FOREWORD

This manual has been prepared to provide information for the construction, operation and other technical details of SUBARU vehicles.
Read this manual thoroughly and make the most of it to give better service to your customers and improve your knowledge of vehicle maintenance.
For information on systems etc. that remains unchanged, refer to the 19MY new car information.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

SUBARU CORPORATION

1 GENERAL DESCRIPTION

CONTENTS

1.1 General Overview

1.1.1 Vehicle Composition List Table

Vehicle shape	Type	Destination code	Engine	Driving method	Grade	Transmission
Forester	SK	U5	2.5 L DOHC NA	AWD	2.5i EyeSight	CVT
		C4			2.5i Plus	
		U5, C5			2.5i Plus EyeSight	
		U5, C5			2.5i-Premium EyeSight base	
		U5, C5, C4			2.5i-Premium EyeSight	
		U5			2.5i-Sport EyeSight base	
		U5, C5, C4			2.5i-Sport EyeSight	
		U5			2.5i-Limited EyeSight base	
		U5, C5, C4			2.5i-Limited EyeSight	
		U5, C5, C4			2.5i-Touring EyeSight	

1.1.2 Vehicle Type Classification Symbol

VIN

Display example:]JF2SK##C#LH######[

The starting and ending brackets ( ] [ ) are stop marks.

#: Differs depending on the vehicle model.

Digits	Meaning	Details
1 to 3	Vehicle classification	JF2: MPV manufactured by SUBARU CORPORATION
4	Car line	S: FORESTER
5	Body classification	K: Wagon
6	Displacement class	A : 2.5 L NA U5 4 CYLINDERS GASOLINE 182HP D : 2.5 L NA C4 4 CYLINDERS GASOLINE 182HP E : 2.5 L NA C5 4 CYLINDERS GASOLINE 182HP
7	Grade	A: Base, EyeSight B: Base Plus C: Base Plus, Key less Access D: Base Plus, EyeSight E: Base Plus, EyeSight, Key less Access F: Premium Base, EyeSight, Key less Access G: Premium Base, EyeSight H: Premium Base, EyeSight, NAVI J: Premium, EyeSight, Key less Access K: Premium, EyeSight L: Sport Base, EyeSight, Key less Access M: Sport, EyeSight, Key less Access N: Sport, EyeSight, NAVI, Key less Access P: Sport, EyeSight, NAVI (H/K), Key less Access R: Sport, EyeSight, H/K, Key less Access S: Limited Base, EyeSight, Key less Access T: Limited Base, EyeSight, NAVI (H/K) U: Limited, EyeSight, NAVI (H/K), Key less Access V: Limited, EyeSight, Key less Access W: Limited, EyeSight, H/K, Key less Access X: Touring, EyeSight, NAVI (H/K), Key less Access Y: Touring, EyeSight, H/K, Key less Access
8	Restraints and GVWR class	C: Manual belts + dual airbag + side airbag for seat bag + curtain airbag for roof + driver's knee airbag, class C (GVWR 4,001 to 5,000 lb)
9	Check digit	X or 0 to 9
10	Model year	L: 2020MY
11	Transmission type	H: Full-time AWD CVT (Yajima plant, Gunma)
12 to 17	Serial number	400001 to 699999

Vehicle type classification

Display example: SK9BY#L

#: Depends on the vehicle model.

Digits	Meaning	Details
1	Series	S: Forester
2	Body type	K: Wagon
3	Total engine displacement/Drive system	9: 2.5 L AWD NA
4	Model year	B: 2020MY
5	Destination	Y: for U.S., Canada, and Mexico
6	Grade	1: 2.5i EyeSight 3: 2.5i + 4: 2.5i + EyeSight 6: 2.5i Premium EyeSight 7: 2.5i Premium EyeSight base 9: 2.5i Sport EyeSight A: 2.5i Sport EyeSight base D: 2.5i Limited EyeSight E: 2.5i Limited EyeSight base H: 2.5i Touring EyeSight
7	Fuel feed system/Transmission	L: DI DOHC NA CVT

Engine

Display example: FB25DXZH##

#: Differs depending on the vehicle model.

Digits	Meaning	Details
1 to 2	Engine type symbol	FB: 4-cylinder gasoline
3 to 4	Displacement	25: 2.5 L
5	Valve train/fuel supply system/ steering wheel	D: DOHC DI NA (LH)
6	Exhaust regulations	X: North America (Tier 3/LEV III)
7	Intake/exhaust system	Z: Intake AVCS, exhaust AVCS, TGV, EGR
8	Mounted transmission	H: CVT
9 to 10	Detailed specifications	Used when ordering parts. For details, refer to the parts catalog.

Transmission

TR580DH###

#: Differs depending on the vehicle model.

Digits	Meaning	Details
1	Transmission symbol	T: Transmission
2	Basic transmission system	R: Full-time AWD CVT
3 to 4	Distance between pulley centers	58: Between pulley centers 6.22 in (158 mm)
5	Model series	0: CVT
6	Transmission basic specifications	D: With Auto Start-Stop, with CVTF cooler (with warmer function), without CVTF cooler (with air cooler)
7	Mounted engine	H: 2.5 L DOHC NA
8 to 10	Detailed specifications	Used when ordering parts. For details, refer to the parts catalog.

Rear differential

Identification	Reduction speed ratio	LSD
42	3.700	None

1.2 Major Changes

Chapter 5 WHEEL & TIRE
- ID registration of TPMS transmitter is automated.

Chapter 9 EXTERIOR
- LED light source is adopted for the license plate light.

Chapter 11 ENTERTAINMENT
- Infotainment system Gen.3.1 α is adopted.
- Time setting method is changed.
- USB hub reset function is adopted.
- Telematics system is adopted for C5.

Chapter 12 ADVANCED SAFETY SYSTEM
- Lane centering control and preceding vehicle follow-up steering control are adopted.

5 WHEEL & TIRE

CONTENTS

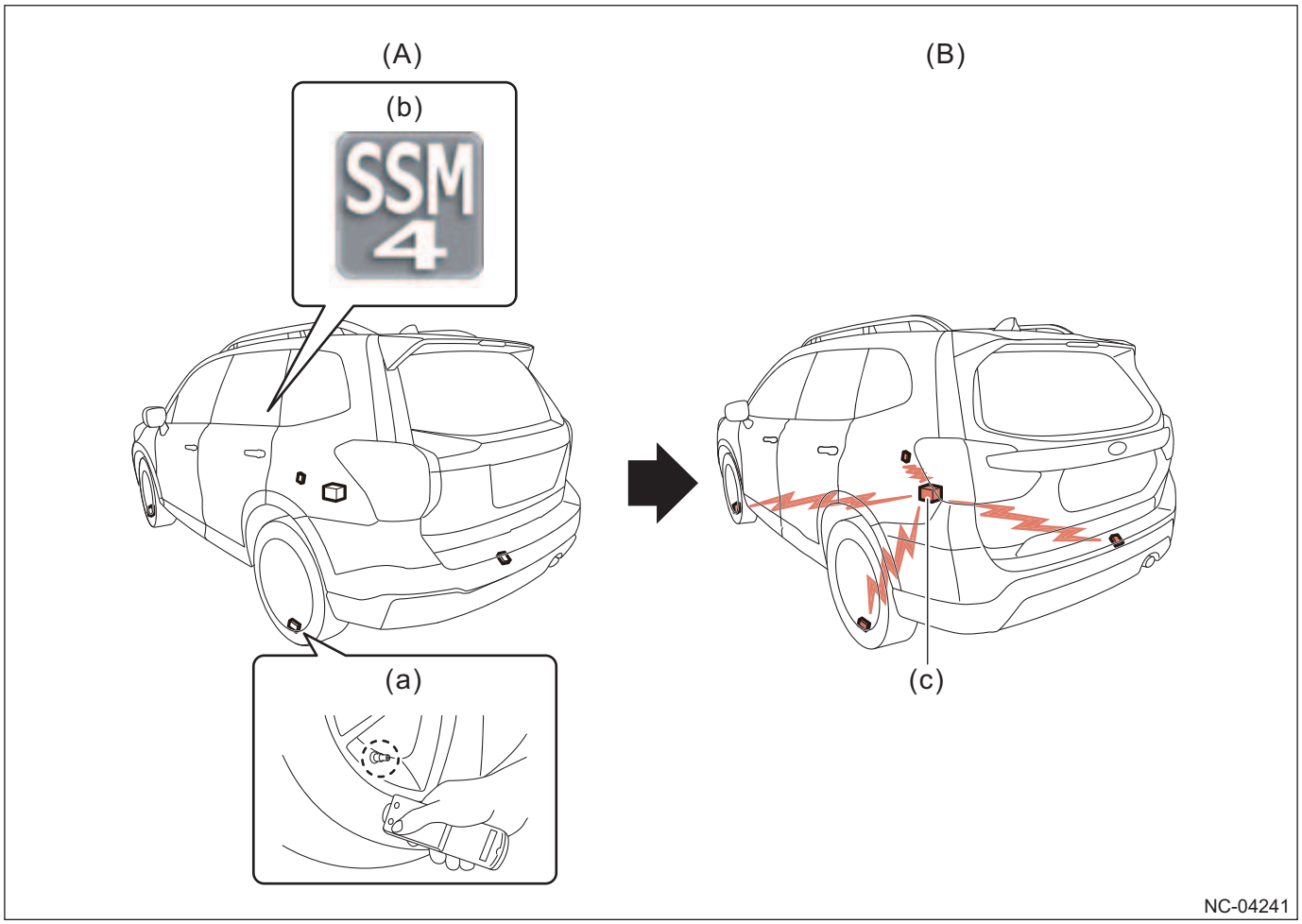
5.1 Tire Pressure Monitoring System (TPMS) (For Some Grades)

5.1.1 Overview

Registration of the transmitter IDs of the Tire Pressure Monitoring System (TPMS) is automated to improve the convenience when replacing tires.

5.1.2 Construction and Operation

A system that identifies the TPMS transmitters equipped on each wheel to register their IDs automatically is adopted. ID registration of the TPMS transmitters using a dedicated tool is no longer necessary. This eliminates the need to visit a dealer for TPMS setting required such as when replacing the tires with snow tires and improves convenience.



(A) Existing model vehicle

(B) New model vehicle

(a) Sending IDs using transmitter registration tool

(b) Registering IDs using Subaru Select Monitor

(c) Automatic ID registration

9 EXTERIOR

CONTENTS

9.1 Lighting System

9.1.1 Overview

LED is adopted for the license plate light.

9.1.2 Component

Component details

License plate light

Adoption of LED for the license plate light reduces power consumption and produces an advanced feeling with white illumination of LED.

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No.	Name	Capacity and wattage	Type
(a)	License plate light (LED)	13.5 V - 0.4 W (LED)	*1

**1 : Non-disassembly type*

11 ENTERTAINMENT

CONTENTS

11.1 Audio/Navigation and Speaker System

11.1.1 Overview

The Gen.3.1 α Infotainment System is adopted for the audio/navigation system.

The items enhanced on Gen.3.1 α are as follows.

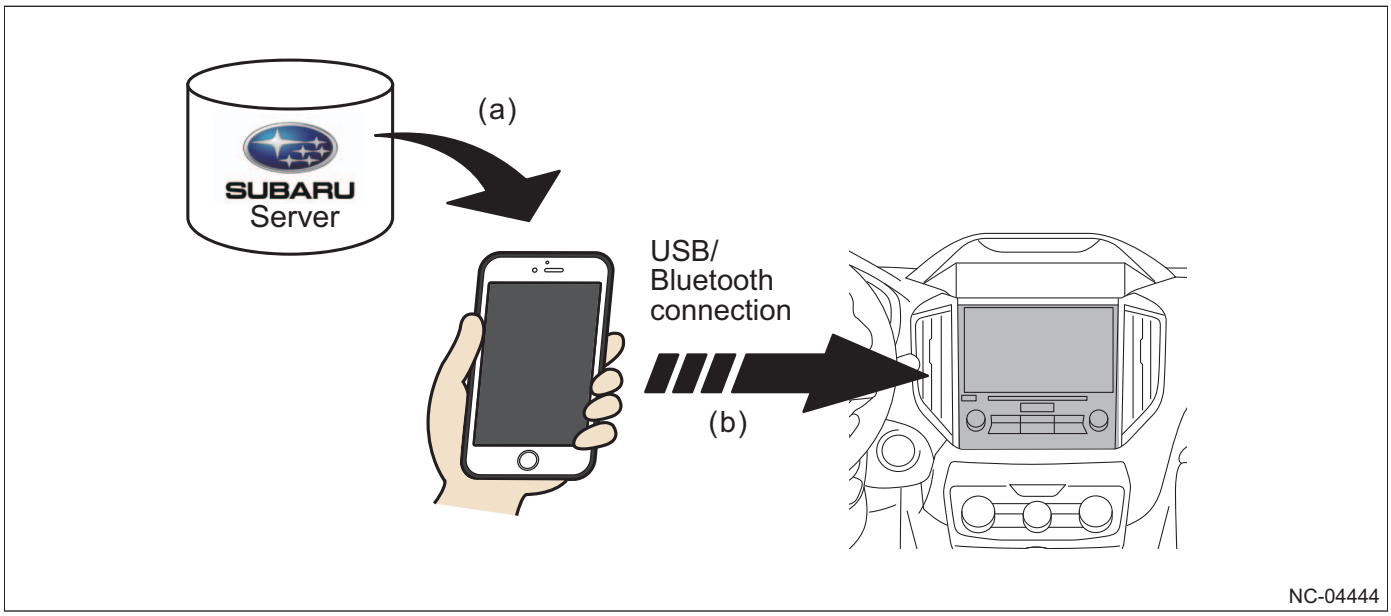
- The map can be updated wirelessly using a smartphone application.
- Vehicle time setting can be changed on the head unit.
- The auto reset function is added to the USB hub.
- Measures are taken to prevent USB device music source from switching to radio when ACC is OFF.

11.1.2 Construction and Operation

Gen.3.1 α audio/navigation system

Map update Over The Air (MOTA)

While map data can be updated only via Wi-Fi connection in the existing model vehicle, the new model vehicle downloads using an app on a smartphone to upload the map data by connecting the smartphone and the head unit. This improves convenience.



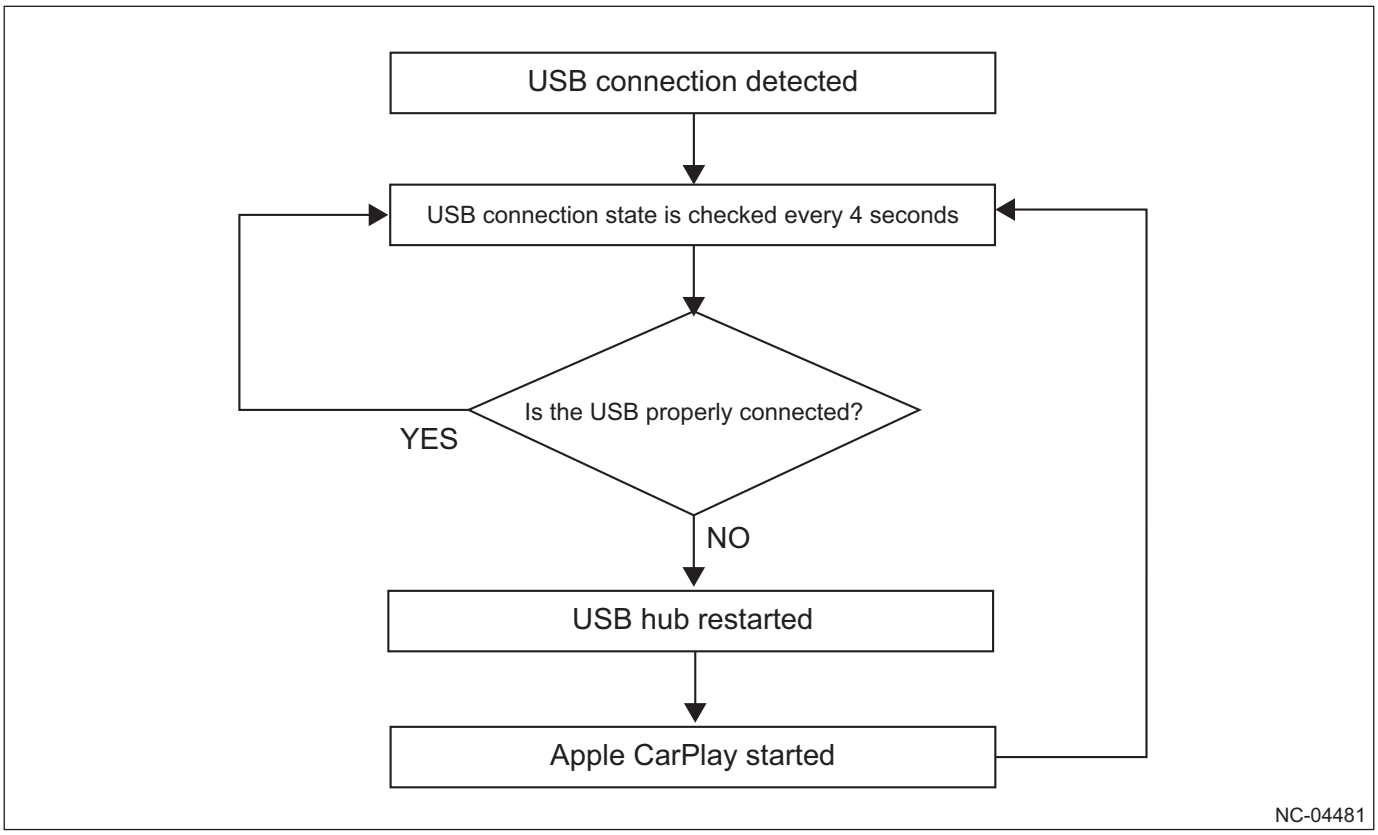
(a) Map data is downloaded to the smartphone from the server.

(b) Downloaded map data is transmitted from the smartphone to the head unit and the data is updated.

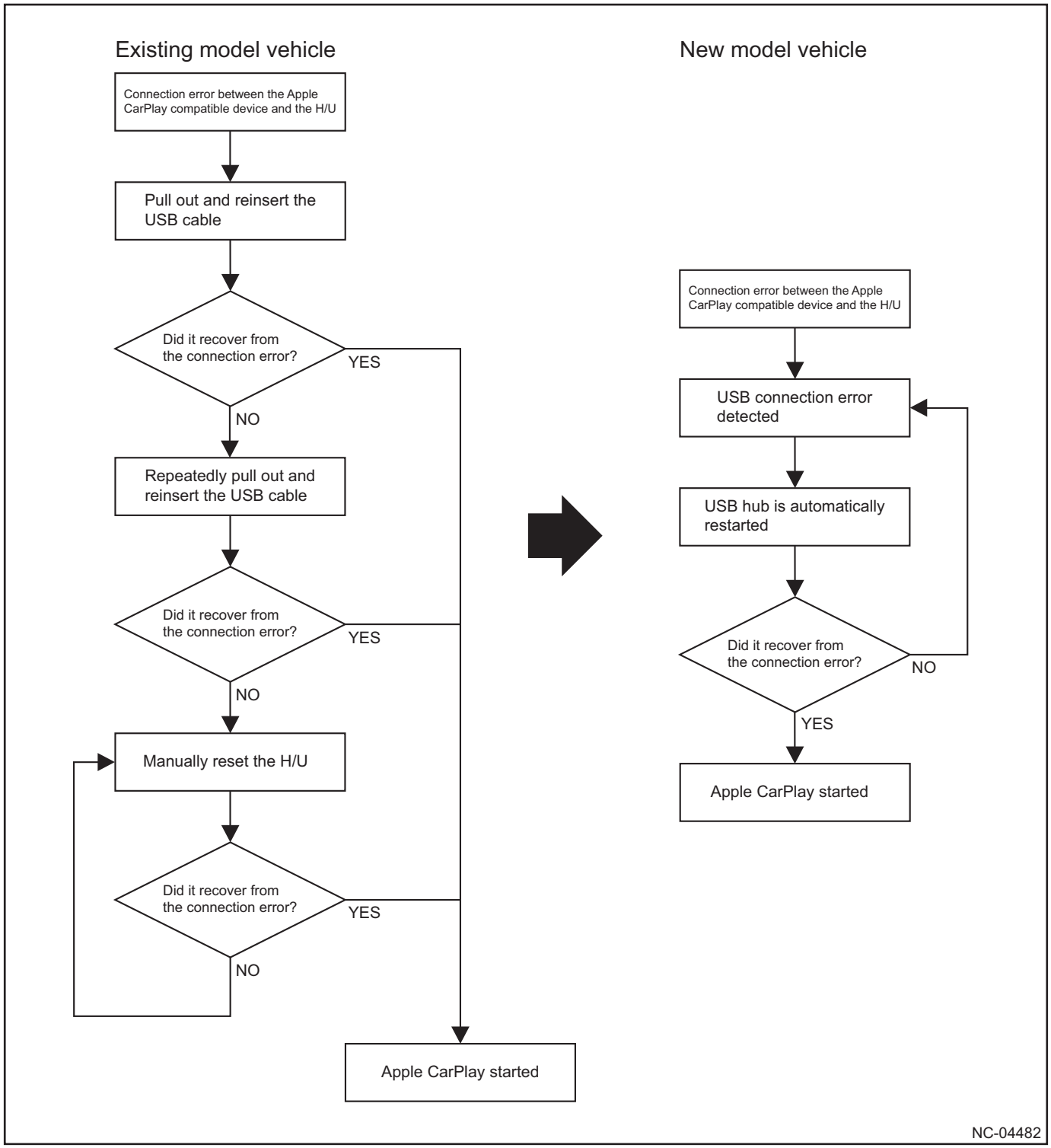
Connectivity for smartphone link

■ USB hub

The USB hub reset that checks the USB connection status every 4 seconds and automatically restarts the USB hub when a connection error is detected is adopted for the head unit.

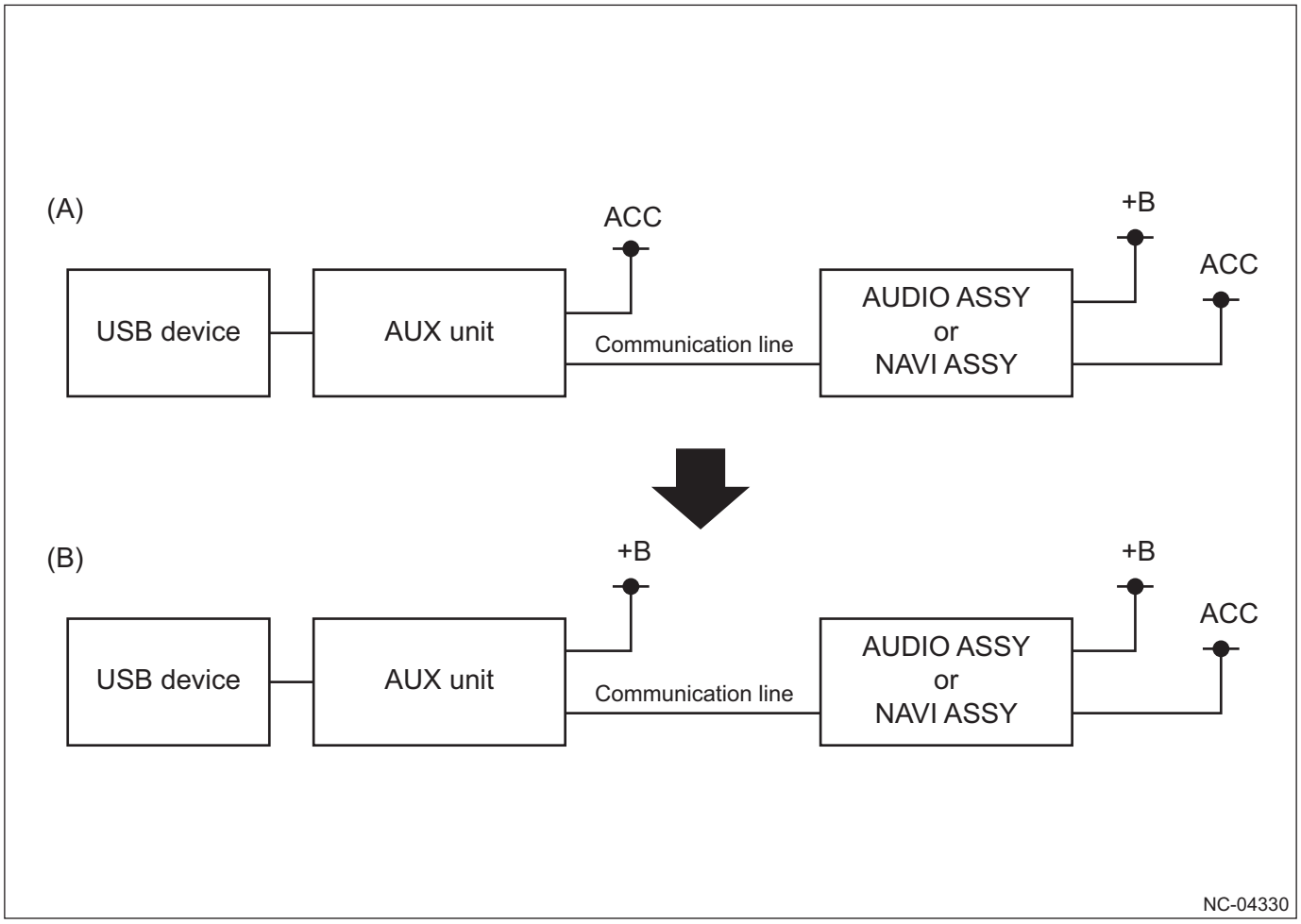


In a connection using a USB cable, when Apple CarPlay cannot recognize the compatible device due to a connection error between the Apple CarPlay compatible device and the head unit, USB plugging and unplugging was necessary in the existing model vehicle. In addition, when the USB hub itself froze due to repeated plugging and unplugging, the USB hub needed to be reset by restarting the head unit manually. In the new model vehicle, the system checks the connection status. When a connection error is detected, only the USB hub is automatically restarted to restore the connection, eliminating need of manual restart for the head unit.



■ AUX unit

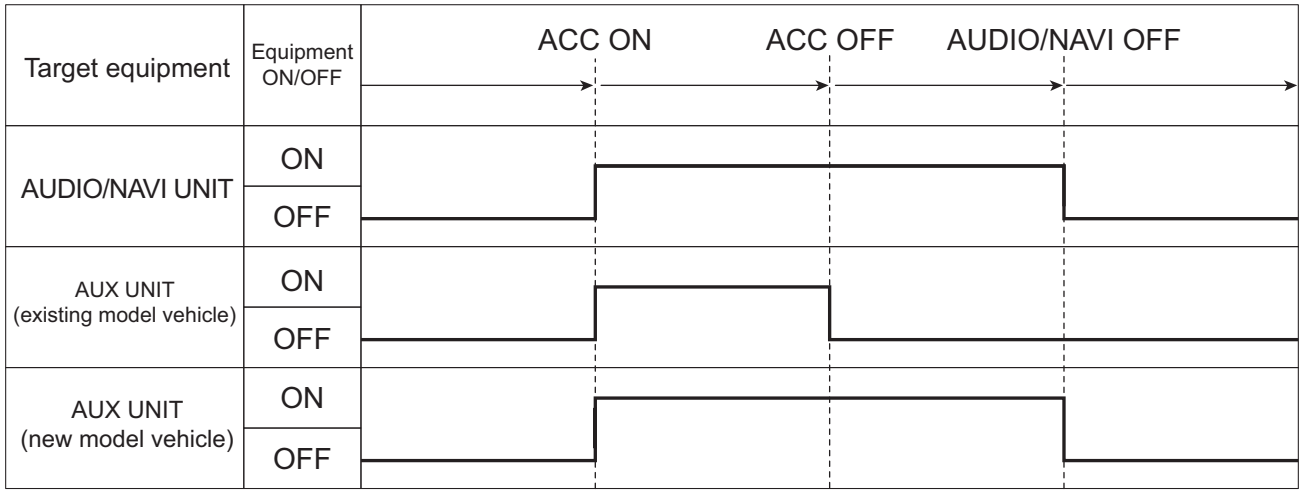
The power supply path of the AUX unit is changed as shown in the following diagram so that the AUX unit can be used without powering off even when ACC OFF is performed during playback of the USB device. This interlocks the power supplies of the head unit and AUX unit and prevents the playback source from switching forcibly from the USB device to the radio.



(A) Existing model vehicle

(B) New model vehicle

Power ON/OFF timing chart



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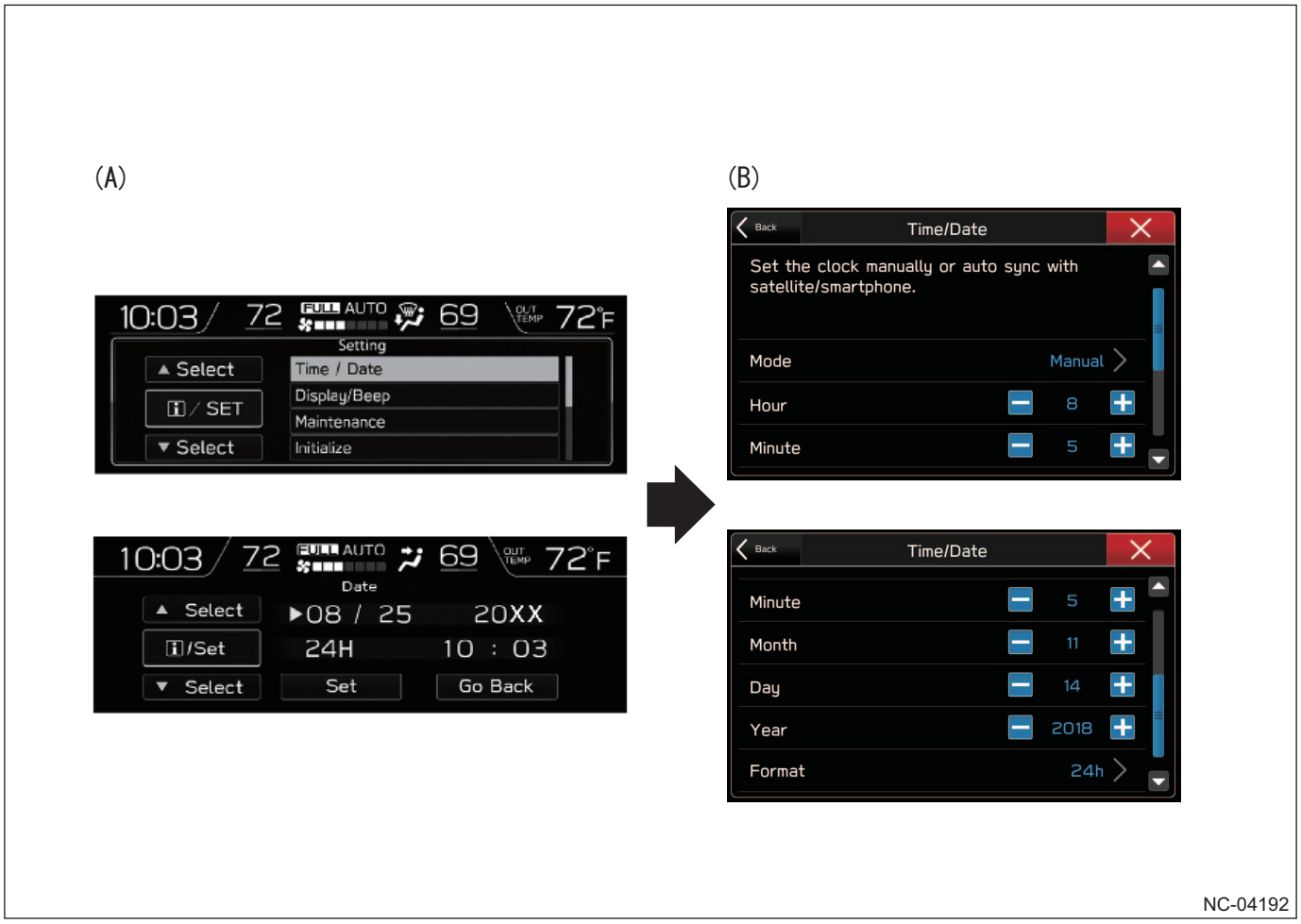
Time setting

In the existing model vehicle, after setting the clock setting to "manual" on the head unit setting screen, the time needs to be set on the setting screen of the multi-function display (MFD). In the new model vehicle, time can be set on the head unit setting screen for more intuitive setting operation. Time setting on the multi-function display (MFD) is no longer available.



(A) Existing model vehicle (multi-function display (MFD))

(B) New model vehicle (head unit setting screen)

11.2 Telematics System

11.2.1 Overview

Telematics system is adopted for C5.

Telematics system is a coined word created from "telecommunication" and "informatics", and it indicates information, contents service, and service provided by external source through integrating a communication system into a mobile unit such as an automobile and the use of bidirectional communication technology.

Providing "security through connection"

A speedy support through communicating with an operator or information notification during an accident or vehicle breakdown is realized.

Providing maintenance information which is the foundation of improving customer satisfaction

By linking with the "Care Connect", a function to notify the health condition (Health Report) and maintenance period (oil, periodic maintenance) of the vehicle is installed.

Data Communication Module (DCM) and security measures

The data communication module is installed inside the cabin at the center of the vehicle where effect of collision is low. Also, a structure that operates on built-in battery in the DCM if the power supply from the vehicle battery stops is adopted to continue emergency call.

In the DCM, microcomputer connected to the antenna (external) and microcomputer for communication inside the vehicle (CAN, etc.) are separated. Communication protocol between these two microcomputers are encrypted by the manufactures original method. A structure that blocks intrusions from the antenna inside the DCM is adopted. Also, the DCM will not operate even if it is installed into another vehicle.

The telecommunication method supports LTE in addition to 3G

The shark fin antenna on the roof is set as the main antenna, and the antenna in the instrument panel (behind the meters) is set as the sub-antenna.

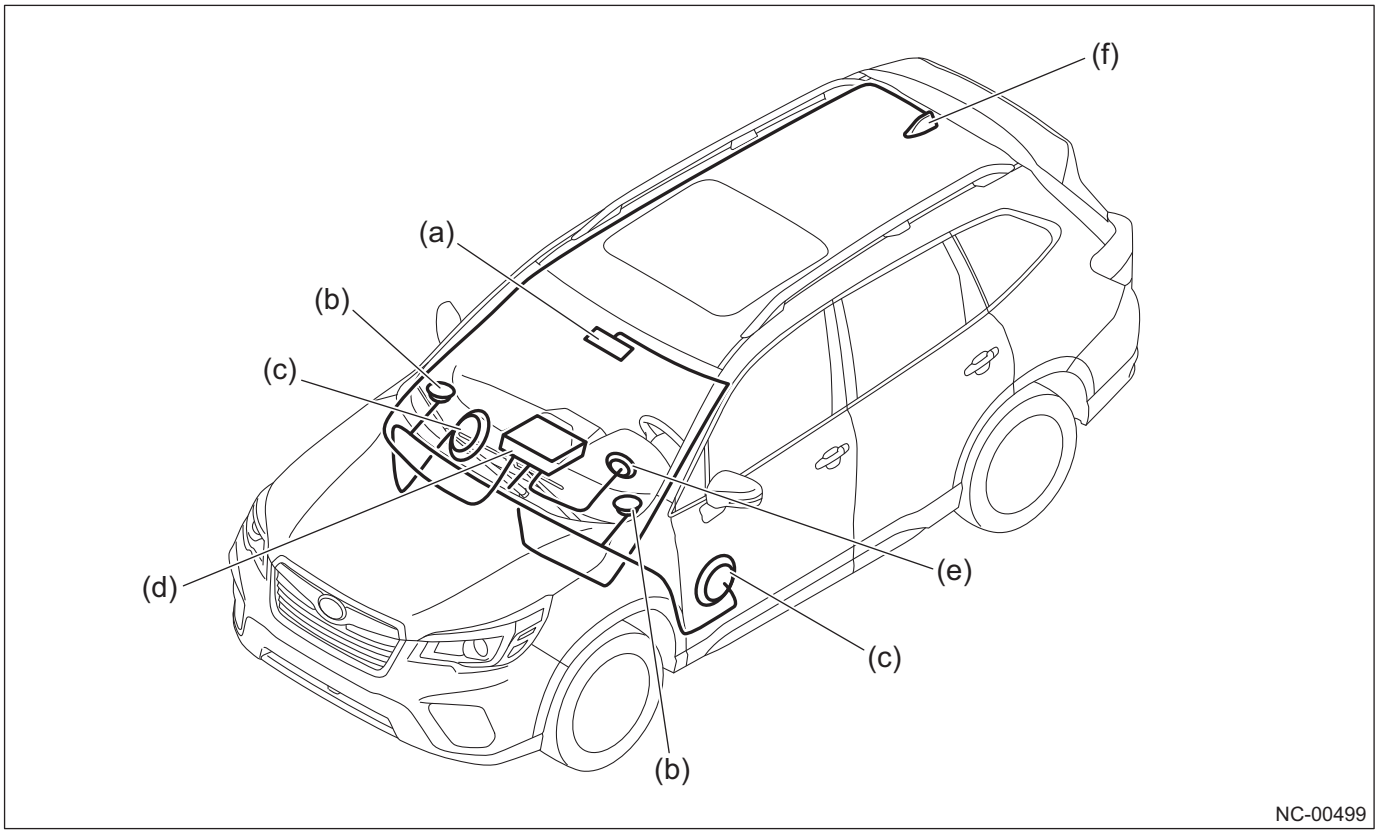
Service function list

The following services are provided by telematics.

Voice Call	SUBARU Concierge	
	Advanced Automatic Collision Notification	
	SOS Emergency Assistance	
	Enhanced Roadside Assistance	
Remote Services	Remote Engine Start (includes Climate Control/Heated Seats)	
	Remote Door Lock & Unlock	
	Remote Horn & Lights	
	Remote Vehicle Locator	
	Send POI to Vehicle	
	Vehicle Condition Check	
Vehicle Alerts	Boundary Alert	
	Speed Alert	
	Curfew Alert	
Customer Touch Point	Service Appointment Scheduler	
	Maintenance Notifications	
	Diagnostic Alerts	
	Vehicle Health Report	
Security	Stolen Vehicle Recovery Plus (SVR Plus includes Vehicle Immobilization/Mobilization)	
		Stolen Vehicle Immobilizer
		Stolen Vehicle Flashing Light
	Vehicle Security Alarm Notification	
Connected Vehicle Feature	SUBARU STARLINK system Update	
	Call volume change function during telematics call	

11.2.2 Component

Component layout drawing



(a) Integrated microphone/indicator switch
(b) Speaker assembly tweeter
(c) Speaker assembly front
(d) DCM
(e) Instrument panel antenna (for sub TEL/GNSS)
(f) Antenna assembly roof (AM/FM/XM/TEL)

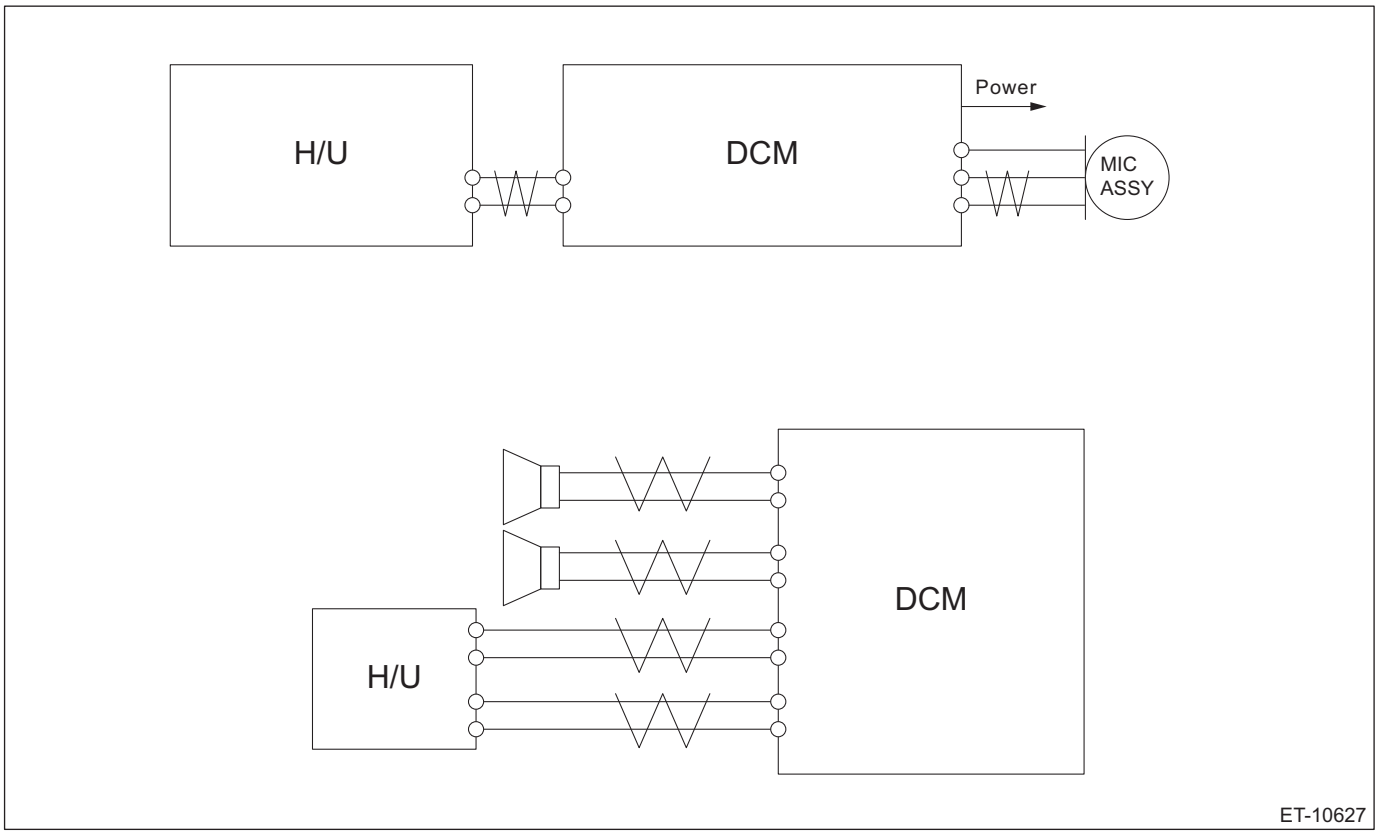
Component details

Microphone and speaker

The microphone and speaker for talking with the operator on an emergency call are shared with the existing parts connected to the navigation system or the audio head unit.

■ Microphone and speaker connection configuration diagram

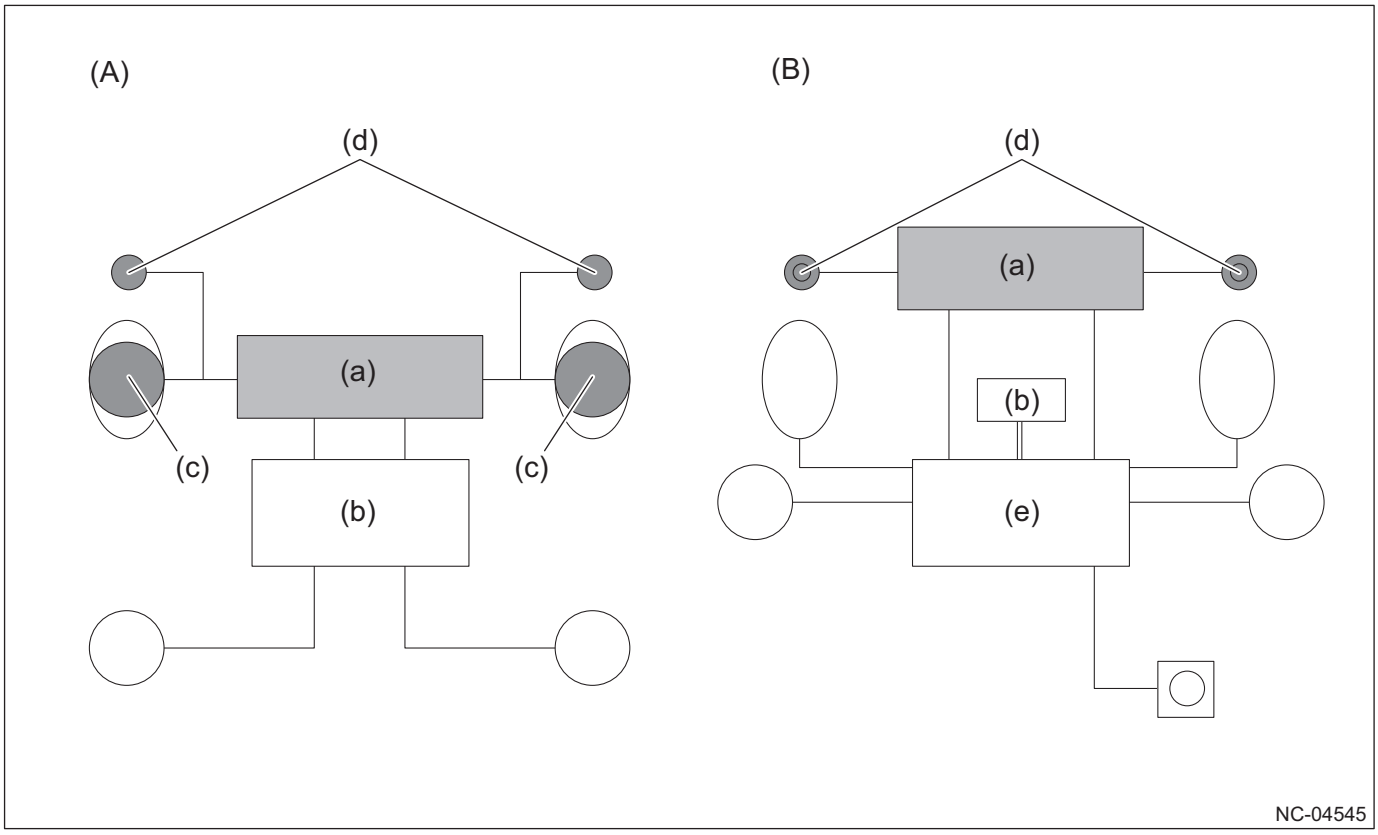
DCM will send a mute signal to the head unit to drive the microphone and speaker from the DCM when the call is operated.



■ Speaker configuration diagram

Side speaker on both sides of the instrument panel are installed to ensure the call audio from the speaker on the other side can be heard even if the speaker on one side is damaged during collision (side collision).

Sound is output from both sides to make the call audio easy to hear similar to normal handsfree calling.



(A) Standard audio system

(a) DCM
(b) Head unit
(c) Speaker assembly front

(B) Harman/Kardon® audio system

(d) Speaker assembly tweeter
(e) Power amplifier assembly

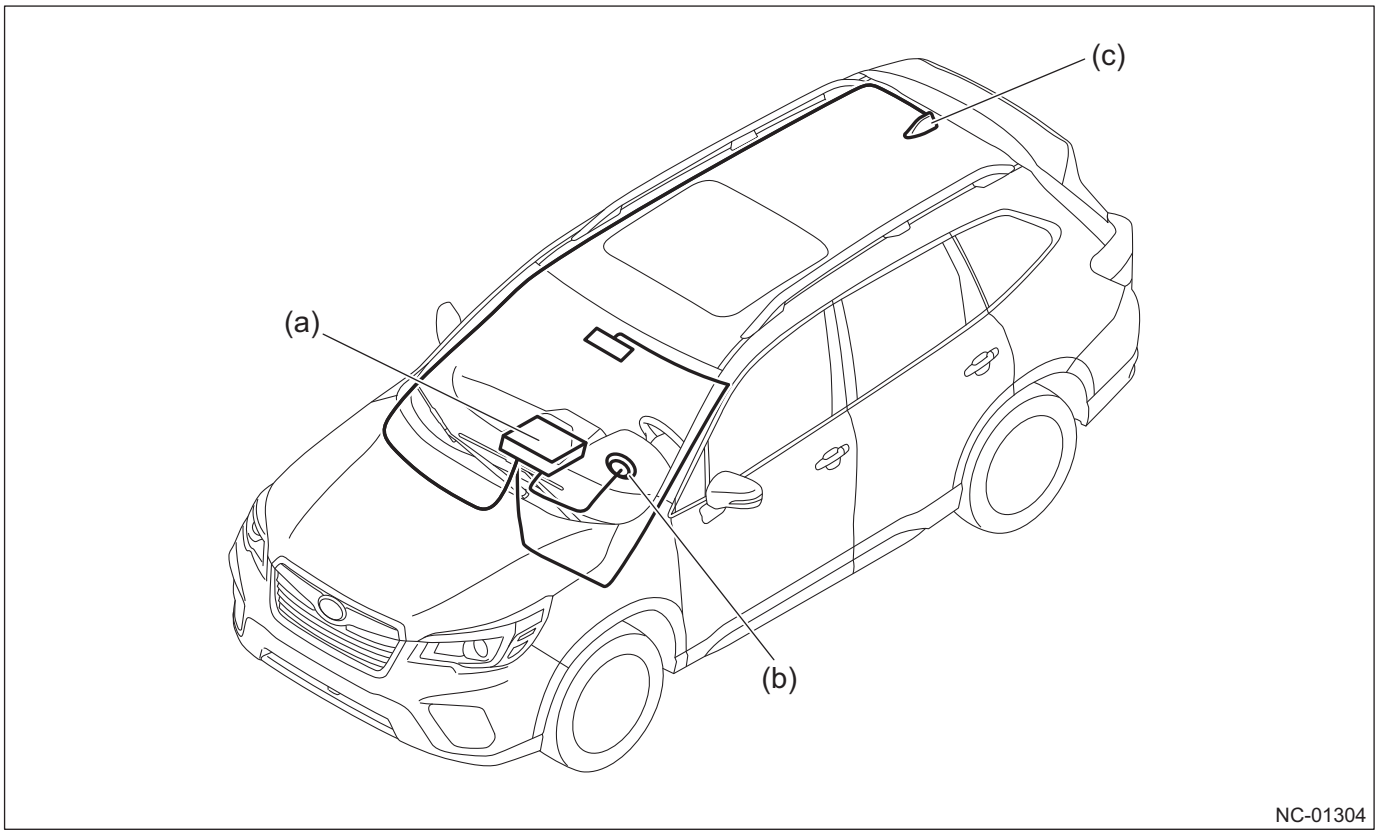
Antenna for telephone

The communication method of telephone supports LTE in addition to 3G.

High speed and large volume communication is realized by using Multi-Input Multi-Output (MIMO) technology that transfers information using multiple antennas for both sending and receiving.

Shark fin antenna on the roof is set as the main antenna and the antenna in the instrument panel (behind the meters) is set as the sub-antenna as multiple antennas are required to support LTE.

By placing two antennas at front and rear of the vehicle (outside the vehicle and inside the cabin), it can still communicate even when one of the antennas are damaged at the time of collision.

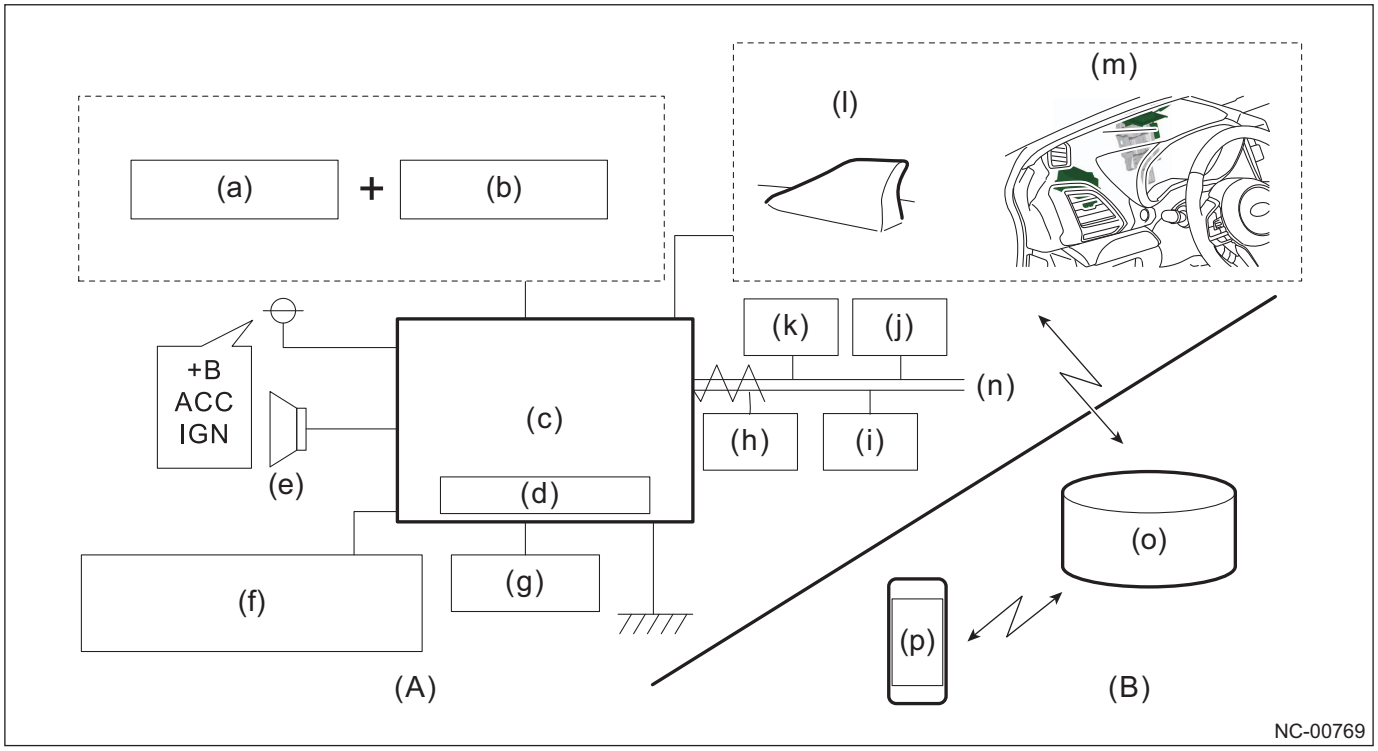


(a) DCM
(b) Instrument panel antenna (for sub TEL/GNSS)
(c) Antenna assembly roof (AM/FM/XM/TEL)

11.2.3 Construction and Operation

System diagram

System configuration diagram

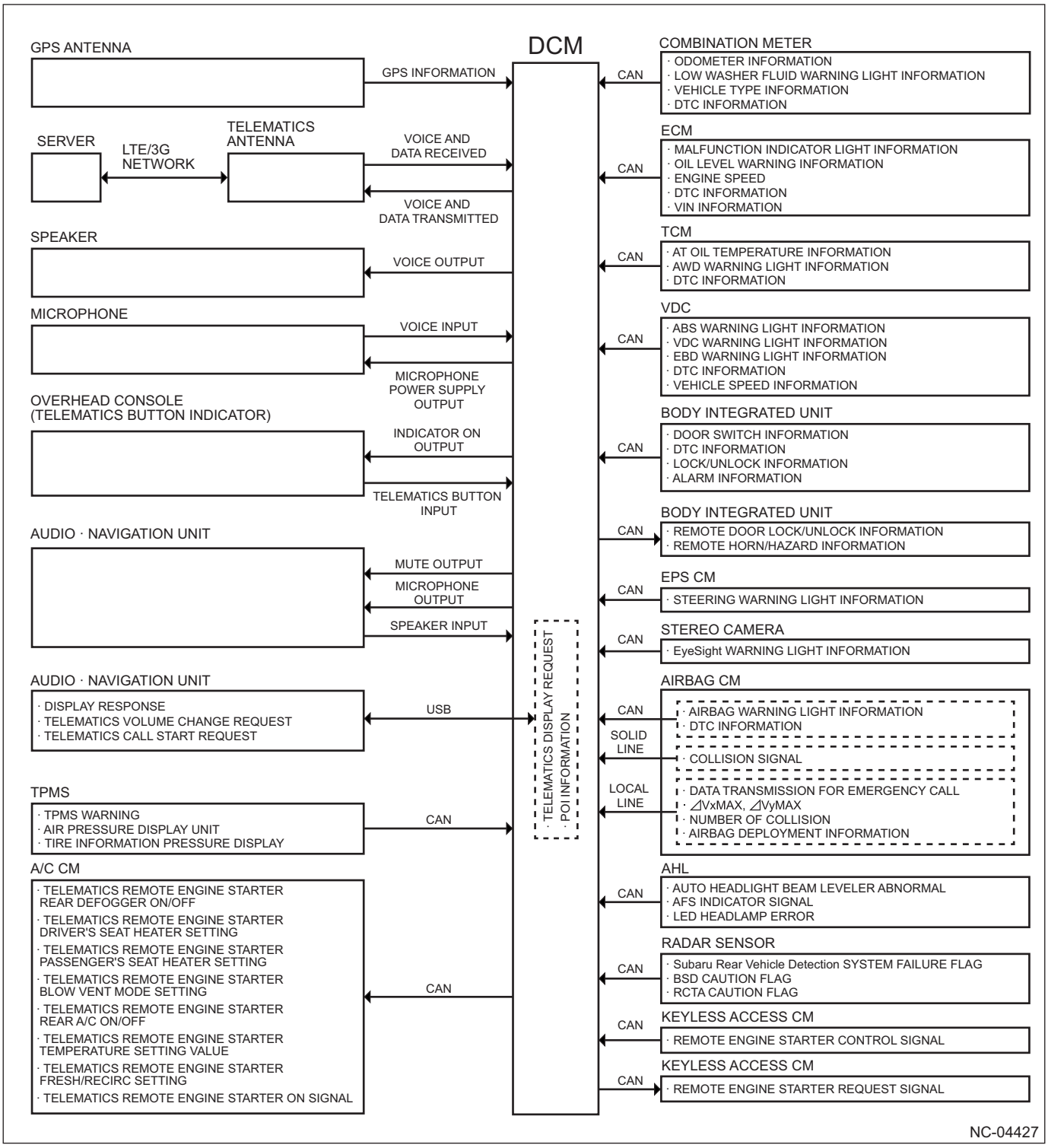


(A) Vehicle
(B) Server

(a) Microphone
(b) Integrated indicator switch
(c) Data Communication Module (DCM)
(d) Backup battery
(e) Speaker
(f) Navi/display audio
(g) A/B ECM
(h) BIU
(i) Meter
(j) E/G ECM
(k) TCM
(l) Antenna assembly roof (AM/FM/XM/TEL)
(m) Instrument panel antenna (for sub TEL/GNSS)
(n) CAN communication
(o) External server
(p) Smartphone

System block diagram

Major signals used by the Data Communication Module (DCM) and related CM



Data Communication Module (DCM)

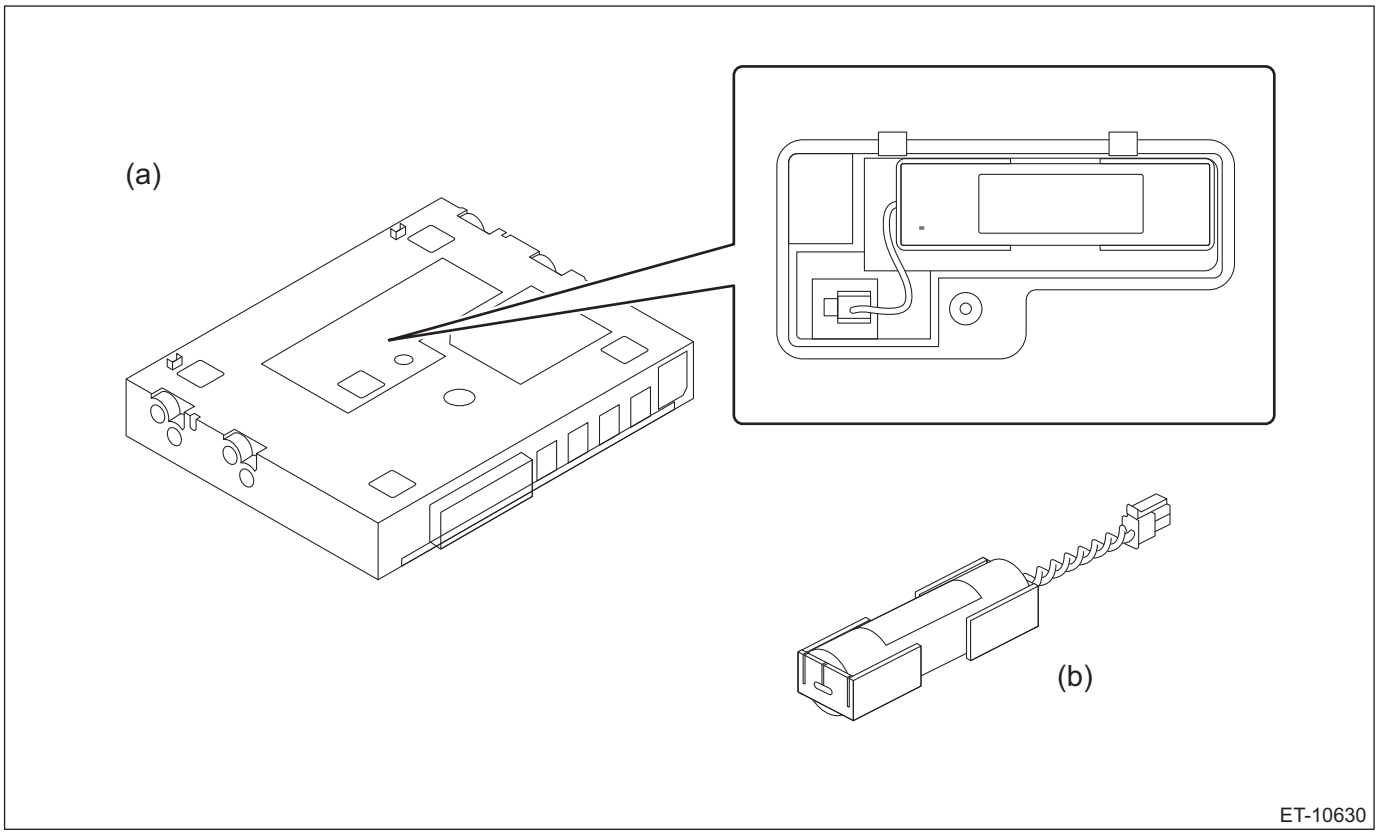
The data communication inside the cabin uses CAN for send/receive the data between each unit, and as for the external communication, the telematics service is provided by communicating with servers via roof antenna and the sub-antenna inside the instrument panel.

The data communication module, which is the heart of the system, is installed in the center of the vehicle, inside the cabin, which is affected least during a crash.

It will operate with the battery built-in the DCM (BUB: Back Up Battery) even when power is not supplied from the battery of the vehicle at the time of a collision (front collision) or during the SOS call, allowing to continue the emergency call.

It has adopted the secondary battery, which will be charged from the vehicle battery while the ignition is ON.

The degradation of the secondary battery is monitored, and notifies the replacement time with an indicator before it will not work as a backup power source.



(a) DCM

(b) Backup battery (BUB)

User interface

There are communication with outside by the integrated indicator switch, display of service with the head unit display of the navigation system or the audio, and guidance by audio function as the UI of the system.

Integrated indicator switch

Immediate communication with outside is possible by operating the switch, and the switch is placed in the overhead console/EyeSight camera cover section considering the operability during emergency.

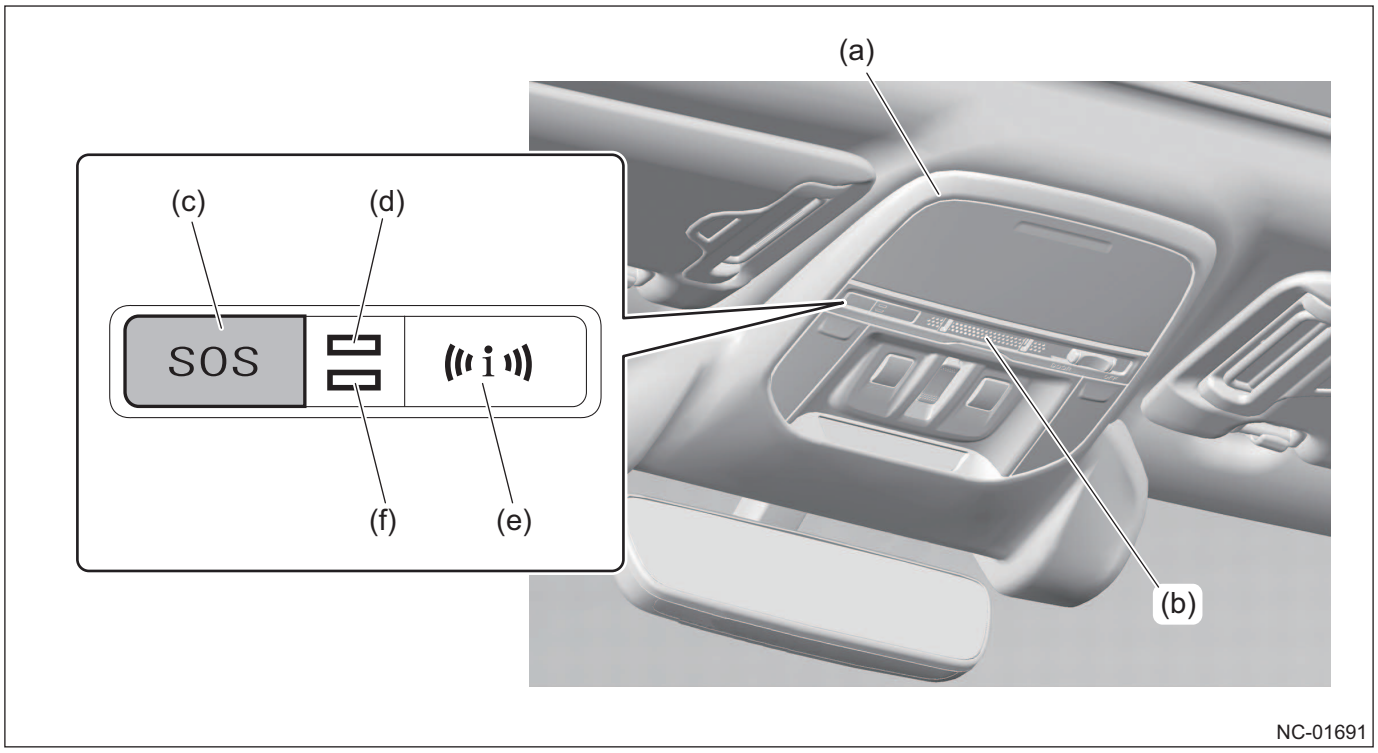
Communication to each service is initiated by pressing the switch, and the communication is canceled by pressing and holding the switch.

■ SOS switch (SOS Emergency Assistance)

Customer contacts the Telematics Customer Care Advisor during an emergency.

■ iCall switch (Enhanced Roadside Assistance)

You can contact the road service during vehicle breakdown, etc. Or, you can select either the road service or concierge with the head unit.



(a) Overhead console
(b) Microphone opening
(c) SOS switch (SOS Emergency Assistance)
(d) GREEN LED indicator
(e) iCall switch (Enhanced Roadside Assistance)
(f) RED LED indicator

Light status	System status
Green lights up.	Normal
Red lights up.	Abnormal (with DTC[*1])
Green flashes/red flashes.	AACN[*2]/SOS/iCall communicating (it will operate if service is possible even if there is DTC[*1])
Both green and red go off.	No service subscription/not operating

*1: Diagnostic Trouble Code

*2: Advanced Automatic Collision Notification

Display screen

When the head unit of the navigation system or the audio receives a mute signal from DCM, the navigation system or the audio will stop the audio being played back, and following screen is displayed on whole touch panel display, notifying the user visually that the service has started.

ET-10632

Audio guidance

Depending on the operation status of the telematics system, following guidance is played back from DCM.

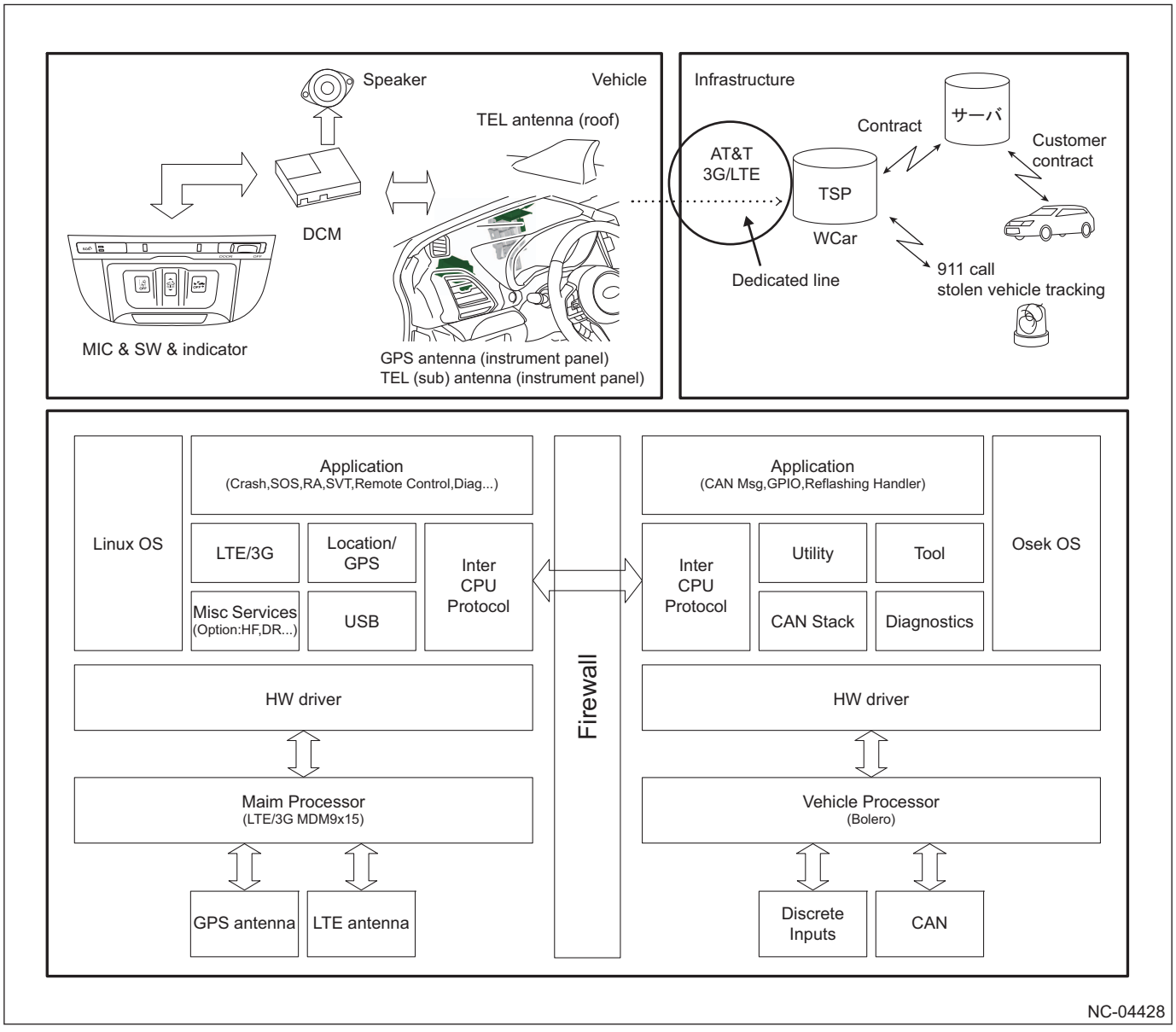
Status	Audio guidance
When a collision that airbag to deploy has occurred	"Call connecting to SUBARU STARLINK emergency services."
When manually sending SOS with the SOS switch	"Connecting to SUBARU STARLINK emergency assistance."
When asking for roadside assistance	"Connecting to SUBARU STARLINK Roadside Assistance."
When the iCall switch is pressed while the roadside assistance and concierge service is activated	"Please use touch screen to select a STARLINK service."
When sending to concierge	"Connecting to SUBARU STARLINK Concierge services.
When notifying that the conversation will be recorded before connecting to the operator	"This call may be recorded or monitored for quality purposes."
When ACN/SOS/iCall is operated without subscription	"You are not currently subscribed to SUBARU STARLINK. Please visit Mysubaru.com to upgrade your service."
When the telephone connection is weak and cannot connect even after multiple retries	"Due to cellular network or hardware problems, your call cannot be connected at this time."
When the service is started in the stolen vehicle	"Stolen Vehicle Recovery Service has been activated."

Security

The protocol between the vehicle and the server is exclusive, making it difficult to be hacked from outside the vehicle.

The microcomputer connecting to the antenna (outside the vehicle) and the microcomputer for communication inside the vehicle are separated, and the communication protocol between these 2 microcomputers are encrypted by the manufactures original method, so it will be blocked inside the DCM even if it gets intruded from the antenna.

The DCM will receive the VIN information written in the EGI as a line via CAN, and stores in the DCM. The vehicle and DCM are linked one-to-one, and the subscribed DCM will not work when installed on another vehicle.



Voice Call

SUBARU Concierge

This is a function to set the destination of the navigation by calling the call center and select the place to go (destination) through conversation with an operator.

Once the destination is decided, the operator will send the destination information to the vehicle, and the destination will be automatically set in the on-board navigation, making it possible to safely set the destination even while driving.

The concierge service can be selected by pressing the iCall switch and selecting the concierge service on the navigation system or the audio head unit display. The service can also be started from the audio head unit display even without pressing the iCall switch.

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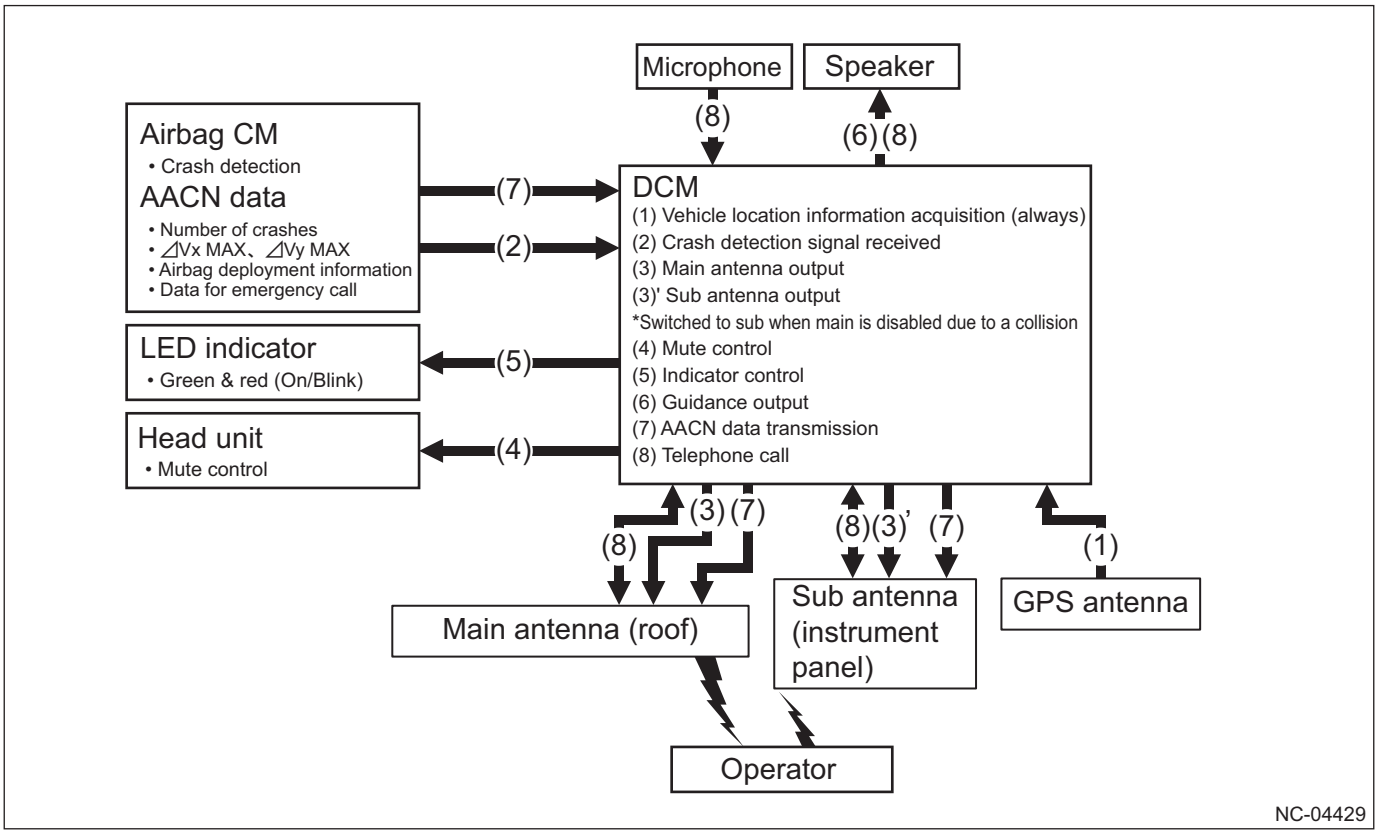
Advanced Automatic Collision Notification

This is a function to automatically notify the operator with highest priority against other services when there is a large impact due to collision, and the DCM will receive collision detection signal.

Telematics Customer Care Advisor will communicate with the occupant, and provide appropriate service depending on the condition of the occupant. Also, an audio guidance of "Call connecting to SUBARU STARLINK emergency services." is played when connecting to an operator.

The following items are functions during operation (canceling by the customer is not possible).

- The DCM will continue to operate with the built-in battery even if the vehicle battery power source is disconnected.
- Red or green LED indicator flashes during the call.



No.	Control description	Supported unit
1	Acquires the location information from the GPS.	DCM
2	Sends the collision detection signal.	Airbag control module
3	Sends the collision notification (including result of 1) to the server.	DCM
4	Mutes the head unit.	DCM
5	Flashes the LED indicator.	DCM
6	Outputs the guidance to the speaker.	DCM
7	Sends AACN data.	Airbag → DCM → server
8	Communicates with an operator.	DCM

■ Notification of detailed accident information

The information of vehicle condition (collision form and number of collisions) when an accident occurs is collected and is notified to the call center. Using this information, the call center presumes the scale of the accident to take appropriate actions.

SOS Emergency Assistance

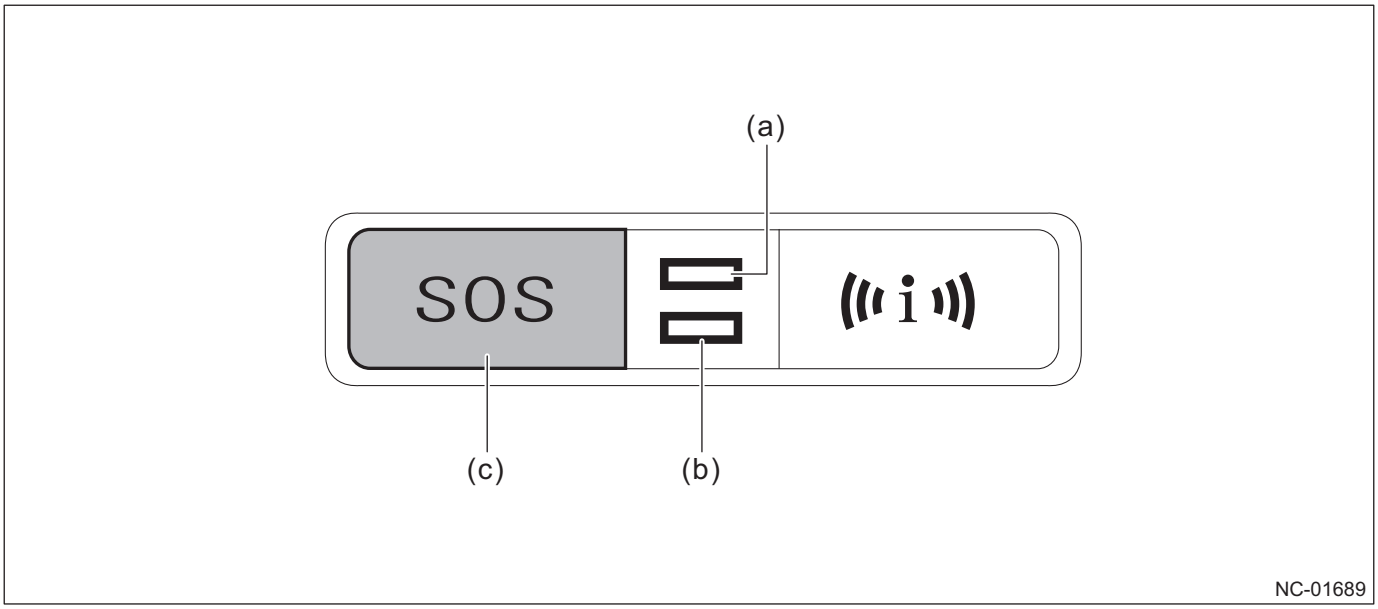
If an emergency occurs, press the dedicated SOS button in the vehicle to receive emergency assistance.

Telematics Customer Care Advisor will communicate with the occupant, confirm the degree of emergency, and provide appropriate emergency assistance. Also, an audio guidance of "Connecting to SUBARU STARLINK emergency assistance." is played when connecting to an operator.

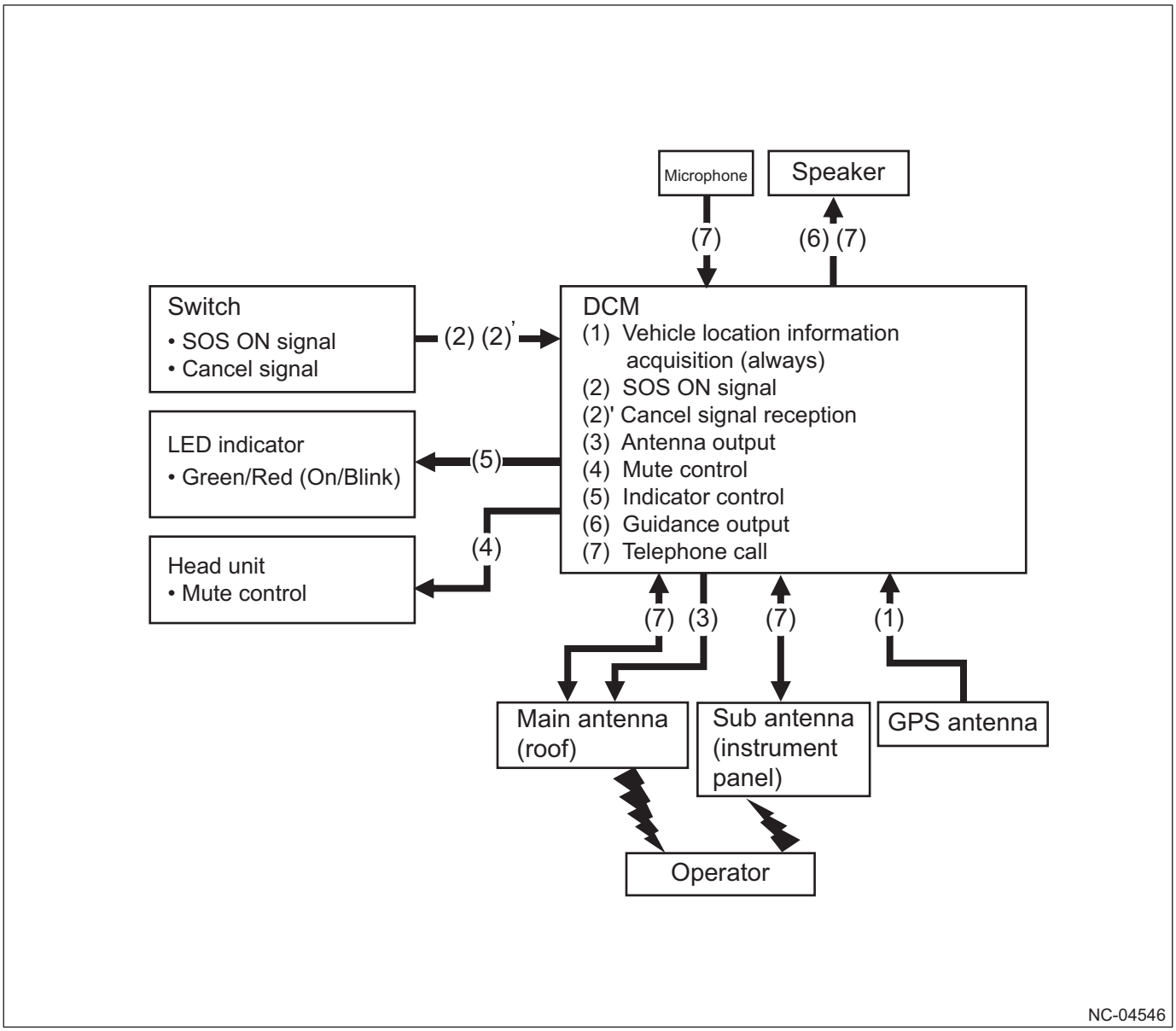
Following items are the functions during operation.

- To prevent calling by mistake, an audio guidance to prompt cancel operation is played when connecting to the server.
- It will be canceled by pressing and holding the button.
- Red or green LED indicator flashes during the call.

SOS switch



(a) GREEN LED indicator
(b) RED LED indicator
(c) SOS switch (SOS Emergency Assistance)



No.	Control description	Supported unit
1	Acquires the location information from the GPS.	DCM
2	Determines as ON by pressing the SOS button, and determines as cancel by pressing and holding.	DCM
3	Sends the SOS notification (including result of 1) to the server.	DCM
4	Mutes the head unit.	DCM
5	Flashes the LED indicator.	DCM
6	Outputs the guidance to the speaker.	DCM
7	Communicates with an operator.	DCM

Enhanced Roadside Assistance

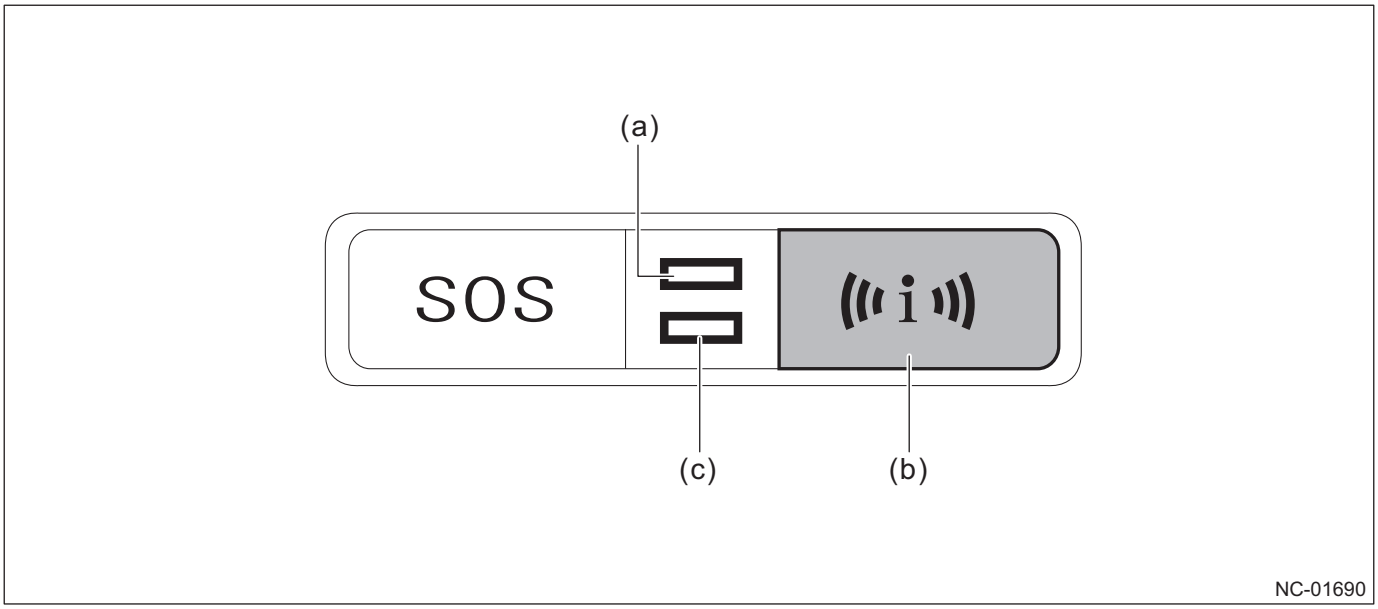
This is a function to receive a roadside assistance by pressing the i-button during vehicle breakdown, etc., and connecting to the dedicated operator.

Telematics Customer Care Advisor in charge of roadside assistance will confirm the situation, and provide appropriate roadside assistance. Also, an audio guidance of "Connecting to SUBARU STARLINK Roadside Assistance." is played when connecting to an operator.

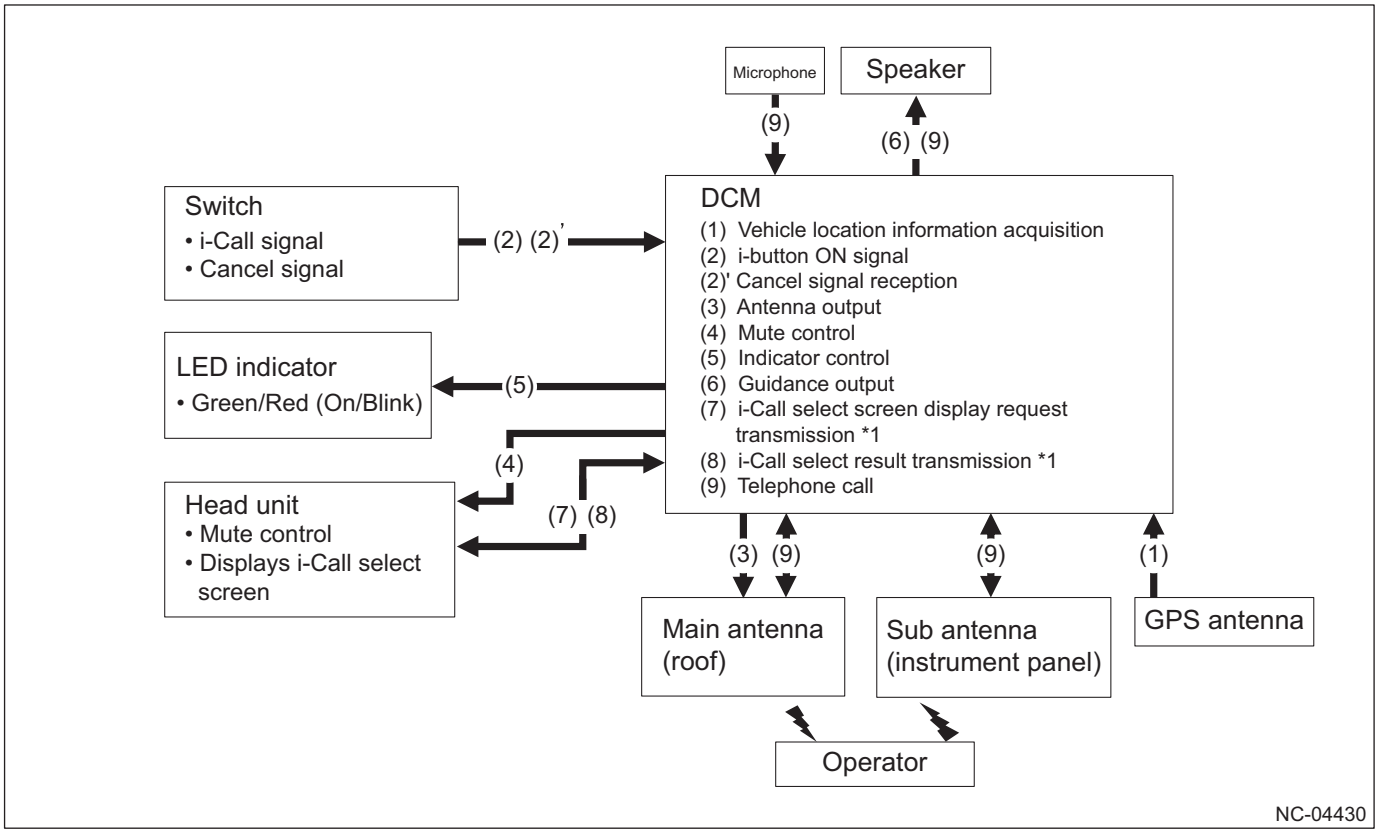
Following items are the functions during operation.

- It will be canceled by pressing and holding the button.
- Red or green LED indicator flashes during the call.

iCall switch



(a) GREEN LED indicator
(b) iCall switch (Enhanced Roadside Assistance)
(c) RED LED indicator



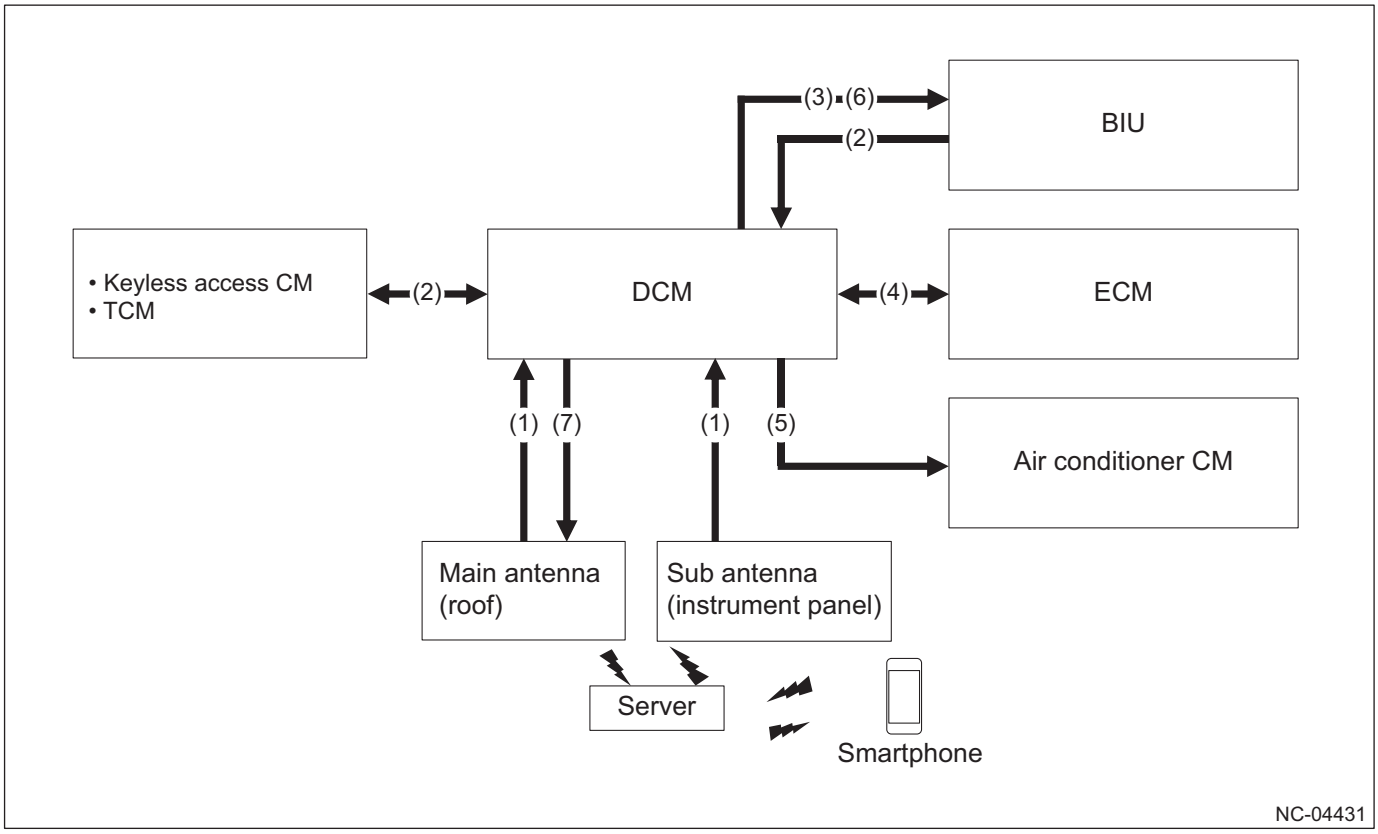
1 : Only with concierge service subscription

No.	Control description	Supported unit
1	Acquires the location information from the GPS.	DCM
2	Determines as ON by pressing the i-button, and determines as cancel by pressing and holding.	DCM
3	Sends the i-Call notification (including result of 1) to the server.	DCM
4	Mutes the head unit.	DCM
5	Flashes the LED indicator.	DCM
6	Outputs the guidance to the speaker.	DCM
7	Sends the request of display on i-Call selection screen to the head unit.*1	DCM
8	Sends the result of i-Call selection to DCM.*1	Head unit
9	Communicates with an operator.	DCM

Remote Engine Start (includes Climate Control/Heated Seats)

This is a function to start the engine of the vehicle remotely using the dedicated mobile application on a smartphone.

By setting the air conditioner from the dedicated app, the cabin can be cooled before going into the vehicle in summer, and in winter, the cabin can be warmed, as well as de-icing by operating the defroster

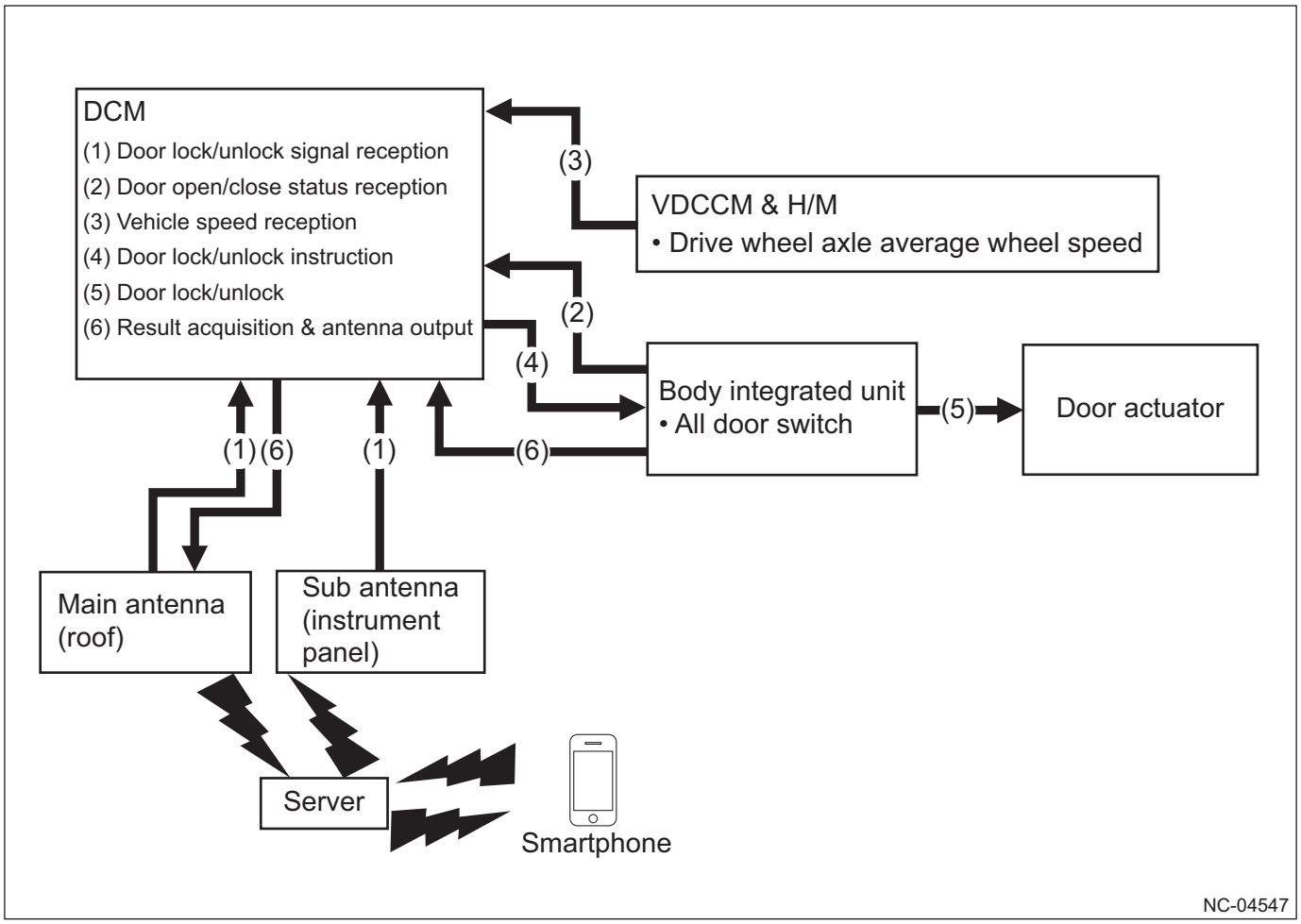


No.	Control description	Supported unit
1	Sends the engine start request from the server to DCM (antenna).	Server
2	Confirms the vehicle status.	DCM
3	Outputs the horn & light request.	DCM
4	Sends the engine start request and receives the result.	DCM
5	Sends the air conditioner start request.	DCM
6	Outputs the horn & light request.	DCM
7	Sends the result to the server.	DCM

Remote Door Lock & Unlock

This is a function to lock/unlock the doors remotely using the smartphone dedicated mobile application Customer Web Portal when you forgot to lock the doors or left the keys inside a locked vehicle.

- Unlocking of the doors can be either driver door only or all doors at once (locking is for all doors including the rear gate).
- Operation is not accepted while driving (however, unlocking operation is accepted when the vehicle speed is approximately 3.1 MPH (5 km/h) or lower).
- Even if it is unlocked by mistake, the doors are locked automatically after 60 seconds of unlocking if no door is opened.



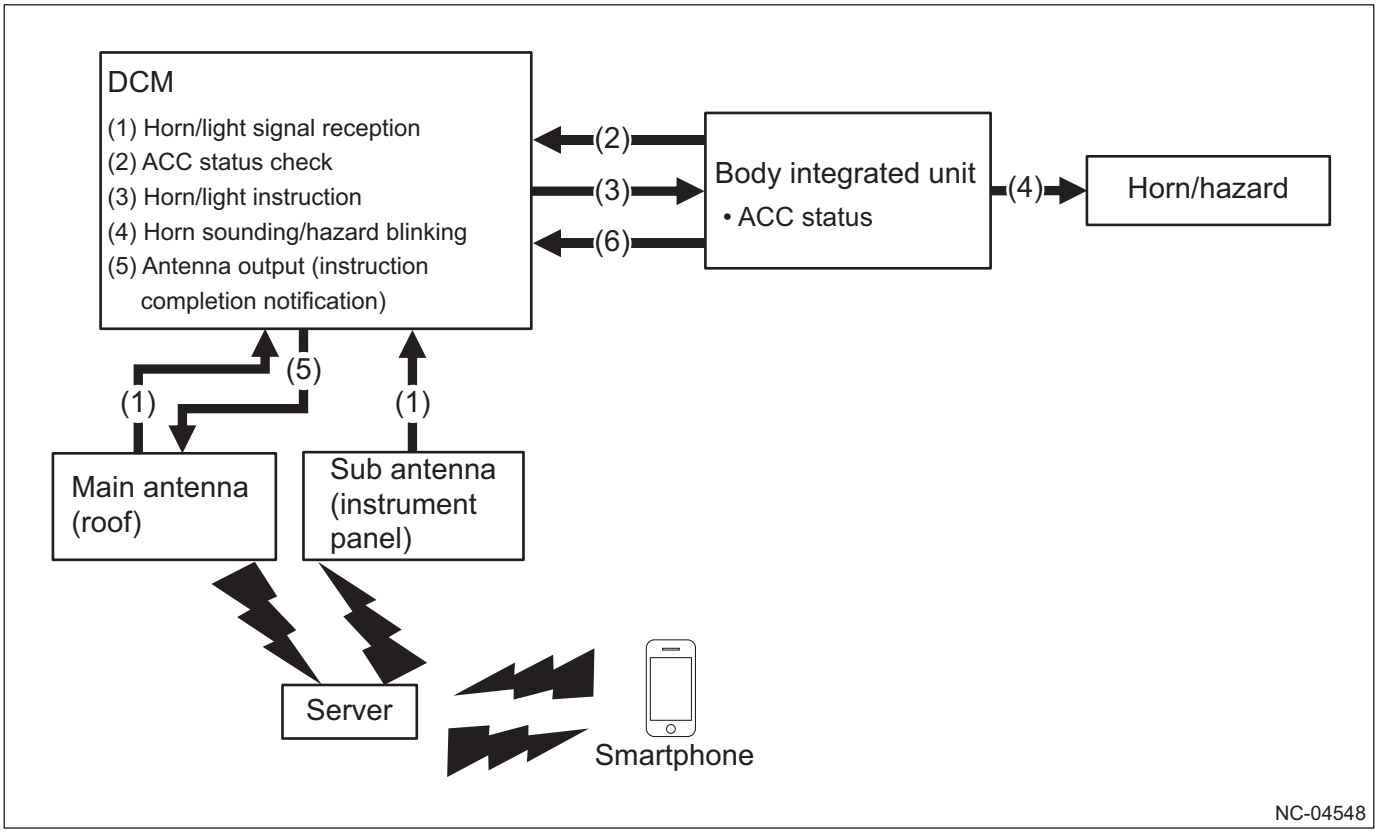
No.	Control description	Supported unit
1	Sends the door lock/unlock request from the server to DCM (antenna).	Server
2	Determines the vehicle condition.	DCM
3		
4	Outputs the door lock/unlock request based on the results of 2 and 3.	DCM
5	Locks/unlocks the door based on the signal from 4.	Body integrated unit
6	Sends the result of door lock/unlock to the server.	DCM

Remote Horn & Lights

This is a function to start the hazard lights and the horn remotely using the smartphone dedicated mobile application Customer Web Portal to confirm the position of the vehicle in parking lot, etc.

A pattern to operate both the hazard lights and the horn to operate simultaneously, and a patter to only the hazard lights to operate can be selected.

* Operation time of above is 30 seconds. Also, the operation is not accepted while driving.



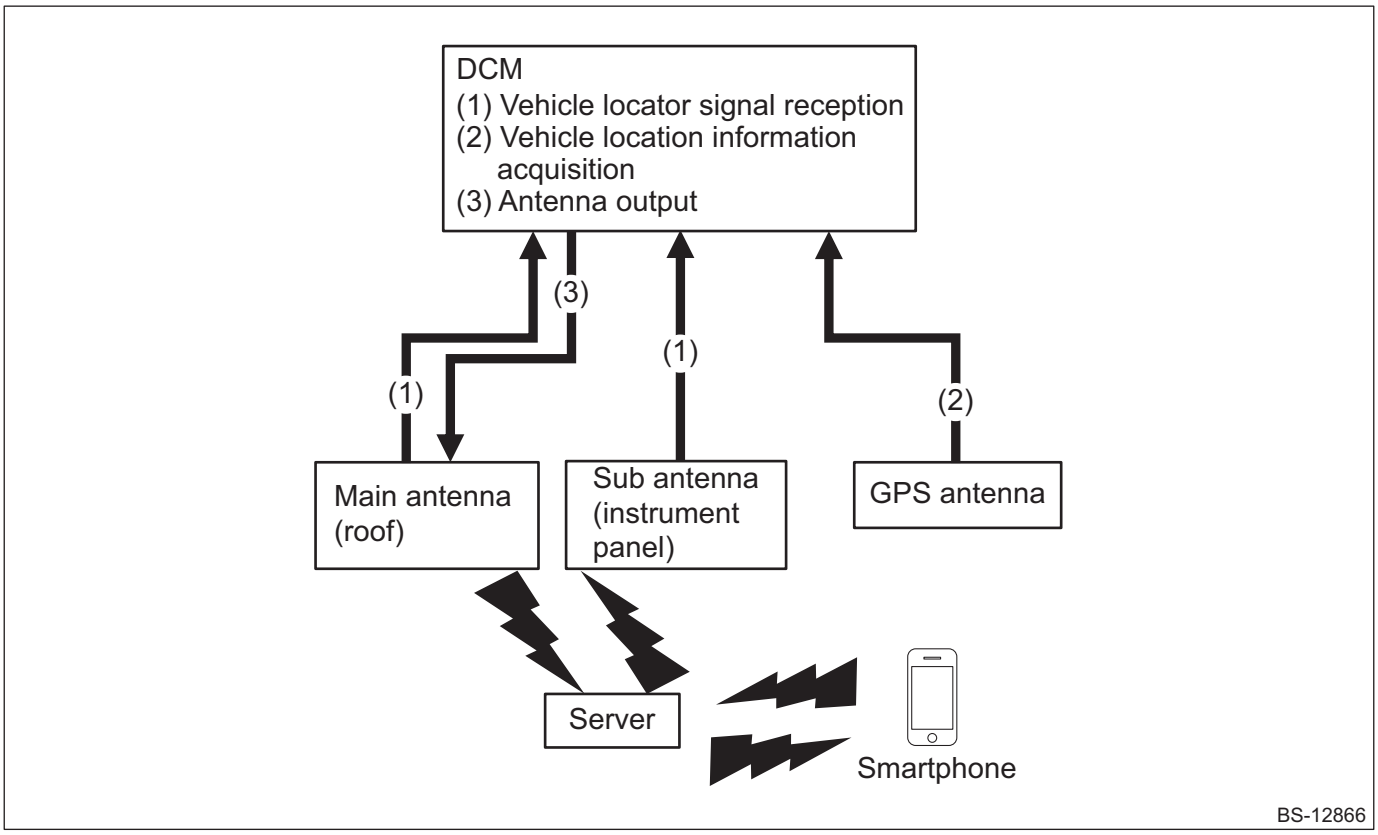
No.	Control description	Supported unit
1	Sends the horn & hazard lights/only hazard lights request from the server to DCM (antenna).	Server
2	Confirms the ACC condition.	DCM
3	Outputs the horn & hazard lights/only hazard lights request based on the result of 2.	DCM
4	Performs horn sounding & hazard lights flashing/only hazard lights flashing based on the signal from 3.	Body integrated unit
5	Sends the result of 3 to the server.	DCM
6	Stops the operation during the operation of 4 with following conditions. ・IGN ON ・Stop request from DCM ・Timer fulfilled (30 seconds) ・Lock/unlock signal from smart/keyless	Body integrated unit

Remote Vehicle Locator

This is a function to quickly and simply determine the location of the vehicle using the GPS equipped in the vehicle.

The vehicle location information acquired from the GPS is sent to the server, and forwarded to the smartphone or PC of the user. Also, the location information can be used linked to the smartphone app or the online map.

* Depending on the app, it may be able to show the route to that location or store the location information.

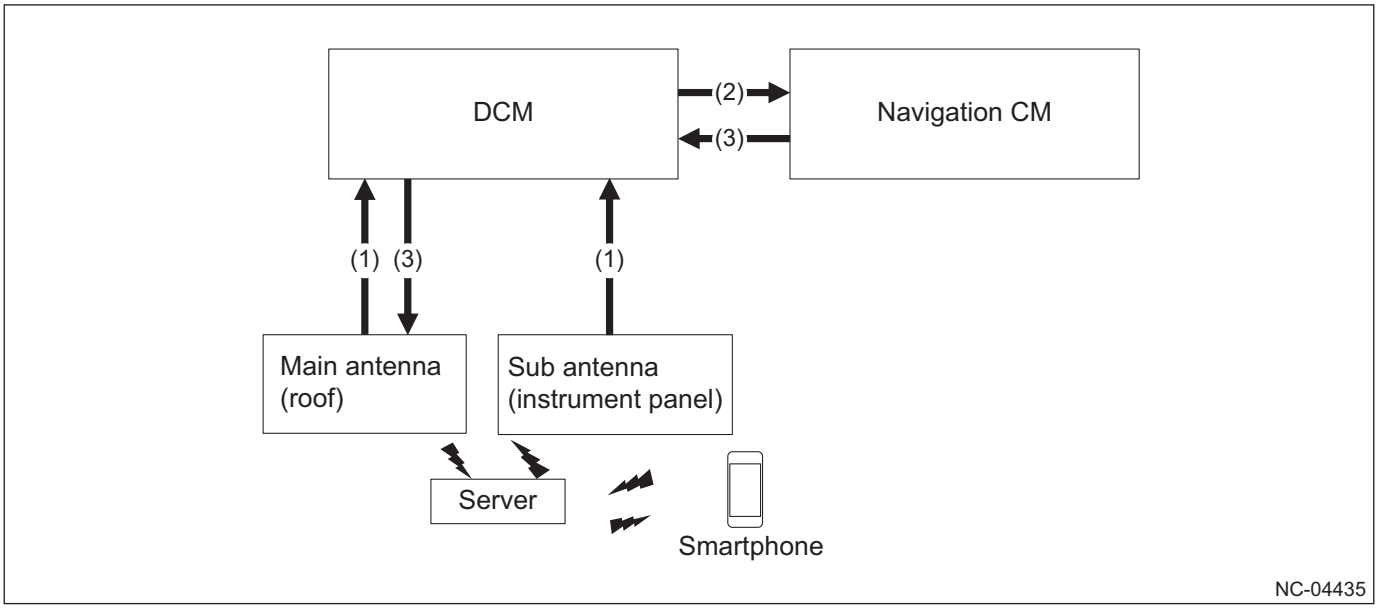


No.	Control description	Supported unit
1	Sends vehicle locator request from the server to DCM (antenna).	Server
2	Acquires the location information from the GPS.	DCM
3	Sends the result of 2 to the server.	DCM

Destination to vehicle (to navigation or text depends on the vehicle type)

This is a function to set the destination of the on-board navigation by sending the destination information to the vehicle from the smartphone dedicated mobile app.

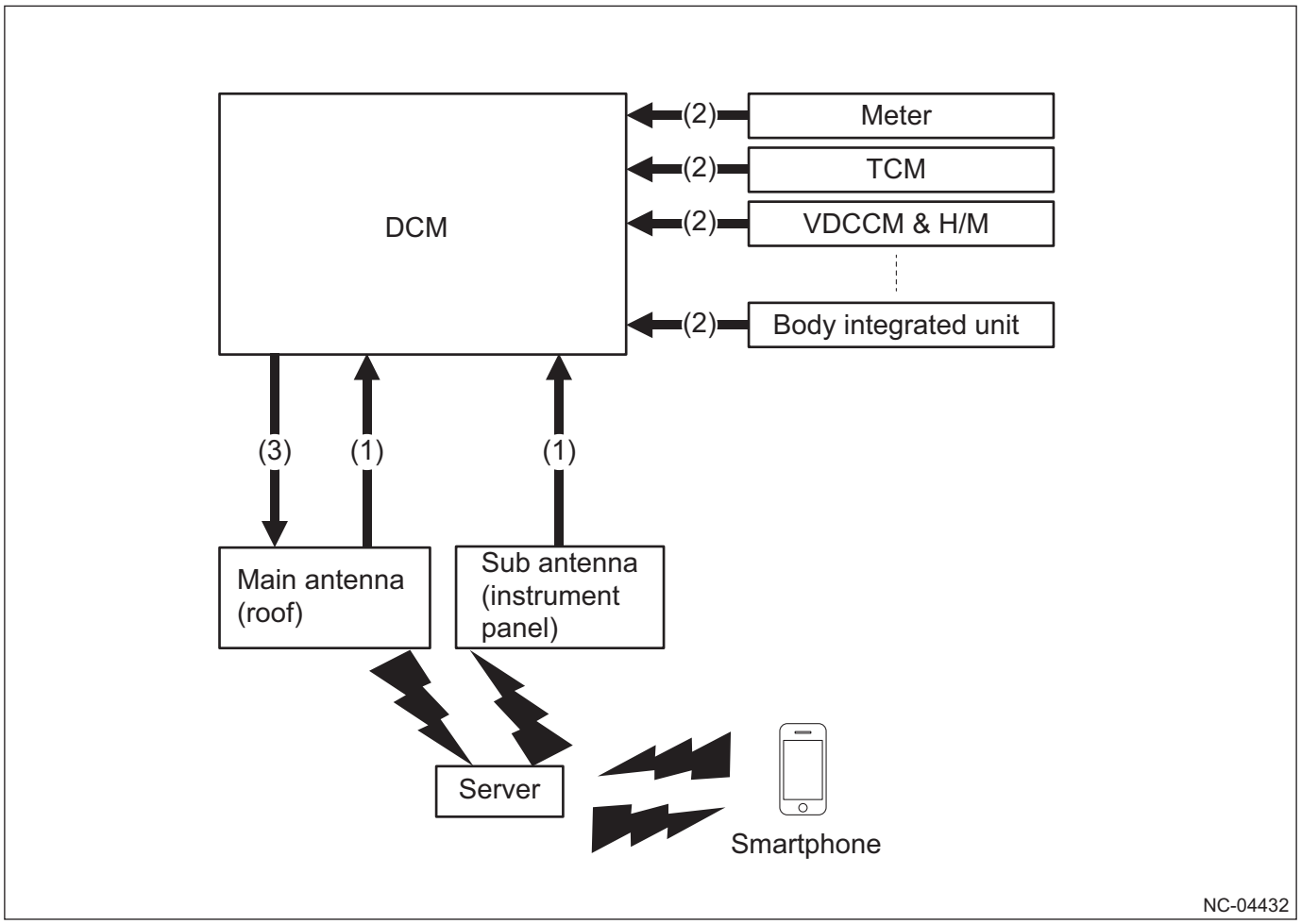
It is possible to depart immediately after boarding the vehicle by setting the destination from the app before boarding the vehicle.



No.	Control description	Supported unit
1	Sends destination setting information from the server to DCM (antenna).	Server
2	Sends the destination information to the navigation.	DCM
3	Sends the result to the server.	DCM

Vehicle Condition Check

This is a function to confirm the condition of the vehicle from the Customer Web Portal.



No.	Control description	Supported unit
1	Receives the vehicle information send request from the server.	DCM
2	Sends the vehicle condition information from each unit.	Each unit
3	Sends the vehicle condition information to the server.	DCM

Vehicle Alerts

Boundary Alert

This is a function to set a circular or rectangular virtual fence on the map, and notifies when the vehicle goes in or goes out of the set fence.

Either to receive a notification when the vehicle goes in or goes out of the set range can be selected.

Speed Alert

This is a function to set a certain speed, and notifies when the vehicle exceeds the set speed.

The exceeded time can be set in addition to the speed, and it can set conditions such as whether to send a notification when the vehicle is driven exceeding the set speed and the time.

Curfew Alert

This is a function to set a certain time of the day, and notifies when the vehicle is being used during the set time period.

This can notify the driver via the on-board audio/navigation system that the set time is approaching.

Customer Touch Point

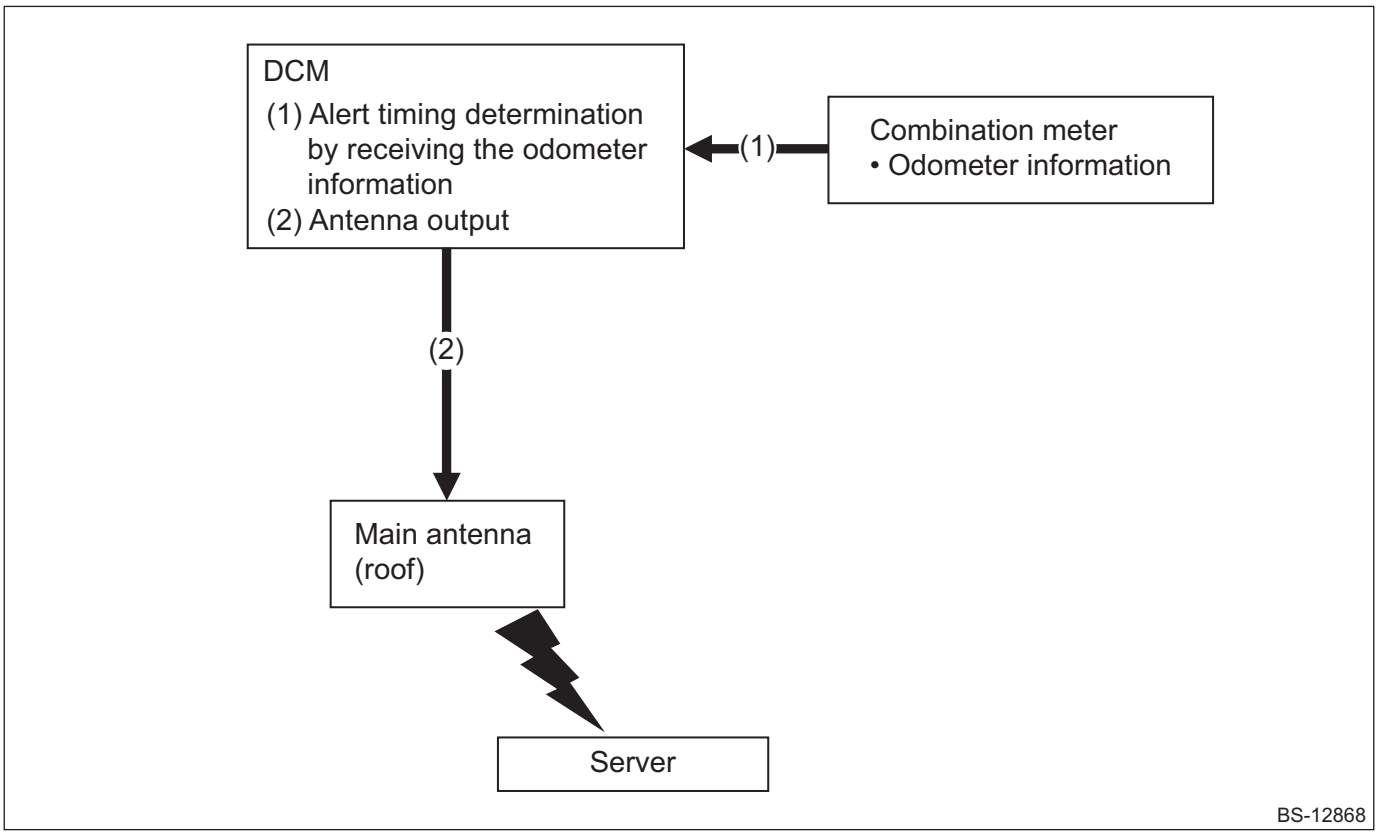
Service Appointment Scheduler

This is a function to display the dedicated dealer booking screen by accessing the server with the on-board audio/navigation system, and you can book an appointment with the dealer from inside the vehicle. This function can also offer an appointment depending on the vehicle condition or availability of any service campaign so that you can make a call to a specific dealer.

* This is available only when making a handsfree call is possible on the on-board audio/navigation system.

Maintenance Notifications

This is a function to acquire the mileage of the vehicle and notify the time for engine oil change and periodic maintenance.



No.	Control description	Supported unit
1	Receives the information of the odometer and determines if it is time to alert.	DCM
2	Notifies the server based on the result of 1.	DCM

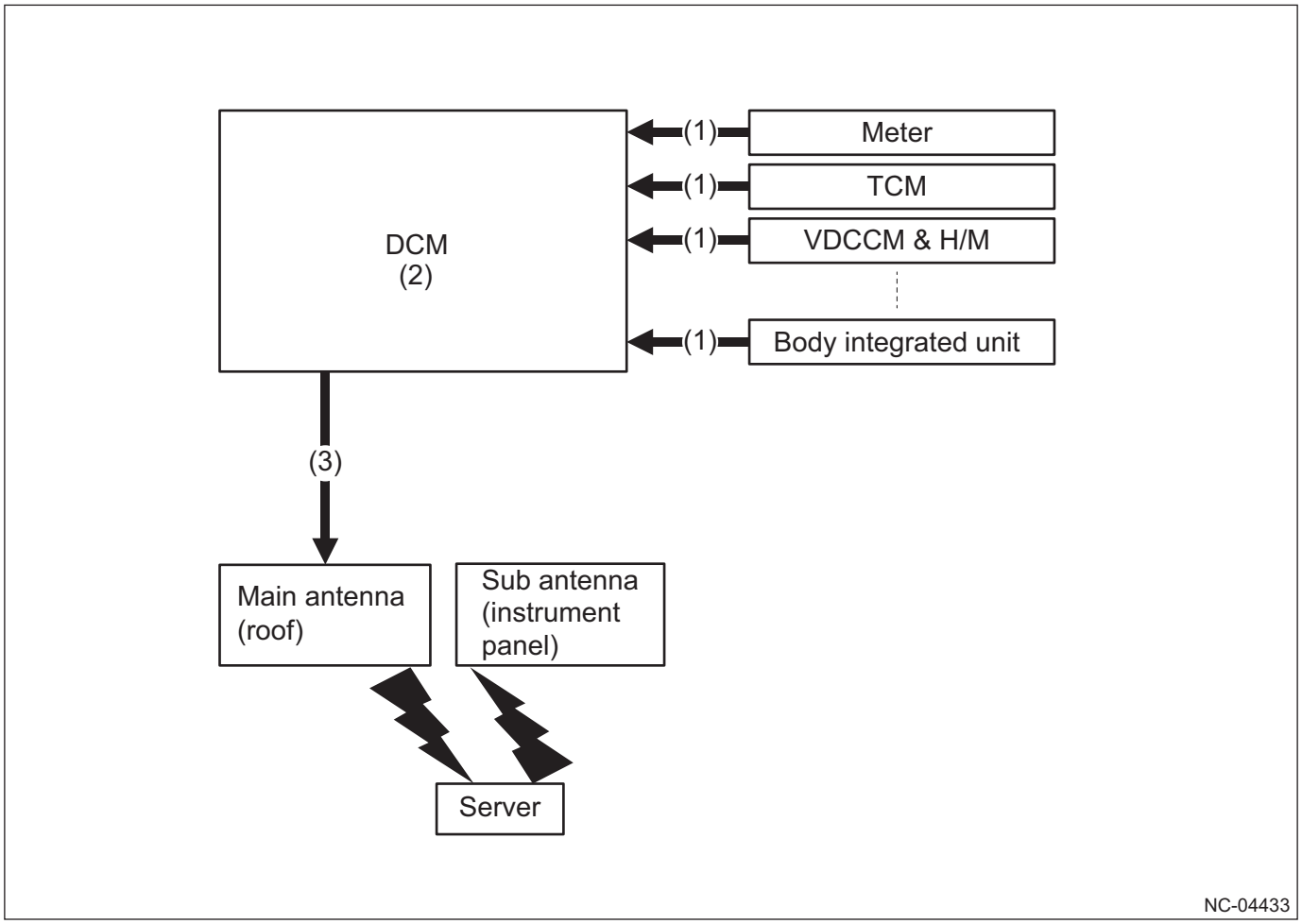
Diagnostic Alerts

This is the function to illuminate the warning light on the instrument panel together with notifying the user with an e-mail.

Vehicle Health Report

This is a function to send an easy to understand vehicle diagnostic report including various element of the vehicle performance via e-mail.

System check, mileage, future maintenance schedule, etc., are sent.



No.	Control description	Supported unit
1	Sends the vehicle condition information from each unit.	Each unit
2	Detects IGN OFF.	DCM
3	Sends the vehicle condition information to the server.	DCM

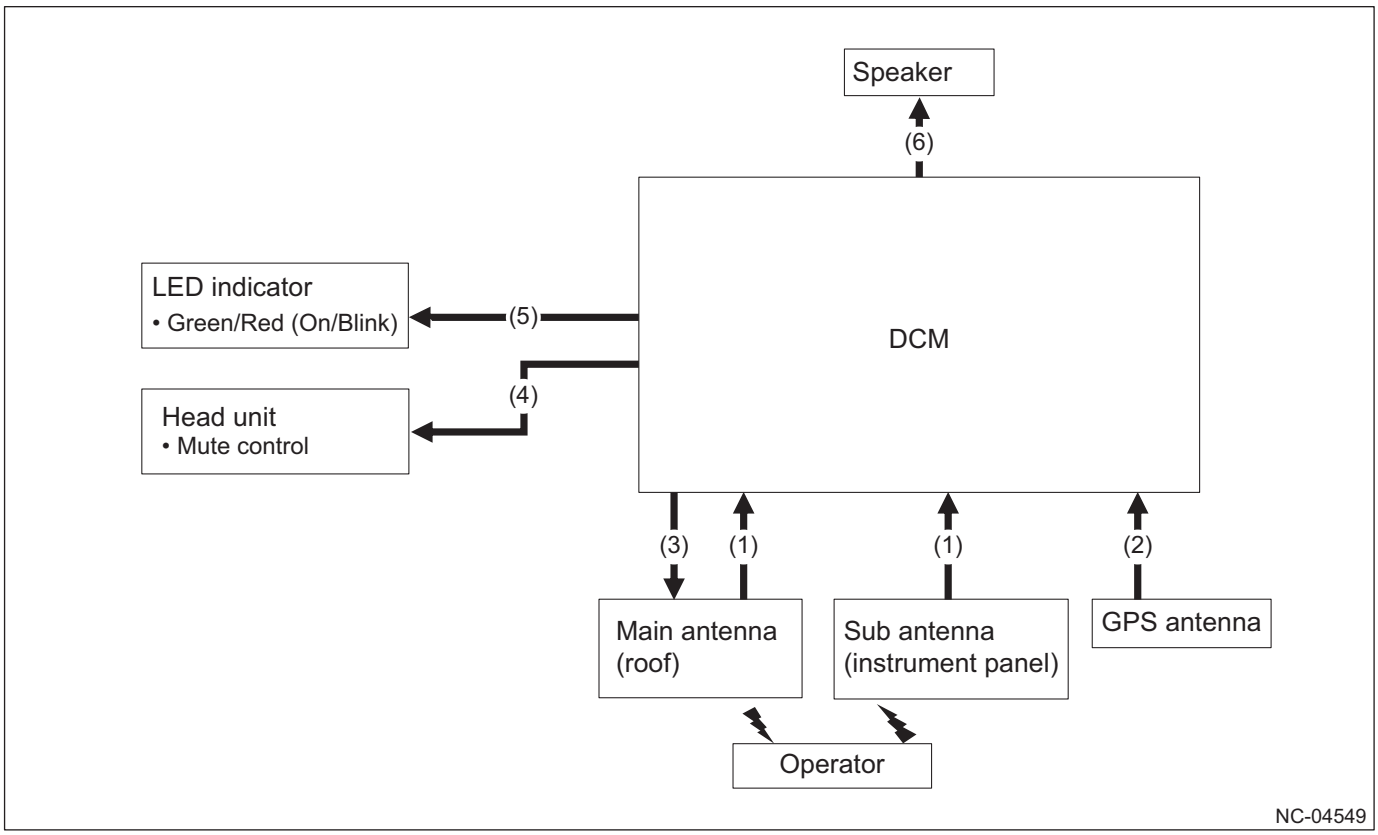
Security

Stolen Vehicle Recovery Plus (SVR Plus includes Vehicle Immobilization/Mobilization)

This is a function to assist recovering of the vehicle by the Telematics Customer Care Advisor working together with local law enforcement.

When the user notices that the vehicle was stolen and contacts the police, the case number is given, and by notifying that case number to the operator, the location information of the vehicle is acquired from DCM. However, the acquired location information is only notified to police and not to the user to prevent any danger.

An audio guidance of "Stolen Vehicle Recovery Service has been activated." is sounded when the service is started (It can acquire the location information even if the ignition is OFF. Also, the user will be notified by an e-mail when police has recovered the vehicle).



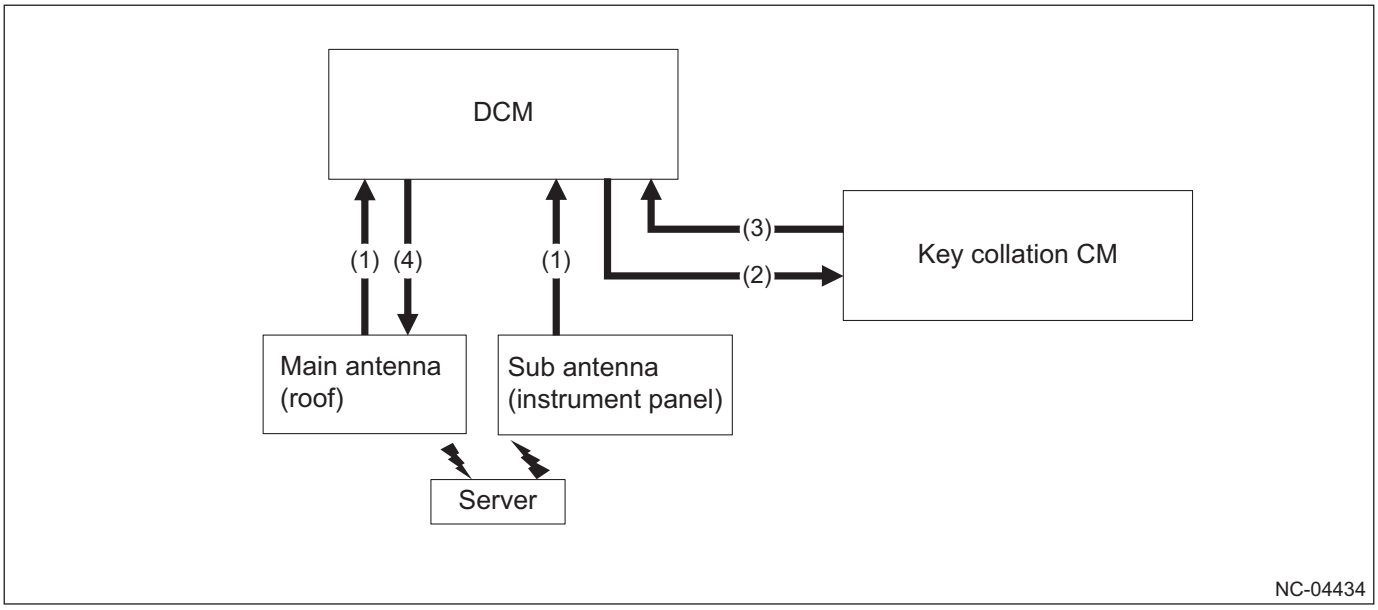
No.	Control description	Supported unit
1	Sends the stolen vehicle recovery request to DCM from the operator via the server.	Operator → server
2	Acquires the location information from the GPS.	DCM
3	Sends the result of 2 to the operator via the server.	DCM
4	Mutes the head unit.	DCM
5	Flashes the LED indicator (green/red).	DCM
6	Outputs the guidance to the speaker.	DCM

■ Stolen Vehicle Immobilizer

This is a function to disable the starting of the engine of the vehicle by sending a signal from the server to the stolen vehicle with the request from police.

It will make moving of the stolen vehicle difficult and assist recovery of the vehicle by combining the immobilizer function with the location information of the stolen vehicle. It is also possible to disable the stolen vehicle immobilizer when there is a request from police.

* It is not possible to stop the engine forcefully while driving.

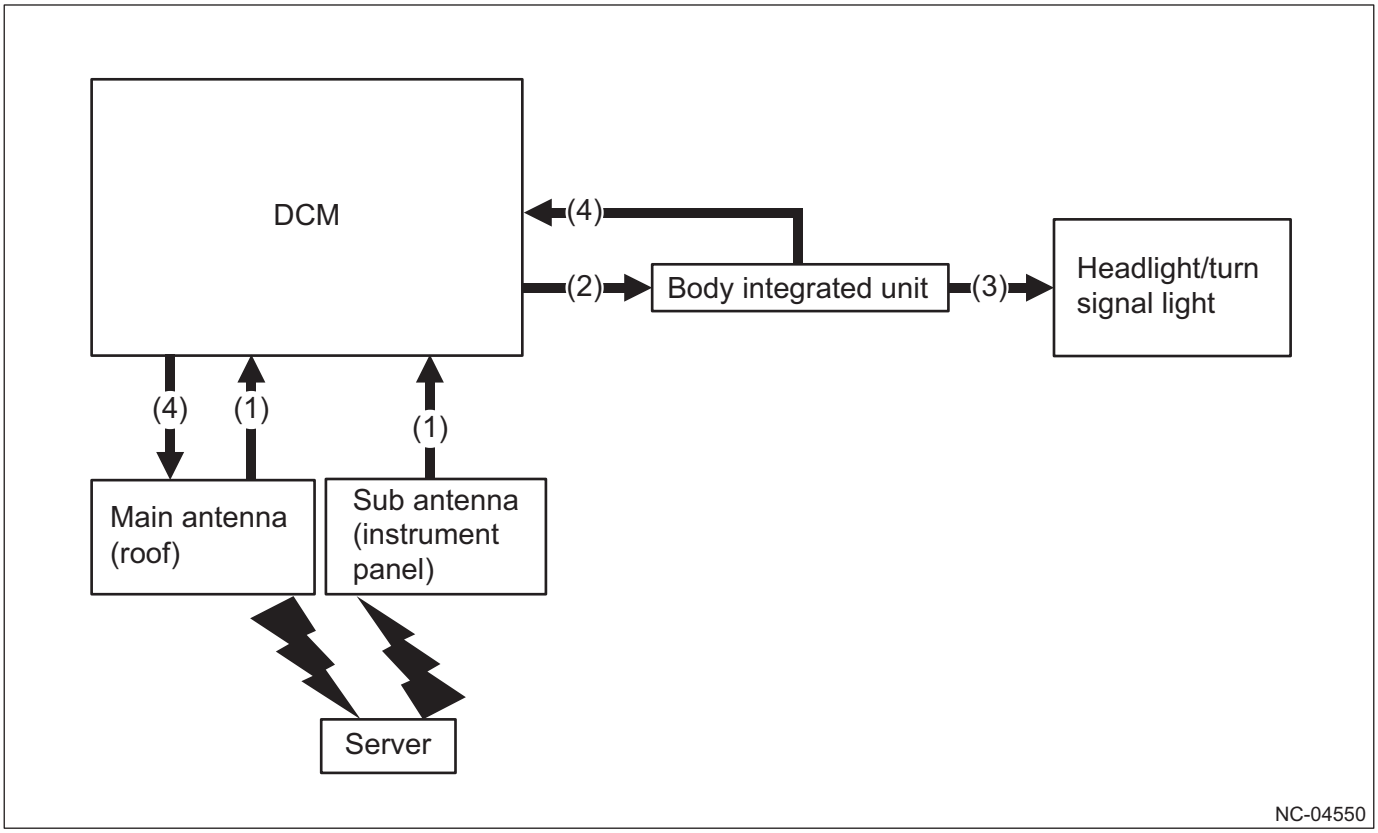


No.	Control description	Supported unit
1	Sends the immobilizer set request from the server to DCM (antenna).	Server
2	Sends the stolen vehicle immobilizer set request.	DCM
3	Sends the result to DCM.	Key collation CM
4	Sends the result to the server.	DCM

■ Stolen Vehicle Flashing Lights

This is a function to flash the lights of the stolen vehicle by sending a signal from the server to the stolen vehicle with the request from police.

This assists police identifying the stolen vehicle.

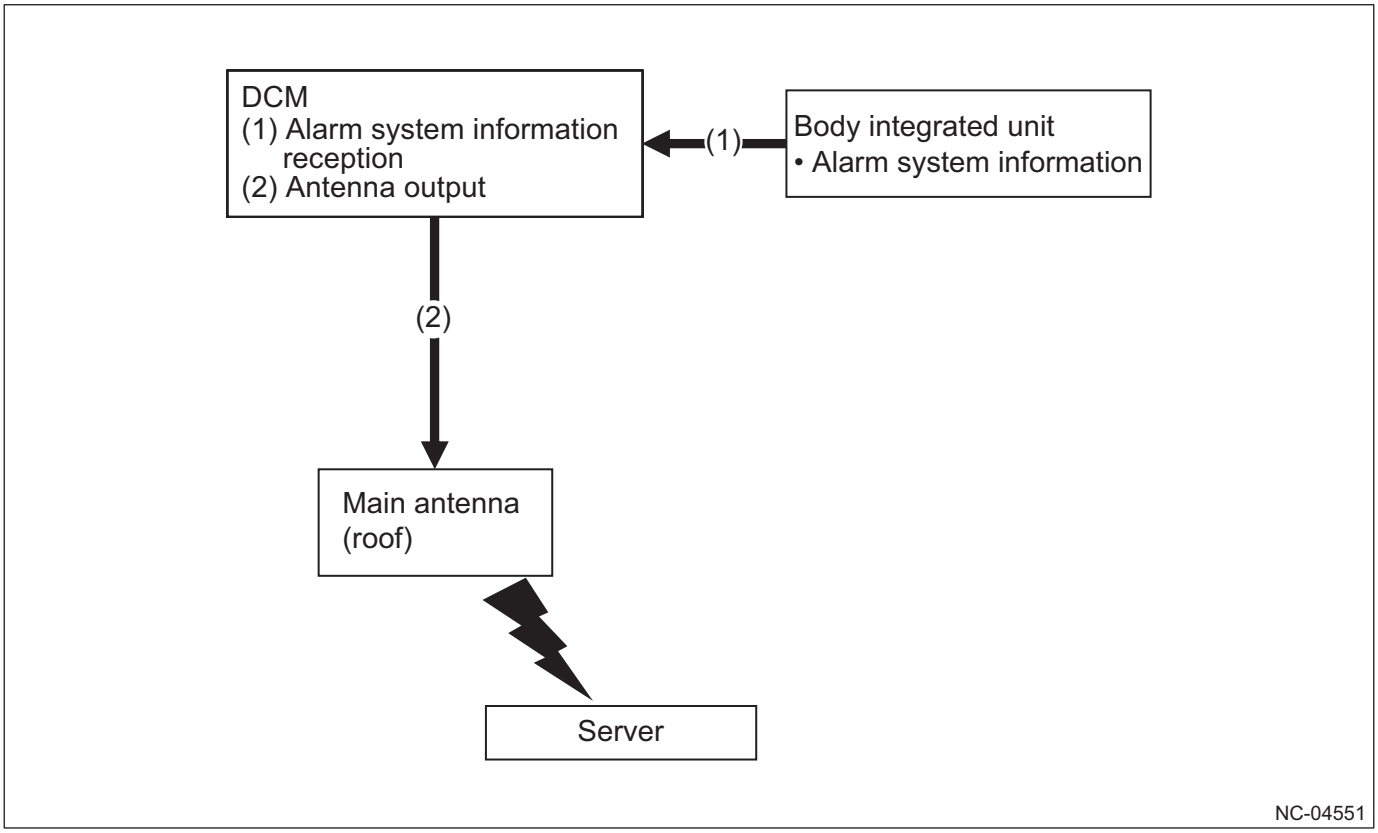


No.	Control description	Supported unit
1	Sends the light flashing signal from the server to DCM (antenna).	Server
2	Sends the light flashing signal.	DCM
3	Flashes the lights.	Body integrated unit
4	Sends the result to the server.	DCM

Vehicle Security Alarm Notification

This is a function to notify when the security alarm has activated.

The alarm system information and the location information of the vehicle are sent from DCM to the server when the security alarm of the vehicle is activated, and that is notified to the user from the server via telephone or e-mail.



No.	Control description	Supported unit
1	Sends the alert system information.	Body integrated unit
2	Notifies the server that 1 was received.	DCM

Connected Vehicle Feature

SUBARU STARLINK system Update

This is a function to download the DCM update data from the server using a wireless communication, and updates the DCM.

It was necessary for the user to schedule maintenance with a dealer and bring the vehicle to the dealer when an update was required with a service campaign or similar, but that frequency can be reduced by this function.

Call volume change function during telematics call

This is the function to adjust the call volume of the telematics call such as Advanced Automatic Collision Notification (AACN), SOS Emergency Assistance, and Emergency Roadside Assistance using the head unit volume dial knob.

11.3 Combination Meter/MFD/MID

11.3.1 System Display Screen Details

Multi-information display (MID) screen structure

MID contents

■ **Warning screen**

Rear seat reminder

The rear seat reminder prompts the driver to check things left behind on the rear seat after the push button ignition switch OFF or ignition switch OFF.

Operation

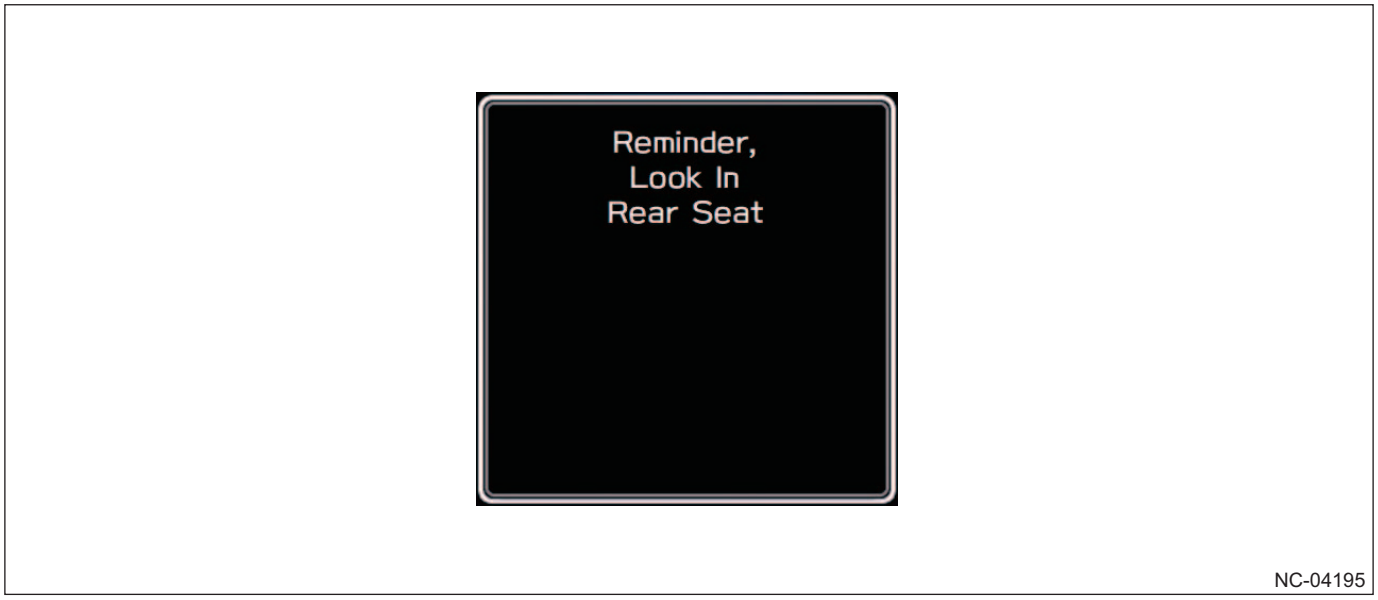
When there is a history of opening the rear door, by turning the push button ignition switch or ignition switch OFF, an interruption screen is displayed on MID for 10 seconds and a buzzer sounds for 2 seconds.

The rear seat reminder stops when any of the following operations is performed.

- Turning the push button ignition switch or ignition switch ON
- Opening the rear door

The history of opening the rear door is cleared in 30 minutes after turning the push button ignition switch or ignition switch OFF.

* The rear seat reminder can be turned on/off in the customizing screen of the multi-information display (MID).



12 ADVANCED SAFETY SYSTEM

CONTENTS

12.1 EyeSight

12.1.1 Overview

Lane centering control and preceding vehicle follow-up steering control are newly adopted for U5/C5 to realize superior prevention safety and reduction of burden of drivers. The systems recognize the lane markers on both sides or a preceding vehicle while adaptive cruise control is in operation to assist the driver's steering operation so that the vehicle can keep traveling near the center of the lane or follow the preceding vehicle.

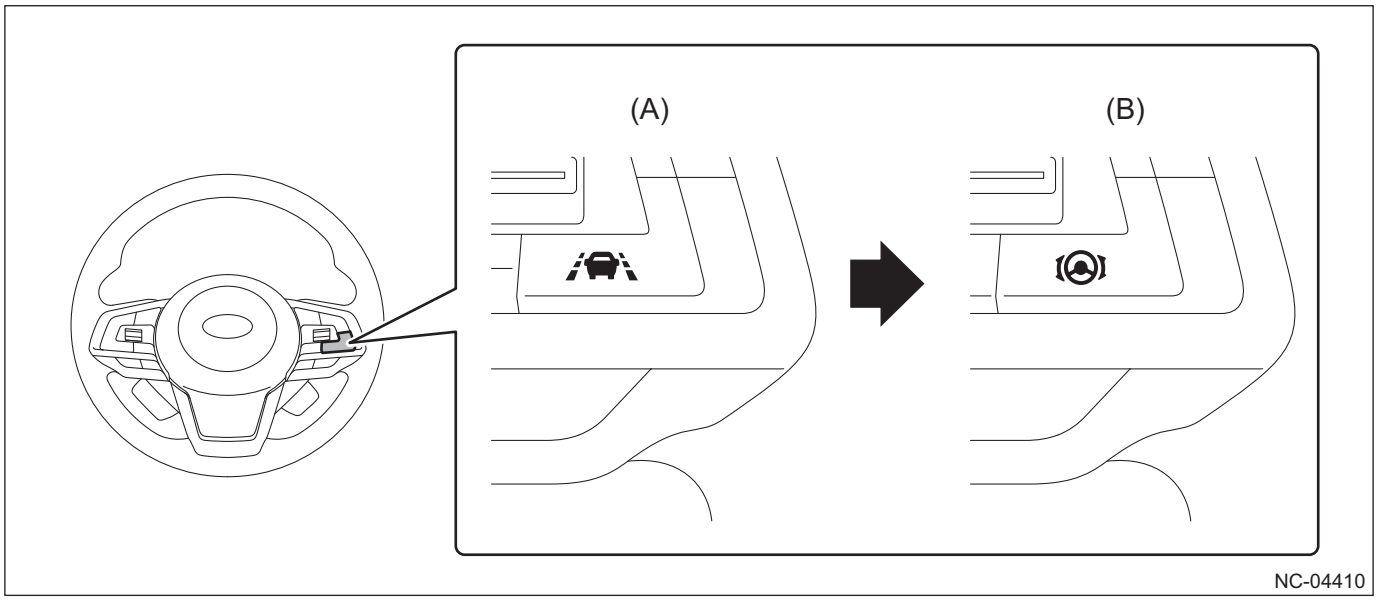
12.1.2 Component

Component details

Switch

■ Steering switch

The design of the lane keep assist switch is changed in accordance with the adoption of the Lane Centering Function.



(A) Existing model vehicle

(B) New model vehicle

12.1.3 Construction and Operation

Lane centering function

The system recognizes the right and left lane markers and assists the steering operation so that the vehicle can keep traveling near the center of the lane. Also, when the lane is not recognized on the narrow road or because of too short distance with the preceding vehicle, steering control to follow the preceding vehicle is performed.

Lane centering control

The lane centering control is activated when the following conditions are met.

- Adaptive cruise control is activated.
- The own vehicle is driving at approximately 0 to 90 MPH (0 to 145 km/h) or slower.
- Lane width is approximately 9.8 to 14.8 ft (3 to 4.5 m)
- The driver is operating the steering wheel.
- The system recognizes the lane markers on both sides.
- The vehicle is traveling on a straight line or mild curve.
- The vehicle is traveling near the center of the lane.
- The function is turned on in the customizing screen.

Preceding vehicle follow-up steering control

Preceding vehicle follow-up steering control is activated when the following conditions are met.

- Adaptive cruise control is activated.
- The own vehicle is traveling at approximately 37 MPH (60 km/h) or slower.
- The driver is operating the steering wheel.
- The vehicle is traveling on a straight line or mild curve.
- A preceding vehicle that can be followed on the course is recognized.
- The function is turned on in the customizing screen.

* When the own vehicle is traveling at approximately 25 mph (40 km/h) or slower, lane centering control and preceding vehicle follow-up steering control are interlocked and activated. Also, these controls are automatically switched depending on the road status and recognized information.

Display of multi-function display (MFD)

NC-04411

* EyeSight screen when brake ON

Display of multi-information display (MID)

NC-04440

(a) Preceding vehicle frame icon
(b) Lane marker icon
(c) Cruise control indicator light
(d) Steering wheel icon

The steering wheel icon indicates the status of steering control.

Steering wheel icon display

Steering wheel icon	Status of steering control	MID display
Green	Lane centering control and preceding vehicle follow-up steering control are in operation.	 NC-04412

Steering wheel icon	Status of steering control	MID display
White	Function is activated but steering control is not in operation.	 NC-04413
None	Lane centering control and preceding vehicle follow-up steering control are not activated.	 NC-04414

The lane marker icon and preceding vehicle frame icon indicate the status of steering control.

Lane marker icon and preceding vehicle frame icon displays

Icon display	Indicated information	MID display
Lane marker icon and preceding vehicle frame icon illuminate in blue.	Preceding vehicle is recognized and lane centering control and preceding vehicle follow-up steering control are in operation.	 NC-04415
Preceding vehicle frame icon illuminates in blue.	Preceding vehicle is recognized and preceding vehicle follow-up steering control is in operation.	 NC-04416
Lane marker icon illuminates in blue.	Lane marker is recognized and lane center keep control is in operation.	 NC-04417
Lane marker icon illuminates in gray.	Steering control is activated.	 NC-04418

Icon display	Indicated information	MID display
No icon is displayed.	Steering control is disabled.	 NC-04419

Unoperated steering warning

Alert	MID display
If the lane centering control and preceding vehicle follow-up steering control are in operation with the steering wheel not being operated for 13 seconds, the unoperated steering warning is displayed on the multi-information display (MID).	 NC-04420
After that, if the steering wheel is not operated for 7 seconds (20 seconds in total), a warning buzzer sounds and long-period unoperated steering warning is displayed on the multi-information display (MID).*	 NC-04421
If the steering wheel is not operated for another 25 seconds (45 seconds in total), a warning buzzer sounds, long-period unoperated steering warning is displayed on the multi-information display (MID), and lane centering control and preceding vehicle follow-up steering control are canceled.*	 NC-04422

* Warning buzzer and screen display continue until the driver starts to operate again.

Lane departure avoidance request warning

Alert	MID display
While lane centering control and preceding vehicle follow-up steering control are in operation, if the vehicle is determined to depart the lane due to failure of steering control, a warning buzzer sounds, warning display requesting to avoid a lane departure, and the lane marker icon on the direction of departure flashes in amber.	 NC-04423

Automatic cancellation by system

Alert	MID display
A warning buzzer sounds, cancellation screen is displayed, and lane centering control and preceding vehicle follow-up steering control are canceled.	 NC-04424

Lane departure prevention function

With newly adopted lane centering control and preceding vehicle follow-up steering control, lane departure prevention control shares the lane keep switch and screen display of the multi-information display with lane centering control and preceding vehicle follow-up steering control. Because of this, the switch design, icon display, and operation conditions are changed.

List of changes

	Current model vehicle	New model vehicle
Steering switch design	 NC-04552	 NC-04553
Multi-information display Icon display	 NC-04425	 NC-04426
Operating conditions	• The own vehicle is traveling at approximately 37 mph (60 km/h) to 90 mph (145 km/h). • The system recognizes the lane markers on both sides. • The driver is operating the steering wheel. • The vehicle is driving on a road with lane width of approximately 10 ft (3 m) to 15 ft (4.5 m). • The vehicle is traveling on a straight line or mild curve. • The vehicle is traveling near the center of the lane.	The following conditions are added to those for the current model vehicle. • Adaptive cruise control is not activated. Or adaptive cruise control is activated but lane centering control and preceding vehicle follow-up steering control are deactivated by the customization function.