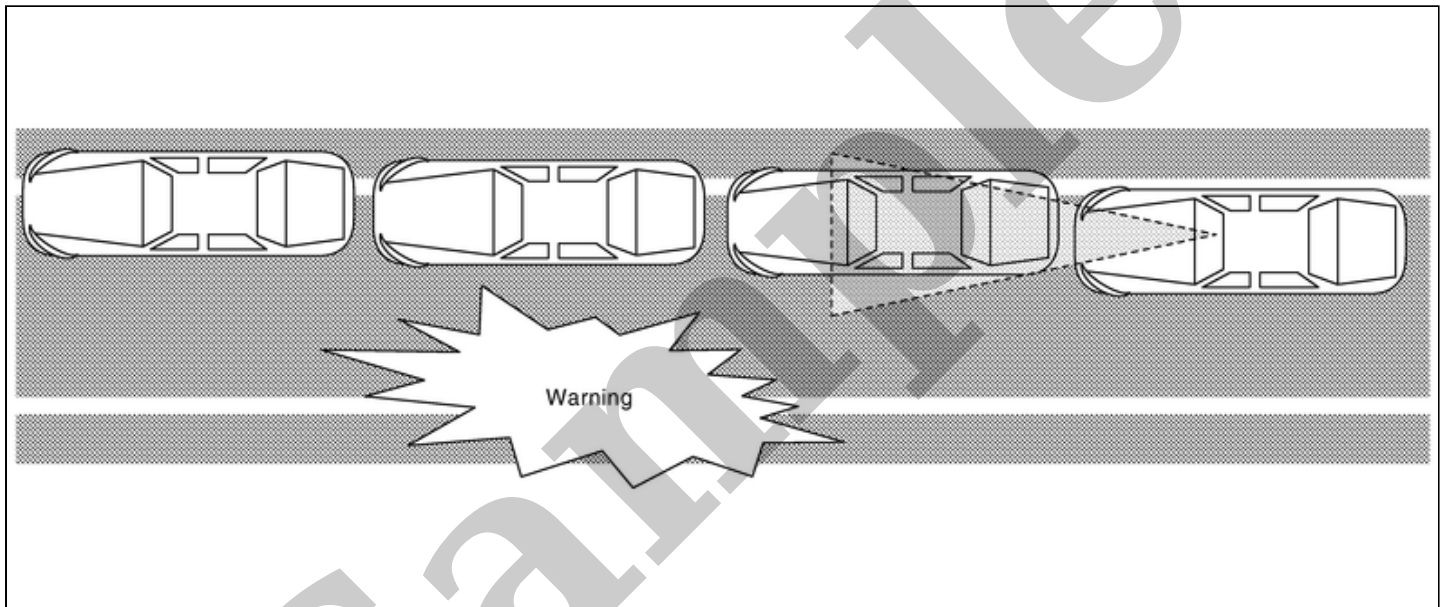
Reception unit	Signal name		Description
Combination meter	CAN communication	Meter display signal	Transmits a meter display signal to turn ON the LDW system display
		Buzzer output signal	Transmits a signal to activate buzzer

Reception unit	Signal name		Description
ADAS control unit 2	CAN communication	Motor operation signal	Activates a motor operation signal to activate the steering vibration motor.

## FUNCTION DESCRIPTION

- Lane Departure Warning (LDW) system provides a LDW function when the vehicle is driven at speeds of approximately 60 km/h (37 MPH) or more.
- When the vehicle approaches either the left or the right side of the traveling lane, a steering vibration activates and the LDW indicator (yellow) on the combination meter blinks to alert the driver.
- The warning does not occur during turn signal operation (Lane change side).
- The warning function stops when the vehicle returns inside of the lane markers.

## EXAMPLE



SIEMD-7109803-02-POIA0014GB

When the vehicle approaches the right lane marker, the driver is alerted by the steering vibration and the blinking of LDW warning display (yellow).

## OPERATION DESCRIPTION

- The front camera unit monitors lane markers of the traveling lane.
- When judging from a lane marker detection signal that the vehicle is approaching the lane marker, the ADAS control unit 2 controls the following item to alert the driver.
  - Activates the steering vibration motor by ADAS control unit 2.
  - Front camera unit transmits a meter display signal to combination meter via CAN communication and turns ON/OFF the LDW system display.

## OPERATION CONDITION

Front camera unit performs the control when the following conditions are satisfied.

- LDW system: ON
- Vehicle speed: approximately 60 km/h (37 MPH) or more
- Turn indicator signal: After 2 seconds or more from turned OFF



**NOTE:**

- LDW system ON/OFF can be set on the information display.
- After the operating conditions of warning are satisfied, the warning continues until the vehicle speed reaches approximately 55 km/h (34 MPH)
- The LDW system may not function properly, depending on the situation. Refer to [Handling Precaution](#).

## CANCEL CONDITION

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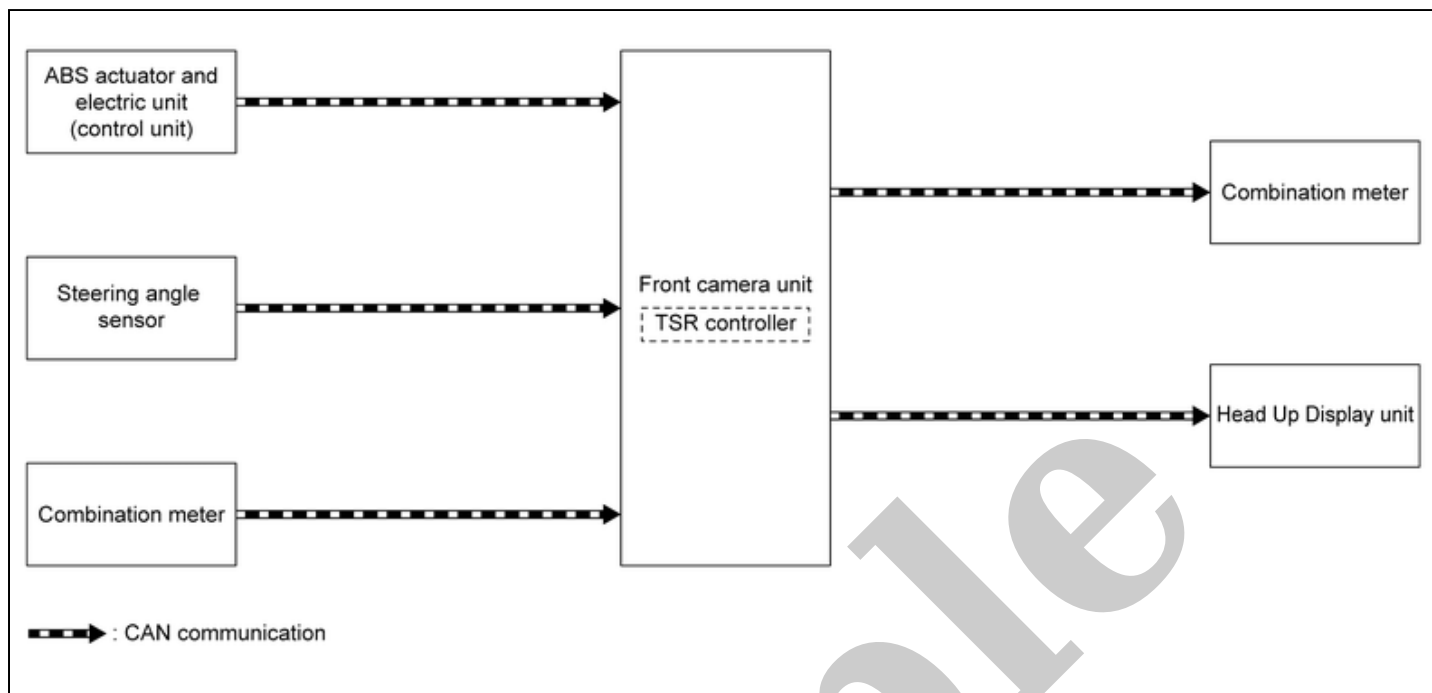
The front camera unit cancels the operation when the system is under any conditions of the operation cancellation condition.

- When the system malfunction occurs.
- When the front camera unit becomes high temperature [over approximately 40 °C (104 °F)].

Sample



## SYSTEM DIAGRAM



SIEMD-7109802-01-000310461

Component	Description
ABS actuator and electric unit (control unit)	<a href="#">Component Description</a>
Steering angle sensor	<a href="#">Component Description</a>
Combination meter	<a href="#">Combination Meter</a>
Front camera unit	<a href="#">Front Camera Unit</a>
Head Up Display unit	<a href="#">Head Up Display Unit</a>

## FRONT CAMERA INPUT/OUTPUT SIGNAL ITEM

### Input Signal Item

Transmit unit	Signal name		Description
ABS actuator and electric unit (control unit)	CAN communication	Vehicle speed signal (ABS)	Receives the wheel speed of the four wheels
Combination meter	CAN communication	System selection signal	Receives a selection state of each item selected with the combination meter
Steering angle sensor	CAN communication	Steering angle sensor signal	Receives the number of revolutions, turning direction of the steering wheel

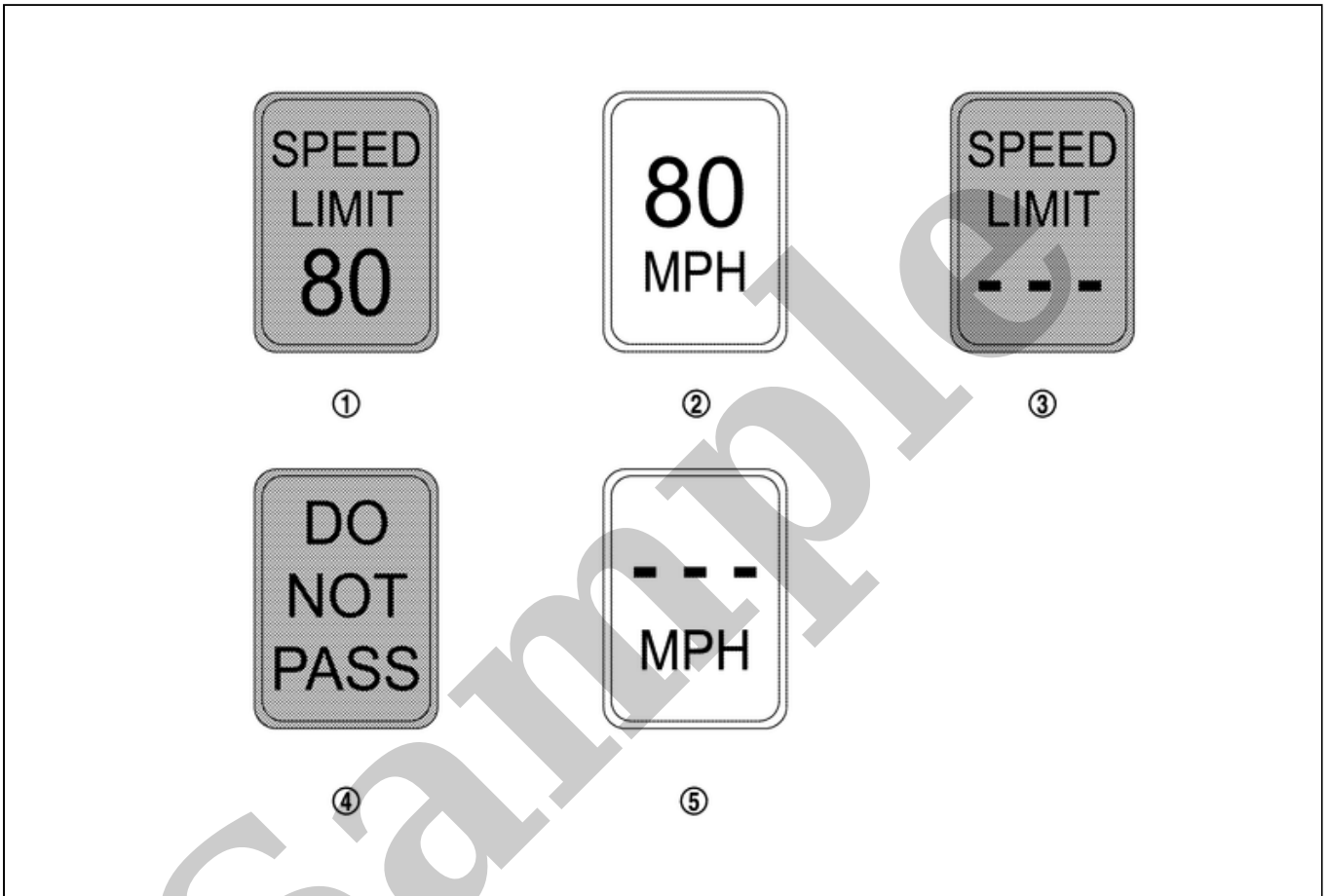
### Output Signal Item

Reception unit	Signal name		Description
Combination meter	CAN communication	Meter display signal	Transmits a signal to display a state of the system on the information display
		Buzzer output signal	Transmits a signal to activate buzzer

Reception unit	Signal name		Description
Head Up Display unit	CAN communication	Display signal	Transmits a signal to display a state of the system on the Head Up Display unit

## FUNCTION DESCRIPTION

- Displays the road conditions as identified by the front camera unit on the information display, and alerts the driver. Identifies the road sign information.
- The front camera unit detects road signs as described below and displays them on the information display.



SIEMD-7109802-02-000310462

①	Latest detected speed limit	②	Reduce speed limit caution (orange)	③	No speed limit information
④	No passing zone	⑤	Reduce speed limit caution (with no speed limit information) (orange)		

## EXAMPLE