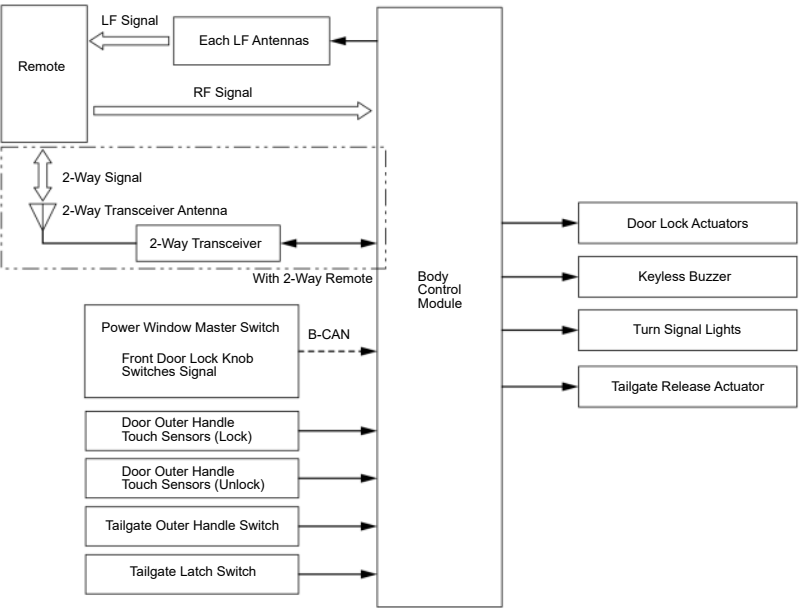


Keyless Access System Description

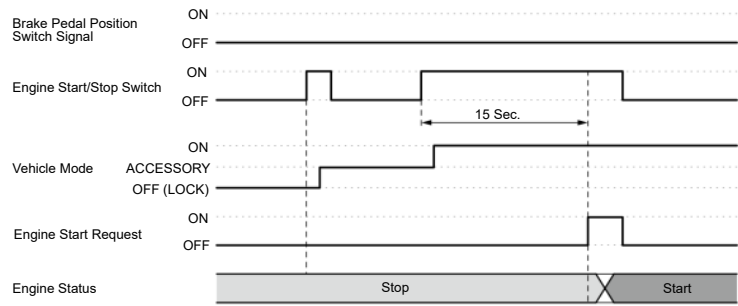
Smart Entry Function

The body control module detects the input signal of the door outer handle touch sensor (Lock), door outer handle touch sensor (Unlock), tailgate outer handle switch, and authenticates a 2-way communication with the remote. The body control module then activates the door lock actuators or tailgate release actuator, and an answer back. For details on the illumination patterns of the warning lights and the functional check of the system, refer to keyless access system symptom troubleshooting information.



Engine Start (When Brake Line Failure) (CVT)

If a failure occurs in the line between the brake pedal position switch and body control module, the engine cannot be started due to no brake signal detections. Therefore, the vehicle has a function that can start the engine by pressing and holding the engine start/stop button for 15 seconds or more with the vehicle in ACCESSORY.



Smart Entry Answer Back

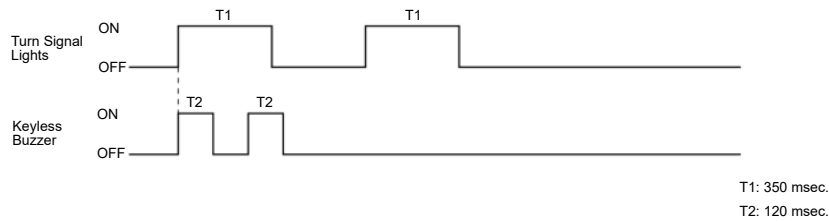
Lock

When the body control module receives a lock signal, it sends a signal to the turn signal lights and keyless buzzer sounds.



Unlock

When the body control module receives an unlock signal, it sends a signal two times to the turn signal lights and keyless buzzer sounds.

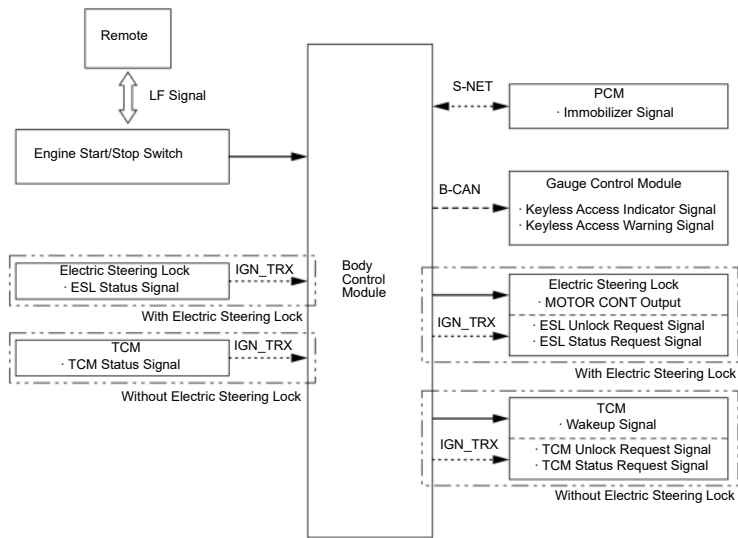


Remote Search Function

Every time the doors are detected as opened or closed with the vehicle in the ACCESSORY/ON mode, the remote search function determines if the remote is present inside the vehicle. When the remote is taken out of the vehicle, the keyless buzzer sounds, and the gauge control module (Only when the vehicle is in the ON mode) shows a warning.

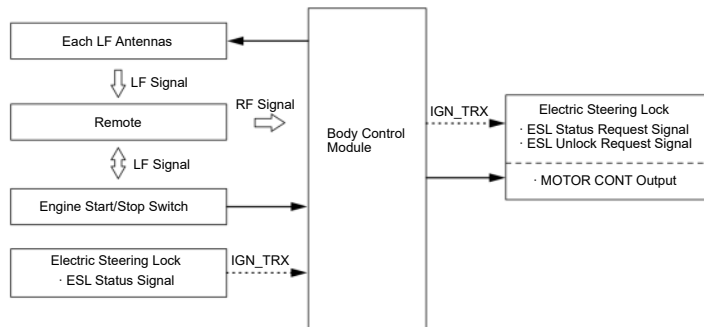
Backup Communication Function

When key authentication between the remote and the body control module is not possible because of a system abnormality, or a drop of the battery voltage of the remote, the immobilizer function can be canceled by pressing the engine start/stop switch button once and bringing the remote close to the engine start/stop switch while the engine start/stop switch indicator is flashing. This causes the immobilizer signal to be sent to the body control module via the LF antenna of the engine start/stop switch.



Electric Steering Lock (With Electric Steering Lock)

The electric steering lock control unit is built into the electric steering lock and controls the steering lock motor. When the remote code is identified, the electric steering lock control unit unlocks the steering lock by controlling the steering lock motor.



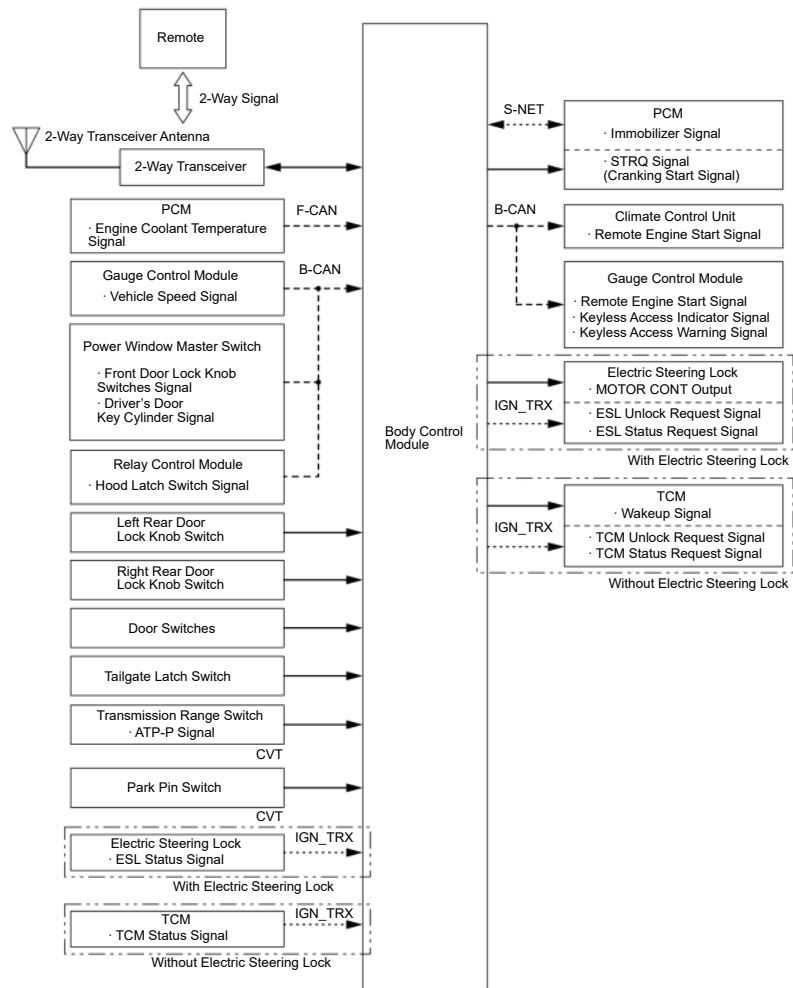
Remote Engine Start System (With Remote Engine Start Function)

Engine Start

The remote engine start feature is initiated by first pressing the lock button, then pressing and holding the "START" button within 5 seconds on the remote. An RF signal from the remote is received by the body control module, which then sends the request to start the engine to the PCM. At the same time, the body control module authenticates the key for the immobilizer system. The PCM starts the engine and sends feedback to the body control module indicating the status of the engine.

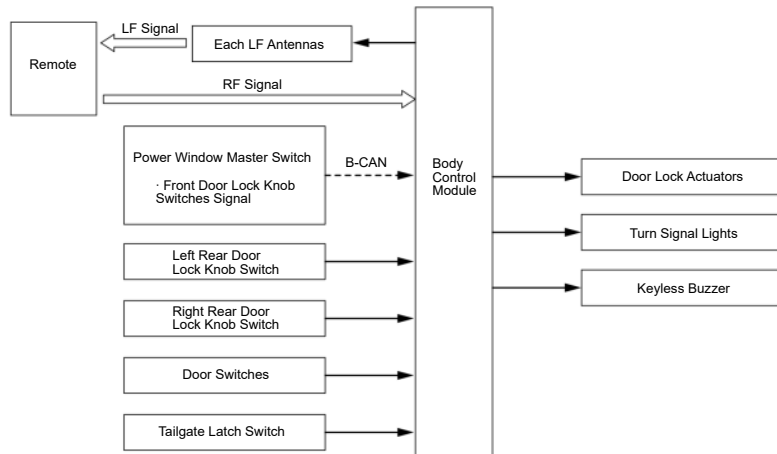
Remote Engine Start Link

According to outside air temperature, the climate control, rear window defogger, seat heater, and mirror defogger operate while the remote engine start is operating.



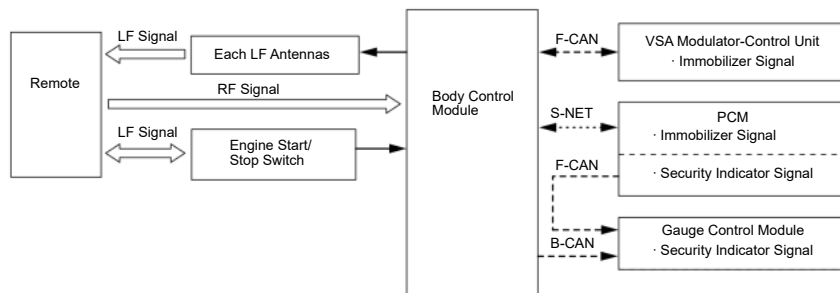
Key Lockout Prevent Function

The body control module monitors whether or not the remote is in the vehicle. If the remote is in the vehicle, the system will not lock the doors. If the driver manually locks and closes the doors with the remote in the vehicle, the body control module energizes the door lock actuator and unlocks the doors. Also, if the tailgate is closed with the remote in the vehicle, all the doors are closed, and the driver's door lock knob is in the lock position, the body control module energizes the door lock actuator and unlocks the doors. In addition, when the keyless lockout prevent function operates, the answer back is performed.



Immobilizer Function

The immobilizer function provides mutual authentication between the body control module, PCM, and VSA modulator-control unit when the vehicle is turned to the ON mode. The engine stays running after engine start-up if the immobilizer signal matches. The body control module authenticates the VSA modulator-control unit and the immobilizer signal only one time, when the vehicle is turned to the ON mode after resetting of the 12 volt battery, removing and installing the back-up fuse or removing and installing the VSA modulator-control unit. For some models, the brake pedal must be depressed to perform the immobilizer authentication.



Alarm Function

The alarm function detects if the doors are opened or closed with the vehicle in the ACCESSORY/ON mode. When the remote is taken out of the vehicle, the keyless buzzer will sound and the gauge control module (Only when the vehicle is in the ON mode) will show a warning. Before the remote battery level falls to the point where the remote cannot be detected, the gauge control module will show a warning and an alarm will sound.

Registration Facility

The body control module can store up to 6 remotes using the HDS.

Fault Diagnosis Function

The system has a fault diagnosis function. If any malfunction occurs, the keyless access indicator comes on in the gauge control module.

Customer Emergency

When the engine start/stop button is pressed continuously at least three times or once for 1.5 seconds or longer in an emergency while driving, the engine turns off, and the vehicle mode switches to the ACCESSORY mode. Furthermore, pressing the engine start/stop button while driving will set off a buzzer several times in order to avoid unintended operation of the engine start/stop button.

Walk Away Auto Lock Function (If Equipped)

The walk away auto lock system detects where the remote is and locks all the doors on the vehicle when all the doors and tailgate are closed and the remote is outside of the vehicle and out of range.

To operate the walk away auto lock system, it is necessary to enter the auto lock mode.

To enter the auto lock mode, all of the following conditions must be met:

- The vehicle is in the OFF (LOCK) mode.
- All the doors and tailgate are closed.
- The remote is not inside of the vehicle.
- The remote is outside and within 1.5 m (5 ft) of the vehicle.

The vehicle's buzzer beeps once to confirm that the auto lock mode is engaged.

When the remote is carried beyond 1.5 m (5 ft) from the vehicle and remains outside of this range for more than 2 seconds, the system engages and locks all of the doors. At that time, the keyless buzzer sounds and some exterior lights will flash. However, if the remote remains within 1.5 m (5 ft) from the vehicle for 30 seconds or more after entering the auto lock mode, the doors will automatically lock.

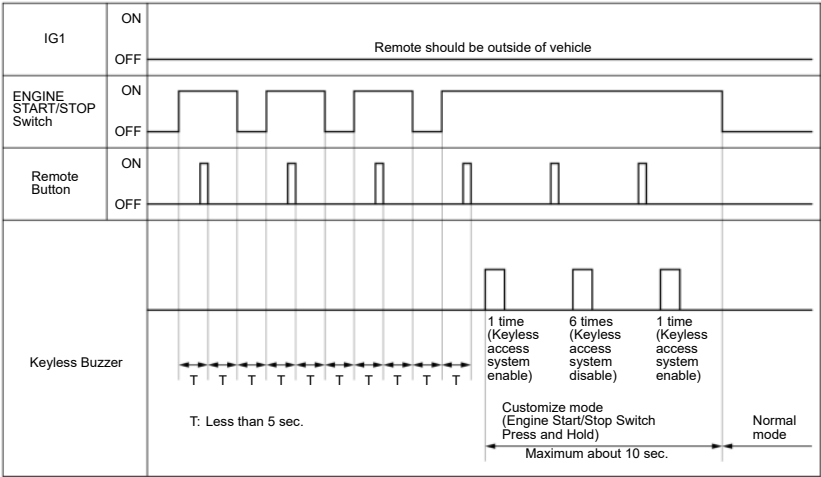
The system does not work under the following conditions:

- The remote is inside of the vehicle.
- If the remote is away more than 1.5 m (5 ft) from the vehicle after closing all the doors.
- If a communication error occurs between the remote and the vehicle.

The walk away auto lock system can be cancelled temporarily by customization.

Keyless Access System Operation Manual Customize

The keyless access system can be enabled and disabled by the operation shown in the table. The system is enabled and disabled each time any button is pressed on the remote in the customize mode.



Automatic Vehicle OFF Function

The automatic vehicle off function turns the vehicle to the OFF mode if about 20 minutes lapse after the user leaves the vehicle ON mode and the remote left in the vehicle. When the function is working, the electric steering lock* remains released.

*: With electric steering lock

The automatic vehicle OFF function works about 20 minutes after all the following conditions meet.

- The vehicle is stopped.
- The driver's door switch turns to ON from OFF.
- The vehicle is in ATP-P position. (CVT)
- The driver's seat belt buckle unbuckled.

The automatic vehicle OFF function stops working when any of the following conditions are met.

- The vehicle is running.
- Other than ATP-P position. (CVT)
- The driver's seat belt buckle is buckled.

Failsafe Function

If there is a failure in the keyless access system that terminates the keyless access features, the system enters the failsafe mode and displays the keyless access system warning.