

Operation Manual

MULTIMEDIA NAVIGATION RECEIVER

AVIC-Z150BH AVIC-X950BH AVIC-X850BT AVIC-X8510BT

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.

HD Radio®

This HD Radio receiver enables:

PSD

HD2/HD3

Digital Sound

iTunes® Tagging

Artist Experience

SiriusXM
READY

English

Thank you for buying this Pioneer product.

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



Important

The screens shown in the examples may differ from actual screens, which may be changed without notice for performance and function improvements.

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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.

The screen examples shown in this manual are those for AVIC-Z150BH. The screens may vary according to the models.

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 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 CAPITALS, BOLD** lettering; e.g.) **HOME** button, **MODE** button.
- Menu items, screen titles, and functional components are described in **bold** with double quotation marks “ ”:

e.g.)

“**Destination**” screen or “**Phone**” screen

- Touch panel keys that are available on the screen are described in **bold** in brackets []: e.g.) **[Destination]**, **[AV Source]**.
- Extra information, alternatives and other notes are presented in the following format: e.g.)
☐ If the home location has not been stored yet, set the location first.
- Functions of other keys on the same screen are indicated with ■ at the beginning of the description: e.g.)
 ■ If you touch **[OK]**, the entry is deleted.
- References are indicated like this: e.g.)
 ➞ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

Terms used in this manual

“Front display” and “Rear display”

In this manual, the screen that is attached to the body of this navigation unit will be referred to as the “Front display”. Any additional screen that is commercially available and can be connected to this navigation unit will be referred to as the “Rear display”.

“Video image”

“Video image” in this manual indicates moving images of DVD-Video, DivX®, iPod, and any equipment that is connected to this system with an RCA cable, such as general-purpose AV equipment.

“External storage device (USB, SD)”

The SD memory card, SDHC memory card, microSD card, microSDHC card and USB memory device are collectively referred to as the “external storage device (USB, SD)”. If it indicates the USB memory only, it is referred to as the “USB storage device”.

“SD memory card”

The SD memory card, SDHC memory card, microSD card and microSDHC card are collectively referred to as the “SD memory card”.

“iPod”

In this manual, iPod and iPhone will be referred to as “iPod”. ■

Notice regarding video viewing

Remember that use of this system for commercial or public viewing purposes may constitute an infringement on the author's rights as protected by the Copyright Law. ■

Notice regarding DVD-Video viewing

This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited. ■

Notice regarding MP3 file usage

Supply of this product only conveys a license for private, non-commercial use and does not convey a license nor imply any right to use this product in any commercial (i.e. revenue-generating) real time broadcasting (terrestrial,

satellite, cable and/or any other media), broadcasting/streaming via internet, intranets and/or other networks or in other electronic content distribution systems, such as pay-audio or audio-on-demand applications. An independent license for such use is required. For details, please visit <http://www.mp3licensing.com>. ■

iPod compatibility

This product supports only the following iPod models and iPod software versions. Others may not work correctly.

Made for

- iPod touch (5th generation): iOS 6.0.1
 - iPod touch (4th generation): iOS 6.0.1
 - iPod touch (3rd generation): iOS 5.1.1
 - iPod touch (2nd generation): iOS 4.2.1
 - iPod touch (1st generation): iOS 3.1.3
 - iPod classic 160GB (2009): Ver. 2.0.4
 - iPod classic 160GB (2008): Ver. 2.0.1
 - iPod classic 80GB: Ver. 1.1.2
 - iPod nano (6th generation): Ver. 1.2
 - iPod nano (5th generation): Ver. 1.0.2
 - iPod nano (4th generation): Ver. 1.0.4
 - iPod nano (3rd generation): Ver. 1.1.3
 - iPhone 5: iOS 6.0.1
 - iPhone 4S: iOS 6.0.1
 - iPhone 4: iOS 6.0.1
 - iPhone 3GS: iOS 6.0.1
 - iPhone 3G: iOS 4.2.1
 - iPhone: iOS 3.1.3
- When you use this navigation system with a USB interface cable for iPod (sold separately) that is appropriate for this product, you can control an iPod compatible with this navigation system.
- Operation methods may vary depending on the iPod models and the software version of iPod.
- Depending on the software version of the iPod, it may not be compatible with this equipment.

Introduction

For details about iPod compatibility with this navigation system, refer to the information on our website. ■

- Some data remains. Be sure to read *Setting items to be deleted* first.
- ➔ For details, refer to *Setting items to be deleted* on page 165. ■

Map coverage

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

Protecting the LCD panel and screen

- Do not expose the LCD screen to direct sunlight when this product is not used. This may result in LCD screen malfunction due to the resulting high temperatures.
- When using a cellular phone, keep the antenna of the cellular phone away from the LCD screen to prevent disruption of the video in the form of spots, colored stripes, etc.
- To protect the LCD screen from damage, be sure to touch the touch panel keys only with your finger and do so gently. ■

Notes on internal memory

Before removing the vehicle battery

If the battery is disconnected or discharged, the memory will be erased and must be reprogrammed.

- Some data remains. Be sure to read *Setting items to be deleted* first.
- ➔ For details, refer to *Setting items to be deleted* on page 165.

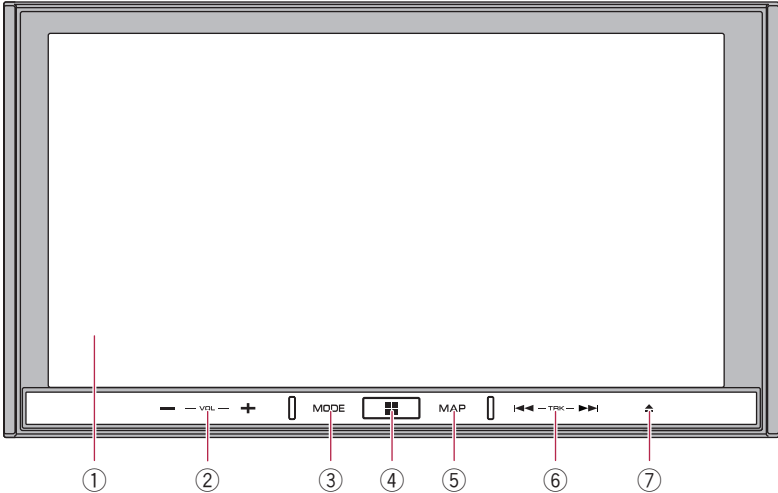
Data subject to erasure

The information is erased by disconnecting the yellow lead from the battery (or removing the battery itself).

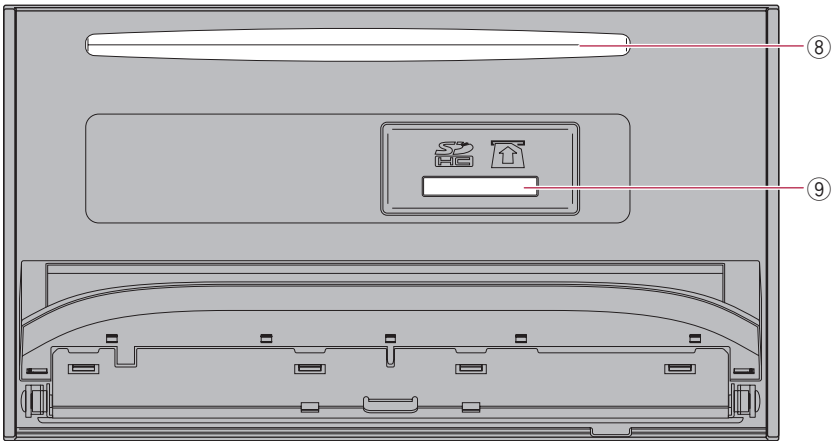
Checking part names and functions

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

AVIC-Z150BH (with the LCD panel closed)

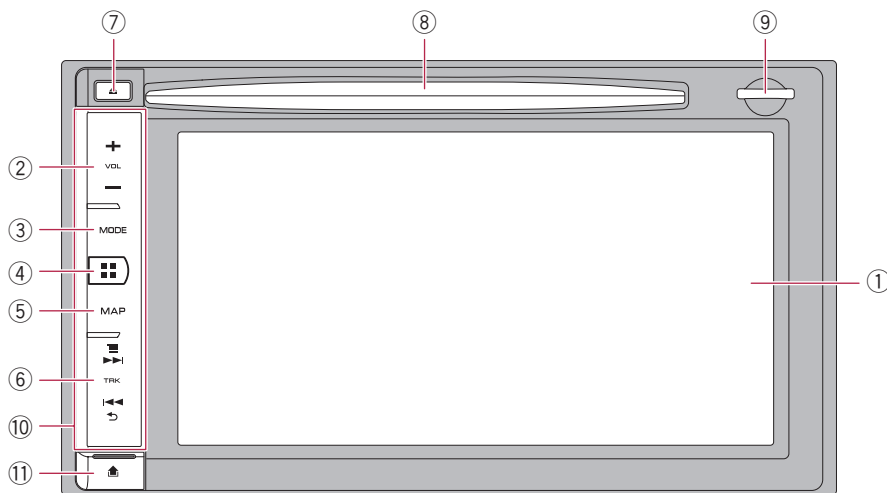


AVIC-Z150BH (with the LCD panel open)



Basic operation

AVIC-X950BH, AVIC-X850BT, and AVIC-X8510BT



① LCD screen

② VOL (+/-) button

Press to adjust the AV (Audio and Video) source volume.

③ MODE button

- Press to switch the screen to the AV operation screen or the **AppRadio Mode** screen.

➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

- Press to switch between the **AppRadio Mode** screen and the AV operation screen.

➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

- Press and hold to display the **"Picture Adjustment"** screen.

➡ For details, refer to *Adjusting the picture* on page 158.

- Press and hold to display the touch panel calibration screen while the **"Picture Adjustment"** screen is displayed.

➡ For details, refer to *Adjusting the response positions of the touch panel (touch panel calibration)* on page 147.

④ HOME button

- Press the **HOME** button to display the **"Top Menu"** screen while the map screen, the AV operation screen, or the application menu screen is displayed.
- Press to switch the application operation screen to the application menu screen.

➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

⑤ MAP button

- Press to display the current location when the navigation screen (showing other than the current location) is displayed. When the current location is displayed, the screen changes to the registered map scale. When the AV source screen is displayed, it switches to the current location screen.

➡ For details, refer to *Registering a scale* on page 35.

Basic operation

- Press and hold to temporarily clear the screen regardless of whether it is the AV source, the current location screen or the **AppRadio Mode** screen.

➡ For details, refer to *Temporarily clearing the screen (navigation system in standby mode)* on page 20.

⑥ TRK button

- Press to perform manual seek tuning, fast forward, reverse and track search controls.
- Press to perform the back and menu function of the Android device when you use the **AppRadio Mode** with an Android device.

⑦ ▲ button

⑧ Disc-loading slot

Insert a disc to play.

➡ For details, refer to *Inserting and ejecting a disc* on page 15.

⑨ SD card slot

➡ For details, refer to *Inserting and ejecting an SD memory card* on page 16.

⑩ Detachable faceplate

⑪ 🏠 button

Press to remove the detachable faceplate from the navigation system.

➡ For details, refer to *Removing the detachable faceplate* on page 14. ■

Protecting your product against theft

- ❑ This function is available on AVIC-X950BH, AVIC-X850BT, and AVIC-X8510BT.

The detachable faceplate can be detached from the navigation system to discourage theft, as described below.



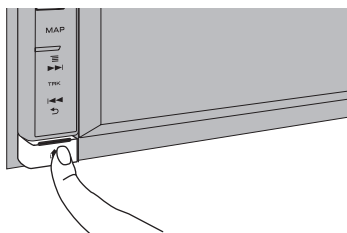
CAUTION

- Do not expose the detachable faceplate to excessive shock or disassemble it.
- Never grip the buttons tightly or use force when removing or attaching.
- Keep the detachable faceplate out of reach of small children to prevent them from placing it in their mouths.
- After removing the detachable faceplate, keep it in a safe place so it is not scratched or damaged.
- Do not expose the detachable faceplate to direct sunlight and high temperatures.
- When removing or attaching the detachable faceplate, do so after turning off the ignition switch (ACC OFF).

Removing the detachable faceplate

- ❑ The navigation system cannot be operated while the detachable faceplate is removed from the navigation system.

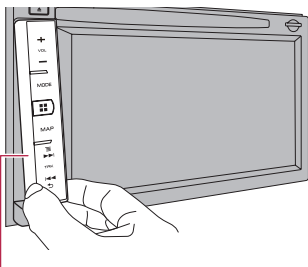
1 Press the 🏠 button.



When you release your finger, the bottom of the detachable faceplate separates slightly from the navigation system.

Basic operation

- 2 Gently grip the bottom of the detachable faceplate and slowly pull it outward.



Detachable faceplate

Attaching the detachable faceplate

- 1 Slide the detachable faceplate all the way into the navigation system.

Make sure the detachable faceplate is securely connected to the mounting hooks of the navigation system.

- 2 Push the lower part of the detachable faceplate until you hear a click.

If you fail to successfully attach the detachable faceplate to the navigation system, try again but be careful not to force it as the panel could be damaged.

Adjusting the LCD panel angle

- This function is only available on AVIC-Z150BH.



WARNING

Keep hands and fingers clear of the unit when opening, closing, or adjusting the LCD panel. Be especially cautious of children's hands and fingers.



CAUTION

Do not open or close the LCD panel by force. This may cause a malfunction.

- 1 Press the button.

The "Monitor Setup" screen appears.

- 2 Touch or to adjust the angle.



- 3 Touch .

- The adjusted angle of the LCD panel will be memorized and the LCD panel will automatically return to that angle the next time the LCD panel is opened or closed.

Inserting and ejecting a disc

Inserting a disc (for AVIC-Z150BH)



WARNING

- Keep hands and fingers clear of the unit when opening, closing, or adjusting the LCD panel. Be especially cautious of children's hands and fingers.
- Do not use with the LCD panel left open. If the LCD panel is left open, it may result in injury in the event of an accident.



CAUTION

- Do not open or close the LCD panel by force. This may cause a malfunction.
- Do not operate this navigation system until the LCD panel has completely opened or closed. If this navigation system is operated while the LCD panel is opening or closing, the LCD panel may stop at that angle for safety.
- Do not place a glass or can on the open LCD panel. Doing so may break this navigation system.
- Do not insert anything other than a disc into the disc-loading slot.

1 Press the **▲** button.

The “Monitor Setup” screen appears.

2 Touch [Open].



The LCD panel opens, and the disc-loading slot appears.

3 Insert a disc into the disc-loading slot.

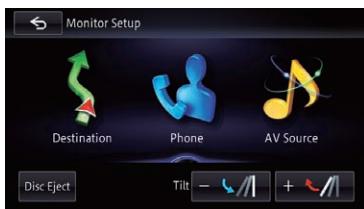
The disc is loaded, and the LCD panel closes.

Ejecting a disc (for AVIC-Z150BH)

1 Press the **▲** button.

The “Monitor Setup” screen appears.

2 Touch [Disc Eject].



The LCD panel opens, and the disc is ejected.

3 Remove the disc, and press the **▲** button.

The LCD panel closes.

Inserting a disc (for AVIC-X950BH, AVIC-X850BT and AVIC-X8510BT)



CAUTION

Do not insert anything other than a disc into the disc-loading slot.

- Insert a disc into the disc-loading slot.

Ejecting a disc (for AVIC-X950BH, AVIC-X850BT and AVIC-X8510BT)

- Press the **▲** button.

The disc is ejected. 

Inserting and ejecting an SD memory card



CAUTION

- Ejecting an SD memory card during data transfer can damage the SD memory card. Be sure to eject the SD memory card by 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.
 - Do not insert anything other than SD memory cards.
- ☐ This system is not compatible with the 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.

Inserting an SD memory card (for AVIC-Z150BH)



CAUTION

- Do not press the **▲** button when an SD memory card is not fully inserted. Doing so may damage the card.
- Do not press the **▲** button before an SD memory card has been completely removed. Doing so may damage the card.

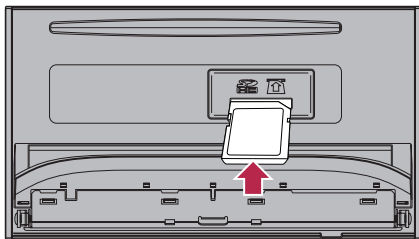
1 Press and hold the **▲** button.

The LCD panel opens fully.

Basic operation

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

Insert it with the label surface face-up and press the card until it clicks and completely locks.



3 Press the ▲ button.

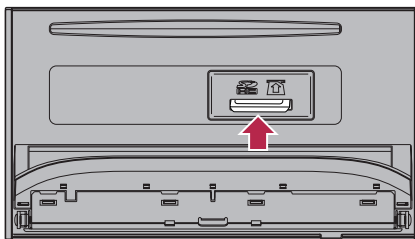
The LCD panel closes.

Ejecting an SD memory card (for AVIC-Z150BH)

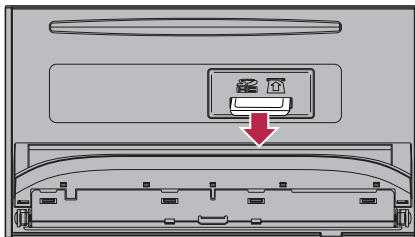
1 Press and hold the ▲ button.

The LCD panel opens fully.

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



3 Pull the SD memory card out straight.



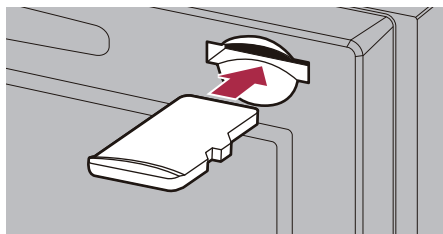
4 Press the ▲ button.

The LCD panel closes.

Inserting an SD memory card (for AVIC-X950BH, AVIC-X850BT and AVIC-X8510BT)

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

Insert the SD memory card with the terminal contacts face-down, and press the card until it clicks and locks completely.



Ejecting an SD memory card (for AVIC-X950BH, AVIC-X850BT and AVIC-X8510BT)

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



2 Pull the SD memory card out straight.



Plugging and unplugging a USB storage device

⚠ CAUTION

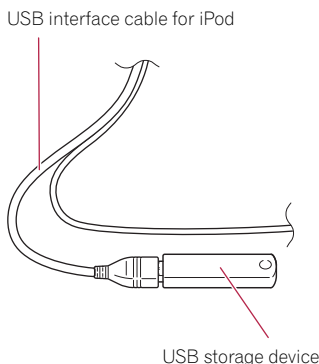
- To prevent data loss and damage to the storage device, never remove it from this navigation system while data is being transferred.
- Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, iPhone, smartphone, or other devices while using this product.

- ❑ This navigation system may not achieve optimum performance with some USB storage devices.
- ❑ Connection via a USB hub is not possible.
- ❑ A USB interface cable for iPod (sold separately) is required for connection.

Plugging in a USB storage device

1 Pull out the plug from the USB port of the USB interface cable for iPod.

2 Plug a USB storage device into the USB interface cable for iPod.



Unplugging a USB storage device

● Pull out the USB storage device after checking that no data is being accessed. ❑

Connecting and disconnecting an iPod

⚠ CAUTION

- To prevent data loss and damage to the storage device, never remove it from this navigation system while data is being transferred.
- Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, iPhone, smartphone, or other devices while using this product.

Basic operation

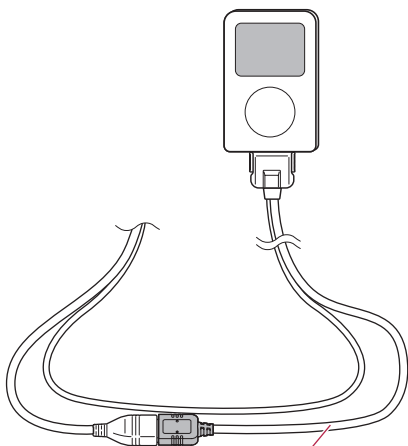
Connecting your iPod

Using the USB interface cable for iPod enables you to connect your iPod to the navigation system.

- ❑ A USB interface cable for iPod (sold separately) is required for connection.
- ❑ For details about iPod compatibility with this navigation system, refer to the information on our website.
- ❑ Connection via a USB hub is not possible.

1 Check that no USB storage device is connected.

2 Connect your iPod.



USB interface cable for iPod

Disconnecting your iPod

- Pull out the USB interface cable for iPod after checking that no data is being accessed. ■

Startup and termination

1 Start the engine to boot up the system.

After a short pause, the splash screen comes on for a few seconds.

- ❑ To protect the LCD screen from damage, be sure to touch the touch panel keys only with your finger and do so gently.

2 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.

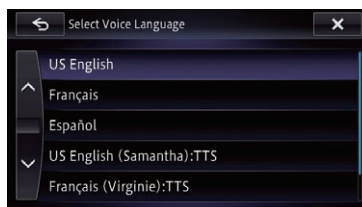
1 Start the engine to boot up the system.

After a short pause, the splash screen comes on for a few seconds.

2 Touch the language that you want to use on screen.



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

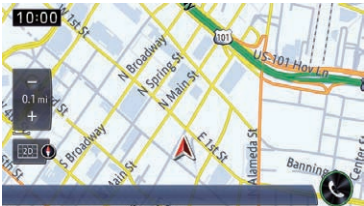


The navigation system will now restart.

4 Read the terms carefully, checking the details, and then touch [OK] if you agree to the conditions.



The map screen appears.



Regular startup

- Start the engine to boot up the system.

After a short pause, the splash screen comes on for a few seconds.

- ❑ The screen shown will differ depending on the previous conditions.
- ❑ If the anti-theft function is activated, you must enter your password.
- ❑ The terms appear if the previous condition was the navigation screen.
Read the terms carefully, checking the details, and then touch [OK] if you agree to the conditions.

After you touch [OK], the screen that was displayed just before turning off the ignition switch (ACC OFF) is displayed.

A message about the map database

After you start using this navigation system, a message related to map data may be displayed.

- ❑ This message is displayed the first time you turn on the navigation system each month.
- ❑ Touch the message to close it or it will disappear automatically after eight seconds. ■

Demonstration images

If you do not operate this navigation system for five minutes, demonstration images are displayed.

- ❑ The demonstration images will not be displayed if you drive after mounting this navigation system. ■

Temporarily clearing the screen (navigation system in standby mode)

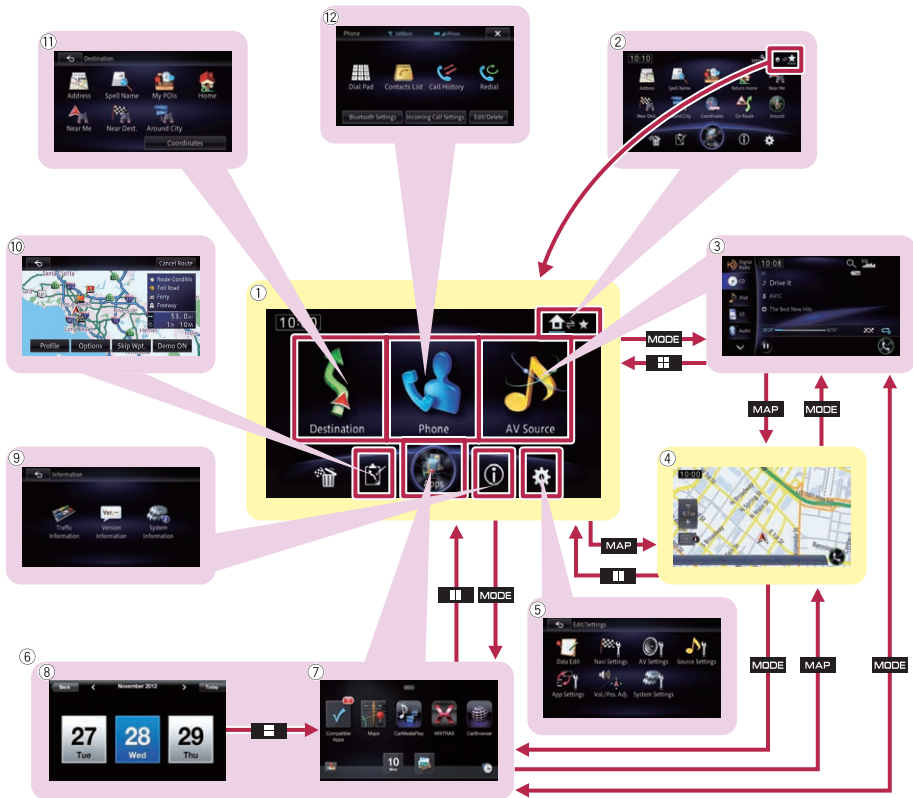
You can temporarily clear the screen at night or when the screen is too bright.

- Press and hold the MAP button.

The screen is cleared temporarily.

- ❑ If you touch the screen when the navigation system is in standby mode, it reverts to the original screen.
Also, if you press the **MAP** button, the standby mode is canceled and the current location screen is displayed. If you press the **MODE** button, the standby mode is canceled and the AV source screen is displayed.
- ❑ When the navigation system is in standby mode, the navigation guidance does not output the voice guidance. The audio sound is output.
- ❑ The standby mode is not canceled by turning ignition switch on or off. ■

How to use the navigation menu screens



① Top Menu

This is the starting menu to access the desired screens and operate various functions. You can also check or cancel your set route from this menu.

- ❑ If you press the **HOME** button, the screen of either “**Top Menu**” or Shortcut Menu which was being displayed last time is displayed.
- ❑ [**Apps**] is only available when an iPhone or a smartphone is connected to this navigation system.

② Shortcut Menu

- ❑ If you press the **HOME** button, the screen of either “**Top Menu**” or Shortcut

Menu which was being displayed last time is displayed.

③ AV operation screen

This is the screen that normally appears when you play the AV source.

④ Map screen

You can use this screen to check the current vehicle position information and route to the destination.

⑤ Edit/Settings screen

You can access the screen to customize settings.

⑥ AppRadio Mode screen

Basic operation

In this manual, the application menu screen and the application operation screen are collectively referred to as the “**AppRadio Mode** screen”.

⑦ Application menu screen

This navigation system can switch to the application menu, which you can display and operate the application for the iPhone or smartphone on the screen.

⑧ Application operation screen

You can control the iPhone or smartphone applications directly on the navigation screen.

⑨ Information screen

You can access the screen for handling various information such as the system information of the device.

⑩ Editing route screen

You can edit the conditions for calculating the current route.

⑪ Destination screen

You can search for your destination on this menu.

⑫ Phone screen

You can access the screen that is related to hands-free phoning. 

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.

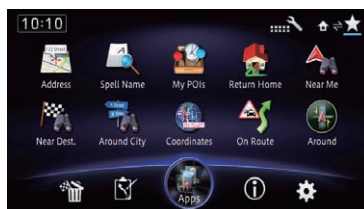
Selecting the shortcut

- ☐ Up to 10 menu items can be registered in shortcuts.

1 Display the Shortcut Menu screen.

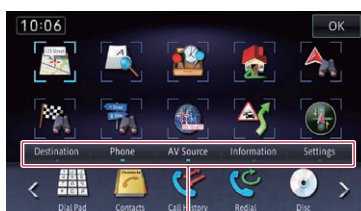
- ➞ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch .



The Shortcut selection screen appears.

3 Touch the tab or touch or to display the icon that you want to set to shortcut.

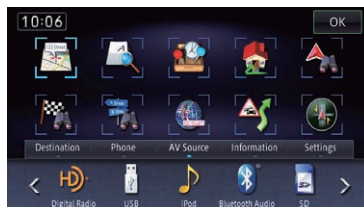


Tabs

4 Touch and hold the icon that you want to add to shortcut.

5 Move the icon to the upper side of the screen, and then release it.

The selected item is added to shortcut.



Removing a shortcut

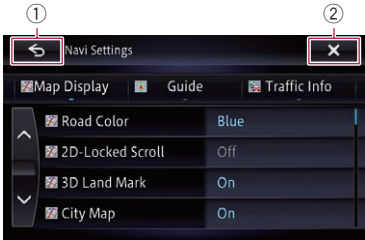
1 Touch and hold the icon of the shortcut you want to remove.

2 Move the icon to the lower side of the screen, and then release it. .

Using the touch panel

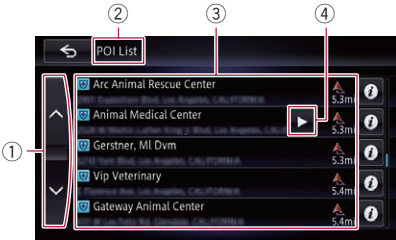
You can operate the product by touching the marks and items (touch panel keys) displayed on the screen directly with your fingers.

Using the common touch panel keys



- ① The previous screen returns.
- ② The screen is closed.

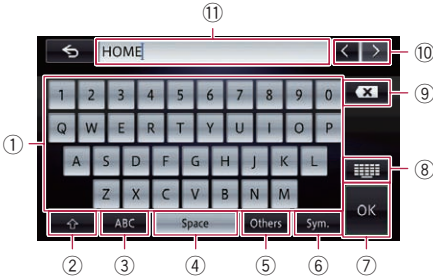
Operating list screens (e.g. POI list)



- ① Touching or on the scroll bar scrolls through the list and allows you to view the remaining items.
- ② **Screen title**
- ③ **Listed items**
Touching an item on the list allows you to narrow down the options and proceed to the next operation.
- ④ If not all the characters can be displayed within the displayed area, touching the key to the

right of the item allows you to see the remaining characters.

Operating the on-screen keyboard



- ① **Keyboard**
Touching the keys enters the characters in the text box.
- ② You can switch between capital and lower case letters.
- ③ **ABC**
You can enter letters and numbers.
- ④ **Space**
You can leave spaces.
A space equivalent to the number of touches is inserted.
- ⑤ **Others**
You can enter other characters of alphabet.
 Even if you use any of "A", "Ä", "Å", "Æ", the displayed result is the same.
- ⑥ **Sym.**
You can enter text with marks such as "&", "+", or numbers.
- ⑦ **OK**
Confirms the entry and allows you to proceed to the next step.
- ⑧ Switches the on-screen keyboard layout.
- ⑨ Deletes the input text one letter at a time, beginning at the end of the text. Continuing to touch the key deletes all of the text.

Basic operation

⑩ < >

Allows you to move the cursor to the right or left for a number of characters equivalent to the number of touches.

⑪ Text box

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

Swipe action

You can operate some navigation and audio functions by sliding your fingers vertically and horizontally while touching the screen.

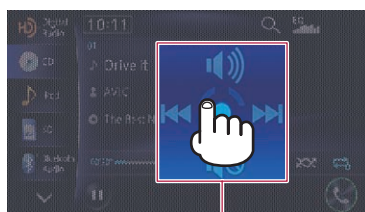
1 Touch and hold the swipe response area.

- The swipe response area varies depending on the displayed screen.

Example: CD



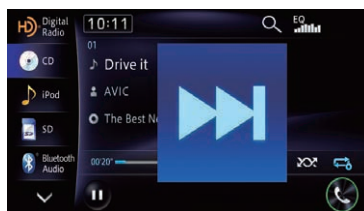
Swipe response area



Operation guide

The operation guide appears.

2 While touching the screen, slide your finger toward the function you want to execute and release.



The selected function is zoomed in and the function operates.

Swipe action list

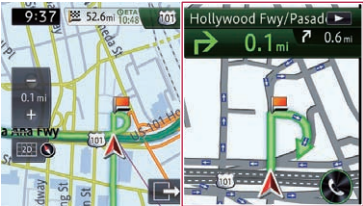
Navigation

Operation screen	Action
Guidance display	← Displays the turning direction at the next guide point and the distance, and gives a voice announcement.
	→ Cancels the display of the intersection guide map.
	↑ Hides the street list.
	↓ Displays the next guidance point.
The auto re-route function taking into account traffic congestion (*1)	→ Selects an alternative route.
	← Selects the current route.

Operation screen	Action
The auto re-route function taking into account closed/ blocked roads (*1)	↓ Restarts the route guidance of an alternative route.
	← Displays the turning direction at the next guide point and the distance, and gives a voice announcement.
App View map	↑ The sound mix function is disabled.
	↓ The sound mix function is enabled.
	● Displays the "AppRadio Mode" screen. (*2)

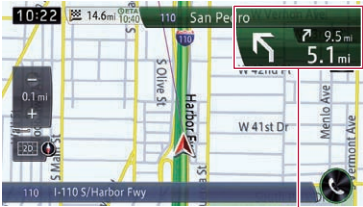
(*1) This function is available on AVIC-Z150BH and AVIC-X950BH.
(*2) Displays this screen after releasing your finger from the circle.

- The intersection guidance display and the interchange guidance display



Swipe response area

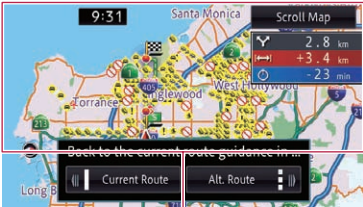
The other guidance displays



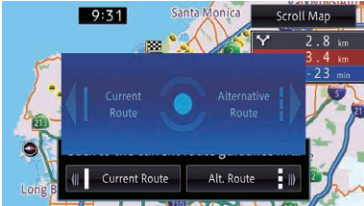
Swipe response area



- The auto reroute function taking into account traffic congestion (for AVIC-Z150BH and AVIC-X950BH)

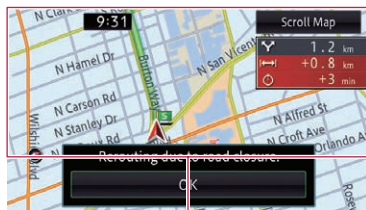


Swipe response area

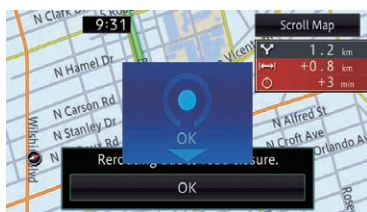


Basic operation

- The auto reroute function taking into account closed/blocked roads (for AVIC-Z150BH and AVIC-X950BH)



Swipe response area



Audio

Operation screen	Action
Radio (FM, AM) (*1)	← Skips to the previous preset channel.
	→ Skips to the next preset channel.
	↑ Unmutes the sound.
	↓ Mutes the sound.
HD Radio (HD Radio™ tuner) (*2)	← Skips to the previous preset channel.
	→ Skips to the next preset channel.
	↑ Unmutes the sound.
	↓ Mutes the sound.

Operation screen	Action
Disc (CD, CD-R, CD-RW)/Bluetooth Audio	← Skips to the previous track.
	→ Skips to the next track.
	↑ Unmutes the sound.
	↓ Mutes the sound.
Disc (DVD-Video)	← Skips to the previous chapter.
	→ Skips to the next chapter.
	↑ Unmutes the sound.
	↓ Mutes the sound.
Disc (DivX video files)/SD/USB	← Skips to the previous file.
	→ Skips to the next file.
	↑ Unmutes the sound.
	↓ Mutes the sound.
iPod	← Skips to the previous chapter or song.
	→ Skips to the next chapter or song.
	↑ Unmutes the sound.
	↓ Mutes the sound.
Pandora®	→ Skips to the next track.
	↑ Unmutes the sound.
	↓ Mutes the sound.
Aha Radio	← Skips to the previous content.
	→ Skips to the next content.
	↑ Unmutes the sound.
	↓ Mutes the sound.
SiriusXM™ tuner	← Skips to the previous channel.
	→ Skips to the next channel.
	↑ Unmutes the sound.
	↓ Mutes the sound.

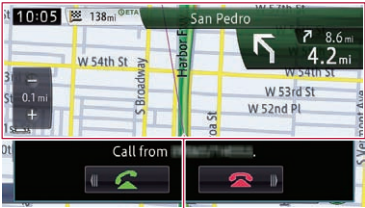
(*1) A source available on AVIC-X850BT and AVIC-X8510BT.

(*2) A source available on AVIC-Z150BH and AVIC-X950BH.

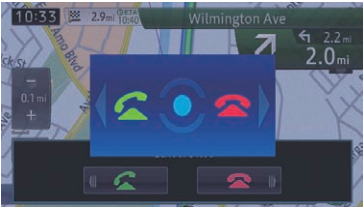
Hands-free phoning

Operation screen	Action
Receiving a phone call	← Allows you to talk on the phone.
	→ Ends the call.

- Receiving a phone call



Swipe response area

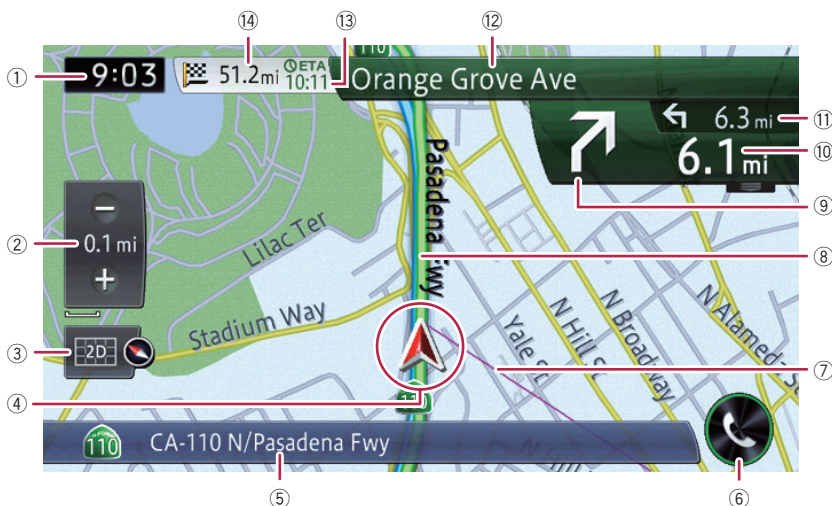


How to use the map

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 Current time

② Scale display touch panel key

Touching [+] or [-] changes the map scale. You can change the map scale between 10 yards and 1 000 miles (10 meters and 2 000 kilometers).

- ❑ The “_” mark shown below indicates the scale distance (2D display only).

③ Map control

The “View” screen that can set the view mode and the map orientation appears.

- ➡ For details of the operation, refer to *Switching the view mode* on page 33.
- ➡ For details, refer to *Switching the map orientation* on page 33.

④ 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 actual current position of the vehicle.

⑤ Information bar

Each touch of this key changes the display information as follows.

- The information of where your vehicle is traveling along
 - ❑ When “**Street Name**” is selected on “**Current Location Info.**” of “**Navi Settings**”, the street name or city name is displayed. Also, “**Coordinates**” is selected, latitude and longitude are displayed.
 - ➡ For details, refer to *Setting the current street name display* on page 140.

How to use the map

- ☐ When there is no data of current position, no information is displayed.
- The AV source currently selected
 - ☐ Depending on the source currently chosen, an image is displayed.

⑥ **Phone key**

Displays the “Phone” screen.

➡ For details, refer to *Displaying the phone menu* on page 61.

⑦ **Direction line***

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

⑧ **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.

⑨ **Next direction of travel***

As you get closer to the guidance point, the color of the item changes to green.

⑩ **Distance to the guidance point***

Shows the distance to the next guidance point.

⑪ **Second maneuver arrow***

Shows the turning direction after the next guidance point and the distance to it.

⑫ **Number and name of the street to be used (or next guidance point)***

Displays the number and name of the upcoming street. If you touch , the street name is scrolled and hidden letters appear.

⑬ **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 **Minor Ordinary Road**, **Major Ordinary Road** or **Freeway**, and the actual driving speed. The estimated time of arrival is only a reference value, and does not guarantee arrival at that time.

➡ For details, refer to *Changing the virtual speed of the vehicle* on page 143.

⑭ **Distance to the destination (or distance to waypoint)***

Meaning of guidance flags

Icon	Meaning
	Destination The checkered flag indicates your destination.
	Waypoint The red flags indicate your waypoints.
	Guidance point The next guidance point (next turning point, etc.) is shown by an orange flag.

Enlarged map of the intersection

When “Close Up View” in the “Guide” screen is “On”, an enlarged map of the intersection appears.



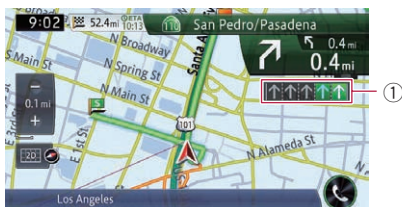
➡ For details, refer to *Setting the auto-zoom display* on page 143.

- ☐ When the enlarged map of traffic circle appears, the exit numbers are displayed on each exit. The voice guidance is announced from the entrance to the exit.

How to use the map

The display while driving on the freeway

In certain locations of the freeway, lane information is available. The map indicates 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 in the vicinity of interchanges and exits.



① Lane information

- **Green lane:**

Guided lane

- **Green lane with a white arrow:**

Recommended lane

- **Gray lane:**

Non guided lane

- On the toll roads, the lanes are in blue instead of green.

② Freeway exit information

Displays the freeway exit.

③ Freeway signs

These show the road number and give directional information.

④ Distance to the next guidance point

These show the distance to the next guidance point.

- If the data for these items is not contained in the built-in memory, the information is

not available even if there are 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 pink) have only basic data and can only be used to plot a navigable route. Pioneer navigation will display full route guidance, including turn-by-turn voice directions and arrow icons. 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 (light gray-color roads)

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

Operating the map screen

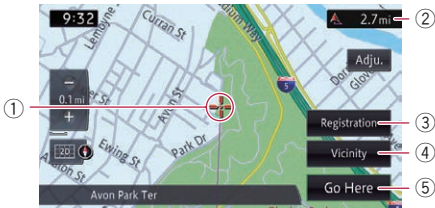
Scrolling the map to the position you want to see

1 Display the map screen.

- For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch and hold the map in the desired direction to see.

The map moves centered around the position you have touched.



- ① Cursor
- ② Distance from the current position
- ③ **Registration**
You can register the location indicated by the current cursor position as **"Favorites"**.
➔ For details, refer to *Registering and editing locations* on page 50.
- ④ **Vicinity**
You can search for the POIs near the cursor position by selecting a category.
➔ For details, refer to *Searching for a nearby POI* on page 40.
- ⑤ **Go Here**
You can search for a route to a destination indicated by the cursor position.
➔ For details, refer to *Setting a route to your destination* on page 44.

3 To slightly adjust the position, touch [Adju.] first, then the direction arrow (eight directions) in which you want to make slight adjustments.



Each touch of the direction arrow moves the map little by little.
The direction arrows disappear by touching [Adju.] again.

- ❑ Pressing the **MAP** button returns the map to the current position.

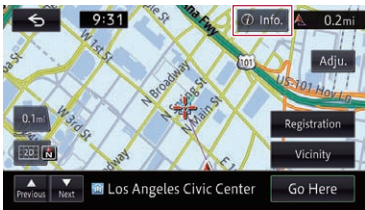
Viewing information about a specified location

For the locations you have searched using the destination menu, you can display the detailed information as long as the information related to the location is stored in the system.

1 Search for a location using the "Destination" screen.

- ➔ For details, refer to Chapter 4.

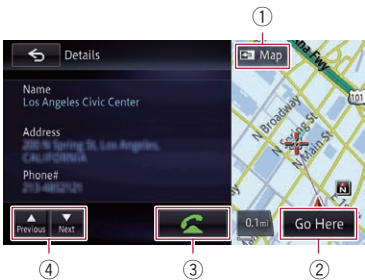
2 Touch [Info].



The **"Details"** screen appears.

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

The information for the specified location appears.



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

- ① **Map**
Displays the map screen.
- ② **Go Here**
Searches for the route to the displayed location.
❑ If the route is already set, the displayed location can be modified to the destination or a waypoint.

How to use the map



Enables you to call the position if a telephone number is available. (Pairing with cellular phone featuring Bluetooth wireless technology is required.)



The previous facility or the next facility appears when searching for a POI.

Switching the view mode

Various types of screen displays can be selected for navigation guidance.

1 Display the map screen.

- For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch on the map screen.

The “View” screen appears.

3 Touch the type that you want to set.

You can select the following types:

- 2D View** (default):
Displays a normal map (2D map).



- 3D View:**

Displays a map with an antenna view (3D map).



- App View:**

Displays the screen of an application for the iPhone or smartphone on the right side

of the screen and the map on the left side of the screen.

If you touch the map, the map is scrolled on the whole screen. And if you touch the screen of an application for the iPhone or smartphone, the **AppRadio Mode** screen appears.

- For details, refer to *Scrolling the map to the position you want to see* on page 31.
- For details, refer to *Swipe action* on page 25.



- Rear View:**

Displays the rear view image on the right side of the screen and the map on the left side of the screen.



- This mode is available when the rear view camera setting is set to “On”.
- For details, refer to *Setting for rear view camera* on page 161.

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.

When “**Heading Up**” is selected,  is displayed.

• **North Up:**

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

When “**North Up**” is selected,  is displayed.

- ❑ The red arrow indicates north.
- ❑ 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.
- ❑ The map orientation is fixed at “**North Up**”, regardless of whether the 2D map screen is displayed or the 3D map is displayed.

1 **Display the “View” screen.**

- ➔ For details of the operation, refer to *Switching the view mode* on page 33.

2 **Touch [Map Orientation] to switch the vehicle’s direction.**

Each time you touch the key the setting changes. .

Displaying one-way street marks

You can display one-way street marks.

- ❑ You can turn on or off the one-way street display on the 0.1 mile (100 meters) scale.

1 **Display the “View” screen.**

- ➔ For details of the operation, refer to *Switching the view mode* on page 33.

2 **Touch [One-way Disp. on 100m Scale].**

Each touch of the key turns on or off the one-way street display on the 0.1 mile (100 meters) scale. .

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 0.75 mile (1 kilometer) or more.

- ❑ Up to 200 items or 100 preinstalled POIs are displayed on the map.

Displaying preinstalled POIs on the map

- ❑ You can select up to 200 items from the subcategories or detailed categories.

1 **Display the “View” screen.**

- ➔ For details of the operation, refer to *Switching the view mode* on page 33.

2 **Touch [Overlay POI].**

3 **Touch [Hide], and then touch [View].**



- ❑ If you do not want to display the POI icon on the map, touch **[Hide]**. (Even if “**Hide**” is selected, the POI selection setting is retained.)
 - If you touch , the pop-up menu is disappeared.

4 **Touch the main category you want.**

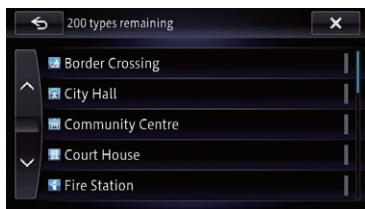


A list of subcategories under the selected main category appears.

- ❑ If you touch the item, the indicator on the right of the list turns on and show that the item is selected. If you touch the same item, the indicator turns off and the selection is canceled.

How to use the map

5 Touch the subcategory to display.



The indicator of the selected POI lights up and you can continue to select the POI.

- ❑ The indicator also lights up when several POI are selected. Touching the facility again turns off the indicator and deselects the POI.
- ❑ To select another POI, touch  to return to the Step 2 screen and repeat Step 2 and 3.

6 Touch .

The screen returns to the map screen and the logo of the selected POI appears. .

Registering a scale

You can register a scale for each map according to the display method. You can see the map in the registered scale by pressing the **MAP** button even if you switch the view mode.

1 Adjust the map scale to the scale you want to register.

2 Display the “View” screen.

- ➞ For details of the operation, refer to *Switching the view mode* on page 33.

3 Touch [Save Scale].

A confirmation message appears.

4 Touch [Yes].

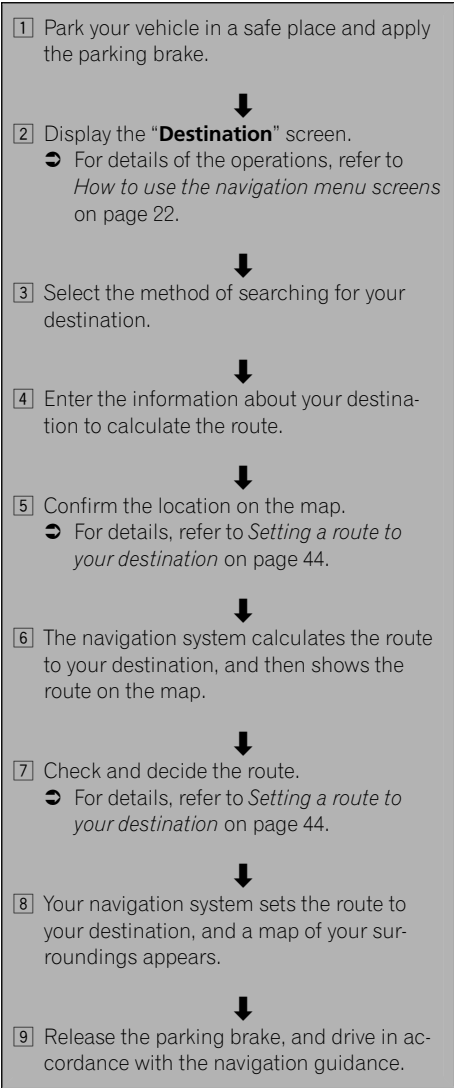
The registration is complete. .

! CAUTION

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 applies 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



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 destination is searched.

You can select the method of searching for a location by address.

- Searching for a city name first
- Finding the location by specifying the house number

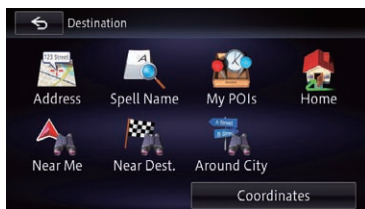
Searching for a city name first

- ❑ Depending on the search results, some steps may be skipped.
- ❑ When you enter characters, the system will automatically search the database for all possible options. Only the characters you enter are active.
- ❑ If the search candidates number reaches 20 or less, the screen automatically changes to the search result screen.

1 Display the “Destination” screen.

- ➞ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Address].



3 Touch the key next to “Country” to select the country.

If the destination is in another country, change the country setting.

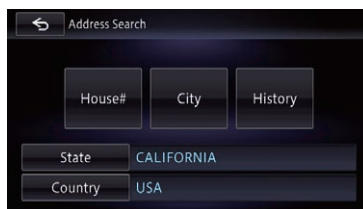
- ❑ Once the country has been selected, you only have to change countries when your destination is outside the country you selected.

4 Touch the key next to “State” and touch the desired state, province, or territory on the list.

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 [City].



- If you touch [History], the “City History List” screen appears, enabling you to search by previously selected city history.
- ➞ For details, refer to *Searching by selected city history* on page 39.

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



The “Select City” screen appears.

7 Touch the desired city name.

- If you touch , the geographic center of the city appears on the map screen.

Searching for and selecting a location

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



The “Select a Street” screen appears.

9 Touch the street you want.

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



The “House Number Selection” screen appears.

- If you touch [OK] without entering the house number, a representative location on the street in the selected city appears.

11 Touch the desired house number range.

The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44.

Finding the location by specifying the house number

- ❑ Depending on the search results, some steps may be skipped.
- ❑ When you enter characters, the system will automatically search the database for all possible options. Only the characters you enter are active.

- ❑ If the search candidates number reaches 20 or less, the screen automatically changes to the search result screen.

1 Display the “Address Search” screen.

2 Touch [House#].

The “Enter House Number” screen appears.

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



The “Enter Street Name” screen appears.

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



The “Select a Street” screen appears.

5 Touch the street you want.

The “Enter City Name” screen appears.

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



The “Select City” screen appears.

Searching for and selecting a location

7 Touch the desired city name.

The “**House Number Selection**” screen appears.

If the house number you have entered is not found, a message appears. In that case, all house number ranges are listed after touching [Yes].

- If you touch  the geographic center of the city appears on the map screen.

8 Touch the desired house number range.

The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44. 

Searching by selected city history

You can search cities from the history that you have searched by entering the name with the keyboard and selected by “**Address**”.

- ☐ The history can store up to 100 cities.
- ☐ The cities are listed in order of the most recent search.

1 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Address].

The “**Address Search**” screen appears.

3 Touch [History].

The “**City History List**” screen appears.

4 Touch the desired city name.

- If you touch  the geographic center of the city appears on the map screen.

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

The “**Select a Street**” screen appears.

6 Touch the street you want.

The “**Enter House Number**” screen appears.

- ☐ If the selected street has only one matching location, the searched location appears on the map screen.

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

The “**House Number Selection**” screen appears.

- If you touch [OK] without entering the house number, a representative location on the street in the selected city appears.

8 Touch the desired house number range.

The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44. 

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 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Home].

- ☐ If you have not registered your home location, a message appears. Touch [Yes] to start registration.
- ➔ For details, refer to *Registering your home* on page 134. 

Searching for Points of Interest (POI)

Information about various facilities (Points Of Interest – POI), such as gas stations, parking lots or restaurants, 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

- ❑ If the search candidates number reaches 20 or less, the screen automatically changes to the search result screen.

1 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Spell Name].

The “**Spell Name**” screen appears.

3 Touch [Name].

- If you change the region to search, touch [State] and display the “**State List**” screen to change the setting.
- If you change the country to search, touch [Country] and display the “**Country List**” screen to configure.
 - ❑ Once the country has been selected, you only have to change countries when your destination is outside the country you selected.

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

The “**POI List**” screen appears.

5 Touch the POI you want.

The searched location appears on the map screen.

- If you touch [Sort], the order of POI can be sorted.
 - ❑ The current order is indicated on the upper right of the screen.
- **By Distance:**
Sorts the items in the list in order by distance from the vehicle position.
- **By Coincidence:**
Sorts the items in the list in order by degree of consistency with the entered text.
- **By Name:**
Sorts the items in the list alphabetically, and the list display can be switched by switching the alphabet tabs.
- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44.

Searching for a nearby POI

You can search for POIs in your surroundings.

- ❑ Up to 50 POIs within a 100 miles (160 kilometers) radius of the vehicle position are listed in order by distance.

1 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Near Me].

POIs are divided into several categories.

- ❑ The “**Category History**” screen appears if you have searched for POIs before.
- ❑ The history can be stored up to 10 genres. You can delete the stored histories collectively.
- ❑ If you want to delete the histories, touch [Delete All].
- ❑ If you want to search for a genre other than displayed, touch [Other]. The POI list is displayed.

3 Touch the category you want.

The “**POI List**” screen appears.

- ❑ If there are more detailed categories within the selected category, repeat this step as frequently as necessary.

4 Touch the POI you want.

The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44.

Searching for POIs around the destination

- ❑ This function is available when the route is set.

1 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Near Dest.].

POIs are divided into several categories.

Searching for and selecting a location

- ❑ The “**Category History**” screen appears if you have searched for POIs before.
- ❑ The history can be stored up to 10 genres. You can delete the stored histories collectively.
- ❑ If you want to delete the histories, touch **[Delete All]**.
- ❑ If you want to search for a genre other than displayed, touch **[Other]**. The POI list is displayed.

3 Touch the category you want.

The “**POI List**” screen appears.

- ❑ If there are more detailed categories within the selected category, repeat this step as frequently as necessary.

4 Touch the POI you want.

The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44.

Searching for POIs around the city

You can search for POIs around a specified city.

- ❑ If the search candidates number reaches 20 or less, the screen automatically changes to the search result screen.

1 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Around City].

The “**Around City**” screen appears.

3 Touch [Country].

The “**Country List**” screen appears.

- If you change the region to search, touch **[State]** and display the “**State List**” screen to change the setting.

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

The screen returns to the previous screen.

5 Touch [City].

- If you touch **[History]**, the “**City History List**” screen appears, enabling you to search by previously selected city history.
 - ➔ For details, refer to *Searching by selected city history* on page 39.

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

The “**Select City**” screen appears.

7 Touch the desired city name.

POIs are divided into several categories.

- ❑ The “**Category History**” screen appears if you have searched for POIs before.
- ❑ The history can be stored up to 10 genres. You can delete the stored histories collectively.
- ❑ If you want to delete the histories, touch **[Delete All]**.
- ❑ If you want to search for a genre other than displayed, touch **[Other]**. The POI list is displayed.
- If you touch , the geographic center of the city appears on the map screen.

8 Touch the category you want.

The “**POI List**” screen appears.

- ❑ If there are more detailed categories within the selected category, repeat this step as frequently as necessary.

9 Touch the POI you want.

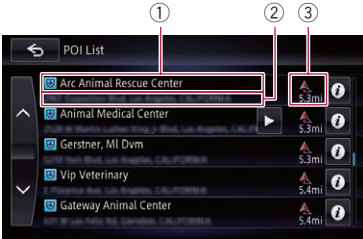
The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44.

Searching for and selecting a location

How to read the “POI List” screen

The following information is displayed on the “POI List” screen.



- ① Facility name
- ② Facility address
- ③ Distance from the position that the search starts
- ❑ If you touch **[i]**, detailed information of the facility appears.

Deleting the icons displayed after searching for a nearby POI

After searching for a nearby POI, the icons of nearby facilities appear on the map. The following operation shows how to delete the icons.

1 Display the “View” screen.

- ➡ For details of the operation, refer to *Switching the view mode* on page 33.

2 Touch [Del. Search Results].

All displayed icons are deleted. **[■]**

Selecting destination from stored locations

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 “My POIs”.
- ➡ For details, refer to *Storing favorite locations* on page 50.

1 Display the “Destination” screen.

- ➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [My POIs].

A list of registered locations appears.

3 Touch the entry you want.

The searched location appears on the map screen.

- ➡ For subsequent operations, refer to *Setting a route to your destination* on page 44.

You can switch the list display between “Favorites” and “History” by touching the tabs.



- If you touch **[Sort]**, you can sort the entry by following order.
 - **By Date** (default):
Sorts the list in chronological order of registration or call up.
 - **By Distance**:
Sorts the list in order by distance from the vehicle position.
 - **By Name**:
Sorts the list alphabetically. **[■]**

Selecting a location you searched for recently

The places that you set as destinations or way-points previously are automatically stored in “History”.

- ❑ If no location is stored in Destination History, you cannot select **[History]**. (If you perform a route calculation, you can select **[History]**.)

Searching for and selecting a location

- ❑ “History” can store up to 100 locations. If the entries reach the maximum, any further entry will overwrite the oldest one.

1 Display the “Destination” screen.

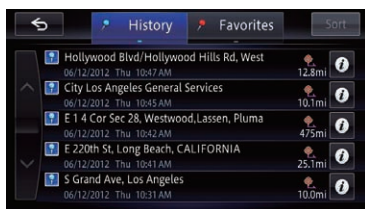
- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [My POIs].

3 Touch [History].

A list of locations where you have selected appears.

4 Touch the entry you want.



The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44. ■

Searching for a location by coordinates

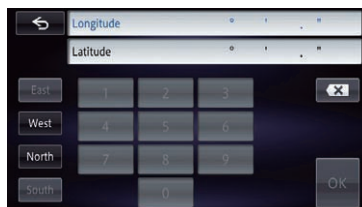
Entering a latitude and longitude pinpoints the location.

1 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Coordinates].

3 Touch [East] or [West], and then enter the longitude.



To enter W 50°1'2.5" for example, touch [West], [0], [5], [0], [0], [1], [0], [2], and [5].

4 Touch [North] or [South], and then enter the latitude.

To enter N 5°1'2.5" for example, touch [North], [0], [5], [0], [1], [0], [2], and [5].

5 Touch [OK].

The searched location appears on the map screen.

- ➔ For subsequent operations, refer to *Setting a route to your destination* on page 44. ■

Setting a route to your destination

1 Search for a location.

➔ For details, refer to Chapter 4.

After searching for the destination, the Location confirmation screen appears.

2 Touch [Go Here].

Location confirmation screen

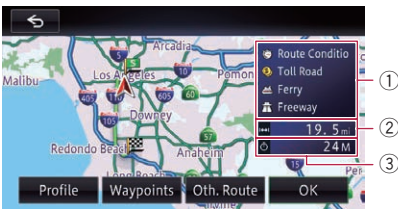


The destination is set, and then the route calculation starts.

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

- ❑ If you press the **MAP** button during route calculation, the calculation is canceled and the map screen appears.
- ❑ If the route is already set, the screen for asking whether the searched location becomes the destination or a waypoint appears. If you touch **[Destination]**, the current destination is deleted and the route to a new destination is searched.
If you touch **[Waypoint]**, the route for stopping by the searched location on the way to the same destination is searched.

Route confirmation screen



- ① Route calculation condition
- ② Distance to the destination
- ③ Travel time to your destination

- If you touch **[Profile]**, the “**Route Profile**” screen appears.
 - ➔ For details, refer to *Checking the current itinerary* on page 45.
- If you touch **[Waypoints]**, the “**Waypoints List**” screen appears.
 - ➔ For details, refer to *Editing waypoints* on page 47.
- When there are multiple routes following a search, **[Oth. Route]** appears.
If you touch **[Oth. Route]**, you can select a route with conditions that may differ from those of the currently selected route.
 - ➔ For details, refer to *Displaying multiple routes* on page 44.

When there is only one route, **[Route Map]** appears.

If you touch **[Route Map]**, the entire route is displayed on one screen.

- ❑ On the route map screen, you can scroll the map or change its scale.
 - ➔ For details, refer to *Scrolling the map to the position you want to see* on page 31.
 - ➔ For details, refer to *How to read the map screen* on page 29.
- If you touch **[Cancel]**, a message confirming whether to cancel the calculated route appears. If you touch **[Yes]**, the calculated route is canceled and the map screen appears.

3 Touch [OK].

The displayed route is set as your selected route, and route guidance starts.

Displaying multiple routes

You can select a desired route from multiple route options.

- ❑ If you set waypoints, you cannot display multiple routes.

1 Touch [Oth. Route] on the Route confirmation screen.

Multiple route options appear.

2 Touch 1 to 6.

Another route is displayed.

3 Touch [OK].

The displayed route is set as your selected route, and route guidance starts. ■

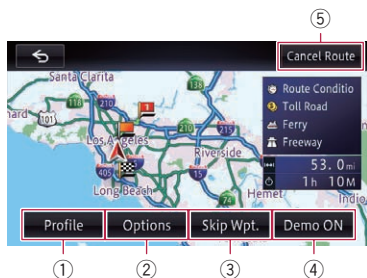
Checking and modifying the current route

Displaying the route overview

- ❑ The route overview is only active when the route is set.

1 Display the editing route screen.

- ➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.



① Profile

You can confirm the set route.

- ➡ For details, refer to *Checking the current itinerary* on page 45.

② Options

You can add a waypoint along the route and set the route which passes through it. You can also change search criteria.

- ➡ For details, refer to *Modifying the route calculation conditions* on page 46.
- ➡ For details, refer to *Editing waypoints* on page 47.

③ Skip Wpt.

If you no longer need to stop by the registered waypoint, you can search a route again by supposing that you have already passed the waypoint.

- ➡ For details, refer to *Skipping a waypoint* on page 48.

④ Demo ON

You can confirm the route from the demonstration of the driving of the route from the starting point and final destination.

- ➡ For details, refer to *Using the demonstration guidance* on page 48.

Demo OFF

While the demonstration guidance is running, [Demo OFF] appears. Touching the key finishes the demonstration guidance.

⑤ Cancel Route

You can delete the current route.

- ➡ For details, refer to *Canceling the route guidance* on page 49.

2 Touch the item that you want to refine. ❑

Checking the current itinerary

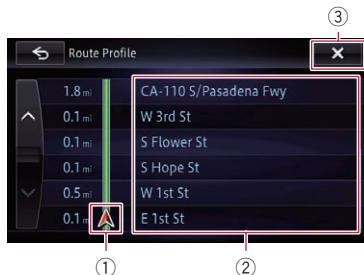
You can check the route details.

1 Display the editing route screen.

- ➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Profile].

The "Route Profile" screen appears.



① Current position

② Guidance point

③ X

The screen is closed.

- ❑ When you display the "Route Profile" screen by touching [Profile] on the Route confirmation screen, [OK] appears.

Touching this key starts the route guidance on the displayed route. ❑

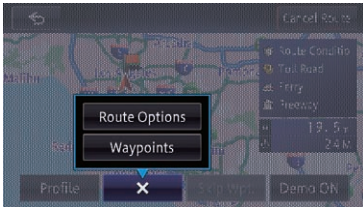
Modifying the route calculation conditions

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

1 Display the editing route screen.

- For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Options], and then touch [Route Options].



The “Route Options” screen appears.

- If you touch , the pop-up menu is disappeared.

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 (*) 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.

 Main Road:

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

Toll Road

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

 Use*:

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

 Avoid:

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

- ☐ The system may calculate a route that includes toll roads even if “**Avoid**” is selected.

Ferry

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

 Use*:

Calculates a route that may include ferries.

 Avoid:

Calculates a route that avoids ferries.

- ☐ The system may calculate a route that includes ferries even if “**Avoid**” is selected.

Freeway

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

 Use*:

Calculates a route that may include freeways.

 Avoid:

Calculates a route that avoids freeways.

- ☐ The system may calculate a route that includes freeways even if “**Avoid**” is selected. 

Checking and modifying the current route

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.

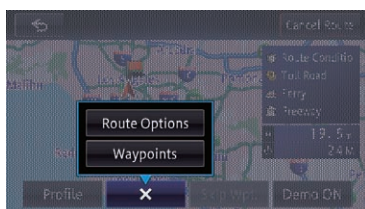
Adding a waypoint

□ Up to five waypoints can be set.

1 Display the editing route screen.

➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

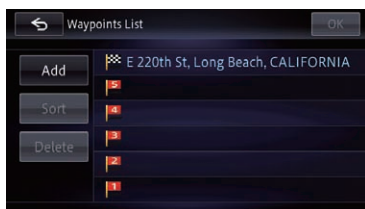
2 Touch [Options], and then touch [Waypoints].



The “Waypoints List” screen appears.

■ If you touch , the pop-up menu is disappeared.

3 Touch [Add].



The “Add” screen appears.

4 Search for a location.



➔ For details, refer to Chapter 4.

5 Touch [OK] on the “Waypoints List” screen.



6 Touch [OK].



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 editing route screen.

➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

Checking and modifying the current route

2 Touch [Options], and then touch [Waypoints].

The “Waypoints List” screen appears.

3 Touch [Delete].

The “Delete” screen appears.

4 Select the waypoint that you want to delete.

A check mark appears next to the selected waypoint.

5 Touch [Delete].

A message confirming whether to delete the waypoint appears.

6 Touch [Yes].

The selected waypoint will be deleted from the list.

7 Touch [OK] on the “Waypoints List” screen.

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

8 Touch [OK].

A 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.

1 Display the editing route screen.

- For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Options], and then touch [Waypoints].

The “Waypoints List” screen appears.

3 Touch [Sort], and then touch [Manual].

You can specify the order of waypoints to sort.

- If you touch [Automatic], the waypoints are sorted in the order of the nearest one from the current location.

4 Touch the waypoint or destination.



Put them in the desired order.

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].

A map of the current position appears. ☐

Skipping a waypoint

1 Display the editing route screen.

- For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Skip Wpt.].

The next waypoint is considered to have already been passed through, and a route is searched. ☐

Using the demonstration guidance

You can confirm the route by making the navigation system run to the destination from the point of departure on screen.

- ☐ The demonstration is repeated, but finishes in the following cases:
 - When starting actual driving
 - When searching a route
 - When deleting route
 - When is touched [Demo OFF].

Checking and modifying the current route

1 Display the editing route screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Demo ON].

3 Display the map screen.

The demonstration guidance will begin.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

Finishing the demonstration guidance

1 Display the editing route screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Demo OFF].

The demonstration guidance is finished.

- ☐ You can also finish the demonstration guidance by touching **Demo.** and then touching **[Yes]** while the demonstration guidance is running. 

Canceling the route guidance

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

1 Display the editing route screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Cancel Route].

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.

- ☐ You can also cancel the route by touching  on the **"Top Menu"** screen. 

Registering and editing locations

Storing favorite locations

Storing your favorite locations as “Favorites” lets you save the time and effort of re-entering this information. Stored items can be made available on “Favorites” later.

“Favorites” can store up to 400 locations. Home location is counted as one of the items in “Favorites”.

1 Search for a location.

- ➔ For details about the search methods, refer to Chapter 4.

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

The location is registered, the location name input screen appears.

- ➔ For details, refer to *Editing registered locations* on page 50.

3 Touch [OK].

The registration is complete.

Editing registered locations

1 Display the “Edit/Settings” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Data Edit].

The “Edit” screen appears.

3 Touch [Edit Favorite].

The “Edit Favorite” screen appears.

4 Touch [Edit].

The “Edit Favorite” screen appears.

- ☐ Home location is displayed on the top of the list.

5 Touch the location that you want to edit.

6 Touch the item you want to configure.



① Name

You can enter the desired name.

- ☐ Up to 40 characters can be input for the name.

② Phone#

You can edit the registered phone number.

The maximum digits you can enter for the phone number is 24.

③ Icon

You can change the symbol displayed on the map and the “Edit Favorite” screen.

④ Sound Effects

You can edit the sound effects of registered locations.

⑤ Change Position

You can change the registered location by scrolling the map.

7 Touch [X].

The registration is complete.

Deleting a favorite location from the list

1 Display the “Edit/Settings” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Data Edit].

The “Edit” screen appears.

3 Touch [Edit Favorite].

The “Edit Favorite” screen appears.

Editing the data on the use of navigation function

4 Touch [Delete].

5 Select the location you want to delete.



A check mark appears next to the selected location.

- If you touch **[All]**, you can select all entries. If you want to deselect all entries, touch **[None]**.

6 Touch [Delete].



A message will appear asking you to confirm the deletion.

7 Touch [Yes].



The data you selected is deleted.

- If you touch **[No]**, the deletion is canceled.

Deleting the destination history from the list

Items in **"History"** can be deleted. All entries in **"History"** can be deleted collectively.

1 Display the "Edit/Settings" screen.

- For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Data Edit].

The **"Edit"** screen appears.

3 Touch [Delete Search History].

The **"History"** screen appears.

4 Select the location you want to delete.



A check mark appears next to the selected location.

- If you touch **[All]**, you can select all entries. If you want to deselect all entries, touch **[None]**.

5 Touch [Delete].



A message will appear asking you to confirm the deletion.

6 Touch [Yes].

The data you selected is deleted.

- If you touch **[No]**, the deletion is canceled. □

Deleting learned routes

The device learns the streets you often use, and the learned streets are preferentially used during a route search. To change a frequently used street, delete the learned route and let the device learn it again.

- ❑ Please note that all the learned routes will be deleted.

1 Display the “Edit/Settings” screen.

- ➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Data Edit].

The “**Edit**” screen appears.

3 Touch [Delete Learned Routes].

A confirmation message appears.

4 Touch [Yes].

Deletes the learned routes. ❑

Deleting track logs

You can delete track logs displayed on the map screen.

- ❑ You can also automatically delete track logs.

1 Display the “Edit/Settings” screen.

- ➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Data Edit].

The “**Edit**” screen appears.

3 Touch [Delete Travel Log].

A confirmation message appears.

4 Touch [Yes].

Deletes the track log. ❑

Using traffic information

- ❑ This function is available on AVIC-Z150BH and AVIC-X950BH.

You can check real-time traffic information transmitted by the Traffic Message Channel (TMC) of the FM Radio Data System (RDS) on screen. The traffic information is updated periodically. When the navigation system receives updated traffic information, the navigation system will show it on map and display detailed text information when available. When you receive information concerning traffic incidents on your route, the system will suggest another route to avoid traffic congestion.

- ❑ When used in North America, this product receives traffic information provided by Clear Channel Broadcasting, Inc.

© Clear Channel Broadcasting, Inc.

- ❑ The system acquires the traffic information up to 100 miles in radius from the vehicle position. (If there is a lot of traffic information around your vehicle, the radius will be shorter than 100 miles.)
- ❑ The navigation system provides the following functions by using the information from RDS-TMC service:
 - Displaying a list of traffic information
 - Displaying traffic information on a map
 - Suggesting a route to avoid traffic congestion by using traffic information
- ❑ The term "traffic congestion" in this section refers to the following types of traffic information: stop and go traffic, stopped traffic and closed/blocked roads. This information is always taken into consideration when checking your route, and the information related to these events cannot be turned off.

Checking all traffic information

Traffic information except traffic flow information is listed on screen. This allows you to check how many traffic incidents have occurred, their location and their distance from your current position.

1 Display the "Information" screen.

- For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Trfc info.].

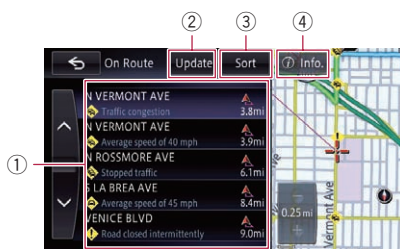
The "Traffic Information Menu" screen appears.

3 Touch [Nearby Incidents].

The "Nearby" screen appears.

A list with received traffic information is shown.

4 Select an incident you want to view in detail.



① Listed items

The details of the selected incident are displayed.

② Update

If you touch [Update] while new traffic information is received, the current information is updated and old information is removed. The traffic information list is updated to reflect the new situation.

③ Sort

Touching the key displays the following pop-up menu to sort the traffic information.

• By Distance:

You can sort traffic information by distance from your current position.

When you touch [Nearby Incidents], the list displayed will be sorted according to the linear distance from the vehicle position to the traffic information.

- **By Name:**
You can sort the traffic information in alphabetical order.
- **By Event:**
You can sort the traffic information according to the incident.
The list will be sorted in the order of closed/blocked roads, traffic congestion, accidents, road works and others.

- ④  Info.

5 Touch

Checking traffic information on the route

1 Display the "Information" screen.

- ## 2 Touch [Trfc info.]

3 Touch [Traffic on Route].

The “**On Route**” screen appears.

The method for checking the content displayed on the screen is the same as “**Nearby**” screen.

- ## How to read traffic information on the map

- ❑ A line is displayed only when the map scale is 2.5 miles (5 km) or lower.
- ❑ Icons appear only when the scale on the map is 10 miles (20 km) or lower. If the scale is changed, the icons are resized according to the selected scale.

- ## Setting an alternative route to avoid traffic congestion

The navigation system regularly whether or not there is traffic information on your route. If the navigation system detects any traffic congestion on your current route, the system tries to find a better route in the background.

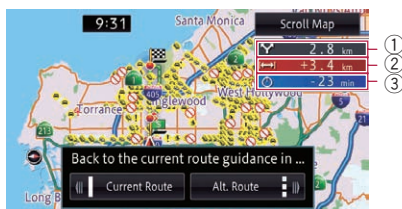
- ❑ The following types of traffic incidents on the route will be checked for: slow, queuing and stopped traffic, and closed/blocked roads except for closed freeway exits/entrances.

Using traffic information

- ❑ If the navigation system detects any closed/blocked roads on your current route, **"Re-routing due to road closure."** is announced and displayed on the screen. Only recommended route is available. Touch [OK] to start the route guidance.

Checking for traffic congestion automatically

If there is information about traffic congestion on your current route and if an alternative route can be found, the navigation system will recommend a new alternative route automatically. In such a case, the following screen will appear.



- ① Distance from the current position of your vehicle to the point of entry into the new route.
 - ② Difference in distance between the existing route and new route.
 - ③ Difference in travel time between the existing route and new route.
- ❑ No action is taken if the system cannot find any traffic congestion information on your route or cannot find an alternative.

● Touch [Alt. Route].

The recommended route is set as your route, and the route guidance starts.

- ❑ When no selection is made, the recommended route or the current route will be automatically selected according to the settings. And the route guidance starts.
- ➡ For details, refer to *Setting to select your route automatically using the auto reroute function* on page 142.
- If you touch [Current Route] while the recommended route is displayed, the screen switches

to the current route displayed, and route guidance starts.

- If you touch [Scroll Map], you can switch the map scale or the map orientation and confirm the route. □

Selecting the preferred RDS-TMC service provider manually

A default preferred TMC service provider for each country has been set. The navigation system tunes to the radio station with good reception among the preferred RDS-TMC service providers. If you want to set another preferred RDS-TMC service provider, you can manually select one from the available RDS-TMC service providers.

1 Display the "Information" screen.

- ➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [Trfc info.].

The "Traffic Information Menu" screen appears.

3 Touch [TMC Provider Selection].

4 Touch the desired service provider on the list.

After touching a service provider, the system starts tuning to the selected RDS-TMC service provider. When the tuning is successful, the system returns to the map display. □

Registering and connecting a Bluetooth device

If your devices feature Bluetooth® technology, this navigation system can be connected to your devices wirelessly. This section describes how to set up a Bluetooth connection.

For details about the connectivity with the devices featuring Bluetooth wireless technology, refer to the information on our website.

Preparing communication devices

This navigation system has a built-in function to use devices featuring Bluetooth wireless technology.

➔ For details, refer to *Notes for hands-free phoning* on page 69.

You can register and use devices that feature the following profiles with this navigation system.

- HFP (Hands-Free Profile)
 - A2DP (Advanced Audio Distribution Profile)
 - SPP (Serial Port Profile)
- ❑ When the navigation system is turned off, the Bluetooth connection is also disconnected. When the system restarts, the system automatically attempts to reconnect the previously-connected device. Even when the connection is severed for some reason, the system automatically reconnects the specified device (except when the connection is severed due to device operation). ❑

Registering your Bluetooth devices

You need to register your devices featuring Bluetooth wireless technology when you connect it for the first time. A total of 5 devices can be registered. Two registration methods are available:

- Searching for nearby Bluetooth devices

- Pairing from your Bluetooth devices
- ❑ If you try to register more than 5 devices, the system will ask you to select one of the registered devices to delete.
- ➔ For details, refer to *Deleting a registered device* on page 59.

Searching for nearby Bluetooth devices

The system searches for available Bluetooth devices near the navigation system, displays them in a list, and registers them for connection.

1 Activate the Bluetooth wireless technology on your devices.

For some Bluetooth devices, no specific-action is necessary to activate Bluetooth wireless technology. For details, refer to the instruction manual of your devices.

2 Display the “Phone” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

3 Touch [Bluetooth Settings].

The “Bluetooth Settings” screen appears.

4 Touch [Registration].

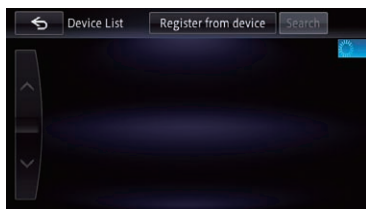
The “Device List” screen appears.

The system searches for Bluetooth devices waiting for the connection and displays them in the list if a device is found.

- ❑ Up to 10 devices will be listed in the order that the devices are found.

Registering and connecting a Bluetooth device

5 Wait until your Bluetooth device appears in the list.



- ❑ If you cannot find the Bluetooth device that you want to connect, check that the device is waiting for the Bluetooth wireless technology connection.

6 Touch the Bluetooth device name you want to register.



- If you touch **[Search]**, the system starts searching for Bluetooth devices waiting for connection, and displays them in the list format when any devices are detected.

7 Pair this navigation system with your Bluetooth device.

When the Bluetooth device connects to this product for the first time, a pairing operation is needed to specify the device to connect. How the pairing is performed varies depend-

ing on the Bluetooth device. Perform pairing according to the screen instructions for this product or Bluetooth device. Refer to the instruction manual of your devices to register (registration and authentication of device). After registering, a confirmation message appears.

8 Touch **[OK]**.

The registration is complete, and the device is connected as a hands-free phone. You can perform the following setting depending on the Bluetooth device registered.

- **Transferring the phone book**

You can transfer the phone book to the navigation system if the registered Bluetooth device features PBAP (Phone Book Access Profile).

If you touch **[Yes]**, you can transfer the whole phone book to the navigation system, and then the message that transfer is finished appears.

- **Selecting whether to use the Bluetooth audio**

You can select whether to use the Bluetooth audio function if the registered Bluetooth device features Bluetooth audio.

The message **"Is this Android?"** appears.

9 Touch **[Yes]** if the Bluetooth device you connected is an Android device.

- **Yes:**
Allows you to proceed to the next step.
- **No:**
The device is registered in the navigation system. After the device is successfully registered, the Bluetooth connection is established from the navigation system.
- ❑ Only the Android device (for AVIC-Z150BH and AVIC-X950BH) can be performed the smartphone cooperation function (**AppRadio Mode**, **aha** and **Pandora**) with via Bluetooth wireless technology.

The message **"Do you want to set this device for the AppRadio Mode?"** appears.

Registering and connecting a Bluetooth device

10 Touch [Yes] if you use the AppRadio Mode with a device you registered.

- **Yes:**
Allows you to proceed to the next step.
- **No:**
The device is registered in the navigation system. After the device is successfully registered, the Bluetooth connection is established from the navigation system.

11 Touch [OK].

Pairing from your Bluetooth devices

You can register the Bluetooth device by setting the navigation system to standby mode and requesting connection from the Bluetooth device.

1 Activate the Bluetooth wireless technology on your devices.

For some Bluetooth devices, no specific-action is necessary to activate Bluetooth wireless technology. For details, refer to the instruction manual of your devices.

2 Display the “Phone” screen.

- ➡ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

3 Touch [Bluetooth Settings].

The “**Bluetooth Settings**” screen appears.

4 Touch [Registration].

The “**Device List**” screen appears.

5 Touch [Register from device].

The navigation system waits for a Bluetooth wireless technology connection.

6 Register the navigation system on your Bluetooth device.

If your device asks you to enter a password, enter the password of the navigation system.

When the device is successfully registered, the connection settings are made from the device.

- ☐ If registration fails, repeat the procedure from the beginning.

7 Touch [OK].

The registration is complete, and the device is connected as a hands-free phone.

You can perform the following setting depending on the Bluetooth device registered.

- **Transferring the phone book**

You can transfer the phone book to the navigation system if the registered Bluetooth device features PBAP (Phone Book Access Profile).

If you touch [Yes], you can transfer the whole phone book to the navigation system, and then the message that transfer is finished appears.

- **Selecting whether to use the Bluetooth audio**

You can select whether to use the Bluetooth audio function if the registered Bluetooth device features Bluetooth audio.

The message “**Is this Android?**” appears.

8 Touch [Yes] if the Bluetooth device you connected is an Android device.

- **Yes:**
Allows you to proceed to the next step.
- **No:**
The device is registered in the navigation system. After the device is successfully registered, the Bluetooth connection is established from the navigation system.
- ☐ Only the Android device (for AVIC-Z150BH and AVIC-X950BH) can be performed the smartphone cooperation function (**AppRadio Mode**, **aha** and **Pandora**) with via Bluetooth wireless technology.

The message “**Do you want to set this device for the AppRadio Mode?**” appears.

9 Touch [Yes] if you use the AppRadio Mode with a device you registered.

- **Yes:**

Registering and connecting a Bluetooth device

Allows you to proceed to the next step.

- **No:**
The device is registered in the navigation system. After the device is successfully re-registered, the Bluetooth connection is established from the navigation system.

10 Touch [OK].

Deleting a registered device

When you have already registered 5 Bluetooth devices and you want to add another, you must first delete one of the registered devices.

- ❑ If a registered phone is deleted, all the phone book entries and call history lists that correspond to the phone will be also cleared.

1 Display the “Phone” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

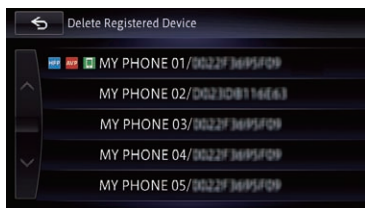
2 Touch [Bluetooth Settings].

The “**Bluetooth Settings**” screen appears.

3 Touch [Delete Device].

The “**Delete Registered Device**” screen appears.

4 Touch the Bluetooth device name that you want to delete.



A message prompting you to delete a registered device appears.

5 Touch [Yes].

The device is deleted.

- ❑ If the device you deleted was set for the priority connecting as a hands-free phone,

Bluetooth audio player or smartphone, this navigation system needs to set another device for priority connecting.

Connecting a registered Bluetooth device manually

The navigation system automatically connects the Bluetooth device selected as the target of connection. However, connect the Bluetooth device manually in the following cases:

- Two or more Bluetooth devices are registered, and you want to manually select the device to be used.
- You want to reconnect a disconnected Bluetooth device.
- Connection cannot be established automatically for some reason.

If you start connection manually, carry out the following procedure. You can also connect the Bluetooth device by having the navigation system detect it automatically.

1 Activate the Bluetooth wireless technology on your devices.

For some Bluetooth devices, no specific-action is necessary to activate Bluetooth wireless technology. For details, refer to the instruction manual of your devices.

2 Display the “Phone” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

3 Touch [Bluetooth Settings].

The “**Bluetooth Settings**” screen appears.

4 Touch [Change Device].

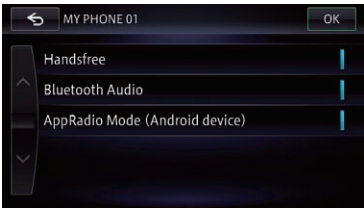
The “**Change Bluetooth Device**” screen appears.

Registering and connecting a Bluetooth device

5 Touch the name of the device that you want to connect.



6 Touch the profile that you want to connect.



You can select the following profiles:

- **Handsfree:**
Connects the device as a hands-free phone.
- **Bluetooth Audio:**
Connects the device as a Bluetooth audio player.
- **AppRadio Mode (Android):**
Connects the device as a smartphone in **AppRadio Mode**.

7 Touch [OK].

Connection starts.

- ❑ If you select the “**AppRadio Mode (Android)**” when “**App Connection Settings**” is set to “**iPhone**”, “**Device Selection for AppRadio Mode**” appears. Select whether smartphone cooperation is performed with an Android device.
 - ➡ For details, refer to *Selecting the device connection method* on page 157.

When a connection is successfully established, a connection complete message appears and the map screen returns by touching [OK].

- ❑ To cancel the connection to your device, touch [Cancel].
- ❑ If connection fails, check whether your device is waiting for a connection and then retry.

8 Touch [OK].

Setting for priority connecting

The selected device is set for priority connecting.

And one of the following icons is indicated next to the device name.



Appears when the device is registered so that it will be preferentially paired with the smartphone in **AppRadio Mode**.



Appears when the device is registered so that it will be preferentially paired with the Bluetooth audio connection.



Appears when the device is registered so that it can be preferentially paired with the hands-free connection.



Using hands-free phoning

CAUTION

For your safety, avoid talking on the phone as much as possible while driving.

If your cellular phone features Bluetooth technology, this navigation system can be connected to your cellular phone wirelessly. Using this hands-free function, you can operate the navigation system to make or receive phone calls. You can also transfer the phone book data stored in your cellular phone to the navigation system. This section describes how to set up a Bluetooth connection and how to operate a cellular phone featuring Bluetooth technology on the navigation system.

For details about the connectivity with the devices featuring Bluetooth wireless technology, refer to the information on our website.

Displaying the phone menu

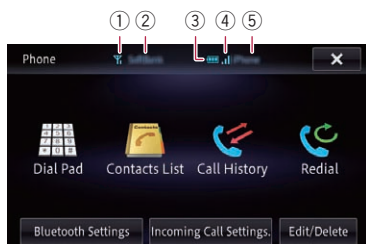
Use the **"Phone"** if you connect the cellular phone to the navigation system for utilization.

➔ For details, refer to Chapter 9.

1 Press the HOME button to display the "Top Menu" screen.

2 Touch [Phone].

The **"Phone"** screen appears.



- ① Reception status of the cellular phone
- ② Network name of the cellular phone company
- ③ Battery status of the cellular phone

- ④ Strength of the Bluetooth connection between the navigation system and the device
- ⑤ Name of the connected cellular phone

Making a phone call

You can make a phone call in many different ways.



- ① The call ends.
- ② The hands-free function is turned on or off. If you want to talk on the cellular phone, turn off the hands-free function.
- ③ The dial pad appears.
- ④ You can adjust the volume when talking.
- ⑤ The operation menu during call is minimized.

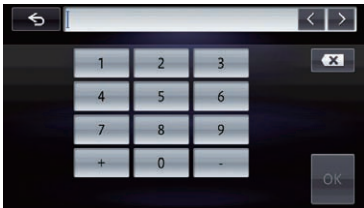
Direct dialing

1 Display the "Phone" screen.

➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch [Dial Pad].

3 Touch the number keys to enter the phone number.



When the input is complete, [OK] becomes active.

- If you touch **[X]**, the entered number is deleted one digit at a time from the end of the number. Press and hold to delete all digits.

4 Touch [OK] to make a call.

- To cancel the call after the system starts dialing, touch **[Cancel]** or

5 Touch to end the call.



The call ends.

- You may hear a noise when you hang up the phone.
- If you touch **[X]**, the operation menu is mini-
mized during the call.

To display the menu again, touch



Calling a number in the phone book

You can select and call a contact from the phone book entries transferred to the navigation system.

- Before using this function, you need to transfer the phone book entries stored in your cellular phone to the navigation system.
- ➔ For details, refer to *Transferring the phone book* on page 65.

Searching for a contact to call on the alphabet tabs

1 Display the “Phone” screen.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch [Contacts List].

The “Contacts List” screen appears.

3 Touch alphabet tabs.



The screen jumps to the top of the page displaying the entries that start with the selected letter or number.

- Touching the alphabet tabs displays all entries that start with symbols.
- Touching **[Num]** displays all entries that start with numbers.
- Touching **[Oth.]** displays the page including entries that are not assigned to any of the other tabs.
- If you touch **[Sort]**, the names can be sorted. Each touch of **[Sort]** changes the settings as follows:

- **First** (default):

Using hands-free phoning

Switches the contact entries to first/last name display and sorts the entries by order of first name.

- **Last:**
Switches the contact entries to last/first name display and sorts the entries by order of last name.
- ☐ Depending on the type of cellular phone, the settings may not be available.

4 Touch the desired name on the list.

5 Touch the desired entry on the list to make a call.

A call confirmation message appears.

6 Touch [Yes].

Dialing starts.

- ☐ To cancel the call after the system starts dialing, touch **[Cancel]** or .

7 Touch to end the call.

Calling a number by searching by name

You can search by the names registered in the “Contacts List” screen.

1 Display the “Phone” screen.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch [Contacts List].

The “Contacts List” screen appears.

3 Touch [Search].

4 Enter the desired name and then touch [OK].



The “Contacts Name Search Results” screen appears.

5 Touch the desired name on the list.

6 Touch the desired entry on the list to make a call.

A call confirmation message appears.

7 Touch [Yes].

Dialing starts.

- ☐ To cancel the call after the system starts dialing, touch **[Cancel]** or .

8 Touch to end the call.

Dialing from the history

The most recent calls made (dialed), received and missed are stored in the call history list. You can browse the call history list and call numbers from it.

- ☐ Each call history saves 30 calls per registered cellular phone. If the number of calls exceeds 30, the oldest entry will be deleted.

1 Display the “Phone” screen.

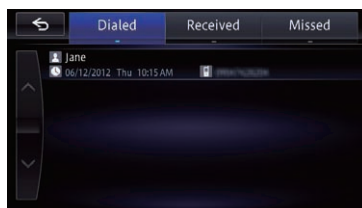
- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch [Call History].

3 Touch [Received], [Dialed] or [Missed].

The selected call history list appears.

4 Touch an entry on the list.



A call confirmation message appears.

5 Touch [Yes].

Dialing starts.

- ☐ To cancel the call after the system starts dialing, touch **[Cancel]** or .

6 Touch to end the call.

Redialing a call

You can call again to the number that was sent last.

1 Display the “Phone” screen.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch [Redial].

A call confirmation message is displayed.

3 Touch [Yes].

Dialing starts.

2 Touch next to the POI that you want to call.

The “Details” screen appears.

3 Touch to make a call.

Dialing starts.

- ❑ To cancel the call after the system starts dialing, touch [Cancel] or .

4 Touch to end the call. .

Dialing a favorite location

You can make a call to an entry stored in the “My POIs” list.

1 Display the “Destination” screen.

- ➔ For details of the operations, refer to *How to use the navigation menu screens* on page 22.

2 Touch [My POIs].

3 Touch next to the location that you want to make a call.

The “Details” screen appears.

4 Touch to make a call.

Dialing starts.

- ❑ To cancel the call after the system starts dialing, touch [Cancel] or .

5 Touch to end the call.

Dialing a facility's phone number

You can make a call to facilities with phone number data.

- ❑ You cannot make a call to locations or POIs that have no phone number data.

1 Search for the POI.

The “POI List” screen appears.

- ➔ For details of the operations, refer to *Searching for Points of Interest (POI)* on page 39.

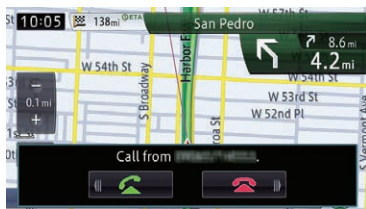
Using hands-free phoning

Receiving a phone call

You can perform hands-free answering by using the navigation system.

Answering an incoming call

The system informs you that it is receiving a call by displaying a message and producing a ring sound.



- ❑ You can set the system to automatically answer incoming calls. If not set to automatically answer incoming calls, you will have to answer the calls manually.
 - ➔ For details, refer to *Answering a call automatically* on page 68.
- ❑ If the voice on the other end of the call is too quiet to hear, you can adjust the volume of the received voice.
 - ➔ For details, refer to *Setting the Volume for Guidance and Phone* on page 136.
- ❑ The registered name appears if the phone number of the received call is already registered in “**Contacts List**”.
- ❑ Depending on the caller ID service, the phone number of the received call may not be displayed. “**Call from an unknown caller.**” appears instead.

1 To answer an incoming call, touch .

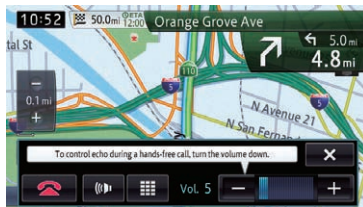
The operation menu during a call appears.

- If you touch , the incoming call is rejected.

The rejected call is recorded in the missed call history list.

- ➔ For details, refer to *Dialing from the history* on page 63.

2 Touch to end the call.



The call ends.

- ❑ You may hear a noise when you hang up the phone.
 - If you touch  or , you can turn on or off the hands-free function. Turn this off if you want to talk on the cellular phone.
 - If you touch , you can dial during a call.
 - If you touch  or , you can adjust the volume when talking.
 - If you touch , the operation menu is minimized during the call.

To display the menu again, touch .



Transferring the phone book

You can transfer the phone book entries from your cellular phone to the phone book of the navigation system.

- ❑ Depending on the cellular phone, the phone book may be called Contacts, Business Card or something else.
- ❑ With some cellular phones, it may not be possible to transfer the entire phone book collectively. In this case, transfer addresses one at a time from your phone book using your cellular phone.

- ❑ If you connect a cellular phone featuring an auto-synchronization function, the phone book transfer or synchronization will be automatically performed.
- ❑ A maximum of 1 000 entries can be transferred per cellular phone. If the entries exceed 1 000, the extra entries will not be transferred.
- ❑ Each entry can hold up to 5 phone numbers.
If more than one number is registered for one person, such as work place and home, each number may be counted separately.
- ❑ Depending on the cellular phone that is connected to this navigation system via Bluetooth technology, this navigation system may not be able to display the phone book correctly. (Some characters may be garbled.)
- ❑ If the phone book in the cellular phone contains image data, the phone book may not be correctly transferred.
- ❑ The transferred data cannot be edited on the navigation system.
- ❑ Depending on the cellular phone, phone book transfer may not be available.

1 Connect the cellular phone that has the phone book to transfer.

- ➔ For details, refer to *Connecting a registered Bluetooth device manually* on page 59.

2 Touch [Edit/Delete] on the “Phone” screen.

The “**Edit/Delete**” screen appears.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

3 Touch [Contacts].

The “**Contacts List**” screen appears.

4 Touch [Import].

- ❑ If some data has been already retrieved, select either [Overwrite] or [Additional].
 - **Overwrite:**
The existing data is overwritten, and if the telephone number is added to the

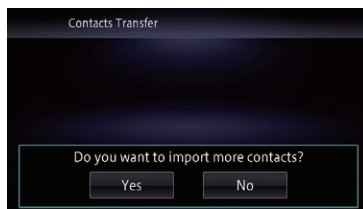
cellular phone, it will be transferred anew.

- **Additional:**

If the telephone number is added to the cellular phone, it will be transferred anew.

When data transfer is finished, a message asking whether you want to transfer more data appears.

5 Touch [No].



The transferred data is imported to the navigation system.

When the data has been successfully imported, an import complete message is displayed and the “**Contacts List**” screen appears.

- ❑ It may take time depending on how many entries are transferred.
- Touch [Yes] to continue the transfer.

Deleting registered contacts

1 Touch [Edit/Delete] on the “Phone” screen.

The “**Edit/Delete**” screen appears.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch [Contacts].

The “**Contacts List**” screen appears.

3 Touch [Delete].

The “**Delete**” screen appears.

Using hands-free phoning

4 Touch the entry you want to delete.



A check mark appears next to the entry.

- If you touch **[All]**, you can select all entries. If you want to deselect all entries, touch **[None]**.

5 Touch **[Delete]**.

A message confirming whether to delete the entry appears.

6 Touch **[Yes]**.

The entry is deleted.

- If you touch **[No]**, the deletion is canceled.

Deleting the history information

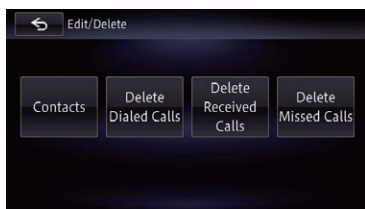
You can clear the memory of each item that corresponds to the connected cellular phone: the outgoing call history, incoming call history or missed call history information.

1 Touch **[Edit/Delete]** on the "Phone" screen.

The "Edit/Delete" screen appears.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch the history item you want to delete.



On this screen, you can select the following items:

- **Delete Dialed Calls:**

Clears the dialed call history list.

- **Delete Received Calls:**

Clears the received call history list.

- **Delete Missed Calls:**

Clears the missed call history list.

3 Touch the history information you want to delete.

The selected history information is checked and you can continue to select the history information.

- Touching **[All]** selects all history information. Touching **[None]** deselects all selected history information.

4 Touch **[Delete]**.

A confirmation message appears.

5 Touch **[Yes]**.

Data on the selected item is cleared from this navigation system's memory.

- If you do not want to clear the memory that you have selected, touch **[No]**.

Changing the phone settings

Editing the device name

You can change the device name to be displayed on your cellular phone. (Default is "PIONEER NAVI".)

1 Display the "Phone" screen.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch **[Bluetooth Settings]**.

The "Bluetooth Settings" screen appears.

3 Touch **[Device Name]**.

The keyboard to enter the name appears.

4 Touch **[X]** to delete the current name, and enter the new name using the keyboard.



- ❑ Up to 16 characters can be entered for a device name.

5 Touch **[OK]**.
The name is changed.

Editing the password

You can change the password to be used for authentication on your cellular phone. (Default is "1111".)

- ❑ Four to eight characters can be entered for a password.

1 Display the "Phone" screen.
➤ For details, refer to *Displaying the phone menu* on page 61.

2 Touch **[Bluetooth Settings]**.
The "Bluetooth Settings" screen appears.

3 Touch **[Passkey]**.
The password setting screen appears.

4 Touch **[X]** to delete the current password, and enter the new password using the keyboard.

5 Touch **[OK]**.
The password is changed.

Stopping Bluetooth wave transmission

You can stop transmission of electric waves by turning off the Bluetooth function. If you do

not use the Bluetooth wireless technology, we recommend selecting "Off".

1 Display the "Phone" screen.
➤ For details, refer to *Displaying the phone menu* on page 61.

2 Touch **[Bluetooth Settings]**.
The "Bluetooth Settings" screen appears.

3 Touch **[Bluetooth On/Off]**.
Each touch of **[Bluetooth On/Off]** changes the settings as follows:

- **On** (default):
Turns on the Bluetooth function.
- **Off**:
Turns off the Bluetooth function.

Answering a call automatically

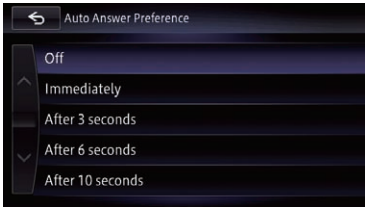
The navigation system automatically answers incoming calls to the cellular phone, so you can answer calls while driving without taking your hands off the steering wheel.

1 Display the "Phone" screen.
➤ For details, refer to *Displaying the phone menu* on page 61.

2 Touch **[Incoming Call Settings.]**.
The "Incoming Call Settings." screen appears.

3 Touch **[Auto Answer Preference]**.
The "Auto Answer Preference" screen appears.

4 Touch the desired option.



On this screen, you can select the following items:

Using hands-free phoning

- **Off** (default):
No automatic response. Respond manually.
- **Immediately**:
Answers immediately.
- **After 3 seconds**:
Answers after three seconds.
- **After 6 seconds**:
Answers after six seconds.
- **After 10 seconds**:
Answers after ten seconds.

Setting the automatic rejection function

If this function is on, the navigation system automatically rejects all incoming calls.

1 Display the “Phone” screen.

- ➔ For details, refer to *Displaying the phone menu* on page 61.

2 Touch [Incoming Call Settings.].

The “Incoming Call Settings.” screen appears.

3 Touch [Refuse All Calls].

Each touch of [Refuse All Calls] changes the settings as follows:

- **Off** (default):
Accepts all incoming calls.
- **On**:
Rejects all incoming calls.
- ☐ If both “Refuse All Calls” and “Auto Answer Preference” are activated, “Refuse All Calls” takes priority and all incoming calls are automatically rejected.
- ☐ If “Refuse All Calls” is set to “On”, rejected incoming calls will not be stored in the missed call list. ☐

Notes for hands-free phoning

General notes

- Connection to all cellular phones featuring Bluetooth wireless technology is not guaranteed.

- The line-of-sight distance between this navigation system and your cellular phone must be 10 meters or less when sending and receiving voice and data via Bluetooth technology. However, the actual transmission distance may be shorter than the estimated distance, depending on the usage environment.
- With some cellular phones, the ring sound may not be output from the speakers.
- If private mode is selected on the cellular phone, hands-free phoning may be disabled.

Registration and connection

- Cellular phone operations vary depending on the type of cellular phone. Refer to the instruction manual that came with your cellular phone for detailed instructions.
- With cellular phones, phone book transfer may not work even though your phone is paired with the navigation system. In that case, disconnect your phone, perform pairing again from your phone to the navigation system, and then perform the phone book transfer.

Making and receiving calls

- You may hear a noise in the following situations:
 - When you answer the phone using the button on the phone.
 - When the person on the other end of line hangs up the phone.
- If the person on the other end of the phone call cannot hear the conversation due to an echo, decrease the volume level for hands-free phoning. This may reduce the echo.
- With some cellular phones, even if you press the accept button on the cellular phone when a call comes in, hands-free phoning may not be performed.

- The registered name appears if the phone number of the received call is already registered in the phone book. When one phone number is registered under different names, the name that comes first in the phone book is displayed.
- If the phone number of the received call is not registered in the phone book, the phone number of the received call appears.

The received call and the dialed number histories

- You cannot make a call to the entry of an unknown user (no phone number) in the received call history.
- If calls are made by operating your cellular phone, no history data will be recorded in the navigation system.

Phone book transfers

- If there are more than 1 000 phone book entries on your cellular phone, not all entries may download completely.
- With some cellular phones, it may not be possible to transfer all items in the phone book at one time. In this case, transfer items one by one from your cellular phone.
- Depending on the cellular phone, this navigation system may not display the phone book correctly. (Some characters may be garbled, or first and last names may be reversed.)
- If the phone book in the cellular phone contains image data, the phone book may not be transferred correctly. (Image data cannot be transferred from the cellular phone.)
- Depending on the cellular phone, phone book transfer may not be available. 

Basic operations of the AV source

This chapter describes the basic operations of the AV source.

You can play or use the following sources with your Pioneer navigation system.

- Radio (FM, AM) (*1)
- HD Radio (HD Radio™ tuner) (*2)
- CD
- ROM (in MP3, AAC, WMA)
- DVD-Video
- DivX
- SD

The following sources can be played back or used by connecting an auxiliary device.

- USB
- iPod
- Pandora®
- Aha Radio
- Bluetooth audio
- SiriusXM™ tuner
- AV input 1 (AV1)
- AV input 2 (AV2)
- ☐ (*1) A source available on AVIC-X850BT and AVIC-X8510BT.
- ☐ (*2) A source available on AVIC-Z150BH and AVIC-X950BH.

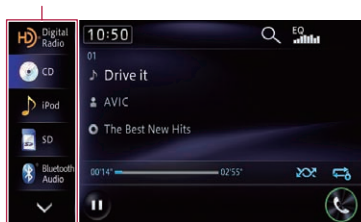
Displaying the AV operation screen

- Press the **MODE** button when the map screen is displayed.

- ☐ The AV operation screen can also be displayed by touching **[AV Source]** on the "Top Menu".

Selecting a source

Source icons



- Touch the source icon you want to select on the left edge of the screen.

The operation screen of the selected source appears.

- ☐ If seven or more sources can be selected,  appears.
- ☐ If you touch , the AV source icons will be switched and hidden icons will appear. ☐

Turning off the AV source

Turn off the AV source to stop playing or receiving the AV source.

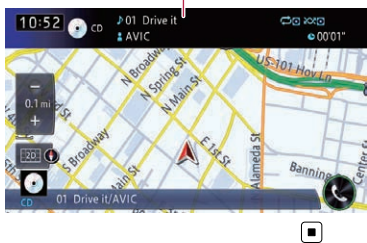
- Touch **[Off]** on the left edge of the screen.

The AV source is turned off. ☐

AV source plate display

If you select a station or song with the track up/down button while the map screen is still displayed, the AV source plate appears on the top of the map screen. The AV source plate displays the status of the currently played AV source. The AV source plate disappears if it is not operated for about four seconds after it appears.

AV source plate



Using the radio

- ❑ This function is available on AVIC-X850BT and AVIC-X8510BT.

You can listen to the radio using the navigation system. This section describes operations for radio.

Starting procedure

1 Display the AV operation screen.

- ➡ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Touch [Radio] on the left edge of the screen to display the "Radio" screen.

3 Touch the band indicator to switch a band.

- ➡ For details, refer to *Using the touch panel keys* on page 73.

4 Use the touch panel keys on the screen to control the radio.

- ➡ For details, refer to *Using the touch panel keys* on page 73. □

Reading the screen



① Source icon

Shows which source has been selected.

② Program service name indicator

Shows the program service name (station name) of the current station.

- ❑ When "AM" is selected, this indicator is not shown.

③ Current time

④ Band indicator

Shows which band the radio is tuned to: FM1, FM2, FM3 or AM.

⑤ Preset number indicator

Shows the selected preset item

⑥ Frequency indicator

⑦ Signal level indicator

⑧ STEREO indicator

Shows that the frequency selected is being broadcast in stereo.

- ❑ When "AM" is selected, this indicator is not shown. □

Using the touch panel keys



① Selects a band

Touch the left part to select a FM band (FM1, FM2 or FM3). Touch the right part to switch to the AM band.

- ❑ When "AM" is selected, you cannot switch to another AM band by touching the band key.

② Recalls equalizer curves

- ➡ For details, refer to *Using the equalizer* on page 151.

③ Displays the "Function" menu

- ➡ For details, refer to *Using advanced functions* on page 75.

④ Operates some functions by swipe action

- ➡ For details, refer to *Swipe action* on page 25.

⑤ Displays the "Phone" screen

- ➡ For details, refer to *Displaying the phone menu* on page 61.

- ⑥ **Stores the strongest broadcast frequencies**
➔ For details, refer to *Storing the strongest broadcast frequencies* on page 74.

- ⑦ **Performs manual tuning**
To tune manually, touch  or  briefly. The frequencies move up or down one step at a time.

Performs seek tuning

To perform seek tuning, touch and hold  or  for about one second and then release. The tuner will scan frequencies until it finds a broadcast strong enough for good reception.

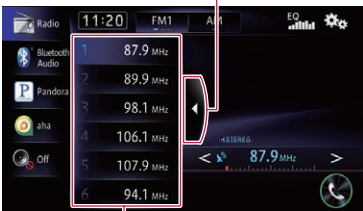
- ☐ You can cancel seek tuning by touching either  or  briefly.
- ☐ If you keep holding  or  you can skip broadcasting frequencies. Seek tuning will start when you release the keys.

- ⑧ **Displays preset channels**
Touching this key displays the preset channel list.

Touch the item of the list ("1" to "6") to switch to a channel registered as a preset channel.

- ☐ If you touch the preset channel list display key while the preset channel list is displayed, the list disappears and preset tuning keys are displayed.

Preset channel list display key



Preset tuning keys

- Once you have stored broadcast channels, you can easily recall preset channels from memory with a single touch of a key.
➔ For details, refer to *Storing and recalling broadcast frequencies* on page 74.

Storing and recalling broadcast frequencies

With a touch of any of the preset tuning keys ("1" to "6"), you can easily store up to six broadcast frequencies for later recall (also with the touch of a key).

- 1 **Select a frequency that you want to store in memory.**

- 2 **Display the preset channel list.**

- ➔ For details, refer to *Displays preset channels* on page 74.

- 3 **Keep touching a preset tuning key [1] to [6].**

The selected radio station has been stored in memory.

The next time you touch the same preset tuning key "1" to "6", the radio station frequencies are recalled from memory.

- ☐ Up to 18 FM stations, six for each of the three FM bands, as well as six AM stations, can be stored in memory.

Storing the strongest broadcast frequencies

BSM (best stations memory) lets you automatically store the six strongest broadcast frequencies under the preset tuning keys "1" to "6" and, once stored there, you can tune into them with the touch of a key.

- ☐ Storing broadcast frequencies with BSM may replace broadcast frequencies you have already saved.
- ☐ Previously stored broadcast frequencies may remain stored if the number of strong broadcast frequencies stored has not reached the limit.

Using the radio

● Touch [BSM] to begin a search.

A message appears. While the message is displaying, the six strongest broadcast frequencies will be stored under the preset tuning keys “1” to “6” in order of their signal strength. When this is complete, the message disappears.

- If you touch [Cancel], the storage process is canceled. 

Using advanced functions

Tuning in strong frequencies

Local seek tuning allows you to only tune into those radio stations with sufficiently strong signals for good reception.

1 Touch on the “Radio” screen.

The “Function” menu appears.

2 Touch [Local].

3 Touch [On] to turn local seek tuning on.

- If you touch [Off], local seek tuning is turned off.

4 Touch or to set the sensitivity.

There are four levels of sensitivity for FM and two levels for AM:

FM: 1 — 2 — 3 — 4

AM: 1 — 2

- The FM “4” (AM “2”) setting allows reception of only the strongest stations, while lower settings let you receive weaker stations. 

Operating by hardware buttons

Pressing the TRK button

You can move the preset channels up or down.

Pressing and holding the TRK button

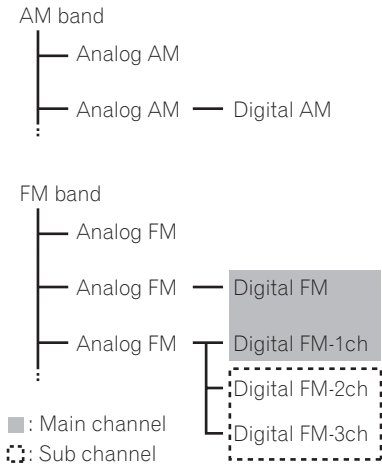
You can perform seek tuning. 

❑ This function is available on AVIC-Z150BH and AVIC-X950BH.
You can listen to the radio by using the navigation system. This section describes operations for HD Radio reception.

HD Radio stations

HD Radio stations offer high quality audio and data services. HD Radio stations are brought to you by your local FM or AM stations. HD Radio stations feature the following:

- High quality audio
- FM multicasting
- Data service



Digital Sound

Digital, CD-quality sound. HD Radio Technology enables local radio stations to broadcast a clean digital signal. AM sounds like today's FM and FM sounds like a CD.

PSD

Program Service Data: Contributes to the superior user experience of HD Radio Technology. Presents song name, artist, station IDs, HD2/HD3 Channel Guide, and other relevant data streams.

HD2/HD3

Adjacent to traditional main stations are extra local FM channels. These HD2/HD3 Channels provide new, original music as well as deep cuts into traditional genre.

iTunes® Tagging

iTunes® Tagging provides you the opportunity to discover a wide range of content and the means to "tag" that content for later review and purchase from the iTunes® Store.

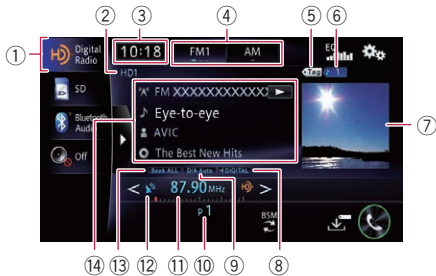
Artist Experience

Visual information related to content being played on your HD Radio receiver, such as Album Art, historical photographs, still art from live broadcasts, among other related content.

Starting procedure

- 1 **Display the AV operation screen.**
➤ For details of the operations, refer to *Displaying the AV operation screen* on page 71.
- 2 **Touch [Digital Radio] on the left edge of the screen to display the "Digital Radio" screen.**
- 3 **Use the touch panel keys on the screen to control the radio.**
➤ For details, refer to *Using the touch panel keys* on page 77.

Reading the screen



- ① **Source icon**
Shows which source has been selected.

HD Radio™ reception

② Multicasting indicator

Shows the number of multicast channels in the current frequency.

③ Current time

④ Band indicator

Shows which band the radio is tuned to: FM1, FM2, FM3 or AM.

⑤ Song info reception indicator

Shows the reception status of the song information.

Indicator	Meaning
	Appears when the navigation system receives song information and can store it. The icon is displayed on the operation screen of the HD Radio receiver.
	Appears when the navigation system is storing song information. The icon is displayed on all operation screens of AV sources.

⑥ Song info status indicator

Shows the status of the song information stored in the navigation system.

Indicator	Meaning
	Displays the number of song information items stored in the navigation system. The icon is displayed on all operation screens of AV sources.
	Appears when the song information is transferred to an iPod. The icon is displayed on all operation screens of AV sources.

⑦ Album artwork

Shows the album artwork of the current song if it is available.

- ☐ If the album artwork cannot be acquired, the station logo is displayed. If the station logo cannot be acquired either, the preinstalled image is displayed.

⑧ Signal type indicator

Shows the type of signal currently being received. If a digital broadcasting is received, "Digital" appears. Otherwise, "Analog" appears.

⑨ Blending mode indicator

- For details, refer to *Switching the reception mode* on page 80.

⑩ Preset number indicator

Shows the selected preset item

⑪ Frequency indicator

⑫ Signal level indicator

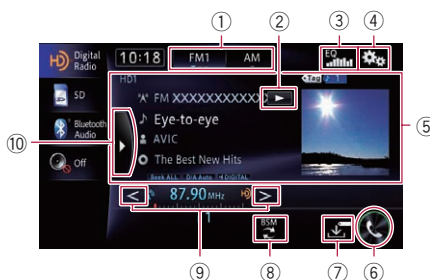
⑬ Seek type indicator

- For details, refer to *Switching the seek mode* on page 80.

⑭ Detailed information

-  **Call sign, program service or frequency**
Shows the call sign, the program service or the frequency of the broadcast station currently being received.
-  **Song title (program name)**
Shows the title of the current song (program).
-  **Artist (performer) name**
Shows the artist (performer) name currently playing (when available).
-  **Album title**
Shows the title of the album of the current track (when available). 

Using the touch panel keys



① Selects a band

Touch the left part to select a FM band (FM1, FM2 or FM3). Touch the right part to switch to the AM band.

- ☐ When "AM" is selected, you cannot switch to another AM band by touching the band key.

② **Scrolls the text**

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

③ **Recalls equalizer curves**

➡ For details, refer to *Using the equalizer* on page 151.

④ **Displays the “Function” menu**

➡ For details, refer to *Using advanced functions* on page 80.

⑤ **Operates some functions by swipe action**

➡ For details, refer to *Swipe action* on page 25.

⑥ **Displays the “Phone” screen**

➡ For details, refer to *Displaying the phone menu* on page 61.

⑦ **Stores song information to an iPod**

Touch this key when receiving the song information of the song on air, and you can store the song information on your iPod.

➡ For details, refer to *Storing song information to an iPod (iTunes Tagging)* on page 79.

⑧ **Stores the strongest broadcast frequencies**

➡ For details, refer to *Storing the strongest broadcast frequencies* on page 79.

⑨ **Performs manual tuning**

To tune manually, touch ◀ or ▶ briefly. The frequencies move up or down one step at a time.

Performs seek tuning

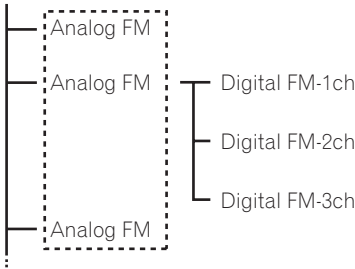
To perform seek tuning, touch and hold ◀ or ▶ for about one second and then release.

The tuner will scan frequencies until it finds a broadcast strong enough for good reception.

❑ You can cancel seek tuning by touching either ◀ or ▶ briefly.

❑ When an analog station is received, only analog broadcasts can be tuned up or down.

If a digital broadcast is not yet received, tuning up or down seeks the next or previous analog station.



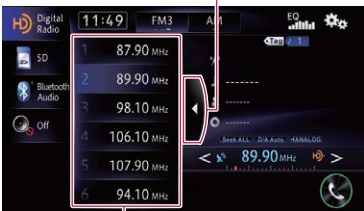
⑩ **Displays preset channels**

Touching this key displays the preset channel list.

Touch the item of the list (“1” to “6”) to switch to a channel registered as a preset channel.

❑ If you touch the preset channel list display key while the preset channel list is displayed, the list disappears and preset tuning keys are displayed.

Preset channel list display key



Preset tuning keys

- Once you have stored broadcast channels, you can easily recall preset channels from memory with a single touch of a key.

➡ For details, refer to *Storing and recalling broadcast frequencies* on page 79.

HD Radio™ reception

Storing and recalling broadcast frequencies

With a touch of any of the preset tuning keys ("1" to "6"), you can easily store up to six broadcast frequencies for later recall (also with the touch of a key).

1 Select a frequency that you want to store in memory.

2 Display the preset channel list.

- ➔ For details, refer to **Displays preset channels** on page 78.

3 Touch and hold a preset tuning keys ([1] to [6]).

The selected radio station has been stored in memory.

The next time you touch the same preset tuning key "1" to "6", the radio station frequencies are recalled from memory.

- ❑ Up to 18 FM stations, six for each of the three FM bands, as well as six AM stations, can be stored in memory.

Storing the strongest broadcast frequencies

BSM (best stations memory) lets you automatically store the six strongest broadcast frequencies and assign them to the preset tuning keys "1" to "6". Once stored, you can tune in to these frequencies with the touch of a key.

- ❑ Storing broadcast frequencies with BSM may replace broadcast frequencies you have already saved.
- ❑ Previously stored broadcast frequencies may remain stored if the number of strong broadcast frequencies stored has not reached the limit.

● Touch [BSM] to begin a search.

Six strongest broadcast frequencies will be stored under the preset tuning keys "1" to "6" in order of their signal strength.

- If you touch [Cancel], the storage process is canceled. ❑

Storing song information to an iPod (iTunes Tagging)

You can store the song information to the iPod, when the navigation system has received the song information. The songs will show up in a playlist called "Tagged playlist" in iTunes next time you synchronize your iPod. You can directly buy the songs via the navigation system.

Depending on when the song information is stored, information for the previous song or the song after the current song may also be stored. Be sure to confirm the song before you purchase it.

- ❑ The iTunes Tagging function is available while digital broadcasts are being received.
- ❑ This function is provided on the following iPod models:
 - iPod touch 5th generation
 - iPod touch 4th generation
 - iPod touch 3rd generation
 - iPod touch 2nd generation
 - iPod touch 1st generation
 - iPod classic
 - iPod nano 6th generation
 - iPod nano 5th generation
 - iPod nano 4th generation
 - iPod nano 3rd generation
 - iPhone 5
 - iPhone 4S
 - iPhone 4
 - iPhone 3GS
 - iPhone 3G
 - iPhone

- ❑ The version of iTunes must be 7.4 or higher.

1 Tune into the digital broadcast station.

When song information is received,  is displayed while the desired song is being broadcast, and  becomes active.

- ➔ For details, refer to **Song info reception indicator** on page 77.

2 Touch .

Information on the song on air is stored in the navigation system.

While the information is being acquired,  is displayed.

When it is complete,  turns off and  is displayed.

- ❑ The song information for up to 50 songs can be stored on this navigation system. Depending on when the song information is stored, information for the previous song or the song after the current song may also be stored.

3 Connect your iPod.

The song information is transferred to your iPod.

- ❑ If the iPod is already connected, every time you touch , the song information will be transferred to your iPod. When the song information is stored on your iPod,  disappears.
- ❑ When transfer of song information is completed, the information stored in the navigation system will be automatically deleted.
- ❑ If you turn off the navigation system or disconnect the iPod while transferring song information, the transfer may not successfully complete.
- ❑ While the navigation system is storing song information, transfer to iPod is not possible. 

Using advanced functions

Tuning in strong frequencies

Local seek tuning allows you to only tune into those radio stations with sufficiently strong signals for good reception.

1 Touch on the "Digital Radio" screen.

2 Touch [Local].

3 Touch [On] to turn local seek tuning on.

- If you touch [Off], local seek tuning is turned off.

4 Touch or to set the sensitivity.

There are four levels of sensitivity for FM and two levels for AM:

FM: 1 — 2 — 3 — 4

AM: 1 — 2

- ❑ The FM "4" (AM "2") setting allows reception of only the strongest stations, while lower settings let you receive weaker stations.

Switching the seek mode

You can select the method of seek tuning.

1 Touch on the "Digital Radio" screen.

2 Touch [Seek].

3 Touch [All] or [HD].

- **All (default):**
Seeks stations from both analog and digital broadcasting.
- **HD:**
Seeks only from digital broadcasting.
- ❑ If you select "HD" while [Blending] is set to "Analog", the setting on [Blending] turns to "D/A Auto" automatically.

Switching the reception mode

If reception of a digital broadcast becomes poor, the tuner automatically switches to the analog broadcast of the same frequency level by default. If you want to avoid frequent automatic switching, change this setting to [Analog].

1 Touch on the "Digital Radio" screen.

2 Touch [Blending].

3 Touch [Analog] or [D/A Auto].

- **D/A Auto (default):**
Automatically switches to the analog broadcast of the same frequency level as the digital broadcast.
- **Analog:**
Receives analog broadcasting only.
- ❑ If you select "Analog" on this setting while [Seek] is set to "HD", the setting on [Seek] turns to "All" automatically. 

Operating by hardware buttons

Pressing the TRK button

You can move the preset channels up or down.

Pressing and holding the TRK button

You can perform seek tuning. 

Playing audio CDs

You can play a normal music CD using the built-in drive of the navigation system. This section describes how.

Starting procedure

1 Display the AV operation screen.

- For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Insert the disc you want to play into the disc-loading slot.

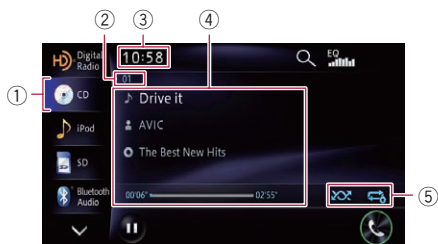
Playback starts from the first track of the CD.

- For details, refer to *Inserting and ejecting a disc* on page 15.
- ❑ If the disc is already set, touch [Disc] on the left edge of the screen.
- For details, refer to **Selecting a source** on page 71.

3 Use the touch panel keys on the screen to control the disc.

- For details, refer to *Using the touch panel keys* on page 82.

Reading the screen



① Source icon

Shows which source has been selected.

② Track number indicator

Shows the number of the track currently playing.

③ Current time

④ Current track information

- : Track title

Shows the title of the track currently playing (when available).

• : Artist name

Shows the artist name of the track currently playing (when available).

• : Album title

Shows the title of the album of the current track (when available).

• Play time

Shows the elapsed playing time within the current track.

- ❑ "-----" is displayed if there is no corresponding information.

⑤ Playback condition indicator

Indicates the current playback condition.

Playing tracks in random order

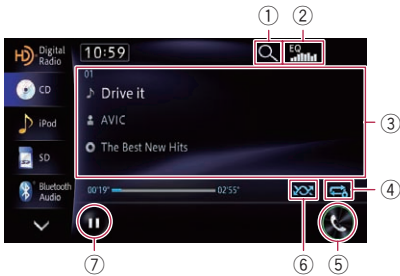
Indicator	Meaning
	Does not play tracks in random order.
	Plays all tracks in the current disc in random order.

Setting a repeat play range

Indicator	Meaning
	Repeats the current disc.
	Repeats just the current track.



Using the touch panel keys



① **Selects a track from the list**

Touching the key displays a list which lets you see the track titles on a disc. You can play a track on the list by touching it.



❑ “-----” is displayed if there is no corresponding information.

② **Recalls equalizer curves**

➡ For details, refer to *Using the equalizer* on page 151.

③ **Operates some functions by swipe action**

➡ For details, refer to *Swipe action* on page 25.

④ **Sets a repeat play range**

The repeat play range can be changed by only touching a single key.

❑ If you perform track search or fast forward or reverse, track repeat playback is automatically canceled.

➡ For details, refer to **Playback condition indicator** on page 81.

⑤ **Displays the “Phone” screen**

➡ For details, refer to *Displaying the phone menu* on page 61.

⑥ **Plays tracks in random order**

All tracks in the disc can be played at random by only touching a single key.

❑ If you turn the random play on when the repeat play range is set to , the repeat play range changes to  automatically.

➡ For details, refer to **Playback condition indicator** on page 81.

⑦ **Playback and Pause**

Touching  or  switches between playback and pause. ❑

Operating by hardware buttons

Pressing the TRK button

You can skip tracks forward or backward.

Pressing and holding the TRK button

You can perform fast reverse or fast forward. ❑

Playing music files on ROM

You can play a disc that contains compressed audio files using the built-in drive of the navigation system. This section describes these operations.

- ❑ In the following description, the MP3, WMA, AAC files are collectively referred to as “Compressed audio files”.

Starting procedure

1 Display the AV operation screen.

- ➡ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Insert the disc you want to play into the disc-loading slot.

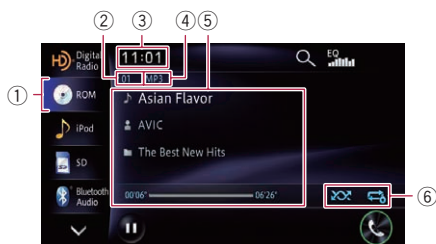
Playback starts from the first file of the ROM.

- ➡ For details, refer to *Inserting and ejecting a disc* on page 15.
- ❑ If the disc is already set, touch [Disc] on the left edge of the screen.
- ➡ For details, refer to *Selecting a source* on page 71.

3 Use the touch panel keys on the screen to control the disc.

- ➡ For details concerning operations, refer to *Using the touch panel keys* on page 84. ■

Reading the screen



① Source icon

Shows which source has been selected.

② Track number indicator

Shows the number of the track currently playing.

③ Current time

④ File type indicator

Shows the type of audio files.

⑤ Current file information

• Track title

Shows the title of the track currently playing (when available).

- ❑ If the title of a track is not available, the file name appears.

• Artist name

Shows the artist name currently playing (when available).

• Folder name/Album title

Shows the title of the album of the current file when MP3 or AAC data have information. Otherwise, shows the folder name currently playing.

• Play time

Shows the elapsed playing time within the current file.

- ❑ “-----” is displayed if there is no corresponding information.

⑥ Playback condition indicator

Indicates the current playback condition.

Playing files in random order

Indicator	Meaning
	Does not play files in random order.
	Plays all audio files in the current repeat play range in random order.

Setting a repeat play range

Indicator	Meaning
	Repeats all compressed audio files.
	Repeats just the current file.
	Repeats the current folder.



Using the touch panel keys

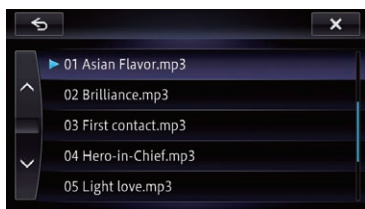


① Selects a file from the list

Touching the key displays a list which lets you see the track titles or folder names on a disc.

- ❑ If the title of a track is not available, the file name appears.

Touching a folder on the list shows its content. You can play a file on the list by touching it.



② Recalls equalizer curves

➡ For details, refer to *Using the equalizer* on page 151.

③ Operates some functions by swipe action

➡ For details, refer to *Swipe action* on page 25.

④ Sets a repeat play range

The repeat play range can be changed by only touching a single key.

- ❑ If you select another folder during repeat play, the repeat play range changes to .
- ❑ If you perform fast reverse or fast forward during , the repeat play range changes to .
- ❑ When  is selected, it is not possible to playback a subfolder of that folder.

➡ For details, refer to **Playback condition indicator** on page 83.

⑤ Displays the “Phone” screen

➡ For details, refer to *Displaying the phone menu* on page 61.

⑥ Plays files in random order

The files in the current repeat play range can be played at random by only touching a single key.

- ❑ If you turn the random play on when the repeat play range is set to , the repeat play range changes to  automatically.

➡ For details, refer to **Playback condition indicator** on page 83.

⑦ Playback and Pause

Touching  or  switches between playback and pause. .

Operating by hardware buttons

Pressing the TRK button

You can skip files forward or backward.

Pressing and holding the TRK button

You can perform fast reverse or fast forward. .

Playing a DVD-Video

You can play a DVD-Video using the built-in drive of the navigation system. This section describes operations for playing a DVD-Video.

Starting procedure

1 Display the AV operation screen.

- For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Insert the disc you want to play into the disc-loading slot.

The source changes and then playback will start.

- For details, refer to *Inserting and ejecting a disc* on page 15.
- ❑ If the disc is already set, touch [Disc] on the left edge of the screen.
- For details, refer to **Selecting a source** on page 71.

3 Use the touch panel keys on the screen to control the disc.

- For details, refer to *Using the touch panel keys* on page 86. ■

Shows the elapsed playing time within the current title.

⑥ Digital sound format indicator

Shows which digital sound format (surround sound format) has been selected.

⑦ Audio channel indicator

Shows the current audio channel type, such as “Mch” (Multi-channel).

⑧ Repeat range indicator

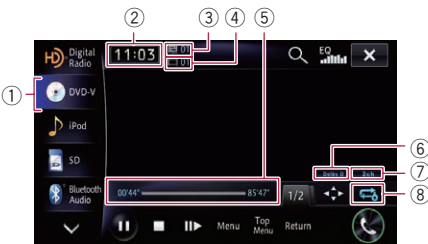
Shows which repeat range has been selected.

Setting a repeat play range

Indicator	Meaning
	Plays the whole of the current disc.
	Repeats just the current chapter.
	Repeats just the current title.



Reading the screen



① Source icon

Shows which source has been selected.

② Current time

③ Title number indicator

Shows the title number currently playing.

④ Chapter number indicator

Shows the chapter number currently playing.

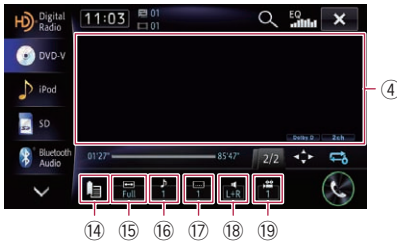
⑤ Play time indicator

Using the touch panel keys

Playback screen (page 1)



Playback screen (page 2)



- ❑ With some discs, the icon  may be displayed, meaning that the operation is invalid.

① Searches for a desired scene and starts playback from a specified time

- ➔ For details, refer to *Searching for a specific scene and starting playback from a specified time* on page 87.

② Recalls equalizer curves

- ➔ For details, refer to *Using the equalizer* on page 151.

③ Hides the touch panel keys and information of the current video

Touching  shows only the current video.

- ❑ If you want to display the touch panel keys and information of the current video again, touch anywhere on the LCD screen.

④ Operates some functions by swipe action

- ❑ When the video is displayed in full screen mode, the whole screen becomes a swipe response area.

- ➔ For details, refer to *Swipe action* on page 25.

⑤ Sets a repeat play range

The repeat play range can be changed by only touching a single key.

- ❑ If you perform chapter (title) search, fast forward, fast reverse or slow motion playback, the repeat play range changes to .

- ❑ This function is not available when disc playback has been stopped.

- ➔ For details, refer to **Repeat range indicator** on page 85.

⑥ Displays the “Phone” screen

- ➔ For details, refer to *Displaying the phone menu* on page 61.

⑦ Displays the DVD menu keypad

- ➔ For details, refer to *Using the DVD menu by touch panel keys* on page 88.

⑧ Performs an operation (such as resuming) that is stored on the disc

When using a DVD that has a point recorded that indicates where to return to, the DVD returns to the specified point and begins playback from there.

⑨ Displays the DVD menu

You can display the menu by touching [Menu] or [Top Menu] while a disc is playing. Touching either of these keys again lets you start playback from the location selected from the menu. For details, refer to the instructions provided with the disc.

⑩ Frame-by-frame playback (or slow-motion playback)

- ➔ For details, refer to *Frame-by-frame playback* on page 88.

- ➔ For details, refer to *Slow motion playback* on page 89.

⑪ Stops playback

⑫ Playback and Pause

Touching  or  switches between playback and pause.

⑬ Switches to the next page of touch panel keys

⑭ Resumes playback (Bookmark)

- ➔ For details, refer to *Resuming playback (Bookmark)* on page 87.

Playing a DVD-Video

⑮ Changing the wide screen mode

- For details, refer to *Changing the wide screen mode* on page 89.

⑯ Switches the audio language

You can switch the audio language while the disc is playing when a disc has multilingual data (multi-audio).

- Each time you touch this key changes the audio language.
- For details, refer to *Setting the top-priority languages* on page 94.

⑰ Switches the subtitle language

You can switch the subtitle language while the disc is playing when a disc has multilingual data (multi-subtitle).

- Each time you touch this key changes the subtitle language.
- For details, refer to *Setting the top-priority languages* on page 94.

⑱ Selects audio output

When playing DVDs recorded with LPCM audio, you can switch the audio output. Touch  repeatedly until the desired audio output appears on the display. Each touch of  changes the settings as follows:

- **L+R:** Left and right
- **L:** Left
- **R:** Right
- **Mix:** Mixing left and right
- This function is not available when disc playback has been stopped.
- The appearance of this key changes according to the current setting.

⑲ Changes the viewing angle (Multi-angle)

Each touch of  switches between viewing angles.

- During playback of a scene shot from multiple angles, the angle icon  is displayed. Turn the angle icon display on or off using the "DVD/DivX® Setup" menu.
- The appearance of this key changes according to the current setting.
- For details, refer to *Setting the angle icon display* on page 94.

Resuming playback (Bookmark)

The Bookmark function lets you resume playback from a selected scene the next time the disc is loaded.

● Touch on the "DVD-V" screen.

You can bookmark one point for each of up to five discs. If you try to memorize another point for the same disc, the older bookmark will be overwritten by the newer one.

- To clear the bookmark on a disc, touch and hold .

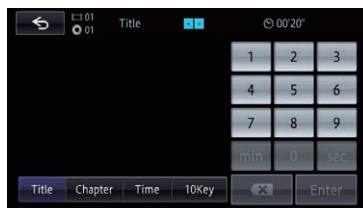
Searching for a specific scene and starting playback from a specified time

You can search for the scene you want by specifying a title or chapter, and the time.

- Chapter search and time search are not available when disc playback has been stopped.

1 Touch and then touch [Title] (title), [Chapter] (chapter), [Time] (time).

2 Touch the keys to input the target number or time and then touch [Enter].



For titles, chapters

- To select 3, touch [3] and [Enter] in order.
- To select 10, touch [1] and [0] and [Enter] in order.

For time (time search)

- To select 5 minutes 3 seconds, touch [5], [min], [3], [sec] and [Enter] in order.
- To select 71 minutes 00 seconds, touch [7], [1], [min] and [Enter] in order.

- To select 100 minutes 05 seconds, touch [1], [0], [0], [5], [sec] and [Enter] in order.
- ❑ To cancel an input number, touch .
- To cancel the input numbers, touch and hold .

Direct number search

You can use this function when you need to enter a numerical command during DVD playback.

- 1 Touch .
- 2 Touch [10Key].
- 3 Touch [0] to [9] to input the desired number.
- 4 While the input number is displayed, touch [Enter].

Operating the DVD menu

You can operate the DVD menu by touching the menu item on the screen directly.

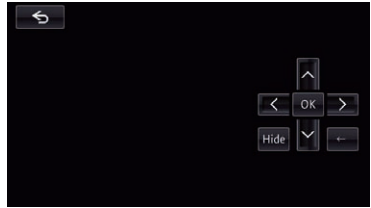
- ❑ This function can be used when the  key is displayed on the upper left corner of the LCD screen.
- ❑ This function may not work properly with some DVD disc content. In that case, use touch panel keys to operate the DVD menu.
- ❑ If you touch the screen while  is displayed, the touch panel keys will not be displayed.

- 1 Touch the screen to display the touch panel keys.
- 2 Touch [Top Menu] or [Menu] to display the touch panel keys to operate the DVD menu.
- 3 Touch the desired menu item.
 - If you touch , the touch panel keys for selecting the menu item are displayed.

Using the DVD menu by touch panel keys

If items on the DVD menu appear, the touch panel keys may overlay them. If so, select an item using those touch panel keys.

- 1 Touch , ,  or  to select the desired menu item.



- ❑ If the touch panel keys for DVD menu selection disappear, touch anywhere on the screen, and then touch . The touch panel keys are displayed again.

- 2 Touch [OK].

Playback starts from the selected menu item. The way to display the menu differs depending on the disc.

- If you touch  or , the display position of touch panel keys is changed each time you touch it.
- If you touch [Hide], the touch panel keys disappear and the  icon is displayed. You can select a menu item by touching it.

Frame-by-frame playback

This lets you move ahead one frame at a time during pause.

- Touch [II▶] during pause.

Each time you touch [II▶], you move ahead one frame.

- ❑ To return to normal playback, touch [▶] or [II].
- ❑ With some discs, images may be unclear during frame-by-frame playback.

Playing a DVD-Video

Slow motion playback

This lets you slow down playback speed.

1 Touch and hold [⏮] until ⏮ is displayed during playback.

The icon ⏮ is displayed, and forward slow motion playback begins.

- ☐ To return to normal playback, touch [▶] or [⏮].

2 Touch [⏮] to adjust playback speed during slow motion playback.

Each time you touch [⏮] it changes the speed in four steps in the following order:

1/16 → 1/8 → 1/4 → 1/2

- ☐ There is no sound during slow motion playback.
- ☐ With some discs, images may be unclear during slow motion playback.
- ☐ Reversed slow motion playback is not possible.

Changing the wide screen mode

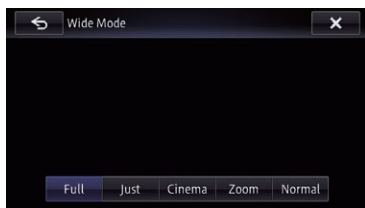
You can set the screen size of video.

- ☐ The default setting is “Full”.

1 Touch [⏮] on the “DVD-V” screen.

- ☐ The appearance of this key changes according to the current setting.

2 Touch the desired mode.



- **Full**

A 4:3 picture is enlarged in the horizontal direction only, enabling you to enjoy a 4:3 TV picture (normal picture) without any omissions.

- **Just**

The picture is enlarged slightly at the center and the amount of enlargement increases

horizontally toward the ends of the picture, enabling you to enjoy a 4:3 picture without sensing any disparity, even on a wide screen.

- **Cinema**

A picture is enlarged by the same proportion as “Full” or “Zoom” in the horizontal direction and by an intermediate proportion between “Full” and “Zoom” in the vertical direction; ideal for a cinema-sized (wide screen) picture where captions lie outside the frame.

- **Zoom**

A 4:3 picture is enlarged in the same proportion both vertically and horizontally; ideal for a cinema-sized (wide screen) picture.

- **Normal**

A 4:3 picture is displayed normally, giving you no sense of disparity since its proportions are the same as those of the normal picture.

- ☐ Images may be unclear when “Cinema” or “Zoom” is selected.
- ☐ Remember that use of this system for commercial or public viewing purposes may constitute an infringement on the author's rights protected by the Copyright Law. ☐

Operating by hardware buttons

Pressing the TRK button

You can skip chapters forward or backward.

Pressing and holding the TRK button

You can perform fast reverse or fast forward. ☐

You can play a DivX disc using the built-in drive of the navigation system. This section describes those operations.

Starting procedure

1 Display the AV operation screen.

➔ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Insert the disc you want to play into the disc-loading slot.

The source changes and then playback will start.

- ➔ For details, refer to *Inserting and ejecting a disc* on page 15.
- ❑ If the disc is already set, touch [Disc] on the left edge of the screen.
- ➔ For details, refer to **Selecting a source** on page 71.

3 Use the touch panel keys on the screen to control the disc.

➔ For details, refer to *Using the touch panel keys* on page 90. ■

Shows the file name currently playing.

⑥ **Current folder name indicator**

Shows the folder name currently playing.

⑦ **Digital sound format indicator**

Shows the digital sound format (surround sound format) currently selected.

⑧ **Audio channel indicator**

Shows the current audio channel type, such as "Mch" (Multi-channel).

⑨ **Repeat range indicator**

Shows which repeat range has been selected.

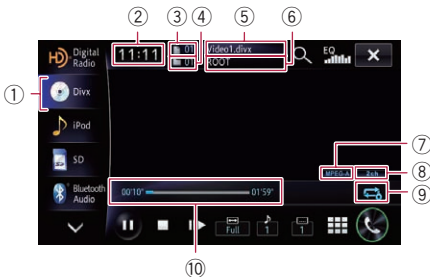
Setting a repeat play range

Indicator	Meaning
	Plays the whole of the current disc.
	Repeats just the current file.
	Repeats just the current folder.

⑩ **Play time indicator**

Shows the elapsed playing time within the current file. ■

Reading the screen



① **Source icon**

Shows which source has been selected.

② **Current time**

③ **File number indicator**

Shows the file number currently playing.

④ **Folder number indicator**

Shows the folder number currently playing.

⑤ **Current file name indicator**

Using the touch panel keys

Playback screen



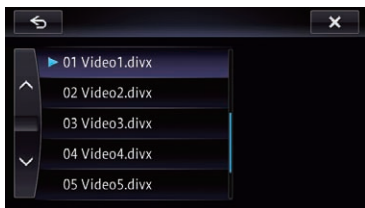
❑ With some discs, the icon ⑩ may be displayed, meaning that the operation is invalid.

① **Selects a file from the list**

Touching the key displays the list which lets you find file names or folder names on a disc.

Playing a DivX video

- ❑ A dash (–) is displayed if there is no corresponding information.
- Touching a folder on the list shows its content. You can play a file on the list by touching it.



The contents of the folder in which the currently playing file is located are displayed.

② Recalls equalizer curves

- ➡ For details, refer to *Using the equalizer* on page 151.

③ Hides the touch panel keys and information of the current video

Touching shows only the current video.

- ❑ If you want to display the touch panel keys and information of the current video again, touch anywhere on the LCD screen.

④ Operates some functions by swipe action

- ❑ When the video is displayed in full screen mode, the whole screen becomes a swipe response area.
- ➡ For details, refer to *Swipe action* on page 25.

⑤ Sets a repeat play range

The repeat play range can be changed by only touching a single key.

- ❑ If you select another folder during repeat play, the repeat play range changes to .
- ❑ If you perform fast reverse or fast forward during , the repeat play range changes to .
- ❑ When is selected, it is not possible to playback a subfolder of that folder.
- ➡ For details, refer to **Repeat range indicator** on page 90.

⑥ Displays the “Phone” screen

- ➡ For details, refer to *Displaying the phone menu* on page 61.

⑦ Searches for a desired scene and starts playback from a specified time

- ➡ For details, refer to *Starting playback from a specified time* on page 92.

⑧ Switches the subtitle language

You can switch the subtitle language while the disc is playing when a disc has multilingual data (multi-subtitle).

- ❑ Each time you touch this key changes the subtitle language.
- ➡ For details, refer to *Setting the top-priority languages* on page 94.

⑨ Switches the audio language

You can switch the audio language while the disc is playing when a disc has multilingual data (multi-audio).

- ❑ Each time you touch this key changes the audio language.
- ➡ For details, refer to *Setting the top-priority languages* on page 94.

⑩ Changing the wide screen mode

- ➡ For details, refer to *Changing the wide screen mode* on page 92.

⑪ Frame-by-frame playback (or slow-motion playback)

- ➡ For details, refer to *Frame-by-frame playback* on page 91.
- ➡ For details, refer to *Slow motion playback* on page 92.

⑫ Stops playback

⑬ Playback and Pause

Touching or switches between playback and pause.

Frame-by-frame playback

This lets you move ahead one frame at a time during pause.

● Touch during pause.

Each time you touch , you move ahead one frame.

- ❑ To return to normal playback, touch or .
- ❑ With some discs, images may be unclear during frame-by-frame playback.

Slow motion playback

This lets you slow down playback speed.

● **Touch and hold [⏮] until ⏮ is displayed during playback.**

The icon ⏮ is displayed, and forward slow motion playback begins.

- ❑ To return to normal playback, touch [▶].
- ❑ There is no sound during slow motion playback.
- ❑ With some discs, images may be unclear during slow motion playback.
- ❑ Reversed slow motion playback is not possible.

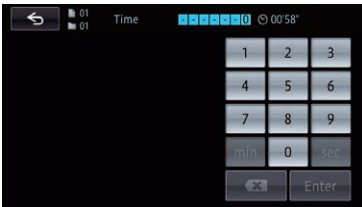
Starting playback from a specified time

You can search for a desired scene by specifying the time.

- ❑ Time search is impossible when disc playback has been stopped.

1 **Touch [⏮].**

2 **Touch the keys to input the target number or time and then touch [Enter].**



- To select 5 minutes 3 seconds, touch [5], [min], [3], [sec] and [Enter] in order.
- To select 71 minutes 00 seconds, touch [7], [1], [min] and [Enter] in order.
- To select 100 minutes 05 seconds, touch [1], [0], [0], [5], [sec] and [Enter] in order.
- ❑ To cancel an input number, touch [X].
To cancel the input numbers, touch and hold [X].

Changing the wide screen mode

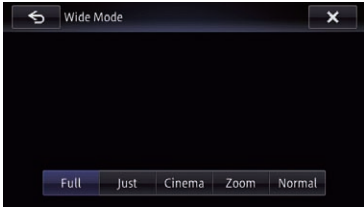
You can set the screen size of video.

- ❑ The default setting is "Full".

1 **Touch [⏮] on the "DivX" screen.**

- ❑ The appearance of this key changes according to the current setting.

2 **Touch the desired mode.**



- **Full**
A 4:3 picture is enlarged in the horizontal direction only, enabling you to enjoy a 4:3 TV picture (normal picture) without any omissions.
- **Just**
The picture is enlarged slightly at the center and the amount of enlargement increases horizontally toward the ends of the picture, enabling you to enjoy a 4:3 picture without sensing any disparity, even on a wide screen.
- **Cinema**
A picture is enlarged by the same proportion as "Full" or "Zoom" in the horizontal direction and by an intermediate proportion between "Full" and "Zoom" in the vertical direction; ideal for a cinema-sized (wide screen) picture where captions lie outside the frame.
- **Zoom**
A 4:3 picture is enlarged in the same proportion both vertically and horizontally; ideal for a cinema-sized (wide screen) picture.
- **Normal**
A 4:3 picture is displayed normally, giving you no sense of disparity since its proportions are the same as those of the normal picture.

Playing a DivX video

- ❑ Images may be unclear when “Cinema” or “Zoom” is selected.
- ❑ Remember that use of this system for commercial or public viewing purposes may constitute an infringement on the author’s rights protected by the Copyright Law. ■

Playing DivX® VOD content

Some DivX VOD (video on demand) content may only be playable a fixed number of times. When you load a disc containing this type of DivX VOD content, the remaining number of plays is shown on-screen and you then have the option of playing the disc (thereby using up one of the remaining plays), or stopping. If you load a disc that contains expired DivX VOD content (for example, content that has zero remaining plays), “**This DivX rental has expired.**” is displayed.

- ❑ If your DivX VOD content allows an unlimited number of plays, then you may load the disc into your player and play the content as often as you like, and no message will be displayed.
- ❑ In order to play DivX VOD content on this unit, you first need to register the unit with your DivX VOD content provider. For information about your registration code, refer to *Displaying your DivX VOD registration code* on page 149.
- ❑ DivX VOD content is protected by a DRM (Digital Rights Management) system. This restricts playback of content to specific, registered devices.

● If the message is displayed after loading a disc containing DivX VOD content, touch [▶].

Playback of the DivX VOD content will start.

- ❑ Touch [◀◀] or [▶▶] to switch between files.
- ❑ If you do not want to play the DivX VOD content, touch [■]. ■

Operating by hardware buttons

Pressing the TRK button

You can skip files forward or backward.

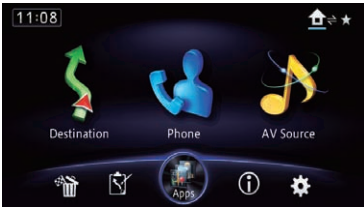
Pressing and holding the TRK button

You can perform fast reverse or fast forward. ■

This chapter describes how to configure the DVD-Video/DivX playback.

Displaying DVD/DivX® Setup menu

- 1 Press the HOME button to display the “Top Menu” screen.
- 2 Touch .



The “Edit/Settings” screen appears.

- 3 Touch [Source Settings].
The “Setting according to source” screen appears.
- 4 Touch [DVD/DivX® Setup].
The “DVD/DivX® Setup” screen appears.
- 5 Touch the item you want to configure.



Setting the top-priority languages

You can assign the top-priority language to the top-priority subtitle, audio and menu in initial playback. If the selected language is recorded on the disc, subtitles, audio and menu are displayed or output in that language.

- 1 Display the “DVD/DivX® Setup” screen.

➔ For details, refer to *Displaying DVD/DivX® Setup menu* on page 94.

- 2 Touch [Subtitle Language], [Audio Language] or [Menu Language].

Each language menu is displayed and the currently set language is selected.

- 3 Touch the desired language.

When you select “Others”, a language code input display is shown. Input the four-digit code of the desired language then touch [OK].

➔ For details, refer to *Language code chart for DVDs* on page 97.

❑ If the selected language is not recorded on the disc, the default language specified on the disc is output and displayed.

❑ You can also switch the subtitle and audio language by touching  or  during playback.

Even if you touch  or  to switch the subtitle or audio language, this setting will not change. 

Setting the angle icon display

You can set the angle icon  to display in scenes where the angle can be switched.

- 1 Display the “DVD/DivX® Setup” screen.

➔ For details, refer to *Displaying DVD/DivX® Setup menu* on page 94.

- 2 Touch [Multi Angle].

- 3 Touch [On] or [Off].

- On (default):
Displays the angle icon in scenes where the angle can be switched.
- Off:
Hides the angle icon. 

DVD-Video or DivX setup

Setting the aspect ratio

There are two kinds of displays. A wide screen display has a width-to-height ratio (TV aspect) of 16:9, while a regular display has a TV aspect of 4:3. If you use a regular rear display with a TV aspect of 4:3, you can set the aspect ratio suitable for your rear display. (We recommend use of this function only when you want to fit it to the rear display.)

- ☐ When using a regular display, select either "Letter Box" or "Panscan". Selecting "16:9" may result in an unnatural image.

1 Display the "DVD/DivX® Setup" screen.

- For details, refer to *Displaying DVD/DivX® Setup menu* on page 94.

2 Touch [TV Aspect].

3 Touch [16:9], [Letter Box] or [Panscan].

- **16:9:** Wide screen image (16:9) is displayed as it is (initial setting).
- **Letter Box:** The image is in the shape of a letter box with black bands at the top and bottom of the screen.
- **Panscan:** The image is cut short at the right and left of the screen.

- ☐ When playing discs that do not have a panscan system, the disc is played back with "Letter Box" even if you select "Panscan" setting. Confirm whether the disc package bears the  mark.

- ☐ Some discs do not enable changing of the TV aspect. For details, refer to the disc's instructions. 

Setting the parental lock

Some DVD-Video discs let you use parental lock to set restrictions so that children cannot watch violent or adult-oriented scenes. You can set the parental lock level in steps as desired.

- ☐ When you set a parental lock level and then play a disc featuring a parental lock, code number input indications may be displayed. In this case, playback will begin when the correct code number is input.

Setting the code number and level

When you first use this function, register your code number. If you do not register a code number, the parental lock will not operate.

1 Display the "DVD/DivX® Setup" screen.

- For details, refer to *Displaying DVD/DivX® Setup menu* on page 94.

2 Touch [Parental Level].

3 Touch [0] to [9] to input a four-digit code number.

4 While the input number is displayed, touch [OK].

The code number is registered, and you can now set the level.

5 Touch any of [1] to [8] to select the desired level.

The parental lock level is set.

- **Parental Level 8:** Playback of the entire disc is possible (initial setting).
- **Parental Level 7 to Parental Level 2:** Playback of discs for children and non-adult oriented discs is possible.
- **Parental Level 1:** Only playback of discs for children is possible.

- ☐ If you want to change the parental level already set, enter the registered code number and then select the parental level.

- ☐ We recommend that you keep a record of your code number in case you forget it.

- ☐ The parental lock level is recorded on the disc. You can confirm it by looking at the disc package, the included literature or the disc itself. You cannot use the parental lock with discs that do not feature a recorded parental lock level.

- ☐ With some discs, parental lock operates to skip certain scenes only, after which normal playback resumes. For details, refer to the disc's instructions.

- ☐ If you forget the registered code number, touch  10 times on the number input screen. The registered code number is canceled, letting you register a new one. 

Setting the auto play

When a DVD disc with a DVD menu is inserted, this unit will cancel the DVD menu automatically and start playback from the first chapter of the first title.

- ☐ This function is available on DVD-Video.
- ☐ Some DVDs may not operate properly. If this function is not fully operable, turn this function off and start playback.

1 Display the "DVD/DivX® Setup" screen.

- ➡ For details, refer to *Displaying DVD/DivX® Setup menu* on page 94.

2 Touch [Auto Play].

3 Touch [On] or [Off].

- **Off** (default):
Deactivates the auto play function.
- **On**:
Activates the auto play function.
- ☐ When "**Auto Play**" is set to "**On**", the repeat range is automatically set to  ☐

- ☐ The DivX subtitles will be displayed even when the subtitle file setting is on if no corresponding subtitle files exist.
- ☐ Up to three subtitle lines can be displayed collectively. ☐

Setting the subtitle file for DivX

You can select whether to display DivX external subtitles or not.

- ☐ If no DivX external subtitle files exist, the original DivX subtitles are displayed even when "**Custom**" is selected.

1 Display the "DVD/DivX® Setup" screen.

- ➡ For details, refer to *Displaying DVD/DivX® Setup menu* on page 94.

2 Touch [Subtitle File].

3 Touch [Original] or [Custom].

- ☐ Up to 42 characters can be displayed on one line. If more than 42 characters are set, the line breaks and the excess characters are displayed on the next line.
- ☐ Up to 126 characters can be displayed on one screen. If more than 126 characters are set, the excess characters will not be displayed.

DVD-Video or DivX setup

Language code chart for DVDs

Two-letter code, input code	Language	Two-letter code, input code	Language	Two-letter code, input code	Language
aa, 0101	Afar	ie, 0905	Interlingue	rn, 1814	Rundi
ab, 0102	Abkhazian	ik, 0911	Inupiaq	ro, 1815	Romanian
af, 0106	Afrikaans	in, 0914	Indonesian	ru, 1821	Russian
am, 0113	Amharic	is, 0919	Icelandic	rw, 1823	Kinyarwanda
ar, 0118	Arabic	it, 0920	Italian	sa, 1901	Sanskrit
as, 0119	Assamese	iw, 0923	Hebrew	sd, 1904	Sindhi
ay, 0125	Aymara	ja, 1001	Japanese	sg, 1907	Sango
az, 0126	Azerbaijani	ji, 1009	Yiddish	sh, 1908	Serbo-Croat
ba, 0201	Bashkir	jw, 1023	Javanese	si, 1909	Sinhala
be, 0205	Belarusian	ka, 1101	Georgian	sk, 1911	Slovak
bg, 0207	Bulgarian	kk, 1111	Kazakh	sl, 1912	Slovenian
bh, 0208	Bihari	kl, 1112	Greenlandic	sm, 1913	Samoan
bi, 0209	Bislama	km, 1113	Central Khmer	sn, 1914	Shona
bn, 0214	Bengali	kn, 1114	Kannada	so, 1915	Somali
bo, 0215	Tibetan	ko, 1115	Korean	sq, 1917	Albanian
br, 0218	Breton	ks, 1119	Kashmiri	sr, 1918	Serbian
ca, 0301	Catalan	ku, 1121	Kurdish	ss, 1919	Swati
co, 0315	Corsican	ky, 1125	Kirghiz	st, 1920	Sotho
cs, 0319	Czech	la, 1201	Latin	su, 1921	Sundanese
cy, 0325	Welsh	ln, 1214	Lingala	sv, 1922	Swedish
da, 0401	Danish	lo, 1215	Lao	sw, 1923	Swahili
de, 0405	German	lt, 1220	Lithuanian	ta, 2001	Tamil
dz, 0426	Dzongkha	lv, 1222	Latvian	te, 2005	Telugu
el, 0512	Greek	mg, 1307	Malagasy	tg, 2007	Tajik
en, 0514	English	mi, 1309	Maori	th, 2008	Thai
eo, 0515	Esperanto	mk, 1311	Macedonian	ti, 2009	Tigrinya
es, 0519	Spanish	ml, 1312	Malayalam	tk, 2011	Turkmen
et, 0520	Estonian	mn, 1314	Mongolian	tl, 2012	Tagalog
eu, 0521	Basque	mo, 1315	Moldavian	tn, 2014	Tswana
fa, 0601	Persian	mr, 1318	Marathi	to, 2015	Tonga
fi, 0609	Finnish	ms, 1319	Malay	tr, 2018	Turkish
fj, 0610	Fijian	mt, 1320	Maltese	ts, 2019	Tsonga
fo, 0615	Faroese	my, 1325	Burmese	tt, 2020	Tatar
fr, 0618	French	na, 1401	Nauru	tw, 2023	Twí
fy, 0625	Western Frisian	ne, 1405	Nepali	uk, 2111	Ukrainian
ga, 0701	Irish	nl, 1412	Dutch	ur, 2118	Urdu
gd, 0704	Scot.Gaelic	no, 1415	Norwegian	uz, 2126	Uzbek
gl, 0712	Galician	oc, 1503	Occitan	vi, 2209	Vietnamese
gn, 0714	Guarani	om, 1513	Oromo	vo, 2215	Volapük
gu, 0721	Gujarati	or, 1518	Oriya	wo, 2315	Wolof
ha, 0801	Hausa	pa, 1601	Panjabi	xh, 2408	Xhosa
hi, 0809	Hindi	pl, 1612	Polish	yo, 2515	Yoruba
hr, 0818	Croatian	ps, 1619	Pashto	zh, 2608	Chinese
hu, 0821	Hungarian	pt, 1620	Portuguese	zu, 2621	Zulu
hy, 0825	Armenian	qu, 1721	Quechua		
ia, 0901	Interlingua	rm, 1813	Romansh		



You can play compressed audio files stored in the external storage device (USB, SD).

- ❑ When you play audio files stored on a USB storage device, a USB interface cable for iPod (sold separately) is required for connection.
- ❑ In the following description, the SD memory card and USB memory device are collectively referred to as the “external storage device (USB, SD)”. If it indicates the USB memory device only, it is referred to as the “USB storage device”.

Starting procedure

1 Display the AV operation screen.

- ➔ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Insert the SD memory card into the SD card slot or plug the USB storage device into the USB connector.

- ➔ For details, refer to *Plugging in a USB storage device* on page 18.
- ➔ For details, refer to *Inserting and ejecting an SD memory card* on page 16.
- ❑ Playback is performed in order of folder numbers. Folders are skipped if they contain no playable files. If there are no playable files in folder 01 (root folder), playback starts from folder 02.

3 Touch [USB] or [SD] on the left edge of the screen to display the “USB” or “SD” screen.

4 Use the touch panel keys on the screen to control the external storage device (USB, SD).

- ➔ For details, refer to *Using the touch panel keys (Music)* on page 99. 

Reading the screen



- ❑ This unit may not achieve optimum performance with some external storage devices.
- ❑ You can play back the files on a USB storage device compliant with the Mass Storage Class. For details about the USB Class, refer to the manual supplied with the USB storage device.

① Source icon

Shows which source has been selected.

② File number indicator

Shows the number of the file currently playing.

③ Current time

④ File type indicator

Shows the type of audio files.

⑤ Playback mode

⑥ Current file information

• Track title

Shows the title of the track currently playing (when available).

- ❑ If the title of a track is not available, the file name appears.

• Artist name

Shows the artist name currently playing (when available).

• Folder name/Album title

Shows the title of the album of the current file (when available).

- ❑ If the title of an album is not available, the folder name appears.

• Play time

Shows the elapsed playing time within the current file.

- ❑ “-----” is displayed if there is no corresponding information.

⑦ Playback condition indicator

Indicates the current playback condition.

Playing music files (from USB or SD)

Playing files in random order

Indicator	Meaning
	Does not play files in random order.
	Plays all audio files in the current repeat play range in random order.

Setting a repeat play range

Indicator	Meaning
	Repeats all compressed audio files in the selected external storage device (USB, SD).
	Repeats just the current file.
	Repeats the current folder.

Touching a folder on the list shows its content. You can play a file on the list by touching it.



- ③ **Recalls equalizer curves**
 ➔ For details, refer to *Using the equalizer* on page 151.
- ④ **Operates some functions by swipe action**
 ➔ For details, refer to *Swipe action* on page 25.
- ⑤ **Sets a repeat play range**
 The repeat play range can be changed by only touching a single key.
☐ If you skip the file forward or backward when the repeat play range in , the repeat play range changes to .
 ➔ For details, refer to **Playback condition indicator** on page 98.
- ⑥ **Displays the “Phone” screen**
 ➔ For details, refer to *Displaying the phone menu* on page 61.
- ⑦ **Plays files in random order**
 The files in the current repeat play range can be played at random by only touching a single key.
☐ If you turn the random play on when the repeat play range is set to , the repeat play range changes to  automatically.
 ➔ For details, refer to **Playback condition indicator** on page 98.
- ⑧ **Playback and Pause**
 Touching  or  switches between playback and pause.

Using the touch panel keys (Music)



- ① **Switches the operation screen**
 Touching this key switches between the screen to operate music files and that to operate video files. This touch panel key is only available when there are both audio and video files on the external storage device (USB, SD).
- ② **Selects a file from the list**
 Touching the key displays the list which lets you find track titles or folder names on an external storage device (USB, SD).

Operating by hardware buttons

Pressing the TRK button

You can skip files forward or backward.

Pressing and holding the TRK button

You can perform fast reverse or fast forward. 

You can play video files stored in the external storage device (USB, SD).

- ❑ When you play video files stored on a USB storage device, a USB interface cable for iPod (sold separately) is required for connection.
- ❑ In the following description, the SD memory card and USB memory device are collectively referred to as the “external storage device (USB, SD)”. If it indicates the USB memory device only, it is referred to as the “USB storage device”.

Starting procedure

1 Display the AV operation screen.

- ➔ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Insert the SD memory card into the SD card slot or plug the USB storage device into the USB connector.

- ➔ For details, refer to *Plugging in a USB storage device* on page 18.
- ➔ For details, refer to *Inserting and ejecting an SD memory card* on page 16.
- ❑ Playback is performed in order of folder numbers. Folders are skipped if they contain no playable files. If there are no playable files in folder 01 (root folder), playback starts from folder 02.

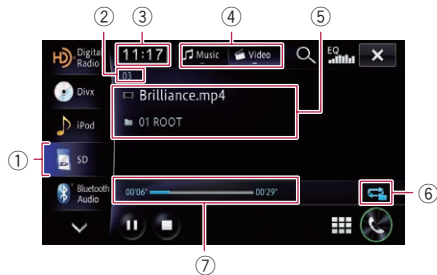
3 Touch [USB] or [SD] on the left edge of the screen to display the “USB” or “SD” screen.

4 Touch the screen to display the touch panel keys.

5 Use the touch panel keys on the screen to control the external storage device (USB, SD).

- ➔ For details, refer to *Using the touch panel keys (Video)* on page 101. ■

Reading the screen



- ❑ This unit may not achieve optimum performance with some external storage devices.
- ❑ You can play back the files on a USB storage device compliant with the Mass Storage Class. For details about the USB Class, refer to the manual supplied with the USB storage device.

① Source icon

Shows which source has been selected.

② File number indicator

Shows the number of the file currently playing.

③ Current time

④ Playback mode

⑤ Current video information

• File name indicator

Shows the file name currently playing.

• Folder name indicator

Shows the folder name currently playing.

⑥ Playback condition indicator

Indicates the current playback condition.

Setting a repeat play range

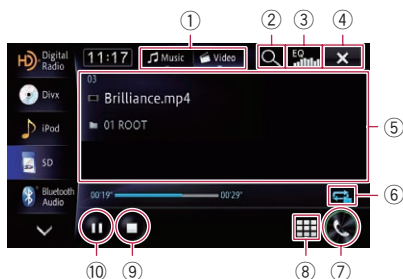
Indicator	Meaning
	Repeats all video files in the selected external storage device (USB, SD).
	Repeats just the current file.
	Repeats the current folder.

⑦ Play time indicator

Playing video files (from USB or SD)

Shows the elapsed playing time within the current file.

Using the touch panel keys (Video)

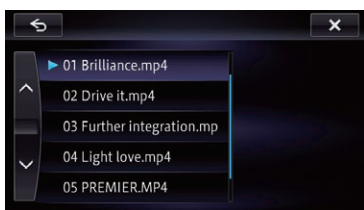


① Switches the operation screen

Touching this key switches between the screen to operate music files and that to operate video files. This touch panel key is only available when there are both audio and video files on the external storage device (USB, SD).

② Selects a file from the list

You can select and play your choice of titles from the list.



The contents of the folder in which the currently playing file is located are displayed.

③ Recalls equalizer curves

➔ For details, refer to *Using the equalizer* on page 151.

④ Hides the touch panel keys and information of the current video

Touching shows only the current video.

☐ If you want to display the touch panel keys and information of the current video again, touch anywhere on the LCD screen.

⑤ Operates some functions by swipe action

☐ When the video is displayed in full screen mode, the whole screen becomes a swipe response area.

➔ For details, refer to *Swipe action* on page 25.

⑥ Sets a repeat play range

The repeat play range can be changed by only touching a single key.

➔ For details, refer to **Playback condition indicator** on page 100.

⑦ Displays the "Phone" screen

➔ For details, refer to *Displaying the phone menu* on page 61.

⑧ Searches for a desired scene and starts playback from a specified time

➔ For details, refer to *Searching for a specific scene and starting playback from a specified time* on page 101.

⑨ Stops playback

⑩ Playback and Pause

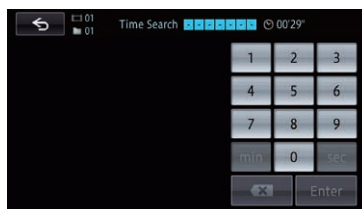
Touching or switches between playback and pause.

Searching for a specific scene and starting playback from a specified time

You can search for a desired scene by specifying the time.

1 Touch .

2 Touch the keys to input the target number or time and then touch [Enter].



- To select 5 minutes 3 seconds, touch **[5]**, **[min]**, **[3]**, **[sec]** and **[Enter]** in order.
- To select 71 minutes 00 seconds, touch **[7]**, **[1]**, **[min]** and **[Enter]** in order.

- To select 100 minutes 05 seconds, touch [1], [0], [0], [5], [sec] and [Enter] in order.
- To cancel an input number, touch .
To cancel the input numbers, touch and hold  .

Operating by hardware buttons

Pressing the TRK button

You can skip files forward or backward.

Pressing and holding the TRK button

You can perform fast reverse or fast forward. .

Using an iPod (iPod)

Using the USB interface cable for iPod enables you to connect your iPod to the navigation system.

- ❑ A USB interface cable for iPod (sold separately) is required for connection.

Starting procedure

1 Display the AV operation screen.

- ➡ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Connect your iPod.

The source changes and then playback will start.

- ➡ For details, refer to *Connecting your iPod* on page 19.
- ❑ If the iPod is already connected, touch [iPod] on the left edge of the screen.
 - ➡ For details, refer to **Selecting a source** on page 71.
- ❑ If you connect the iPhone or iPod touch, quit applications before connecting.

3 Use the touch panel keys on the screen to control your iPod.

- ➡ For details of the operation, refer to *Using the touch panel keys* on page 104.
- ❑ The video image of iPod may have noise if the rear display outputs the video image. When noise is produced in the video image of iPod, turn off output setting of the rear display.
 - ➡ For details of the operations, refer to *Selecting the video for rear display* on page 159. ■

Reading the screen

Music



Video



- ① **Source icon**
Shows which source has been selected.
- ② **Song number indicator**
Shows the number of the song and the total number of songs in the selected list.
- ③ **Current time**
- ④ **Playback mode**
- ⑤ **Chapter number indicator**
Shows the current chapter number and total number of chapters when a file with chapters is played (when available).
- ⑥ **Album artwork**
Album art of the current song is displayed if it is available.
- ⑦ **Playback condition indicator**
Indicates the current playback condition.

Setting the shuffle play

Indicator	Meaning
	Cancels the shuffle play.
	Plays back songs or videos in random order within the selected list.
	Selects an album randomly, and then plays back all the songs in that album in order. The actions while this indicator is displayed on the video operation screen vary depending on the connected iPod.

Setting a repeat play range

Indicator	Meaning
	Repeats all songs or videos in the selected list.
	Repeats just the current song or video.

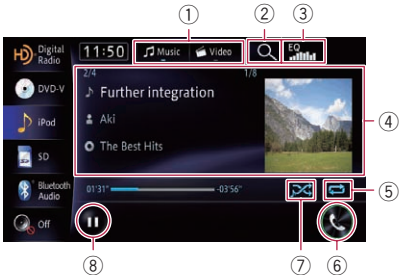
- ⑧ **Current song (episode) information**
-  **Song title (episode)**
Shows the title of the current song. When a podcast is played, the episode is displayed (when available).
 -  **Artist name (podcast title)**
Shows the artist name currently playing. When a podcast is played, the podcast title is displayed (when available).
 -  **Album title (release date)**
Shows the title of the album for the song. When a podcast is played, the release date is displayed (when available).
 - **Play time**
Shows the elapsed playing time within the current song (episode).
☐ “-----” is displayed if there is no corresponding information.
- ⑨ **File number indicator**
Shows the number of the file currently playing (when available).
- ⑩ **Current video information**
-  **File name indicator**

Shows the file name currently playing (when available).

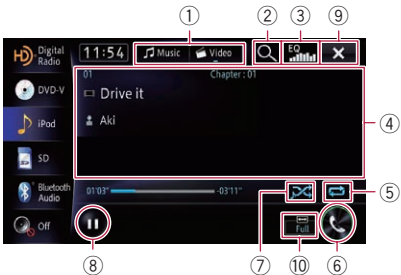
-  **Artist name (podcast title)**
Shows the artist name currently playing. When a podcast is played, the podcast title is displayed (when available).
- **Play time indicator**
Shows the elapsed playing time within the current file.
☐ “-----” is displayed if there is no corresponding information.
☐ If characters recorded on the iPod are not compatible with this navigation system, they may become garbled. ☐

Using the touch panel keys

Music



Video



- ① **Switches the operation screen**
Touching this key displays the touch panel key ([Video] or [Music]) to switch between the screen to operate video files and that to operate music files.

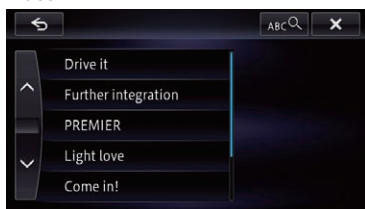
Using an iPod (iPod)

- ❑ This touch panel key is only available when there are both audio and video file in your iPod.
- ② **Selects a file from the list**
Touching a folder on the list shows its content. You can play a file on the list by touching it.

Music



Video



- ❑ If you touch , alphabet characters are displayed. Touch the first letter of the title of the video/song you are looking for.
- ③ **Recalls equalizer curves**
➡ For details, refer to *Using the equalizer* on page 151.
- ④ **Operates some functions by swipe action**
❑ When the video is displayed in full screen mode, the whole screen becomes a swipe response area.
➡ For details, refer to *Swipe action* on page 25.
- ⑤ **Sets a repeat play range**
The repeat play range can be changed by only touching a single key.
➡ For details, refer to *Playback condition indicator* on page 103.
- ⑥ **Displays the "Phone" screen**
➡ For details, refer to *Displaying the phone menu* on page 61.
- ⑦ **Sets the shuffle play**

The shuffle play setting can be changed by only touching a single key.

➡ For details, refer to *Playback condition indicator* on page 103.

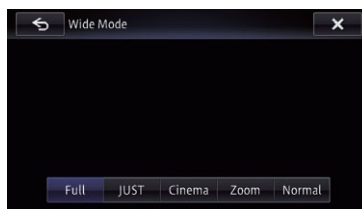
- ⑧ **Playback and Pause**
Touching  or  switches between playback and pause.
- ⑨ **Hides the touch panel keys and information of the current video**
Touching  shows only the current video.
❑ If you want to display the touch panel keys and information of the current video again, touch anywhere on the LCD screen.
- ⑩ **Changing the wide screen mode**
➡ For details, refer to *Changing the wide screen mode* on page 105. 

Changing the wide screen mode

You can set the screen size of video.

❑ The default setting is "Full".

- 1 **Touch  on the "iPod" screen.**
❑ The appearance of this key changes according to the current setting.
- 2 **Touch the desired mode.**



- **Full**
A 4:3 picture is enlarged in the horizontal direction only, enabling you to enjoy a 4:3 TV picture (normal picture) without any omissions.
- **Just**

The picture is enlarged slightly at the center and the amount of enlargement increases horizontally toward the ends of the picture, enabling you to enjoy a 4:3 picture without sensing any disparity, even on a wide screen.

- **Cinema**

A picture is enlarged by the same proportion as "**Full**" or "**Zoom**" in the horizontal direction and by an intermediate proportion between "**Full**" and "**Zoom**" in the vertical direction; ideal for a cinema-sized (wide screen) picture where captions lie outside the frame.

- **Zoom**

A 4:3 picture is enlarged in the same proportion both vertically and horizontally; ideal for a cinema-sized (wide screen) picture.

- **Normal**

A 4:3 picture is displayed normally, giving you no sense of disparity since its proportions are the same as those of the normal picture.

- ☐ Images may be unclear when "**Cinema**" or "**Zoom**" is selected.
- ☐ Remember that use of this system for commercial or public viewing purposes may constitute an infringement on the author's rights protected by the Copyright Law. ☐

Operating by hardware buttons

Pressing the TRK button

You can skip songs, videos or podcasts forward or backward.

When a song, video or podcast with chapter is played, you can skip chapter forward or backward.

Pressing and holding the TRK button

You can perform fast reverse or fast forward. ☐

Streaming Pandora® and using Aha Radio

WARNING

Certain uses of a smartphone may not be legal while driving in your jurisdiction, so you must be aware of and obey any such restrictions.

If in doubt as to a particular function, only perform it while the car is parked.

No feature should be used unless it is safe to do so under the driving conditions you are experiencing.

When connecting iPhone or smartphone with applications installed, you can control, view, and/or hear application content from this navigation system.

❑ In this chapter, iPhone and iPod touch will be referred to as iPhone.

In this navigation system, you can use the following applications.

- Pandora®
- Aha Radio
- ❑ Be sure to read *Using app-based connected content* before you perform this operation.
 - ➔ For details, refer to *Using app-based connected content* on page 191.
- ❑ Even if you switch to another source while listening to Aha Radio contents, playback of the contents continues when you switch back to the Aha Radio source.
- ❑ When you are talking on a cellular phone connected to this navigation system via Bluetooth wireless technology, playback is paused temporarily. Playback resumes when you hang up.

Information for compatibility of connected devices

The following is detailed information regarding the devices required to use the Pandora® and the Aha Radio application on this navigation system.

For iPhone users

- The device has iOS 3.0 or higher.

- A USB interface cable for iPod (sold separately) must be used to connect your iPhone to this navigation system.

For smartphone users

- The following conditions apply to the use of this function.
 - The device has Android OS 2.2 or higher.
 - The device supports Bluetooth SPP (Serial Port Profile).
 - The device supports Bluetooth A2DP (Advanced Audio Distribution Profile) (for AVIC-X850BT and AVIC-X8510BT).
- ❑ Compatibility with all Android devices is not guaranteed.

For details about Android device compatibility with this navigation system, refer to the information on our website.
- An App Connectivity Kit (CD-AH200) (sold separately) is required for connection to this navigation system (for AVIC-Z150BH and AVIC-X950BH).
- The device is connected to this navigation system via Bluetooth. ❑

Starting procedure

The procedure varies depending on your type of device.

For iPhone users

1 Prepare the navigation system to connect to your iPhone.

- ➔ For details, refer to *Selecting the device connection method* on page 157.

2 Start up the Pandora or Aha application installed on the iPhone.

- ❑ Before starting up, sign in to Pandora or Aha Radio from your iPhone.

3 Connect your iPhone.

- ❑ If the iPhone is already connected, touch [Pandora] or [aha] on the left side of the screen.

- ➔ For details, refer to *Connecting your iPod* on page 19.

4 Display the AV operation screen.

- ➔ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

5 Touch [Pandora] or [aha] on the left side of the screen to display the “Pandora” or “aha” screen.

6 Use the touch panel keys on the screen to control the Pandora or Aha Radio.

- ➔ For details, refer to *Streaming Pandora®* on page 109.
- ➔ For details, refer to *Using Aha Radio* on page 111.

6 Touch [Pandora] or [aha] on the left side of the screen to display the “Pandora” or “aha” screen.

When you touch [Pandora] or [aha], the navigation system starts establishing Bluetooth connection.

After the connection is successfully established, the touch panel keys on the “Pandora” or “aha” screen are activated.

7 Use the touch panel keys on the screen to control the Pandora or Aha Radio.

- ➔ For details, refer to *Streaming Pandora®* on page 109.
- ➔ For details, refer to *Using Aha Radio* on page 111. 

For smartphone users

1 Prepare the navigation system to connect to your smartphone.

- ➔ For details, refer to *Selecting the device connection method* on page 157.

2 Register your smartphone and connect it to this product via the Bluetooth wireless technology.

- ☐ The registered device must be selected as the priority device.
- ➔ For details, refer to *Registering your Bluetooth devices* on page 56.

3 Unlock your smartphone.

4 Connect your smartphone to this product via the separately sold App Connectivity Kit (CD-AH200) (for AVIC-Z150BH and AVIC-X950BH).

- ➔ For details of the operations, refer to the Installation Manual.
- ☐ The cable connection method varies depending on your device.

5 Display the AV operation screen.

- ➔ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

Streaming Pandora® and using Aha Radio

Streaming Pandora®

You can experience Pandora by connecting an iPhone or smartphone that has the Pandora application installed.

Note:

- Certain functionality of the Pandora service is not available when accessing the service through the Pioneer navigation system, including, but not limited to, creating new stations, deleting stations, emailing current stations, buying songs from iTunes, viewing additional text information, logging in to Pandora, and adjusting Cell Network Audio Quality.
- Pandora internet radio is a music service not affiliated with Pioneer. More information is available at <http://www.pandora.com>
- To ensure compatibility, install the latest version of the Pandora application by visiting the app store on your mobile device.

- **Album title**

Shows the title of the album of the current track.

- **Play time indicator**

Shows the elapsed playing time within the current track.

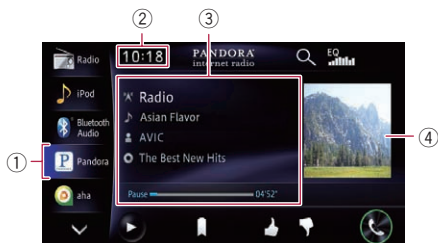
- “-----” is displayed if there is no corresponding information.

④ **Album artwork**

Album art of the current track is displayed if it is available.

- If the album artwork cannot be acquired, the preinstalled image is displayed.

Reading the screen



① **Source icon**

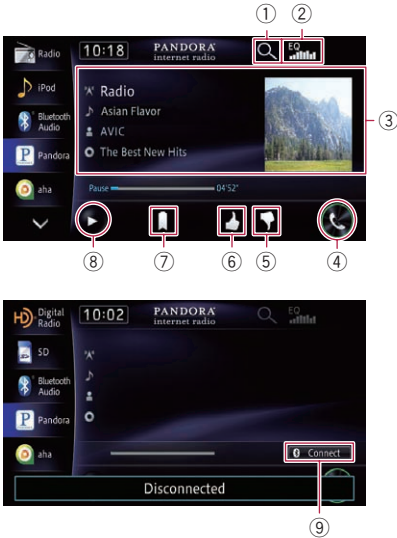
Shows which source has been selected.

② **Current time**

③ **Current track information**

-  **Station name indicator**
Shows the Pandora station name the tuner is currently tuned in.
-  **Track title**
Shows the title of the current track.
-  **Artist name**
Shows the artist name currently playing.

Using the touch panel keys



- ① **Selects a Pandora station from the list**
Touching the key displays the list of your Pandora stations to select one of them to play.



- ☐ Touching plays only one track based on particular musical characteristics at a time from shuffled several stations.
- ☐ Stations indicated by are shared stations.
- ☐ When you touch [ABC] or [By Date], the list item can be sorted.
 - **ABC:**
You can sort the items in the list alphabetically.
 - **By Date:**

You can sort the items in the list in order of dates the items were created.

- ② **Recalls equalizer curves**
 - ➔ For details, refer to *Using the equalizer* on page 151.
 - ③ **Operates some functions by swipe action**
 - ➔ For details, refer to *Swipe action* on page 25.
 - ④ **Displays the “Phone” screen**
 - ➔ For details, refer to *Displaying the phone menu* on page 61.
 - ⑤ **Thumbs Down**

Touching the key gives “Thumbs Down” to the track currently playing and skip to the next track.

 - ☐ This function is not available when using a shared station.
 - ⑥ **Thumbs Up**

Touching the key gives “Thumbs Up” to the track currently playing.

 - ☐ This function is not available when using a shared station.
 - ⑦ **Bookmark**

Touching the key displays the screen which lets you select the artist or track to add bookmarks.
- ⑧ **Playback and Pause**

Touching or switches between playback and pause.
 - ⑨ **Connecting a registered Bluetooth device manually**
 - ☐ This is displayed when “App Connection Settings” is set to “Android”.
 - ➔ For details, refer to *Starting procedure* on page 107.

Operating by hardware buttons

Pressing the TRK button

You can skip the track forward.

Streaming Pandora® and using Aha Radio

Using Aha Radio

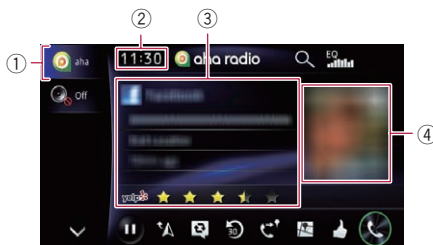
When connecting an iPhone or smartphone with the Aha Radio installed, you can control, view, and/or hear Aha Radio content from this navigation system. You can also display POI information from the Aha Radio application on the map screen and route to these POIs.

- ❑ For details concerning operations, refer to the Help and Tips section within the Aha Radio application.
- ❑ Aha Radio stations may require initial setup or sign in before the station can be accessed.

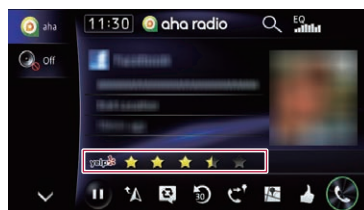
Note:

- Certain functionality of the Aha Radio service may not be available when accessing the service through the Pioneer navigation system, including, but not limited to, creating new Aha stations, deleting Aha stations, recording 'shouts' by voice, adjusting Aha Radio App settings, logging into Facebook, creating a Facebook account, logging into Twitter, or creating a Twitter account.
- Aha Radio is a service not affiliated with Pioneer. More information is available at <http://www.ahamobile.com>.
- A specific version of the Aha Radio application must be installed on your iPhone or smartphone to enjoy Aha Radio content on this navigation system. Because the application for the iPhone or smartphone is not provided by Pioneer, the required version of the application may not yet be available at the time of purchase of the navigation system. Availability, version and update information can be found at <http://www.pioneerelectronics.com/aharadio>

Reading the screen

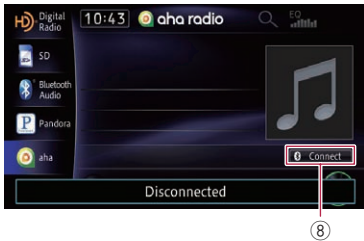


- ① **Source icon**
Shows which source has been selected.
- ② **Current time**
- ③ **Current station information**
Shows which source has been selected.
 - **Station name**
Shows the name of the Aha Radio station to which navigation system is currently tuned.
 - **Detailed information**
Shows the information on the content currently being played.
 - ❑ "-----" is displayed if there is no corresponding information.
 - **Rating information**
Shows the rated value of the current content displayed (only when and where applicable).



- ④ **Content image**
Displays an image of the current content if one is available.

Using the touch panel keys



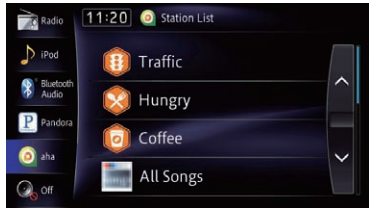
- ① **Pauses the content currently playing and shows a text pop-up screen**
- ❑ “-----” is displayed if there is no corresponding information.

Pop-up screen



- ❑ Touching [OK] closes the pop-up screen and plays the content.
- ② **Selects an Aha Radio station from the list**

Touching this key displays the list of your available Aha Radio stations. Touch the desired Aha Radio station to change Aha Radio sources.



- ③ **Recalls equalizer curves**
- ➔ For details, refer to *Using the equalizer* on page 151.
- ④ **Operates some functions by swipe action**
- ➔ For details, refer to *Swipe action* on page 25.
- ⑤ **Displays the “Phone” screen**
- ➔ For details, refer to *Displaying the phone menu* on page 61.
- ⑥ **Performs additional functions of each station or content currently playing**
- ❑ The icons displayed vary depending on each station or content.

Indicator	Meaning
	Touching the key discloses the current car location through Aha Radio.
	Touching the key retweets the selected tweets with your Twitter account.
	Touching the key performs fast reverse of the current content for 30 seconds.
	Touching the key sends you to the Location confirmation screen of the selected POI to search for the desired route. ➔ For subsequent operations, refer to <i>Setting a route to your destination</i> on page 44.
	Touching the key “likes” the current content. ❑ Depending on the content, touching or cancels “likes”.

Streaming Pandora® and using Aha Radio

Indicator	Meaning
	Touching the key “dislikes” the current content. ☐ Depending on the content, touching  or  cancels “dislikes”.
	Touching the key lets you make a call to a phone number registered in the current content using the hands-free function.

⑦ Playback and pause (or stop)

Touch  to start playback. Touching  during playback, pauses or stops playback.

☐ Pause (or stop) key functionality depends on the content.

⑧ Connecting a registered Bluetooth device manually

☐ This is displayed when “App Connection Settings” is set to “Android”.

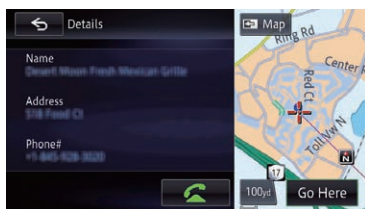
➞ For details, refer to *Starting procedure* on page 107.

Functions coupled with Aha Radio and the navigation system

Depending on the stations, functions coupled with the navigation system may also be.

Viewing POI information with Aha Radio

You can check the information of POI location when setting to the destination the POI location obtained with Aha Radio.



➞ For details, refer to *Viewing information about a specified location* on page 32.

☐ When you switch to the map screen while viewing the content that includes POI loca-

tion information, a maximum of 30 POI icons are displayed on the map screen.

☐ The POI icons on the map will not disappear, even when the smartphone is removed.

The icons will disappear with the following operations:

- Turning off the ignition switch (ACC OFF)
- Initializing user data
- Updating the display of the Aha POI icons

☐ Aha POI icons are updated at the following intervals.

- When a station with content including location information is reselected
- When the content lists of the Aha application are updated
- If there are 30 or more content items selected and the 31st POI is read 

You can control the Bluetooth audio player.

- ❑ Before using the Bluetooth audio player, you must register and connect the device to this navigation system.
 - ➡ For details, refer to *Registering your Bluetooth devices* on page 56.
- ❑ Operations may vary depending on the Bluetooth audio player.
- ❑ Depending on the Bluetooth audio player connected to this navigation system, the available operations with this navigation system may be limited to the following two levels:
 - A2DP (Advanced Audio Distribution Profile): Only playing back songs on your audio player is possible.
 - A2DP and AVRCP (Audio/Video Remote Control Profile): Playing back, pausing, selecting songs, etc., are possible.
- ❑ Since a number of Bluetooth audio players are available on the market, operations with your Bluetooth audio player using this navigation system vary considerably in range. Please refer to the instruction manual that came with your Bluetooth audio player as well as this manual while operating your player on this navigation system.
- ❑ While you are listening to songs on your Bluetooth audio player, please refrain from operating your cellular phone as much as possible. If you try operating your cellular phone, the signal may cause a noise on the song playback.
- ❑ Even if you switch to another source while listening to a song on your Bluetooth audio player, the song playback continues.
- ❑ Depending on the Bluetooth audio player you connected to this navigation system, operations on this navigation system to control the player may differ from those explained in this manual.
- ❑ When you are talking on a cellular phone connected to this unit via Bluetooth wireless technology, song playback from your Bluetooth audio player connected to this unit may be paused.

Starting procedure

- 1 **Pull out the connecting cable for using the AppRadio Mode.**
 - ❑ You cannot use Bluetooth audio player when the connecting cable for using the **AppRadio Mode** is connected.
- 2 **Display the AV operation screen.**
 - ➡ For details of the operations, refer to *Displaying the AV operation screen* on page 71.
- 3 **Touch [Bluetooth Audio] on the left edge of the screen to display the "Bluetooth Audio" screen.**
 - ❑ The Bluetooth device is connected when you touch **[Bluetooth Audio]**. If the Bluetooth device is not connected, touch **[Connect]**.
 - ➡ For details, refer to **Connects and disconnects the Bluetooth audio player** on page 116.
- 4 **Use the touch panel keys on the screen to control the Bluetooth audio player.**
 - ➡ For details, refer to *Using the touch panel keys* on page 115. ■

Reading the screen



- ① **Source icon**
Shows which source has been selected.
- ② **File number indicator**
Shows the file number currently playing (when available).
- ③ **Current time**

Using the Bluetooth audio player

④ Battery status of the Bluetooth device

- Depending on the Bluetooth device, this icon may not appear.

⑤ Connection status indicator

Shows whether the device featuring Bluetooth technology is connected or not.

⑥ Device name indicator

⑦ Playback condition indicator

Indicates the current playback condition if the connected Bluetooth audio player features AVRCP 1.3.

Playing files in random order

Indicator	Meaning
	Does not play files in random order.
	Plays all audio files in the current group in random order.
	Plays all audio files in the current repeat play range in random order.

Setting a repeat play range

Indicator	Meaning
	Does not repeat.
	Repeats just the current file.
	Repeats the current group.
	Repeats all audio files in the Bluetooth audio player.

⑧ Current file information

If the connected Bluetooth audio player features AVRCP 1.3, the following file information will be displayed.

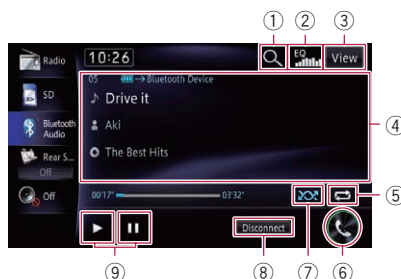
-  **Track title**
Shows the title of the track currently playing (when available).
-  **Artist name**
Shows the artist name currently playing (when available).
-  **Album title**
Shows the title of the album of the current file (when available).

• Play time indicator

Shows the elapsed playing time within the current file.

- In the following cases, file information will only be displayed after a file starts or resumes playing:
 - You connect a Bluetooth audio player compatible with AVRCP1.3, and operate the player to start playing.
 - You select another file when playback is paused. 

Using the touch panel keys



① Selects a track from the list

Touching this key displays the list in which you can find the track title and the folder name of Bluetooth audio player. Touching a folder on the list shows its content. You can play a track on the list by touching it.

- This function is only available when the connected Bluetooth audio player supports AVRCP 1.4.



② Recalls equalizer curves

- ➞ For details, refer to *Using the equalizer* on page 151.

Using the Bluetooth audio player

③ Switches the screen displays

Each touch of this key, switches between the file information screen and the list selection screen.

④ Operates some functions by swipe action

➡ For details, refer to *Swipe action* on page 25.

⑤ Sets a repeat play range

The repeat play range can be changed by only touching a single key.

❑ This function is only available when the connected Bluetooth audio player supports AVRCP 1.3.

➡ For details, refer to **Playback condition indicator** on page 115.

⑥ Displays the “Phone” screen

➡ For details, refer to *Displaying the phone menu* on page 61.

⑦ Plays files in random order

All of the files within the repeat play range can be played at random by only touching a single key.

❑ This function is only available when the connected Bluetooth audio player supports AVRCP 1.3.

➡ For details, refer to **Playback condition indicator** on page 115.

⑧ Connects and disconnects the Bluetooth audio player

The Bluetooth audio player is disconnected when you touch **[Disconnect]**.

❑ If the Bluetooth audio player is not connected, touch **[Connect]** and await for the Bluetooth wireless connection.

⑨ Playback and Pause

Touching **[▶]** or **[⏸]** switches between playback and pause. 

Pressing and holding the TRK button

You can perform fast reverse or fast forward. 

Operating by hardware buttons

Pressing the TRK button

You can skip files forward or backward.

Using the SiriusXM tuner

Introducing SiriusXM tuner operations

You can use this unit to control a SiriusXM Connect Vehicle Tuner, which is sold separately.

For more information on how to install SiriusXM Connect Vehicle Tuner, consult the installation guide included with the tuner. Everything worth listening to is on SiriusXM, getting over 130 channels, including the most commercial-free music, plus the best sports, news, talk and entertainment. A SiriusXM Vehicle Tuner and Subscription are required. For more information, visit www.siriusxm.com.

To subscribe to the SiriusXM Satellite Radio service

1 Select SiriusXM as the source.

You should be able to tune in to Channel 1. If you cannot get Channel 1, ensure your SiriusXM Connect Vehicle Tuner is installed correctly as described in the tuner installation guide.

2 Touch on the "SiriusXM" screen.

3 Input [000] and then touch [Enter].

The radio tunes in to Channel 0.

4 Touch .

The "SiriusXM" screen returns.

5 Check the Radio ID.

The SiriusXM Radio ID can be found by tuning to Channel 0. In addition, the Radio ID is located on the bottom of the SiriusXM Connect Vehicle Tuner.

Please note that the SiriusXM Radio ID does not include the letters I, O, S or F.

You will need this number to activate your subscription.

6 Activate the service either online or by phone.

- Visit the website, www.siriusxm.com/activation

- Call SiriusXM Listener Care at 1-866-635-2349 to activate.
- To activate SiriusXM Canada service go to www.xmradio.ca and click on "ACTIVATE RADIO" in the top right corner, or call 1-877-438-9677.
- The SiriusXM satellites will send an activation message to your tuner. When the tuner has received the message, "Subscription updated." is displayed.

Once you have subscribed, SiriusXM will send an activation message to your tuner.

The activation process usually takes 10 to 15 minutes but may take up to an hour in some cases. Do not turn off the unit while the activation message is displayed. 

Starting procedure

1 Display the AV operation screen.

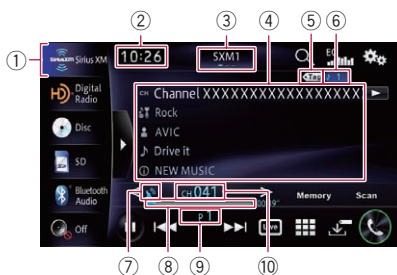
- For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Touch [SiriusXM] on the left edge of the screen to display the "SiriusXM" screen.

3 Use the touch panel keys on the screen to control the SiriusXM tuner.

- For details, refer to *Using the touch panel keys* on page 118. 

Reading the screen



① Source icon

Shows which source has been selected.

② **Current time**

③ **Band indicator**

Shows which band the radio is tuned to: SXM1, SXM2 or SXM3.

④ **Current channel information**

Shows the detailed information of the broadcast channel currently being received.

• **Channel name**

Shows the channel name to which the tuner is currently tuned.

- ☐ The Radio ID is displayed when Channel 0 is selected.

• **Category name**

Shows the category name of the broadcast channel.

- ☐ The Radio ID is displayed when Channel 0 is selected.

• **Artist (performer) name**

Shows the artist (performer) name currently playing (when available).

• **Song title (program name)**

Shows the title of the current song (program).

• **Detailed information**

Shows the information on the content currently being played.

- ☐ The item is blank if there is no corresponding information.

⑤ **Song info reception indicator**

Shows the reception status of the song information.

Indicator	Meaning
	Appears when the navigation system receives song information and can store it. The icon is displayed on the "SiriusXM" screen.
	Appears when the navigation system is storing song information. The icon is displayed on all AV operation screens.

⑥ **Song info status indicator**

Shows the status of the song information stored in the navigation system.

Indicator	Meaning
	Displays the number of song information items stored in the navigation system. The icon is displayed on all AV operation screens.
	Appears when the song information is transferred to an iPod. The icon is displayed on all AV operation screens.

⑦ **Signal level indicator**

⑧ **Play time indicator**

Shows the elapsed playing time within the stored broadcast.

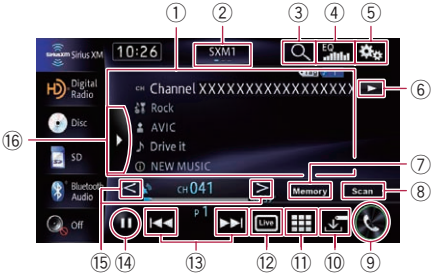
⑨ **Preset number indicator**

Shows the selected preset item

⑩ **Channel number indicator**

Shows the channel number to which the tuner is currently tuned. ☐

Using the touch panel keys



① **Operates some functions by swipe action**

- ➔ For details, refer to *Swipe action* on page 25.

② **Selects a band**

Touching the key repeatedly switches between the following SiriusXM bands: **SXM1**, **SXM2**, or **SXM3**.

- ☐ This function is convenient for preparing different preset lists for each band.

③ **Selects a channel from the list**

- ➔ For details, refer to *Selecting a channel from the list* on page 120.

Using the SiriusXM tuner

④ Recalls equalizer curves

- ➔ For details, refer to *Using the equalizer* on page 151.

⑤ Displays the “Function” menu

⑥ Scrolls the text

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

⑦ Memorizes the current channel

- ➔ For details, refer to *Memorizing the current contents* on page 122.

⑧ Performs scan tuning

To perform channel scan tuning, touch this key.

- ➔ For details, refer to *Using the Tune Scan™* on page 121.

⑨ Displays the “Phone” screen

- ➔ For details, refer to *Displaying the phone menu* on page 61.

⑩ Stores the iTunes® song tagging

Touching this key stores the iTunes song tagging from the broadcasting station on your iPod.

- ➔ For details, refer to *Storing song information to an iPod (iTunes Tagging)* on page 123.

⑪ Selects a channel directly

- ➔ For details, refer to *Selecting a SiriusXM channel directly* on page 120.

⑫ Returns to live broadcast

Use to return to the live broadcast while in **Replay™** mode.

- ➔ For details, refer to *Using the “Replay™” function* on page 120.

⑬ Skips forward or backward

Touching [⏮] skips the contents backward while in **Replay™** mode.

Touching [⏭] skips the contents forward while in **Replay™** mode.

- ➔ For details, refer to *Using the “Replay™” function* on page 120.

⑭ Playback and Pause

Touching [▶] or [⏸] switches between playback and pause of the contents while in **Replay™** mode.

- ➔ For details, refer to *Using the “Replay™” function* on page 120.

⑮ Performs manual tuning

The channels move up or down one at a time.

- ❑ If you keep touching [◀] or [▶] you can skip the broadcasting channels.

⑯ Recalls channels from the preset

Touching this key displays the preset channel list.

Touch the item of the list (“1” to “6”) to switch to a channel registered as a preset channel.

- ❑ If you touch the preset channel list display key while the preset channel list is displayed, the list disappears and preset tuning keys are displayed.

Preset channel list display key



Preset tuning keys

- Once you have stored broadcast channels, you can easily recall preset channels from memory with a single touch of a key.
 - ➔ For details, refer to *Storing broadcast channels* on page 120.
- If you turn on the **Tune Start** setting, you can play from the beginning of the song that is broadcast when you switch to the preset channel (**Tune Start™** function).
 - ❑ You cannot replay a broadcast prior to the beginning of the stored data.
 - ❑ If you touch [Live], the tuner will tune to the current live broadcast.
 - ➔ For details, refer to *Setting the Tune Start™* on page 121.

Storing broadcast channels

With a touch of any of the preset tuning keys (“1” to “6”), you can easily store up to six broadcast channels for later recall (also with a single touch of a key).

- ❑ The broadcast channel may not be stored depending on the broadcast channel.

1 Select the channel that you want to store in memory.

2 Display the preset channel list.

- ➔ For details, refer to *Recalls channels from the preset* on page 119.

3 Touch and hold a preset tuning keys ([1] to [6]).

The selected channel is then memorized.

The next time you touch the same preset tuning key “1” to “6”, the channel is recalled from memory.

- ❑ Up to 18 channels, six for each of the three SiriusXM bands, can be memorized.

Selecting a SiriusXM channel directly

You can select a broadcast channel directly by entering the desired channel number.

1 Touch  on the “SiriusXM” screen.

2 Touch [0] to [9] to input the desired channel number.

To cancel the input numbers one by one, touch [Clear].

3 While the input number is displayed, touch [Enter].

The SiriusXM channel that was entered is selected.

4 Touch .

The previous screen returns.

Selecting a channel from the list

You can select a channel from the channel list category.

1 Touch  on the “SiriusXM” screen.

The list screen appears.

2 Touch the category name you want.

The category in the hierarchy under the selected channel list is displayed.

- ❑ The channel which broadcasts is displayed, if the song, artist, or your favorite sport teams registered in the alert list is broadcasting.

3 Touch the desired channel.

The tuner then tunes to the broadcast you selected.

- ❑ Each touch of [Info] changes the display information as follows:

CH Name List — Artist List — Song List — Content List



Using the “Replay™” function

You can play back up to 60 minutes broadcast of the channel currently being listened to using the “Replay™” function.

● Touch [] on the “SiriusXM” screen.

The recent broadcast is played.

While the recent broadcast is being played, you can operate as follows:

Using the SiriusXM tuner

Touch panel keys	Action
[◀◀]	Returns to the start of the current program. Touching again will skip back to the previous program.
[▶▶]	Jumps to the next program.
[▶] or [⏸]	Touching [▶] or [⏸] switches between playback and pause.

- ❑ You cannot replay a broadcast prior to the beginning of the stored data.
- ❑ If you touch [⏸], the tuner will tune to the current live broadcast.

Using the Tune Scan™

You can perform scan tuning of multiple live broadcast channels.

- ❑ If fewer than two channels are targeted for scan tuning, the message, “**Not enough content to scan.**” is displayed, and you cannot perform scan tuning.
- ❑ If no channel targeted for scan tuning is found, the message, “**Scan stopped. No content to scan.**” is displayed.
- ❑ The channel may not be scan tuned on the broadcast channel.

1 Touch [Scan] on the “SiriusXM” screen.

The scan menu appears.

2 Touch [Category] or [P.CH].

The scan play starts.

- **Category:**
Selects the category from the category list, and performs scan tuning.
- **P.CH:**
Performs scan tuning in the preset channel (1 to 6).
 - ❑ You can scan only song channels.



① Continues listening to the current scanning channel

- ❑ You can quit the **Tune Scan** and listen to the current channel.

② Skips forward or backward

Touching [◀◀] skips to the previous channel.

Touching [▶▶] skips to the next channel.

③ Quits the Tune Scan and returns to the previous channel

Using advanced functions

Setting the Tune Start™

You can play from the beginning of the audio content by **Tune Start**, even if the broadcast of audio content was in the middle when switch to the preset channel.

You can enable or disable **Tune Start** by setting.

1 Touch [Function] on the “SiriusXM” screen.

The “Function” menu appears.

2 Touch [Tune Start].

3 Touch the item you want to set.

- **On** (default):
The **Tune Start** function is enabled.
- **Off:**
The **Tune Start** function is disabled.

Setting the parental lock

The SiriusXM Parental Control feature allows you to control access to channels that you consider inappropriate for younger listeners.

When enabled, the Parental Control feature requires you to enter a passcode to tune to the locked channels.

Setting the passcode

1 Touch  on the "SiriusXM" screen.

The "Function" menu appears.

2 Touch [Parental Control].

3 Enter the passcode (the default passcode is "0000").

The "Parental Control" menu appears.

4 Touch [Edit Code].

5 Enter the passcode you want to set, and then touch [Enter].

The "Please re-enter new code." screen appears.

- ☐ To cancel the input numbers one by one, touch [Clear].

6 Re-enter the passcode, and then touch [Enter].

The passcode is changed.

Locking the channel

1 Touch  on the "SiriusXM" screen.

The "Function" menu appears.

2 Touch [Parental Control].

3 Enter the current passcode.

The "Parental Control" menu appears.

4 Touch the channel you want to lock.

 appears and the channel is locked.

- ☐ If you touch the channel you locked, the icon switches to  and the lock is canceled.
- ☐ If you touch [Clear All], all locks are canceled.

Using the Content Alerts function (such as Song Alerts, Artist Alerts and Game Alerts)

While listening to SiriusXM Satellite Radio, you can be alerted when your favorite songs, artists or games involving your favorite sports teams are playing on other channels. The radio will display an Alert message when a matching artist, song or team is found on another channel. Then you can choose if you want to tune to that favorite or you can ignore it and stay on your current channel. Information on setting up the Artist, Song and Game Alerts is described below.

Memorizing the current contents

The keywords of song titles, artist names, and your favorite sport teams to which you are listening can be memorized to an alert list.

1 Touch [Memory] on the "SiriusXM" screen.

A confirmation message appears.

2 Touch the item you want to memorize.

The keyword is memorized to an alert list. When a program that matches a keyword memorized to the alert list is broadcast, a beep sounds and a message is displayed.

3 Touch [Jump] to switch to that station.

You can listen to that track.

- ☐ You can enable or disable alerts by setting the alert function.
- ☐ Notification may not be provided depending on the status of the navigation system.
- If you touch [Stay], the channel does not switch.

Setting the program you want to be alerted

1 Touch  on the "SiriusXM" screen.

The "Function" menu appears.

2 Touch [Alert Setting].

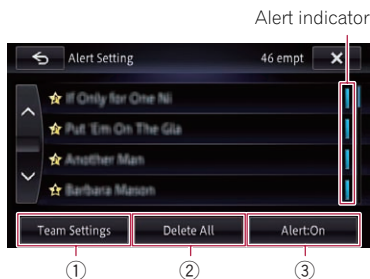
The "Alert Setting" screen appears.

Using the SiriusXM tuner

3 Touch the keyword you want to be alerted.

The alert indicator is highlighted, and the alert setting is enabled.

- ☐ If you touch the indicator highlighted, the alert setting is canceled.



① Team Settings

Sets details of sport teams about which you want to be alerted.

- ➔ For details, refer to *Selecting teams for Game Alert* on page 123.

② Delete All

Deletes all items memorized to the alert list.

③ Alert: On

Each touch of this key changes the setting as follows:

- **Alert: On** (default):
The alert function is enabled.
- **Alert: Off**:
The alert function is disabled.

- ☐ If you touch and hold the list item, you can delete the item from the list.
- ☐ You can register up to 50 keywords in the alert list.

Selecting teams for Game Alert

This navigation system can alert you when games involving your favorite sports teams are about to start. To use this function you need to store the teams you want to follow in advance.

1 Touch [Team Settings] on the “Alert Setting” screen.

The list screen appears.

2 Touch the league you want.

3 Touch the team you want.

The team settings are enabled. ☐

Storing song information to an iPod (iTunes Tagging)

You can store the song information to the iPod, when the navigation system has received the song information. The songs will show up in a playlist called “Tagged playlist” in iTunes next time you synchronize your iPod. You can directly buy the songs via the navigation system.

Depending on when the song information is stored, information for the previous song or the song after the current song may also be stored. Be sure to confirm the song before you purchase it.

- ☐ The iTunes Tagging function is available while digital broadcasts are being received.

- ☐ This function is provided on the following iPod models:

- iPod touch 5th generation
- iPod touch 4th generation
- iPod touch 3rd generation
- iPod touch 2nd generation
- iPod touch 1st generation
- iPod classic
- iPod nano 6th generation
- iPod nano 5th generation
- iPod nano 4th generation
- iPod nano 3rd generation
- iPhone 5
- iPhone 4S
- iPhone 4
- iPhone 3GS
- iPhone 3G
- iPhone

- ☐ The version of iTunes must be 7.4 or higher.

1 Tune into the broadcast channel.

When song information is received, **Tag** is displayed while the desired song is being broadcast, and **Tag** becomes active.

- ➔ For details, refer to **Song info reception indicator** on page 118.

2 Touch .

Information on the song on air is stored in the navigation system.

While the information is being acquired,  is displayed.

When it is complete,  turns off and  is displayed.

- ❑ The song information for up to 50 songs can be stored on this navigation system. Depending on when the song information is stored, information for the previous song or the song after the current song may also be stored.

3 Connect your iPod.

The song information is transferred to your iPod.

- ❑ If the iPod is already connected, every time you touch , the song information will be transferred to your iPod. When the song information is stored on your iPod,  disappears.
- ❑ When transfer of song information is completed, the information stored in the navigation system will be automatically deleted.
- ❑ If you turn off the navigation system or disconnect the iPod while transferring song information, the transfer may not successfully complete.
- ❑ While the navigation system is storing song information, transfer to iPod is not possible. .

Operating by hardware buttons

Pressing the TRK button

You can move the channel up or down.

Pressing and holding the TRK button

You can move channels up or down by holding down the button. .

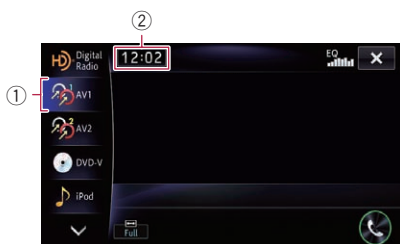
Using AV input

You can display the video image output by the device connected to the navigation system. For details of the connection method, refer to the Installation Manual.

CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, you must stop in a safe place and apply the parking brake.

Reading the screen



- ① **Source icon**
Shows which source has been selected.
- ② **Current time**

Using AV1

You can display the video image output by the device connected to video input 1.

1 Turn on the setting of video input 1 (AV1).

- ➡ For details, refer to *Setting video input 1 (AV1)* on page 149.

2 Display the AV operation screen.

- ➡ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

3 Touch [AV1] on the left edge of the screen.

The image is displayed on the screen.

Using AV2

You can display the video image output by the equipment connected to video input 2.

1 Turn on the setting of video input 2 (AV2).

- ➡ For details, refer to *Setting video input 2 (AV2)* on page 149.

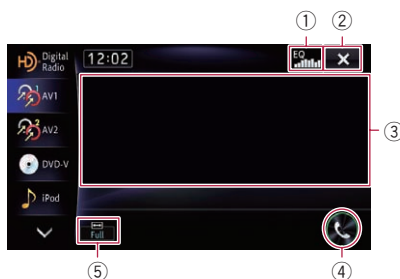
2 Display the AV operation screen.

- ➡ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

3 Touch [AV2] on the left edge of the screen.

The image is displayed on the screen.

Using the touch panel keys



① Recalls equalizer curves

- ➡ For details, refer to *Using the equalizer* on page 151.

② Hides the touch panel keys and information of the current video

Touching shows only the current video.

- If you want to display the touch panel keys and information of the current video again, touch anywhere on the LCD screen.

③ Operates some functions by swipe action

- When the video is displayed in full screen mode, the whole screen becomes a swipe response area.

- ➡ For details, refer to *Swipe action* on page 25.

- ④ **Displays the “Phone” screen**
➤ For details, refer to *Displaying the phone menu* on page 61.
- ⑤ **Changing the wide screen mode**
➤ For details, refer to *Changing the wide screen mode* on page 126. 

Changing the wide screen mode

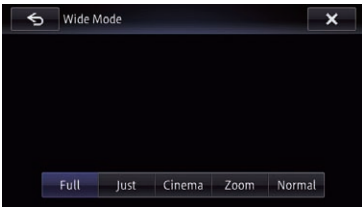
You can set the screen size of video.

- ☐ The default setting is “**Full**”.

1 Touch on the “AV1” or “AV2” screen.

- ☐ The appearance of this key changes according to the current setting.

2 Touch the desired mode.



- **Full**
A 4:3 picture is enlarged in the horizontal direction only, enabling you to enjoy a 4:3 TV picture (normal picture) without any omissions.
- **Just**
The picture is enlarged slightly at the center and the amount of enlargement increases horizontally toward the ends of the picture, enabling you to enjoy a 4:3 picture without sensing any disparity, even on a wide screen.
- **Cinema**
A picture is enlarged by the same proportion as “**Full**” or “**Zoom**” in the horizontal direction and by an intermediate proportion between “**Full**” and “**Zoom**” in the vertical direction; ideal for a cinema-sized (wide

screen) picture where captions lie outside the frame.

- **Zoom**
A 4:3 picture is enlarged in the same proportion both vertically and horizontally; ideal for a cinema-sized (wide screen) picture.
- **Normal**
A 4:3 picture is displayed normally, giving you no sense of disparity since its proportions are the same as those of the normal picture.
- ☐ Images may be unclear when “**Cinema**” or “**Zoom**” is selected.
- ☐ Remember that use of this system for commercial or public viewing purposes may constitute an infringement on the author’s rights protected by the Copyright Law. 

Using AppRadio Mode

WARNING

Certain uses of a smartphone may not be legal while driving in your jurisdiction, so you must be aware of and obey any such restrictions.

If in doubt as to a particular function, only perform it while the car is parked.

No feature should be used unless it is safe to do so under the driving conditions you are experiencing.

To utilize compatible applications via AppRadio Mode with an iPhone 5/iPod touch (5th generation), you must first update the Pioneer navigation system's firmware.

The iPhone 5/iPod touch (5th generation) compatible firmware is available as a free download from the Pioneer website:

<http://www.pioneerelectronics.com>

<http://www.pioneerelectronics.ca>

Additional cables are also required to connect the iPhone 5/iPod touch (5th generation) to your Pioneer navigation system.

Please visit the Pioneer website to learn more about iPhone 5/iPod touch (5th generation) compatibility and connectivity for your navigation system.

You can control applications for iPhone and smartphone directly on the navigation screen (AppRadio Mode).

In **AppRadio Mode**, you can operate applications with finger gestures such as tapping, dragging, scrolling or flicking on the screen of the navigation system.

- ☐ For AVIC-X850BT and AVIC-X8510BT, **AppRadio Mode** is only available on the iPhone.
- ☐ In this chapter, the iPhone and iPod touch will be referred to as iPhone.
- ☐ The compatible finger gestures vary depending on the application for iPhone or smartphone.

- ☐ When an application not compatible with **AppRadio Mode** is started, depending on the application, you can see an image of application on the screen of this navigation system. However, you cannot operate the application.

To use the **AppRadio Mode**, install the **AppRadio app** on the iPhone or smartphone beforehand to enable launching of the application on the navigation system. For details about the **AppRadio app**, visit the following site:

For U.S.A.

<http://www.pioneerelectronics.com/AppRadioMode>
For Canada

<http://www.pioneerelectronics.ca/AppRadioMode>

- ☐ Be sure to read *Using app-based connected content* before you perform this operation.
- ➡ For details, refer to *Using app-based connected content* on page 191.

- Pioneer is not liable for any issues that may arise from incorrect or flawed app-based content.
- The content and functionality of the supported applications are the responsibility of the App providers.
- In **AppRadio Mode**, functionality through the product is limited while driving, with available functions determined by the App providers.
- Availability of **AppRadio Mode** functionality is determined by the App provider, and not determined by Pioneer.
- **AppRadio Mode** allows access to applications other than those listed (subject to limitations while driving), but the extent to which content can be used is determined by the App providers.

Information for compatibility of connected devices

The following is the detailed information regarding the terminals required to use the application for iPhone or smartphone on this navigation system.

For iPhone users

- This function can be operated with the following iPhone models.
 - iPod touch 4th generation
 - iPhone 4S
 - iPhone 4
- The device has iOS 4.0 or higher.
- A USB interface cable for iPod (sold separately) must be used to connect your iPhone to this navigation system.

For smartphone users

- ❑ This description is for AVIC-Z150BH and AVIC-X950BH.
- The following conditions apply to the use of this function.
 - The device has Android OS 2.3 or higher.
 - The device supports Bluetooth SPP (Serial Port Profile).
- ❑ Compatibility with all Android devices is not guaranteed.
For details about Android device compatibility with this navigation system, refer to the information on our website.
- An App Connectivity Kit (CD-AH200) (sold separately) is required for connection to this navigation system.
- The device is connected to this navigation system via Bluetooth.❑

Starting procedure

The procedure varies depending on your type of device.

For iPhone users

- 1 Prepare the navigation system to connect to your iPhone.**
 - For details, refer to *Selecting the device connection method* on page 157.
- 2 Connect your iPhone.**
 - For details, refer to *Connecting your iPod* on page 19.
- 3 Press the HOME button to display the "Top Menu" screen.**
- 4 Touch [Apps].**

A message, which notifies you that your iPhone can launch the application, appears on screen.

A message, which asks you whether you want to launch your application, appears on your iPhone.

- 5 Use your iPhone to launch the application.**

The **AppRadio app** is launched.

- 6 Touch [OK] on the screen of this product.**

The **AppRadio Mode** screen (Application menu screen) appears.

Application menu screen



- ❑ If you connect your device while an **AppRadio Mode**-compatible application is already running, the application operation screen appears on this navigation system.

Using AppRadio Mode

7 Touch the desired application icon.

The desired application is launched, and the application operation screen appears.

8 Operate the application.

9 Press the HOME button to go back to the application menu screen.

- If you press the **HOME** button while the application menu screen is displayed, the "Top Menu" screen appears.

For smartphone users

- This description is for AVIC-Z150BH and AVIC-X950BH.

1 Prepare the navigation system to connect to your smartphone.

- ➡ For details, refer to *Selecting the device connection method* on page 157.

2 Register your smartphone and connect it to this product via the Bluetooth wireless technology.

- The registered device must be selected as the priority device.
- ➡ For details, refer to *Registering your Bluetooth devices* on page 56.

3 Unlock your smartphone.

4 Connect your smartphone to this product via the separately sold App Connectivity Kit (CD-AH200).

- The cable connection method varies depending on your device.
- ➡ For details of the operations, refer to the Installation Manual.

5 Press the HOME button to display the "Top Menu" screen.

6 Touch [Apps].

The **AppRadio app** is launched, and the **AppRadio Mode** screen (Application menu screen) appears.

Application menu screen



- If you connect your device while an **AppRadio Mode**-compatible application is already running, the application operation screen appears on this navigation system.
- The [Apps] key icon and Bluetooth icon vary according to the condition of Bluetooth connection as follows:

Icon	Meaning
	Appears when Bluetooth wireless technology (SPP) is connected.
	Appears when Bluetooth wireless technology (SPP) is disconnected.

You cannot use the **AppRadio Mode** when Bluetooth wireless technology (SPP) is disconnected.

7 Touch the desired application icon.

The desired application is launched, and the application operation screen appears.

8 Operate the application.

9 Press the HOME button to go back to the application menu screen.

- If you press the **HOME** button while the application menu screen is displayed, the "Top Menu" screen appears. □

Using the keyboard

⚠ CAUTION

For your safety, the keyboard functionality is only available when the vehicle is stopped and the parking brake is engaged.

- ❑ This function is only available in **AppRadio Mode** on the iPhone.

When you tap the text input area of an application for iPhone, a keyboard will be displayed on-screen. You can input the desired text directly from this navigation system.

- ❑ The language preference for the keyboard of this navigation system should be same as the setting on your iPhone. If the settings for this product and the iPhone are different, you may be unable to enter characters properly.

1 Set the keyboard language.

- ➔ For details of the operations, refer to *Setting the keyboard language with application for iPhone* on page 157.

2 Start up the AppRadio Mode.

- ➔ For details, refer to *Starting procedure* on page 128.

3 Touch the text input area on the application operation screen.

A keyboard for entering text appears.



- ① Enters the characters
- ② Deletes the input text one letter at a time, beginning at the end of the text
- ③ Confirms the entry and allows you to proceed to the next step

- ④ Hides the keyboard and text can now be entered using the keyboard of iPhone
- ⑤ Changes the iPhone keyboard layout
 - ❑ The iPhone keyboard layouts that can be selected by tapping depends on the setting of Hardware Keyboard Layout of your iPhone.
- ⑥ Switches to a keyboard offering numeric and symbol characters
- ⑦ Converts the case of the keyboard characters

Using the sound mix function

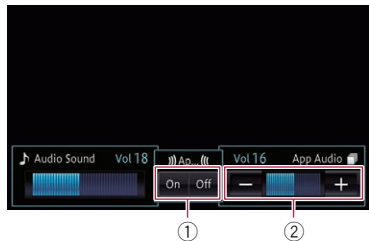
You can output sound mixing AV source and an application for iPhone or smartphone when the **AppRadio Mode** is used.

1 Start up the AppRadio Mode.

- ➔ For details, refer to *Starting procedure* on page 128.

2 Press the VOL (+/-) button.

The sound mix menu will be displayed on-screen.



- ① Sets whether to switch the sound mix function on or off
 - Off (default):
The sound mix function is disabled.
 - On:
The sound mix function is enabled.
- ② Adjusts the AppRadio Mode volume
Each touch of or increases or decreases the volume level.

Using AppRadio Mode

Other functions

Displaying the image of your application (iPhone)

You can set an image of the application for iPhone, which is not compatible with **AppRadio Mode**, to be shown on the screen.

- ☐ Depending on the type of application, you may not be able to see the image on screen.
- ☐ You can only control the application on the connected device.

1 Connect your iPhone.

- For details, refer to *Connecting your iPod* on page 19.

2 Press the HOME button to display the "Top Menu" screen.

3 Touch [Apps].

A message, which notifies you that your iPhone can launch the application, appears on screen.

A message, which asks you whether you want to launch your application, appears on your iPhone.

4 Use your iPhone to refuse to launch the application.

5 Touch [OK] on the screen of this product.

The black screen appears.

6 Launch an application on your iPhone.

An image of the application appears on the screen.

7 Press the HOME button to return to the "Top Menu" screen.

Displaying the image of your application (smartphone)

- ☐ This function is available on AVIC-Z150BH and AVIC-X950BH.

You can set an image of the application for smartphone, which is not compatible with **AppRadio Mode**, to be shown on the screen.

- ☐ Compatibility with all smartphones is not guaranteed.
- ☐ When you use this function, do not connect other devices via Bluetooth wireless technology. Be sure to disconnect your Bluetooth device before using this function.
- ☐ You can only control the application on the connected device.

1 Connect your smartphone to this product via the separately sold App Connectivity Kit (CD-AH200).

- ☐ The cable connection method varies depending on your device.
- For details of the operations, refer to the Installation Manual.

2 Press the HOME button to display the "Top Menu" screen.

3 Touch [Apps].

The image in your smartphone appears on the screen.

4 Launch an application on your smartphone.

An image of the application appears on the screen.

5 Press the HOME button to return to the "Top Menu" screen. ☐

Displaying the information screen

- 1 Press the HOME button to display the “Top Menu” screen.
- 2 Touch .
The “Information” screen appears.
- 3 Touch the item you want to configure.



Checking the connections of leads

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

- 1 Display the “Information” screen.
 - ➔ For details, refer to *Displaying the information screen* on page 132.
- 2 Touch [System Information].
The “System Information Menu” screen appears.
- 3 Touch [Connection Status].



- ① **Speed Pulse**
The Speed Pulse value detected by the navigation system is shown. “0” is shown while the vehicle is stationary.
- ② **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. (If the orange/white lead is not connected, “Off” appears.)
- ③ **Back Signal**
When the shift lever is shifted to “R”, the signal switches to “High” or “Low”. (One of these is displayed depending on the vehicle.)
- ④ **Parking Brake**
When the parking brake is applied, “On” is displayed. When the parking brake is released, “Off” is displayed.
- ⑤ **GPS Antenna**
Indicates the connection status of the GPS antenna, the reception sensitivity, and from how many satellites the signal is received.

Color	Signal communication	Used in positioning
Orange	Yes	Yes
Yellow	Yes	No

Customizing preferences

- ❑ When the GPS antenna is connected to this navigation system, "OK" is displayed. When the GPS antenna is not connected to this navigation system, "NOK" is displayed.
- ❑ If reception is poor, please change the installation position of the GPS antenna.

⑥ Installation

The installation position of the navigation system is shown.

If installed correctly, "OK" appears. Indicates whether the installation position of the navigation system is correct or not. When the navigation system is installed at an extreme angle exceeding the limitation of the installing angle, "NG" will be displayed. When the angle of the navigation system has been changed, "NG" will be displayed.

⑦ Bluetooth 1

The name of the connected Bluetooth device, Bluetooth device address and name of the profile in use are displayed. The electric wave condition between this product and the Bluetooth device is shown in the illustration.

⑧ Bluetooth 2

The name of the connected Bluetooth device, Bluetooth device address and name of the profile in use are displayed. The electric wave condition between this product and the Bluetooth device is shown in the illustration.

⑨ Bluetooth 3

The name of the connected Bluetooth device, Bluetooth device address and name of the profile in use are displayed. The electric wave condition between this product and the Bluetooth device is shown in the illustration. ■

Checking sensor learning status and driving status

- ❑ The navigation system can automatically use its sensor memory based on the outer dimensions of the tires.

1 Display the "Information" screen.

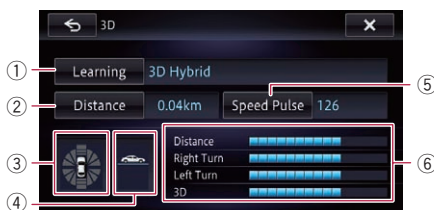
- For details, refer to *Displaying the information screen* on page 132.

2 Touch [System Information].

The "System Information Menu" screen appears.

3 Touch [3D Calibration Status].

The "3D Calibration Status" screen appears.



① Learning

Indicates the current driving mode.

② Distance

Indicates driving distance.

③ Acceleration or deceleration/Rotational speed

Indicates the acceleration or deceleration velocity of your vehicle. Also, the rotational speed when your vehicle turns to the left or right is shown.

④ Inclination

Indicates the incline of the street that you are currently on.

⑤ Speed Pulse

Indicates the total number of speed pulses.

⑥ Degree of learning

Sensor learning situations for distance (**Distance**), right turn (**Right Turn**), left turn (**Left Turn**) and 3D detection (**3D**) are indicated by the length of bars.

- ❑ When tires have been changed or chains fitted, turning on the Speed Pulse allows the system to detect the fact that the tire diameter has changed, and automatically replaces the value for calculating distance.
- ❑ If a separately sold speed pulse generator (ND-PG1) is connected, the distance calculation value cannot be replaced automatically.

Clearing status

You can delete the learned results stored in “Distance”, “Speed Pulse” or “Learning”.

- 1 Touch [Distance] or [Speed Pulse].
The following message appears.



- 2 Touch [Yes].
Clears the results stored in “Distance” or “Speed Pulse”.
- 3 Touch [Learning].
- 4 Touch [Reset All].
Clears all leaning results.
- ❑ Touch [Reset All] for the following cases:
 - After changing the installation position of the navigation system
 - After changing the installation angle of the navigation system
 - After moving the navigation system to another vehicle
 - If you touch [Reset Distance], all learned results stored in “Distance” are cleared.❑

Checking the device number

- 1 Display the “Information” screen.
➔ For details, refer to *Displaying the information screen* on page 132.
- 2 Touch [System Information].
The device number of your navigation system is displayed.
- 3 Check the device number.❑

Checking the version information

- 1 Display the “Information” screen.
➔ For details, refer to *Displaying the information screen* on page 132.
- 2 Touch [Version Information].
The current version is displayed.
- 3 Check the version information.
- 4 Touch [OK].❑

Registering 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 “Destination”. The registered home position can also be modified later.

- ❑ If your home has been already registered, delete the registered home location first.
➔ For details, refer to *Deleting registered contacts* on page 66.

1 Search for a location.
➔ For details, refer to Chapter 4.

After searching for a point, the map of the selected position is displayed.

- 2 Press the HOME button to display the “Top Menu” screen.
- 3 Touch [Destination].

Customizing preferences

4 Touch [Home].

If the home location has not been stored yet, a confirmation message appears.

5 Touch [Yes].

The registration is complete.

- ❑ If your home location has been newly registered, the name “Home” and home mark are automatically entered.
- ❑ You can change your home position.
 - For details, refer to *Editing registered locations* on page 50. ❑

Displaying the adjustment and correction screen

1 Press the HOME button to display the “Top Menu” screen.

2 Touch .

The “Edit/Settings” menu appears.

3 Touch [Vol./Pos. Adj.].

The “Volume/Position Adjustment” screen appears.

4 Touch the item you want to configure.



Switching the muting/attenuation timing

You can mute the AV source volume or attenuate the output signal.

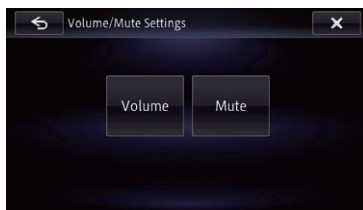
1 Display the “Volume/Position Adjustment” screen.

- For details, refer to *Displaying the adjustment and correction screen* on page 135.

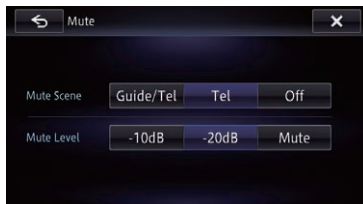
2 Touch [Volume/Mute Settings].

The “Volume/Mute Settings” screen appears.

3 Touch [Mute].



4 Touch the item you want to configure.



• Guide/Tel:

The volume is muted or attenuated according to the following conditions.

- When the navigation outputs the guidance voice.
- When you use a cellular phone via Bluetooth technology (dialing, talking, incoming call).

• Tel:

The volume is muted or attenuated when you use a cellular phone via Bluetooth technology (dialing, talking, incoming call).

• Off:

The volume does not change. ❑

Switching the muting/attenuation level

You can select the muting/attenuation level of “**Mute Timing**”. This setting is also effective for a mute signal that has been received from the MUTE lead connected to the navigation unit.

- ❑ This menu is not available when “**Mute Timing**” is “**Off**”.

1 Display the “Volume/Position Adjustment” screen.

- ➡ For details, refer to *Displaying the adjustment and correction screen* on page 135.

2 Touch [Volume/Mute Settings].

The “**Volume/Mute Settings**” screen appears.

3 Touch [Mute].

4 Touch the item you want to configure.

- **-20dB:**
The volume becomes 1/10.
- **-10dB:**
The volume becomes 1/3.
- **Mute:**
The volume becomes 0. ☐

Setting the Volume for Guidance and Phone

The sound volume for the navigation can be set. You can separately set the volume of the route guidance and the beep sound.

1 Display the “Volume/Position Adjustment” screen.

- ➡ For details, refer to *Displaying the adjustment and correction screen* on page 135.

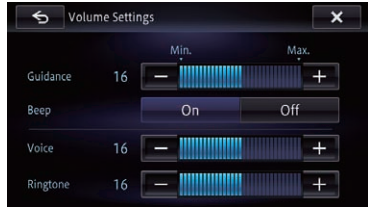
2 Touch [Volume/Mute Settings].

The “**Volume/Mute Settings**” screen appears.

3 Touch [Volume].

The “**Volume Settings**” screen appears.

4 Touch [+] or [-] to set their volume.



On this screen, you can operate the following items.

- **Guidance**

This setting controls the guidance volume of navigation.

- **Voice**

This setting controls the incoming voice volume.

- **Ringtone**

This setting controls the incoming ring tone volume.

- ❑ “**Ringtone**” and “**Voice**” adjustments are needed only when a cellular phone featuring Bluetooth technology is connected.

- If you touch the key next to “**Beep**”, the setting is changed.

- **On** (default):

A beep sounds.

- **Off:**

The beep sound is muted. ☐

Correcting the current location

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

1 Display the “Volume/Position Adjustment” screen.

- ➡ For details, refer to *Displaying the adjustment and correction screen* on page 135.

2 Touch [Modify Current Location].

3 Scroll to the position where you want to set, then touch [OK].

4 Touch the arrow key on the screen to set the direction, then touch [OK]. ☐

Customizing preferences

Switching the road on which you are driving

When you are driving in the area where an ordinary road and toll road run parallel, and if the system calculates your vehicle position to be on a road opposite from the one on which you are actually driving, you can switch your vehicle position to the right road, i.e. either the ordinary road or the toll road.

1 Display the “Volume/Position Adjustment” screen.

- For details, refer to *Displaying the adjustment and correction screen* on page 135.

2 Touch [Find Alternative Location].

The vehicle position is corrected to the right type of road.

- ☐ The vehicle position may not be corrected in some cases.
- ☐ During the route guidance, the vehicle position is corrected before the route is searched again. ☐

Displaying the screen for navigation function settings

1 Press the HOME button to display the “Top Menu” screen.

2 Touch .

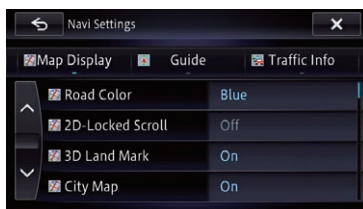
The “Edit/Settings” menu appears.

3 Touch [Navi Settings].



The “Navi Settings” menu appears.

4 Touch the item you want to configure.



5 Touch to end the setup.

Changing the road color

You can set the road color to bluish or reddish.

1 Display the “Navi Settings” screen.

- For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Map Display].

3 Touch [Road Color].

The setting screen appears.

4 Touch the item you want to set.

- **Blue** (default):
Changes to blue based road colors.
- **Red**:
Changes to red based road colors.

Setting the scroll-Locked 2D (Normal) View

You can select whether to lock the normal view when you scroll the screen.

1 Display the “Navi Settings” screen.

- For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Map Display].

3 Touch [2D-Locked Scroll].

The setting screen appears.

4 Touch the item you want to set.

- **Off** (default):
Does not lock the normal view when you scroll the screen.

- **On**
Locks the normal view when you scroll the screen.

Displaying the 3D landmarks

- ☐ The 3D landmarks and this setting are only available on AVIC-Z150BH.
You can select whether to display the 3D landmarks on the map.
- ☐ 3D landmarks only appear when the view mode is “**3D View**” and the map scale is set to 0.25 mile (200 m) or lower.

- 1 **Display the “Navi Settings” screen.**
 - For details, refer to *Displaying the screen for navigation function settings* on page 137.
- 2 **Touch [Map Display].**
- 3 **Touch [3D Land Mark].**
The setting screen appears.
- 4 **Touch the item you want to set.**
 - **On** (default):
Displays the 3D landmark on the map.
 - **Off**:
Hides the 3D landmark on the map.

Setting the detailed city map

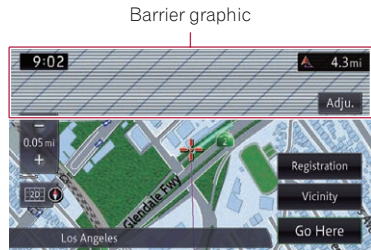
- ☐ This function is only available on AVIC-Z150BH.
You can select whether to display the city map when in certain metropolitan city areas.
- ☐ The city map is displayed when the map scale is 0.05 mile (50 meters) or less.

- 1 **Display the “Navi Settings” screen.**
 - For details, refer to *Displaying the screen for navigation function settings* on page 137.
- 2 **Touch [Map Display].**
- 3 **Touch [City Map].**
The setting screen appears.
- 4 **Touch the item you want to set.**
 - **On** (default):
Automatically switches to the city map when in a city map area.

- **Off**:
Does not show the city map.
 - ☐ Even if you switch “**City Map**” to “**On**”, the city map cannot be displayed in areas where there is no city map data.

Setting the barrier graphic for the city map

- ☐ This function is only available on AVIC-Z150BH.
On the city map screen, you can display a “barrier graphic” pattern where no city map data is available. This prevents a normal map of a different scale from being displayed at the same time, considerably enhancing the clarity of the city map on screen.



- 1 **Display the “Navi Settings” screen.**
 - For details, refer to *Displaying the screen for navigation function settings* on page 137.
- 2 **Touch [Map Display].**
- 3 **Touch [City Map Barrier].**
The setting screen appears.
- 4 **Touch the item you want to set.**
 - **On** (default):
Displays the barrier graphic for the city map.
When the vehicle position or cursor enters the barrier graphic area, the graphic disappears and a normal map is displayed in full screen mode.
 - **Off**:

Customizing preferences

Does not display the barrier graphic for the city map. When the vehicle position or cursor enters the area where no city map data is available, a normal map is displayed in full screen mode.

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 "Navi Settings" screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Map Display].

3 Touch [Day/Night Display].

The setting screen appears.

4 Touch the item you want to set.

- **Automatic** (default):
You can change the colors of a map between daytime and nighttime according to whether the vehicle lights are on or off.
- **Day:**
The map is always displayed with daytime colors.
- ☐ To use this function with "Automatic", the orange/white lead of the navigation system must be connected correctly.

Displays the track log on the screen.

- **Off:**

Does not display the track log on the screen.

Deleting the track log automatically

You can delete the track log automatically.

1 Display the "Navi Settings" screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Map Display].

3 Touch [Trav Log Auto Del.].

The setting screen appears.

4 Touch the item you want to set.

- **Off** (default):
Does not delete the track log automatically.
- **Near Home:**
After you turn off power of this product (turn off the engine) at a location within 100 m from registered your home, the track log is deleted automatically.
- **At Power Off:**
After you turn off power of this product (turn off the engine), the track log is deleted automatically.

Displaying the track log

You can select whether to display the track log on the map.

1 Display the "Navi Settings" screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Map Display].

3 Touch [Display Travel Log].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):

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 “Navi Settings” screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Map Display].

3 Touch [Current Location Info.].

The setting screen appears.

4 Touch the item you want to set.

- **Street Name** (default):
Displays the street name (or city name) on the map.
- **Coordinates**:
The current position is displayed in latitude and longitude.

Setting the criteria of route calculation

You can predefine the route calculation criteria. 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.

1 Display the “Navi Settings” screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Route Condition].

The setting screen appears.

4 Touch the item you want to set.

- **Fast** (default):
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.

• **Main Road**:

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

Setting the use of toll roads

You can predefine the use of toll roads when calculating a route. This setting controls whether toll roads (including toll areas) should be taken into account.

1 Display the “Navi Settings” screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Toll Road].

The setting screen appears.

4 Touch the item you want to set.

- **Use** (default):
Calculates a route that may include toll roads in a standard criteria.
- **Avoid**:
Calculates a route that avoids toll roads.

Setting the use of ferries

You can predefine the use of ferries when calculating a route. This setting controls whether ferry crossings should be taken into account.

1 Display the “Navi Settings” screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Ferry].

The setting screen appears.

4 Touch the item you want to set.

- **Use** (default):
Calculates a route that may include ferries in a standard criteria.
- **Avoid**:
Calculates a route that avoids ferries.

Customizing preferences

Setting the route calculation by learning route

The system learns the travel history of your vehicle for each road.

This setting controls whether or not the travel history should be taken into account.

1 Display the “Navi Settings” screen.

- For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Learning Route].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Calculates a route with the travel history taken into account.
- **Off**:
Calculates a route without the travel history taken into account.

Setting the route calculation allowing for traffic congestion

- ☐ This function is available on AVIC-Z150BH and AVIC-X950BH.

This navigation system can calculate a route taking into account traffic congestion when it acquires traffic information.

1 Display the “Navi Settings” screen.

- For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Traffic Avoidance].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Calculates a route allowing for traffic congestion.
- **Off**:
Calculates a route without allowing for traffic information.

Setting the route calculation allowing for time restrictions

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



CAUTION

If the time difference is not set correctly, the navigation system cannot consider traffic regulations correctly. Set the time difference correctly.

- For details, refer to *Setting the time difference* on page 145.

1 Display the “Navi Settings” screen.

- For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Time restrictions].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Calculates a route while avoiding streets or bridges with traffic restrictions during a certain time.
- **Off**:
Calculates a route while ignoring traffic restrictions.
 - ☐ If you want to set your route to avoid raised draw bridges, select “On”.
 - ☐ 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.

Setting the use of freeways

You can predefine the use of freeways when calculating a route.

1 Display the “Navi Settings” screen.

- For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Freeway].

The setting screen appears.

4 Touch the item you want to set.

- **Use** (default):
Calculates a route that may include free-ways in a standard criteria.
- **Avoid:**
Calculates a route that avoids freeways.

Setting to select your route automatically using the auto reroute function

- ❑ This function is available on AVIC-Z150BH and AVIC-X950BH.

You can set in advance a new route and the current route you select when the navigation system recommends a new alternative route automatically and no selection is made.

1 Display the “Navi Settings” screen.

- ➡ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].**3 Touch [Auto Reroute Choice].**

The setting screen appears.

4 Touch the item you want to set.

- **Current Route** (default):
Selects the current route.
- **Alt. Route:**
Selects an alternative route.

4 Touch the item you want to set.

- **Destination** (default):
Displays the distance and the progress to the destination, elapsed time and the estimated time of arrival.
- **Waypoint:**
Displays the distance and the progress to the next waypoint, elapsed time and the estimated time of arrival.

Setting the auto reroute function to avoid traffic congestion

- ❑ This function is available on AVIC-Z150BH and AVIC-X950BH.

This navigation system can calculate a route allowing for traffic congestion when the system acquires traffic information.

1 Display the “Navi Settings” screen.

- ➡ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].**3 Touch [Auto Reroute].**

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Calculates a route automatically allowing for traffic congestion.
- **Off:**
Does not calculate a route automatically.

Displaying the distance and estimated time

You can set the display information of the estimated time of arrival in the route guidance.

1 Display the “Navi Settings” screen.

- ➡ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].**3 Touch [Distance/ETA].**

The setting screen appears.

Customizing preferences

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 "Navi Settings" screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Close Up View].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Switches to an enlarged map.
- **Off**:
Does not switch to an enlarged map.

Changing the setting of the navigation interruption screen

You can set whether to automatically switch to the navigation screen from the AV screen when your vehicle approaches a guidance point such as an intersection.

1 Display the "Navi Settings" screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [AV Guide Mode].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Switches from the AV operation screen to the map screen.
 - **Off**:
Does not switch the screen.
- ☐ This setting is effective only when "Close Up View" is set to "On".

Setting the App operation screen interruption

You can set whether to automatically switch to the navigation screen from the **AppRadio Mode** screen.

1 Display the "Navi Settings" screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [App Guide Mode].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Switches from the App operation screen to the map screen.
- **Off**:
Does not switch the screen.

Changing the virtual speed of the vehicle

You can set the average speed for the ordinary road or freeway to calculate the estimated time of arrival.

- ☐ This setting is enabled if the route calculation does not take account of traffic congestion.

- ➔ For details, refer to *Setting the auto re-route function to avoid traffic congestion* on page 142.

1 Display the "Navi Settings" screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [Minor Ordinary Road], [Major Ordinary Road] or [Freeway].

The setting screen appears.

4 Touch the item you want to set.

The estimated time of arrival is calculated based on the average speed you set. The average speed you can select for each kind of road is as follows.

Minor Ordinary Road

- **mile** or **Mile&Yard**:

10mph, 20mph, 25mph (default), 30mph, 40mph

- **km:**
20km/h, 30km/h, 40km/h (default), 50km/h, 60km/h

Major Ordinary Road

- **mile or Mile&Yard:**
30mph, 40mph, 45mph (default), 50mph, 55mph
- **km:**
50km/h, 60km/h, 70km/h (default), 80km/h, 90km/h

Freeway

- **mile or Mile&Yard:**
55mph, 60mph (default), 70mph, 75mph, 80mph
- **km:**
90km/h, 100km/h (default), 110km/h, 120km/h, 130km/h

- ❑ The unit may vary depending on the settings.
➔ For details, refer to *Changing the unit between km and miles* on page 144.
- ❑ The estimated time of arrival may not take into account parameters other than this speed value.

Changing the unit between km and miles

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

1 Display the “Navi Settings” screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Guide].

3 Touch [km / mile].

The setting screen appears.

4 Touch the item you want to set.

- **mile** (default):
Shows distance in miles.
- **km:**
Shows distance in kilometers.
- **Mile&Yard:**
Shows distance in miles and yards.
- If you touch [No], the setting is canceled.

Displaying the traffic notification icon

- ❑ This function is available on AVIC-Z150BH and AVIC-X950BH.

Selects whether to display or hide the traffic notification icons on the map when incidents occur on your route.

1 Display the “Navi Settings” screen.

- ➔ For details, refer to *Displaying the screen for navigation function settings* on page 137.

2 Touch [Traffic Info].

3 Touch [Traffic].

The setting screen appears.

4 Touch the item you want to set.

- **On** (default):
Displays the icons on the map.
- **Off:**
Hides the icons on the map. ☐

Changing the view mode

Various types of screen displays can be selected for navigation guidance.

- ➔ For details of the operation, refer to *Switching the view mode* on page 33. ☐

Displaying the screen for system settings

1 Press the HOME button to display the “Top Menu” screen.

2 Touch .

The “Edit/Settings” menu appears.

3 Touch [System Settings].



The “System Settings” screen appears.

Customizing preferences

4 Touch the item you want to configure.



Selecting the language

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

1 Display the "System Settings" screen.

- For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Regional Settings].

The "Language Settings" screen appears.

3 Touch [Program Language].

The "Select Program Language" screen appears.

4 Touch the desired language.

After the language is selected, the previous screen returns.

5 Touch [Voice Language].

The "Select Voice Language" screen appears.

6 Touch the desired language.

After the language is selected, the previous screen returns.

7 Touch on the "Language Settings" screen.

A message confirming whether to restart the navigation system appears.

8 Touch [Yes].

The navigation system restarts.

- If you press the **MODE**, **MAP**, or **HOME** button, the setting procedure is canceled.

Setting the time difference

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

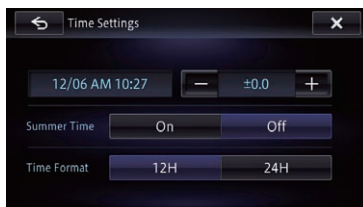
1 Display the "System Settings" screen.

- For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Time Settings].

The "Time Settings" screen appears.

3 To set the time difference, touch [+] or [-], [On] or [Off], or [12H] or [24H].



On this screen, you can operate the following items.

- **+, -**
Adjusts time for the summer time.
- **Summer Time**
Turns the summer time on or off.
Off (default):
Changes the summer time setting to off.
On:
Changes the summer time setting to on.
- **Time Format**
12H (default):
Changes the display to 12-hour format with am/pm.
24H:
Changes the display to 24-hour format.

Changing the preinstalled splash screen

You can change the splash screen to other images preinstalled in the navigation system.

1 Display the "System Settings" screen.

- For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Splash Screen].

The "Select Splash Screen" screen appears.

3 Touch the image to use as the splash screen from the list.

The image is displayed on the screen.

▪ If you touch **[Show Image]**, you can confirm a selected image via full screen preview. Touch the screen to return to the **"Select Splash Screen"**.

4 Touch **[OK]**.

The image is set as the splash screen, and the map screen returns.

Changing to the splash screen stored on the SD memory card

You can change the splash screen to other images imported from the SD memory card.

- ☐ Splash screen images must be used within the following formats.
 - BMP or JPEG files
 - Allowable data size is 6 MB or smaller
- ☐ The best image size is 800 pixels x 480 pixels.
- ☐ Proper compatibility with allowable files is not guaranteed.
- ☐ Imported original images will be stored in the built-in memory, but the ability to save these images cannot be guaranteed completely. If your original image data is deleted, insert the SD memory card again and re-import the original image.
- ☐ The maximum number of images, including those in the built-in memory, that can be imported and displayed on the list is 10.

1 Create a folder named "Pictures" in the top-most directory of the SD memory card.

2 Store the picture files in the "Pictures" folder.

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

- ➔ For details of the operation, refer to *Inserting and ejecting an SD memory card* on page 16.

4 Display the "System Settings" screen.

- ➔ For details, refer to *Displaying the screen for system settings* on page 144.

5 Touch **[Splash Screen].**

The **"Select Splash Screen"** screen appears.

6 Touch **[Load from SD].**

A message confirming whether to start loading files appears.

- **Yes:**

Starts importing the files into the navigation system.

- **No:**

Returns you to the previous screen.

The **"Select Splash Screen"** screen appears.

7 Touch the image to use as the splash screen from the list.

The image is displayed on the screen.

8 Touch **[OK].**

The image is set as the splash screen, and the map screen returns.

- ☐ Images imported from the SD memory card are added to the list on **"Select Splash Screen"**.

Customizing preferences

Adjusting the response positions of the touch panel (touch panel calibration)

If you feel that the touch panel keys on the screen deviate from the actual positions that respond to your touch, adjust the response positions of the touch panel screen.

- ❑ Do not use sharp pointed tools such as a ballpoint or mechanical pens, which could damage the screen.

1 Press and hold the MODE button.

The picture adjustment screen appears.

2 Press and hold the MODE button while the picture adjustment screen is still displayed.

The touch panel adjustment screen appears.

3 Touch two corner of the screen along the allows, and then touch two center of + mark at the same time twice.

4 Press the MODE button.

The adjustment results are saved.

5 Press the MODE button once again.

Proceed to the 16-point adjustment.

6 Gently touch the center of the + mark displayed on the screen.

The target indicates the order.

After you touch all marks, the adjusted position data is saved.

- ❑ Do not turn off the engine while saving the adjusted position data.
- If you press the **MODE** button, the previous adjustment position returns.
- If you press and hold the **MODE** button, the adjustment is canceled.

Setting the illumination color

The illumination color can be selected from 5 different colors. Furthermore, the illumination can be switched between these 5 colors in order.

Selecting the color from the preset colors

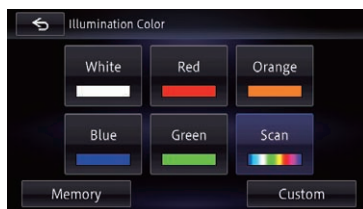
1 Display the “System Settings” screen.

- For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Illumination color setting].

The “Illumination Color” screen appears.

3 Touch the color you want.



Available options:

- **Colored keys:**
Selects the desired preset color.
- **Memory:**
Selects the registered color in the memory.
- **Scan:**
Shifts gradually between the five default colors in sequence.
- **Custom:**
Displays the “Illumination Color” screen. You can customize the illumination color.
➤ For details, refer to *Creating a user-defined color and storing it to memory* on page 147.

Creating a user-defined color and storing it to memory

You can create a user-defined color and set it as the illumination color.

1 Display the “System Settings” screen.

- For details, refer to *Displaying the screen for system settings* on page 144.

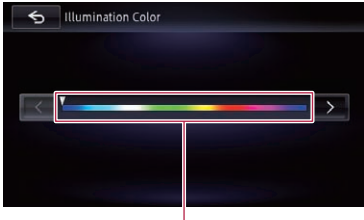
2 Touch [Illumination color setting].

The “Illumination Color” screen appears.

3 Touch [Custom].

The “Illumination Color” screen appears.

4 Touch ◀ or ▶ to adjust the values for Red, Green and Blue to create a favorite color.



Color bar

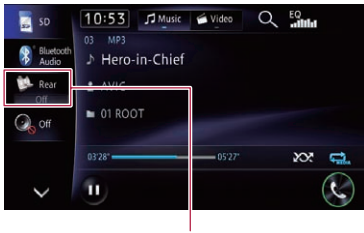
- You can adjust the color tone by dragging the color bar.
Watch the illumination of the hardware buttons while adjusting the color.

5 Touch ◀.

The previous screen returns.

Displaying the icon for setting the rear display output

You can display the icon to select which source will be displayed on the rear display.



Icon of output to select which setting of the rear display

- ➡ For details, refer to *Selecting the video for rear display* on page 159.

1 Display the “System Settings” screen.

- ➡ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Rear Monitor Output].

The “Rear Monitor Output Setting Screen” screen appears.

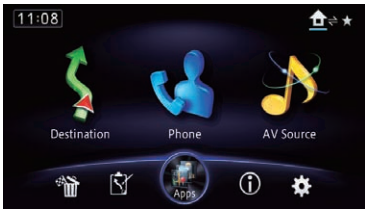
3 Touch [On] or [Off].

- **Off** (default):
The icon of the output setting of the rear display disappears.
- **On**:
The icon of the output setting of the rear display appears. ◻

Displaying the screen for AV system settings

1 Press the HOME button to display the “Top Menu” screen.

2 Touch ⚙.



The “Edit/Settings” screen appears.

3 Touch [Source Settings].

The “Setting according to source” screen appears.

4 Touch the item you want to configure.



Customizing preferences

Setting video input 1 (AV1)

You can use outside video equipment such as portable players connected to this product with this setting.

❑ This setting applies to mini-jack input.

1 Display the “Setting according to source” screen.

➡ For details, refer to *Displaying the screen for AV system settings* on page 148.

2 Touch [AV Input].

3 Touch [AV1 Input].

4 Touch [On].

The connected component is enabled.

❑ Use “**AV1 Input**” when connecting CD-RM10 (sold separately) through the external video component.

▪ If you touch [Off], the setting is turned off.

Setting video input 2 (AV2)

You can use outside video equipment such as portable players connected to this product with this setting.

❑ This setting applies to RCA inputs (AUDIO INPUT and VIDEO INPUT) on the back of the system.

1 Display the “Setting according to source” screen.

➡ For details, refer to *Displaying the screen for AV system settings* on page 148.

2 Touch [AV Input].

3 Touch [AV2 Input].

4 Touch [On].

The connected component is enabled.

▪ If you touch [Off], the setting is turned off.

Changing the screen size of SD/USB video

Changes the screen size of video. If a video file is played, you can select the display mode between normal and full screen.

1 Display the “Setting according to source” screen.

➡ For details, refer to *Displaying the screen for AV system settings* on page 148.

2 Touch [SD/USB Settings].

3 Touch [SD Video Output Settings] or [USB Video Output Settings].

4 Touch [Full] or [Normal].

• Full (default):

A picture is enlarged in four directions without keeping the aspect ratio and displays to the full extent of a screen.

• Normal:

A picture is displayed fitting to the long side of the screen while keeping the aspect ratio.

Displaying your DivX VOD registration code

If you want to play DivX VOD (video on demand) content on this navigation system, you must first register the unit with your DivX VOD content provider. You do this by generating a DivX VOD registration code, which you submit to your provider.

❑ This feature is available when the selected source is **CD**, **ROM**, **DivX**, or **DVD-V**.

1 Display the “Setting according to source” screen.

➡ For details, refer to *Displaying the screen for AV system settings* on page 148.

2 Touch [DivX® VOD].

A screen where you can choose to display a registration code or deregistration code is displayed.

- ❑ If a registration code has already been activated, it cannot be displayed.

3 Touch [Registration Code].

Your 10-digit registration code is displayed.

- ❑ Make a note of the code as you will need it when you register with a DivX VOD provider.

Displaying your DivX VOD deregistration code

A registration code registered with a deregistration code can be deleted.

- ❑ This feature is available when the selected source is **CD**, **ROM**, **DivX**, or **DVD-V**.

1 Display the “Setting according to source” screen.

- For details, refer to *Displaying the screen for AV system settings* on page 148.

2 Touch [DivX® VOD].

A screen where you can choose to display a registration code or deregistration code is displayed.

- ❑ If a registration code has not been activated, the deregistration code is not displayed.

3 Touch [Deregistration Code].

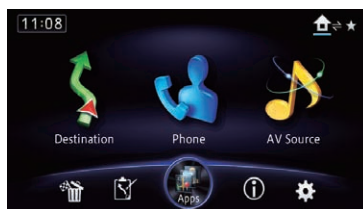
Your eight-digit deregistration code is displayed.

- ❑ Make a note of the code as you will need it when you deregister with a DivX VOD provider. ■

Displaying the screen for AV sound settings

1 Press the HOME button to display the “Top Menu” screen.

2 Touch .



The “Edit/Settings” screen appears.

3 Touch [AV Settings].

The “AV Settings” menu appears.

4 Touch [AV Sound Settings].

The “AV Sound Settings” screen appears.

- ❑ You cannot make adjustments in the following situations:
 - AV source is “Off”.
 - During muting/attenuation

5 Touch the item you want to configure.



Using balance adjustment

You can select a fader/balance setting that provides an ideal listening environment in all occupied seats.

1 Display the “AV Sound Settings” screen.

- For details, refer to *Displaying the screen for AV sound settings* on page 150.

2 Touch [FAD/BAL].

When “Sub. W” is selected in “Rear SP”, [Balance] will be displayed instead of [FAD/BAL] and the front/rear speaker balance cannot be adjusted.

Customizing preferences

- ➔ For details, refer to *Setting the rear output* on page 158.

3 Touch or to adjust front/rear speaker balance.

Each time you touch  or  the front/rear speaker balance moves towards the front or rear.

"Front 15" to "Rear 15" is displayed as the front/rear speaker balance moves from the front to rear.

Set "Front" and "Rear" to "0" when using a dual speaker system.

4 Touch or to adjust the left/right speaker balance.

Each time you touch  or  the left/right speaker balance moves towards the left or right.



"Left 15" to "Right 15" is displayed as the left/right speaker balance moves from left to right.

Adjusting loudness

Loudness compensates for deficiencies in the low- and high-sound ranges at low volumes.

1 Display the "AV Sound Settings" screen.

- ➔ For details, refer to *Displaying the screen for AV sound settings* on page 150.

2 Touch [Loudness].

3 Touch [On].

- If you touch [Off], the setting is turned off.

4 Touch or , and select the level you want to set. Low — Mid — High

Using the equalizer

The equalizer lets you adjust equalization to match the vehicle interior acoustic characteristics as desired.

Recalling equalizer curves

There are seven stored equalizer curves that you can easily recall at any time. Here is a list of the equalizer curves:

Equalizer curve

S.Bass (Super Bass) is a curve in which only low-pitched sound is boosted.

Powerful is a curve in which low- and high-pitched sounds are boosted.

Natural is a curve in which low- and high-pitched sounds are slightly boosted.

Vocal is a curve in which the midrange, which is the human vocal range, is boosted.

Flat is a flat curve in which nothing is boosted.

Custom1 is an adjusted equalizer curve that you create. A separate custom curve can be created for each source.

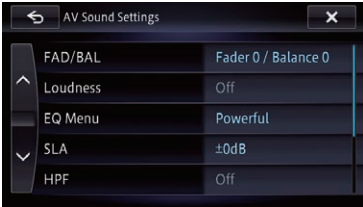
Custom2 is an adjusted equalizer curve that you create. If you select this curve, the effect is reflected all AV source.

- ❑ When "Flat" is selected, no supplement or correction is made to the sound. This is useful to check the effect of the equalizer curves by switching alternatively between "Flat" and a set equalizer curve.
- ❑ You cannot select "Custom1" and "Custom2" when "Auto EQ" is "On".
 - ➔ For details, refer to *Using the auto-adjusted equalizer* on page 153.

1 Display the "AV Sound Settings" screen.

- ➔ For details, refer to *Displaying the screen for AV sound settings* on page 150.

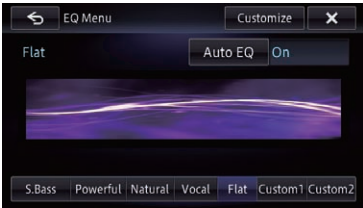
2 Touch [EQ Menu].



3 Touch the equalizer you want.



- ❑ If **Auto EQ** has been set to “On”, an image corresponding to each equalizer curve you selected appears.



- ➡ For details of the operations, refer to *Adjusting the equalizer curve automatically (Auto EQ)* on page 154.

Customizing the equalizer curves

You can adjust the currently selected equalizer curve setting as desired. Adjustments can be made with a 8-band graphic equalizer.

- ❑ This function is not available when “**Auto EQ**” is “On”.
 - ➡ For details, refer to *Using the auto-adjusted equalizer* on page 153.

The difference between “Custom1” and “Custom2”

- A separate “**Custom1**” curve can be created for each source. If you make adjustments when a curve “**S.Bass** (Super Bass)”, “**Powerful**”, “**Natural**”, “**Vocal**”, “**Flat**”, or “**Custom1**” is selected, the equalizer curve settings will be memorized in “**Custom1**”.
- A “**Custom2**” curve can be created common to all sources. If you make adjustments when the “**Custom2**” curve is selected, the “**Custom2**” curve will be updated.
- The “**Custom1**” curve is applied to each of the sources selected, but you can apply the same curve to the following sources.
 - **AV1** and **AV2**
 - **CD, ROM, DVD-V, and DivX**
 - **SD** and **USB**
 - **Bluetooth Audio, Pandora** (Bluetooth connection) and **Aha Radio** (Bluetooth connection)
 - **Pandora** (HDMI connection) and **Aha Radio** (HDMI connection) (for AVIC-Z150BH and AVIC-X950BH)
 - **iPod, Pandora** (iPhone) and **Aha Radio** (iPhone)

1 Display the “AV Sound Settings” screen.

- ➡ For details, refer to *Displaying the screen for AV sound settings* on page 150.

2 Touch [EQ Menu].

3 Touch one of the keys to select a curve that you want to use as the basis of customizing.

4 Touch [Customize].

Customizing preferences

- 5 Touch the frequency for which you want to adjust the level.



- 6 Touch [▲] or [▼] to adjust the level of the equalizer band.

Each time you touch [▲] or [▼], the level of the equalizer band increases or decreases.

Using the auto-adjusted equalizer

You can set the auto-adjusted equalizer to suit the vehicle's acoustics. To use this function, the vehicle's acoustics must be measured in advance.

- ➔ For details of the operations, refer to *Adjusting the equalizer curve automatically (Auto EQ)* on page 154.
- ❑ To manually adjust the equalizer curve, set "Auto EQ" to "Off".

- 1 Display the "AV Sound Settings" screen.

- ➔ For details, refer to *Displaying the screen for AV sound settings* on page 150.

- 2 Touch [EQ Menu].

- 3 Touch the key next to "Auto EQ" to turn the auto-adjusted equalizer on or off.

- 4 Select the equalizer curve.

Adjusting source levels

SLA (source level adjustment) lets you adjust the volume level of each source to prevent radical changes in volume when switching between sources.

- ❑ Settings are based on the FM tuner volume level, which remains unchanged.

- ❑ You cannot select [SLA] when the FM tuner is selected as the AV source.

- 1 Compare the FM tuner volume level with the level of the source you wish to adjust.

- 2 Display the "AV Sound Settings" screen.

- ➔ For details, refer to *Displaying the screen for AV sound settings* on page 150.

- 3 Touch [SLA].

- 4 Touch [+] or [-] to adjust the source volume.

"+8dB" to "-8dB" is displayed as the source volume is increased or decreased.

The following AV sources are set to the same source level adjustment volume automatically.

- **AV1 and AV2**
- **CD, ROM, and DivX**
- **SD and USB**
- **Bluetooth Audio, Pandora** (Bluetooth connection) and **Aha Radio** (Bluetooth connection)
- **Pandora** (HDMI connection) and **Aha Radio** (HDMI connection) (for AVIC-Z150BH and AVIC-X950BH)
- **iPod, Pandora** (iPhone) and **Aha Radio** (iPhone)

Using the high pass filter

When you cut lower sounds from the subwoofer output frequency, activate **HPF** (high pass filter). Only frequencies higher than those in the selected range are output from the front or rear speakers.

- 1 Display the "AV Sound Settings" screen.

- ➔ For details, refer to *Displaying the screen for AV sound settings* on page 150.

- 2 Touch [HPF].

- 3 Touch [On].

- If you touch [Off], the setting is turned off.

4 Each touch of **<** or **>** changes the cut-off frequencies as follows:
50Hz — 63Hz — 80Hz — 100Hz — 125Hz

Using the subwoofer output

The navigation system is equipped with a subwoofer output mechanism, which can be turned on or off.

1 Display the “AV Sound Settings” screen.

➤ For details, refer to *Displaying the screen for AV sound settings* on page 150.

2 Touch [Sub Woofer].

3 Confirm that the subwoofer output is turned on.

☐ The default setting is “On”.



▪ If you touch [Off], the subwoofer output is turned off.

4 Touch [Reverse] or [Normal] to select the phase of subwoofer output.

5 Touch **<** or **>** next to “Frequency(Hz)” to select cut-off frequency.

Each time you touch **<** or **>**, cut-off frequencies are selected in the following order:
50Hz — 63Hz — 80Hz — 100Hz — 125Hz
Only frequencies lower than those in the selected range are output from the subwoofer.

6 Touch [+] or [-] next to “Level” to adjust the output level.

“+6” to “-24” is displayed as the level is increased or decreased.

Enhancing bass (Bass Booster)

You can enhance bass sounds that are often muted by driving noise.

1 Display the “AV Sound Settings” screen.

➤ For details, refer to *Displaying the screen for AV sound settings* on page 150.

2 Touch [Bass Booster].

3 Touch [+] or [-] to adjust the range from 0 to 6.

Using sonic center control

Sound that is suited for the listening position can easily be created with this function.

1 Display the “AV Sound Settings” screen.

➤ For details, refer to *Displaying the screen for AV sound settings* on page 150.

2 Touch [Sonic Center Control].

3 Touch **<** or **>** to select a listening position.

☐ The larger the value of the range: “Left 7” to “Right 7” setting, the greater the delay of the speaker output.

☐ When “Left” is set, the left speaker output is delayed. When “Right” is set, the right speaker output is delayed. ☐

Adjusting the equalizer curve automatically (Auto EQ)

By measuring the vehicle’s acoustics, the equalizer curve can be adjusted automatically to suit the vehicle interior.

! WARNING

A loud tone (noise) may be emitted from the speakers when measuring the vehicle’s acoustics. Never perform the Auto EQ measurement while driving.

Customizing preferences

CAUTION

- Thoroughly check the conditions before performing Auto EQ, as the speakers may be damaged if this is performed under the following conditions:
 - When the speakers are incorrectly connected. (For example, when a rear speaker is connected as a subwoofer output.)
 - When a speaker is connected to a power amp delivering output higher than the speaker's maximum input power capability.
- If a microphone for acoustical measurement (sold separately) is not placed in an appropriate location, the measurement tone may become loud and measurement may take a long time, resulting in battery drainage. Be sure to place the microphone in the specified location.

Before operating the Auto EQ function

- Perform Auto EQ in as quiet a place as possible, with the vehicle engine and air conditioning switched off. Also, cut power to car phones or cellular phones in the vehicle, or remove them from the vehicle before performing Auto EQ. Sounds other than the measurement tone (surrounding sounds, engine sound, telephones ringing, etc.) may prevent correct measurement of the vehicle's acoustics.
- Be sure to perform Auto EQ using the microphone for acoustical measurement (sold separately). Using another microphone may prevent measurement, or result in incorrect measurement of the vehicle's acoustics.
- To perform Auto EQ, the front speakers must be connected.
- When this navigation system is connected to a power amp with input level control, Auto EQ may be impossible if the power amp's input level is set below the standard level.

- When this navigation system is connected to a power amp with an LPF (low pass filter), turn the LPF off before performing Auto EQ. Also, set the cut-off frequency for the built-in LPF of an active subwoofer to the highest frequency.
- The distance has been calculated by computer to provide optimum delay to ensure accurate results. Do not change this value.
 - The reflected sound within the vehicle is strong and delays occur.
 - The LPF on active subwoofers or external amps delay the lower sounds.
- If an error occurs during measurement, a message appears and measurement is canceled. Check the following before measuring the vehicle's acoustics.
 - Front speakers (left/right)
 - Rear speakers (left/right)
 - Noise
 - Microphone for acoustical measurement (sold separately)
 - Low battery

Performing Auto EQ

- ☐ Auto EQ changes the audio settings as follows:
 - “**Auto EQ**” on the “**EQ Menu**” screen is set to “**On**”.
 - ➡ For details, refer to *Using the auto-adjusted equalizer* on page 153.
 - The fader/balance settings return to the center position.
 - ➡ For details, refer to *Using balance adjustment* on page 150.
 - The equalizer curve switches to “**Flat**”.
 - ➡ For details, refer to *Using the equalizer* on page 151.
 - The front and rear speakers will automatically be adjusted to a high pass filter setting.
- ☐ Previous settings for Auto EQ will be overwritten.
- ☐ For AVIC-Z150BH users

Customizing preferences

Do not press the ▲ button to open or close the panel when you are using the microphone.

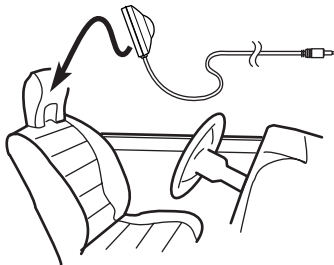
1 Stop the vehicle in a quiet place, close all the doors, windows and sun roof, and then turn the engine off.

If the engine is left running, engine noise may prevent correct Auto EQ.

- ❑ If driving restrictions are detected during measurement, measurement is canceled.

2 Fix the microphone for acoustical measurement (sold separately) in the center of the headrest of the driver's seat, facing forward.

The Auto EQ may differ depending on where you place the microphone. If desired, place the microphone on the front passenger seat and perform Auto EQ.



3 Disconnect the iPhone or smartphone device.

4 Turn on the ignition switch (ACC ON).

If the vehicle's air conditioner or heater is turned on, turn it off. Noise from the fan in the air conditioner or heater may prevent correct Auto EQ.

5 Switch the AV source to "Off".

- ➔ For details of the operations, refer to *Displaying the AV operation screen* on page 71.

6 Set the video setting for the rear display to "Mirror AV".

- ➔ For details of the operations, refer to *Selecting the video for rear display* on page 159.

7 Press the HOME button to display the "Top Menu" screen.

8 Touch .

The "Edit/Settings" screen appears.

9 Touch [AV Settings].

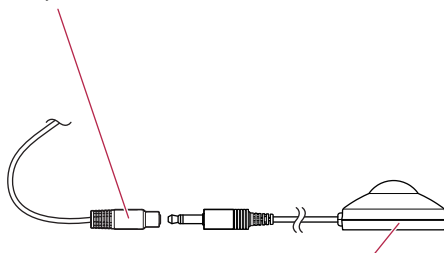
The "AV Settings" menu appears.

10 Touch [Auto EQ Measurement].

The "Auto EQ Measurement" screen appears.

11 Plug the microphone into the mini-jack connector.

Mini-jack of the RCA connector



Microphone for acoustical measurement (sold separately)

12 Touch [Start].

A 10-second countdown starts.

13 Exit the vehicle and keep the door closed until the countdown finishes.

When the countdown is over, a measurement tone (noise) is emitted from the speakers and the Auto EQ measurement begins.

14 Wait until the measurement is completed.

When Auto EQ is completed, a message is displayed indicating that the measurement is completed.

- ❑ If the vehicle's acoustics cannot be measured correctly, an error message will be displayed.
- ❑ The measurement time varies depending on the type of vehicle.
- ❑ To stop the measurement, touch [Stop].

Customizing preferences

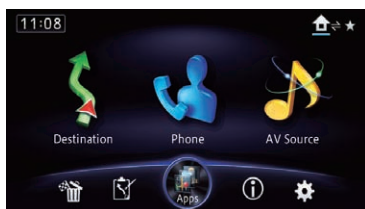
15 Store the microphone carefully in the glove compartment or another safe place.

If the microphone is subjected to direct sunlight for an extended period, high temperatures may cause distortion, color change or malfunction. 

Displaying the screen for app settings

1 Press the HOME button to display the "Top Menu" screen.

2 Touch .



The "Edit/Settings" screen appears.

3 Touch [App Settings].

The "App Settings" menu appears.

4 Touch the item you want to configure.



Selecting the device connection method

If you want to use the application for iPhone or smartphone on this navigation system, you must select the method for connecting your device.

1 Display the "App Settings" screen.

- For details of the operations, refer to *Displaying the screen for app settings* on page 157.

2 Touch [App Connection Settings].

The "App Connection Settings" screen appears.

3 Touch [iPhone] or [Android].

- **iPhone:**
The connection setting of iPhone is enabled.
- **Android:**
The connection setting of smartphone (Android device) is enabled.
- ☐ The [Apps] key icon of the "Top Menu" screen varies according to the connection setting.
- ☐ You cannot set to connect when your device is connected to this navigation system with a cable.
- ☐ When a device that supports Bluetooth SPP (Serial Port Profile) is registered and preferentially paired, the connection will set to "Android" automatically.

Setting the keyboard language with application for iPhone

- ☐ This function is only available in **AppRadio Mode** on the iPhone.

You can use the keyboard in **AppRadio Mode** by setting the language of the keyboard for iPhone.

1 Set the language preference for the keyboard of the iPhone.

2 Display the "App Settings" screen.

- For details of the operations, refer to *Displaying the screen for app settings* on page 157.

3 Touch [App Keyboard Settings].

The "App Keyboard Selection" screen appears.

4 Touch the desired language.

After the language is selected, the previous screen returns. 

Setting the rear output

The navigation system's rear output can be used for a full-range speaker or subwoofer connection. If you switch "Rear SP" to "Sub. W", you can connect a rear speaker lead directly to a subwoofer without using an auxiliary amp.

Initially, the navigation system is set for a rear full-range speaker connection ("Full").

- ☐ Both rear speaker leads output and RCA rear output are switched simultaneously in this setting. (When you use the product without RCA rear output, this setting only applies to the rear speaker leads.)
- ☐ "Rear SP" can be set only when the source is selected to "Off".

1 Disconnect the iPhone or smartphone device.

2 Press the HOME button to display the "Top Menu" screen.

3 Touch .
The "Edit/Settings" screen appears.

4 Touch [AV Settings].
The "AV Settings" menu appears.

5 Touch [Rear SP].

- 6 Touch [Full] or [Sub. W].
- **Full** (default):
When no subwoofer is connected to the rear output, select "Full".
 - **Sub. W**
When a subwoofer is connected to the rear output, select "Sub. W". 

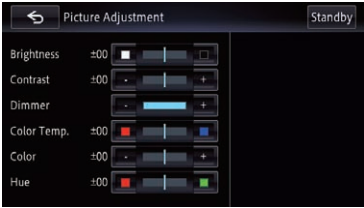
Adjusting the picture

 CAUTION

For safety reasons, you cannot use some of these navigation functions while your vehicle is in motion. To enable these functions, you must stop in a safe place and apply the parking brake. Refer to Important Information for the User (a separate manual).

You can adjust the picture for each source and rear view camera.

- 1 Press and hold the MODE button.
The "Picture Adjustment" screen appears.
- 2 Touch the right and left touch panel keys to make an adjustment.



- **Brightness:**
Adjusts the black intensity.
 - **Contrast:**
Adjusts the contrast.
 - **Dimmer:**
Adjusts the brightness of display.
 - **Color Temp.:**
Adjusts the tone of color (which color is emphasized, red or blue).
 - **Color:**
Adjusts the color saturation.
 - **Hue:**
Adjusts the tone of color (which color is emphasized, red or green).
- ☐ Touching [Standby] while adjusting the rear view camera image clears the screen temporarily.
- ➡ For details, refer to *Temporarily clearing the screen (navigation system in standby mode)* on page 20.

Customizing preferences

- ❑ The adjustments of "**Brightness**" and "**Contrast**" are stored separately when your vehicle's headlights are off (daytime) and when your vehicle's headlights are on (nighttime). These are switched automatically depending on whether the vehicle's headlights are on or off.
- ❑ The adjustments of "**Dimmer**" is stored separately when your vehicle's headlights are off (daytime) and when your vehicle's headlights are on (nighttime). "**Dimmer**" is switched automatically only when the value of nighttime is lower than that of daytime.
- ❑ You cannot adjust "**Color**" and "**Hue**" for the source without a video and navigation map display.
- ❑ The setting contents can be memorized separately for the following screen and the video image.
 - **Audio source**
 - **Radio** or **Digital Radio/CD/ROM/iPod (Music)/SD (audio)/USB (audio)/Bluetooth Audio/SiriusXM/Pandora/aha/source off screen/menu screens/others**
 - **Video source**
 - **AppRadio Mode** (iOS) (Video) and **iPod** (Video)
 - **AppRadio Mode** (Android) (Video)
 - **DVD-V** and **DivX**
 - **SD** (Video)
 - **USB** (Video)
 - **AV1** (Video)
 - **AV2** (Video)
 - Rear view camera image
 - **Map screen**
- ❑ The picture adjustment may not be available with some rear view cameras.
- ❑ Because of the LCD screen characteristics, you may be unable to adjust the screen at low temperatures.

3 Touch .

The previous screen returns. 

Selecting the video for rear display

You can choose either to show the same image as the front screen or to show the selected source on the rear display.

1 Display the AV operation screen.

- For details of the operations, refer to *Displaying the AV operation screen* on page 71.

2 Touch on the left edge of the screen.

- ❑ If the source icon to be displayed on the rear display does not appear on the AV operation screen, turn on the setting of [**Rear Monitor Output**].
 - For details, refer to *Displaying the icon for setting the rear display output* on page 148.
- ❑ The appearance of this key changes according to the current setting.
- ❑ While the tuner is receiving an emergency announcement, traffic announcement, or news program, the current setting cannot be changed.

3 Touch the source you want to show on the rear display.

The source you can select is as follows.

- **Mirror AV:**
The video on the front screen of the navigation unit is output to the rear display.
- **Disc:**
The video and sound of the DVDs are output to the rear display.
- **iPod:**
The video and sound of the iPod are output to the rear display.
- **AV1:**
The video and sound of **AV1** are output to the rear display.
- **AV2:**
The video and sound of **AV2** are output to the rear display.
- **Off:**
Nothing is output to the rear display.

- ❑ Touching  closes the pop-up screen.
- ❑ When "**Mirror AV**" is selected, the following restrictions are applied to rear display.
 - When selecting "**Rear View**" in the map display, nothing is displayed.
 - All sounds cannot be output for the rear display.
 - When playing back video files on the external storage device (USB, SD), the video image is not output.
 - The picture may have noise if the iPod video is output to the rear display.
- ❑ When "**Disc**" is selected, the following restriction is applied to rear display.
 - When a CD or MP3/WMA/AAC disc is set in the built-in DVD drive, only the sound is output.
- ❑ When "**iPod**" is selected, the following restriction is applied to rear display.
 - The picture may have noise if the iPod video is output to the rear display.
- ❑ When "**AV1**" or "**AV2**" is selected, the following restrictions are applied to the rear display.
 - The video image and sound are output only when "**AV1**" or "**AV2**" has both video and sound.
 - The video image and sound are output only when the corresponding settings on "**AV1 Input**" or "**AV2 Input**" are "**On**". .

Replicating the settings

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

- ❑ AVIC FEEDS is available 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 and ejecting an SD memory card* on page 16.

A message confirming whether to update the settings appears.

3 Touch [Yes].

Update starts.

After the settings are updated, a message notifying completion of update appears.

4 Touch [OK].

The navigation system restarts. .

Using the rear view camera functions

The following two functions are available. The rear view camera feature requires a separately sold rear view camera (e.g. ND-BC6). (For details, consult your dealer.)

Rear view camera

The navigation system features a function that automatically switches to the full-screen image of the rear view camera installed on your vehicle. When the shift lever is in the REVERSE (R) position, the screen automatically switches to full-screen rear view camera image.

Camera for Rear view mode

Rear view can be displayed at all times (e.g. when monitoring an attached trailer, etc.) as a split screen where map information is partially displayed. Please note that with this setting, camera image is not resized to fit, and that a portion of what is seen by the camera is not viewable.

- For details, refer to *Setting for rear view camera* on page 161.

Customizing preferences

Setting for rear view camera



CAUTION

Pioneer recommends the use of a camera which outputs mirror reversed images, otherwise the screen image may appear reversed.

- ❑ Immediately verify whether the display changes to a rear view camera image when the shift lever is moved to REVERSE (R) from another position.
- ❑ When the screen changes to full-screen rear view camera image during normal driving, switch to the opposite setting in "Polarity".

Setting the rear view camera activation

1 Display the "System Settings" screen.

- ➔ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Back Camera Settings].

The "Back Camera Settings" screen appears.

3 Touch [Camera].

This changes the setting to "On".

- ❑ You can only switch to "Rear View" if this setting is "On".
- ➔ For details of the operation, refer to *Switching the view mode* on page 33.

Setting the polarity of the rear view camera

1 Display the "System Settings" screen.

- ➔ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Back Camera Settings].

The "Back Camera Settings" screen appears.

3 Touch [Polarity].

4 Touch [GND] or [Battery] to select an appropriate setting for polarity.

- **Battery** (default):

When the polarity of the connected lead is positive while the shift lever is in the REVERSE (R) position.

- **GND:**

When the polarity of the connected lead is negative while the shift lever is in the REVERSE (R) position.

When the shift lever is moved to the REVERSE (R) position after setting the rear view camera, the rear view image appears.

Displaying the parking assist guidelines

1 Display the "System Settings" screen.

- ➔ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Back Camera Settings].

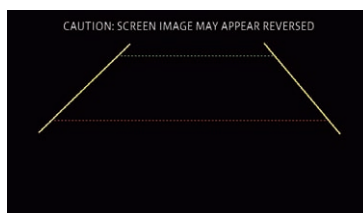
The "Back Camera Settings" screen appears.

3 Touch [Parking Assist Line].

4 Touch [On] or [Off].

- **Off** (default):
The guideline disappears.
- **On:**
The guideline appears.

When the shift lever is moved to the REVERSE (R) position after setting the rear view camera, the rear view image appears.



Setting guidelines on the rear view image



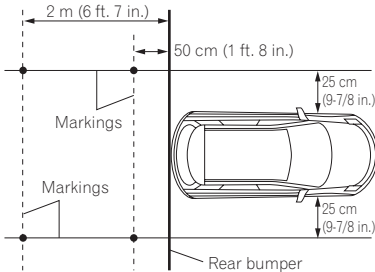
CAUTION

- When adjusting the guidelines, be sure to park the vehicle in a safe place and apply the parking brake.

- Before getting out of the car to place the markings, be sure to turn the ignition switch off (ACC OFF).
- The range projected by the rear view camera is limited. Also, the vehicle width and distance guidelines displayed on the rear view camera image may differ from the actual vehicle width and distance. (The guidelines are straight lines.)
- The image quality may deteriorate depending on the usage environment, such as at night or in dark surroundings.

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

2 Using packing tape or similar, place markings approximately 25 cm from each side of the vehicle, and approximately 50 cm and 2 m from the rear bumper.



3 Display the “System Settings” screen.

- ➡ For details, refer to *Displaying the screen for system settings* on page 144.

4 Touch [Back Camera Settings].

The “**Back Camera Settings**” screen appears.

5 Touch [Parking Assist Line Adjustment].

A confirmation message appears.

6 Touch [OK].

The screen for setting the guidelines appears.

7 Touch or to select a point.



8 Touch , , or to adjust the position of the point.

- ❑ When a point is moved, the distance from the initial value is displayed at the top right of the screen.

9 Touch [OK].

The set value is saved and the rear view image appears.

- If you touch [**Default**], the point returns to the preadjustment position.
- If you touch , the display returns to the setting screen for guidelines without reflecting the setting. ■

Other functions

Setting the anti-theft function

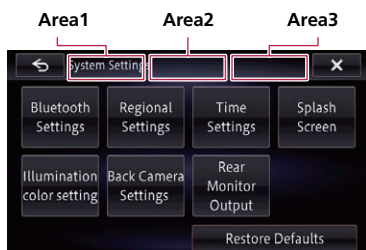
You can set a password for the navigation system. If the back-up lead is cut after the password is set, the navigation system prompts for the password at the time of next boot up.

Setting the password

1 Display the "System Settings" screen.

- ➔ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch Area1, followed by Area2, and then touch and hold Area3.



3 Touch [Set Password].

The password setting screen appears.

4 Enter the password you want to set.

- ❑ 5 to 16 characters can be entered for a password.

5 Touch [OK].

6 Enter a password hint.

- ❑ Up to 24 characters can be entered for a hint.

7 Touch [OK].

The "Password Confirmation" screen appears.

- ❑ If you want to change the password currently set, enter the current password and then enter the new one.

8 Check the password, and then touch



Entering the password

On the password input screen, you must enter the current password.

1 Enter the password.

2 Touch [OK].

If you enter the correct password, the navigation system will be unlocked.

Deleting the password

The current password can be deleted.

1 Display the "System Settings" screen.

- ➔ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch Area1, followed by Area2, and then touch and hold Area3.

3 Touch [Clear password].

A message confirming whether to delete the password appears.

4 Touch [Yes].

The password setting screen appears.

A message confirming a password hint appears.

5 Touch [OK].

6 Enter the current password.

7 Touch [OK].

Forgotten password

Contact the nearest authorized Pioneer Service Station. ■

Restoring the navigation system to the default or factory settings

You can restore settings or recorded content to the default or factory settings. Various methods are used to clear user data, and the situations and the cleared content differ in each case. For information regarding the content cleared by each method, see the list presented later.

Method 1: Remove the vehicle battery

This transforms the system into the same state as when the navigation system is uninstalled.

Method 2: Touch the item you want to initialize on the “Restore Defaults” screen

➡ For details, refer to *Restoring the default setting* on page 164.

Method 3: Touch [Restore Factory Settings]

➡ For details, refer to *Restoring the navigation system to the initial state* on page 164.

Restoring the default setting

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

- ❑ Be sure to read “*Setting items to be deleted*” before you perform this operation.
 - ➡ For details, refer to *Setting items to be deleted* on page 165.

1 Display the “System Settings” screen.

➡ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Restore Defaults].

3 Touch the item you want to initialize.



A message confirming whether to erase the data appears.

4 Touch [Yes].

The selected item is initialized.

Restoring the navigation system to the initial state

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

- ❑ Be sure to read “*Setting items to be deleted*” before you perform this operation.
 - ➡ For details, refer to *Setting items to be deleted* on page 165.

1 Display the “System Settings” screen.

➡ For details, refer to *Displaying the screen for system settings* on page 144.

2 Touch [Restore Defaults].

3 Touch [Restore Factory Settings].

A message confirming whether to erase the data appears.

4 Touch [Yes].

The recorded contents are cleared, and the navigation system restarts.

Other functions

Setting items to be deleted

The items to be deleted vary depending on the reset method. The items listed in the following table will be restored 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 restored to the default or factory settings.

□ Bold indicates functions or command names.

- **Method 1: Remove the vehicle battery**
- **Method 2: Touch the item you want to initialize on the “Restore Defaults” screen**
- **Method 3: Touch [Restore Factory Settings]**

Setting items to be deleted		Method 1	Method 2	Method 3
All settings in the “ Navi Settings ” screen		—	✓	✓
All settings in the “ Edit ” screen		—	✓	✓
All settings in the “ AV Settings ” screen		—	—	✓
Source Settings	AV Input	✓	—	✓
	Other settings	—	—	✓
Vol./Pos. Adj.	Volume Set-tings	—	✓	✓
	Other settings	—	—	✓
All settings in the “ Language Settings ” screen		—	—	✓
All settings in the “ Time Settings ” screen		—	—	✓
All settings in the “ Select Splash Screen ” screen		—	✓	✓
All settings in the “ Illumination Color ” screen		—	—	✓
Back Camera Settings	Polarity	✓	—	✓
	Other settings	—	—	✓
All settings in the “ Rear Monitor Output Set-ting Screen ” screen		—	—	✓
All settings in the “ App Settings ” screen		—	—	✓
Shortcut Menu settings		—	✓	✓
Learning route data		—	—	✓
View mode and scale setting on the map, direc-tion of the map		—	—	✓
Route search results		—	—	✓
Current route		—	—	✓
Volume setting for AV sources, TA volume		✓	—	✓
All settings and stored data in the “ Phone ” screen		—	✓	✓
Overlay POI in the “ View ” screen		—	✓	✓

Setting items to be deleted		Method 1	Method 2	Method 3
Track log		—	—	✓
All settings in the "AV Sound Settings" screen		✓	—	✓
Wide screen mode		—	—	✓
Sound mix function		—	—	✓
Playback method of AV source		✓	—	✓
All settings in the "Function" screen		✓	—	✓
Picture Adjustment	Dimmer	—	—	✓
	Other settings	✓	—	✓
LCD panel angle		✓	—	✓
Standby mode		✓	—	✓
Output setting of the rear display		✓	—	✓



Appendix

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 does not turn on. The navigation system does not 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. Always install a correct fuse with the same rating.
	Noise and other factors are causing the built-in microprocessor to operate incorrectly.	Park your vehicle in a safe place, and turn off the engine. Turn the ignition key back to off (ACC OFF). Then restart the engine, and turn the power to the navigation system back on.
You cannot position your vehicle on the map without a significant positioning error.	The GPS antenna is in an unsuitable location.	The quality of signals from the GPS satellites is poor, impairing 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 clean.
	The position of satellites relative to your vehicle is inadequate.	The quality of signals from the GPS satellites is poor, impairing 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.
	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, impairing positioning accuracy. When using a cellular phone, keep its antenna away from the GPS antenna.

Appendix

Symptom	Cause	Action (Reference)
You cannot position your vehicle on the map without a significant positioning error.	Something is covering 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.
	Signals from the vehicle's speed pulse are not being picked up properly.	Check that the cables are properly connected. If necessary, consult the dealer that installed the system.
	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.
	The navigation system is installed with an extreme angle exceeding the installation angle limitations.	Confirm the installation angle. (The navigation system must be installed within the allowed installation angle. For details, refer to the Installation Manual.)
	Indication of the position of your vehicle is misaligned after a U-turn or reversing.	Check whether or not the reverse gear signal input lead (violet) is properly connected. (The navigation system works properly without the lead connected, but positioning accuracy will be adversely affected.)
The map color does not switch automatically between daytime and nighttime.	"Day/Night Display" is set to "Day".	Check the "Day/Night Display" setting and ensure "Automatic" is selected. (Page 139)
	The orange/white lead is not connected.	Check the connection.
The screen is too bright.	The picture quality adjustment of the display is incorrect.	Adjust the picture quality. (Page 158)
The display is very dim.	The vehicle's light is turned ON, and "Automatic" is selected on "Day/Night Display".	Read about "Day/Night Display" setting and, if desired, select "Day". (Page 139)
	The picture quality adjustment of the display is incorrect.	Adjust the picture quality. (Page 158)
No sounds of AV source are produced. The volume level will not rise.	The volume level is low.	Adjust the volume level.
	The attenuator or mute is on.	Turn the attenuator or mute off.
	A speaker lead is disconnected.	Check the connection.
The volume of navigation guidance and beeps cannot be adjusted.	The VOL (+/-) button is used to adjust the volume.	Turn the volume up or down using "Volume" on the "Vol./Pos. Adj." menu. (Page 136)
The person on the other end of the phone call cannot hear the conversation due to an echo.	The voice from the person on the other end of the phone call is output from the speakers and then picked up by the microphone again, creating an echo.	Use the following methods to reduce the echo: —Lower the volume on the receiver —Have both parties pause slightly before speaking
There is no picture.	The parking brake cord is not connected.	Connect the parking brake cord, and apply the parking brake.
	The parking brake is not applied.	Connect the parking brake cord, and apply the parking brake.
	The backlight of the LCD panel is turned off.	Turn on the backlight. (Page 20)

Appendix

Symptom	Cause	Action (Reference)
Rear display picture disappears.	The source disc being listened to in the navigation system has been ejected.	Before ejecting the disc, switch the source. This problem may occur when certain connection methods are used.
	There is a problem with the rear display, for example a faulty wiring connection.	Check the rear display and its connection.
	An AV source that cannot output to the rear display is selected.	Select an appropriate AV source.
Nothing is displayed and the touch panel keys cannot be used.	The setting for the rear view camera is incorrect.	Select the appropriate setting for the rear view camera.
	The shift lever was placed in [R] when the rear view camera was not connected.	Select the correct polarity setting for "Back Camera Settings" . (Page 161)
There is no response when the touch panel keys are touched, or a different key responds.	The touch panel keys deviate from the actual positions that respond to your touch for some reason.	Perform touch panel calibration. (Page 147)
The external storage device (USB, SD) cannot be used.	The USB storage device has been removed immediately after plugging it in.	Park your vehicle in a safe place, and turn off the engine. Turn the ignition key back to off (ACC OFF). Then restart the engine, and turn the power to the navigation system back on.
The screen becomes freezes.	An error has occurred.	Park your vehicle in a safe place, and turn off the engine. Turn the ignition key back to off (ACC OFF). Then restart the engine, and turn the power to the navigation system back on.
The smartphone was not charged.	Charging stopped because the temperature of the smartphone rose due to prolonged use of the smartphone during charging.	Disconnect the smartphone from the cable, and wait until the smartphone cools down.
	More battery power was consumed than was gained from charging.	This problem may be resolved by stopping any unnecessary services on the smartphone.

Problems with the AV screen

Symptom	Cause	Action (Reference)
CD or DVD playback is not possible.	The disc is inserted upside down.	Insert the disc with the label upward.
	The disc is dirty.	Clean the disc.
	The disc is cracked or otherwise damaged.	Insert a normal, round disc.
	The files on the disc are in an irregular file format.	Check the file format.
	The disc format cannot be played back.	Replace the disc.
	The loaded disc is a type this system cannot play.	Check what type of disc it is. (Page 182)
The screen is covered by a caution message and the video cannot be shown.	The parking brake lead is not connected or applied.	Connect the parking brake lead correctly, and apply the parking brake.
	The parking brake interlock is activated.	Park your vehicle in a safe place and apply the parking brake.

Appendix

Symptom	Cause	Action (Reference)
No video output from the connected equipment.	The "AV1 Input" or "AV2 Input" setting is incorrect.	Correct the settings. (Page 125)
The audio or video skips.	The navigation system is not firmly secured.	Secure the navigation system firmly.
No sounds are produced. The volume level will not rise.	Cables are not connected correctly.	Connect the cables correctly.
	The system is performing still, slow motion, or frame-by-frame playback with DVD-Video.	There is no sound during still, slow motion, or frame-by-frame playback with DVD-Video.
	The system is paused or performing, fast reverse or forward during the disc playback.	For the media other than music CD (CD-DA), there is no sound on fast reverse or forward.
The icon  is displayed, and operation is impossible.	The operation is not compatible with the video configuration.	This operation is not possible. (For example, the DVD playing does not feature that angle, audio system, subtitle language, etc.)
The picture stops (pauses) and the navigation system cannot be operated.	The reading of data is impossible during disc playback.	Stop playback once, then restart.
The picture is stretched, with an incorrect aspect ratio.	The aspect setting is incorrect for the display.	Select the appropriate setting for that image. (Page 95)
A parental lock message is displayed and DVD playback is not possible.	The parental lock is on.	Turn the parental lock off or change the level. (Page 95)
The parental lock for DVD playback cannot be canceled.	The code number is incorrect.	Input the correct code number. (Page 95)
Playback is not with the audio language and subtitle language settings selected in "DVD/DivX® Setup".	The DVD playing does not feature dialog or subtitles in the language selected in "DVD/DivX® Setup".	Switching to a selected language is not possible if the language selected in "DVD/DivX® Setup" is not recorded on the disc. (Page 94)
The picture is extremely unclear/distorted and dark during playback.	The disc features a signal to prohibit copying. (Some discs may have this.)	Since the navigation system is compatible with the copy guard analog copy protect system, the picture may suffer from horizontal stripes or other imperfections when a disc with that kind of protection signal is viewed on some displays. This does not mean the navigation system is malfunctioning.
iPod cannot be operated.	The iPod is frozen.	• Reconnect the iPod with the USB interface cable for iPod. • Update the iPod software version.
	An error has occurred.	• Reconnect the iPod with the USB interface cable for iPod. • Park your vehicle in a safe place, and turn off the engine. Turn the ignition key back to off (ACC OFF). Then restart the engine, and turn the power to the navigation system back on. • Update the iPod software version.
	Cables are not connected correctly.	Connect the cables correctly.

Appendix

Symptom	Cause	Action (Reference)
Sound from the iPod cannot be heard.	The audio output direction may switch automatically when the Bluetooth and USB connections are used at the same time.	Use the iPod to change the audio output direction.

Problems with the phone screen

Symptom	Cause	Action (Reference)
Dialing is impossible because the touch panel keys for dialing are inactive.	Your phone is out of range for service.	Retry after re-entering the range for service.
	The connection between the cellular phone and the navigation system cannot be established now.	Perform the connection process.

Problems with the AppRadio Mode screen

Symptom	Cause	Action (Reference)
A black screen is displayed.	While operating an application, the application was ended on the smartphone side.	Press the HOME button to display the " Top Menu " screen.
	The smartphone OS may be awaiting screen operation.	Stop the vehicle in a safe place and check the screen on the smartphone.
The screen is displayed, but operation does not work at all.	An error has occurred.	• Park your vehicle in a safe place, and then turn off the ignition switch (ACC OFF). Subsequently, turn the ignition switch to on (ACC ON) again. • When an Android device is connected, disconnect the Bluetooth connection from this product and then reconnect it.



Appendix

Messages for navigation functions

The following messages may be displayed by your navigation system. Refer to the table 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 cases, follow the instructions given on the display.

Message	Cause	Action (Reference)
Route calculation was not possible.	Route calculation has failed because of a malfunction in the 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 possible. Navigation cannot be provided 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.
Unable to find any road leading to the destination.	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 create route profile	In rare cases, a route calculation error may occur.	• Retry. • Consult the Pioneer Local dealer if this message persists.
No image file.	"Pictures" folder exists on the SD memory card but there is no loadable data in the folder.	Use appropriate data and store it correctly. (Page 146)
Unsupported file format.	An image file was not made to specifications as the splash screen.	Use appropriate data and store it correctly. (Page 146)
Abnormal status on speaker connection or main unit was detected. If it does not return to normal status after ACC off/on, consult Pioneer authorized dealer or Pioneer service.	This unit fails to operate or the speaker connection is incorrect; the protective circuit is activated.	Check the speaker connection. If the message fails to disappear even after the engine is switched off/on, contact your dealer or an authorized Pioneer Service Station for assistance.



Appendix

Messages for AV functions

When problems occur with AV source playback, an error message appears on the display. Refer to the table below to identify the problem, then take the suggested corrective action. If the error persists, record the error message and contact your dealer or your nearest Pioneer service center. The messages in “()” will appear on the rear display.

Built-in DVD drive

Message	Cause	Action (Reference)
Playback error. Please remove the disc.	Dirty	Clean the disc.
	Scratched disc	Replace the disc.
	The disc is loaded upside down.	Check that the disc is loaded correctly.
	There is an electrical or mechanical error.	• Replace the disc. • Set the ACC to off and then set it to on again.
Region code cannot be matched (DIFFERENT REGION DISC)	The disc does not have the same region number as the navigation system.	Replace the DVD-Video with one bearing the correct region number.
Unreadable disc (UNPLAYABLE DISC)	This type of disc cannot be played by the navigation system.	Replace the disc with one the navigation system can play. (Page 185, Page 201)
Playback error due to irregular temperature. Please remove the disc. (THERMAL PROTECTION IN MOTION)	The temperature of the navigation system is out of the normal operating range.	Wait until the unit's temperature returns within normal operating limits.
Tracks that cannot be played back will be skipped (FILE SKIPPED)	Files that are protected by digital rights management (DRM).	The protected files are skipped.
Cannot play back all tracks (PROTECTED DISC)	All the files on the inserted disc are secured by DRM.	Replace the disc.
Flash write error. Unable to write to flash memory. (CAN NOT SAVE DATA)	The playback history for VOD contents cannot be saved for some reason.	• Retry. • If the message appears frequently, consult your dealer.
Your device is not authorized to play this protected DivX video. (YOUR DEVICE IS NOT AUTHORIZED TO PLAY THIS DivX PROTECTED VIDEO)	The device does not match the device registered with the VOD provider. VOD content cannot be played back.	Check whether this device has been registered with the VOD provider.
Unable to playback. Refer to Operation Manual for playable file format. (VIDEO RESOLUTION NOT SUPPORTED)	High definition (HD) DivX video cannot be played.	Create playable one and retry.

SD/USB/iPod

Message	Cause	Action (Reference)
Tracks that cannot be played back will be skipped	Files that are protected by digital rights management (DRM).	The protected files are skipped.
	This type of file cannot be played by this unit.	Replace it with a playable file. (Page 185, Page 201)

Appendix

Message	Cause	Action (Reference)
Cannot play back all tracks	All the files on the inserted external storage device are secured by DRM.	Store playable files.
	None of the files can be played by this unit.	Replace it with a playable file. (Page 185, Page 201)
USB flash drive was disconnected for device protection. Do not connect this USB flash drive to the unit. To restart USB, restart the unit.	The USB connector or USB cable is short-circuited.	Confirm that the USB connector or USB cable is not caught in something or damaged.
	The connected USB storage device consumes more than the maximum allowable current.	Disconnect the USB storage device and do not use it. Turn the ignition switch to off, then turn ACC back on or turn the ignition switch on and then connect the compliant USB storage device.
	The USB interface cable for iPod is short-circuited.	Confirm that the USB interface cable for iPod or USB cable is not caught in something or damaged.
Authorization failure. iPod is not connected.	The iPod is not compatible with this navigation system.	Use a compatible iPod.
	Communication failure	• Disconnect the cable from the iPod. Once the iPod main menu is displayed, reconnect the cable. • If the message appears frequently, consult your dealer.

SiriusXM Satellite Radio

Message	Cause	Action (Reference)
Check Antenna	The antenna connection is incorrect.	Check the antenna connection. If the message fails to disappear even after the engine is switched off/on, contact your dealer or the nearest authorized Pioneer service center for assistance.
Check Tuner	The SiriusXM Connect Vehicle Tuner connection is incorrect.	Check the tuner connection and battery voltage. If the message fails to disappear even after the engine is switched off/on, contact your dealer or the nearest authorized Pioneer service center for assistance.
No Signal	The SiriusXM Connect Vehicle Tuner is having difficulty receiving the SiriusXM satellite signal.	• Verify that your vehicle is outdoors with a clear view of the southern sky. • Verify that the SiriusXM magnetic mount antenna is mounted on a metal surface on the outside the vehicle. • Move the SiriusXM antenna away from any obstructions.
Subscription updated. Press OK to continue.	This product has detected a change in your SiriusXM subscription status.	Touch [OK] to clear the message.
Channel not available.	The channel that you have requested is not a valid SiriusXM channel.	Check the SiriusXM channel lineup.
Channel not subscribed. Contact SiriusXM to subscribe.	The channel that you have requested is not included in your SiriusXM subscription package.	Check the content of your SiriusXM subscription package.
Channel locked.	Locked by the radio Parental Control feature.	Release the channel lock.



Appendix

Messages for Bluetooth functions

When problems occur with Bluetooth functions, an error message appears on the display. Refer to the table below to identify the problem, then take the suggested corrective action. If the error persists, record the error message and contact your dealer or your nearest Pioneer service center.

Message	Cause	Action (Reference)
Currently unable to register.	The Bluetooth device that you want to register is under communication such as transferring phone book.	After finishing the communication, register the Bluetooth device again.
Unable to connect the device. Try again later.	This navigation system is trying to connect to the Bluetooth device while performing the following operations with another device. • Registering the Bluetooth device • Setting to connect the Bluetooth device • Transferring the phone book	After the operation of another device is complete, reconnect the Bluetooth device.
Unable to register the Bluetooth device.	An error has occurred.	Set the "Bluetooth On/Off" to "Off" , and then set to "On" . Subsequently, operate to register again.
Could not find any available phone.	No available phone is in the surrounding area when the system searches for connectable cellular phones featuring Bluetooth wireless technology.	• Activate the target phone's Bluetooth wireless technology. • Check whether your cellular phone is activated and, whether the distance to your cellular phone is too far.
Unable to search for available devices.	This navigation system is trying to search for available device while performing following operations. • Registering the Bluetooth device • Setting to connect the Bluetooth device • Transferring the phone book • Deleting the registered Bluetooth device	After finishing the operation, search for available devices again.
Device search failed.	An error has occurred.	Set the "Bluetooth On/Off" to "Off" , and then set to "On" . Subsequently, search for available devices again.
Unable to change the device name.	An error has occurred.	Set the "Bluetooth On/Off" to "Off" , and then set to "On" . Subsequently, operate to change the device name again.
Currently unable to delete.	This navigation system is trying to delete the registered Bluetooth device while performing the following operations. • Using the hands-free phoning • Registering Bluetooth device • Setting to connect the Bluetooth device • Transferring the phone book	After finishing the operation, delete the Bluetooth device again.
Delete failed	An error has occurred.	Set the "Bluetooth On/Off" to "Off" , and then set to "On" . Subsequently, operate to delete the Bluetooth device again.

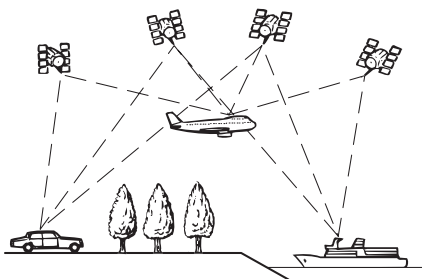
Appendix

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 68 900 000 feet (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 ground'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.



Positioning by dead reckoning

The built-in sensor in the navigation system also calculates your position. The current location is measured by detecting driving distance with the speed pulse, the turning direction with the gyro sensor and inclination of the road with the G sensor.

The built-in sensor can even calculate changes of altitude, and correct the discrepancies in the distance traveled caused by driving along winding roads or up slopes.

If you use this navigation system with connecting the speed pulse, the system will become more accurate than no connection of speed

pulse. So you connect the speed pulse without fail to get the accuracy of positioning.

- ❑ The position of the speed detection circuit vary depending on the vehicle model. For details, consult your authorized Pioneer dealer or an installation professional.
- ❑ Some types of vehicles may not output a speed signal while driving at just a few kilometers per hour. In such a case, the current location of your vehicle may not be displayed correctly while in traffic congestion or in a parking lot.

How do GPS and dead reckoning work together?

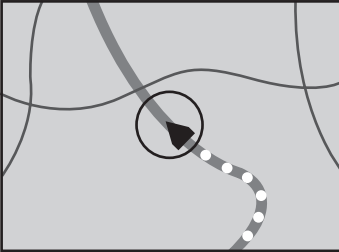
For maximum accuracy, your navigation system continually compares GPS data with your estimated position as calculated from the data of built-in sensor. However, if only the data from the built-in sensor is available for a long period, positioning errors are gradually compounded until the estimated position becomes unreliable. For this reason, whenever GPS signals are available, they are matched with the data of the built-in sensor and used to correct it for improved accuracy.

- ❑ If you use chains on your wheels for winter driving or put on the spare wheel, errors may suddenly increase because of difference in wheel diameter. Initialize the sensor status and it may recover the accuracy to normal condition.
- ➔ For details, refer to *Clearing status* on page 134.

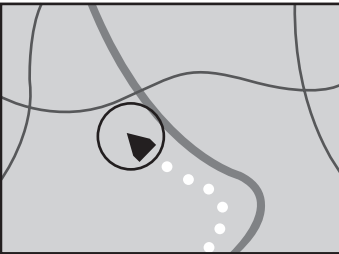
Appendix

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

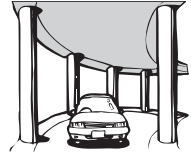
Positioning errors are kept to a minimum by combining GPS, dead reckoning and map matching. However, in some situations, these functions may not work properly, and the error may become bigger.

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

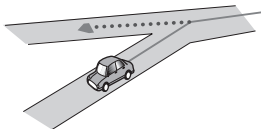
- If a car phone or cellular phone is used near the GPS antenna, GPS reception may be lost temporarily.
- Do not cover the GPS antenna with spray paint or car wax, because this may block the reception of GPS signals. Snow buildup can also degrade the signals, so keep the antenna clear.
- ❑ If a GPS signal has not been received for a long time, your vehicle's actual position and the current position mark on the map may diverge considerably or may not be updated. In such case, once GPS reception is restored, accuracy will be recovered.

Appendix

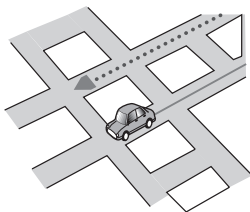
Conditions likely to cause noticeable positioning errors

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.

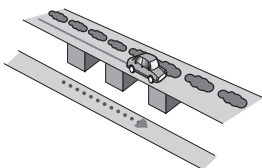
- If you make a slight turn.



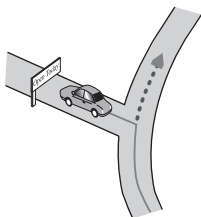
- If there is a parallel road.



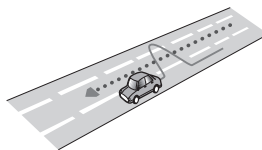
- If there is another road very nearby, such as in the case of an elevated freeway.



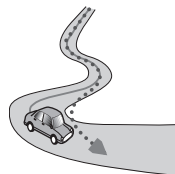
- If you take a recently opened road that is not on the map.



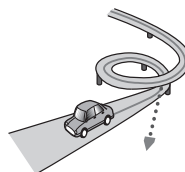
- If you drive in zigzags.



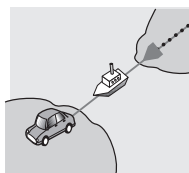
- If the road has a series of hairpin bends.



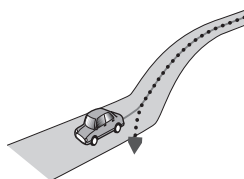
- If there is a loop or similar road configuration.



- If you take a ferry.

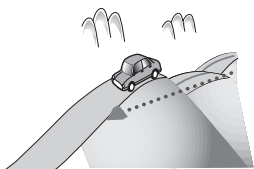


- If you are driving on a long, straight road or a gently curving road.

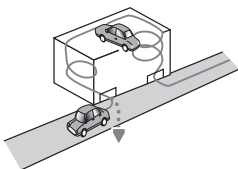


Appendix

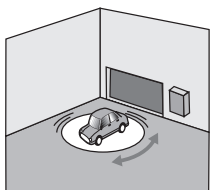
- If you are on a steep mountain road with many height changes.



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



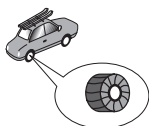
- If your vehicle is turned on a turntable or similar structure.



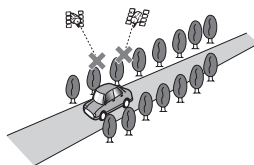
- If your vehicle's wheels spin, such as on a gravel road or in snow.



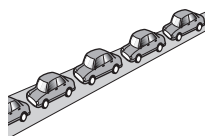
- If you put on chains, or change your tires for ones with a different size.



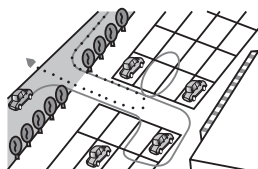
- If trees or other obstacles block the GPS signals for a considerable period.



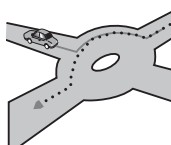
- If you drive very slowly, or in a start-and-stop manner, as in a traffic congestion.



- 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. ■

Appendix

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. (If you want to set a long-distance route going across several areas, set waypoints along the way.)
- 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.
- When there is a traffic congestion ahead, a detour route may not be suggested if driving through the traffic congestion would still be better than taking the detour.
- 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.

Auto reroute function

- If you deviate from the set route, the system will re-calculate the route from that point so that you remain on track to the destination.
- This function may not work under certain conditions. 

Handling and care of discs

Some basic precautions are necessary when handling your discs.

Appendix

Built-in drive and care

- Use only conventional, fully circular discs. Do not use shaped discs.



- Do not use cracked, chipped, warped, or otherwise damaged discs as they may damage the built-in drive.
- Use 12-cm discs. Do not use 8-cm discs or an adapter for 8-cm discs.
- When using discs that can be printed on label surfaces, check the instructions and the warnings of the discs. Depending on the discs, inserting and ejecting may not be possible. Using such discs may result in damage to this equipment.
- Do not touch the recorded surface of the discs.
- Store discs in their cases when not in use.
- Avoid leaving discs in excessively hot environments including under direct sunlight.
- Do not attach labels, write on or apply chemicals to the surface of the discs.
- Do not attach commercially available labels or other materials to the discs.
 - The discs may warp making the disc unplayable.
 - The labels may come off during playback and prevent ejection of the discs, which may result in damage to the equipment.
- To clean a disc, wipe it with a soft cloth, moving outward from the center.



- Condensation may temporarily impair the built-in drive's performance. Leave it to adjust to the warmer temperature for about

one hour. Also, wipe any damp discs with a soft cloth.

- Playback of discs may not be possible because of disc characteristics, disc format, recorded application, playback environment, storage conditions and so on.
- Road shocks may interrupt disc playback.
- Read the precautions for discs before using them.

Ambient conditions for playing a disc

- At extremely high temperatures, a temperature cutout protects this product by switching it off automatically.
- Despite our careful design of the product, small scratches that do not affect actual operation may appear on the disc surface as a result of mechanical wear, ambient conditions for use or handling of the disc. This is not a sign of the malfunction of this product. Consider it to be normal wear and tear. ■

Playable discs

DVD-Video and CD

DVD and CD discs that display the logos shown below generally can be played on this built-in DVD drive.

DVD-Video



CD



Appendix

- ❑ **DVD** is a trademark of DVD Format/Logo Licensing Corporation.
- ❑ It is not possible to play DVD-Audio discs. This DVD drive may not be able to play all discs bearing the marks shown above.



AVCHD recorded discs

This unit is not compatible with discs recorded in AVCHD (Advanced Video Codec High Definition) format. Do not insert AVCHD discs. If inserted, the disc may not be ejected.

Playing DualDisc

- DualDiscs are two-sided discs that have a recordable CD for audio on one side and a recordable DVD for video on the other.
- Playback of the DVD side is possible with this navigation system. However, since the CD side of DualDiscs is not physically compatible with the general CD standard, it may not be possible to play the CD side with this navigation system.
- Frequent loading and ejecting of a DualDisc may result in scratches to the disc.
- Serious scratches can lead to playback problems on this navigation system. In some cases, a DualDisc may become stuck in the disc-loading slot and will not eject. To prevent this, we recommend you refrain from using DualDisc with this navigation system.
- Please refer to the manufacturer for more detailed information about DualDiscs.

Dolby Digital

This product will down-mix Dolby Digital signals internally and the sound will be output in stereo.

- ❑ Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

Detailed information for playable media

Compatibility

Common notes about disc compatibility

- Certain functions of this product may not be available for some discs.
- Compatibility with all discs is not guaranteed.
- It is not possible to playback DVD-ROM/ DVD-RAM discs.
- Playback of discs may become impossible with direct exposure to sunlight, high temperatures, or depending on the storage conditions in the vehicle.

DVD-Video discs

- DVD-Video discs that have incompatible region numbers cannot be played on this DVD drive. The region number of the player can be found on this product's chassis.

DVD-R/DVD-RW/DVD-R SL (Single Layer)/DVD-R DL (Dual Layer) discs

- Unfinalized discs which have been recorded with the Video format (video mode) cannot be played back.
- Discs which have been recorded with the Video Recording format (VR mode) cannot be played back.
- DVD-R DL (Dual Layer) discs which have been recorded with Layer Jump recording cannot be played back.
- For detailed information about recording mode, please contact the manufacturer of media, recorders, or writing software.

Appendix

CD-R/CD-RW discs

- Unfinalized discs cannot be played back.
- It may not be possible to playback CD-R/CD-RW discs recorded on a music CD recorder or a personal computer because of disc characteristics, scratches or dirt on the disc, or dirt, scratches or condensation on the lens of the built-in drive.
- Playback of discs recorded on a personal computer may not be possible, depending on the recording device, writing software, their settings, and other environmental factors.
- Please record with the correct format. (For details, please contact manufacturer of media, recorders, or writing software.)
- Titles and other text information recorded on a CD-R/CD-RW disc may not be displayed by this product (in the case of audio data (CD-DA)).
- Read the precautions with CD-R/CD-RW discs before using them.

Common notes about the external storage device (USB, SD)

- Do not leave the external storage device (USB, SD) in any location with high temperatures.
- Depending on the kind of the external storage device (USB, SD) you use, this navigation system may not recognize the storage device or files may not be played back properly.
- The text information of some audio and video files may not be correctly displayed.
- File extensions must be used properly.
- There may be a slight delay when starting playback of files on an external storage device (USB, SD) with complex folder hierarchies.
- Operations may vary depending on the kind of an external storage device (USB, SD).
- It may not be possible to play some music files from SD or USB because of file characteristics, file format, recorded applica-

tion, playback environment, storage conditions, and so on.

USB storage device compatibility

- For details about USB storage device compatibility with this navigation system, refer to *Specifications* on page 201.
- Protocol: bulk
- You cannot connect a USB storage device to this navigation system via a USB hub.
- Partitioned USB storage device is not compatible with this navigation system.
- Firmly secure the USB storage device when driving. Do not let the USB storage device fall onto the floor, where it may become jammed under the brake or gas pedal.
- There may be a slight delay when starting playback of audio files encoded with image data.
- Some USB storage devices connected to this navigation system may generate noise on the radio.
- Do not connect anything other than the USB storage device.

The sequence of audio files on USB storage device

For USB storage device, the sequence is different from that of USB storage device.

SD memory card and SDHC memory card

- For details about SD memory card compatibility with this navigation system, refer to *Specifications* on page 201.

Handling guidelines and supplemental information

- This system is not compatible with the Multi Media Card (MMC).
- Copyright protected files cannot be played back.

Appendix

Notes specific to DivX files

- Only DivX files downloaded from DivX partner sites are guaranteed for proper operation. Unauthorized DivX files may not operate properly.
- DRM rental files cannot be operated until playing back is started.
- The navigation system corresponds to a DivX file display of up to 1 590 minutes 43 seconds. Search operations beyond this time limit are prohibited.
- DivX VOD file playback requires supplying the ID code of this navigation system to the DivX VOD provider. Regarding the ID code, refer to *Displaying your DivX VOD registration code* on page 149.
- Plays all versions of DivX video, except for DivX 7 with standard playback of DivX media files.
- For more details about DivX, visit the following site:
<http://www.divx.com/>
- The character code for the subtitle file should comply with ISO-8859-1. Using characters other than ISO-8859-1 may cause the characters to be displayed incorrectly.
- The subtitles may not be displayed correctly if the displayed characters in the subtitle file include control code.
- For materials that use a high transfer rate, the subtitles and video may not be completely synchronized.
- If multiple subtitles are programmed to display within a very short time frame, such as 0.1 seconds, the subtitles may not be displayed at the correct time.

DivX subtitle files

- Srt format subtitle files with the extension “.srt” can be used.
- Only one subtitle file can be used for each DivX file. Multiple subtitle files cannot be associated.
- Subtitle files that are named with the same character string as the DivX file before the extension are associated with the DivX file. The character strings before the extension must be exactly the same. However, if there is only one DivX file and one subtitle file in a single folder, the files are associated even if the file names are not the same.
- The subtitle file must be stored in the same folder as the DivX file.
- Up to 255 subtitle files may be used. Any more subtitle files will not be recognized.
- Up to 64 characters can be used for the name of the subtitle file, including the extension. If more than 64 characters are used for the file name, the subtitle file may not be recognized.

Appendix

Media compatibility chart

General

Media	CD-R/-RW	DVD-R/-R SL/-R DL/DVD-RW	USB storage device	SD memory card
File system	• ISO9660 level 1 • ISO9660 level 2 • Romeo, Joliet • UDF 1.02/1.50/2.00/2.01/2.50	• ISO9660 level 1 • ISO9660 level 2 • Romeo, Joliet • UDF 1.02/1.50/2.00/2.01/2.50	FAT16/FAT32	
Maximum number of folders	700		300	
Maximum number of files	999	3 500	5 000	
Playable file types	MP3, WMA, AAC, DivX		MP3, WMA, AAC, WAVE, H.264, MPEG4, WMV	
Notes: • Maximum playback time of audio file stored in the disc: 60 h • Maximum playback time of audio file stored on an external storage device (USB, SD): 7.5 h (450 minutes)				

MP3 compatibility

Media	CD-R/-RW	DVD-R/-R SL/-R DL/DVD-RW	USB storage de- vice	SD memory card
File extension	.mp3			
Bit rate	8 kbps to 320 kbps (CBR), VBR			
Sampling frequency	16 kHz to 48 kHz (32 kHz, 44.1 kHz, 48 kHz for emphasis)		8 kHz to 48 kHz	
ID3 tag	ID3 tag Ver. 1.0, 1.1, 2.2, 2.3		ID3 tag Ver. 1.0, 1.1, 2.2, 2.3, 2.4	
Notes: • Ver. 2.x of ID3 tag is prioritized when both Ver. 1.x and Ver. 2.x exist. • The navigation system is not compatible with the following: MP3i (MP3 interactive), mp3 PRO, m3u playlist				

Appendix

WMA compatibility

Media	CD-R/-RW	DVD-R/-R SL/-R DL/DVD-RW	USB storage de- vice	SD memory card
File extension	.wma			
Bit rate	5 kbps to 320 kbps (CBR), VBR			
Sampling frequency	8 kHz to 48 kHz			
Note: The navigation system is not compatible with the following: Windows Media™ Audio 9 Professional, Lossless, Voice				

WAV compatibility

Media	CD-R/-RW	DVD-R/-R SL/-R DL/DVD-RW	USB storage device	SD memory card
File extension	WAV files on the CD-R/-RW, DVD-R/-RW/-R SL/-R DL cannot be played.		.wav	
Format			Linear PCM (LPCM)	
Sampling frequency			16 kHz to 48 kHz	
Quantization bits			8 bits and 16 bits	
Note: The sampling frequency shown in the display may be rounded.				

AAC compatibility

Media	CD-R/-RW	DVD-R/-R SL/-R DL/DVD-RW	USB storage de- vice	SD memory card
File extension	.m4a			
Bit rate	8 kbps to 320 kbps (CBR)			
Sampling frequency	8 kHz to 44.1 kHz		8 kHz to 48 kHz	
Note: The navigation system plays back AAC files encoded by iTunes.				

Appendix

DivX compatibility

Media	CD-R/-RW	DVD-R/-R SL/-R DL/DVD-RW	USB storage device	SD memory card
File extension	.avi/.divx		DivX files on the external storage device (USB, SD) cannot be played.	
Profile (DivX version)	Home Theater Ver. 3.11/Ver. 4.x/Ver. 5.x/Ver. 6.x			
Compatible audio codec	MP3, Dolby Digital			
Bit rate (MP3)	8 kbps to 320 kbps (CBR), VBR			
Sampling frequency (MP3)	16 kHz to 48 kHz (32 kHz, 44.1 kHz, 48 kHz for emphasis)			
Maximum image size	720 pixels × 576 pixels			
Maximum file size	4 GB			
Notes: • The navigation system is not compatible with the following: DivX Ultra format, DivX files without video data, DivX files encoded with LPCM (Linear PCM) audio codec • Depending on the file information composition, such as the number of audio streams, there may be a slight delay in the start of playback on discs. • If a file contains more than 4 GB, playback stops before the end. • Some special operations may be prohibited because of the composition of DivX files. • Files with high transfer rates may not be played back correctly. The standard transfer rate is 4 Mbps for CDs and 10.08 Mbps for DVDs.				

Appendix

Video files compatibility (USB, SD)

File extension	.avi	.mp4		.m4v	.wmv
Format	MPEG-4	MPEG-4	H.264	MPEG-4	WMV
Compatible video codec	MPEG-4	MPEG-4	H.264	MPEG-4	WMV
Compatible audio codec	Linear PCM (LPCM) MP3	AAC	AAC	AAC	WMA
Maximum resolution	400 pixels x 240 pixels				
Maximum bit rate:	Bit rate: 2.5 Mbps Frame rate: 30 fps	Bit rate: 2.5 Mbps Frame rate: 30 fps	Bit rate: 1.5 Mbps Frame rate: 30 fps	Bit rate: 2.5 Mbps Frame rate: 30 fps	Bit rate: 768 kbps Frame rate: 30 fps
Maximum file size	4 GB				
Maximum play-back time	150 minutes				

Common notes

- The navigation system may not operate correctly, depending on the application used to encode WMA files.
- Depending on the version of Windows Media™ Player used to encode WMA files, album names and other text information may not be correctly displayed.
- There may be a slight delay when starting playback of audio files encoded with image data.
- The navigation system is not compatible with packet write data transfer.
- This navigation system can recognize up to 32 characters, beginning with the first character, including extension for the file and folder name. Depending on the display area, the navigation system may try to display them with a reduced font size. However, the maximum number of the characters that you can display varies according to the width of each character, and of the display area.
- Folder selection sequence or other operations may be altered, depending on the encoding or writing software.
- Regardless of the length of blank section between the songs of original recording, compressed audio discs play with a short pause between songs.

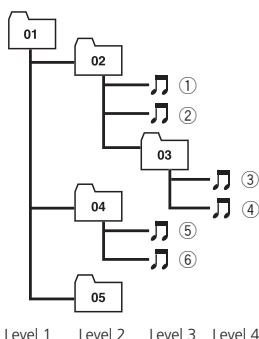
Appendix

Example of a hierarchy

The following figure is an example of the tier structure in the disc. The numbers in the figure indicate the order in which folder numbers are assigned and the order to be played back.

 Folder

 File



Notes

- This product assigns folder numbers. The user cannot assign folder numbers.
- If there is a folder that does not contain any playable file, the folder itself will display in the folder list but you cannot check any files in the folder. (A blank list will appear.) Also, these folders will be skipped without displaying the folder number. ■

Bluetooth



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Appendix

WMA/WMV

Windows Media is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

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DivX



DivX is a compressed digital video format created by the DivX video codec from DivX, LLC, a subsidiary of Rovi Corporation. This unit can play DivX video files recorded on CD-R/RW/ROM and DVD-R/RW/ROM discs. Keeping the same terminology as DVD video, individual DivX video files are called "Titles". Keep in mind that when naming files/titles on a CD-R/RW or a DVD-R/RW disc prior to burning, they will be played in written order by default.

- ❑ DivX®, DivX Certified® and associated logos are trademarks of Rovi Corporation or its subsidiaries and are used under license.

ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, LLC, a subsidiary of Rovi Corporation. This is an official DivX Certified® device that plays DivX video. Visit divx.com for more information and software tools to convert your files into DivX videos.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in *Displaying your DivX VOD registration code*. Go to vod.divx.com for more information on how to complete your registration.

- ➡ For details, refer to *Displaying your DivX VOD registration code* on page 149. ❑

AAC

AAC is short for Advanced Audio Coding and refers to an audio compression technology standard used with MPEG-2 and MPEG-4. Several applications can be used to encode AAC files, but file formats and extensions differ depending on the application which is used to encode. This unit plays back AAC files encoded by iTunes. ❑

Android™

Android is a trademark of Google Inc. ❑

Detailed information regarding connected iPod devices



CAUTION

- Pioneer accepts no responsibility for data lost from an iPod, even if that data is lost while using the navigation system. Please back up your iPod data regularly.
- Do not leave the iPod in direct sunlight for extended amounts of time. Extended exposure to direct sunlight can result in iPod malfunction due to the resulting high temperature.
- Do not leave the iPod in any location with high temperatures.
- Firmly secure the iPod when driving. Do not let the iPod fall onto the floor, where it may become jammed under the brake or gas pedal.

For details, refer to the iPod manuals.

iPod and iPhone

Made for



iPod



iPhone

Appendix

“Made for iPod” and “Made for iPhone” mean that an electronic accessory has been designed to connect specifically to iPod or iPhone, respectively, and has been certified by the developer to meet Apple performance standards.

Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

Please note that the use of this accessory with iPod or iPhone may affect wireless performance.

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iTunes

iTunes is a trademark of Apple Inc., registered in the U.S. and other countries. ■

Using app-based connected content

IMPORTANT

Requirements to access app-based connected content services such as Pandora internet radio and Aha Radio using the Pioneer navigation system:

- Latest version of the Pioneer compatible connected content application(s) for the smartphone, available from the service provider, downloaded to your smartphone.
- A current account with the content service provider.
- Smartphone Data Plan.

Note: if the Data Plan for your smartphone does not provide for unlimited data usage, additional charges from your carrier may apply for accessing app-based connected content via 3G and/or EDGE networks.

- Connection to the Internet via 3G, EDGE or Wi-Fi network.
- Optional Pioneer adapter cable connecting your iPhone to the Pioneer navigation system.

Limitations:

- Access to app-based connected content will depend on the availability of cellular and/or Wi-Fi network coverage for the purpose of allowing your smartphone to connect to the Internet.
- Service availability may be geographically limited to the region. Consult the connected content service provider for additional information.
- Ability of this product to access connected content is subject to change without notice and could be affected by any of the following: compatibility issues with future firmware versions of smartphone; compatibility issues with future versions of the connected content application(s) for the smartphone; changes to or discontinuation of the connected Content application(s) or service by its provider.

Pandora®

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Aha Radio

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HDMI



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Appendix

MHL

MHL, the MHL Logo, and Mobile High-Definition Link are trademarks or registered trademarks of MHL, LLC in the United States and other countries. ■

Using the LCD screen correctly

Handling the LCD screen

- When the LCD screen is subjected to direct sunlight for a long period of time, it will become very hot, resulting in possible damage to the LCD screen. When not using this navigation system, avoid exposing it to direct sunlight as much as possible.
- The LCD screen should be used within the temperature ranges shown in *Specifications*.
- Do not use the LCD screen at temperatures higher or lower than the operating temperature range, because the LCD screen may not operate normally and could be damaged.
- The LCD screen is exposed in order to increase its visibility within the vehicle. Please do not press strongly on it as this may damage it.
- Do not push the LCD screen with excessive force as this may scratch it.
- Never touch the LCD screen with anything besides your finger when operating the touch panel functions. The LCD screen can scratch easily.

Liquid crystal display (LCD) screen

- If the LCD screen is near the vent of an air conditioner, make sure that air from the air conditioner is not blowing on it. Heat from the heater may break the LCD screen, and cool air from the cooler may cause moisture to form inside the navigation unit, resulting in possible damage.
- Small black dots or white dots (bright dots) may appear on the LCD screen. These are due to the characteristics of the LCD screen and do not indicate a malfunction.

- The LCD screen will be difficult to see if it is exposed to direct sunlight.
- When using a cellular phone, keep the antenna of the cellular phone away from the LCD screen to prevent disruption of the video in the form of disturbances such as spots or colored stripes.

Maintaining the LCD screen

- When removing dust from the LCD screen or cleaning it, first turn the system power off, then wipe with a soft dry cloth.
- When wiping the LCD screen, take care not to scratch the surface. Do not use harsh or abrasive chemical cleaners.

LED (light-emitting diode) backlight

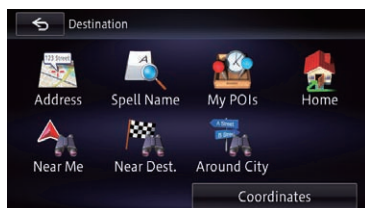
A light emitting diode is used inside the display to illuminate the LCD screen.

- At low temperatures, using the LED backlight may increase image lag and degrade the image quality because of the characteristics of the LCD screen. Image quality will improve with an increase in temperature.
- The product lifetime of the LED backlight is more than 10 000 hours. However, it may decrease if used in high temperatures.
- If the LED backlight reaches the end of its product lifetime, the screen will become dimmer and the image will no longer be visible. In that case, please consult your dealer or the nearest authorized Pioneer Service Station. ■

Appendix

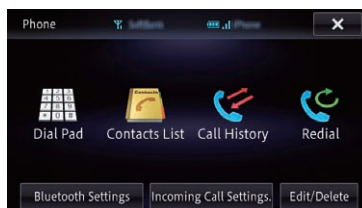
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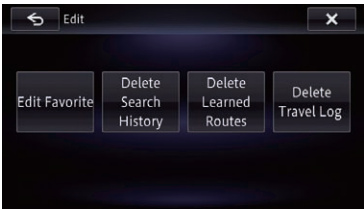
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Edit/Settings menu



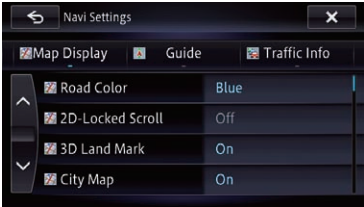
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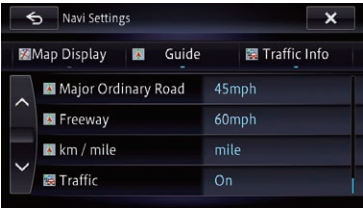


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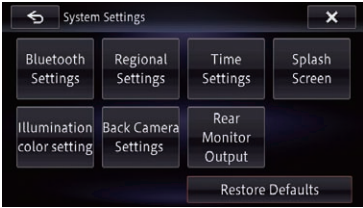
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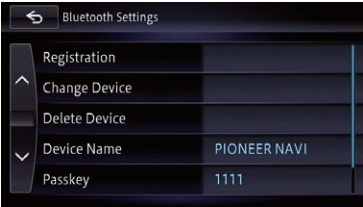
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Appendix

Glossary

AAC

AAC is short for Advanced Audio Coding and refers to an audio compression technology standard used with MPEG-2 and MPEG-4.

Aspect ratio

This is the width-to-height ratio of a TV screen. A regular display has an aspect ratio of 4:3. Wide screen displays have an aspect ratio of 16:9, providing a bigger picture for exceptional presence and atmosphere.

Bit rate

This expresses data volume per second, or bps units (bits per second). The higher the rate, the more information is available to reproduce the sound. Using the same encoding method (such as MP3), the higher the rate, the better the sound.

Built-in sensor

The built-in sensor that enables the system to estimate your vehicle's position.

CD-DA

This stands for a general music CD (commercial-release audio CD). In this manual, this word is sometime used for a distinction between data CDs (which include compressed audio files) and general music CDs.

Chapter

Titles of DVD-Video are in turn divided into chapters which are numbered in the same way as the chapters of a book. With discs featuring chapters, you can quickly find a desired scene with chapter search.

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.

DivX

DivX is a popular media technology created by DivX, LLC, a subsidiary of Rovi Corporation. DivX media files contain highly compressed video with high visual quality that maintains a relatively small file size. DivX files can also include advanced media features like menus, subtitles, and alternate audio tracks. Many DivX media files are available for download online, and you can create your own using your personal content and easy-to-use tools from DivX.com.

DivX Certified®

DivX Certified® products are officially tested by the creators of DivX and guaranteed to play all versions of DivX video, except for DivX 7.

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 point

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

Home location

Your registered home location.

ID3 tag

This is a method of embedding track-related information in an MP3 file. This embedded information can include the track title, the artist's name, the album title, the music genre, the year of production, comments and other data. The contents can be freely edited using software with ID3 tag editing functions. Although the tags are restricted by the number of characters, the information can be viewed when the track is played back.

Appendix

ISO 9660 format

This is the international standard for the format logic of DVD/CD-ROM folders and files. For the ISO9660 format, there are regulations for the following two levels:

- **Level 1:**
The file name is in 8.3 format (the name consists of up to eight characters, half-byte English capital letters, half-byte numerals and the “_” sign, with a file-extension of three characters).
- **Level 2:**
The file name can have up to 31 characters (including the separation mark “.” and a file extension). Each folder contains less than eight hierarchies.
- **Extended formats**
Joliet:
File names can have up to 64 characters.
Romeo:
File names can have up to 128 characters.

JPEG

This stands for Joint Photographic Experts Group, and is an international still image compression standard.

MP3

MP3 is short for MPEG Audio Layer 3. It is an audio compression standard established by a working group (MPEG) of the ISO (International Organization for Standardization). MP3 is able to compress audio data to about 1/10th the size of a conventional disc.

MPEG

This stands for Moving Pictures Experts Group, and is an international video image compression standard.

Multi-angle

With regular TV programs, although multiple cameras are used to simultaneously shoot scenes, only images from one camera at a time are transmitted to your TV. Some DVDs feature scenes shot from multiple angles, letting you choose your viewing angle as desired.

Multi-audio (Multilingual dialog)

Some videos feature dialog recorded in multiple languages or audio recorded in multiple tracks. For example, dialog in up to eight languages can be recorded on a single DVD-Video, letting you choose the language as desired.

Multi-session

Multi-session is a recording method that allows additional data to be recorded later. When recording data on a CD-ROM, CD-R or CD-RW, etc., all data from beginning to end is treated as a single unit or session. Multi-session is a method of recording more than two sessions in one disc.

Multi-subtitle

For example, subtitles in up to 32 languages can be recorded on a single DVD-Video, letting you choose as desired.

Packet write

This is a general term for a method of writing individual files to a CD-R, etc. whenever required, just as is done with files on floppy or hard disks.

Parental lock

Some DVD-Video discs with violent or adult-oriented scenes feature parental lock which prevents children from viewing such scenes. With this kind of disc, if you set the unit's parental lock level, playback of scenes inappropriate for children will be disabled, or these scenes will be skipped.

Phone book

An address book on user's phone is collectively referred to as “Phone book”. Depending on the cellular phone, the phone book may be called a name such as “Contacts”, “Business card” or something else.

Point Of Interest (POI)

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

Appendix

Region number

DVD players and DVD discs feature region numbers indicating the area in which they were purchased. Playback of a DVD is not possible unless it features the same region number as the DVD player.

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.

Title

DVD-Video discs have a high data capacity, enabling recording of multiple videos on a single disc. If, for example, one disc contains three separate videos, they are divided into title 1, title 2 and title 3. This lets you enjoy the convenience of title search and other functions.

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.

VBR

VBR is short for variable bit rate. Generally speaking, CBR (constant bit rate) is more widely used. But by flexibly adjusting the bit rate according to the needs of audio compression, it is possible to produce compression-priority data.

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.

WMA

WMA is short for Windows Media™ Audio and refers to an audio compression technology that is developed by Microsoft Corporation. WMA data can be encoded by using Windows Media Player version 7 or later. ■

Appendix

Specifications

General

Rated power source	14.4 V DC (allowable voltage range: 10.8 V to 15.1 V DC)
Grounding system	Negative type
Maximum current consumption	10.0 A
Dimensions (W × H × D):	
AVIC-Z150BH	
Chassis	178 mm × 100 mm × 167 mm (7 in. × 3-7/8 in. × 6-5/8 in.)
Nose	170 mm × 96 mm × 20 mm (6-3/4 in. × 3-3/4 in. × 3/4 in.)
AVIC-X950BH	
Chassis	178 mm × 100 mm × 167 mm (7 in. × 3-7/8 in. × 6-5/8 in.)
Nose	170 mm × 97 mm × 11 mm (6-3/4 in. × 3-7/8 in. × 3/8 in.)
AVIC-X850BT	
Chassis	178 mm × 100 mm × 167 mm (7 in. × 3-7/8 in. × 6-5/8 in.)
Nose	170 mm × 97 mm × 11 mm (6-3/4 in. × 3-7/8 in. × 3/8 in.)
AVIC-X8510BT	
Chassis	178 mm × 100 mm × 167 mm (7 in. × 3-7/8 in. × 6-5/8 in.)
Nose	170 mm × 97 mm × 11 mm (6-3/4 in. × 3-7/8 in. × 3/8 in.)

Weight:

AVIC-Z150BH	2.15 kg (4.7 lbs)
AVIC-X950BH	1.87 kg (4.1 lbs)
AVIC-X850BT	1.84 kg (4.1 lbs)
AVIC-X8510BT	1.84 kg (4.1 lbs)

NAND flash memory 8 GB

Navigation

GPS receiver:

System	L1, C/Acode GPS SPS (Standard Positioning Service)
Reception system	12-channel multi-channel reception system
Reception frequency	1 575.42 MHz
Sensitivity	-140 dBm (typ)
Position update frequency	Approx. once per second

GPS antenna:

Antenna	Micro strip flat antenna/ right-handed helical polarization
Antenna cable	3.55 m (11 ft. 7 in.)
Dimensions (W × H × D)	33 mm × 14.7 mm × 36 mm (1-1/4 in. × 4/7 in. × 1-3/8 in.)
Weight	73.7 g (0.211 lbs)

Display

Screen size/aspect ratio:

AVIC-Z150BH	7 inch wide/16:9
AVIC-X950BH	6.1 inch wide/16:9
AVIC-X850BT	6.1 inch wide/16:9
AVIC-X8510BT	6.1 inch wide/16:9

Effective display area:

AVIC-Z150BH	155.2 mm × 81.3 mm
AVIC-X950BH	135 mm × 70.8 mm
AVIC-X850BT	135 mm × 70.8 mm
AVIC-X8510BT	135 mm × 70.8 mm

Pixels 384 000 (800 × 480)

Display method TFT Active matrix driving

Backlight LED

Color system NTSC compatible

Tolerable temperature range:

Power on	+14 °F to +140 °F
Power off	-4 °F to +176 °F

Angle adjustment

AVIC-Z150BH	0° to 22°
AVIC-X950BH	0°
AVIC-X850BT	0°
AVIC-X8510BT	0°

Audio

Maximum power output 50 W × 4

50 W × 2 ch/4Ω + 70 W ×
1 ch/2Ω (for subwoofer)

Continuous power output ... 22 W × 4 (50 Hz to 15 kHz,
5%THD, 4Ω LOAD, Both
Channels Driven)

Load impedance 4Ω (4Ω to 8Ω [2Ω for 1 ch]
allowable)

Preout output level (max):

AVIC-Z150BH	4.0 V
AVIC-X950BH	2.2 V
AVIC-X850BT	2.2 V
AVIC-X8510BT	2.2 V

Preout impedance:

AVIC-Z150BH	100Ω
AVIC-X950BH	1 kΩ
AVIC-X850BT	1 kΩ
AVIC-X8510BT	1 kΩ

Appendix

Equalizer (8-Band Graphic Equalizer):

Frequency 40 Hz/80 Hz/200 Hz/400 Hz/
1 kHz/2.5 kHz/8 kHz/10 kHz
Gain ± 12 dB

Loudness contour:

Low +3.5 dB (100 Hz), +3 dB
(10 kHz)
Mid +10 dB (100 Hz), +6.5 dB
(10 kHz)
High +11 dB (100 Hz), +11 dB
(10 kHz)
(volume: -30 dB)

HPF:

Frequency 50 Hz/63 Hz/80 Hz/100 Hz/
125 Hz
Slope -12 dB/oct

Subwoofer:

Frequency 50 Hz/63 Hz/80 Hz/100 Hz/
125 Hz
Slope -18 dB/oct
Gain -24/+6 dB
Phase Normal/Reverse

Bass boost:

Gain 0 dB to +12 dB

DVD drive

System DVD-Video, CD, MP3, WMA,
AAC, DivX system
Usable discs DVD-Video, DVD-R(SL/DL),
DVD-RW, CD-ROM, CD-DA,
CD-R/RW

Region number 1

Signal format:

Sampling frequency 44.1 kHz/48 kHz/96 kHz
Number of quantization bits
..... 16 bit/20 bit/24 bit; linear

Frequency response 5 Hz to 44 000 Hz (with DVD,
at sampling frequency
96 kHz)

Signal-to-noise ratio 97 dB (1 kHz) (IHF-A net-
work)
(CD: 96 dB (1 kHz) (IHF-A
network))

Dynamic range 95 dB (1 kHz) (CD: 94 dB
(1 kHz))

Distortion 0.008 % (1 kHz)

Output level:

Video 1.0 Vp-p/75Ω (±0.2 V)
Audio 1.0 V (1 kHz, 0 dB)

Number of channels 2 (stereo)

MP3 decoding format MPEG-1, 2 & 2.5 Audio Layer
3

WMA decoding format Ver. 7, 8 & 9

AAC decoding format MPEG-4 AAC (only encoded
by iTunes):
.m4a

DivX decoding format Home Theater Ver.3.11,
Ver.4.X, Ver.5.X, Ver.6.X:
.avi, .divx

USB

USB standard spec. USB 2.0 High Speed
Max current supply 1 A
File system FAT16, FAT32
USB class Mass storage class
Decoding format MP3/WMA/AAC/WAVE/
H.264/MPEG4/WMV

SD (AVIC-Z150BH)

SD memory card, SDHC memory card
Compatible physical format
..... Version 2.00
File system FAT16, FAT32
Decoding format MP3/WMA/AAC/WAVE/
H.264/MPEG4/WMV

SD (AVIC-X950BH, AVIC-X850BT and AVIC-X8510BT)

microSD card, microSDHC card
Compatible physical format
..... Version 2.00
File system FAT16, FAT32
Decoding format MP3/WMA/AAC/WAVE/
H.264/MPEG4/WMV

Bluetooth

Version Bluetooth 2.1+EDR
Output power +4 dBm Max.
(Power class 2)

FM tuner

AVIC-Z150BH, AVIC-X950BH
Frequency range 87.9 MHz to 107.9 MHz
Usable sensitivity 9 dBf (0.8 μV/75Ω, mono,
S/N: 30 dB)
Signal-to-noise ratio 80 dB (digital broadcasting)
(IHF-A network)
72 dB (analog broadcasting)
(IHF-A network)

AVIC-X850BT, AVIC-X8510BT
Frequency range 87.9 MHz to 107.9 MHz
Usable sensitivity 9 dBf (0.8 μV/75Ω, mono,
S/N: 30 dB)
Signal-to-noise ratio 72 dB (IHF-A network)

Appendix

AM tuner

AVIC-Z150BH, AVIC-X950BH

- Frequency range 530 kHz to 1 710 kHz
(10 kHz)
- Usable sensitivity 25 μ V (S/N: 20 dB)
- Signal-to-noise ratio 80 dB (digital broadcasting)
(IHF-A network)
- 62 dB (analog broadcasting)
(IHF-A network)

AVIC-X850BT, AVIC-X8510BT

- Frequency range 530 kHz to 1 710 kHz
(10 kHz)
- Usable sensitivity 25 μ V (S/N: 20 dB)
- Signal-to-noise ratio 62 dB (IHF-A network)

CEA2006 Specifications



- Power output 14 W RMS $\times$ 4 Channels
(4 Ω and $\leq$ 1 % THD+N)
- S/N ratio 91 dBA (reference: 1 W into
4 Ω)

Note

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>**

*To keep up to date with the latest navigational data,
you can periodically update your navigation system.
For further details, please visit our website.*

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