

PARK ASSIST SYSTEM

id092000011000

Caution

- The parking assist system is a supplementary system which displays the conditions at the rear of the vehicle when reversing. Always directly confirm the safety of the surrounding area visually when reversing.

Outline

- When the vehicle is reversing, the rear mount camera installed to the liftgate displays the images at the rear of the vehicle in the audio unit display for verification of the presence of pedestrians and obstructions at the rear of the vehicle.

Function

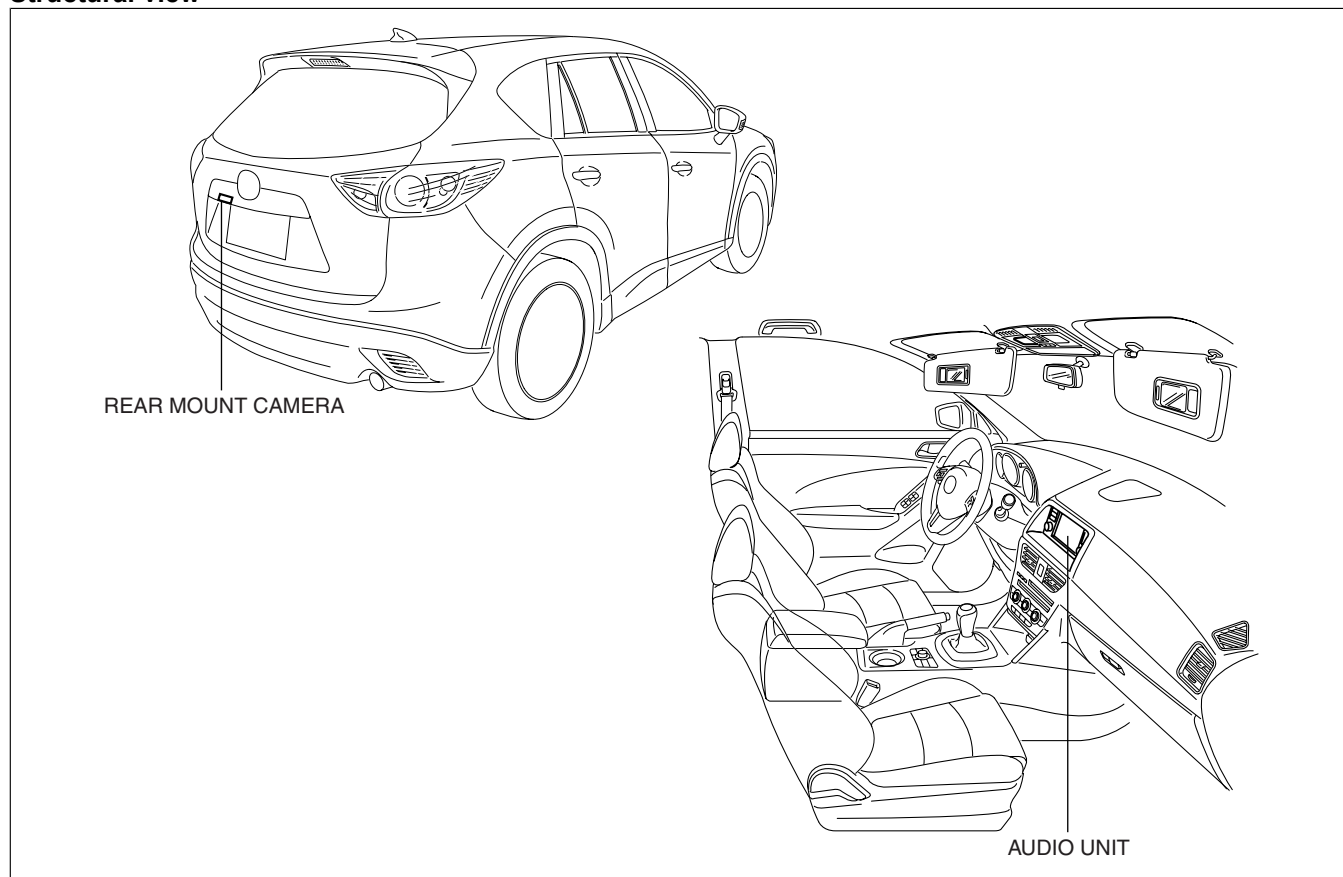
Fixed assist lines display type

- The images at the rear of the vehicle taken by rear mount camera and the guidelines are displayed in the audio unit display.

Predicted vehicle path assist lines display type

- Displays the predicted vehicle track relative to the movement of the steering wheel and the images at the rear of the vehicle taken by rear mount camera.

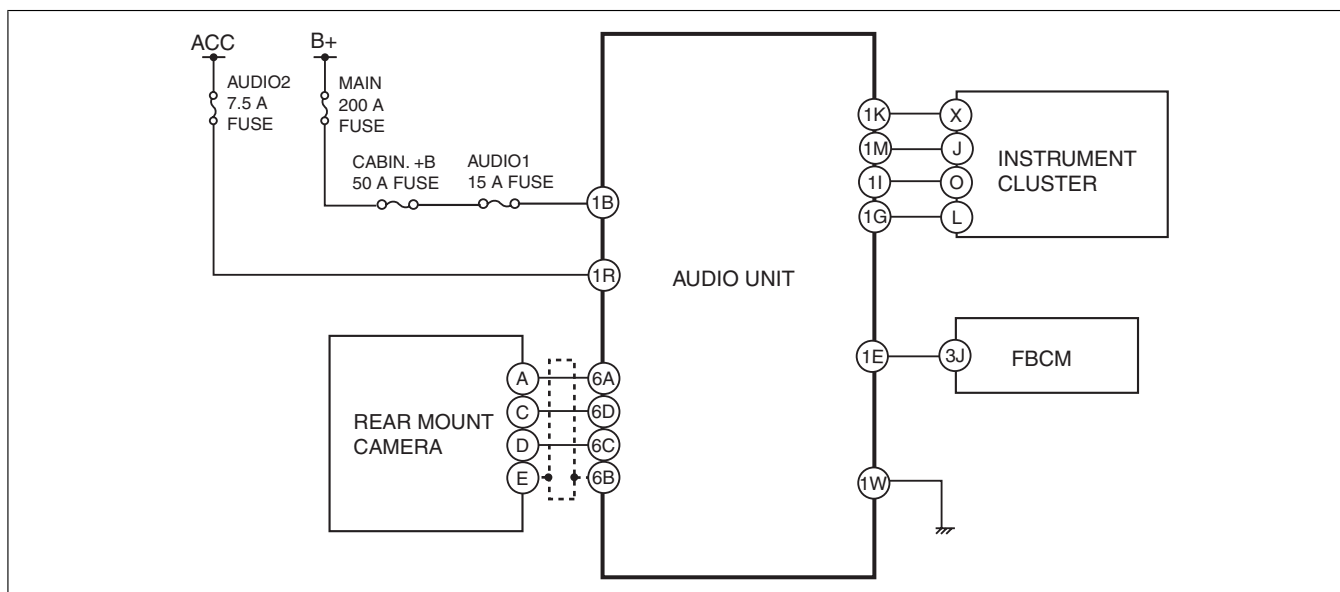
Structural view



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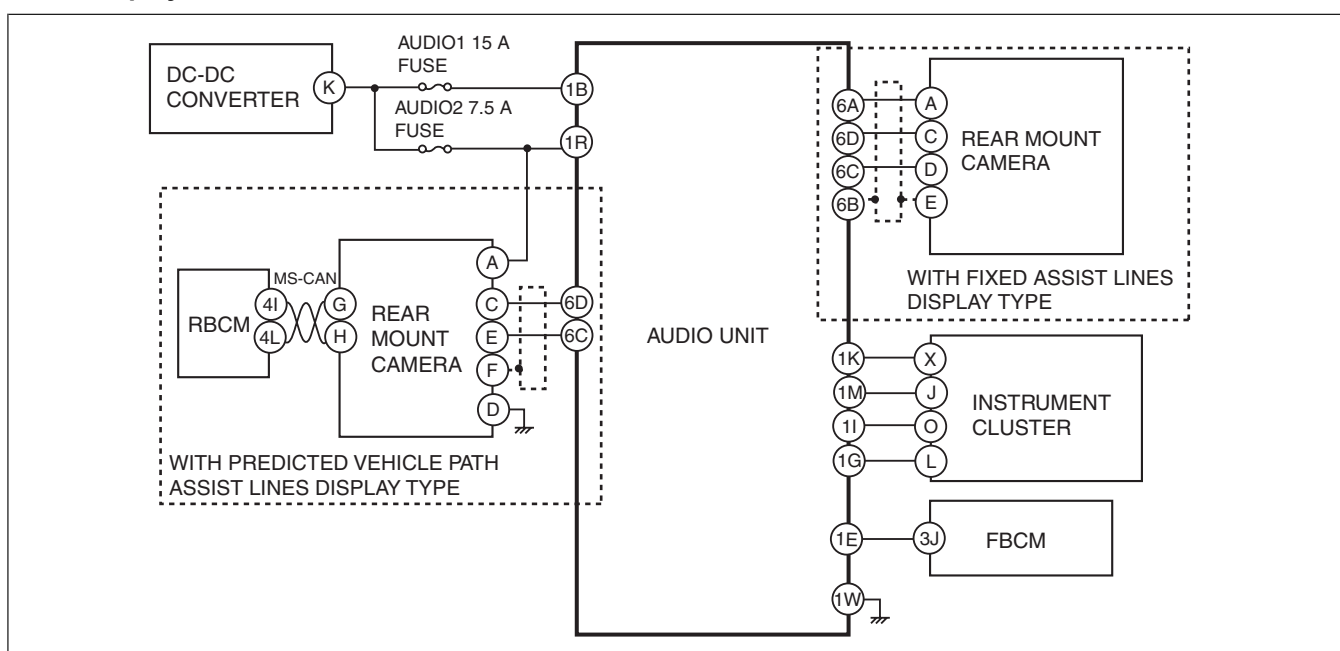
Block diagram

Without i-stop system



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With i-stop system

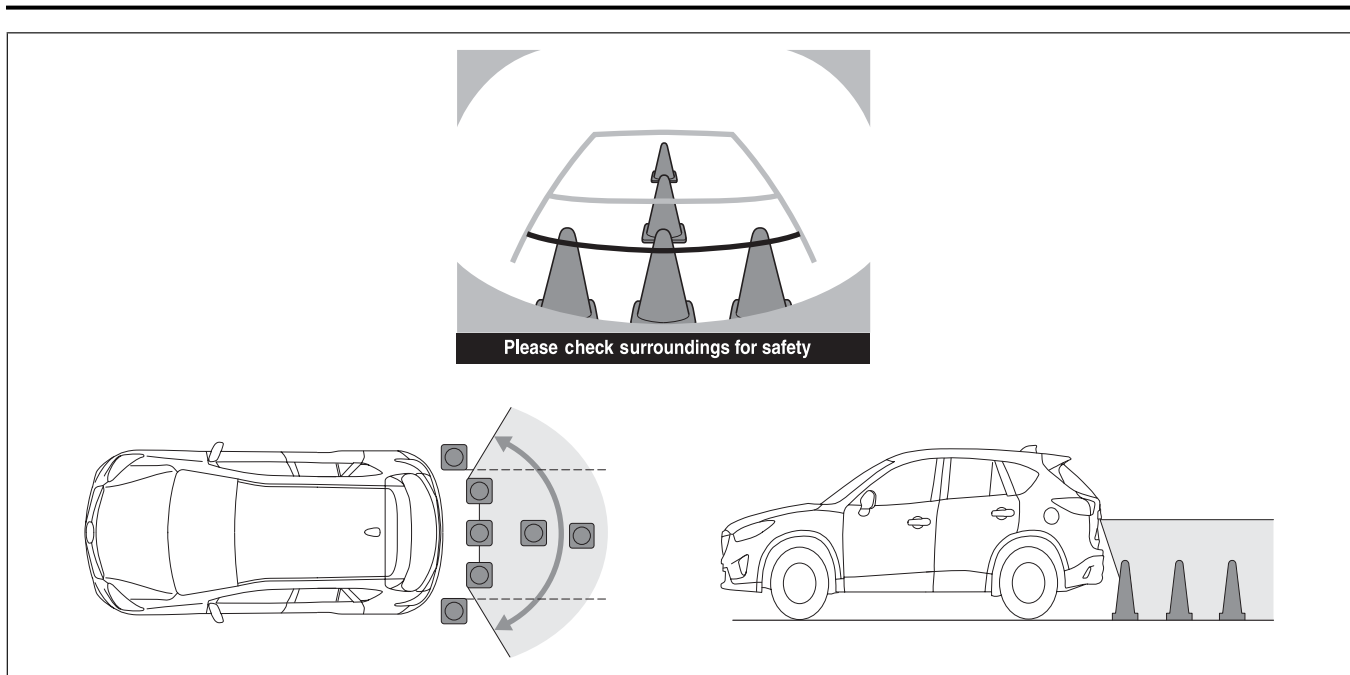


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Image range

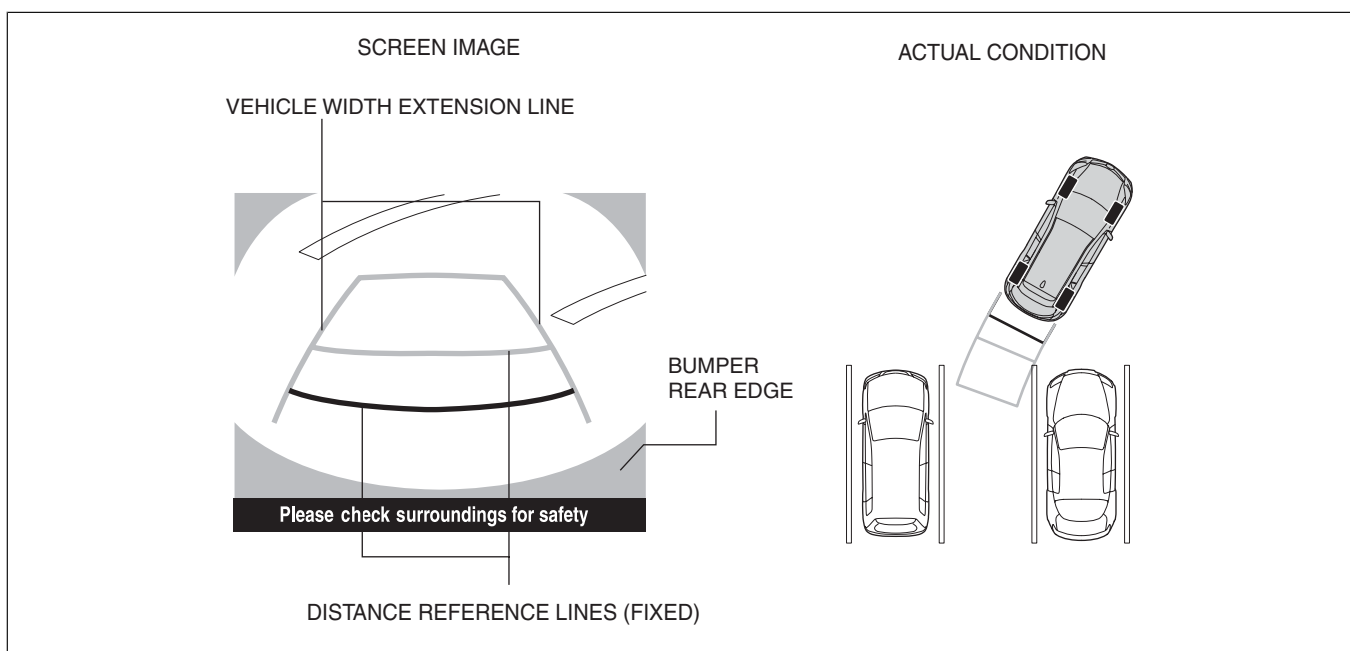
Note

- The image range may differ depending on the road surface conditions and the vehicle conditions. In addition, images near both sides of the rear bumper and below the rear bumper cannot be obtained.



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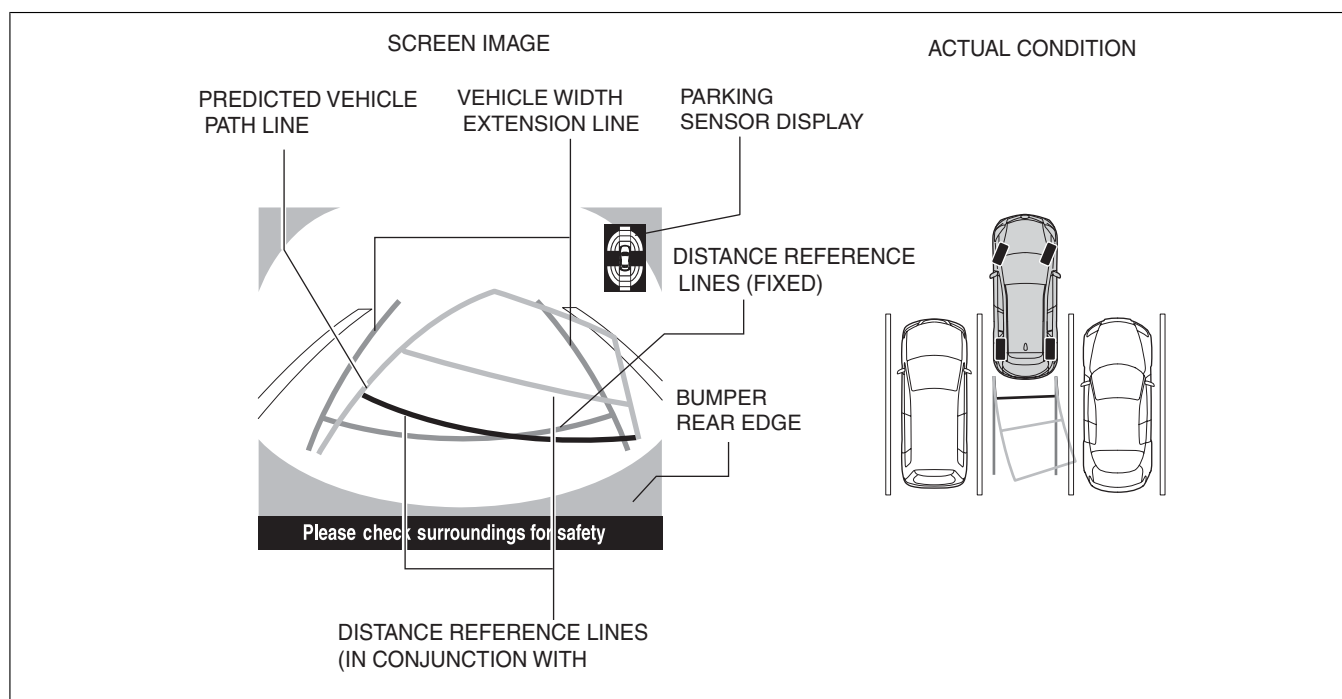
Rear view monitor screen Fixed assist lines display type



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Display item	Display line color	Function
Distance reference lines (fixed)	Red	<ul style="list-style-type: none"> Shows distance reference line 0.5 m from the rear of the rear bumper. Not in conjunction with steering operation.
	Yellow	<ul style="list-style-type: none"> Shows distance reference line 1.0 m from the rear of the rear bumper. Not in conjunction with steering operation.
	Yellow	<ul style="list-style-type: none"> Shows distance reference line 0.5 m from the rear of the rear bumper. Not in conjunction with steering operation.
Vehicle width extension line	Yellow	<ul style="list-style-type: none"> Vehicle width extension line. (Length: 2.7 m, width: vehicle width)

Predicted vehicle path assist lines display type



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Display item	Display line color	Function
Parking sensor display	—	<ul style="list-style-type: none"> Displays the location of the obstruction detected by the parking sensor.
Distance reference line (in conjunction with steering)	Red	<ul style="list-style-type: none"> Shows distance reference line 0.5 m from the rear of the rear bumper. Display changes in conjunction with the steering operation.
	Yellow	<ul style="list-style-type: none"> Shows distance reference line 1.0 m from the rear of the rear bumper. Display changes in conjunction with the steering operation.
	Yellow	<ul style="list-style-type: none"> Shows distance reference line 2.7 m from the rear of the rear bumper. Display changes in conjunction with the steering operation.
Distance reference lines (fixed)	Blue	<ul style="list-style-type: none"> Shows distance reference line 0.5 m from the rear of the rear bumper. Not in conjunction with steering operation.
Vehicle width extension line	Blue	<ul style="list-style-type: none"> Vehicle width extension line. (Length: 2.7 m, width: vehicle width)
Predicted vehicle path line	Yellow	<ul style="list-style-type: none"> Calculated vehicle path based on steering angle signal. (Length: 2.7 m, width: vehicle width) Predicted vehicle path which expresses the vehicle outermost circumference in conjunction with the steering operation.

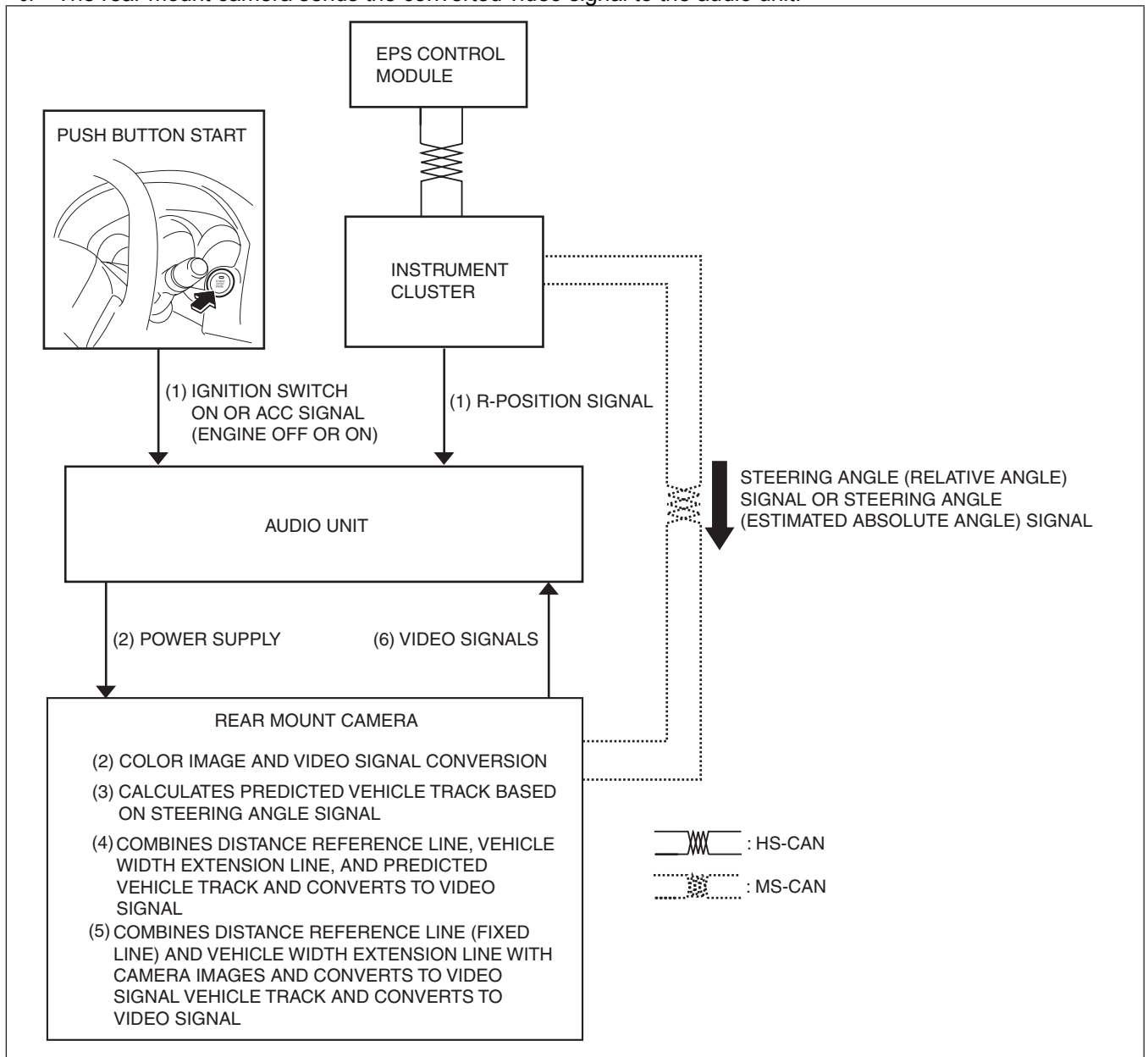
Operation

Caution

- The images shot by the rear mount camera differ depending on the actual conditions resulting from road surface conditions, the number of passengers, and cargo load, and even though it may appear that the vehicle will not come into contact with an object as seen in the image, it may actually come into contact with it. When reversing the vehicle, always verify the surroundings visually.

- When the ignition is switched to ACC or ON (engine off or on) and the shift lever is shifted to the R position, power is supplied to the rear mount camera from the audio unit.
- The rear mount camera produces color images of the conditions at the rear of the vehicle when power is supplied, and converts them to an image signal.
- The rear mount camera calculates the predicted vehicle track based on the steering angle (relative angle) signal and steering angle (estimated absolute angle) signal received from the electric power steering (EPS) control module. (with predicted vehicle path assist lines display type)
- The rear mount camera combines the distance reference line, vehicle width extension line, and calculated predicted vehicle track with the camera images and converts them to a video signal. (with predicted vehicle path assist lines display type)

5. The rear mount camera combines the distance reference line (fixed line) and vehicle width extension line with the camera images and converts them to a video signal. (with fixed assist lines display type)
6. The rear mount camera sends the converted video signal to the audio unit.



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Note

- It may be difficult to see the display under the following conditions; however, it does not indicate a malfunction:
 - When the temperature around the lens is high/low.
 - When the camera is wet such as on a rainy day or during period of high humidity.
 - When foreign material such as mud is stuck around the camera.
 - When the camera lens reflects sunlight or headlight beams.