

Operation Manual

ADD-ON NAVIGATION SYSTEM

AVIC-U220

Notice to all users:

This software requires that the navigation system is properly connected to your vehicle's parking brake and depending on your vehicle, additional installation may be required. For more information, please contact your Authorized Pioneer Electronics retailer or call us at (800) 421-1404.

Be sure to read **Important Information for the User** first!

Important Information for the User includes the important information that you must understand before using this navigation system.

Indications of this unit may be different from the actual value.

Some of the features of this device do not take in to consideration the type of vehicle it is installed into.

Contents

Thank you for buying this Pioneer product.

Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, keep this manual in a safe place for future reference.

[Important

The screens shown in the examples may differ from actual screens.

Actual screens may be changed without notice for performance and function improvements.

1 Introduction

Manual overview 5

- How to use this manual 5
- Conventions used in this manual 5
- Terms used in this manual 5

Map coverage 5

Resetting the microprocessor 5

1 Before you start

Checking part names and functions 7
Removing and attaching the detachable device 7

- Removing the detachable device 7
- Attaching the detachable device

Charging the battery of the detachable device **8**

Monitoring the battery status **8**Inserting and ejecting an SD memory card **9**

- Inserting an SD memory card
- Ejecting an SD memory card 9

Protecting your product from theft **10** Flow from startup to termination **10**

On first-time startup 11

Regular startup 11

(B) How to use the navigation menu screens

Screen switching overview 12
What you can do on each menu 13
Shortcut Menu 13

- Selecting the shortcut 13
- Canceling the shortcut 14

Operating menu screens (e.g. "Navigation Menu" screen) **14**

Operating list screens (e.g. city list) 14
Operating the on-screen keyboard 15

(14) How to use the map

How to read the map screen 16

- Audio information bar 17
- Enlarged map of the intersection 17
- Display during freeway driving 17
- Types of the road stored in the map database 18

Operating the map screen 18

- Changing the scale of the map 18
- Switching the map orientation 18
- Switching the map between 2D and 3D 19
 - Displaying "Eco Graph" 20
- Scrolling the map to the position you want to see 20

Viewing information about a specified location **20**

(15) Eco-driving function

Displaying "Eco Graph" 22

- Reading the screen 22

Displaying Eco Drive Level guidance 23
Sudden start alert 23

Changing the eco-function setting 23

(6) Searching for and selecting a location

The basic flow of creating your route 25
Searching for a location by address 26

Searching for a name by entering multiple keywords

Setting up a route to your home 28

- Searching for Points of Interest (POI) 28

 Searching for a POI directly from the name of the facilities 28
 - Searching for a nearby POI 29

Contents

destination 29	
 Searching for POIs around the city 	2
Selecting destination from "Favorites" 30)
Searching for POIs by using the data on the	ne
SD memory card 31	
Selecting a location you searched for	
recently 31	
Searching for a location by coordinates	31
Searching for a location by scrolling the	
map 32	

- Searching for POIs around the

Of After the location is decided

Setting a route to your destination 33

Checking and modifying the current route

Displaying the "Route info" screen 34 Modifying the route calculation conditions 34

- Items that users can operate
Checking the current itinerary 35
Editing waypoints 35

- Adding a waypoint **35**
- Deleting a waypoint 36
- Sorting waypoints 36

Canceling the route guidance 37

(19) Registering and editing locations

Storing a location in "Favorites" 38

- Registering a location by "Favorites" 38
- Registering a location by scroll mode 38

Editing registered locations 38

- Editing the entry in the "Favorites" list 38
- Editing your home 39
- Sorting the entry in the "Favorites" list 39

Deleting the entry from the "Favorites"
 list 40

Registering and editing your home 40

- Registering your home 40
- Editing your home 41

Deleting the entry from the "History" list **41** Exporting and importing "Favorites"

items 42

- Exporting "Favorites" items 42
- Importing the "Favorites" items edited on AVIC FEEDS 42

10 Fuel cost management

Using the "Gas Mileage" function 44

- Inputting the fuel consumption information for calculating the fuel cost 44
- Calculating the fuel consumption 44
- Exporting the data of fuel cost information 45

Exporting the data of "Gas Mileage" from "Export/Import Menu" screen **45**

1 Using Applications

Preparing in advance **47**Launching the application **47**

12 Customizing preferences

Displaying the "Settings Menu" screen 48
Setting the volume for navigation system 48
Customizing the regional settings 48

- Selecting the language 48
- Setting the time difference 49
- Changing the unit between km and miles 50
- Changing the virtual speed of the vehicle 50
- Setting the keyboard layout **50**

Customizing the map screen settings

Displaying POI on the map 51

Contents

-	Switching		the	map	between	2D	anc
	3D	52					

- Displaying maneuvers 52
- Setting the map color change between day and night 53
- Changing the road color 53
- Setting the auto-zoom display 53
- Setting the "Favorites" icon display 53
- Setting the current street name display 54
- Displaying the fuel consumption information 54

Checking the version information 54
Registering and editing your home 54
Correcting the current location 55
Checking the connections of leads Using the demonstration guidance 55
Recording your travel history 56

(B) Other functions

Replicating the settings **57**Returning the navigation system to the default or factory settings **57**

- Restoring the default setting 57
- Returning the navigation system to the initial state 58
- Setting items to be deleted 59

Interruption of the AV receiver screen 60

- When a phone call is received 60
- When XM or SIRIUS alert is received 60
- When the rear view camera is activated 60

Appendix

Troubleshooting 62
Messages and how to react to them 64
Positioning technology 65

- Positioning by GPS 65

Map matching 65

Handling large errors 65

- When positioning by GPS is impossible 66
- Conditions likely to cause noticeable positioning errors

Route setting information 68

Route search specifications 68

Common notes about the SD memory

card 69

SD and SDHC logo 69

Display information 70

- "Navigation Menu" screen 70
- "Settings Menu" screen 70
- "Settings Menu" screen 71

Glossary **72**Specifications **73**

Introduction

Manual overview

Before using this product, be sure to read **Important Information for the User** (a separate manual) which contains warnings, cautions, and other important information that you should note.

How to use this manual

Finding the operation procedure for what you want to do

When you have decided what you want to do, you can find the page you need from the Contents.

Finding the operation procedure from a menu name

If you want to check the meaning of an item displayed on the screen, you will find the necessary page from the *Display information* at the end of the manual.

Glossary

Use the glossary to find the meanings of terms.

Conventions used in this manual

Before moving on, take a few minutes to read the following information about the conventions used in this manual. Familiarity with these conventions will help you greatly as you learn how to use your new equipment.

 Buttons on your navigation system are described in ALL CAPITAL, BOLD lettering: e.g.)

MODE button

- Items in different menus, screen titles, and functional components are described in bold with double quotation marks "": e.g.)
 - "Navigation Menu" screen
- Touch panel keys that are available on the screen are described in **bold** in brackets []: e.g.)

[Address], [Settings].

- Extra information, alternatives and other notes are presented in the following format:
 - e.g.)
 - ☐ If the home location has not been stored vet, set the location first.
- Descriptions of separate operations to be performed on the same screen are indicated with at the beginning of the description:
 - e.g.)
 - Touch [OK].
- References are indicated like this: e.g.)
 - → For details, refer to Registering your home on page 40.

Terms used in this manual

"SD memory card"

The SD memory card and SDHC memory card are collectively referred to as the "SD memory card". ■

Map coverage

For details about the map coverage of this navigation system, refer to the information on our website.

Resetting the microprocessor



CAUTION

Please refer to the related section before clearing.

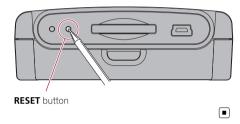
⇒ For detailed information about the items which would be erased, refer to Returning the navigation system to the default or factory settings on page 57.

The microprocessor must be reset under the following conditions:

- Prior to using this product for the first time after installation.
- If the product fails to operate properly.

Introduction

- If there appear to be problems with the operation of the system.
- When changing the combination of equipment.
- When adding/removing additional products that connect to the navigation system.
- If your vehicle position is shown on the map with a significant positioning error.
- Press the RESET button with a pen tip or other pointed implement.



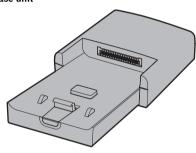
Checking part names and functions

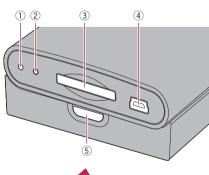
This chapter gives information about the names of the parts and the main features using the buttons.

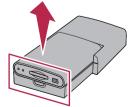
Detachable device



Base unit







1 Power indicator

② RESET button

⊃ For details, refer to *Resetting the microprocessor* on page 5.

3 SD card slot

For more detailed information, refer to Inserting and ejecting an SD memory card on page 9.

4 USB port (Mini-B)

Use to connect with your PC.

⑤ Detach button

Press to remove the detachable device from the base unit.

Removing and attaching the detachable device

$\mathbf{\Lambda}_{\mathbf{c}}$

CAUTION

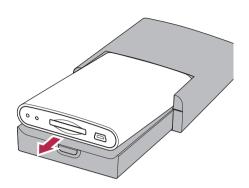
- Before removing the detachable device, turn the ignition switch off (ACC OFF).
- When you attach the detachable device, be sure to attach it to the base unit before turning the ignition switch on (ACC ON).
- · Never use force when removing or attaching.
- Avoid subjecting the detachable device to excessive shocks.
- Keep the detachable device out of direct sunlight and high temperatures.
- After removing the detachable device, keep it in a safe place so it is not scratched or damaged.

Removing the detachable device

1 Press the Detach button to release the detachable device.

2 Gently grip both sides of the detachable device and slowly pull it out.

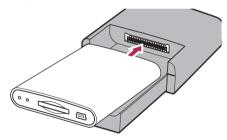
Take care not to drop the detachable device and protect it from contact with water or other fluids to prevent permanent damage.



Attaching the detachable device

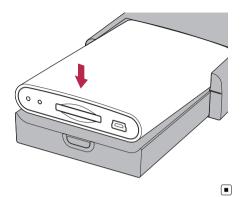
1 Slide the detachable device all the way into the base unit.

Make sure that the detachable device is securely connected to the base unit terminal.



2 Press the center of the front of the detachable device until you hear a click.

If you fail to successfully attach the detachable device to the base unit, try again but be careful not to force it as the unit could be damaged.



Charging the battery of the detachable device

- Charging cannot be done when the temperature is outside of the charging temperature range.
- The operating temperature range of the battery is from –4 °F to +140 °F.
- The charging temperature range of the battery is from 32 °F to +131 °F.

The battery of the detachable device is charged in the following situations.

- When the detachable device is attached to the base unit while the ignition switch is turned on (ACC ON).
- When the detachable device is connected to your PC. •

Monitoring the battery status

You can check the battery status of the detachable device.

1 Touch [Home] on the map screen.

The "Top Menu" screen appears.

2 Touch [Settings].

The "Settings Menu" screen appears.
The battery status indicator is displayed on the upper right of the "Settings Menu" screen.

Battery status indicator					
	Fully charged				
	Sufficient power				
C \$ 2	Charging				

Inserting and ejecting an SD memory card

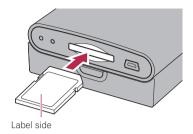


- Ejecting an SD memory card during data transfer can damage the SD memory card. Be sure to eject the SD memory card by following the procedure described in this manual.
- If data loss or corruption occurs on the storage device for any reason, it is usually not possible to recover the data. Pioneer accepts no liability for damages, costs or expenses arising from data loss or corruption.
- ☐ This system is not compatible with Multi Media Card (MMC).
- Compatibility with all SD memory cards is not guaranteed.
- ☐ This unit may not achieve optimum performance with some SD memory cards.
- □ Do not insert anything other than SD memory cards.
- If data related to map data, such as customized POI data, is stored on the SD memory card, the navigation system restarts.

Inserting an SD memory card

Insert an SD memory card into the SD card slot.

Insert the card with the contact end first into the SD card slot and press the card until it clicks and completely locks.



Ejecting an SD memory card

1 Press the MODE button of the AV receiver.

After a short pause, the navigation screen appears.

- ☐ The display will turn off if you press the **MODE** button of the AV receiver immediately after the navigation system restarts, so wait (approximately 10 seconds) after restart before pressing the **MODE** button.
- **⇒** For details of the operations, refer to *Screen switching overview* on page 12.

2 Touch [Home] on the map screen. The "Top Menu" screen appears.

3 Touch [Eject SD].



A message confirming whether to restart the navigation system appears.

4 Touch [OK].



The navigation system restarts.

After a short pause, the navigation screen returns.

5 Check that the following screen is displayed.

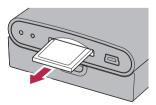


6 Press the middle of the SD memory card gently until it clicks.



The SD memory card is ejected.

7 Pull the SD memory card out straight.



8 Touch [Restart].



The navigation system restarts.

After a short pause, the navigation screen returns.

Protecting your product from theft

The detachable device can be removed from the base unit to discourage theft.

For details, refer to Removing the detachable device on page 7. ■

Flow from startup to termination

- 1 Start the engine to boot up the system.
- 2 Press the MODE button of the AV receiver.

After a short pause, the navigation screen appears.

- ☐ The display will turn off if you press the MODE button of the AV receiver immediately after the navigation system restarts, so wait (approximately 10 seconds) after restart before pressing the MODE button.
- → For details of the operations, refer to Screen switching overview on page 12.

3 Turn off the vehicle engine to terminate the system.

The navigation system is also turned off.

On first-time startup

When you use the navigation system for the first time, select the language that you want to use.

- 1 Start the engine to boot up the system.
- 2 Press the MODE button of the AV receiver.

After a short pause, the navigation screen appears.

- ☐ The display will turn off if you press the MODE button of the AV receiver immediately after the navigation system restarts, so wait (approximately 10 seconds) after restart before pressing the MODE button.
- **⇒** For details of the operations, refer to *Screen switching overview* on the next page.
- 3 Touch the language that you want to use on the screen.



4 Touch the language that you want to use for the voice guidance.



The navigation system will now restart. When the navigation system restarts, the AV receiver screen is displayed.

5 Read the disclaimer carefully, checking its details, and then touch [OK] if you agree to the conditions.



The map screen appears.



Regular startup

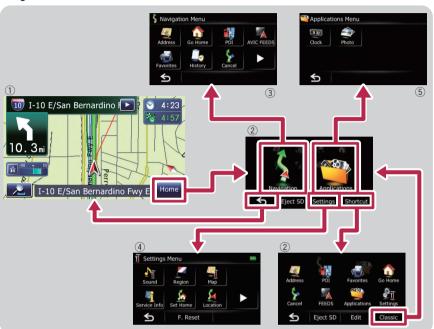
- 1 Start the engine to boot up the system.
- 2 Press the MODE button of the AV receiver.

After a short pause, the navigation screen appears.

- ☐ The display will turn off if you press the MODE button of the AV receiver immediately after the navigation system restarts, so wait (approximately 10 seconds) after restart before pressing the MODE button.
- ☐ The screen shown will differ depending on the previous conditions.
- When there is no route, the disclaimer appears after the navigation system reboots. Read the disclaimer carefully, checking its details, and then touch [OK] if you agree to the conditions.
- **⊃** For details of the operations, refer to *Screen switching overview* on the next page. ■

Screen switching overview

Navigation screen





AV receiver screen (e.g. AVH-P3200BT)

What you can do on each menu

① Map screen

Touch on the "Top Menu" screen.

2 Top Menu

Touch [Home] on the map screen to display the "Top Menu" screen.

This is the starting menu to access the desired screens and operate the various functions.

There are two types of the "**Top Menu**" screen.



Classic Menu



Shortcut Menu

☐ In this manual, Classic Menu will be referred to as "**Top Menu**".

③ "Navigation Menu" screen

You can search for your destination on this menu. You can also check or cancel your set route from this menu.

Other features include useful functions to support your navigation.

(4) "Settings Menu" screen

You can access the screen to customize settings.

5 "Applications Menu" screen

You can launch applications downloaded to an SD memory card via the utility program AVIC FEEDS.

Shortcut Menu

Registering your favorite menu items in shortcuts allows you to quickly jump to the registered menu screen by a simple touch on the Shortcut Menu screen.

Selecting the shortcut

- Up to 8 menu items can be registered in shortcuts.
- 1 Touch [Home] on the map screen.

The "Top Menu" screen appears.

2 Touch [Shortcut].



When you use the navigation system for the first time or no items are set on shortcut, a message will appear. Touch [Yes] to start the shortcut selection.

3 Touch [Edit].



4 Touch the tab on the right edge or scroll the bar to display the icon that you want to set to shortcut.



Scroll bar

- 5 Touch and hold the icon that you want to add to shortcut.
- 6 Move the icon to the left side of the screen, and then release it.

The selected item is added to shortcut.



7 To finish the selection, touch [Close].

Canceling the shortcut

- 1 Touch and hold the icon that you want to cancel the shortcut.
- 2 Move the icon to the right side of the screen, and then release it.
- 3 To finish the selection, touch [Close].

Operating menu screens (e.g. "Navigation Menu" screen)



- 1) Screen title
- 2 5

The previous screen returns.

③ ▶ ◀

Shows the next or previous page.

Operating list screens (e.g. city list)



- 1 Screen title
- 2 🛭

(3) ≤

The previous screen returns.

(4) Listed items

Touching an item on the list allows you to narrow down the options and proceed to the next operation.

5

If all of the characters cannot be displayed within the displayed area, touching the key to the right of the item allows you to see remaining characters.

Operating the on-screen keyboard



① Text box

Displays the characters that are entered. If there is no text in the box, an informative quide with text appears.

② Keyboard

Touch the keys to enter the characters.

The previous screen returns.

4 0-9, Sym., Others

You can enter other characters of alphabet. You can also enter text with marks such as [&] or numbers.

Touch to togale the selection.

- □ When you use any of "A", "A", "A", "Æ", the displayed result is the same.
- ⑤ OK Confirms the entry and allows you to proceed to the next step.
- © Deletes the input text one letter at a time, beginning at the end of the text. Continuing to touch the button deletes all of the text.
- ☐ You can select the type of keyboard to be used for inputting characters.
 - ⇒ For details, refer to Setting the keyboard layout on page 50.

Most of the information provided by your navigation system can be seen on the map. You need to become familiar with how information appears on the map.

How to read the map screen

This example shows an example of a 2D map screen.



- ☐ Information with an asterisk (*) appears only when the route is set.
- Depending on the conditions and settings, some items may not be displayed.
- ① Name of the street to be used (or next guidance point)*

Touching this item enables you to hear the next guidance again.

2 Next direction of travel*

When you approach a guidance point, this appears in green. Touching this item enables you to hear the next guidance again.

③ Distance to the guidance point* Shows the distance to the next guidance point.

(4) Eco-Meter

Displays a graph comparing the past average fuel mileage and the average fuel mileage since the navigation system was last started. Touching this item displays the "Eco Graph" screen.

- ⇒ For details, refer to Displaying "Eco Graph" on page 22.
- (5) Map control

Touching adisplays touch panel keys for changing the map scale and the map orientation.

Street name (or city name) that your vehicle is traveling along

⊃ For details, refer to *Setting the current* street name display on page 54.

(7) Current position

Indicates the current location of your vehicle. The apex of the triangular mark indicates your orientation and the display moves automatically as you drive.

☐ The apex of the triangular mark is the proper current position.

8 Home key

Touch [**Home**] on the map screen to display the "**Top Menu**" screen.

⊃ For details of the operations, refer to *Screen switching overview* on page 12.

Map orientation indicator

- When "North up" is selected, N is displayed.
- When "Heading up" is selected,
 is displayed.
 - ☐ The red arrow indicates north.
 - **⊃** For details, refer to *Switching the map orientation* on the next page.

10 Direction line*

The direction towards your destination (next waypoint, or cursor) is indicated with a straight line.

(11) Current route*

The route currently set is highlighted in color on the map. If a waypoint is set on the route, the route after the next waypoint is highlighted in another color.

12 Multi-Info window

Each touch of [Multi-Info window] changes the display information.

- Distance to the destination (or distance to waypoint)*
- Estimated time of arrival at your destination or waypoint*

The estimated time of arrival is an ideal value calculated based on the value set for "**Speed**" and the actual driving speed. The estimated time of arrival is only a reference value, and does not quarantee arrival at that time.

- Travel time to your destination or waypoint*
- (3) Current time

Meaning of guidance flags



Destination

The checkered flag indicates your destination.



Waypoint

The blue flags indicate your waypoints.



Guidance point

The next guidance point (next turning point, etc.) is shown by a yellow flag.

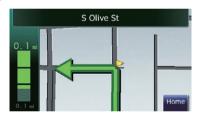
Audio information bar

While the navigation system screen is displayed, changing the source or adjusting the volume displays source information at the bottom of the screen.



Enlarged map of the intersection

When "Close Up View" in the "Map" screen is "On", an enlarged map of the intersection appears.



⊃ For details, refer to *Setting the auto-zoom display* on page 53.

Display during freeway driving

In certain locations of the freeway, lane information is available, indicating the recommended lane to be in to easily maneuver the next guidance.



While driving on the freeway, freeway exit numbers and freeway signs may be displayed when in the vicinity of interchanges and exits.



- 1 Lane information
- ② **Freeway exit information** Displays the freeway exit.
- 3 Freeway signs

These show the road number and give directional information.

☐ If the data for these items is not contained in the built-in memory, the information is not available even if there are the signs on the actual road.

Types of the road stored in the map database

Roads included in the route guidance

Turn by Turn Routable Roads contain full attribute data and can be used for full Route Guidance. Pioneer Navigation will display full route guidance, including turn-by-turn voice directions and arrow icons.

Roads without turn-by-turn instructions

Routable roads (the route displayed and highlighted in purple) have only basic data and can only be used to plot a navigable route. Pioneer Navigation will only display a navigable route on the map (only the arrival guidance for the destination or a waypoint is available). Please review and obey all local traffic rules along the highlighted route. (For your safety.)

No turn-by-turn directions will be displayed on these roads.

Non routable roads (pink color road)

Map display is possible, but it cannot be used for route calculation. Please review and obey all local traffic rules along this route. (For your safety.)

Operating the map screen Changing the scale of the map

You can change the map scale between 25 yard and 1 000 miles (25 meters and 2 000 kilometers).

- 1 Display the map screen.
- 2 Touch on the map screen.

and with the map scale appear.

3 Touch or to change the map scale.



If you do not operate the function for a few seconds, the initial map screen automatically returns.

Switching the map orientation

You can switch how the map shows your vehicle's direction between "Heading up" and "North up".

- Heading up:
 - The map display always shows the vehicle's direction as proceeding toward the top of the screen.
- North up:

The map display always has north at the top of the screen.

- The map orientation is fixed at "North up" when the map scale is 25 miles (50 kilometers) or more.
- ☐ The map orientation is fixed at "Heading up" when the 3D map screen is displayed.
- 1 Display the map screen.
- 2 Touch on the map screen.
- or nappears.
 - When "North up" is selected, is displayed.
 - When "Heading up" is selected, is displayed.



3 Touch or to switch the vehicle's direction.

Each time you touch the key changes that setting.

If you do not operate the function for a few seconds, the initial map screen automatically returns.

Switching the map between 2D and 3D

2D map screen



3D map screen



- 1 Display the map screen.
- 2 Touch on the map screen.
- or appears.
 - ☐ When the 2D map screen is selected, is displayed.
 - ☐ When the 3D map screen is selected, is displayed.



3 Touch 00 or 30.

Each time you touch the key changes that setting.

If you do not operate the function for a few seconds, the initial map screen automatically returns.

Displaying "Eco Graph"

"Eco Graph" shows the results of a comparison of past average mileage and current average mileage.

- 1 Display the map screen.
- 2 Touch on the map screen.



The "Eco Graph" screen appears.



- ☐ Touch **s** to move from the **"Eco Graph"** screen to the map screen.
- For details, refer to Displaying "Eco Graph" on page 22.

Scrolling the map to the position you want to see

1 Display the map screen.

2 Touch and drag the map in the desired direction to scroll.



- 1 Distance from the current position
- ② Cursor

Positioning the cursor to the desired location results in a brief informational overview about the location being displayed at the bottom of screen, with street name and other information for this location being shown. (The information shown varies depending on the position.)

- ☐ The scrolling increment depends on your dragging length.
- Touch .

The map returns to the current position.

Viewing information about a specified location

An icon appears at registered places (home location, specific places, **Favorites** entries) and places where there is a POI icon. Place the scroll cursor over the icon to view detailed information.

1 Scroll the map and move the scroll cursor to the icon you want to view.

Touch 📰.



The "Information List" screen appears.

Touch the item that you want to check the detailed information.

Information for a specified location appears.



The information shown varies according to the location. (There may be no information for that location.)

- **⊃** For details, refer to *Setting the* "Favorites" icon display on page 53.
- ⇒ For details, refer to Displaying POI on the map on page 51.

Eco-driving function

This navigation system is equipped with an Eco-driving function that can be used to estimate whether you are driving in an environmentally friendly way.

This chapter describes this function.

- The fuel mileage calculated is based on a theoretical value determined from vehicle speed and position information from the navigation system. The fuel mileage displayed is only a reference value, and does not guarantee the mileage displayed can be obtained.
- The Eco-driving functions are an estimate of the real time fuel consumption to average fuel consumption ratio and is not an actual value.
- The Eco-driving functions and calculations take into consideration the location of the GPS position and speed of the vehicle in determining a value.

Displaying "Eco Graph"

This function estimates approximate fuel mileage based on your driving, compares that with your average fuel mileage in the past, and displays the results in a graph.

1 Touch [Home] on the map screen and then touch [Navigation].

➡ For details of the operations, refer to Screen switching overview on page 12.

2 Touch [Eco Graph].



☐ You can also touch on the map screen to display the "Eco Graph".

Reading the screen



1) Average fuel mileage comparison graph

Displays a comparison of the average fuel mileage up to the point the navigation system was last stopped (past average fuel mileage) and the current average fuel mileage. The display is updated every 3 seconds. The more the value moves in the direction of +, the better the fuel mileage.

There are three different graph bars.

Total

A comparison of the past average fuel mileage and the average fuel mileage from the location the navigation system was last started to the current driving location.

M: Ordinary Road

A comparison of the past average fuel mileage and the average fuel mileage for 90 seconds in the past, while the vehicle is driving on an ordinary road.

• 🜃 : Freeway

A comparison of the past average fuel mileage and the average fuel mileage for 90 seconds in the past, while the vehicle is driving on a freeway.

② Eco Score

The result of the comparison of your past average fuel mileage and current average fuel mileage appears as a value from **0.0 Pts** (points) to **10.0 Pts**. The higher the value, the better the fuel mileage when compared to past route guidance.

The "Eco Score" is updated every 5 minutes.

☐ This is not displayed when "Eco Score" is set to "Off" or when no route is set.

3 Best Score

Displays the best score to date.

Eco-driving function

☐ This is not displayed when "Eco Score" is set to "Off" or when no route is set.

(4) Eco-gauge

The green gauge indicates the current score, and the gray gauge indicates the best score to date.

☐ This is not displayed when "Eco Score" is set to "Off" or when no route is set.

(5) Animal icons

The number of displayed animal icons increases or decreases according to the value of "Eco Score".

- □ If you try to use the "Eco Graph" function immediately after you start using the navigation system for the first time, may be displayed and the function may not be available.
 - ⇒ For details, refer to Troubleshooting on page 62 (Symptom: "Eco Graph" is not available.).
- ☐ The display settings can be changed.
 - **⊃** For details, refer to *Changing the eco- function setting* on this page. **□**

Displaying Eco Drive Level guidance

This navigation system is equipped with the "Eco Drive Level" function that estimates how well you have driven in an environmentally friendly way.

The points of "Eco Drive Level" change according to "Eco Score" when the vehicle reaches the destination. When a certain number of points is reached, the level increases and a message appears.



1 Tree icon

As the level increases, a tree icon changes from a young tree to a big tree.

- ☐ This is not displayed when "Eco Drive Level" is set to "Off".
- **⊃** For details, refer to *Changing the eco-function setting* on this page. ■

Sudden start alert

If the speed of the vehicle exceeds 25.5 mph (41 kmph) within 5 seconds from the time it is started, a message appears and a warning sound beeps.



⊃ For details, refer to *Changing the eco-function setting* on this page. ■

Changing the eco-function setting

You can change the eco-function setting.

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - **⇒** For details of the operations, refer to *Screen* switching overview on page 12.
- 2 Touch [Eco Graph].



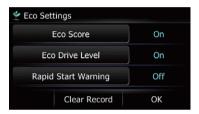
Eco-driving function

3 Touch [Settings].



The "Eco Settings" screen appears.

4 Touch the desired option.



Eco Score

- On (default): Displays "Eco Score".
- Off-

Hides "Eco Score".

For details, refer to Displaying "Eco Graph" on page 22.

Eco Drive Level

• On (default):

After you arrive the destination, a message appears and a beep sounds if the level of "Eco Drive Level" have increased or decreased.

Off:

No message appears and no sound beeps when the vehicle reaches the destination.

➡ For details, refer to Displaying Eco Drive Level guidance on the previous page.

Rapid Start Warning

• On:

A message appears and a sound beeps when the vehicle experiences a sudden start.

Off (default):

No message appears and no sound beeps when the vehicle experiences a sudden start.

Clear Record

Fuel consumption data are cleared.

5 Touch [OK].

The settings are completed.



For safety reasons, these route-setting functions are not available while your vehicle is in motion. To enable these functions, you must stop in a safe place and put on the parking brake before setting your route.

☐ Some information regarding traffic regulations depends on the time when the route calculation is performed. Thus, the information may not correspond with a certain traffic regulation when your vehicle actually passes through the location in question. Also, the information on the traffic regulations provided will be for a passenger vehicle, and not for a truck or other delivery vehicles. Always follow the actual traffic regulations when driving.

The basic flow of creating your route

1 Park your vehicle in a safe place and apply the parking brake.



- 2 Display the "Top Menu" screen.
 - **⊃** For details of the operations, refer to *Screen switching overview* on page 12.



3 Select the method of searching for your destination.



4 Enter the information about your destination to calculate route.



- 5 Confirm the location on the map.
 - → For details, refer to Setting a route to your destination on page 33.



6 The navigation system calculates the route to your destination, and then shows the route on the map.



- 7 Check and decide the route.
 - → For details, refer to Setting a route to your destination on page 33.



8 Your navigation system sets the route to your destination, and the map of your surroundings appears.



After releasing the parking brake, drive in accordance with navigation guidance.

06

Searching for and selecting a location

Searching for a location by address

The most frequently used function is "**Address**", in which the address is specified and the location is searched.

- Depending on the search results, some steps may be skipped.
- 1 Touch [Home] on the map screen and then touch [Navigation].
 - **⊃** For details of the operations, refer to *Screen switching overview* on page 12.
- 2 Touch [Address].



3 Touch the key next to "Country" to display the country list.



4 Touch one of the items on the list to set the country as search area.



The screen returns to the previous screen.

Once the country has been selected, you only have to change countries when the location is outside of the country you selected.

5 Touch the key next to "State".



6 Touch one of the items on the list to set it as search area.



The screen returns to the previous screen.

- Once the state, province, or territory has been selected, you only have to change states, provinces, or territories when your destination is outside of the state, province, or territory you selected.
- 7 Touch [City].



The "Enter City Name" screen appears.

8 Enter the city name and then touch IOKI.



The "Select City" screen appears.

Touch the desired city name.

The "Enter Street Name" screen appears.

■ Touch .

The representative location of the city appears on the map screen.

10 Enter the street name and then touch [OK].



The "Select Street" screen appears.

11 Touch the street you want.

The "House#" screen appears.

12 Enter the house number and then touch [OK].



The "Selected House Number" screen appears.

13 Touch the desired house number range.



The searched location appears on the map screen.

⇒ For the subsequent operations, refer to Setting a route to your destination on page 33.

Searching for a name by entering multiple keywords

You can search for a name (such as a city name or a street name) by entering multiple keywords.

Up to three keywords can be entered.

□ Enter a space between keywords.

The result of search depends on the number of entered keywords.

Entering a keyword

All names containing the word beginning with the entered keyword are displayed as a search result.

Entering two keywords

The names including the following words below are displayed as a result:

- First keyword you entered.
- · The word beginning with the second key-

Entering three keywords

The names including the following words below are displayed as a result:

- The words that completely match with both first and second keywords you entered.
- The word beginning with the third keyword.

e.g. Searching "Golden State Hwy".

Entered keywords	Search results	
GOLDEN S		
STATE H	" Golden State Hwy " is	
GOLDEN STATE H	searchable.	
STATE HWY G		
GSH	"Golden State Hwy" is not	
G STATE HWY	searchable.	

Setting up a route to your home

If your home location is stored, the route to your home can be calculated by touching a single key.

1 Touch [Home] on the map screen and then touch [Navigation].

For details of the operations, refer to Screen switching overview on page 12.

2 Touch [Go Home].

- If you have not registered your home location, a message appears. Touch [Register] to start registration.
 - ⇒ For details, refer to Registering and editing your home on page 40.

Searching for Points of Interest (POI)

Information about various facilities (Points Of Interest - POI), such as parking lots or amusement parks, is available. You can search for a POI by selecting the category (or entering the POI Name).

Searching for a POI directly from the name of the facilities

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - **⊃** For details of the operations, refer to *Screen* switching overview on page 12.
- 2 Touch [POI].

The "POI Search" screen appears.

3 Touch [Spell Name].

The "POI Name Input Menu" screen appears.

I Touch [Zone].



The "State/Province Selection" screen appears.

If the location that you want to search for is in another state, province, or territory, this changes the area setting.

- Once the state, province, or territory has been selected, you only have to change states, provinces, or territories when your destination is outside of the state, province, or territory you selected.
- 5 Touch one of the items on the list to set it as search area.

The "POI Name Input Menu" screen returns.

■ Touch [Country].

The "Country List" screen appears.

If the location that you want to search for is in another country, this changes the country setting.

6 Touch [Name].

The "POI Name" screen appears.

7 Enter the POI name and then touch [OK].



The "POI Name Input Menu" screen returns.

8 Touch [Search].

The "POI List" screen appears.

9 Touch the POI you want.

The searched location appears on the map screen.

■ Touch [Sort].

Each time you touch [**Sort**] changes the sort order.

- Current order is indicated on the upper right of the screen.
- 🔭 🕏

Sorts the items in the list in order by distance from the vehicle position.

- ABC =
 - Sorts the items in the list alphabetically.
- ⇒ For the subsequent operations, refer to Setting a route to your destination on page 33.

Searching for a nearby POI

You can search for POIs in your surroundings.

1 Touch [Home] on the map screen and then touch [Navigation].

→ For details of the operations, refer to Screen switching overview on page 12.

2 Touch [POI].

The "POI Search" screen appears.

3 Touch [Near Me].

POIs are divided into several categories.

4 Touch the category you want.

If there are more detailed categories within the selected category, repeat this step as many times as necessary.

The "POI List" screen appears.

5 Touch the POI you want.

The searched location appears on the map screen.

⇒ For the subsequent operations, refer to *Setting a route to your destination* on page 33.

Searching for POIs around the destination

This function is available when the route is set.

1 Touch [Home] on the map screen and then touch [Navigation].

⇒ For details of the operations, refer to *Screen* switching overview on page 12.

2 Touch [POI].

The "POI Search" screen appears.

3 Touch [Near Dest.].

POIs are divided into several categories.

4 Touch the category you want.

If there are more detailed categories within the selected category, repeat this step as many times as necessary.

The "POI List" screen appears.

5 Touch the POI you want.

The searched location appears on the map screen.

⇒ For the subsequent operations, refer to Setting a route to your destination on page 33.

Searching for POIs around the city

You can search for POIs around a specified city.

1 Touch [Home] on the map screen and then touch [Navigation].

⇒ For details of the operations, refer to *Screen switching overview* on page 12.

2 Touch [POI].

The "POI Search" screen appears.

3 Touch [Around City].

The "Around City Input Menu" screen appears.

4 Touch [Zone].



The "State/Province Selection" screen appears.

If the location that you want to search for is in another state, province, or territory, this changes the area setting.

Once the state, province, or territory has been selected, you only have to change states, provinces, or territories when your destination is outside of the state, province, or territory you selected.

5 Touch one of the items on the list to set it as search area.

The "**Around City Input Menu**" screen returns.

■ Touch [Country].

The "Country List" screen appears.

If the location that you want to search for is in another country, this changes the country setting.

6 Touch [Name].

The "Enter City Name" screen appears.

7 Enter the city name and then touch [OK].



The "Around City Input Menu" screen returns.

8 Touch [Search].

The "**Select City**" screen appears.

9 Touch the desired city name.

POIs are divided into several categories.

■ Touch 💹.

The representative location of the city appears on the map screen.

10 Touch the category you want.

If there are more detailed categories within the selected category, repeat this step as many times as necessary.

11 Touch the POI you want.

The searched location appears on the map screen.

⇒ For the subsequent operations, refer to Setting a route to your destination on page 33.

Selecting destination from "Favorites"

Storing locations you visit frequently saves time and effort.

Selecting an item from the list provides an easy way to specify the position.

- This function is not available if no locations have been registered in "Favorites".
- → For details, refer to Storing a location in "Favorites" on page 38.

1 Touch [Home] on the map screen and then touch [Navigation].

⇒ For details of the operations, refer to *Screen* switching overview on page 12.

2 Touch [Favorites].

The "Select Favorite" screen appears.

3 Touch the entry you want.



The searched location appears on the map screen.

⇒ For the subsequent operations, refer to Setting a route to your destination on page 33.

Searching for POIs by using the data on the SD memory card

Creating a customized POI is possible by using the utility program AVIC FEEDS which is available separately, on your PC. (AVIC FEEDS will be available on our website.) Storing the customized POI properly and inserting the SD memory card enables the system to use the data for searches.

- Use the utility program AVIC FEEDS to store customized POI data to an SD memory card.
- 2 Insert an SD memory card into the SD card slot.
 - ⇒ For details of the operation, refer to *Insert*ing an SD memory card on page 9.
- 3 Touch [Home] on the map screen and then touch [Navigation].
 - ⇒ For details of the operations, refer to *Screen* switching overview on page 12.
- 4 Touch [AVIC FEEDS].

The "Select List" screen appears.

Touch the item you want.

The "Select POI" screen appears.

6 Touch the POI you want.

The searched location appears on the map screen.

⇒ For the subsequent operations, refer to Setting a route to your destination on page 33.

Selecting a location you searched for recently

The places that you have set as destination or waypoint in the past are automatically stored in "History".

- ☐ The location is also stored when you touch [Scroll] in the location confirmation screen.
- If no location is stored in Destination History, you cannot select [History]. (If you perform a route calculation, you can select [Historv].)
- "History" can store up to 100 locations. If the entries reach the maximum, the new entry overwrites the oldest one.
- Touch [Home] on the map screen and then touch [Navigation].
- ⇒ For details of the operations, refer to Screen switching overview on page 12.
- 2 Touch [History].

The "**Destination History**" screen appears.

Touch the entry you want.



The searched location appears on the map

⇒ For the subsequent operations, refer to Setting a route to your destination on page 33.

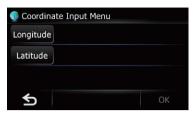
Searching for a location by coordinates

Entering a latitude and longitude pinpoints the location.

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - ⇒ For details of the operations, refer to Screen switching overview on page 12.
- 2 Touch [Coordinate].

The "Coordinate Input Menu" screen appears.

3 Touch [Longitude].



The "Enter Longitude" screen appears.

4 Enter the longitude, and then touch [OK].



The screen returns to the previous screen.

- ☐ To enter W 50°1'2.5" for example, touch [**W**], [0], [5], [0], [0], [1], [0], [2], and [5].
- 5 Touch [Latitude].

The "Enter Latitude" screen appears.

6 Enter the latitude, and then touch [OK].



The screen returns to the previous screen.

- ☐ To enter N 5°1'2.5" for example, touch [**N**], [0], [5], [0], [1], [0], [2], and [5].
- 7 Touch [OK].

The searched location appears on the map screen.

⇒ For details of the operations, refer to *Screen* switching overview on page 12. ■

Searching for a location by scrolling the map

Specifying a location after scrolling the map enables you to set the position as destination, waypoint.

- 1 Display the map screen.
- 2 Touch and drag the screen to scroll the map to the position you want.
- 3 Touch see.
 - **⊃** For details of the operations, refer to *Screen* switching overview on page 12. ■

After the location is decided

Setting a route to your destination

1 Search for a location.

⇒ For details, refer to Chapter 6. After searching for the destination, the Location confirmation screen appears.

2 Touch [OK].

Location confirmation screen



The destination is set, and then route calculation starts.

When the route calculation is completed, Route confirmation screen appears.

■ Touch [Scroll].

The map display changes to the scroll mode. You can fine-tune the location in the scroll mode, and then you can set the location as your destination or do various operations.

■ Touch [Waypoint].

The location is added to the "Waypoints List" screen.

☐ If a destination is not set, [Waypoint] is not available.

3 Touch [OK].

Route confirmation screen



Sets the displayed route as your route, and starts the route guidance.

- 1 Distance to the destination
- ② Travel time to your destination
- (3) Estimated fuel cost to your destination
 - ⇒ For details, refer to Inputting the fuel consumption information for calculating the fuel cost on page 44.
- (4) Route calculation condition
- Touch **5**.

The message confirming whether to cancel the calculated route appears.

Touch [**Yes**] to cancel the calculated route, and then the map screen appears.



Options

⊃ For details, refer to *Modifying the route* calculation conditions on the next page.

Profile

⇒ For details, refer to Checking the current itinerary on page 35.

③ Wavpoints

For details, refer to Editing waypoints on page 35. ■

Checking and modifying the current route

Displaying the "Route info" screen

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - ⇒ For details of the operations, refer to Screen switching overview on page 12.
- 2 Touch [Route info].







- ① Options
 - **⊃** For details, refer to *Modifying the route* calculation conditions on this page.
- 2 Profile
 - **⊃** For details, refer to *Checking the current itinerary* on the next page.
- ③ Waypoints
 - → For details, refer to Editing waypoints on the next page.
- ☐ [Route info] is active only when the route is set.
- 3 Touch [OK]. •

Modifying the route calculation conditions

You can modify the conditions for route calculation and recalculate the current route

- 1 Display the "Route info" screen.
 - → For details, refer to Displaying the "Route info" screen on this page.
- 2 Touch [Options].

The "Route Options" screen appears.

3 Touch the desired items to change the route calculation conditions and then touch [OK].



The route is recalculated, and the Route confirmation screen appears.

Items that users can operate

Settings marked with an asterisk (*) show that these are default or factory settings.

Route Condition

This setting controls how the route should be calculated by taking into account the time, distance or main road.

Determines which condition takes priority for route calculation.

Fast*:

Calculates a route with the shortest travel time to your destination as a priority.

Short:

Calculates a route with the shortest distance to your destination as a priority.

🎇 Major:

Calculates a route that passes major arterial road as a priority.

Checking and modifying the current route

Avoid Toll Road

This setting controls whether toll roads (including toll areas) should be taken into account.

Off*:

Calculates a route that may include toll roads (including toll areas).

🧭 On:

Calculates a route that avoids toll roads (including toll areas).

☐ The system may calculate a route that includes toll roads even if "On" is selected.

Avoid Ferry

This setting controls whether ferry crossings should be taken into account.

Off*:

Calculates a route that may include ferries.

🌠 On:

Calculates a route that avoids ferries.

☐ The system may calculate a route that includes ferries even if "On" is selected.

Avoid Freeway

This setting controls whether freeways may be included in the route calculation.

Off*:

Calculates a route that may include freeways.

🎢 On:

Calculates a route that avoids freeways.

☐ The system may calculate a route that includes freeways even if "On" is selected.

Time restrictions

This setting controls whether streets or bridges that have traffic restrictions during a certain time should be taken into account.

☐ If you want to set your route to avoid raised draw bridges, select "On".

On*:

Calculates a route while avoiding streets or bridges with traffic restrictions during a certain time.

Ø Off:

Calculates a route while ignoring traffic restrictions.

☐ The system may calculate a route that includes streets or bridges that are subject to traffic restrictions during a certain time even if "On" is selected.



CAUTION

If the time difference is not set correctly, the navigation system cannot consider traffic regulations correctly. Set the time difference correctly (**②** Refer to *Setting the time difference* on page 49). ■

Checking the current itinerary

You can check the route details.

- 1 Display the "Route info" screen.
 - ⇒ For details, refer to Displaying the "Route info" screen on the previous page.
- 2 Touch [Profile].

The "Route Profile" screen appears.





Editing waypoints

You can edit waypoints (locations you want to visit on the way to your destination) and recalculate the route so that it passes through these locations.

Adding a waypoint

Up to 5 waypoints can be set, and waypoints and final destination can be sorted automatically or manually.

Checking and modifying the current route

- 1 Display the "Route info" screen.
 - → For details, refer to Displaying the "Route info" screen on page 34.
- 2 Touch [Waypoints].

The "Waypoints List" screen appears.

3 Touch [Add].



The "Select Search method" screen appears.

4 Search for a location.



- ⇒ For details, refer to Chapter 6.
- 5 Touch [OK].



6 Touch [OK] on the "Waypoints List" screen.



The route is recalculated, and the Route confirmation screen appears.

☐ If you set waypoints, you cannot display multiple routes.

Deleting a waypoint

You can delete waypoints from the route and then recalculate the route. (You can delete successive waypoints.)

- 1 Display the "Route info" screen.
 - ⇒ For details, refer to Displaying the "Route info" screen on page 34.
- 2 Touch [Waypoints].

The "Waypoints List" screen appears.

3 Touch [Delete] next to the waypoint that you want to delete.

The touched waypoint will be deleted from the list.

4 Touch [OK] on the "Waypoints List" screen.

The route is recalculated, and the Route confirmation screen appears.

5 Touch [OK].

The map of the current position appears.

Sorting waypoints

You can sort waypoints and recalculate the route.

You cannot sort waypoints that you have already passed.

Checking and modifying the current route

- 1 Display the "Route info" screen.
 - ⇒ For details, refer to Displaying the "Route info" screen on page 34.
- 2 Touch [Waypoints].

The "Waypoints List" screen appears.

3 Touch [Sort].

The "Sort Waypoints" screen appears.

4 Touch the waypoint or destination.



Put them in the desired order.

Touch [Automatic].

You can sort the destination and waypoints automatically. The system will show the nearest waypoint (distance in a straight line) from the current location as waypoint 1, and sort the other points (including your destination) in order of distance from the waypoint 1.

Touch [Clear].

Waypoint sort is canceled.

5 Touch [OK].

The "Waypoints List" screen appears.

6 Touch [OK] on the "Waypoints List" screen.

The route is recalculated, and the Route confirmation screen appears.

7 Touch [OK].

The map of the current position appears.

Canceling the route guidance

If you no longer need to travel to your destination, follow the steps below to cancel the route guidance.

1 Touch [Home] on the map screen and then touch [Navigation].

⊃ For details of the operations, refer to *Screen* switching overview on page 12.

2 Touch [Cancel].

A message confirming the cancellation of the current route appears.

3 Touch [Yes].



The current route is deleted, and a map of your surroundings reappears.

■ Touch [Skip].

The next waypoint along the route is skipped. A new route to your destination through all remaining waypoints, except for the skipped waypoint, is calculated.

When the route calculation is completed, Route confirmation screen appears.

- ☐ [Skip] is available only when a waypoint is set.
- Touch [No].

The previous screen returns without deleting the route. \blacksquare

Storing a location in "Favorites"

Storing your favorite locations as "Favorites" provides you with the opportunity to save the time and effort of re-entering this information. Stored items can be made available on "Favorites" later.

Registering a location by "Favorites"

Favorites can store up to 400 registered locations. These can include your home location, favorite places, and destinations you have already registered.

- ☐ "Favorites" can store up to 400 locations.
- ☐ Home location is counted as one of the items in "Favorites".

1 Touch [Home] on the map screen and then touch [Navigation].

For details of the operations, refer to Screen switching overview on page 12.

2 Touch [Favorites].

The "Select Favorite" screen appears.

3 Touch [Add].

The "Select Search method" screen appears.

4 Search for a location.

→ For details, refer to Searching for and selecting a location on page 25.

5 When the map of the location you want to register is displayed, touch [OK].

The location is registered, and then the "Edit Favorite" screen appears.

⇒ For details, refer to Editing the entry in the "Favorites" list on this page.

6 Touch [OK].

The registration is completed.

Registering a location by scroll mode

1 Touch and drag the screen to scroll the map to the position that you want to register.



Touch

The location is registered, and then the "Edit Favorite" screen appears.

⊃ For details, refer to *Editing the entry in the* "**Favorites**" *list* on this page.

3 Touch [OK].

The registration is completed.

Editing registered locations Editing the entry in the "Favorites" list

1 Touch [Home] on the map screen and then touch [Navigation].

→ For details of the operations, refer to Screen switching overview on page 12.

2 Touch [Favorites].

The "Select Favorite" screen appears.

3 Touch next to the location that you want to edit.

The "Edit Favorite" screen appears.

4 Touch the item that you want to change the setting.



- ☐ Up to 17 characters can be input for the name.
- Touch [Name].

You can enter the desired name.

■ Touch [Phone #].

You can edit the registered phone number.

The maximum digits you can enter for the phone number is 15.

■ Touch [Icon].

You can change the symbol displayed on the map and "Favorites".

■ Touch [Modify Location].

You can change the registered location by scrolling the map.

5 Touch [OK].

The registration is completed.

Editing your home

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - **⇒** For details of the operations, refer to *Screen switching overview* on page 12.
- 2 Touch [Favorites].

The "Select Favorite" screen appears.

☐ Home location is displayed on the top of the list 3 Touch property next to the home location.



The "Edit Favorite" screen appears.

4 Touch the item that you want to change the setting.



■ Touch [Phone #].

You can register your home phone number.

■ Touch [Modify Location].

You can change the registered location by scrolling the map.

☐ For home information, [Name] and [Icon] are not editable.

5 Touch [OK].

The registration is completed.

Sorting the entry in the "Favorites" list

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - **⊃** For details of the operations, refer to *Screen* switching overview on page 12.
- 2 Touch [Favorites].

The "Select Favorite" screen appears.

3 Touch [Sort].

Each time you touch [**Sort**] changes the sort order.

- Current order is indicated on the upper right of the screen.
- Sorts the items in the list in order by distance from the vehicle position.
- ABC. . :
 Sorts the items in the list alphabetically.
- Sorts the items in the list in order of the recently used items.

Deleting the entry from the "Favorites" **list**

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - **⊃** For details of the operations, refer to *Screen switching overview* on page 12.
- 2 Touch [Favorites].

The "Select Favorite" screen appears.

3 Touch [Delete].

The "Delete from Favorites" screen appears.

4 Select the location you want to delete.



A check mark appears next to the selected location.

■ Touch [All] or [None].

Selects or deselects all entries.

5 Touch [Delete].



A message will appear asking you to confirm the deletion.

6 Touch [Yes].



The data you selected is deleted.

■ Touch [No].

Cancels the deletion.

Registering and editing your home

Registering your home position saves time and effort. Also, routes to home positions can be calculated easily with a single touch of the key from the "Navigation Menu". The registered home position can also be modified later.

Registering your home

1 Touch [Home] on the map screen.

The "Top Menu" screen appears.

2 Touch [Settings].

The "Settings Menu" screen appears.

3 Touch [Set Home].

The "Set Home" screen appears.

4 Touch [Home].



The "Select Search method" screen appears.

5 Search for a location.

After searching for a point, display it on a map, then touch [**OK**].

The location is registered, and then the "**Set Home**" screen appears.

⊃ For details, refer to *Searching for and selecting a location* on page 25.

6 Touch [Phone #].

You can register your home phone number.

7 Touch [OK].

The registration is completed.

Editing your home

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - **⊃** For details of the operations, refer to *Screen switching overview* on page 12.

2 Touch [Favorites].

The "Select Favorite" screen appears.

- Home location is displayed on the top of the list.
- 3 Touch mext to the home location.



The "Edit Favorite" screen appears.

4 Touch the item that you want to change the setting.



Touch [Phone #].

You can edit the registered phone number.

■ Touch [Modify Location].

You can change the registered location by scrolling the map.

☐ For home information, [Name] and [Icon] are not editable.

5 Touch [OK].

The registration is completed.

Deleting the entry from the "History" list

Items in "**History**" can be deleted. All entries in "**History**" can be deleted at once.

- 1 Touch [Home] on the map screen and then touch [Navigation].
 - For details of the operations, refer to Screen switching overview on page 12.

2 Touch [History].

The "Destination History" screen appears.

3 Touch [Delete].

The "**Delete from History**" screen appears.

4 Select the location you want to delete.



A check mark appears next to the selected location.

Touch [All] or [None].
 Selects or deselects all entries.

5 Touch [Delete].



A message will appear asking you to confirm the deletion.

6 Touch [Yes].

The data you selected is deleted.

■ Touch [No].

Cancels the deletion.

Exporting and importing "Favorites" **items**

Exporting "Favorites" items

Exporting the "Favorites" data to an SD memory card for editing is possible by using the utility program AVIC FEEDS which is available separately, on your PC.

- The utility program AVIC FEEDS is available from our website. For details, refer to the information on our website.
- ☐ If there is previous data in the SD memory card, the data is overwritten with new data when current data is exported.

1 Insert an SD memory card into the SD card slot.

⇒ For details of the operation, refer to *Inserting an SD memory card* on page 9.

2 Touch [Home] on the map screen and then touch [Navigation].

⊃ For details of the operations, refer to *Screen switching overview* on page 12.

3 Touch [Data In/Out].

The "Export/Import Menu" screen appears.

4 Touch [Export] next to "Favorites".



Data export starts.

After the data is exported, the completion message appears.



5 Touch [OK].

The "Navigation Menu" screen appears.

Importing the "Favorites" items edited on AVIC FEEDS

You can import the locations that you have edited on the utility program AVIC FEEDS which is available separately to "Favorites".

When a location that is already registered in "Favorites" is imported, the location is overwritten.

- The utility program AVIC FEEDS is available from our website. For details, refer to the information on our website.
- 1 Store the item into the SD memory card by using the AVIC FEEDS.
- 2 Insert an SD memory card into the SD card slot.
 - ⇒ For details of the operation, refer to *Inserting an SD memory card* on page 9.
- 3 Touch [Home] on the map screen and then touch [Navigation].
 - **⊃** For details of the operations, refer to *Screen* switching overview on page 12.
- 4 Touch [Data In/Out].

The "Export/Import Menu" screen appears.

5 Touch [Import] next to "Favorites".

The following message appears.



6 Touch [Yes].

Data import starts.

After the data is imported, the "Navigation

Menu" screen appears.

Fuel cost management

Using the "Gas Mileage" function

Inputting the fuel consumption information for calculating the fuel cost

You can estimate the fuel cost to your destination by entering the fuel consumption information in the navigation system.

⊃ For details, refer to *Setting a route to your destination* on page 33.

1 Touch [Home] on the map screen and then touch [Navigation].

⊃ For details of the operations, refer to *Screen* switching overview on page 12.

2 Touch [Gas Mileage].

The "Gas Mileage" screen appears.

3 Enter the fuel consumption information.

Enter the following items:

Surface Road:

Enter the fuel cost when you drive on ordinary roads.

- ☐ How the fuel cost is entered depends on the "Gas Unit" setting.
 - When "Gas Unit" is set to "Gallon".
 Enter how many miles (kilometers) you get to a gallon.
 - When "Gas Unit" is set to "Liter".
 Enter how much fuel you need to travel 60 miles (100 kilometers).

HWY Gas Mile:

Enter the fuel cost when you drive on the freeway.

- ☐ How the fuel cost is entered depends on the "Gas Unit" setting.
 - When "Gas Unit" is set to "Gallon".
 Enter how many miles (kilometers) you get to a gallon.
 - When "Gas Unit" is set to "Liter".
 Enter how much fuel you need to travel 60 miles (100 kilometers).

Gas Price/Unit:

Enter the fuel unit price.

Gas Unit:

Set the fuel unit.

• Currency:

Set the unit of currency.

When all the items are entered, inputting the fuel consumption information is complete.

Calculating the fuel consumption

When you enter the fueling information to the navigation system, and export the data to SD memory cards, you can check the fuel consumption information by using the utility program AVIC FEEDS, which is available separately, on your PC.

Up to 24 sets of data can be stored. You can also export the data, as described below.

If the entries reach the maximum number, a new entry will overwrite the oldest one.

These calculations are based only on the information that you provide and not on any data from the vehicle. The fuel mileage displayed is only a reference value, and does not guarantee the fuel mileage displayed can be obtained.

1 Touch [Home] on the map screen and then touch [Navigation].

⊃ For details of the operations, refer to *Screen switching overview* on page 12.

2 Touch [Gas Mileage].

The "Gas Mileage" screen appears.

3 Touch [Gas Price].

The "Gas Price Calculation" screen appears.

Fuel cost management

4 Enter the fuel consumption information.



Enter the following items:

Distance:

Enter the distance traveled since the previous fueling.

- The distance is entered automatically only when the distance traveled since the previous fueling is recorded.
- Gas Pumped:

Enter the amount of fuel pumped.

Gas Price/Unit:

Enter the fuel unit price.

When all the items are entered, the fuel consumption is displayed next to "Gas Mileage".

5 Touch [OK].



The "Gas Mileage" screen appears.

Exporting the data of fuel cost information

Exporting the fuel cost data to an SD memory card is possible.

- The data stored in this navigation system will be cleared as exporting it to the SD memory card.
- ☐ If there is previous data in the SD memory card, the data is overwritten with new data when current data is exported.

1 Insert an SD memory card into the SD card slot.

⇒ For details of the operation, refer to *Inserting an SD memory card* on page 9.

2 Touch [Home] on the map screen and then touch [Navigation].

⊃ For details of the operations, refer to *Screen* switching overview on page 12.

3 Touch [Gas Mileage].

The "Gas Mileage" screen appears.

4 Touch [Export].



After a message confirming whether to export the data appeared, exporting the data to the SD memory card starts.

The "Gas Mileage" screen appears when it is done.

Exporting the data of "Gas Mileage" from "Export/ Import Menu" screen

- 1 Insert an SD memory card into the SD card slot.
 - For details of the operation, refer to Inserting an SD memory card on page 9.
- 2 Touch [Home] on the map screen and then touch [Navigation].
 - **⇒** For details of the operations, refer to *Screen* switching overview on page 12.

3 Touch [Data In/Out].

The "Export/Import Menu" screen appears.

Fuel cost management

4 Touch [Export] next to "Gas Mileage".



Data export starts.

After the data is exported, the completion message appears.



5 Touch [OK].

The "Navigation Menu" screen appears.

Using Applications

This product enables you to use applications downloaded via the utility program AVIC FEEDS, providing for navigation functions and a wide variety of entertainment functions.

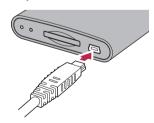
The utility program AVIC FEEDS is available from our website. For details, refer to the information on our website.

Preparing in advance

Before downloading any applications using the utility program AVIC FEEDS, you need to store the model information to an SD memory card.

To save the model information to an SD memory card, connect the detachable device inserted with an SD memory card to your PC. After that, use AVIC FEEDS to download the application to the SD memory card containing model information.

- 1 Remove the detachable device from the base unit.
- 2 Insert an SD memory card into the SD card slot.
 - **⊃** For details of the operation, refer to *Inserting an SD memory card* on page 9.
- 3 Connect the supplied USB cable to USB port (Mini-B).



- 4 Connect the supplied USB cable to your PC.
- 5 Download the application using the utility program AVIC FEEDS. •

Launching the application

You can launch applications downloaded to an SD memory card via the utility program AVIC FEEDS.

- Navigation functions are unavailable when an application is running. Close the application to use navigation functions.
- ☐ The navigation system can run one application at a time.
- ☐ For details of applications, refer to the utility program AVIC FEEDS.
- 1 Use the utility program AVIC FEEDS to download an application to an SD memory card.
- 2 Insert an SD memory card into the SD card slot.
 - ⇒ For details of the operation, refer to Inserting an SD memory card on page 9.
- 3 Touch [Home] on the map screen to display the "Top Menu" screen.
 - ➡ For details of the operations, refer to Screen switching overview on page 12.
- 4 Touch [Applications].

The "Applications Menu" screen appears.

5 Touch the application that you want to launch.

A message confirming whether to restart the navigation system appears.

6 Touch [OK].

The navigation system restarts, and the application is launched. •

Displaying the "Settings Menu" **screen**

1 Touch [Home] on the map screen.

The "Top Menu" screen appears.

2 Touch [Settings].

The "Settings Menu" screen appears.



3 Touch the desired option.

□ Touching or on the right of screen allows you to see the next or previous page.

Setting the volume for navigation system

The sound volume for the navigation can be set.

- 1 Display the "Settings Menu" screen.
 - For details of the operations, refer to Displaying the "Settings Menu" screen on this page.
- 2 Touch [Sound].

The "Sound" screen appears.

3 Touch [+] or [-] next to "Guidance".



Controls the master volume of both the navigation guidance and beep.

When set to , guidance is output. When set to , no guidance is output.

■ Touch [Beep].

Each time you touch the key changes that setting.

- On (default):
 A beep sounds.
- Off:

The beep sound is muted.

Customizing the regional settings

Selecting the language

You can set the languages used on the program and voice guidance. Each language can be set separately.

- 1 Display the "Settings Menu" screen.
 - For details of the operations, refer to Displaying the "Settings Menu" screen on this page.
- 2 Touch [Region].

The "Region" screen appears.

3 Touch [UI Language].



The "Select UI Language" screen appears.

4 Touch the desired language.

After the language is selected, the previous screen returns.

5 Touch [Voice Language].

The "Voice Language Selection" screen appears.

6 Touch the desired language.

After the language is selected, the previous screen returns.

7 Touch [OK] on the "Region" screen.

The navigation system restarts.

After a short pause, the navigation screen returns.

Installing additional files for voice guidance (TTS files)

TTS file is used to read out the street name in the route guidance by navigation system. If the latest TTS file is available, you can replace the current TTS file with the latest one.

1 Use your PC to copy the folder named "Voice" onto the top-most directory of the SD memory card.

The "**Voice**" folder is stored on the supplied CD-ROM. Use your PC to copy it.

2 Insert an SD memory card into the SD card slot.

→ For details of the operation, refer to Inserting an SD memory card on page 9.

3 Touch [Voice Language] on the "Region" screen.

The "Voice Language Selection" screen appears.



4 Touch [Setup].

The "Setup Voice" screen appears.

5 Touch [Current Voice].

The replaceable languages will appear.

6 Touch the desired language.

After a while, loading completes and the "**Re-gion**" screen returns.

7 Touch [OK] on the "Region" screen.

A message confirming whether to restart the navigation system appears.

8 Touch [OK].

The navigation system restarts.

After a short pause, the navigation screen returns.

Setting the time difference

Adjusts the system's clock. Set the time difference (+, -) from the time originally set in your navigation system.

1 Display the "Settings Menu" screen.

For details of the operations, refer to Displaying the "Settings Menu" screen on the previous page.

2 Touch [Region].

The "Region" screen appears.

3 Touch [Time].

The "Time Settings" screen appears.

4 To set the time difference, touch [+] or [-].



The time difference between the time originally set in the navigation system (Pacific Standard Time) and the current location of your vehicle is shown. If necessary, adjust the time difference. Touching [+] or [-] changes the time difference display in half-hour increments.

The time difference can be set from **-4.0** to **+9.0** hours.

5 Touch [Summer Time].

If necessary, set to summer time. Summer time setting is off by default. Touch [**Summer Time**] to change the setting if you are in the summer time period.

6 Touch [Time format].

Each time you touch the key changes that setting.

- 12 hour (default): Changes the display to 12-hour format with am/pm.
- 24 hours: Changes the display to 24-hour format.

Changing the unit between km and miles

This setting controls the unit of distance and speed displayed on your navigation system.

- 1 Display the "Settings Menu" screen.
 - For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Region].

The "Region" screen appears.

3 Touch [km / mile].

Each time you touch the key changes that setting.

- mile (default):
 - Shows distance in miles.
- Mile&Yard:

Shows distance in miles and yards.

• km:

Shows distance in kilometers.

Changing the virtual speed of the vehicle

When calculating the expected time of arrival and the travel time to the destination, set the

average speed for the freeway or ordinary roads using [+] and [-].

- ☐ Changing "km / mile" settings clears and resets input values to the default setting.
- **⊃** For details, refer to *Changing the unit between km and miles* on this page.

1 Display the "Settings Menu" screen.

⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Region].

The "Region" screen appears.

3 Touch [Speed].

The "Average Speed Settings" screen appears.

4 Touch [+] or [-] to set the speed.



☐ The estimated time of arrival is not necessarily estimated based on this speed value.

5 Touch [OK].

The settings are completed.

Setting the keyboard layout

You can select the type of keyboard to be used for inputting characters.

1 Display the "Settings Menu" screen.

⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Region].

The "Region" screen appears.

3 Touch [Keyboard].

Each time you touch the key changes that setting.

• [QWERTY] (default):



[QWERTZ]:



[AZERTY]:



[ABC]:



Customizing the map screen settings

The general settings related with a map screen can be customized.

Displaying POI on the map

Displays icons for the surrounding facilities (POI) on the map.

- ☐ POI icons are not displayed when the map scale is 1 mile (2 kilometers) or more.
- ☐ You can select up to 10 items from the subcategories or detailed categories.

- ☐ Creating a customized POI is possible by using the utility program "AVIC FEEDS" which is available separately, on your PC. ("AVIC FEEDS" will be available on our website.) Store the customized POI into the SD memory card properly, and then insert it to the SD card slot. By selecting the POI icon, the system displays it on the map screen.
- 1 Display the "Settings Menu" screen.
 - For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.
- 2 Touch [Map].

The map setting screen appears.

3 Touch [Overlay POI].

The "Overlay POI" screen appears.

4 Touch [Display] to change the setting to "On".



If you do not want to display the POI icon on the map, touch [Display] to turn it "Off". (Even if "Display" is turned "Off", the POI selection setting is retained.)

5 Touch [POI].

The "Overlay POI (Main Category)" screen appears.

☐ Categories that are already set will have a blue check mark.

6 Touch the main category you want.



A list of subcategories under the selected main category appears.

☐ Categories that are already selected will have a blue check mark.

7 Touch the subcategory to display.



A red check mark appears next to the selected category. To cancel the selection, touch the entry again.

If there are more detailed categories within the subcategory, is active. If you select the subcategory that has more detailed categories, all detailed categories within the subcategory is selected and becomes inactive.

Touch .

The detailed category list is displayed. Touch the item and touch **[OK]** to complete selecting the detailed categories you want to display.

When only a few types of the detailed categories are selected, blue check marks will appear.

8 Touch [OK].



The "Overlay POI (Main Category)" screen returns.

If you want to select or deselect other items, repeat these steps as many as necessary.

9 To finish the selection, touch [OK] in the "Overlay POI (Main Category)" screen.

Switching the map between 2D and 3D

- ☐ You can touch or on the map screen to switch between 2D and 3D.
 - ⇒ For details of the operations, refer to Switching the map between 2D and 3D on page 19.

1 Display the "Settings Menu" screen.

⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [View Mode].

Each time you touch the key changes that setting.

- **2D** (default):
 - Displays the 2D map screen.
- **3D**: Displays the 3D map screen.

Displaying maneuvers

Selects whether to display or hide maneuvers on the map.

1 Display the "Settings Menu" screen.

➡ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [Show Maneuver].

Each time you touch the key changes that setting.

View (default):

Displays maneuvers on the map.

Hide:

Hides maneuvers on the map.

Setting the map color change between day and night

To improve the visibility of the map during the evening, you can set the timing for changing the combination of the map color.

1 Display the "Settings Menu" screen.

For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [Day/Night Display].

Each time you touch the key changes that setting.

Automatic (default):

You can change the colors of a map between daytime and nighttime according to whether the vehicle lights are on or off.

Dav

The map is always displayed with daytime colors.

To use this function with "Automatic", the orange/white lead of the AV receiver must be connected correctly.

Changing the road color

You can set the road color to bluish or reddish.

1 Display the "Settings Menu" screen.

⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [Road Color].

Each time you touch the key changes that setting.

"Blue" (default):

Changes to blue based road colors.

"Red":

Changes to red based road colors.

Setting the auto-zoom display

This setting enables switching to an enlarged map around the point where your vehicle is approaching an intersection, entrance/exit of freeway or a junction.

1 Display the "Settings Menu" screen.

For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [Close Up View].

Each time you touch the key changes that setting.

• On (default):

Switches to an enlarged map.
Displays the close up view with the 2D map.

Off:

Does not switch to an enlarged map.

Setting the "Favorites" icon display

You can select whether to display the "Favorites" icon on the map.

□ "Favorites" icons are displayed when the map scale is 10 miles (20 kilometers) or less.

→ For details, refer to Editing the entry in the "Favorites" list on page 38.

1 Display the "Settings Menu" screen.

➡ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [Favorites Icon].

Each time you touch the key changes that setting.

• On (default):

Displays the "Favorites" icon on the map.

Off:

Hides the "Favorites" icon on the map.

Setting the current street name display

Selects whether to display or hide the street name (or city name) that your vehicle is traveling along.

1 Display the "Settings Menu" screen.

For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [Current Street].

Each time you touch the key changes that setting.

View (default):

Displays the street name (or city name) on the map.

Hide:

Hides the street name (or city name) on the map.

Displaying the fuel consumption information

Selects whether to display Eco-Meter, indicating the fuel consumption information, on the map.

1 Display the "Settings Menu" screen.

For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [Map].

The map setting screen appears.

3 Touch [Eco Meter].

Each time you touch the key changes that setting.

- On (default): Displays Eco-Meter on the map.
- Off:
 Hides Eco-Meter on the map.

Checking the version information

- 1 Display the "Settings Menu" screen.
 - For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.
- 2 Touch [Service Info].

The "Service Information Screen" screen appears.

3 Check the version information.

Registering and editing your home

When registering your home location, touch [**Set Home**].

For details, refer to Registering and editing your home on page 40. ■

Correcting the current location

Touch the screen to adjust the current position and direction of the vehicle displayed on the map.

- 1 Display the "Settings Menu" screen.
 - ⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.
- 2 Touch [Location].
- 3 Scroll to the position where you want to set, then touch [OK]. ■

Checking the connections of leads

Check that leads are properly connected between the navigation system and the vehicle. Please also check whether they are connected in the correct positions.

- 1 Display the "Settings Menu" screen.
 - ⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.
- 2 Touch [Connection].

The "Connection" screen appears.



1 GPS Status

Indicates the connection status of the GPS antenna, the reception sensitivity and from how many satellites the signal is received.

Color	Signal com- munication	Used in posi- tioning
Orange	Yes	Yes
Yellow	Yes	No

② Hand Brake*

When the parking brake is applied, "**On**" is displayed. When the parking brake is released. "**Off**" is displayed.

③ Illumination*

When the headlights or small lamps of a vehicle are on, "On" is displayed. When the small lamps of a vehicle are off, "Off" is displayed.

□ Information marked with an asterisk (*) indicates the status of connected AV receiver. Proper status is displayed only when the AV receiver is correctly connected to the navigation system.

Using the demonstration guidance

This is a demonstration function for retail stores. After a route is set, touching this key starts the simulation of route guidance.

- 1 Display the "Settings Menu" screen.
 - ⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.
- 2 Touch [Demo Mode].



Each time you touch the key changes that setting.

• On:

Repeats demo drive.

Off (default):

Demo Mode is set off.

Recording your travel history

Activating the track logger enables you to record your driving history (called "track log" below). You can review the travel history later.

If an SD memory card is inserted into the SD card slot, the track logs will be stored in the SD memory card.

1 Insert an SD memory card into the SD card slot.

⇒ For details of the operation, refer to Inserting an SD memory card on page 9.

2 Display the "Settings Menu" screen.

For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

3 Touch [Drive Log].

The "Drive Log" screen appears.

4 Touch [Drive Log].

Each time you touch the key changes that setting.

On:

You can export your track log to the SD memory card.

• Off (default):

You cannot export your track log to the SD memory card.

While the setting is "On", the navigation system continues to store the track logs in the inserted SD memory card.

5 Touch [Type].

Each time you touch the key changes that setting.

• Private (default):

Changes the track log attribute to "Private".

Business:

Changes the track log attribute to "Business".

Other:

Changes the track log attribute to

"Other".

Replicating the settings

You can import settings you have made on the utility program AVIC FEEDS which is available separately to the navigation system.

- ☐ The utility program AVIC FEEDS is available from our website. For details, refer to the information on our website.
- 1 Use AVIC FEEDS to replicate the settings and store them on an SD memory card.

2 Insert an SD memory card into the SD card slot

⊃ For details of the operation, refer to *Inserting an SD memory card* on page 9.

3 Touch [Home] on the map screen and then touch [Navigation].

⊃ For details of the operations, refer to *Screen* switching overview on page 12.

4 Touch [Cpy Setting].

A message confirming whether to update the settings appears.

5 Touch [Yes].

Update starts.

After the settings are updated, a message confirming whether to restart the navigation system appears.

6 Touch [OK].

The navigation system restarts.

After a short pause, the navigation screen returns.

Returning the navigation system to the default or factory settings

You can return settings or recorded contents to the default or factory settings. There are four methods to clear user data, and the situations and the cleared contents are different for

each method. For the contents that are cleared in each method, see the list presented later.

- ⇒ For detailed information about the items which would be erased, refer to Setting items to be deleted on page 59.
- . Method 1: Press the RESET button.
 - **⊃** For details, refer to *Resetting the microprocessor* on page 5.
- Method 2: Touch [F. Reset].
 - **⊃** For details, refer to *Restoring the default* setting on this page.
- Method 3: Touch [Reset] on the "Clear Data/Setting" screen.
 - ⇒ For details, refer to Returning the navigation system to the initial state on the next page.
- Method 4: Touch [Clear user information] on the "Clear Data/Setting" screen.
 - ⇒ For details, refer to Returning the navigation system to the initial state on the next page.

Restoring the default setting

Resets various settings registered to the navigation system and restores them to the default or factory settings.

- ☐ Some data remains. Be sure to read Setting items to be deleted first.
 - ⇒ For detailed information about the items which would be erased, refer to Setting items to be deleted on page 59.

1 Display the "Settings Menu" screen.

➡ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch [F. Reset].

The message confirming whether to restore the settings appears.

3 Touch [Yes].

Returning the navigation system to the initial state

You can return settings or recorded content to the default or factory settings.

⇒ For detailed information about the items which would be erased, refer to Setting items to be deleted on the next page.

1 Display the "Settings Menu" screen.

⇒ For details of the operations, refer to Displaying the "Settings Menu" screen on page 48.

2 Touch and hold [F. Reset].

The "Clear Data/Setting" screen appears.

3 Touch [Clear user information].

Touching [Clear user information] displays the confirmation message for clearing the memory.

■ Touch [Reset].

Various settings registered to the navigation system are reset to the default or factory settings.

4 Touch [Yes].

The recorded contents are cleared.

Setting items to be deleted

The items to be deleted vary depending on the reset method. The items listed in the following table return to the default or factory settings. Any items not listed below will be retained.

- —: The setting will be retained.
- ✓: The setting will be cleared and returned to the default or factory settings.

Navigation functions		Method 1	Method 2	Method 3	Method 4
Map function	View mode and scale setting on the map	_	_	✓	✓
	Direction of the map	_	_	✓	1
	Last cursor position on the map screen	_	√	✓	✓
	Current route	_	_	_	1
Route Setting	Guidance state of the current route	_	_	✓	✓
	Vehicle position information	1	_	1	1
	Route info	_	✓	✓	✓
	Point registered in Favorites	_	_	_	✓
	Sorting order selected in [Favorites]	_	_	✓	✓
Navigation Menu	History	_	_	_	1
	Gas Mileage	_	✓	1	✓
	Driving data of Eco Graph	_	✓	✓	✓
	Eco Settings	_	✓	1	1
Settings Menu	UI Language, Voice Language	_	_	1	✓
	Time	_	_	1	✓
	Set Home	_	_		✓
	Demo Mode	1	1	1	✓
	Other settings	_	✓	✓	✓

- . Method 1: Press the RESET button.
- Method 2: Touch [F. Reset].
- Method 3: Touch [Reset] on the "Clear Data/Setting" screen.
- Method 4: Touch [Clear user information] on the "Clear Data/Setting" screen.

Interruption of the AV receiver screen

When a function with a higher priority reaches the connected AV receiver, the navigation screen automatically switches to the AV receiver screen.

The screen switches in the following cases.

When a phone call is received

When a cellular phone is connected to the AV receiver via Bluetooth wireless technology and an incoming call comes in, the display switches to the phone operation screen. After the call, the system automatically returns to the navigation screen.

When XM or SIRIUS alert is received

When the alert function is activated in the AV receiver and corresponding information is broadcast, the AV receiver switches the screen and displays the alert message.

When the rear view camera is activated

The AV receiver features a function that automatically switches to the image of the rear view camera. When the shift lever is in the RE-VERSE (R) position, the screen automatically switches to rear view camera image.

Troubleshooting

If you have problems operating your navigation system, refer to this section. The most common problems are listed below, along with likely causes and solutions. If a solution to your problem cannot be found here, contact your dealer or the nearest authorized Pioneer service facility.

Problems with the navigation screen

Symptom	Cause	Action (Reference)
The power doesn't turn on. The navigation system doesn't operate.	Leads and connectors are incorrectly connected.	Confirm once more that all connections are correct.
	The fuse is blown.	Rectify the reason for the fuse blowing, then replace the fuse. Be very sure to install a correct fuse with the same rating.
	The detachable device battery runs down.	Wait until the detachable device battery recharges.
	It may be time to replace the detachable device's internal battery.	Please contact the nearest authorized Pioneer Service Station.
	The navigation system is booting up.	Wait (approximately 10 seconds) after restart before pressing the MODE button of AV receiver. When navigation system restarts, the blank screen appears until the navigation system is ready. Wait until the navigation screen reappears.
You cannot position your vehicle on the map without a significant positioning error.		The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. Check the GPS signal reception and the position of the GPS antenna if necessary.
	Obstacles are blocking signals from the satellites.	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. Check the GPS signal reception and the position of the GPS antenna if necessary, or continue driving until reception improves. Keep the antenna clear.
	The position of satellites relative to your vehicle is inadequate.	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. Continue driving until reception improves.
	Signals from the GPS satellites have been modified to reduce accuracy. (GPS satellites are operated by the US Department of Defense, and the US government reserves the right to distort positioning data for military reasons. This may lead to greater positioning errors.)	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. Wait until reception improves.

Symptom	Cause	Action (Reference)
	If a vehicle phone or cellular phone is used near the GPS antenna, GPS reception may be lost temporarily.	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. When using a cellular phone, keep the antenna of the cellular phone away from the GPS antenna.
	Something covers the GPS antenna.	Do not cover the GPS antenna with spray paint or vehicle wax, because this may block the reception of GPS signals. Snow buildup can also degrade the signals.
	Something covers this product's topside.	Do not cover this product with spray paint or vehicle wax, because this may block the reception of GPS signals.
	The navigation system may not be mounted securely in your vehicle.	Check that the navigation system is securely mounted and, if necessary, consult the dealer that installed the system.
"Eco Graph" is not available.	The navigation system is unable to obtain past average fuel mileage data, so "Eco Graph" cannot be displayed.	Drive about 10 km on a road without obstructions. Then park your vehicle in a safe place, turn off the navigation system and turn the power to the navigation system back on.
The map color does not switch automatically between daytime and nighttime.	"Day/Night Display" is set to "Day".	Check "Day/Night Display" setting and make sure "Automatic" is selected. (Page 53)
The volume of navigation guidance and beeps cannot be adjusted.	You are attempting to adjust the volume with the AV receiver.	Turn the volume up or down using [Sound] on the "Settings Menu" screen. (Page 48)
The system does not switch to the navigation system screen.	The detachable device is not attached to the base unit.	Attach the detachable device to the base unit. (Page 8)

If the screen becomes frozen...

Park your vehicle in a safe place, and apply the parking brake. Press RESET button on the navigation system.

Messages and how to react to them

The following messages may be displayed by your navigation system. Refer to the table below to identify the problem, then take the suggested corrective action.

There are occasions when you may see error messages other than those shown here. In such a case, follow the instructions given on the display.

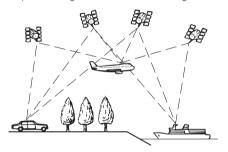
Messages for navigation functions

Message	When	What to do (Reference)
Route calculation was not possible.	Route calculation has failed because of a malfunction in map data, software, or hardware.	Change the destination. Consult the Pioneer Local dealer if this message persists.
Route calculation not possible. Destination too far.	The destination is too far.	Set a destination closer to the starting point.
Route calculation not possible. Destination too close.	The destination is too close.	Set a destination farther from the starting point.
Route calculation not possi- ble. Navigation cannot be pro- vided around destination or starting point.	The destination, waypoint(s), or starting point are in an area where no road exists (e.g. a mountain) and the route calculation is impossible.	Set a destination and waypoint(s) on roads. Reset the destination after you drive the vehicle to any road.
Route to destination cannot be calculated.	The destination or waypoint(s) are in an isolated island, etc. without a ferry and the route calculation is impossible. If there is no road connected to your starting point or destination, this message will appear.	Change the destination.
Failed to make the route profile.	In rare cases, a route calculation error may occur.	Retry. Consult the Pioneer Local dealer if this message persists.
Application startup failed. Check file on SD card. Press	The application is not stored on the SD memory card.	Use the utility program AVIC FEEDS to confirm the proper solution.
"OK" to exit Application Mode.	The application failed to download properly.	Use the utility program AVIC FEEDS to confirm the proper solution.
	A file required for application start- up is not stored on the SD memory card or is damaged.	Use the utility program AVIC FEEDS to confirm the proper solution.
	The SD memory card is damaged.	Make sure there are no problems with the SD memory card.

Positioning technology Positioning by GPS

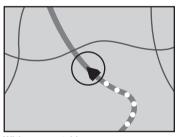
The Global Positioning System (GPS) uses a network of satellites orbiting the Earth. Each of the satellites, which orbit at a height of 21 000 km, continually broadcasts radio signals giving time and position information. This ensures that signals from at least three can be picked up from any open area on the earth's surface.

The accuracy of the GPS information depends on how good the reception is. When the signals are strong and reception is good, GPS can determine latitude, longitude and altitude for accurate positioning in three dimensions. But if signal quality is poor, only two dimensions, latitude and longitude, can be obtained and positioning errors are somewhat greater.

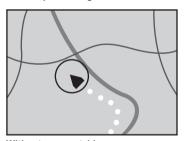


Map matching

As mentioned, the positioning systems used by this navigation system are susceptible to certain errors. Their calculations may, on occasion, place you in a location on the map where no road exists. In this situation, the processing system understands that vehicles travel only on roads, and can correct your position by adjusting it to a nearby road. This is called map matching.



With map matching



Without map matching

Handling large errors

Positioning errors are kept to a minimum by combining GPS and map matching. However, in some situations, these functions may not work properly, and the error may become bigger.

When positioning by GPS is impossible

- GPS positioning is disabled if signals cannot be received from more than two GPS satellites
- In some driving conditions, signals from GPS satellites may not reach your vehicle.
 In this case, it is impossible for the system to use GPS positioning.



In tunnels or enclosed parking garages



Under elevated roads or similar structures



When driving among high buildings



When driving through a dense forest or tall trees

- If a car phone or cellular phone is used near this product, GPS reception may be lost temporarily.
- Do not cover this product with spray paint or vehicle wax, because this may block the reception of GPS signals.
- ☐ If a GPS signal have not been received for a long time, your vehicle's actual position and the current position mark on the map diverge considerably or do not be updated. In such case, once GPS reception is restored, accuracy will be recovered.

Conditions likely to cause noticeable positioning errors

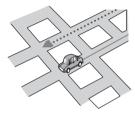
For various reasons, such as the state of the road you are traveling on and the reception status of the GPS signal, the actual position of

your vehicle may differ from the position displayed on the map screen.

• If you make a shallow turn.



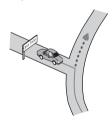
If there is a parallel road.



• If there is another road very nearby, such as in the case of an elevated freeway.



 If you take a recently opened road that is not on the map.



If you drive in zigzags.



If the road has a series of hairpin bends.



• If there is a loop or similar road configuration.



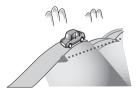
If you take a ferry.



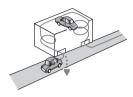
• If you are driving on a long, straight road or a gently curving road.



 If you are on a steep mountain road with many height changes.



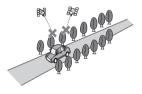
 If you enter or exit a multi-storey parking lot or similar structure using a spiral ramp.



If your vehicle is turned on a turntable or similar structure.



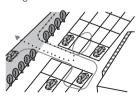
• If trees or other obstacles block the GPS signals for a considerable period.



• If you drive very slowly, or in a start-andstop manner, as in a traffic congestion.



• If you join the road after driving around a large parking lot.



When you drive around a traffic circle.



 When starting driving immediately after starting the engine.

Route setting information Route search specifications

Your navigation system sets a route to your destination by applying certain built-in rules to the map data. This section provides some useful information about how a route is set.



CAUTION

When a route is calculated, the route and voice guidance for the route are automatically set. Also, for day or time traffic regulations, only information about traffic regulations applicable at the time when the route was calculated is considered. One-way streets and street closures may not be taken into consideration. For example, if a street is open during the morning only, but you arrive later, it would be against the traffic regulations so you cannot drive along the set route. When driving, please follow the actual traffic signs. Also, the system may not know some traffic regulations.

- The calculated route is one example of the route to your destination decided by the navigation system while taking the type of streets or traffic regulations into account. It is not necessarily an optimum route. (In some cases, you may not be able to set the streets you want to take. If you need to take a certain street, set a waypoint on that street.)
- If the destination is too far, there may be instances where the route cannot be set.

- During voice guidance, turns and intersections from the freeway are announced.
 However, if you pass intersections, turns, and other guidance points in rapid succession, some may delay or not be announced.
- It is possible that guidance may direct you off a freeway and then back on again.
- In some cases, the route may require you
 to travel in the opposite direction to your
 current heading. In such cases, you are instructed to turn around, so please turn
 around safely by following the actual traffic
 rules.
- In some cases, a route may begin on the opposite side of a railway or river from your actual current location. If this happens, drive towards your destination for a while, and try route calculation again.
- There may be instances when the starting point, the waypoint and the destination point are not on the highlighted route.
- The number of traffic circle exits displayed on the screen may differ from the actual number of roads.

Route highlighting

- Once set, the route is highlighted in bright color on the map.
- The immediate vicinity of your starting point and destination may not be highlighted, and neither will areas with particularly complex road layouts. Consequently, the route may appear to be cut off on the display, but voice guidance will continue.

Common notes about the SD memory card

- Do not leave the SD memory card in any location with high temperatures.
- Operations may vary depending on the kind of an SD memory card.
- Depending on the kind of the SD memory card you use, this navigation system may not recognize the storage device or files may not be played back properly.
- This system is not compatible with Multi Media Card (MMC).
- ⇒ For details about SD memory card compatibility with this navigation system, refer to Specifications on page 73.

SD and SDHC logo



SD Logo is a trademark of SD-3C, LLC.



SDHC Logo is a trademark of SD-3C, LLC.

Display information

"Navigation Menu" screen



		Page
Address		26
Go Home		28
POI		28
	Spell Name	28
	Near Me	29
	Near Dest.	29
	Around City	29
AVIC FE	EDS	31
Favorit	es	30, 38
History	1	31, 41
Cancel		37
Coordinate		31
Gas Mileage		44, 44
Eco Graph		22
Route info		34
Cpy Setting		57
Data In/Out		42, 45

"Settings Menu" screen



		Page
Sound		48
Region		48
	UI Language, Voice Language	48
,	Time	49
,	km / mile	50
,	Speed	50
,	Keyboard	50
Мар		51
	Overlay POI	51
,	View Mode	52
•	Show Maneuver	52
•	Day/Night Display	53
,	Road Color	53
,	Close Up View	53
,	Favorites Icon	53
,	Current Street	54
	Eco Meter	54
Service	Info	54
Set Home 4		40
Location		

"Settings Menu" screen



	Page
Connection	55
Demo Mode	55
Drive Log	56
F. Reset	57
-	

Glossary

Current location

The present location of your vehicle; your current location is shown on the map by a red triangle mark.

Destination

A location you choose as the end point of your journey.

Favorites

A frequently visited location (such as your workplace or a relative's home) that you can register to allow easy routing.

GPS

Global Positioning System. A network of satellites that provides navigation signals for a variety of purposes.

Guidance mode

The mode in which guidance is given as you drive to your destination; the system automatically switches to this mode as soon as a route has been set.

Guidance point

These are important landmarks along your route, generally intersections. The next guidance point along your route is indicated on the map by the yellow flag icon.

Home location

Your registered home location.

Point Of Interest (POI)

Any of a range of locations stored in the data, such as railway stations, shops, restaurants, and amusement parks.

Route setting

The process of determining the ideal route to a specific location; route setting is done automatically by the system when you specify a destination.

Set route

The route marked out by the system to your destination. It is highlighted in bright color on the map.

Track log

Your navigation system logs routes that you already passed through if the track logger is activated. This recorded route is called a "track log". It is handy when you want to check a route traveled or if returning along a complex route.

Voice guidance

The giving of directions by navigation voice while in guidance.

Waypoint

A location that you choose to visit before your destination; a journey can be built up from multiple waypoints and the destination.

Specifications

General

Navigation

GPS receiver: SystemL1, C/Acode GPS SPS (Standard Positioning Service) Reception system 20-channel multi-channel reception system Reception frequency 1575.42 MHz Sensitivity-140 dBm (typ) Position update frequencyApprox. once per second GPS antenna: Antenna Micro strip flat antenna/ right-handed helical polarization Dimensions (W \times H \times D) $(1-1/4 \text{ in.} \times 4/7 \text{ in.} \times$ 1-3/8 in.) Weight96 g (0.21 lbs)

USB

SD

Compatible physical format



Specifications and design are subject to possible modifications without notice due to improvements.

Register your product at

http://www.pioneerelectronics.com

in Canada http://www.pioneerelectronics.ca

See "Visit our website" page

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