1 **EV system**

2 **Charging operation**

3 **Things you must know**

The quick guide is not intended as a substitute for your “OWNER’S MANUAL”. We strongly encourage you to review the “OWNER’S MANUAL” and supplementary manuals so you will have a better understanding of your vehicle’s capabilities and limitations.

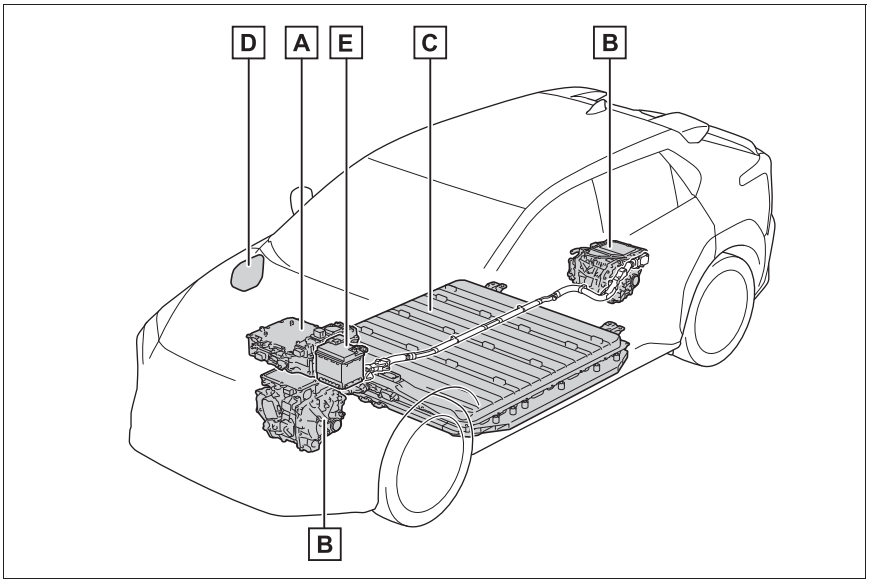
Depending on specifications, the vehicle shown in the illustration may differ from your vehicle in terms of equipment.

Electric Vehicle system features

Battery electric vehicles are considerably different from conventional vehicles.

They use electricity charged in a traction battery, to drive the electric motor. Since battery electric vehicles are driven using electricity, they do not emit any emissions such as CO_2 (Carbon Dioxide) and NOx (Nitrogen Oxides). Battery electric vehicles are environmentally friendly vehicles.

System components



The illustration is an example for explanation and may differ from the actual item.

A ESU: Electricity Supply Unit (built in onboard traction battery charger/DC-DC converter)

B eAxle (Traction motor / Inverter / Trans axle) (front/rear*)

C Traction battery

Provides electricity to the electric motor.

D Charging port

E 12-volt battery

Provides electricity to various vehicle systems such as the SRS airbags, headlights, wipers, etc.

*: AWD models only

Charging

The following methods can be used to charge the traction battery.

AC charging

This is a charging method used when charging from an AC outlet with the AC charging cable or charging that use an AC charger.
By setting charging schedule, it is also possible to charge at the desired date and time.

DC charging

This is a charging method that uses a DC charger that complies with SAE J 3400. The traction battery can be charged in a shorter time than AC charging.
SAE is an abbreviation for an industrial standard issued by the Society of Automotive Engineers.

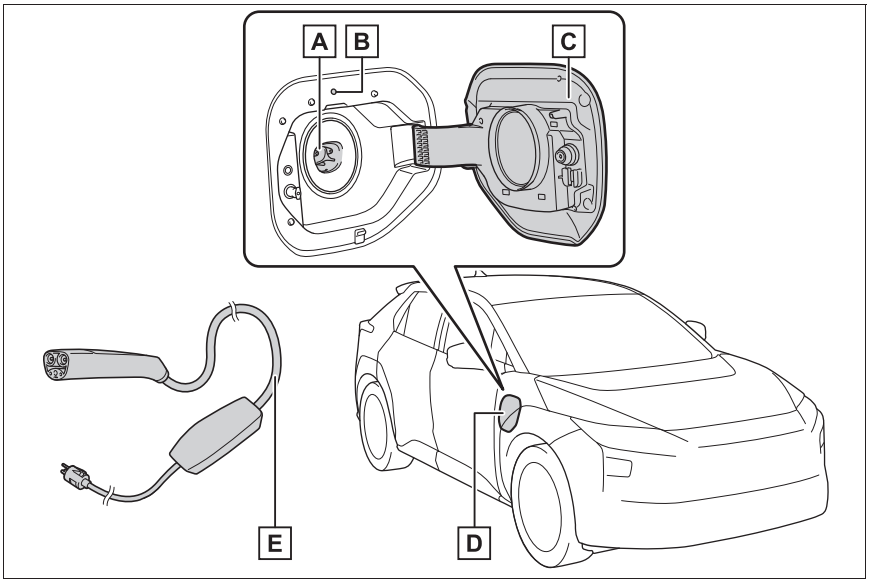
This is a charging method that uses a DC charger that complies with SAE J 3400. The traction battery can be charged in a shorter time than AC charging.

Acoustic Vehicle Alerting System

A sound which changes in accordance with the driving speed, will be played in order to warn people nearby of the vehicle's approach. This sound may be heard inside the vehicle. The sound will stop when the vehicle speed exceeds approximately 23 mph (37 km/h).

Charging equipment

Charging equipment and names



A Charging inlet

B Charging indicator and Charging inlet light

C Charging port lid

D Charging port

E AC charging cable*

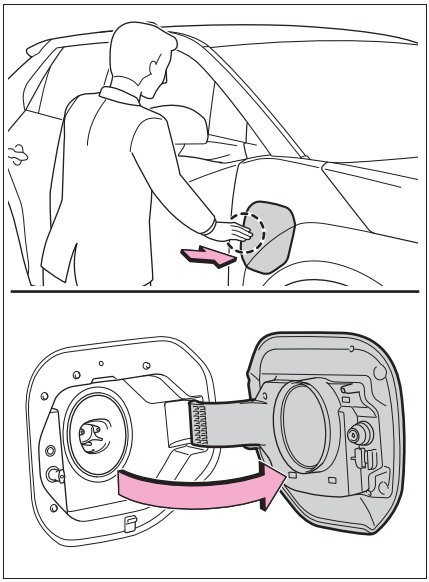
*: It is an example for explanation and may differ from the actual item. The AC charging cable can be purchased at your SUBARU dealer.

Opening/closing the charging port lid

Open

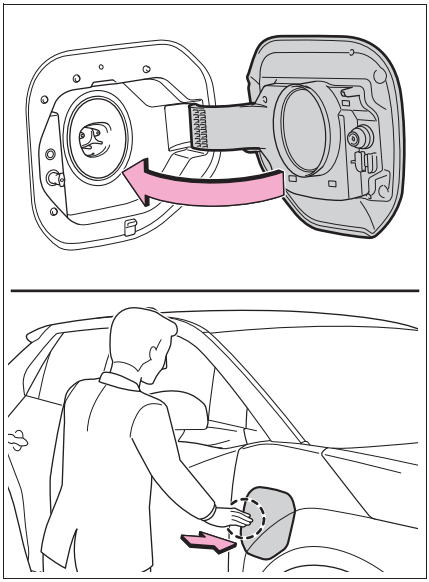
Slightly open the charging port lid by pressing the rear edge of it. (the position shown in the illustration)

Fully open the charging port lid by hand.



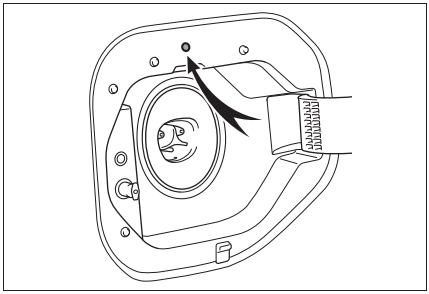
Close

Move the charging port lid to the slightly open position and then press the rear edge (the position shown in the illustration) to close it.



Charging indicator

The illumination/flashing pattern changes to inform the user of the charging status in the following ways.



Illumination/flashing pattern	Vehicle condition
Illuminated	• Charging is in progress*1 • Traction battery heater is operating
Flashes normally*2	When charging schedule is registered and AC charging cable is connected to vehicle
Flashes rapidly*2	When charging cannot be carried out due to malfunction in a power source or the vehicle, etc.

*1: The indicator is dimmed when the charging is done

*2: Flashes for a certain period of time, and then turns off.

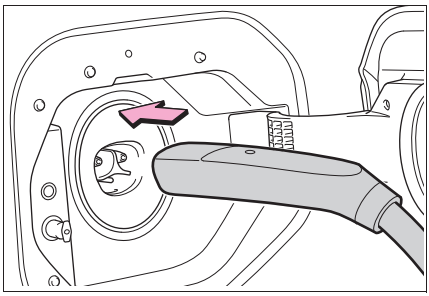
Locking and unlocking the AC charging connector

Helps to prevent the AC charging connector from being disconnected while charging or tampering such as someone other than the user taking away the charging cable.

Locking and unlocking the AC charging connector

Locking the AC charging connector

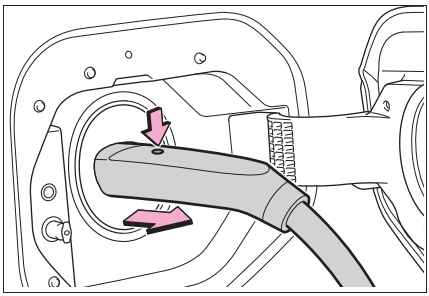
The AC charging connector will be automatically locked when inserting it into the charging inlet.



Unlocking the AC charging connector

The AC charging connector will be unlocked when the release button is pressed while carrying the electronic key on your person or when the doors are unlocked.

While charging is stopped, the AC charging connector will be unlocked when the doors are unlocked using the smart key system or wireless remote control.



Things to know before charging

WARNING

Charging precautions

This vehicle has been designed to allow charging from an external power source using an AC charging cable for exclusive use with standard household AC outlets. However, the vehicle differs greatly from standard household electrical goods in the following ways, and incorrect usage could cause fire or electric shock, possibly leading to death or serious injury.

- When charging, a large amount of current will flow for a long time.
- Depending on the charging environment, perform charging outdoors.

NOTICE

Charging precautions

To charge properly, follow the procedure after reading the explanation below. Charging is intended to be carried out by licensed drivers only who properly understand the charging procedure.

- Do not allow people who is not used to charging, such as children, to perform charging without supervision.
- When charging with a charger, follow the procedures for using each charger.

When charging using a public charging facility, check the setting of the charging schedule function.

- When the charging schedule is registered, temporarily turn off the function or turn “Charge Now” on.
- When the charging schedule is set to on, charging will not start even if the AC charging cable is connected. Also, charging fee may occur due to connection of the AC charging cable.

Confirm the following before charging

Before charging, always check the following items.

- The parking brake is applied.
- The power switch is turned to OFF.
- Lights such as the headlights, emergency flashers and interior lights, etc. are turned off.

  If these light switches are turned on, then these features will consume electricity, and charging time will increase.

How to use AC charging

NOTICE

When using the AC charging related parts

To prevent damage to the AC charging related parts, observe the following precautions.

- When removing the AC charging cable, check that the AC charging connector is unlocked.
- Do not apply a vibration to the AC charging connector while charging. Charging may be stopped.
- Do not insert anything but the AC charging connector into the charging inlet.
- Do not disassemble, repair or modify the charging inlet. When the charging inlet needs to be repaired, consult your SUBARU dealer.

When charging

1 Prepare the AC charging cable.

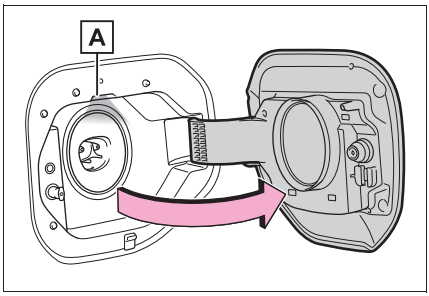
2 Insert the plug of the AC charging cable into the outlet of the external power source.

Make sure to hold the body of the plug and insert it firmly into the outlet.

When the remote switch is equipped, turn it on.

3 Open the charging port lid.

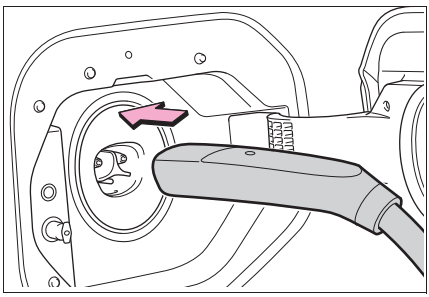
The charging inlet light [A] will illuminate.



4 Insert the AC charging connector into the charging inlet.

Align the guide position on the bottom of the AC charging connector, and push the AC charging connector straight into the charging inlet as far as possible.

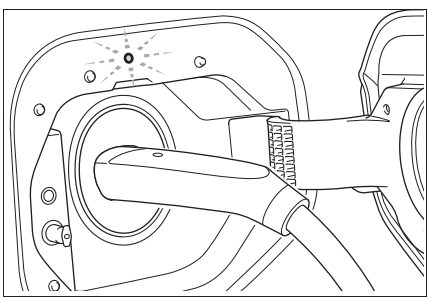
When the AC charging connector is inserted straight as far as possible, it will automatically lock.



5 Confirm that the charging indicator of the charging port is illuminated.

Charging will not start if the charging indicator does not illuminate when the AC charging connector is inserted.

If the charging indicator is flashing, the charging schedule is registered.



The charging indicator will turn off when charging is completed.

■ **During charging**

- The charging starting time may differ depending on the state of the vehicle, but this does not indicate a malfunction.
- During charging, sounds may be heard from near the traction battery in accordance with the operation of the air conditioning system or traction battery cooler.
- Depending on radio wave conditions, interference may be heard on the radio.

■ **Safety function**

If the release button is pressed, charging will not begin even if the AC charging cable is connected.

Also, charging will be stopped if the AC charging connector is unlocked during charging. When restarting charging, do one of the followings, and check that the charging indicator of the charging port illuminates.

- Remove and reinsert the AC charging connector
- Lock the doors

WARNING

When charging

Observe the following precautions.
Failure to do so may cause an unexpected accident, resulting in death or serious injury.

- Before charging, check that the charging inlet is not deformed, damaged or corroded, and check that the inlet is free of foreign matter such as dirt, snow and ice.
  If there is dirt or dust in these areas, remove completely before inserting the AC charging connector.
- Do not touch the terminals of the AC charging connector and charging inlet with a sharp metal objects (needles, etc.) or hands, or short them with foreign objects.
- In order to stop charging at the charging station, follow the instructions of the charger.
- If any heat, smoke, odors, noise or other abnormalities are noticed during charging, stop charging immediately.
- Do not charge the vehicle during a lightning storm.
- Prevent the AC charging cable from being caught in the door or back door.
- Make sure to connect the AC charging cable to a socket within reach and do not use an extension cord.
- Close the hood before using the charging system.
  The cooling fan may start operating suddenly. Touching or getting close to rotating parts such as the fan may cause your hands or clothes (especially a necktie or scarf) to become caught and result in a serious injury.

Onboard traction battery charger

The onboard traction battery charger is located in the motor compartment. Make sure to observe the following precautions regarding the onboard traction battery charger. Failure to observe these precautions may result in death or serious injury such as burns and electric shocks.

- The onboard traction battery charger is hot during charging.
  Do not touch the onboard traction battery charger, as doing so may result in burns.
- Do not disassemble, repair or modify the onboard traction battery charger. When the onboard traction battery charger needs to be repaired, consult your SUBARU dealer.

NOTICE

When charging

Do not insert the plug into the charging inlet.
The charging inlet may be damaged.

Using private power generator

Do not use private power generators as a power source for charging.
Doing so may make charging unstable, the voltage may be insufficient, and the charging operation may stop.
Noise may be heard from around the motor room, even if charging can be continued.

Charging station

Due to the environment in which the power equipment is located, charging may be unstable due to noise, the voltage may be insufficient, and the charging operation may stop.

After charging

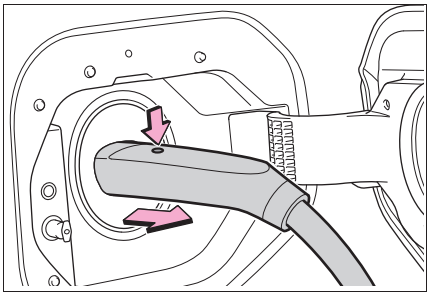
1 Stop charging on the meter display, or unlock the AC charging connector by pressing the release button.

If the AC charging connector is removed and then immediately reconnected, charging will no longer able to be stopped on the meter display. In this case, if the AC charging connector is removed, charging can be stopped on the meter display next time.

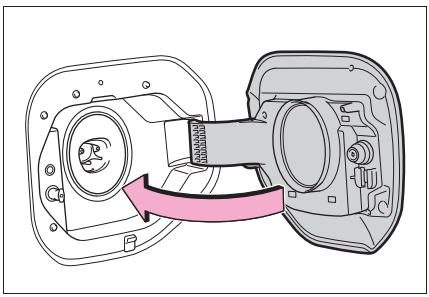
If the release button is pressed during charging (while the charging indicator is illuminated), charging will be interrupted.

2 Make sure to hold the body of the AC charging connector and pull it towards you.

If the charging stop switch is pressed during charging (while the charging indicator is illuminated), charging will be interrupted.



3 Close the charging port lid.



NOTICE

After charging

After removing the AC charging connector from the charging inlet, make sure to close the charging port lid.

If the charging port lid is left open, water or foreign objects may enter the charging inlet, which could lead to vehicle damage.

How to use DC charging

WARNING

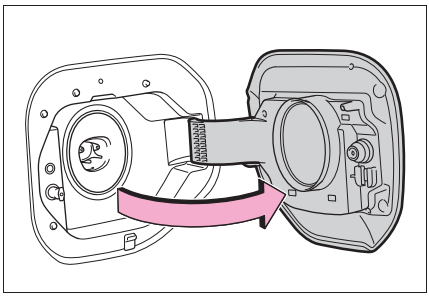
When using a DC charger

Observe the following precautions.
Failure to do so may cause an unexpected accident, resulting in death or serious injury.

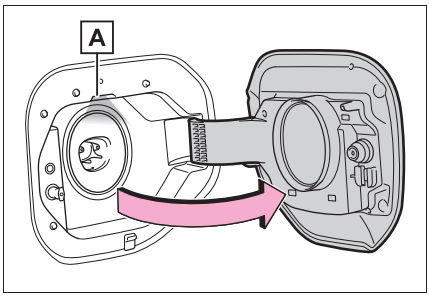
- Use a DC charger that complies with SAE J 3400.
- By using a conversion adapter, A DC charger that complies with SAE J 1772 can be used.
  Use only a conversion adapter provided by SUBARU.
  When using a DC charger, follow the instructions in the manual provided with the DC charger and perform the operation safely.
- Do not use the charging cable longer than 30 meters.

When charging

1 Open the charging port lid.



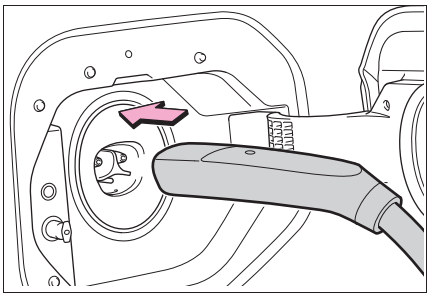
2 The charging inlet light [A] will illuminate.



3 Insert the DC charging connector into the charging inlet.

Insert the DC charging connector and it will lock automatically.

The DC charging connector shape and treatment will differ depending on the type of DC charger. Perform the operations in accordance to handling procedures of the DC charger.



4 Operate the DC charger and start the charging.

Follow the handling procedures of the DC charger to start charging.

Charging starts after a system check is done.

Stop the charging in accordance to the handling procedures of the DC charger when it is desired to interrupt the DC charging.

During DC charging

- The current charging condition can be checked on the multi-information display.
- The actual charging time may differ from that displayed on the DC charger during charging.
- There may be occasions the radio cannot be heard due to noise occurrence during DC charging.
- As the battery approaches full charge, the charging speed will decrease and it will take longer to complete charging.
- Depending on the specifications of the charger, charging will stop before fully charging.
- The time to complete charging may change, or charging may stop before reaching the upper limit of the charge capacity, due to the remaining charge of the traction battery, the outside temperature, the specifications of the charger, etc.
- When DC charging using an adapter, protection functions may activate depending on the outside temperature or the usage, resulting in longer charging times, DC charging suspensions, or charging not starting.
- It is recommended to avoid frequent DC charging to prevent a decline in the traction battery capacity.
- Quickly move from the DC charging space for other users after the DC charging is completed.
- If DC charging is performed while the traction battery is extremely cold, such as in cold weather, steam may come out of the motor compartment or dew may be formed on the hood. This is because the heat, generated while the traction battery is warmed, causes snow, ice, or frost to evaporate. This is not a malfunction.
- The charge amount is corrected when the traction battery is fully charged, so 100% remaining the traction battery may not be displayed.

WARNING

■ Warnings for DC charging

Be sure to observe the following when using DC charging.
Failure to do so may cause an accident that could lead to death or serious injury.

- Check that the DC charger and the charging inlet are not damaged. If there is any damage to the charging inlet, do not perform a DC charge and have it inspected immediately at your SUBARU dealer.
- Do not touch the terminals of the DC charging connector or inlet with metallic sharp tips (wires and needles), or allow a short circuit to occur with foreign objects.
- Do not insert anything other than the DC charging connector into the charging inlet.
- Check that the DC charging cable is not coiled up or pinned underneath heavy objects.
- Do not connect conversion adapters, extension cords, etc. other than those provided by SUBARU, between the DC charging connector and charging inlet.
- When DC charging is interrupted, follow the handling procedures of the DC charger.
  Immediately stop the DC charging when there is an outbreak of heat, smoke, strange noises or smells, etc., during charging.
- Check that the DC charging connector and the charging inlet do not have foreign objects or snow or ice attached to it.
  If anything is attached to the inlet, be sure to completely remove the material before connecting the DC charging connector.
- Do not charge the vehicle when there is a possibility of lightning.
  If you notice lightning while charging the vehicle, do not touch the vehicle and the DC charging cable.
- Do not get the charging inlet terminals wet.
- Close the hood when using DC charging.
  The cooling fan may suddenly start to run. Keep hands and clothing (especially a tie, a scarf or a muffler) away from the fan. Failure to do so may cause the hands or clothing to be caught, resulting in serious injury.

WARNING

When connecting the DC charging connector

- Follow the handling procedures of the DC charger to connect the DC charging connector. If the connector is not connected properly, the system cannot recognize the connection, and it may be possible to start the EV system.
- Do not remove the DC charging connector from the charging inlet during DC charging. After operating the DC charger to stop charging, remove the DC charging connector from the charging inlet.

NOTICE

When using DC charging

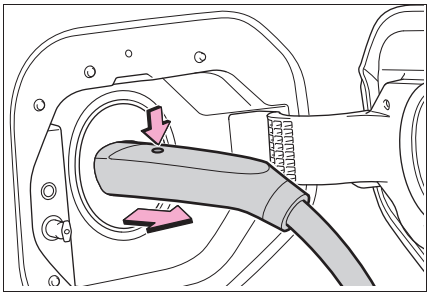
Make sure to follow the handling procedures of the DC charger. If the procedures are not followed properly, the vehicle and the DC charger may be damaged.

After charging

1 Operate the DC charger and stop the charging.

The DC charging connector will be unlocked automatically when charging is completed, while carrying the electronic key on your person or when the doors are unlocked.

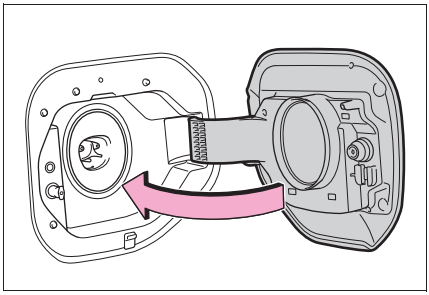
2 Remove the DC charging connector.



The DC charging connector shape and treatment will differ depending on the type of the DC charger.
Perform the operations in accordance to handling procedures of the DC charger.

Return the removed DC charging connector to its original position.

3 Close the charging port lid.



WARNING

Cautions after DC charging

After charging is completed, make sure to remove the DC charging connector from the charging inlet before starting the EV system.

If the vehicle is started off with the connector still connected, it could lead to an accident, possibly resulting in death or serious injury.

NOTICE

Precautions after DC charging

Be sure to close the charging port lid after removing the DC charging connector from the inlet.

Using the charging schedule function

Settings of the charging schedule function

When registering the charging schedule, the following settings can be changed.

■ Select the charging mode

One of the two following charging modes can be selected.

▶ “Start”

Starts charging at the set time* and finishes charging when fully charged.

▶ “Start and stop”

AC charging is performed according to the set start time and stop time.*

*: There might be a slight error in the timing when charging starts due to the state of the traction battery.

■ Repeated setting

The periodic charging schedule can be set by selecting your desired day of the week. Select one or more day of the week to do the charging schedule.

■ Turning “Charge Now” on and off

To start charging without changing the charging schedule setting, turn “Charge Now” on to temporarily cancel the charging schedule and enable charging after connecting the AC charging connector.*

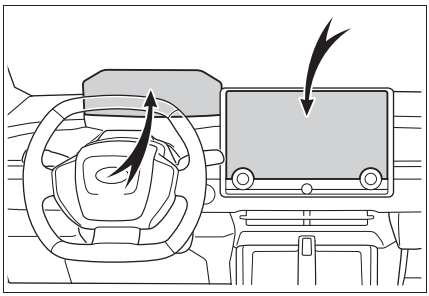
*: If the AC charging connector is removed while the charging schedule is registered and “Charge Now” is on, “Charge Now” turns off.

■ “Next Event”

Of the registered charging schedules, the closest charging schedule after the current time is called the “Next Event”.
For charging schedule, AC charging will be performed according to the Next Event.

Registering the charging schedule

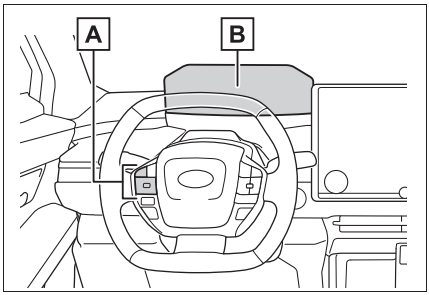
The charging schedule can be registered on the multimedia.
Only “Charge Now” can be set on the multi-information display.



Setting operations on multi-information display

When operating charging schedule, use the meter control switches.

A Meter control switches
B Multi-information display



■ Setting “Charge Now” to on

▶ Operation on “Closing Display” screen

1 Turn the power switch off.

The “Closing Display” screen will be displayed on the multi-information display.
(If the door is opened while waiting for charging schedule, the same screen will be displayed.)

2 Press OK to set “Charge Now” to on.

Each time “OK” is pressed, “Charge Now” switches between on and off.

After setting operations are complete, charging starts when the AC charging connector is connected.*

*: If the AC charging connector is removed while the charging schedule is registered and “Charge Now” is on, “Charge Now” turns off.
If “Charge Now” cannot be set to on even when performing the operations above, remove the AC charging connector while the charging indicator is flashing at the normal speed and then immediately reconnect it.
If this operation is performed, the setting of charging current and the upper limit of the electric current will be temporarily initialized.

Setting operations on multimedia

For details on how to operate the audio system screen, refer to “MULTIMEDIA OWNER’S MANUAL”.

Setting operations related to the charging schedule are performed on the “Charging schedule” screen.

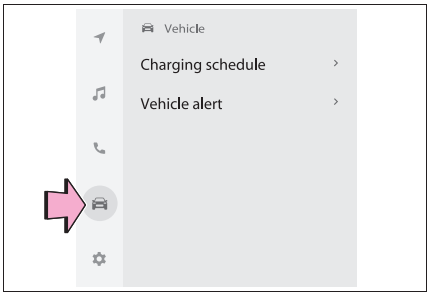
■ Displaying the “Charging schedule” screen

1 Turn the power switch ON and display the menu screen.

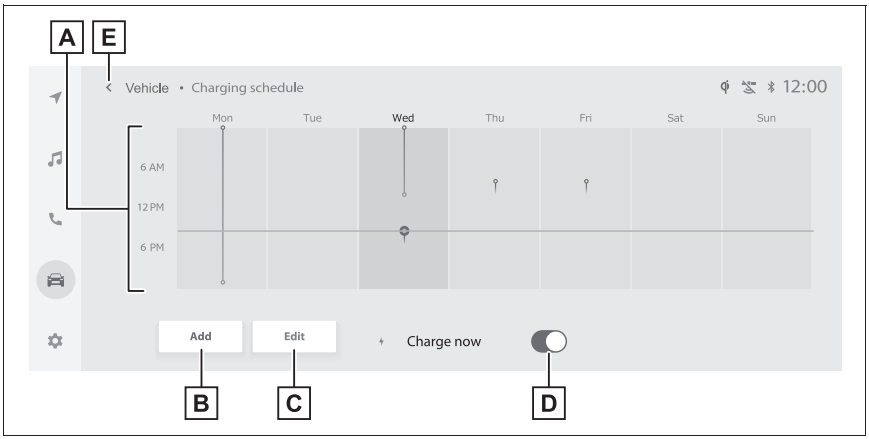
It is not possible to control the Charging schedule settings in Accessory Mode.

2 Select and “Charging schedule”, in that order.

The “Charging schedule” screen will be displayed.



How to read the “Charging schedule” screen



A Charging schedules

Displays the week-long registered charging schedule in a list using icons.

B “Add” button

Press to add a new item to the charging schedule.

C “Edit” button

Press to change or delete registered items on the charging schedule.

D “Charge now” button

Each time the button is pressed, “Charge now” switches between on and off.

E Return button

Press to close the “Charging schedule” screen.

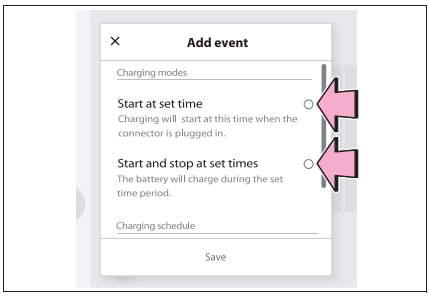
■ Registering the charging schedule

1 Display the “Charging schedule” screen.

2 Press “Add”.

The “Add event” screen will be displayed on the screen.

3 Select the charging mode.
Select the button in the row of the “Start at set time” or “Start and stop at set times”.



4 Operate “Start at set time” screen and select desired time, and then select OK.

When the charging mode is “Start at set time”, set the charging start time.
When the charging mode is “Start and stop at set times”, also set the charging stop time.

5 When activating the repeated settings, select the desired day, and then select OK.

Each time the day is selected, the repeated setting for the selected day switches between on and off.
When turned on, the check box is highlighted and the charging schedule is repeated on that day. It is possible to turn more than one day on.

6 After setting operations are complete, press “Save”.

The charging schedule is added to the list and an icon is added to the “Charging schedule” screen.

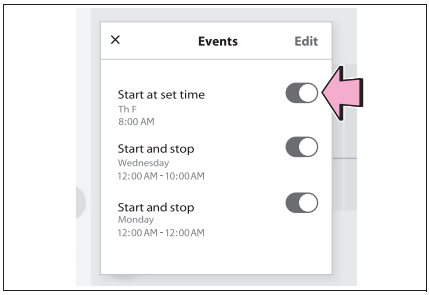
■ Switching charging schedules between on and off

1 Display the “Charging schedule” screen.

2 Press “Edit”.

The “Events” screen will be displayed on the screen.

3 From the items displayed on the screen, press on or off in the row of the charging schedule you wish to change.



If the charging schedule you wish to change is not displayed on the screen, scroll the list up and down to display it.

Each time the button is pressed, the charging schedule switches between on and off.

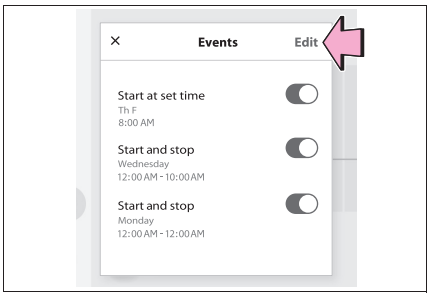
■ Changing the registered charging schedules

1 Display the “Charging schedule” screen.

2 Press “Edit”.

The “Events” screen will be displayed on the screen.

3 Press “Edit” on the “Events” screen.



4 From the items displayed on the screen, press “Edit” in the row of the charging schedule you wish to change.

● Changing registered items:

Change the desired settings as described starting from step 3 of the “Registering the charging schedule” procedure.

When a setting is changed, its icon on the calendar also changes.

● Deleting registered items:

Press “Delete”.

A deletion confirmation message will be displayed.

Press “Delete” to delete the selected charging schedule.

When a charging schedule is deleted, its icon is also deleted from the “Charging schedule” screen.

■ Turning “Charge now” on

1 Display the “Charging schedule” screen.

2 Press “Charge now”.

Each time the button is pressed, “Charge now” switches between on and off.

After setting operations are complete, charging starts when the AC charging connector is connected.

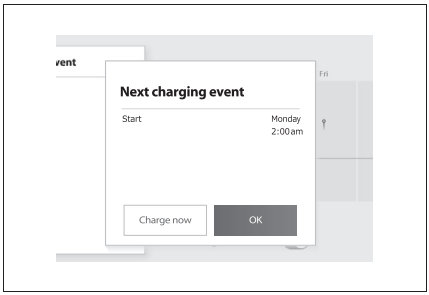
If “Charge now” cannot be set to on even when performing the operations above, remove the AC charging connector while the charging indicator is flashing at the normal speed and then immediately reconnect it.

If this operation is performed, the setting of charging current and the upper limit of the electric current will be temporarily initialized.

■ Displaying next event

Turn the power switch off.

Next event will be displayed according to the charging schedule settings.*



*: If the multimedia customize content “ACC customize” is not set to OFF, the ending screen will not be displayed. If it is this case, check the settings of the multimedia.

When press “OK”, close Next charging event screen.

When press “Charge now”, charge now is turned on.

■ **When all charging schedules are turned off**

The icon is not displayed on the “Charging schedule” screen.

The icon will be displayed by turning it ON on the “Events” screen.

■ **When charging schedule setting operations are canceled**

When the vehicle is in the following conditions, charging schedule setting operations are canceled.

- The power switch is turned off before the settings are confirmed
- The vehicle starts off
- A display with a higher priority than that of the charging schedule setting is shown

■ **When charging schedule are changed while charging**

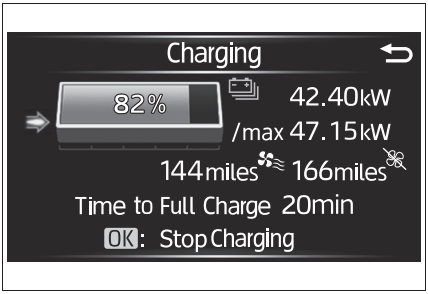
If the charging schedule is changed, Next Event will be updated and charging may stop. After changing the charging schedule, please check Next Event.

If you want to continue charging, turn on “Charge now”.

Checking information related to charging

Information related to charging is displayed and can be checked on the multi-information display.

■ While charging



When any door is opened during charging with the power switch off, the current charging condition and approximate time remaining until charging is complete are displayed for a certain period of time.

The actual charging time may differ depending on conditions such as the remaining capacity of the traction battery, outside temperature, and specifications of the charger.

The time until charging completed may not be displayed if the charging current to the traction battery becomes smaller and the charging time becomes longer.

■ After charging is complete

When any door is opened with the power switch off after charging is complete, a message detailing the results of the charging is displayed for a while.

Also, a message is displayed if an operation that stops charging is performed or a situation where charging cannot be performed occurs.

Using My Room Mode

When the charging cable is connected to the vehicle, electrical components such as the air conditioning system and audio system can be used by the power supply from an external power source.

Starting My Room Mode

1 Connect the charge cable to the vehicle to start charging.

2 Turn the power switch to ON while charging.

My Room Mode settings is automatically displayed on the multimedia.

3 Select the “Yes”.

My Room Mode is started and it is possible to use the air conditioning system, audio system, etc.

Select “No” and press “OK” when My Room Mode is not being used.

To disable My Room Mode, turn the power switch off.

My Room Mode will automatically be off when DC charging is completed.

When using My Room Mode the following may occur

- When the remaining charge of the traction battery drops to the lower limit, the air conditioning system automatically stops. In that case, the air conditioning system can not operate until the remaining charge of the traction battery increases. Turn off the power switch once, then use My Room Mode after the remaining charge of the traction battery increases.
- The charging time of the traction battery gets longer.
- Noise may be heard from the radio depending on conditions of the radio wave.
- The surrounding area of the onboard traction battery charger in the motor compartment may become hot.
- The electric power steering system warning light (yellow) may turn on, but this is not a malfunction.
- When charging the battery in normal mode, the amount of charge is controlled so that the battery is not fully recharged in order to maintain the My Room Mode.

Things you must know

Regenerative braking

In the following situations, kinetic energy is converted to electric energy and deceleration force can be obtained in conjunction with the recharging of the traction battery.

- The accelerator pedal is released while driving with the shift position in D.
- The brake pedal is depressed while driving with the shift position in D.

WARNING

When driving the vehicle

The driver should pay extra attention to pedestrians. As there is no engine noise, the pedestrians may misjudge the vehicle's movement.

Even though the vehicle is equipped with the Acoustic Vehicle Alerting System, drive with care as pedestrians in the vicinity may still not notice the vehicle if the surrounding area is noisy.