No.: ZZ092-00971

# **GENUINE REMOTE ENGINE START**

# **USER'S INSTRUCTIONS**

Parts number: BCKA V7 620

Thank you for purchasing a genuine Mazda accessory.

Before use, be sure to thoroughly read these instructions.

Please read the contents of this booklet in order to properly use the Remote Engine Start. Your safety depends on it.

After using this instruction manual, store it in a place where it can be easily located. Note, consult your authorized Mazda dealer, or a dealer appointed store, for proper vehicle installation of the Remote Engine Start.

If the vehicle equipped with this product, or the product itself, is sold, transferred or loaned to another party, be sure to give this instruction manual to the new owner, so he or she can use this product safely and correctly.

## <Safe and correct use of the product>

Various warnings and cautions are displayed in this manual to assist you in the safe and correct use of the product and as precautions against you or others being injured, or the product being damaged.

Depending on the degree of possible injury or damage that may be incurred, precautionary items have been divided into 'Warnings' and 'Cautions' and illustrated with symbols to depict the nature of the precautionary content.

MARNING	A WARNING indicates a situation in which serious injury or death could result if the warning is ignored.
A CAUTION	A CAUTION indicates a situation in which bodily injury or damage to objects, or both, could result if the caution is ignored.
ADVICE	Always follow the ADVICE noted to ensure vehicle safety and performance. Vehicle damage could result, or proper performance may be compromised if the advice is ignored.
NOTE	A NOTE indicates information or a point related to vehicle usage. Vehicle damage could result, or proper performance may be compromised if the note is ignored.

### **Mazda Motor Corporation**

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# 1. Remote Engine Start features

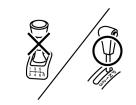
- The Remote Engine Start allows the user to start the engine of a vehicle from a remote location using a remote control.
- The user can turn on the air conditioner / heater beforehand so the cabin of the vehicle can be cooled or heated ahead of time.

# 2. Safety precautions

## N WARNING

Do not install this device on a vehicle equipped with a manual transmission.

- Only install this device on designated vehicles which the harness fits.
- This device can only be installed on vehicles equipped with AT / CVT. Do not install this product on a vehicle equipped with a manual transmission because it is hazardous.



Do not start the engine while inside an enclosed space or garage.

 Never start up the engine while inside an enclosed space where the exhaust fumes can build up, such as a poorly ventilated garage, an underground parking garage or a parking tower. The exhaust fumes are hazardous and can cause poisoning or intoxication.



Ensure that the periphery of the vehicle is safe.

 Use this device only where you can thoroughly check that the periphery of the vehicle is safe. In particular, using the device while a child or pet is close by can result in an unexpected accident.



Do not disassemble or modify this device.

 Never disassemble or modify this device, or install it in a location not specified in this manual. Otherwise, it may not operate correctly and/or may result in an accident or breakdown. In addition, this situation is not covered under warranty.



# ⚠ WARNING

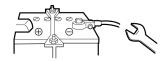
Do not start up the engine using the Remote Engine Start when parked on an incline.

 If the vehicle were to move unintentionally due to the engine vibration, jolt, etc., it could result in a serious accident.



Performing safe maintenance and inspection.

 When performing vehicle inspection and maintenance, remove the (-) terminal on the vehicle battery. Never start up the engine with the remote control during inspection or maintenance at a gas or service station, etc. Otherwise, an accident may occur, such as getting a hand or clothes caught in the rotating parts. Do not perform inspection or maintenance in the engine compartment while the hood switch is pressed.



Keep the remote control in a safe and secure place.

 Keep the remote control out of the reach of children. Otherwise, they may swallow the lithium battery accidentally and choke.



Do not operate this device while other people are inside the vehicle.

• In order to prevent an unexpected jump start, etc., never start the engine while a pet or someone (especially children) is inside the vehicle. Stopping the engine automatically using the Remote Engine Start settings is hazardous (while someone is inside) because the temperature inside the vehicle may become too hot. In addition, there is also a risk of children accidently pressing the climate control switch and setting the temperature too high or too low.





### Fire prevention.

- Do not start the engine when the vehicle is near something flammable (oil or dry grass). Otherwise, the high temperature from the exhaust fumes or exhaust pipe could cause a fire.
- Do not start the engine while the vehicle is wrapped with a body cover. Otherwise, the high temperature from the exhaust fumes or exhaust pipe could cause a fire.



### Do not pour water on the remote control.

• The remote control is water resistant for exposure during daily life, but it may break down if submerged in water or if water gets inside the device.



# Do not perform standard inspection and maintenance right after warming up the engine.

 Performing inspection or maintenance before operation and immediately after warming up your vehicle could result in a burn injury. First, wait 5 minutes once the engine has stopped. Then, after checking all the parts for heat hazards, proceed with the inspection and maintenance.



### Check points when the vehicle is parked.

- Perform the following safety checks thoroughly when the vehicle is parked to prevent potential accidents when starting the engine.
- · Engage the parking brake.
- · Put the shift lever in the "P" position.
- · Check that there are no vehicle keys inside the vehicle.
- · Close all doors and windows.
- Lock the doors.
- · Check that the hood is closed.



### Do not use the automatic retractable door mirror function.

 If you use the Remote Engine Start to start the engine of a vehicle which is equipped with the automatic retractable door mirror function, the door mirrors will open. If you do not want the door mirrors to open, disable the automatic retractable door mirror function before remote-starting the engine.

# 3. General information

- -Laws in some communities may restrict the use of remote starters. For example, some laws may require a person using the remote start to have the vehicle in view when doing so. Check local regulations for any requirements on remote starting of vehicles.
- -This device complies with part 15 of the FCC Rules and Innovation, Science and Economic Development Canada's license-exempt RSSs. Operation is subject to the following two conditions:
  - (1) This device may not cause harmful interference, and
  - (2) This device must accept any interference received, including interference that may cause undesired operation.

### -FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- -This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.
- -The remote control complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules as this equipment has very low levels of RF energy.
- -The controller complies with FCC/ ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.
- -Consult your authorized Mazda dealer for installation of the remote control engine engine starter system.

# 4. Operating precautions

### Usage Environment

- The remote control signal (or the response signal from the controller) may not reach the controller (or the remote control) if there are strong radio waves transmitting nearby, or if there are obstacles blocking the signal.
- The engine may be slow to start during severe cold weather conditions.

### Vehicles with Remote Control Door Lock Function

Even when the Remote Engine Start has been used to start the engine, the
doors can still be locked and unlocked using the vehicle key or the door
request switch. However, if the door locking and unlocking does not operate
due to factors such as engine noise, stop the engine first, and then use the
vehicle key or the door request switch to lock or unlock the doors.

### Vehicles with Genuine Theft-Deterrent System

 After setting the vehicle's genuine theft-deterrent system, the theft-deterrent system continues to operate and the set condition is maintained even if the engine is started using the remote control. Therefore, the alarm is activated if any of the warning conditions are met, such as the door opening. However, the theft-deterrent system cannot be set after the engine is started using the remote control.

# Vehicles with Automatic Lights

• For vehicles with automatic lights, if the light switch is set to "AUTO", the lights may not turn on in some vehicles even when the nighttime remote control is used to start the engine.

## Do Not Perform Unnecessary Idling

• To help protect the environment, conserve energy and avoid inconveniencing others, do not perform idling when it is unnecessary or longer than necessary.

### Remote Control Handling Instructions

The remote control is a sensitive electronic device similar to a cellular telephone. Please follow the handling instructions below to avoid damage to or breakdown of the remote control.

- Avoid storing or using the remote control in places that expose it to direct sunlight, places that have high humidity, places with extremely high temperatures (on top of the dashboard, etc.) or places with extremely low temperatures (leaving inside the vehicle while parked at ski resorts, etc.).
- Do not store or use the remote control in places where it comes into direct contact with water.
- Avoid exposure to strong impacts such as dropping it on the floor or hitting it against something hard.
- If the remote control gets very dirty, use a cloth soaked in a watered-down, mild or neutral detergent, ring out the liquid solution and wipe down the remote control. (Never use benzene, thinner or chemically treated cloth/wipes.)
- Avoid attaching a lot of keys to the key ring on the remote control, or sitting down
  while the remote control is in your pocket, as it can cause the remote control to
  deform and may result in damage.
- While carrying the remote control, if the keys, etc., come into contact with a
  vehicle, it can lead to remote control breakdown or malfunction due an
  electrostatic discharge. Therefore, be careful of this risk during time periods when
  electrostatic discharges occur frequently.
- Be sure that the battery cover is securely locked by the screw. Otherwise, if water accidently gets inside the internal part of the transmitter, it can cause breakdown.
- Do not use in restricted areas such as on board airplanes or inside hospitals.
- The remote control can negatively impact electronic and medical devices.
- Be sure to follow the instructions and rules posted inside medical clinics or facilities regarding the use of electronic devices.
- If the remote control is used on board airplanes, where usage is restricted, you may be subject to punishment due to airline rules and regulations.

#### ADVICE -

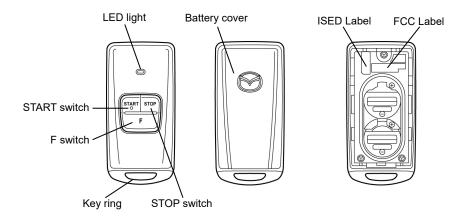
- A maximum of three remote controls can be registered.
- If a key holder or similar object is attached to the key ring, wrap the remote control with tape to protect it, otherwise its coating may become damaged by being forcibly pushed against the key holder.

# 5. Part names

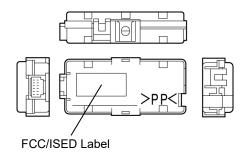
### ■ Remote Control

# CAUTION -

- Keep the remote control out of the reach of children. Otherwise, they may swallow the lithium battery accidentally and choke.
- Do not drop the remote control or hit it against something hard. Otherwise, it can result in breakdown or malfunction.
- Do not pour water on the remote control or submerge it. It can result in breakdown or malfunction.



### ■ Controller



# 6. Basic functions for Remote Engine Start

## **Engine Start & Stop Function**

The remote control is equipped with engine start, engine stop and automatic stop (set with timer) functions. In addition, the engine start operation will perform when conditions outlined on page 13 are satisfied. The air conditioner / heater can be turned on beforehand so the cabin of the vehicle can be cooled or heated ahead of time.



Engine start  $\rightarrow$  P.14

Engine stop  $\rightarrow$  P.15

### Rear Defrost Function

The rear defrost turns on in the following situations.

- When the cabin temperature is 5°C (41°F) or less, 7 seconds after the engine start operation performed on the Remote Engine Start.
- When the rear defrost operation is performed on the remote control.



Directions for rear defrost operation on remote control → P.18

#### ADVICE

- The rear defrost will automatically stop when the engine stops.
- The rear defrost will automatically stop after 15 minutes of operation on some vehicle models.
- When the cabin temperature falls to 5°C (41°F) or less after 7 seconds from the engine start, the rear defrost will not turn on automatically.
- The rear defrost cannot be turned off using the remote control.
- On some vehicle models, dash light does not turn on when the rear defrost is turned on with the Remote Engine Start.

#### Car Find Function

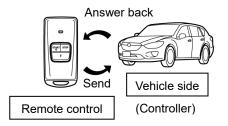
When using the remote control to carry out car find operations, the hazard warning lights will flash twice and the horn will sound twice to allow you to confirm the location of the vehicle. This function is useful for finding your vehicle in places such as large car parks.



Directions for car find operation  $\rightarrow$  P.19

### **Answer Back Function**

This device conducts bidirectional communication between the remote control and the controller (vehicle side). The user can check the status of the operations: engine start, engine stop, warm up time, and car find using the LED on the remote control.

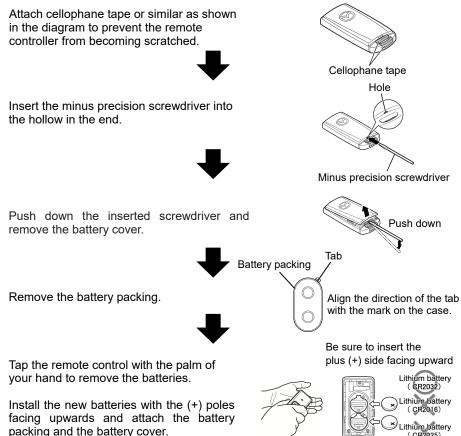


#### Note -

- The reference operating range of the remote control is approx. 2000ft (610m).
   However, this range can be reduced by interference caused by any of
   conditions as follows.
  - There is any obstruction nearby (Buildings, walls, other vehicles, etc.).
  - There is any radio wave transmission nearby (television, radio, cellular, another remote controller, etc.)
  - The battery becomes weak.
- When there is a signal being transmitted that is close to the frequency band used by this device in the surrounding area, transmission between the remote control and controller shall be restricted. In this situation, the remote control will display a communication error.
- 3. When conducting consecutive operations with the remote control switches, wait until after the LED turns off.
- 4. A receive error may display on the remote control even if the engine has started, depending on the radio transmission conditions in the area.

# 7. Low battery warning & replacement directions

If the battery power is depleted, the LED light (red) turns on when a switch is pressed and battery power depleted is indicated. In this case, as battery replacement will be required soon, replace the batteries with new ones according to the following procedure.



#### ADVICE -

When replacing the lithium batteries (CR2032), replace both batteries together.

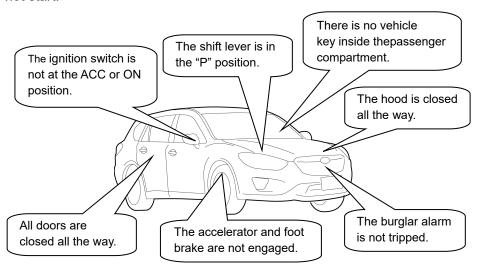
### / WARNING

- Keep the batteries out of the reach of children. In the event that a battery is accidently swallowed, consult with a physician right away.
- Do not peel off the tape which is attached to the backside of the battery cover.

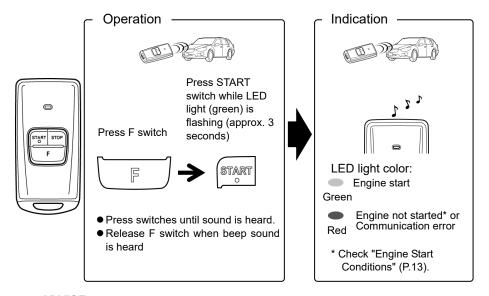
# 8. Basic operations

### **Engine Start Conditions**

When using the Remote Engine Start, be sure to always check the start conditions listed below beforehand. Even if just one of the conditions has not been satisfied, the device will interpret this as a hazard and will not operate. Even if the user tries to operate the remote control, the engine will not start.



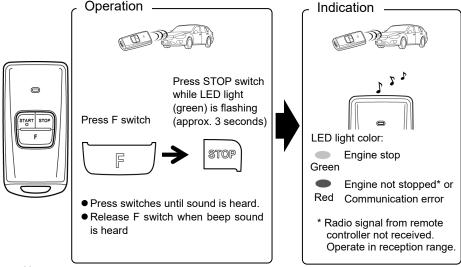
## 8-1. Engine start operation



#### ADVICE

- After the engine start operation is initiated, the controller will automatically send an answer.
- If the engine start conditions are not satisfied, The engine start operation cannot be performed.
- In vehicles with automatic wiper function, the wipers will not operate when the engine is started by remote operation, even if the wiper switch is at the "AUTO" position and rain is falling. In addition, with some vehicle models the wipers will not operate when the wiper switch is at the "Low" or "Hi" position either.
- After setting the vehicle's genuine theft-deterrent system, the theft-deterrent system continues to operate and the set condition is maintained even if the engine is started using the remote control. Therefore, the alarm is activated if any of the warning conditions are met, such as the door opening. However, the theft-deterrent system cannot be set after the engine is started using the remote control.

### 8-2. Engine stop operation



#### Note

 The controller buzzer will sound if the engine is stopped for reasons other than opening a door or the pre-set engine warm-up time has elapsed.

⇒P.13

• Other Engine Stop Conditions

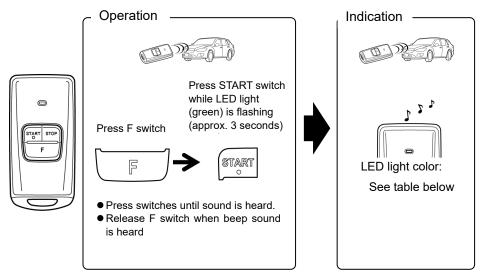
The engine will stop if one of the following conditions is true.

- 1) The hood is opened.
- 2) The shift lever is put in a position other than the "P" position.
- 3) A door is opened.
- 4) The push start switch is pressed.
- 5) The pre-set warm up time has elapsed.
- 6) The brake pedal is engaged.
- 7) The accelerator pedal is engaged (the engine stops by the rpm restriction).
- 8) There is an advanced key or smart key inside the vehicle.

#### Note -

- If the engine is started with the push start switch, it cannot be stopped with the remote control.
- The vehicle cannot be driven when the engine is started using the remote control. To start driving the vehicle, stop the engine with the remote control or opening the vehicle's doors and restart the engine using the vehicle's push button start switch.

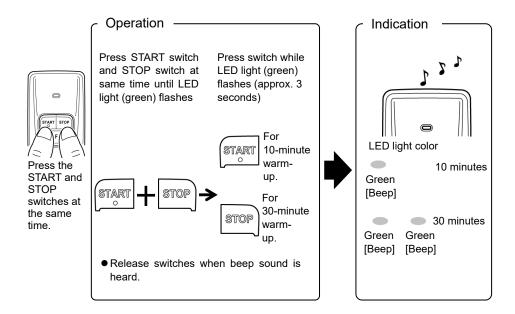
# 8-3. Warm up time check



The remaining time until the engine turns off automatically is indicated by the number of times the LED light flashes.

LED light color	Number of flashes	Remaining time
Green	1 time	0 to 5 minutes
	2 times	5 to10 minutes
	3 times	10 to 20 minutes
	4 times	20 to 30 minutes
Red	Communication error	

# 8-4. Warm up time settings



#### Note

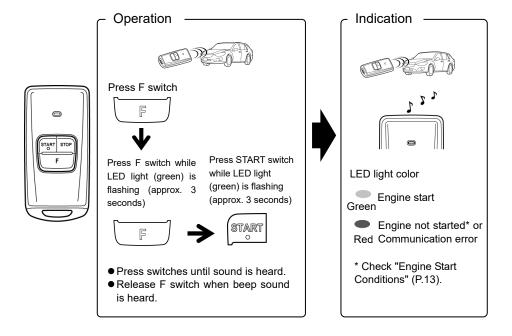
Some vehicle models stop the rear defrost after 15 minutes, even if the warm up time is set to 30 minutes.

# (CAUTION

To help protect the environment, conserve energy and avoid inconveniencing others, do not perform idling when it is unnecessary, or longer than necessary.

# 8-5. Engine start operation with rear defrost start Up

When the engine is started using this operation, the rear defrost operates.



#### ADVICE -

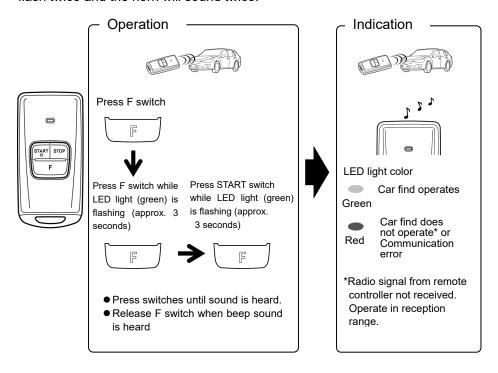
- The rear defrost operation cannot be performed without starting the engine.
- On some vehicle models, dash light does not turn on when the rear defrost is turned on with the Remote Engine Start.
- The rear defrost will automatically stop when the engine stops.
- With some vehicle models, the rear defogger will automatically stop operating
   15 minutes after it starts.

#### Note -

When the engine is started using this operation, the rear defrost operates by force. The rear defrost also operates when the interior temperature is 5 degrees C (41 degrees F) or lower at the time of engine start when the engine is started with the engine start operation described on page 14.

### 8-6. Car find function

If this operation is carried out when the engine is stopped or after the engine has been started by remote control, the vehicle's hazard warning lights will flash twice and the horn will sound twice.



#### Note

When the hazard warning switch has already been pressed to flash the hazard warning lights, the flashing of the hazard warning lights using the car find function does not operate (operation using the hazard warning switch takes precedence). Even in such cases, the remote controller notifies the user that communication with the vehicle was completed using the same display as indicated above and the beep sound.

# 9. Troubleshooting

- Even if you think the device has broken down or malfunctioned, check once more to be sure.
- If an error occurs, read through this instruction manual thoroughly, and check the following items in the table below. If the error or problem persists, do not try to repair the device by yourself. Consult with the authorized Mazda dealer where you purchased the vehicle or device.

Problem	Check Item	Troubleshoot
Remote control does not work	Are the batteries inserted correctly?	Check the status of the batteries. (Refer to P.12.)
	Have the batteries run out?	Replace the batteries with new ones. (Refer to P.12.)
	Did you press more than one switch at the same time? (except the warm-up time setting operation)	Refer to the basic operation items to perform the remote control operation correctly. (Refer to P.14.)
	Did you try to conduct an operation too quickly right after another operation was sent?	When the remote controller is transmitting or the answer-back from the vehicle is being received and a display is indicated, the next transmission cannot be performed. Do the next operation after the display ends. (Refer to P.11.)
Engine does not start using remote control	Did you make a mistake with the "Engine start" operation on the remote control?	Refer to the "Engine start operation" section on P.14.
	When the Fswitch or START switch was pressed, was another switch pressed at the same time or ahead of those switches?	Do not press another switch at the same time or ahead of those switches.
	Have the engine start conditions been satisfied?	Check the engine start conditions. (Refer to P.13.)
Engine stops after starting it with the remote control	Are the engine stop conditions shown in P.15 true?	The engine will stop if one of the conditions shown in P.15 is true.
The headlights and taillights do not turn on when the engine is started with Remote Engine Start	Is the light switch at the "AUTO" position?	With some models, the headlights and taillights may not turn on when the engine is started with Remote Engine Start, even if the switch is at the "AUTO" position.

Problem	Check Item	Troubleshoot
The wipers do not operate when the engine is started with Remote Engine Start	_	The wipers will not operate when the engine is started with Remote Engine Start, even if the wiper switch is at the "AUTO" position. In addition, with some vehicle models the wipers will not operate when the wiper switch is at the "Low" or "Hi" position either.
Engine does not stop using remote control	Did you make a mistake with the "Engine stop" operation on the remote control?	Refer to the "Engine stop operation" section on P.15.
	When the Fswitch or START switch was pressed, was another switch pressed at the same time or ahead of those switches?	Do not press another switch at the same time or ahead of the stop switch.
	Was the engine started using another method other than the Remote Engine Start?	When the engine has been started using the vehicle's push start switch, the engine cannot be stopped by using the remote control.
Warm up time check does not work	Did you make a mistake with the "Warm up time check" operation on the remote control?	Refer to the "Warm up time check" section on P.16.
	When the Fswitch or START switch was pressed, was another switch pressed at the same time or ahead of those switches?	Do not press another switch at the same time or ahead of those switches.
	Was the engine started using another method other than the Remote Engine Start?	When the engine has been started using the vehicle's push start switch, the remaining warm-up time cannot be checked.
Engine is started, but remaining engine warm-up time is not displayed on the remote control.	Was the engine started using the vehicle's push start switch?	When the engine has been started using the vehicle's push start switch, the remaining warm-up time is not displayed on the remote control.
Warm up time settings does not work	Did you make a mistake with the "Warm up time settings" operation on the remote control?	Refer to the "Warm up time settings" section on P.17
	When pressing the START switch and the STOP switch at the same time, was the F switch pressed first, or is the F switch also being pressed at the same time?	Do not press the F switch first or press it at the same time as the other two switches.

Problem	Check Item	Troubleshoot
Rear defrost does not operate by remote control operation	Did you make a mistake with the "Engine start with rear defrost start Up" operation on the remote control?	Refer to the "Engine start operation with rear defrost start Up" section on P.18.
	When the Fswitch or START switch was pressed, was another switch pressed at the same time or ahead of those switches?	Do not press another switch at the same time or ahead of those swiches.
	Did you operate the "Engine start with rear defrost start Up" with the remote control after the engine started?	The "Engine start with rear defrost start Up" operation cannot be performed after the engine started.
	After the engine started, have approx.15 minutes passed?	With some vehicle models, the rear defogger will automatically stop operating 15 minutes after the engine is started with Remote Engine Start.
The rear defrost turns on in spite of the "Engine start operation" shown in p.14.	Is the cabin temperature 5°C(41° F) or less?	The rear defrost will automatically turn on when the cabin temperature is 5°C(41° F) or less and the engine is started with the Remote Engine Start.
The dash light does not turn on when the rear defrost is turned on with remote control	_	The dash light will not turn on when the rear defrost is turned on with the Remote Engine Start.
Car find does not work	Did you make a mistake with the "Car find" operation on the remote control?	Refer to the "Car find function" section on P.19.
	When pressing the F switch, did you press another switch first, or press the F switch and any another switch at the same time?	Do not press another switch at the same time or ahead of the car find switch.
	Is the ignition switch set to ON?	The car find will not work when the ignition switch is set to ON.
	Are the turn signal lamps flashing with the turn signal switch operation?	The hazard flashing by the car find function will not work while the turn signal lamps are flashing.

Problem	Check Item	Troubleshoot
Remote control operating distance is	Have the batteries run out?	Replace the batteries with new ones. (Refer to P.12)
short	Are you too far from the vehicle?	Approach the vehicle and try operating the remote control.
	Is there something blocking the signal between the remote control and the vehicle, such as a building?	Move and try operating the remote control from a better location, or move closer to the vehicle when operating the remote control.
Engine not stopped or car find not operated	Have the batteries run out?	Replace the batteries with new ones. (Refer to P.12)
is displayed	Are you too far from the vehicle?	Approach the vehicle and try operating the remote control.
	Is there something blocking the signal between the remote control and the vehicle, such as a building?	Move and try operating the remote control from a better location, or move closer to the vehicle when operating the remote control.
	If the remote controller operation was [Engine stop operation], was the engine stopped? If the remote controller operation was [Car find operation], did the hazard warning lights flash?	The send operation from the controller may be restricted due to the transmission conditions in the area. (Refer to P.11.)

# 10. Servicing

### Servicing

If you are having a problem with the device, first re-read this instruction manual again to troubleshoot the problem or issue. If the problem or issue does not improve, consult with the authorized Mazda dealer where you purchased the vehicle or device. If you lose the remote control, contact the authorized Mazda dealer where you purchased the vehicle or device.

# 11. Specifications

### Remote Control

Applicable standard	FCC and ISED conforming
Transmission frequency	922.8MHz
Transmission method	Single message transmission
Operating temperature	-10 to +60 °C
range	
Battery type	Coin type, lithium battery CR2032 / Qty. 2
Battery life	Approximately 1 year (When starting the engine 5 times / day. However, the battery life for the batteries included in the accessories is not guaranteed.)
Dimensions	38 × 78 × 18 (mm)
Weight	Approximately 35 g (including the batteries)

### Controller

Applicable standard	FCC and ISED conforming
Transmission frequency	922.8MHz
Transmission method	Single message transmission
Operating temperature	-40 to +85°C
range	
Rated voltage	DC 13.5 V
Power consumption	3mA or less
during standby	
Dimensions	100 × 46 × 26 (mm)

The specification and external appearance may change without prior notice given.

# MEMO

# MEMO

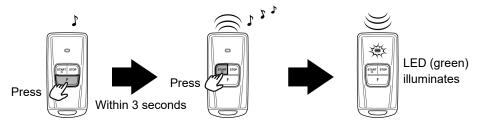
# MEMO

# Request for Dealer Performing Installation Service

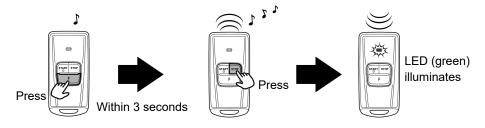
Be sure to explain the device operation to the customer.

# **Quick Reference Manual**

To start the engine



To stop the engine



 Note that some contents of this instruction manual may not match the actual device due to changes in the vehicle or product specification.