NAVIGATION SYSTEM

Contents, Accessories, and Laser

Accessories

Please contact an Authorized Mazda Dealer if you are missing any of the following accessories.



Map Disc

CAUTION:

THIS PRODUCT IS A CLASS I LASER PRODUCT. HOWEVER THIS PRODUCT USES A VISIBLE/INVISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THIS PRODUCT CORRECTLY AS INSTRUCTED. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

Laser products:

Wave length: 650 nm

Laser power: No hazardous radiation is emitted with safety protection.

Preparation

Immediate

Advanced use

IT necessary

Product

Activation	Laser Product Contents Safety Information Introduction	15		.2 .3 .4 .6	Before Use
Change (Change Search Area) Point of interest Memory Point Preset Destination Intersection Phone number Select from map Use POI Character Entry Direct Destination Input POI Icons on Maps / Delete Destination Address Book Address Book Navigation Set Up Precautions/System Performance Map Matching Map Matching Route Guide Troubleshooting Address Emergency Home Previous Destination Freeway On/Off Ramp Coordinates Previous Destination Previous Destination Previous Destination Freeway On/Off Ramp Coordinates Previous Destination Freeway On/Off Ramp Coordinates Previous Destination Freeway On/Off Ramp Prev	Screen names and f	unctions	1 1	2	
Address Book	Use POI Character I Direct Destina POI Icons on	Change (Change Search Point of interest Memory Point Preset Destination Intersection Phone number Select from map Entry ation Input Maps / Delete Destination	Area) Address Emergency Home Previous Destinat Freeway On/Off Ra Coordinates 22 24 24 ation 2	tion mp 2 3 4 5	Routing
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Safety Information

- Read this owner's manual for your Navigation System carefully before using the system. They contain instructions about how to use the system in a safe and effective manner. Mazda assumes no responsibility for any problems resulting from failure to observe the instructions given in this manual.
- This manual uses pictographs to show you how to use the product safely and to alert you to potential dangers resulting from improper connections and operation. The meanings of the pictographs are explained below. It is important that you fully understand the pictographs and explanations in order to use this manual and the system properly.



Warning

The presence of this Warning symbol in the text is intended to alert you to the importance of heeding the operation instructions. Failure to heed the instructions may result in severe injury or death.



■ Do not keep your eyes fixed on the monitor screen or operate the system while driving.

Do not change the settings and destination locations while driving. Minimize the time spent on viewing the monitor screen and listening to the voice guidance while driving. Operating the system will distract the driver from looking ahead of the vehicle and can cause accidents. Always stop the vehicle in a safe location and use the parking brake before operating the system.

■ Always obey local traffic regulations.

Your guided route may include roads that are not open to vehicles or are closed due to traffic regulations. Comply with the local traffic regulations and take another route.

■ Do not use the unit when it is out of order.

If the unit is out of order (no image, no sound) or in an abnormal state (has foreign matter in it, is exposed to water, is smoking, or smells), then turn it off immediately and consult with an Expert repairer, we recommend an Authorized Mazda Repairer. Using the unit in an out-of-order condition may lead to accidents, fires, or electric shocks.

■ Use the proper power supply.

This product is designed for operation with a negative grounded 12 V DC battery system.

■ Do not disassemble.

Do not disassemble the product or attempt to repair it yourself. If the product needs to be repaired, take it to an Expert repairer, we recommend an Authorized Mazda Repairer.



Caution

The presence of this Caution symbol in the text is intended to alert you to the importance of heeding the operation instructions. Failure to heed the instructions may result in injury or material damage.



- Do not use the product where it is exposed to water, moisture, or dust.

 Exposure to water, moisture, or dust may lead to smoke, fire, or other damage to the unit.

 Make especially sure that the unit does not get wet in car washes or on rainy days.
- Keep the voice guidance volume at an appropriate level.

 Keep the volume level low enough to be aware of road and traffic conditions while driving.
- Protect the Deck Mechanism.
 Do not insert any foreign objects into the slot of this unit.
- This navigation system is designed use for exclusively in automobiles.

 This navigation system should only be installed in an automobile. Do not install it in a ship, aircraft, or any other vehicles except an automobile. Do not use it detached from the vehicle.
- Do not insert or allow your hand or fingers to be caught in the unit.

 To prevent injury, do not get your hand or fingers caught in moving parts or in the disc slot. Especially watch out for infants.

Operation is subject to the following two conditions;

- (1) this device may not cause interference, and
- (2) this device must accept any interference,

including interference that may cause undesired operation of the device.

Introduction

Use This Product Safety

■ Extremely low or high temperatures may interfere with normal operation
The inside of the vehicle can become very hot or cold when it is parked for extended periods in direct sunlight or in cold places with the engine turned off. The navigation system may not operate normally under such circumstances. Turn off the navigation system until the inside of the vehicle has cooled down or warmed up. If the system does not operate thereafter, consult an Expert repairer, we recommend an Authorized Mazda Dealer.

Navigation System

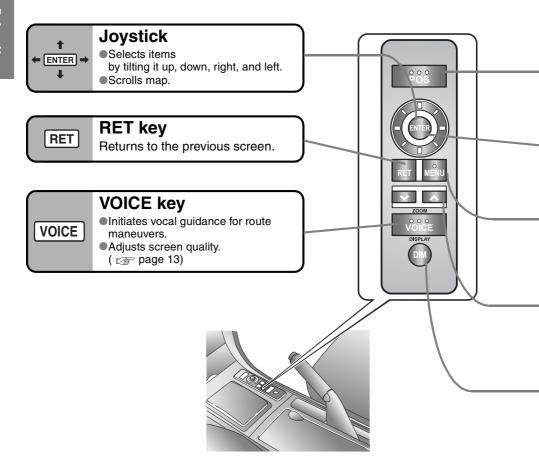
This navigation system utilizes GPS* satellite signals, Speed sensor and Gyrosensor to track and display your vehicle's current position, and to guide you from your starting point to your destination along a calculated route.

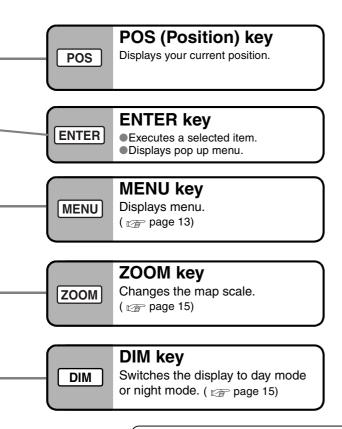
*: GPS (Global Positioning System) is a position detecting system utilizing the signals from GPS satellites deployed by the U.S. Defense Department.

Screens

Screens displayed in this manual may differ from those on the actual display.

Names and Functions





Switching the Display Mode

When the headlight switch is in the \bullet or $\equiv \triangleright$ position, the display switches to night mode.

Press the DIM key to switch to day mode.

To return to night mode, press the DIM key again.

Activation

Insert the map disc into the unit to start the Mobile Navigation System.



■ Map Disc

 Refer to "Handling and Care of Map Discs" to know how to handle a map disc (
 page 53).

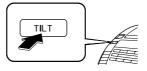
Note

- ●The map disc cannot be inserted or ejected while the ignition switch is in the OFF position.
- •Remember that the battery can run down if the ignition switch is kept in the ON or ACC position for a long time while the engine not running.
 - Turn the ignition switch to the ON position and press OPEN to open the display.



Note

This display angle can be adjusted by pressing TILT.



When the **TILT** is pressed, the display angle changes in stages.

Press OPEN to close the display.

2 Insert the map disc with the printed side facing up.



Note

- The main unit is located in the glove box compartment.
- Condensation may form on the optical lens or the map disc inside the unit when the temperature in the vehicle increases in a short time such as when heating the car on a cold day. This condensation may cause malfunctions. If so, unload the map disc and do not operate the unit for approximately 1 hour. Wipe the condensation off the map disc with a soft cloth.

If the unit does not operate correctly after 1 hour, consult an Authorized Mazda Dealer.





Read CAUTION carefully, and select

Agree and press





Most functions are inhibited while the vehicle is in motion.

Please read the handbook for operation instructions.

Always obey traffic regulations.

The Current Position screen appears.

Note)

- You can select the language by select and press ENTER. You can also change the selected language using Language Selection. (page 45)
- The CAUTION screen remains on the display unless you select Agree and press ENTER.

Removing the Map Disc

When the ignition switch is in the ACC position and press \triangle (EJECT).





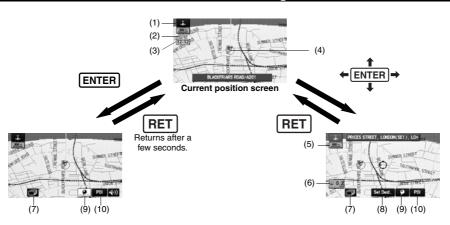
Do not get your hand or fingers caught in moving parts or in the disc slot. This can cause injuries. Children are inquisitive, try to install or remove the map disc without infants looking on.

Buttons on the screen

Select the buttons by using Joystick and press **ENTER**. Colors for unavailable buttons will be pale.

Screen names and functions

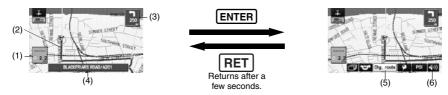
Screens Before Setting Route



- (1) Map Orientation control (page 15)
- (2) GPS (Global Positioning System) marker
 (page 47)
 (3) Clock
- (3) Clock Clock will be displayed when you set up Clock on Navigation Set Up On.
- (4) Vehicle marker
 Shows the current position and direction of your vehicle.
- (5) Scale display
 Displays the scale of the map.
- (6) Distance from current position Displays the distance from the current position to the position pointed by O.

- (7) Screen Configuration (page 14)
 - Set Destination button The destination or way point will be set at the position pointed by in the scroll screen.
- (9) Store Memory Point button Stores markers on the map.
- (10) POI (Point of Interest) Display button

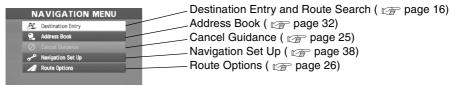
Screens During Route Guidance



- (1) Distance and Time to Destination display Displays the time* and distance to the destination or way point. Selecting this will display the next and further information on the way point or time and distance to the destination. (* Either required time or estimated time arrival)
- (2) Route display
 Shows the provided route as a thick blue line.
- Turn Arrow display
 Shows the direction to turn at the next junction and the distance to the junction.
- (4) Current Road Name
 Shows the name of the road you are currently driving on.
- (5) Change Route button Displays the Route Option menu so that settings for route calculation can be changed.
- (6) Volume button
 Displays the volume adjustment screen.

Menu

Menu appears when pressing MENU.



Screen adjustments and settings

Display Menu screen will be shown when you press VOICE (DISP) and hold.



Display Menu screen will be disappeared when they have been unused during a few seconds.

■ Adjusting the screen quality

Adjusts the screen brightness

Select "ADJ.", press **ENTER**, and then select "BRIGHT", press **ENTER** and the screen will be brighter when scrolling it to the right, or darker when scrolling it to the left.

Adjusts the screen contrast

Select "ADJ.", press **ENTER**, and then select "CONTRAST", press **ENTER** and the screen will be lighter when scrolling it to the right, or deeper when scrolling it to the left.

Note

- · Adjust by scrolling the Joystick to the right and left.
- Restore the adjustment value to the default when selecting "RESET", press ENTER.

■ Clearing the screen

Select "DISP OFF", press **ENTER** and the screen will disappear.

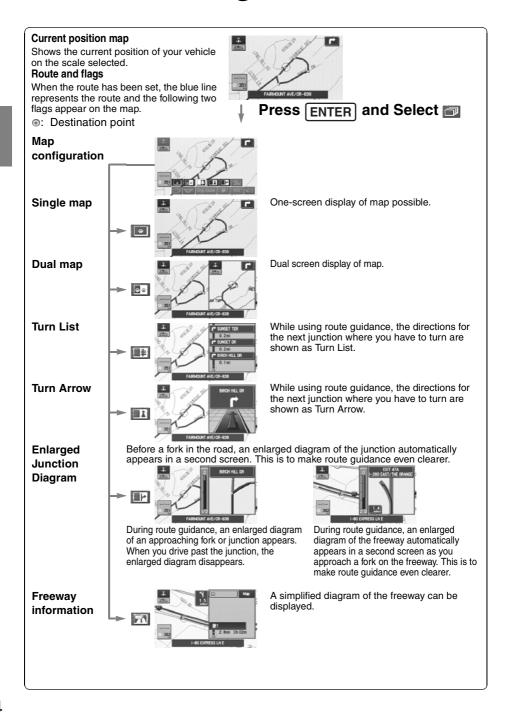
The screen will appear again when pressing any buttons.

■ Daytime screen/Night screen

When the headlights are on, daytime mode can also be selected (if extra screen certain nighttime conditions). This selection can only be done when the headlights are on. Press **ENTER** to switch between day and night modes.

• Alternatively, you can carry out the same operation by using **DIM** .

Screen change

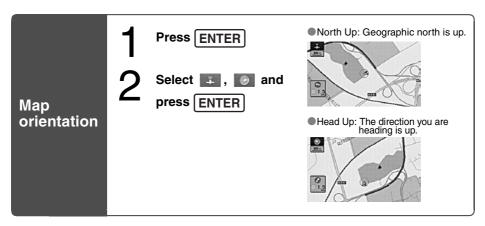


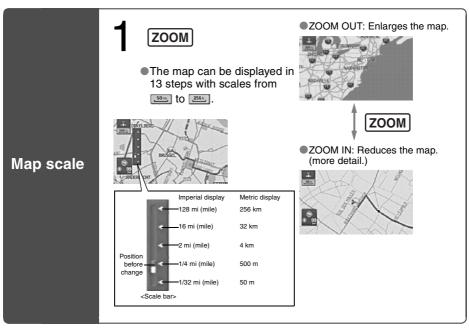
Changing the Map Orientation/Scale



■ Do not keep your eyes fixed on the monitor screen or operate the system while driving

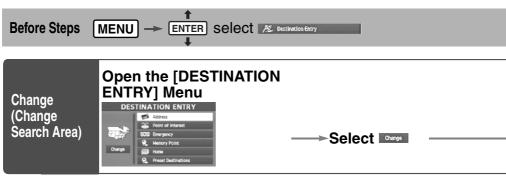
Do not change the settings and destination locations while driving. Minimize the time spent viewing the monitor screen and listening to the voice guidance while driving. Operating the system will distract the driver from looking ahead of the vehicle and may cause an accident. Always stop the vehicle in a safe location and use the parking brake before operating the system.

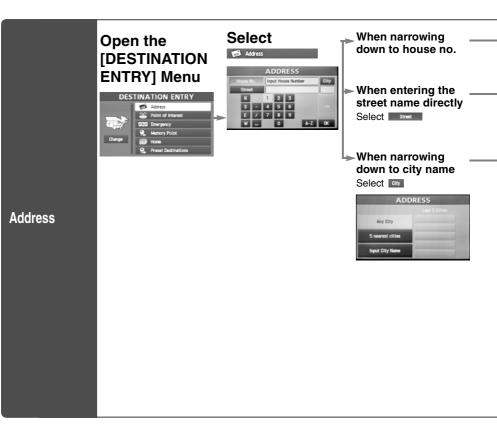




Destination Entry and Route Search

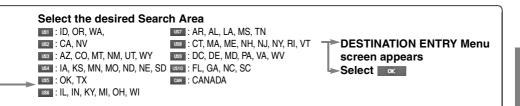
You can set the destination using various methods provided by the system.

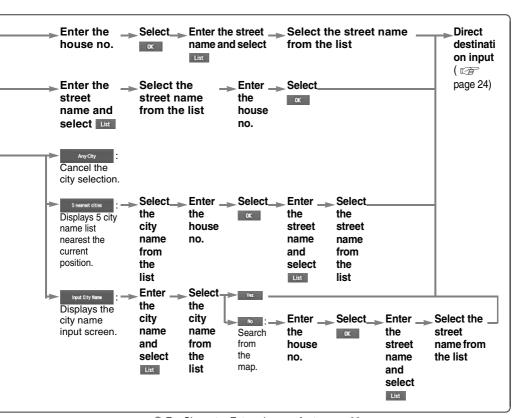






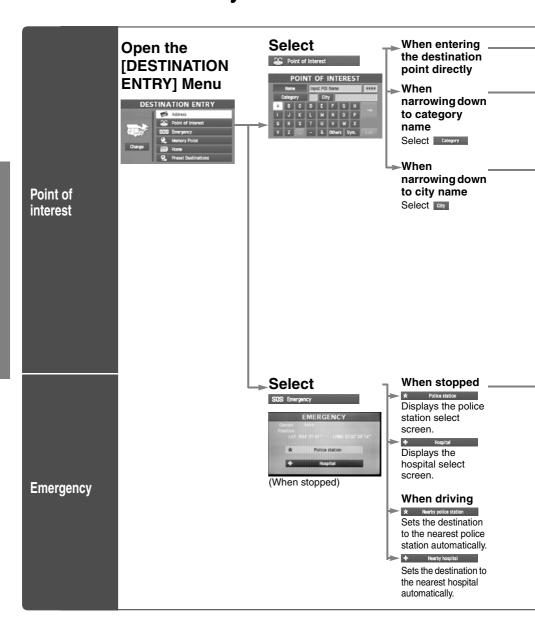
- Do not keep your eyes fixed on the monitor screen or operate the system while driving. Do not change the settings and destination locations while driving. Minimize the time spent viewing the monitor screen and listening to the voice guidance while driving. Operating the system will distract the driver from looking ahead of the vehicle and may cause an accident. Always stop the vehicle in a safe location before operating the system.
- Route searches with the navigation system can include roads that you can not drive on and roads that you are prohibited from driving on due to traffic regulations. Please comply with the traffic regulations.

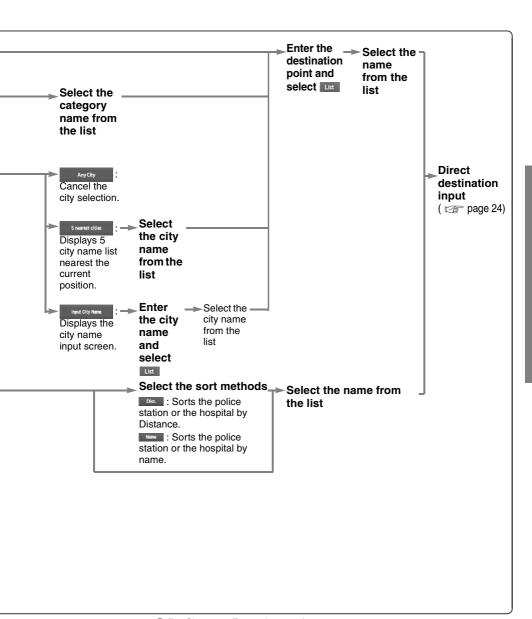




For Character Entry, please refer to page 23.

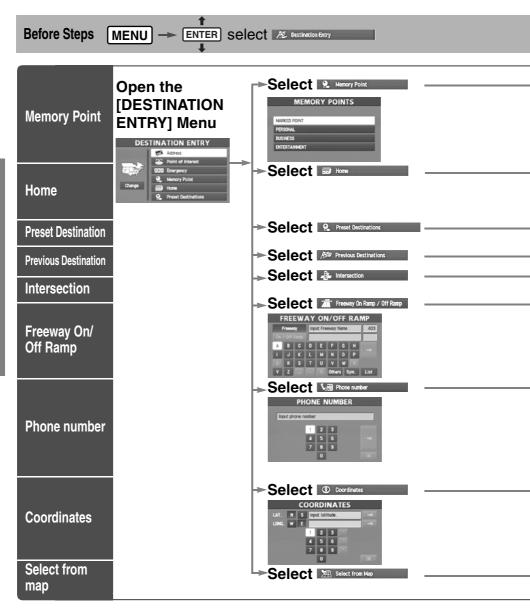
Destination Entry and Route Search

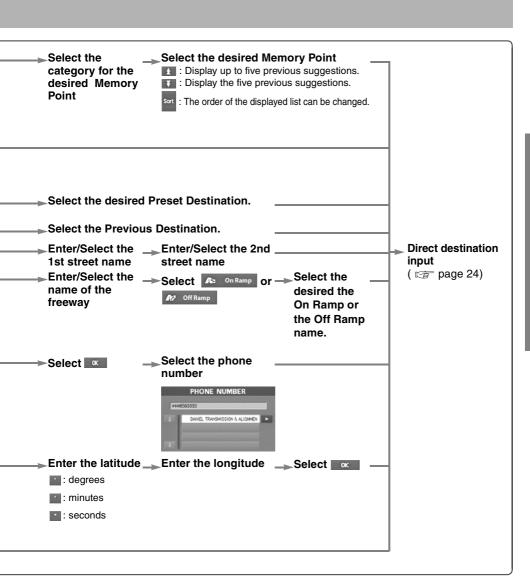




For Character Entry, please refer to page 23.

Destination Entry and Route Search

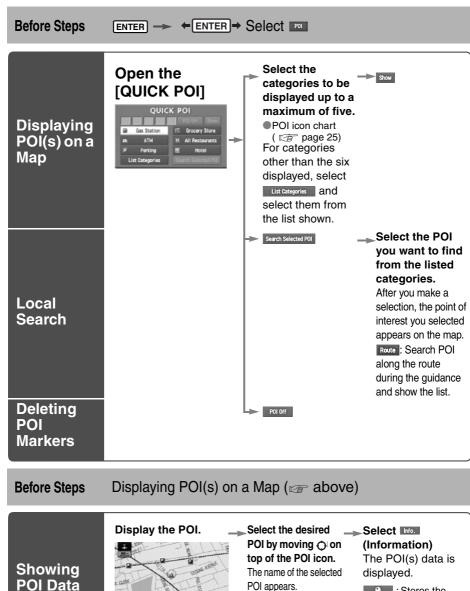




For Character Entry, please refer to page 23.

Use POI

You can select one of the six categories on the menu or List Categories and then select the POI(s) to be displayed on the map.



POI appears.

If no data is stored for the

selected POI, the POI

name is not displayed.

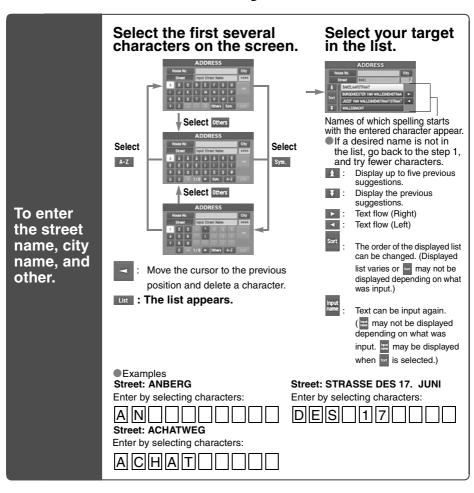
: Stores the

location of

POI as a memory

point.

Character Entry

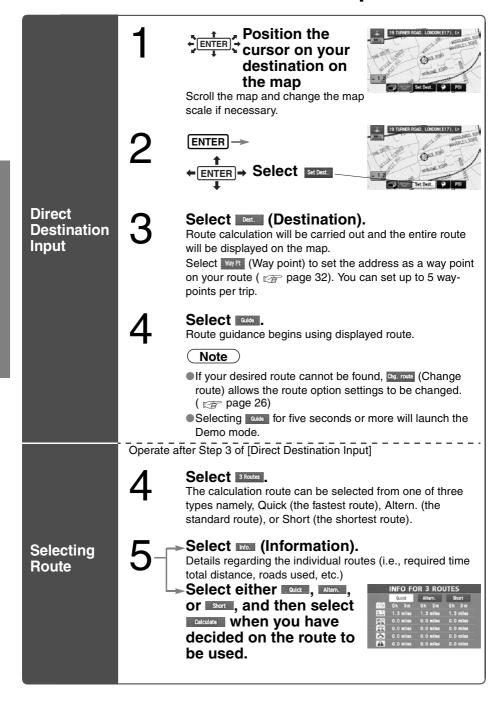


To enter the house phone number, and other.

Select the characters on the screen.

Move the cursor to the previous position and delete a character.

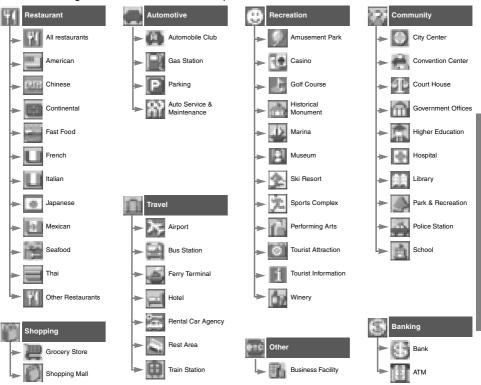
Direct Destination Input

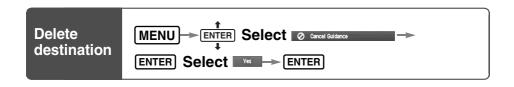


POI Icons on Maps / Delete Destination

■ POI (Point of Interest) Icons

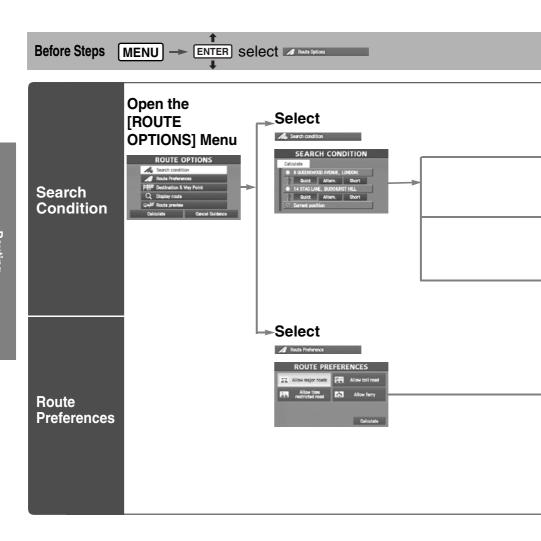
The following are POI icons shown on maps.





Route Options

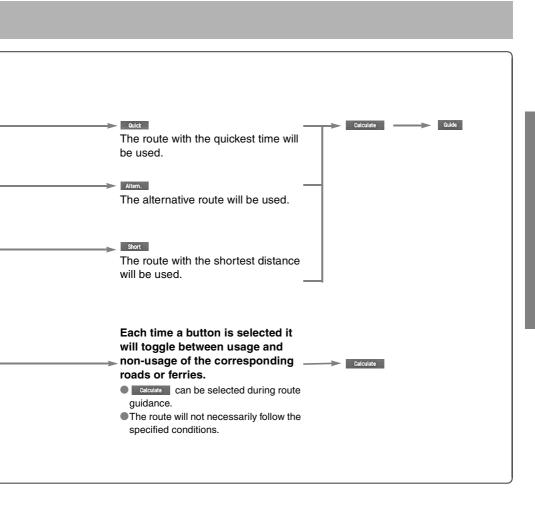
 During route guidance you can change the route options, stop or check the route.



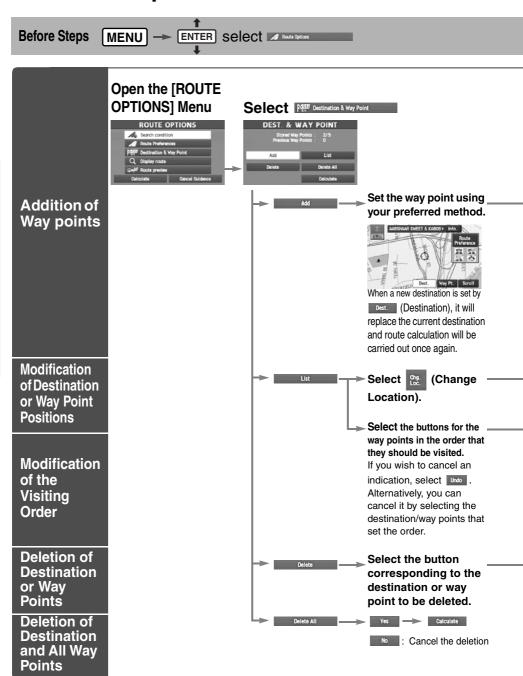


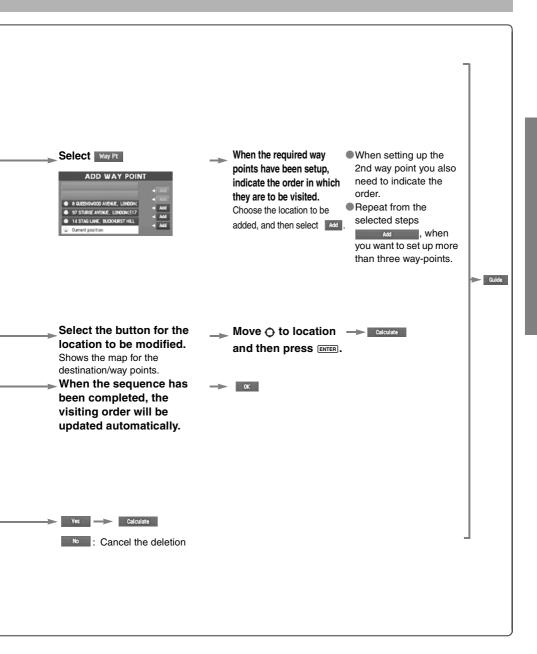
■ Do not keep your eyes fixed on the monitor screen or operate the system while driving

Do not change the settings and destination locations while driving. Minimize the time spent
viewing the monitor screen and listening to the voice guidance while driving. Operating the system
will distract the driver from looking ahead of the vehicle and may cause an accident. Always stop
the vehicle in a safe location and use the parking brake before operating the system.

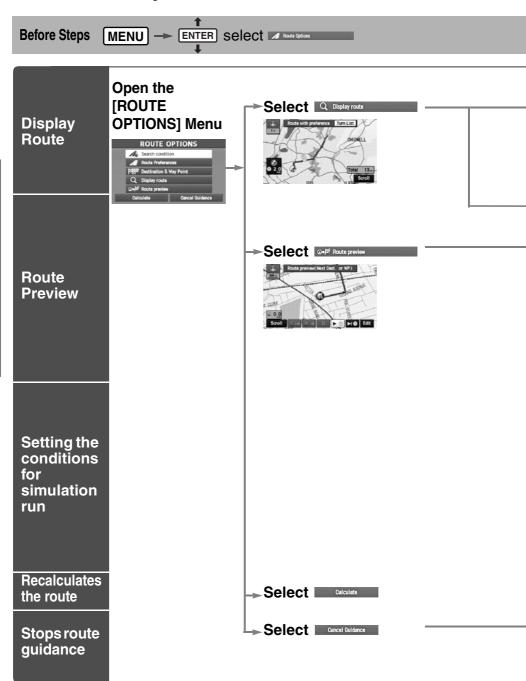


Route Options





Route Options





The Entire Route screen appears.



Enter the map scroll.

Use the buttons displayed on screen to carry out a simulation run.

Scroll: Enter the map scroll.

: Move the start point.

Carry out a simulation run in the direction of the start point. When the run has been started, this button will be displayed as , and when selected, it will cause running to take place at high speed.

: Stop the simulation run.

carry out a simulation run in the direction of the destination. When the run has been started, this button will be displayed as , and when selected, it will cause running to take place at high speed.

Move to the destination.

Edit : Displays the EDIT ROUTE PREVIEW screen.



To next Dest. or WP: Stops at the destination or the next way point.

: Stops at a point of interest which has been setup on the route.

: Delete the POI which has been selected.

POIs: Display the six POIs from Quick-POI storage. When one of these is selected, it will be displayed on the map; furthermore, can be selected to display items other than shown here. For more details, refer to page 41.

If, for example, Restaurant is selected for POIs and a simulation run is started using To rext POI

, this will then stop at a restaurant on the route.

If **Info.** is selected here, the system will display information relating to the establishment question.

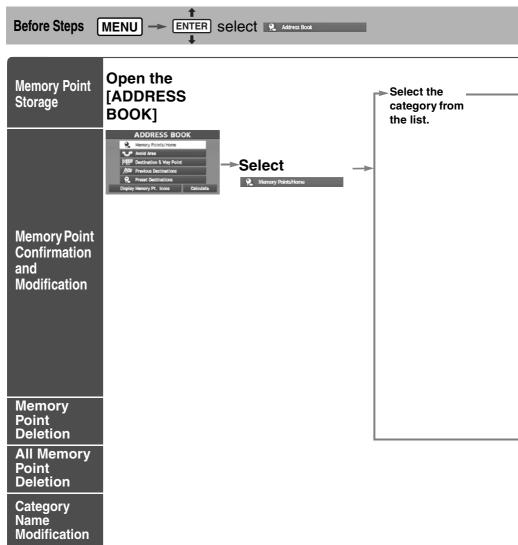
Yes

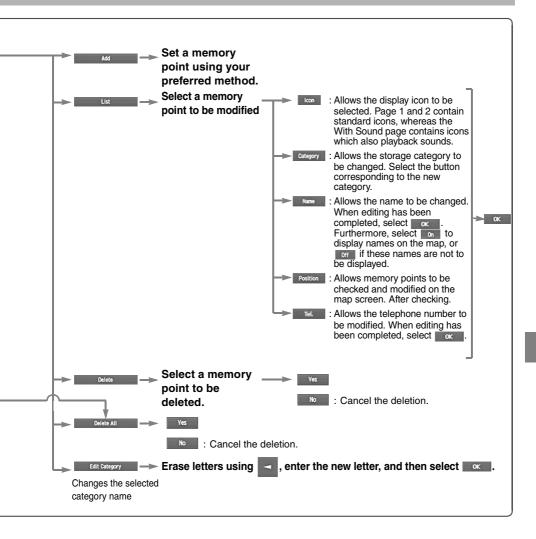
No : Cancel the Cancel Guidance.

RET

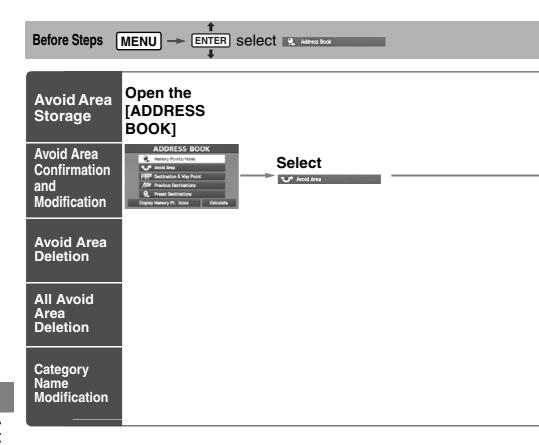
Address Book

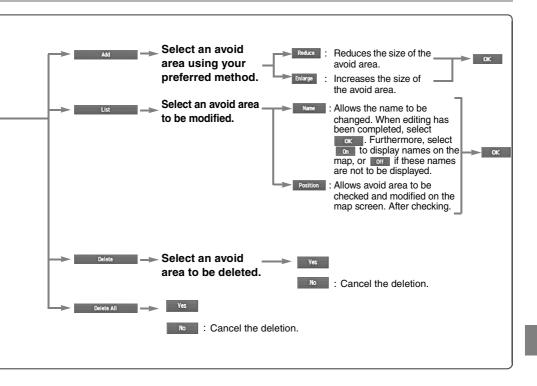
You can, edit, or delete any destinations, way points, or marked point.



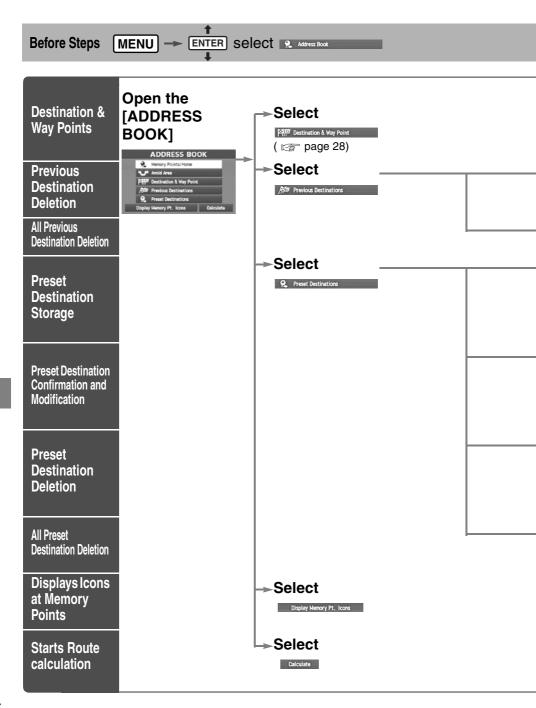


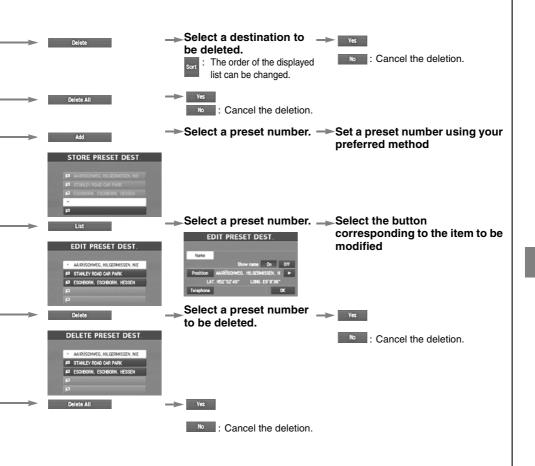
Address Book





Address Book





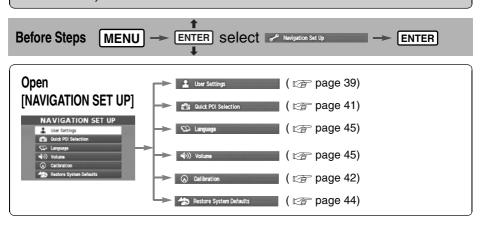
You can alter the map display conditions, the route guidance conditions and show the system information.



■ Stop your vehicle before the following operations.

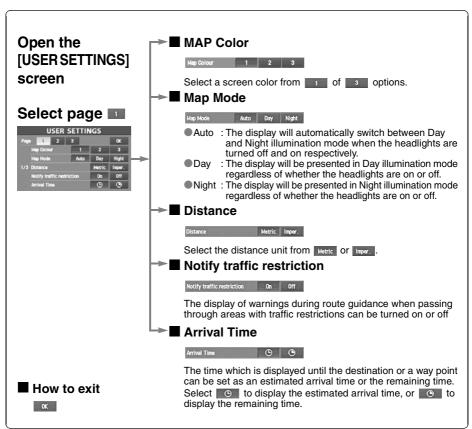
Do not change the settings and destination locations while driving. Minimize the time spent viewing the monitor screen and listening to the voice guidance while driving. Operating the system will distract the driver from looking ahead of the vehicle and may cause an accident.

Always stop the vehicle in a safe location and put the parking brake on before operating the system.



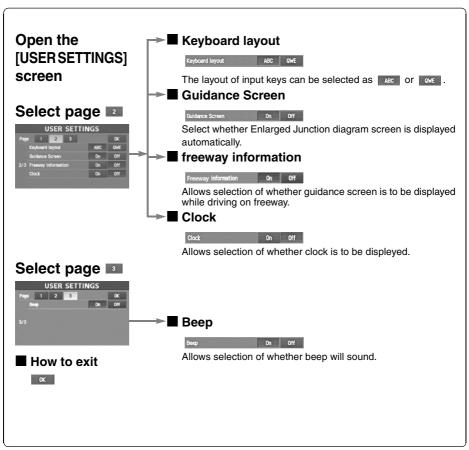
User Setting





User Setting





Quick POI Selection

This function allows you set the categories on the area displayed when the (Point of interest) menu is selected on the map. Quick POI enables you store up to six different kinds category which you use most regularly.



Open the [QUICK POI SELECTION] screen



Select the button for Quick POI storage.

Note

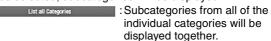
Select the category to be changed

:This button allows you to restore the factory setting.



Select a category.

Once selected, subcategories will be displayed.





Select the subcategories to be displayed on the map.

Repeat the above steps to add further POI markers displayed on the menu.



This function allows you to correct any error in the position or direction of your vehicle display.



Adjusting Current Position and Direction



Open the [Position calibration] screen



Move

to the correct position and select ENTER.



Use (or) to adjust the direction in which you are heading, and select .

Distance

This function automatically corrects any error in the display of the current position that might occur after tire replacement.



Distance is displayed

You will have to drive about 6 miles (10 km) before distance correction is complete.



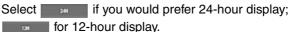
Set Clock

The current time is set using this function. Since time notification is provided by a GPS satellite, time-zone adjustment can be carried out automatically.



Open the [SET CLOCK] screen





Select to move the setting ahead by one hour, and similarly, select to move it back by one hour.

How to exit ...

Map Version

The map and software version numbers can be confirmed by using this function.

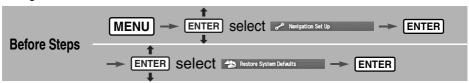


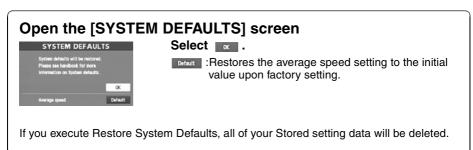
Map and software versions are now displayed.



Restore System Defaults

This function replaces all the settings in the mobile navigation system with the initial default settings.



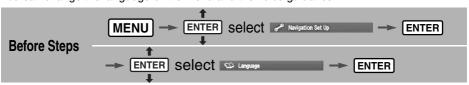


[Default List]

•					
Item	Initial condition				
Menu names					
For maps (one screen and dual screen)	North up				
Map display mode	single-screen display				
Map Display scale/Map scale for Dual-screen is not object of backup.	Single-screen: 10,000 map (1/16 mi)				
	Dual-screen: 40,000 map (1/4 mi)				
Display guidance language	English				
Q-POI map display	All Off				
Q-POI Selection	A : Gas station				
	B: ATM				
	C : Parking				
	D : Grocery store				
	E : All Restaurant F : Hotel				
Search Area					
	U9 (including Washington DC)				
Map Color					
Day/Night/Auto Setting	Auto				
Distance Units (Miles/KM) (Global setting)	Miles				
Volume Presets	4 (1 to 7)				
Right Screen Setting, POI	On				
Time display change (12h/24h)	24h				
Keyboard layout	ABC				
Arrival Time	Time				
Navigation Setup (Clock)	Off				
Navigation Setup (Beep)	On				
Map display					
freeway Information	Off				
Guidance Screen	ON				

Language

You can change the languege of the menu and the voice guidance.



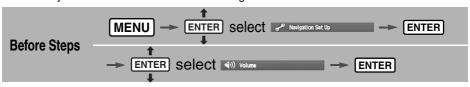
Open the [LANGUAGE] screen



Select your preferred language from the list.

Volume Adjustment

You can adjust the volume control for the voice guidance.



Open the [VOLUME] screen



Select the appropriate button to set the volume to between (minimum) and (maximum).

:Sound output will be muted.

Precautions/System Performance

Voice Guidance

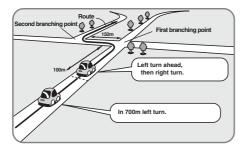


- The navigation system is just a support system for the driver. The driver should always pay attention to the traffic situation to safely make decisions. You may be unable at times to arrive at your destination due to out-of-date information on a map disc. You should be especially careful when selecting an urgent destination such as a hospital or a police station.
- Your route may sometimes include roads that are not open to vehicles or are closed due to traffic regulations. Please comply with the local traffic regulations.
- Do not change the settings and destination locations while driving. Minimize the time spent viewing the monitor screen and listening to the voice guidance while driving. Operating the system will distract the driver from looking ahead of the vehicle and may cause an accident. Always stop the vehicle in a safe location and use the parking brake before operating the system.

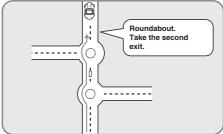
Voice guidance has the following functions:

■Intersection guidance

- The system voice announces the distance to an upcoming turn and the turning direction.
 - This guidance function is automatic. Therefore, you do not have to set it, and it cannot be disabled.
- •The system vocally announces the distance to an upcoming highway branching point or junction.

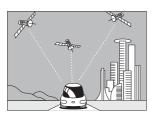


When two intersections are close together, the voice guidance may be late.



When two roundabouts are close together, the voice guidance for the second may be late.

GPS



GPS is a position detecting system utilizing the signals from GPS satellites deployed by the U.S. Department of Defense. The Mobile Navigation System uses input from three or more satellites and calculates the vehicle position based on the principle of triangulation.

The positioning accuracy of the system corresponds to the error display of the GPS which is from about 30 to 200 meters.

•If you are using the system for the first time, or if you have not used it for some time, it takes about 5 minutes (or about 2 minutes in open areas) to calculate your vehicle's position.

■GPS signal reception is poor in the following places









In tunnels

Among high-rise buildings Under elevated roads

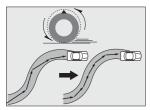
In wooded areas

- The GPS satellites are controlled by the U.S. Defense Department, which may intentionally lower positioning accuracy. In such cases, there may be vehicle position deviations.
- There may be vehicle position deviations for some time until GPS signals are received after turning on the ignition.

Map Matching

This function compares your vehicle's tracking data with the road data on the map disc, applies dead reckoning to determine the road you are driving on, and displays your vehicle on that road on the map.

Intelligent map matching addresses the following problems to achieve high accuracy in vehicle positioning.



Position Correction for Elevated Roads

Position accuracy is improved by detecting if the vehicle is running on or under an elevated road.

Position Correction for Parking Garages

Position accuracy is improved by detecting if the vehicle is driving in an elevated or underground parking garage.

High-precision Gyrosensor

A gyro detects turns with an accuracy of 0.05° per second. Combined with a speed sensor, it enables the system to display the current vehicle position even where GPS signals may be blocked.

- •Using a spare tire in place of the regular one may cause vehicle position deviations.
- Any difference between the direction which your vehicle actually travels and that shown on the map is automatically eliminated by azimuth correction.

Precautions/System Performance

Positioning Accuracy

In the following situations, your vehicle position may not be displayed correctly on the map. But, as you keep driving, your vehicle position will be automatically corrected utilizing map matching and GPS data.



Running on an elevated road



Making a turn after driving on a long straight road



mountain road



Running on a steep Running on a spiral Entering an intersection road



where a road branches off at a small angle



Running on gridiron

layout of roads



Running on a slippery road with tire chains



Snaking on a wide



When your vehicle is on a turntable with the ignition turned off



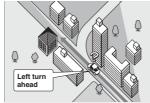
After getting off a ferryboat or vehicle

Route Guide

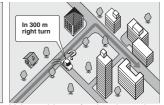
Although you may encounter the following problems in route guide, there is nothing wrong with the system.



For certain intersection shapes, the upcoming turn or the name of the intersection may not be announced.



For certain intersection shapes, you may be prompted to turn right or left When you should actually stay on the same road.



Voice guidance for the planned route may continue even after you have deviated from that route such as having turned too early.



Some points where the road divides on highways or toll roads may not be displayed or announced.



The Intersection Zoom Map may not always agree with the actual shape of the intersection.



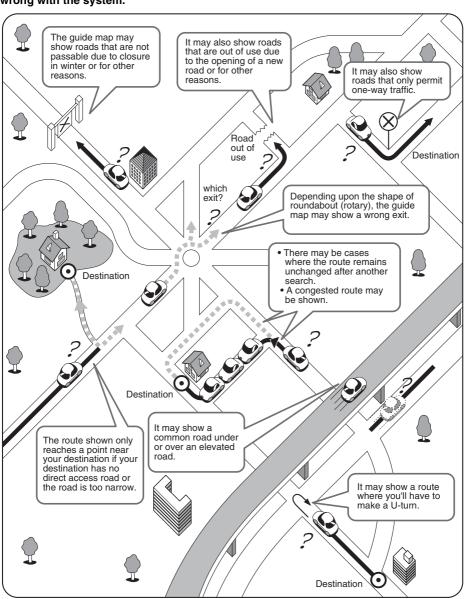
The announced distance to an upcoming turn may differ slightly from reality.



The navigation system is just a support system for the driver. The driver should always pay attention to the traffic situation to safely make decisions. You may be unable to arrive at your destination due to out-of-date information on a map disc. You should be especially careful when selecting an urgent destination such as a hospital or a police station.

Route Search

Although you may encounter the following problems in a route search, there is nothing wrong with the system.



Note

There may be some problems due to operational errors or mistakes. Please read this manual again and verify that there really is a problem before calling an Expert repairer, we recommend an Authorized Mazda Repairer to ask for repair services.

Check point Symptom No picture Check if a fuse has been blown. → Consult an Expert repairer, we recommend an Authorized Mazda Repairer. • Check if the voltage level of the vehicle battery is low. Recharge the battery or change batteries. Display doesn't open or close Check if the vehicle position changed when ACC was set to When, for example, The vehicle • The vehicle was transported by a ferry boat. • The vehicle was rotated on a turn table in a parking lot. position is not • The vehicle was transported by a tow track or other such correct vehicle. → Drive the vehicle for a while where you are receiving GPS signals.

Check point Symptom No GPS •GPS signals may not be received because of obstructions. symbols are After moving the vehicle away from obstructions, the GPS signals can be received. displayed The vehicle • Check if the mode is set to the current position screen. position is not ⇒ Press | POS displayed Check if the volume control for the voice guidance has been turned off. Check if the vehicle is off the route. → Repeat the route search while checking the route guide No voice guidance Check if you are driving the vehicle in the wrong direction on the route. ⇒ Repeat the route search checking the direction of the destination.

●Check if [Beep] is set to [Off] (page 40).

Buttons in the remote control

do not beep

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Troubleshooting

Error Messages

Error message

Please insert a MAP DVD.

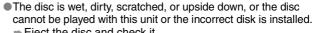


The disc is not installed.

Check if the disk is installed. If installed, check if the installed disk is correct.

MAP DVD-Read Error

The disc installed is not a MAP DVD.



⇒ Eject the disc and check it.

Maintenance

Care of the Product

■ Cleaning this product

Use a dry, soft cloth to wipe it.

■ Cautions for cleaning

Never use solvents such as benzene and thinners, they could mar the surface of the unit.

■ Map disc

If you require the latest map disc, consult an Expert repairer, we recommend an Authorized Mazda Repairer.

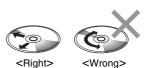
Handling and Care of Map Discs

■ How to hold the disc

- Do not touch the underside of the disc.
- Do not scratch the disc.
- Do not bend the disc.
- •When not in use, keep the disc in the case.

■ Disc Cleaning

•Use a dry, soft cloth to wipe from the center outward.



Label side

■ Do not leave discs in the following places:

- Direct sunlight
- Near car heaters
- In dirty, dusty and damp areas
- On seats and dashboards