

Operating Your Navigation System with Voice

Available Basic Voice Commands

The navigation system can also recognize the words in the following list.

- Terms written in italics are voice commands.

Basic commands

Voice commands and operations

Back → The previous screen returns.

Cancel → Cancels the voice operation.

Help → Outputs the brief operating instruction by voice.

Next page, Previous page → Switches the page.

Last page, First page → Switches to the last or first page.

Voice operation for the iPod

For <Artist name>, <Album name>, <Playlist name>, <Genre name> shown on the following chart, say the name their name in the iPod.

- Playback of iPod movies is not available using voice commands.

Voice commands and operations

Shuffle play → Plays all songs randomly.

Resume → Resumes the song or the video currently playing .

Pause → Pauses the song or the video currently playing .

Next song → Plays the next song.

Previous song → Plays the previous song or return to the beginning of the song currently playing.

Play songs → Starts playback from the top of "**Songs**".

Play artists → Displays the artist list → Say the artist name that you want to play.

Play the artist <Artist name> → Starts playback from the top of the selected artist.

Play albums → Displays the album list → Say the album name that you want to play.

Play the album <Album name> → Starts playback from the top of the selected album.

Play playlists → Displays the playlist → Say the playlist that you want to play.

Play the playlist <Playlist name> → Starts playback from the top of the selected playlist.

Play genres → Displays the genre list → Say the genre that you want to play.

Play the genre <Genre name> → Starts playback from the top of the selected genre.

Browse artists → Displays the artist list together with sub-screen to continue the voice operation. → Say the desired voice commands.

Browse the artist <Artist name> → Displays the album list of the selected artist together with sub-screen to continue the voice operation. → Say the desired voice commands.

Browse albums → Displays the album list together with sub-screen to continue the voice operation. → Say the desired voice commands.

Browse the album <Album name> → Displays the song list of the selected album together with sub-screen to continue the voice operation. → Say the desired voice commands.

Voice commands and operations

Browse playlists → Displays the playlist together with sub-screen to continue the voice operation. → Say the desired voice commands.

Browse the playlist <Playlist name> → Displays the song list of the selected playlist together with sub-screen to continue the voice operation. → Say the desired voice commands.

Browse genre → Displays the genre list together with sub-screen to continue the voice operation. → Say the desired voice commands.

Browse the genre <Genre name> → Displays the song list of the selected genre list together with sub-screen to continue the voice operation. → Say the desired voice commands.

Play more music artist → Plays the songs related to the currently playing artist.

Play more music album → Plays the songs related to the currently playing album.

Play more music genre → Plays the songs related to the currently playing genre.

Next page, Previous page → Displays the previous or next page of the selection list. (*1)

First page, Last page → Displays the first or last page of the the selection list. (*1)

(*1) The voice commands is available only when the selection list is displayed.

Voice operation for AV source (other than iPod)**AV source selection****Voice commands and operations**

Change Source to DISC → Switches the AV source to **Disc**.

Change Source to FM → Switches the AV source to **FM**.

Change Source to AM → Switches the AV source to **AM**.

Change Source to XM Satellite Radio → Switches the AV source to **XM**.

Change Source to SIRIUS Satellite Radio → Switches the AV source to **SIRIUS**.

Change Source to HD Radio → Switches the AV source to **Digital Radio**.

Change Source to SD Media → Switches the AV source to **SD**.

Change Source to USB → Switches the AV source to **USB**.

Change Source to iPod → Switches the AV source to **iPod**.

Change Source to Bluetooth Audio → Switches the AV source to **Audio**.

Built-in DVD drive, external storage device (USB, SD)**Voice commands and operations**

Shuffle play → Plays all songs randomly.

Pause → Pauses the track or file currently playing.

Resume → Resumes the track or file currently playing.

Next song → Plays the next track or file.

Previous song → Plays the previous track or file, or returns to the beginning of the track or file currently playing.

Operating Your Navigation System with Voice

Voice commands related to hands-free phoning

- ❑ You can make a phone call by voice dialing if the cellular phone featuring Bluetooth wireless technology is being paired with the navigation system.
- ❑ For <entry's name> shown on the following chart, say the name of the entry stored in "Contacts".
- ❑ For <phone number> shown on the following chart, say the desired phone number.

Voice commands and operations

Call <entry's name> → Makes a call to the entry (*2).

Call <entry's name> general → Displays the message confirming whether to dial → Say *Yes* → Dials the general phone number of the entry (*3).

Call <entry's name> mobile → Displays the message confirming whether to dial → Say *Yes* → Dials the cellular phone number of the entry (*3).

Call <entry's name> home → Displays the message confirming whether to dial → Say *Yes* → Dials the home phone number of the entry (*3).

Call <entry's name> work → Displays the message confirming whether to dial → Say *Yes* → Dials the office phone number of the entry (*3).

Call <entry's name> other → Displays the message confirming whether to dial → Say *Yes* → Dials the other phone number of the entry (*3).

Call <phone number> → Displays the message confirming whether to dial → Say *Yes* → Dials the phone number.

Make a call → Say the phone number you want to call → Displays the message confirming whether to dial → Say *Yes* → The system starts dialing to the number.

Make a call → Say the name of entry stored on "Contacts" you want to call → Displays the message confirming whether to dial → Say *Yes* → The system starts dialing to the number (*2).

List outgoing calls → Display the list of recent outgoing calls ("Dialed Calls") to select the number and call (*4).

List recent calls → *Incoming calls* → Display the list of recently received calls ("Received Calls") to select the number and call (*4).

List recent calls → *Outgoing calls* → Display the list of recent outgoing calls ("Dialed Calls") to select the number and call (*4).

List recent incoming calls → Display the list of recently received calls ("Received Calls") to select the number and call (*4).

Find the nearest → Displays the category list → Say the category that you want to set to your destination → Displays the list of candidates with number → *Show me details for <the number that you want to select>* → *Call* → Dialing starts.

(*2) If the entry has multiple phone number data, selection list may appear. In such case, say the type of phone number.

(*3) If there is no corresponding type on the entry, the system may suggest you other phone numbers of the entry. In such case, say the type of phone number.

(*4) Touching the item on the screen also enables you to select the desired list.



Tips for Voice Operation

For your voice commands to be correctly recognized and interpreted, ensure that conditions are suitable for recognition.

Close the vehicle windows

Please note that wind through the vehicle window or miscellaneous noise from outside the vehicle can interfere with voice operation.


Position the microphone carefully

For optimum pick-up, the microphone should be fixed at a suitable distance directly in front of the driver.

Pause before giving a command

Speaking too soon may cause the recognition to fail.

Pronounce your commands carefully

Speak slowly, deliberately, and clearly. 

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

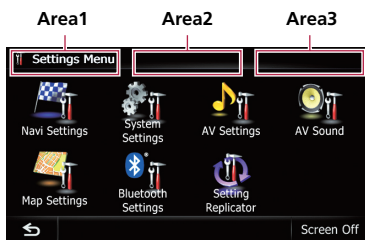
1 Press the HOME button to display the "Top Menu" screen.

2 Touch [Settings].

The "Settings Menu" screen appears.

- This can also be operated using the "Short-cut Menu" screen.

3 Touch Area1, followed by Area2, and then touch and hold Area3.



4 Touch [Set Password].

The password setting screen appears.

5 Enter the password you want to set.

- 5 to 16 characters can be entered for a password.

6 Touch [OK].

7 Reenter the password to confirm the setting.

8 Touch [OK].

Password protection is applied.

- If you want to change the password currently set, enter the current password and then enter the new one.

Entering the password

On the password input screen, you must enter the current password. If you enter an incorrect password three times, the screen is locked and operations using touch panel keys are disabled.

1 Enter the password.

2 Touch [OK].

The message "The unit has been locked because an invalid password was entered three times. Turn ACC off and on, and enter your password." appears if you entered the correct password and the navigation system is unlocking.

Deleting the password

The current password can be deleted.

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

2 Touch [Settings] on the "Top Menu".

3 Touch Area1, followed by Area2, and then touch and hold Area3.

4 Touch [Clear password].

The password setting screen appears.

5 Enter the current password.

6 Touch [OK].

7 Touch [Yes].

The message for deletion appears and then the current password is deleted.

Forgotten password

Contact the nearest authorized Pioneer Service Station.

Returning the navigation system to the default or factory settings

You can return settings or recorded content to the default or factory settings. There are some methods to clear user data, and the situations and the cleared content are different for each method. For information regarding the content that is 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: Restore Factory Settings

This clears some items in the “Navi Settings” menu.

➤ For details, refer to **Restore Factory Settings** on page 188.

Method 3: Touch [Clear user information] on the “Select Items to Reset” screen.

➤ For details, refer to *Displaying the “Select Items to Reset” screen* on page 188.

Method 4: Touch [Reset] on the “Select Items to Reset” screen.

➤ For details, refer to *Displaying the “Select Items to Reset” screen* on page 188.

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 return to the default or factory settings.

- Almost all items not listed below will be retained. However, some of the items to be returned to their default values are not listed if the setting value can be easily recovered by user, such as the last map scale, the last status of AV operation screen, etc.

—: The setting will be retained.

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

Navigation functions		Method 1	Method 2	Method 3	Method 4
Map function	View mode and scale setting on the map	—	—	✓	✓
	Direction of the map	—	—	✓	✓
	Last cursor position on the map screen	—	✓	✓	✓
Route Setting	Current route	✓	—	✓	✓
	Guidance state of the current route	—	—	✓	✓
	Vehicle position information	—	—	✓	✓
	Options	—	✓	✓	✓
Others	Keyboard	—	✓	✓	✓
	Learnt data used in Learning Route	✓	—	✓	✓
Destination	Point registered in Favorites	—	—	✓	—
	History	—	—	✓	—
Map Settings	View Mode	—	—	✓	✓
	Other settings	—	✓	✓	✓
Navi Settings	3D Calibration Status	—	—	—	—
	Drive Log Settings	—	—	✓	—
	Demo Mode	✓	✓	✓	✓
	Set Home	—	—	✓	—
	Modify Current Location	—	—	✓	✓
	Other settings	—	✓	✓	✓

Navigation functions		Method 1	Method 2	Method 3	Method 4
System Settings	Program Language, Voice Language	—	—	✓	✓
	Time	—	—	✓	✓
	Back Camera	✓	—	—	—
	Other settings	—	✓	✓	✓
Bluetooth Settings	All settings (*1)	—	✓	✓	✓
Phone Menu	All settings (*1)	—	✓	✓	✓
Other functions	Anti-theft password	—	—	—	—

(*1) All stored data of 5 users is deleted.

AV functions		Method 1	Method 2	Method 3	Method 4
Volume		✓	—	—	—
AV Settings	Wide Mode, Mute, VR Catalog Menu	—	✓	✓	✓
	Other settings	✓	—	—	—
AV Sound	All settings	✓	—	—	—
CD, ROM, DVD-V, DivX, FM, AM, Audio	All settings (*2)	✓	—	—	—
SD, USB	All settings (*2)	✓	—	✓	—
Other functions	Picture Adjustment	✓	—	—	—
	Tilt	✓	—	—	—

(*2) All settings including the setting on the "Function" menu are deleted.

Restore Factory Settings

- ❑ Be sure to read "Setting items to be deleted" before you perform this operation.

1 Display the "System Settings" screen.

- ➔ For details, refer to *Displaying the "System Settings" screen* on page 161.

2 Touch [Restore Factory Settings].

The message confirming whether to restore the settings appears.

3 Touch [Yes].

Displaying the "Select Items to Reset" screen

- ❑ Be sure to read "Setting items to be deleted" before you perform this operation.

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

2 Turn the ignition switch off and back on.

The navigation system restarts, and the splash screen appears.

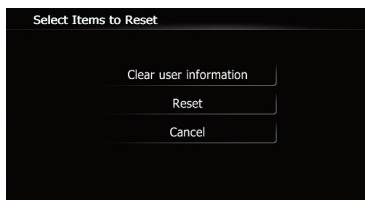
Other functions

3 Press and hold the MODE button and the TRK (◀) button while splash screen appears.

- For users of AVIC-Z120BT, press the **MODE** button and the **TRK (◀◀)** button.

The “**Select Items to Reset**” screen appears.

4 Touch [Clear user information] or [Reset].



The message confirming whether to erase the data appears.

5 Touch [Yes].

The recorded contents are cleared. □

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 doesn't turn on. The navigation system doesn't operate.	Leads and connectors are incorrectly connected.	Confirm once more that all connections are correct.
	The fuse is blown.	Rectify the reason for the fuse blowing, then replace the fuse. Be very sure to install a correct fuse with the same rating.
	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 Acc off. Then start the engine again, 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, causing reduced positioning accuracy. Check the GPS signal reception and the position of the GPS antenna if necessary.
	Obstacles are blocking signals from the satellites.	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. Check the GPS signal reception and the position of the GPS antenna if necessary, or continue driving until reception improves. Keep the antenna clear.
	The position of satellites relative to your vehicle is inadequate.	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. Continue driving until reception improves.
	Signals from the GPS satellites have been modified to reduce accuracy. (GPS satellites are operated by the US Department of Defense, and the US government reserves the right to distort positioning data for military reasons. This may lead to greater positioning errors.)	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. Wait until reception improves.
	If a vehicle phone or cellular phone is used near the GPS antenna, GPS reception may be lost temporarily.	The quality of signals from the GPS satellites is poor, causing reduced positioning accuracy. When using a cellular phone, keep the antenna of the cellular phone away from the GPS antenna.

Appendix

Symptom	Cause	Action (Reference)
You cannot position your vehicle on the map without a significant positioning error.	Something covers the GPS antenna.	Do not cover the GPS antenna with spray paint or vehicle wax, because this may block the reception of GPS signals. Snow buildup can also degrade the signals.
	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 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 connected properly. (The navigation system works properly without the lead connected, but positioning accuracy will be adversely affected.)
"Eco Graph" is not available.	The navigation system is unable to obtain past average fuel mileage data, so "Eco Graph" cannot be displayed.	Drive about 6 miles (10 km) on a road without obstructions. Then park your vehicle in a safe place, turn off the navigation system and turn the power to the navigation system back on.
The map color does not switch automatically between daytime and nighttime.	"Day/Night Display" is set to "Day".	Check "Day/Night Display" setting and make sure "Automatic" is selected. (Page 159)
	The orange/white lead is not connected.	Check the connection.
The screen is too bright.	Picture quality adjustment of the display is not correct.	Adjust the picture quality. (Page 167)
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 159)
	Picture quality adjustment of the display is not correct.	Adjust the picture quality. (Page 167)
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.	VOL (+/-) button is used to adjust the volume.	Turn the volume up or down using [Volume] on the " System Settings " menu. (Page 163)
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



Appendix

Symptom	Cause	Action (Reference)
There's 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 177)
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 ". (Page 164)
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 165)
The external storage device (USB, SD) cannot be used.	The USB storage device has been removed immediately after plugging it.	Park your vehicle in a safe place, and turn off the engine. Turn the ignition key back to Acc off. Then start the engine again, and turn the power to the navigation system back on.

Problems in 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 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 205)
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 connected equipment.	"AV1 Input" or "AV2 Input" setting is incorrect.	Correct the settings. (Page 145)
No video output from connected iPod.	The connection of the USB interface cable for iPod is incorrect.	Connect both the USB plug and the RCA cable side. (If only one of these connection has been made, the iPod will not work properly.) (Page 19)
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. The system is performing still, slow motion, or frame-by-frame playback with DVD-Video.	Connect the cables correctly. 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 not possible.	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.	After touching  once, start playback once more.
The picture is stretched, with incorrect aspect ratio.	The aspect setting is incorrect for the display.	Select the appropriate setting for that image. (Page 169, Page 107)
A parental lock message is displayed and DVD playback is not possible.	Parental lock is on.	Turn parental lock off or change the level. (Page 108)
Parental lock for DVD playback cannot be canceled.	The code number is incorrect.	Input the correct code number. (Page 108)
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 107)
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.	<ul style="list-style-type: none"> Reconnect the iPod with the USB interface cable for iPod. Update the iPod software version.
	An error has occurred.	<ul style="list-style-type: none"> 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 Acc off. Then start the engine again, and turn the power to the navigation system back on. Update the iPod software version.

Appendix

Problems with the phone screen

Symptom	Cause	Action (Reference)
Dialing is not possible 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.

If the screen becomes frozen...

Park your vehicle in a safe place, and turn off the engine. Turn the ignition key back to Acc off. Then start the engine again, and turn the power to the navigation system back on.



Appendix

Messages and how to react to them

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

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

Messages for navigation functions

Message	Cause	Action (Reference)
System detected improper connection of Parking Brake lead. Please check your configuration for safety. Please see Operation Manual for more information regarding safe operation.	Parking brake lead is incorrectly connected.	Confirm once more that their connections are correct.
Route calculation was not possible.	Route calculation has failed because of a malfunction in map data, software, or hardware.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Set a destination and waypoint(s) on roads. • Reset the destination after you drive the vehicle to any road.
Route to destination cannot be calculated.	The destination or waypoint(s) are in an isolated island, etc. without a ferry and the route calculation is impossible. If there is no road connected to your starting point or destination, this message will appear.	Change the destination.
Failed to create route profile	In rare cases, a route calculation error may occur.	<ul style="list-style-type: none"> • Retry. • Consult the Pioneer Local dealer if this message persists.
No picture folder. Save jpeg file to /Pictures/ folder	Cannot load the image because "Pictures" folder is not found in the inserted external storage device.	Use appropriate data and store it correctly. (Page 164)
	"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 164)
Data Read error.	Failed to read the data for some reason.	Use appropriate data and store it correctly. (Page 164)
The file is corrupt	The data is damaged or an attempt was made to set an image file that was not made to specifications as the splash screen.	Use appropriate data and store it correctly. (Page 164)

Appendix

Message	Cause	Action (Reference)
Connection failed.	The cellular phone's Bluetooth wireless technology is turned off.	Activate the target phone's Bluetooth wireless technology.
	The cellular phone is paired (connected) with another device.	Cancel the pairing (connection) and retry.
	Rejection has been received from the cellular phone.	Operate the target phone and accept the connection request from the navigation system. (Furthermore, check the connection settings on your cellular phone.)
	The target cellular phone cannot be found.	Check whether your cellular phone is activated and, whether the distance to your cellular phone is not too far.
Could not find any available phone.	No available phone exists in the surroundings when the system searches for connectable cellular phones featuring Bluetooth wireless technology.	<ul style="list-style-type: none"> • Activate the target phone's Bluetooth wireless technology. • Check whether your cellular phone is activated and, whether the distance to your cellular phone is not too far.
Registration failed.	The cellular phone's Bluetooth wireless technology is turned off during the registration step.	Keep turning the target phone's Bluetooth wireless technology on during the registration.
	Rejection by the cellular phone has received.	Operate the target phone and accept the registration request from the navigation system. (Furthermore, check the connection settings on your cellular phone.)
	Registration step has failed for some reason.	Retry the registration and if the registration still fails, try registering using your cellular phone.



Appendix

Messages for audio 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)
Reading error (ERROR-02-XX)	Dirty	Clean the disc.
	Scratched disc	Replace the disc.
	The disc is loaded upside down	Check that the disc is loaded correctly.
Playback error. Please remove the disc.	Electrical or mechanical	<ul style="list-style-type: none"> • 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	This type of disc cannot be played by the navigation system.	Replace the disc with one the navigation system can play. (Page 208, Page 224)
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 to within normal operating limits.
Error not defined (ERROR-FF-FF)	Undefined error	Set the ACC to off and then set it to on again.
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 writing error. Impossible to write on the flash. (CAN NOT SAVE DATA)	The playback history for VOD contents cannot be saved for some reason.	<ul style="list-style-type: none"> • Retry. • If the message appears frequently, consult your dealer.
Authorization Error (AUTHORIZATION ERROR)	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.
Cannot play back HD file (FILE NOT PLAYABLE-HIGH DEF)	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 the playable file. (Page 208, Page 224)

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.
	All of the files cannot be played by this unit.	Replace it with the playable file. (Page 208, Page 224)
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 500 mA (maximum allowable current).	Disconnect the USB storage device and do not use it. Turn the ignition switch to off, then to ACC or on and then connect the compliant USB storage device.
	The USB interface cable for iPod is short-circuited.	Confirm that 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 an iPod of a compatible version.
	Communication failure	<ul style="list-style-type: none"> • Disconnect the cable from iPod. Once iPod main menu is displayed, connect the cable again. • If the message appears frequently, consult your dealer.



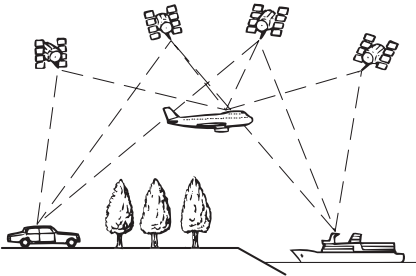
Appendix

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 21 000 km, continually broadcasts radio signals giving time and position information. This ensures that signals from at least three can be picked up from any open area on the earth's surface.

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



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?

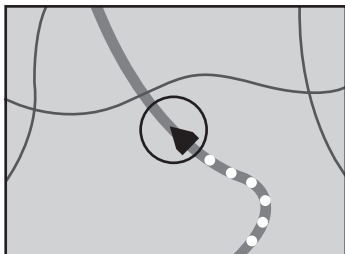
For maximum accuracy, your navigation system continually compares GPS data with your estimated position as calculated from the data of built-in sensor. However, if only the data from the built-in sensor is available for a long period, positioning errors are gradually compounded until the estimated position 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 149.

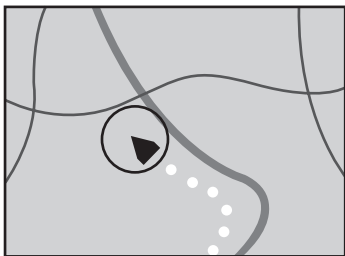
Appendix

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

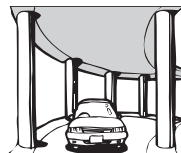
Positioning errors are kept to a minimum by combining GPS, dead reckoning and map matching. However, in some situations, these functions may not work properly, and the error may become bigger.

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.