

Pioneer *sound.vision.soul*

Hardware Manual

ENGLISH

HDD MULTIMEDIA AV NAVIGATION SERVER

AVIC-Z1

SUPER  TUNER III 

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Manual Overview

This manual mainly describes information related to the hardware, such as the names of parts for the navigation system or precautions for use. Please read this manual and all other enclosed manuals before using your navigation system. The following issues are described in each chapter:

How to use this manual

Precautions

This chapter describes precautions for the safety use of the navigation system. Please read all descriptions in this section before using your navigation system.

Notes Before Using the System

This section contains information needed before using the navigation system. Please read all descriptions in this section before using your navigation system.

How to Use the Navigation System and Names of the Parts

This chapter describes important issues to know your navigation system, such as the names of each part, and how to insert or eject discs.

Appendix

This section describes how to handle the navigation system or discs, and the specifications of this navigation system.

Terminology

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 unit are indicated by **ALL CAPITAL, BOLD** lettering:
e.g.)
MAP button, **MENU** button.
- Items in the different menus or touch keys available on the screen are described in parenthesis [] and **bold**:
e.g.)
[**Destination**], [**Settings**].
- Extra information, alternative uses and other notes are presented as follows:
e.g.)
 - When the source icon is not displayed, you can display it by touching the screen.
- The references are indicated as follows:
e.g.)
 - ↪ For suitable discs → Page 17

About the definition of terminology

“Front Display” and “Rear Display”

In this manual, the screen that is attached to the body of the navigation unit will be referred to as the “Front Display”. Any additional optional screen that is purchased for use in conjunction with the navigation unit will be referred to as the “Rear Display”.

Video image

“Video image” in this manual indicates the moving image from DVD-Video in the built-in DVD drive or from the equipment that is connected to the navigation system with AV-BUS or RCA cable, such as a TV tuner or general-purpose AV equipment.

Precautions

Important Safety Information

Before using your navigation system, be sure to read and fully understand the following safety information:

Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

For Canadian model

This Class B digital apparatus complies with Canadian ICES-003.

CAUTION: USE OF CONTROL OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION: THE USE OF OPTICAL INSTRUMENTS WITH THIS PRODUCT WILL INCREASE EYE HAZARD.

WARNING

- Do not attempt to install or service your navigation system by yourself. Installation or servicing of the navigation system by persons without training and experience in electronic equipment and automotive accessories may be dangerous and could expose you to the risk of electric shock or other hazards.
- If liquid or foreign matter should get inside this navigation system, turn off the power immediately and consult your dealer or the nearest authorized PIONEER Service Station. Do not use the navigation system in this condition because doing so may result in a fire, electric shock, or other failure.

- If you notice smoke, a strange noise or smell from the navigation system, or any other abnormal signs on the LCD screen, turn off the power immediately and consult your dealer or the nearest authorized PIONEER Service Station. Using this navigation system in this condition may result in permanent damage to the system.
- Do not disassemble or modify this navigation system, as there are high-voltage components inside which may cause an electric shock. Be sure to consult your dealer or the nearest authorized PIONEER Service Station for internal inspection, adjustments or repairs.

WARNING

- Handling the cord on this product or cords associated with accessories sold with the product may expose you to chemicals listed on proposition 65 known to the State of California and other governmental entities to cause cancer and birth defects or other reproductive harm. *Wash hands after handling.*
- This product contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

CAUTION

- Do not allow this product to come into contact with liquids. Electrical shock could result. Also, damage to the product, smoke, and overheating could result from contact with liquids.

- Read the entire manual before operating this navigation system.

- ❑ The navigation features of this product (and rear view camera option if purchased) is intended solely as an aid to you in the operation of your vehicle. It is not a substitute for your attentiveness, judgment, and care when driving.
- ❑ Do not operate this navigation system (or the rear view camera option if purchased) if doing so in any way will divert your attention from the safe operation of your vehicle. Always observe safe driving rules and follow all existing traffic regulations. If you experience difficulty in operating the system or reading the display, park your vehicle in a safe location and apply the parking brake before making the necessary adjustments.
- ❑ Never allow others to use the system unless they have read and understood the operating instructions.
- ❑ Never use this navigation system to route to hospitals, police stations, or similar facilities in an emergency. Please call 911 without using the hands-free features of this navigation system.
- ❑ Route and guidance information displayed by this equipment is for reference purposes only. It may not accurately reflect the latest permissible routes, road conditions, one way streets, road closures, or traffic restrictions.
- ❑ Traffic restrictions and advisories currently in force should always take precedence over guidance given by the navigation system. Always obey current traffic restrictions, even if the navigation system provides contrary advice.
- ❑ Failure to set correct information about the local time may result in the navigation system providing improper routing and guidance instructions.
- ❑ Never set the volume of your navigation system so high that you cannot hear outside traffic and emergency vehicles.
- ❑ To promote safety, certain functions are disabled unless the vehicle is stopped and/or the parking brake is applied.
- ❑ The data encoded in the hard disk drive is the intellectual property of the provider, and the provider is responsible for such content.
- ❑ Keep this manual handy as a reference for operating procedures and safety information.
- ❑ Pay close attention to all warnings in this manual and follow the instructions carefully.
- ❑ Do not install the display where it may (i) obstruct the driver's vision, (ii) impair the performance of any of the vehicle's operating systems or safety features, including air bags, hazard lamp buttons or (iii) impair the driver's ability to safely operate the vehicle.
- ❑ Please remember to wear your seat belt at all times while operating your vehicle. If you are ever in an accident, your injuries can be considerably more severe if your seat belt is not properly buckled.
- ❑ Never use headphones while driving.

Additional Safety Information

To avoid battery exhaustion

Be sure to run the vehicle engine while using this navigation system. Using the navigation system without running the engine can result in battery drainage.

 **WARNING**

-
- **Do not use with vehicles that do not feature an ACC position.**
-

To ensure safe driving

Parking brake interlock

Certain functions offered by this navigation system could be dangerous if used while driving. To prevent them being used while in motion, there is an interlock with your vehicle's parking brake (**Parking brake interlock**). If you attempt to use these functions during driving, they may be inoperable. If so, stop in a safe place, apply the parking brake, then operate.

⚠ WARNING

- **THE LIGHT GREEN LEAD AT POWER CONNECTOR IS DESIGNED TO DETECT PARKED STATUS AND MUST BE CONNECTED TO THE POWER SUPPLY SIDE OF THE PARKING BRAKE SWITCH. IMPROPER CONNECTION OR USE OF THIS LEAD MAY VIOLATE APPLICABLE LAW AND MAY RESULT IN SERIOUS INJURY OR DAMAGE.**
- **To avoid the risk of accident and the potential violation of applicable laws, this product should never be used while the vehicle is being driven except for navigation purposes. Also, no part of the navigation system should be in a location where it is a visible distraction to the driver.**
- **In some countries or states the viewing of images on a display inside a vehicle even by persons other than the driver may be illegal. Where such regulations apply, they must be obeyed and the product's "Video image" features should not be used.**

The navigation system detects whether your vehicle's parking brake is engaged or not, and prevents you from watching "Video image" on the "Front Display" while driving. When you attempt to watch then DVD or TV, the warning

ATTENTION! Viewing of front seat video source while driving is strictly prohibited. will appear on the "Front Display".

To watch "Video image" on the "Front Display", park your vehicle in a safe place and apply the parking brake.

See "Parking brake interlock" in the Operation Manual for more information.

When using a display connected to REAR MONITOR OUTPUT

⚠ WARNING

- **NEVER install the "Rear Display" in a location that enables the driver to watch "Video image" while driving.**

This navigation system's **REAR MONITOR OUTPUT** is for connection of a display to enable passengers in the rear seats to watch "Video image".

- Setting the source for rear source → Operation Manual
- The map screen navigation images output to the "Rear Display" differs from standard NTSC format images. Therefore, the quality will be inferior to the images that appear on the "Front Display".

About rear view camera

With an optional rear view camera (sold separately) you are able to use the navigation system as an aid to keep an eye on trailers, or while backing up.

⚠ WARNING

- **SCREEN IMAGE MAY APPEAR REVERSED.**
- **USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.**

⚠ CAUTION

- **The rear view camera function is to be used as an aid to keep an eye on trailers, or while backing up. Do not use for entertainment purposes.**
- **Please note that the edges of the rear view camera images may differ slightly according to whether full screen images are displayed when backing up, and whether the images are used for checking the rear when the vehicle is moving forward.**

Notes Before Using the System

Important (Serial Number:)

The serial number of this device is located on the bottom of this product. For your own security and convenience, be sure to record this number on the enclosed warranty card.

After-sales service for Pioneer products

Please contact the dealer or distributor from where you purchased the product for its after-sales service (including warranty conditions) or any other information. In case the necessary information is not available, please contact the companies listed below:

Please do not ship your product to the companies at the addresses listed below for repair without making advance contact.

U.S.A

Pioneer Electronics
(USA) Inc.
CUSTOMER
SUPPORT DIVISION
P.O. Box 1760
Long Beach, CA
90801-1760
800-421-1404

CANADA

Pioneer Electronics of
Canada, Inc.
CUSTOMER
SATISFACTION
DEPARTMENT
300 Allstate Parkway
Markham, Ontario
L3R 0P2
1-877-283-5901

For warranty information, please see the Limited Warranty sheet included with your product.

Product Registration

Visit us at the following site:

<http://www.pioneerelectronics.com>

1. Register your product. We will keep the details of your purchase on file to help you refer to this information in the event of an insurance claim such as loss or theft.
2. Receive updates on the latest products and technologies.

3. Download owner's manuals, order product catalogues, research new products, and much more.
4. Receive notices of software upgrades and software updates.

Features

Touch panel key operation

It is possible to operate the product by using touch panel keys.

Built-in navigation system

The map data required for the navigation function is stored in the hard disk drive.

Music Library

You can record music to hard disk drive from CD and playback them on the music library. You can also organize and edit favorite tracks, etc.

Four times speed for CD recording

For a typical CD, one CD can be recorded in approximately 15 minutes. It is also possible to listen to the song being recorded while recording.

Automatic title retrieval function using Gracenote® Music Recognition Service (for encoding only)

When music is recorded on the music library from CD, information such as the recording artist and track name, etc. are retrieved from the Gracenote Database and displayed (when available). Please read "About Gracenote®" before using this navigation system.

Music recognition technology and related data are provided by Gracenote®. Gracenote is the industry standard in music recognition technology and related content delivery. For more information visit www.gracenote.com.

☛ "About Gracenote®" → Page 20

DVD-Video playback

It is possible to play back DVD-Video, DVD-R (video mode) and DVD-RW (video mode).

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

➤ For details on playable discs → Page 17

Multi-aspect

You can switch between wide screen, letter box and panscan display.

Multi-audio, Multi-subtitle, and Multiangle

You can switch between multiple audio systems, subtitle languages, and multiple viewing angles of a scene recorded on a DVD as desired.

- ❑ This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

CD playback

Music CD/CD-R/CD-RW playback is possible.

➤ For details on playable discs → Page 17

MP3 file playback

It is possible to play back MP3 files recorded on CD-ROM/CD-R/CD-RW (ISO9660 Level 1/Level 2 standard recordings).

- Supply of this navigation system 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>.

NTSC compatibility

This navigation system is NTSC system compatible. When connecting other components to the navigation system, be sure components are compatible with the same video system or else images will not be correctly reproduced.

iPod® compatibility

When you use this navigation system with a Pioneer iPod adapter, you can control an iPod with Dock connector.

- iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries.

Rear entertainment

The DVD-video signals from the built-in DVD drive or the video and audio signals from the AV INPUT source can be output to the "Rear Display" independently from the source selected with this navigation system ("Front Display").

Bluetooth® technology compatibility

When you use this navigation system with a Pioneer Bluetooth unit, a mobile phone features Bluetooth technology can be connected wirelessly.

- The mobile phone used must be compatible for the profile of the Bluetooth unit.
 - When using Bluetooth wireless technology, this navigation system may not be able to operate all of the functions on the mobile phone.
- About hands-free phoning → Operation Manual

Rear view camera ready

You can display what is behind the vehicle if connected to a rear view camera (sold separately).

➤ "About rear view camera" → Page 4

About the SAT RADIO READY Logo

The SAT RADIO READY logo printed below the CD loading slot indicates that the Satellite Radio Tuner for Pioneer (i. e., XM tuner and Sirius satellite tuner which are sold separately) can be controlled by this navigation system. Please inquire

with your dealer or nearest authorized Pioneer service station regarding the satellite radio tuner that can be connected to this navigation system. For satellite radio tuner operation, please refer to the Operation Manuals of the navigation system and satellite radio tuner.

Note:

The system will use direct satellite-to-receiver broadcasting technology to provide listeners in their cars and at home with crystal-clear sound seamlessly from coast to coast. Satellite radio will create and package over 100 channels of digital-quality music, news, sports, talk and children's programming.

"SAT Radio", the SAT Radio logo and all related marks are trademarks of Sirius Satellite Radio inc., and XM Satellite Radio Inc.

About the XM NAVTRAFFIC Logo



Required \$12.95 basic monthly XM radio subscription and XM NavTraffic service subscriptions sold separately. XM NavTraffic only available in select markets. Other fees and taxes, including a one-time activation fee, may apply. Subscription fee is consumer only. All fees and programming subject to change. Subscriptions subject to Customer Agreement available at xmradio.com. XM radio service only available in the 48 contiguous United States.

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NAVTEQ Traffic- is a trademark of NAVTEQ North America, LLC.-2006. NAVTEQ North America, LLC.

Dolby Digital sounds

When using Pioneer multi-channel processors that are planned to be compatible with this navigation system, please consult your dealer or nearest authorized Pioneer Service Station.

- Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.



About DTS sounds



Only digital output of DTS audio is possible. If navigation system's optical digital outputs are not connected. DTS audio will not be output, so select an audio setting other than DTS.

- "DTS" is a registered trademark of Digital Theater Systems, Inc.

Notes for Hard disk drive

Recording equipment and copyright

Recording equipment should be used only for lawful copying and you are advised to check carefully what is lawful copying in the country in which you are making a copy. Copying of copyright material such as films or music is unlawful unless permitted by a legal exception or consented to by the right owners.

About writing data to the hard disk drive at low temperature

Writing to the hard disk drive such as recording music to the music library may be disabled when the navigation system detects abnormally low temperatures inside the vehicle. Functionality will become available once the temperature inside the vehicle returns to normal.

When recording please pay attention to these points;

- Pioneer does not compensate for the contents that could not be recorded or any loss of recorded data due to a malfunction or failure of the navigation system.
- The data recorded on the navigation system is not allowed to be used without a permission from its right holder under copyright law except for personal entertainment.
- Make sure to check the recording operation before recording and check the recorded contents after recording.
- Recording is not guaranteed for all CDs.

About the data saved or recorded by the customer

- The data saved or recorded onto this navigation system by the customer cannot be extracted from the navigation system, and those service cannot be accepted.
- The data saved or recorded onto this navigation system by the customer cannot be guaranteed during repair or service. Lost data that was saved or recorded by the customer is not guaranteed.
- Due to copyrights, the music data recorded into the Music Library cannot be backed up during repair or service.

Notes for LCD Screen

To protect the LCD screen

- Do not allow direct sunlight to fall on the LCD screen when this navigation system is not being used. Extended exposure to direct sunlight can 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 display to prevent disruption of the video with disturbances such as spots or colored stripes.
- Never touch the LCD screen with anything besides your finger when operating the Touch Panel functions. The LCD screen can scratch easily. (The stylus is supplied for special calibrations. Do not use the stylus for normal operation.)

- ▷ For details about handing the LCD panel → Page 21

For viewing LCD comfortably

Due to its construction, the viewing angle of the LCD screen is limited. The viewing angle can be increased, however, by using **[Brightness]** to adjust the black density of the video. When using for the first time, adjust the black density in accordance with the viewing angle to adjust for clear viewing. **[Dimmer]** can also be used to adjust the brightness of the LCD screen itself to suit your personal preference.

Notes for Internal Memory

Before removing the vehicle battery

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

- ▷ For details, refer to "Returning the Navigation System to the Default or Factory Settings" in the the Operation Manual.

Resetting the Microprocessor

CAUTION

- **Pressing the RESET button mainly clears the settings for the AV source without clearing all the items of navigation functions. Please see section "Returning the Navigation System to the Default or Factory Settings" of the Operation Manual before clearing.**

Pressing the **RESET** button lets you reset the microprocessor to its initial settings without changing the condition memory.

- ▷ Condition Memory → Page 17

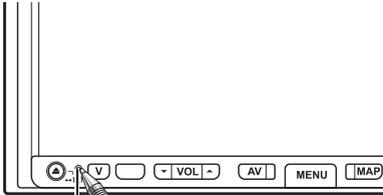
The microprocessor must be resetted under the following conditions:

- Prior to using this navigation system for the first time after installation.
- If the product fails to operate properly.
- If there appear to be problems with the operation of the system.

- When changing the combination of the equipment.
- When adding/removing additional products that connect to the navigation system.

1 Turn the ignition switch OFF.

2 Press the RESET button with a pen tip or other pointed instrument.



RESET button

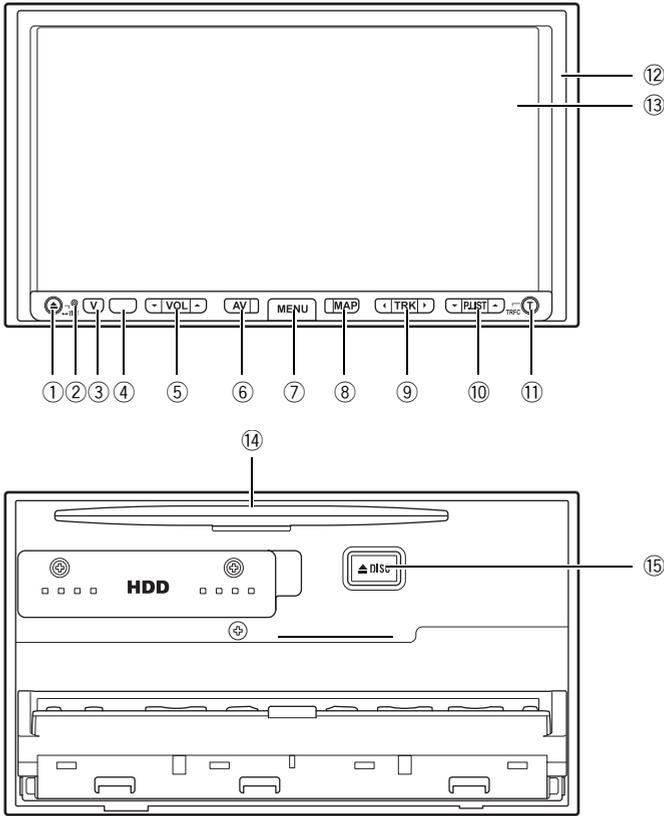
- If you have connected other equipment (for example, a TV tuner) to this navigation system, be sure to reset that equipment too.

How to Use the Navigation System and Names of the Parts

Checking Part Names and Functions

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

□ For more detail on operation, function limitations please refer to the Operation Manual.



① OPEN CLOSE button

Press to open or close the LCD panel and access the disc loading slot.

Press and hold to display the screen angle adjustment screen where you can adjust the angle of the LCD panel.

➤ Opening and Closing the LCD Panel →
Page 14

② RESET button

Press to recover from an errors or another. You can clear the customized settings related to the AV source.

➤ Resetting the Microprocessor → Page 8

③ V button

Press to enter the **PICTURE ADJUSTMENT** mode.

➤ Operating the Picture Adjustment → Operation Manual

Press and hold to turn off the back light of the LCD panel. To turn on the back light, press this button again.

④ Signal receptor

This area receives signals from a remote control (sold separately).

⑤ VOL (▲/▼) button

Pressing on the ▲ side of the button to increase the volume of the audio source while pressing on the ▼ side of it to decrease the volume of the audio source.

You can not adjust the sounds of the navigation features (e.g. guidance voice) and phone volume.

⑥ AV button

Press to switch the screen to the audio operation screen. If you press the **AV** button again, the source switches.

Press and hold the **AV** button to turn off the source.

⑦ MENU button

Press to display a navigation menu of the navigation system.

Press and hold to display Phone Menu when the Bluetooth unit (sold separately) is connected to this navigation system.

⑧ MAP button

Press to view the navigation map screen. Also, when the map is scrolling, pressing this button returns you to the display of the map of your surroundings. Use to switch the view mode of the navigation when the map of your surroundings is displayed.

⑨ TRK (◀/▶) button

Pressing this button when the built-in DVD drive source is selected skips a track or a chapter. Press and hold to fast forward/fast reverse a track or a chapter.

Various operations are possible depending on the Audio source.

⑩ P.LIST (▲/▼) button

Changes the discs in the magazine during the multi-CD player (sold separately) operation.

Switches preset channels during the Radio operation.

Various operations are possible depending on the Audio source.

⑪ T button*

Preset button for Traffic audio service provided by XM or SIRIUS satellite radio tuner. Press and hold this button while on the desired channel to assign preset and you can recall that later. Press once to tune to that station from any source.

When the XM tuner and SIRIUS tuner are not connected:

Not used.

➤ "Using the AV Source (XM, SIRIUS)" → Operation Manual

⑫ LCD panel**⑬ LCD screen****⑭ Disc loading slot**

Insert a disc to play.

⑮ EJECT button

Press to eject the disc from the disc loading slot.

*: XM (GEX-P10XMT, GEX-P920XM) or SIRIUS (SIR-PNR2) satellite radio tuner is required, together with an appropriate active subscription respectively.

About the Power Supply of the Navigation System

How to turn the power on or off

The power to this navigation system turns on or off in conjunction with the ignition switch (ACC) of the vehicle. There is no power switch.

How to turn off the screen temporarily

Touch and hold the **V** button to turn off the screen for a while, and the navigation system enters the standby mode.

To cancel the standby mode, press the **V** button again, or touch the screen.

When Using the Navigation System for the First Time

The navigation system cannot detect the location correctly if the initial learning is not complete. The correct positioning can be attained after driving a certain distance. (The AV source can be used normally regardless of the initial learning status.)

When the vehicle starts to run, the 3D Hybrid Sensor's initial learning automatically starts. Until the 3D Hybrid Sensor's initial learning is complete, the positioning is performed by GPS satellites so the location of your vehicle may not be very accurate. This is not an error. When the initial learning is complete, the location of your vehicle can be detected at high accuracy.

- When an error message appears during the initial learning, refer to "Message and how to react to them" in the Operation Manual.

Selecting a Source by the AV button

1 Turn the ignition switch (ACC) ON.

The navigation system's power supply comes on.

2 After the navigation system starts, press the AV button to switch the screen.

Navigation map screen changes to audio source screen.

3 Press the AV button to turn the audio source on.

4 Press the AV button to select a source.

Press the **AV** button repeatedly to switch between the following sources:

[**CD/ROM**] (MP3)/[**DVD**] (built-in DVD drive)
 — [**MUSIC LIBRARY**] (HDD player) — [**FM**] (FM tuner) — [**AM**] (AM tuner) — [**XM**] (XM tuner) — [**SIRIUS**] (SIRIUS tuner) — [**iPod**] (iPod) — [**M-CD**] (multi-CD) — [**TV**] (television) — [**AV INPUT**] (video input) — [**AUX**] (Auxiliary equipment) — [**EXT 1**] (external unit 1) — [**EXT 2**] (external unit 2)

- Press and hold the **AV** button to turn the source off.

- In the following cases, the sound source cannot be used:
 - When a unit corresponding to each source is not connected to this product.
 - When no disc is set in this navigation system.
 - When no magazine is set in the multi-CD player.
 - When no magazine is set in the multi-DVD player.
 - When [**AUX Input**] (auxiliary input) is set to off (refer to Operation Manual).
 - When [**AV Input**] (video input) is not set to [**Video**] (refer to Operation Manual).
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this product. Two external units can be controlled by this product. When two external units are connected, the product allocates them to external unit 1 or external unit 2.
- When the [**Auto ANT**] mode is set to [**Radio**], the vehicle's antenna can be stowed by following the instructions below.
 - Change the source from radio (**AM** or **FM**) to another source.
 - Turn the source off.
 - Turn off the ignition switch (ACC OFF).
 If the [**Auto ANT**] mode is set to [**Power**], the vehicle's antenna can be stowed only when the ignition switch is turned off (ACC OFF).
 - ▷ [**Auto ANT**] → Operation Manual

Adjusting the Volume

• Use the VOL (▲/▼) button to adjust the audio sound level.

Press the **VOL** (▲/▼) button to increase or decrease the volume.

- To adjust the navigation volume, go to the navigation menu.
- ▷ Navigation volume adjustment → Operation Manual

Turning the Source Off

- Press the **AV** button and hold until the source turns off.
 - This navigation system also can be switched off by turning the ACC (ignition) OFF.

Inserting/Ejecting a Disc

WARNING

- When opening, closing and adjusting the angle of the LCD panel, be careful not to get your finger caught.
- Do not use with the LCD panel left open. If LCD panel is left open, it may result in injury in the event of an accident.

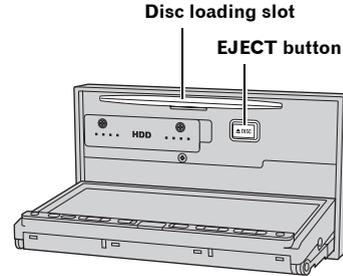
CAUTION

- Do not open and close the LCD panel with hands by force. This may cause malfunction.
- Do not operate this navigation system until the LCD panel completely opens or closes. 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 a can on this navigation system when the LCD panel is open. Doing so may break this navigation system.

Inserting a disc

1 Press the **OPEN CLOSE** button.

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



- To close the LCD panel, press the **OPEN CLOSE** button again.

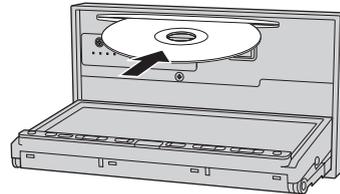
When a disc is already set



The above screen is displayed.

Make sure the disc loading slot is empty before inserting a disc into the slot.

2 Insert a disc into the disc loading slot.



If you insert a disc, the LCD panel closes automatically, and then format reading will start.

- When the ignition switch is turned off (ACC OFF) with the LCD panel open, the LCD panel remains open. Always make sure to close the LCD panel before turning the ignition switch off.
- Do not insert anything other than a disc into the disc loading slot.

- ❑ The built-in DVD drive plays one, standard, 12-cm or 8-cm (single) disc at a time. Do not use an adapter when playing 8-cm discs.
- For details, refer to "Playable discs" → Page 17
- ❑ If you cannot insert a disc completely or if a inserted disc is not recognized, check that the label side of the disc is up. Press the **EJECT** button to eject the disc, and check the disc for damage before inserting the disc again.
- ❑ If the built-in DVD drive does not operate properly, an error message may be displayed.
- Error messages → Operation Manual

Ejecting a disc

1 Press the **OPEN CLOSE** button.

The LCD panel opens.

2 Press the **EJECT** button.

The disc is ejected.

3 Press the **OPEN CLOSE** button.

The LCD panel closes.

Adjusting the LCD Panel Angle

⚠ WARNING

- When opening, closing and adjusting the angle of the LCD panel, be careful not to get your finger caught.

⚠ CAUTION

- Do not open and close the LCD panel with hands by force. This may cause malfunction.

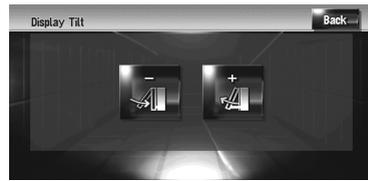
1 Press and hold the **OPEN CLOSE** button.

The angle adjustment screen appears.

2 Touch **[+]** or **[-]** to adjust the angle.

Five levels of angle are available.

3 Touch **[Back]**.



- ❑ The adjusted angle of the LCD panel will be memorized and the LCD panel will automatically return to that angle the next time when opening or closing the LCD panel.

Appendix

Troubleshooting

➤ Troubleshooting → Appendix of the Operation Manual

Handling and Care of the Disc

Some basic precautions are necessary when handling your discs.

Playable discs

DVD and CD discs that display the logos shown below generally can be played back on this built-in DVD drive.

DVD-Video



CD

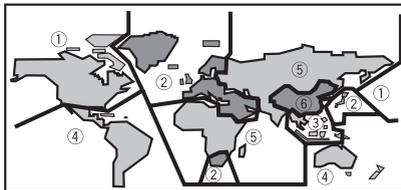


- DVD** is a trademark of DVD Format/Logo Licensing Corporation.
- It is not possible to play back DVD audio discs. This DVD drive may not be able to play all discs bearing the marks shown above.

DVD-Video disc region numbers

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 the bottom of this product.

The illustration below shows the regions and corresponding region numbers.



What the Marks on DVDs Indicate

The marks below may be found on DVD disc labels and packages. They indicate the type of images and audio recorded on the disc, and the functions you can use.

Mark	Meaning
	Indicates the number of audio systems.
	Indicates the number of subtitle languages.
	Indicates the number of viewing angles.
	Indicates the picture size (aspect ratio: screen width-to-height ratio) type.
	Indicates the number of the region where playback is possible.

If marks other than those listed are found on DVD disc labels and packages, please ask the DVD disc supplier for their meaning.

Condition Memory

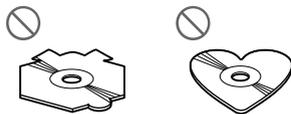
This function memorizes selections made for audio language, subtitle language, angle number and aspect ratio during disc playback for up to 30 discs. Without any special operations, the final setting details during playback of a disc are memorized. The next time a disc is played, the previous settings are automatically applied.

- With some discs, audio language and subtitle language are automatically specified, in which case condition memory does not function.

- When the number of discs exceeds 30, settings for the new disc replace those for the oldest disc.

DVD drive and care

- Use only normal, round discs. If you insert irregular, non-round shaped discs they may jam in the DVD drive or not play properly.



- Check all discs for cracks, scratches or warpage before playing. Discs that have cracks or scratches, or those that are warped may not play properly. Do not use such discs.
- Avoid touching the recorded (non-printed side) surface when handling the disc.
- Store discs in their cases when not in use.
- Keep discs out of direct sunlight and do not expose the discs to high temperatures.
- Do not attach labels to, write on or apply chemicals to the surface of the discs.
- To clean dirt from a disc, wipe the disc with a soft cloth outward from the center of the disc.



- If the heater is used in cold weather, condensation may form on components inside the DVD drive. Condensation may cause the DVD drive to operate incorrectly. If you think that condensation is a problem, turn off the DVD drive for an hour or so to allow the DVD drive to dry out, and wipe any damp discs with a soft cloth to remove the moisture.
- Road shocks may interrupt disc playback.

DVD discs and other DVD media types

- It may not be possible to use certain functions with some DVD-Video discs.
- It may not be possible to play back some DVD video discs.
- When DVD-R/DVD-RW discs are used, playback is possible only for discs which have been finalized.

- When DVD-R/DVD-RW discs are used, playback is possible only for discs which have been recorded in Video format (video mode). It is not possible to play back DVD-RW discs which have been recorded in Video Recording format (VR mode).
- It may not be possible to play back DVD-R/DVD-RW discs which have been recorded in Video format (video mode) because of disc characteristics, scratches or dirt on the disc, or dirt, scratches or condensation on the lens of this product.
- It is not possible to play back general DVD-ROM discs or DVD-RAM discs. Only the DVD-ROM disc authorized by Pioneer can be read.
- Playback of discs recorded on a personal computer may not be possible depending on the application settings and the environment. Please record with the correct format. (For details, contact the manufacturer of the application.)

About playing Dual Disc

- Dual Discs 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 unit. However, since the CD side of Dual Discs 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 Dual Disc may result in scratches on the disc.
- Serious scratches can lead to playback problems on this navigation system. In some cases, a Dual Disc may become stuck in the disc loading slot and will not eject. To prevent this, we recommend you refrain from using Dual Disc with this navigation system.
- Please refer to the manufacturer for more detailed information about Dual Discs.

CD-R/CD-RW discs

- When CD-R/CD-RW discs are used, playback is possible only for discs which have been finalized.
- It may not be possible to play back 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 this product.

- Playback of discs recorded on a personal computer may not be possible, depending on the application settings and the environment. Please record with the correct format. (For details, contact the manufacturer of the application.)
- Playback of CD-R/CD-RW discs may become impossible with direct exposure to sunlight, high temperatures, or depending on the storage conditions in the vehicle.
- 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)).
- If you insert a CD-RW disc into this product, time to play back will be longer than when you insert a conventional CD or CD-R disc.
- Read the precautions with CD-R/CD-RW discs before using them.

MP3 files

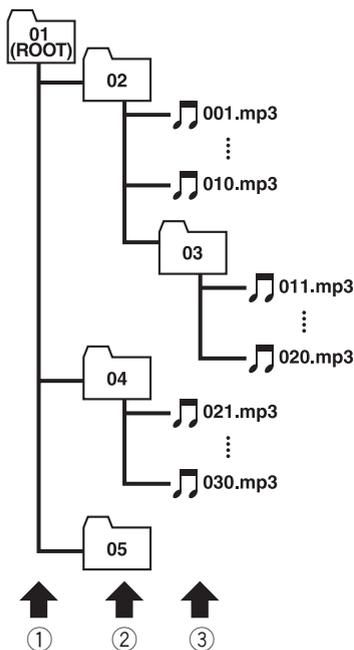
- When naming an MP3 file, add the corresponding filename extension (.mp3).
- This navigation system plays back files with the filename extension (.mp3) as MP3 files. To prevent noise and malfunctions, do not use this extension for files other than MP3 files.
- MP3 is short for MPEG Audio Layer 3 and refers to an audio compression technology standard.
- This product allows playback of MP3 files on CD-ROM, CD-R and CD-RW discs. Disc recordings can be played back if they are compatible with level 1 and level 2 of ISO9660 and with the Romeo and Joliet file system.
- It is possible to play back multi-session compatible recorded discs.
- MP3 files are not compatible with packet write data transfer.
- The maximum number of characters are 32 characters including extension (.mp3). But the navigation system incorporates the proportional font. Therefore, the number of the characters which you can display varies according to the width of each character.
- When playing discs with MP3 files and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs, both types can be played only by switching mode between MP3 and CD-DA.
- The folder selection sequence for playback and other operations is the writing sequence used by the writing software. For this reason, the expected sequence at the time of playback may not coincide with the actual playback

sequence. However, there also are some writing software that permit the setting of the playback order.

- Some audio CDs contain tracks that merge into one another without a pause. When these discs are converted to MP3 files and burned to a CD-R/CD-RW/CD-ROM, the files will be played back on this player with a short pause between each one, regardless of the length of the pause between tracks on the original audio CD.
- Files are compatible with the ID3 Tag Ver. 1.0 and Ver. 1.1 formats for display of album (disc title), track (track title) and artist (track artist).
- The emphasis function is valid only when MP3 files of 32, 44.1 and 48 kHz frequencies are played back. (16, 22.05, 24, 32, 44.1, 48 kHz sampling frequencies can be played back.)
- There is no m3u playlist compatibility.
- There is no compatibility with the MP3i (MP3 interactive) or MP3 PRO formats.
- The sound quality of MP3 files generally becomes better with an increased bit rate. This product can play recordings with bit rates from 8 kbps to 320 kbps, but in order to be able to enjoy sound of a certain quality, we recommend using only discs recorded with a bit rate of at least 128 kbps.

About folders and MP3 files

- An outline of a CD-ROM with MP3 files on it is shown below. Subfolders are shown as folders in the folder currently selected.
- The following figure is an example of the tier structure in the CD. The numbers in the figure indicate the order in which folder numbers are assigned and the order to be played back.
- Indicates the order in which folder numbers are assigned.
- ♪ Indicates each file. The number is assigned in the order of the track to be played back.



- ① **First tier**
- ② **Second tier**
- ③ **Third tier**

Notes:

- This product assigns folder numbers. The user can not assign folder numbers.
- If you are using a folder that does not contain an MP3 file, the folder itself will display but you will not be able to see any files in the folder.
- MP3 files in up to 8 tiers of folders can be played back. However, there is a delay in the start of playback on discs with numerous tiers. For this reason we recommend creating discs with no more than 2 tiers.
- It is possible to play back up to 253 folders on one disc.

Ambient conditions for playing disc

- At extremely high temperatures, a temperature cutoff protects this product by switching it off automatically.
- Despite our careful design of the navigation system, as a result of mechanical wear, ambient conditions for use, or handling of the disc, small scratches that do not affect actual operation may appear on the disc surface. This is not a sign of the malfunction of this navigation system. Consider it to be normal wear and tear.

About Gracenote®

Music recognition technology and related data are provided by Gracenote®. Gracenote is the industry standard in music recognition technology and related content delivery. For more information visit www.gracenote.com.



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End-User License Agreement

USE OF THIS PRODUCT IMPLIES ACCEPTANCE OF THE TERMS BELOW.

This product contains technology and data from Gracenote of Emeryville, California ("Gracenote"). The technology from Gracenote (the "Gracenote Embedded Software") enables this product to do

disc identification and obtain music-related information, including name, artist, track, and title information ("Gracenote Data"), which is included on the Gracenote Database (the "Gracenote Database").

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Other Precautions

- Part of the data cannot be acquired. The contents of the data in the Gracenote® Database included in the hard disk drive are not 100% guaranteed.
- The Gracenote® Database included in the hard disk drive contains the titles for the 300 000 most frequently accessed albums worldwide as of 2005 November.

Using the LCD panel Correctly

Handling the LCD panel

CAUTION

- **Be careful of fingers, long hair, and loose articles of clothing which could possibly get caught between the LCD panel and the main body and cause serious injury.**
- When the LCD panel 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 panel should be used within the temperature ranges shown below.
 - Operating temperature range: +14 °F to +122 °F
 - Storage temperature range: -4 °F to +176 °F
- Do not use the LCD panel at temperatures higher or lower than the operating temperature range because the LCD panel may not operate normally and the LCD panel can 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 place anything on the LCD panel when it is deployed. Also, do not attempt to carry out angle adjustment, or open/close the LCD panel by hand. Applying strong force to the LCD panel may damage it.

- Do not push the LCD screen with much 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. (The stylus is supplied for special calibrations. Do not use the stylus for normal operation.)
- Be careful not to place anything between the LCD panel and the main body when the LCD panel is closing. If an object gets between the LCD panel and main body, the LCD panel may stop working.

About liquid crystal display (LCD) screen

- If the LCD panel is near the vent of an air conditioner when it is opened, 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 this product, resulting in possible damage. Also, if the LCD panel is cooled down by the air conditioner, the LCD screen may become dark, or the life span of the small fluorescent tube used inside the LCD panel may be shortened.
- 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 problem with the navigation system.
- At low temperatures, the LCD screen may be dark for a while after the power is turned on.
- The LCD screen will be difficult to see if it is exposed to direct sunlight.
- When using a portable phone, keep the antenna of the portable phone away from the navigation system to prevent disruption of the video with disturbances such as spots or colored stripes.

Keeping the LCD screen in good condition

- When removing dust from the LCD screen or cleaning the LCD screen, first turn the system power off, then wipe with the soft dry cloth.
- When wiping the LCD screen, take care not to scratch the surface. Do not use harsh or abrasive chemical cleaners.

About small fluorescent tube

- A small fluorescent tube is used inside the display to illuminate the LCD screen.
 - The fluorescent tube should last for approximately 10 000 hours, depending on operating conditions. (Using the navigation system at low temperatures reduces the service life of the fluorescent tube.)
 - When the fluorescent tube reaches the end of its useful life, the LCD screen will be dark and the image will no longer be projected. If this happens, consult your dealer or the nearest authorized PIONEER Service Station.

Glossary

☞ Glossary → Appendix of the Operation Manual

Specifications

General

Rated power source	14.4 V DC (10.8 V to 15.1 V allowable)
Grounding system	Negative type
Maximum current consumption	10.0 A
Dimensions (W × H × D):	
DIN	
Chassis	178 × 100 × 165 mm (7 × 3-7/8 × 6-1/2 in.)
Nose	170 × 96 × 16 mm (6-3/4 × 3-3/4 × 5/8 in.)
Weight	2.9 kg (6.4 lbs)
HDD	30 GB

Navigation

GPS Receiver:	
System	L1, C/Acode GPS
SPS (Standard Positioning Service)	
Reception system	8-channel multi-channel reception system
Reception frequency ...	1 575.42 MHz
Sensitivity	-130 dBm
Position update frequency	Approx. once per second
GPS antenna:	
Antenna	Micro strip flat antenna/ right-handed helical polariza- tion
Antenna cable	5.0 m (16 ft. 5 in.)
Dimensions (W × H × D)	
.....	33 × 13 × 36 mm (1-1/4 × 1/2 × 1-3/8 in.)
Weight	105 g(0.23 lbs)

Display

Screen size/aspect ratio	7.0 inch wide/16:9 (effective display area: 156 × 82 mm) (6-1/8 × 3-1/4 in.)
Pixels	336 960 (1 440 × 234)
Type	TFT active matrix, transmis- sive type
Color system	NTSC
Operating temperature range	+14 °F to +122 °F
Storage temperature range	-4 °F to +176 °F
Angle adjustment	0° to 21° (initial settings: 0°)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 Hz to 15 000 Hz with no more than 5% THD.	
Maximum power output	50 W × 4 50 W × 2 ch/4 Ω + 70 W × 1 ch/2 Ω (for subwoofer)
Load impedance	4 Ω (4 Ω to 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance	2.0 V/1k Ω

Equalizer (3-Band Parametric Equalizer):

Low

Frequency.....	40/80/100/160 Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain.....	±12dB

Mid

Frequency.....	200/500/1k/2k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain.....	±12dB

High

Frequency.....	3.15k/8k/10k/12.5k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain.....	±12dB

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.....	50/80/125 Hz
Slope.....	-12 dB/oct

Subwoofer:

Frequency.....	50/80/125 Hz
Slope.....	-18 dB/oct
Gain.....	±12dB
Phase.....	Normal/Reverse

DVD Drive

System.....	DVD-Video, Compact disc audio, MP3 system
Usable discs.....	DVD-Video, Compact disc, MP3
Region number.....	1
Signal format:	
Sampling frequency	44.1/48/96 kHz
Number of quantization bits	
.....	16/20/24; 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 V _{p-p} /75 Ω (±0.2 V)
Audio.....	1.0 V (1 kHz, 0 dB)
Number of channels.....	2 (stereo)
MP3 decoding format.....	MPEG-1 & 2 Audio Layer 3

FM tuner

Frequency range.....	87.9 MHz to 107.9 MHz
Usable sensitivity.....	8 dBf (0.7 μV/75 Ω, mono, S/ N: 30 dB)
Signal-to-noise ratio	75 dB (IHF-A network)
Distortion.....	0.3 % (at 65 dBf, 1 kHz, stereo) 0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response	30 Hz to 15 000 Hz (±3 dB)
Stereo separation	45 dB (at 65 dBf, 1 kHz)
Selectivity	80 dB (±200 kHz)
Three-signal intermodulation (desired signal level)	
.....	30 dBf (two undesired signal level: 100 dBf)

AM tuner

Frequency range.....	530 kHz to 1 710 kHz (10 kHz)
Usable sensitivity.....	18 μV (S/N: 20 dB)
Signal-to-noise ratio	65 dB (IHF-A network)

Note:

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

Register your product at


<http://www.pioneerelectronics.com>

See "Product registration" page

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