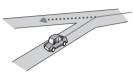
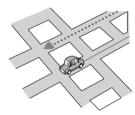
# Conditions likely to cause noticeable positioning errors

For various reasons, such as the state of the road you are traveling on and the reception status of the GPS signal, the actual position of your vehicle may differ from the position displayed on the map screen.

• If you make a shallow turn.



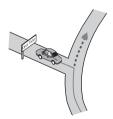
If there is a parallel road.



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



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



• If you drive in zigzags.



• If the road has a series of hairpin bends.



 If there is a loop or similar road configuration.



If you take a ferry.



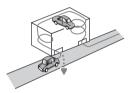
• If you are driving on a long, straight road or a gently curving road.



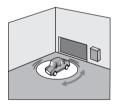
 If you are on a steep mountain road with many height changes.



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



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



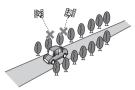
• If your vehicle's wheels spin, such as on a gravel road or in snow.



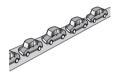
• If you put on chains, or change your tires for ones with a different size.



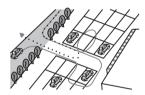
• If trees or other obstacles block the GPS signals for a considerable period.



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



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



• When you drive around a traffic circle.



 When starting driving immediately after starting the engine.

# Route setting information Route search specifications

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



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

- The calculated route is one example of the route to your destination decided by the navigation system while taking the type of streets or traffic regulations into account. It is not necessarily an optimum route. (In some cases, you may not be able to set the streets you want to take. If you need to take a certain street, set a waypoint on that street.)
- If the destination is too far, there may be instances where the route cannot be set. (If you want to set a long-distance route going across several areas, set waypoints along the way.)
- During voice guidance, turns and intersections from the freeway are announced.
   However, if you pass intersections, turns, and other guidance points in rapid succession, some may delay or not be announced.
- It is possible that guidance may direct you off a freeway and then back on again.
- In some cases, the route may require you to travel in the opposite direction to your

- current heading. In such cases, you are instructed to turn around, so please turn around safely by following the actual traffic rules.
- In some cases, a route may begin on the opposite side of a railway or river from your actual current location. If this happens, drive towards your destination for a while, and try route calculation again.
- When there is a traffic congestion ahead, a detour route may not be suggested if driving through the traffic congestion would still be better than taking the detour.
- There may be instances when the starting point, the waypoint and the destination point are not on the highlighted route.
- The number of traffic circle exits displayed on the screen may differ from the actual number of roads.

### Route highlighting

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

### **Auto reroute function**

- If you deviate from the set route, the system will re-calculate the route from that point so that you remain on track to the destination.
- This function may not work under certain conditions. ■

## Handling and care of discs

Some basic precautions are necessary when handling your discs.

### **Built-in drive and care**

• Use only conventional, fully circular discs. Do not use shaped discs.





- Do not use cracked, chipped, warped, or otherwise damaged discs as they may damage the built-in drive.
- Do not touch the recorded surface of the discs.
- · Store discs in their cases when not in use.
- Avoid leaving discs in excessively hot environments including under direct sunlight.
- Do not attach labels, write on or apply chemicals to the surface of the discs.
- To clean a disc, wipe it with a soft cloth, moving outward from the center.



- Condensation may temporarily impair the built-in drive's performance. Leave it to adjust to the warmer temperature for about one hour. Also, wipe any damp discs with a soft cloth.
- Playback of discs may not be possible because of disc characteristics, disc format, recorded application, playback environment, storage conditions and so on.
- Road shocks may interrupt disc playback.
- Read the precautions for discs before using them.

# Ambient conditions for playing a disc

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

# Playable discs DVD-Video and CD

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

**DVD-Video** 



CD





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

### **AVCHD** recorded discs

This unit is not compatible with discs recorded in AVCHD (Advanced Video Codec High Definition) format. Do not insert AVCHD discs. If inserted, the disc may not be ejected.

## **Playing DualDisc**

- DualDiscs are two-sided discs that have a recordable CD for audio on one side and a recordable DVD for video on the other.
- Playback of the DVD side is possible with this navigation system. However, since the CD side of DualDiscs is not physically compatible with the general CD standard, it may not be possible to play the CD side with this navigation system.
- Frequent loading and ejecting of a Dual-Disc may result in scratches to the disc.
- Serious scratches can lead to playback problems on this navigation system. In some cases, a DualDisc may become stuck in the disc loading slot and will not eject. To prevent this, we recommend you refrain from using DualDisc with this navigation system.
- Please refer to the manufacturer for more detailed information about DualDiscs.

## **Dolby Digital**

This product will down-mix Dolby Digital signals internally and the sound will be output in stereo.

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



### **DTS** sound

DTS audio format cannot be output, so select an audio track other than DTS audio format. "DTS" is registered trademarks of DTS, Inc.

# Detailed information for playable media

## Compatibility

### Common notes about disc compatibility

- Certain functions of this product may not be available for some discs.
- Compatibility with all discs is not guaranteed.
- It is not possible to playback DVD-ROM/ DVD-RAM discs.
- Playback of discs may become impossible with direct exposure to sunlight, high temperatures, or depending on the storage conditions in the vehicle.

### DVD-Video discs

 DVD-Video discs that have incompatible region numbers cannot be played on this DVD drive. The region number of the player can be found on this product's chassis.

# DVD-R/DVD-RW/DVD-R DL (Dual Layer) discs

- Unfinalized discs which have been recorded with the Video format (video mode) cannot be played back.
  - Discs which have been recorded with the Video Recording format (VR mode) cannot be played back.
- DVD-R DL (Dual Layer) discs which have been recorded with Layer Jump recording cannot be played back.
- For detailed information about recording mode, please contact the manufacturer of media, recorders, or writing software.

### CD-R/CD-RW discs

Unfinalized discs cannot be played back.

- It may not be possible to playback CD-R/ CD-RW discs recorded on a music CD recorder or a personal computer because of disc characteristics, scratches or dirt on the disc, or dirt, scratches or condensation on the lens of the built-in drive.
- Playback of discs recorded on a personal computer may not be possible, depending on the recording device, writing software, their settings, and other environmental factors.
- Please record with the correct format. (For details, please contact manufacturer of media, recorders, or writing software.)
- Titles and other text information recorded on a CD-R/CD-RW disc may not be displayed by this product (in the case of audio data (CD-DA)).
- Read the precautions with CD-R/CD-RW discs before using them.

# Common notes about the external storage device (USB, SD)

- Do not leave the external storage device (USB, SD) in any location with high temperatures.
- Depending on the kind of the external storage device (USB, SD) you use, this navigation system may not recognize the storage device or files may not be played back properly.
- The text information of some audio and video files may not be correctly displayed.
- File extensions must be used properly.
- There may be a slight delay when starting playback of files on an external storage device (USB, SD) with complex folder hierarchies.
- Operations may vary depending on the kind of an external storage device (USB, SD).
- It may not be possible to play some music files from SD or USB because of file characteristics, file format, recorded application, playback environment, storage conditions, and so on.

### **USB** storage device compatibility

⇒ For details about USB storage device compatibility with this navigation system, refer to Specifications on page 224.

### Protocol: bulk

- You cannot connect a USB storage device to this navigation system via a USB hub.
- Partitioned USB memory is not compatible with this navigation system.
- Firmly secure the USB storage device when driving. Do not let the USB storage device fall onto the floor, where it may become jammed under the brake or gas pedal.
- There may be a slight delay when starting playback of audio files encoded with image data.
- Some USB storage devices connected to this navigation system may generate noise on the radio.
- Do not connect anything other than the USB memory device.

# The sequence of audio files on USB memory

For USB memory, the sequence is different from that of USB memory device.

### SD memory card and SDHC memory card

➡ For details about SD memory card compatibility with this navigation system, refer to Specifications on page 224.

# Handling guidelines and supplemental information

- This system is not compatible with Multi Media Card (MMC).
- Copyright protected files cannot be played back.

## Notes specific to DivX files

- Only DivX files downloaded from DivX partner sites are guaranteed for proper operation. Unauthorized DivX files may not operate properly.
- DRM rental files cannot be operated until playing back is started.

- The navigation system corresponds to a DivX file display of up to 1590 minutes 43 seconds. Search operations beyond this time limit are prohibited.
- DivX VOD file playback requires supplying the ID code of this navigation system to the DivX VOD provider. Regarding the ID code, refer to Displaying your DivX VOD registration code on page 171.
- Plays all versions of DivX video (including DivX 6) with standard playback of DivX media files.
- For more details about DivX, visit the following site: http://www.divx.com/

### DivX subtitle files

- Srt format subtitle files with the extension ".srt" can be used.
- Only one subtitle file can be used for each DivX file. Multiple subtitle files cannot be associated.
- Subtitle files that are named with the same character string as the DivX file before the extension are associated with the DivX file. The character strings before the extension must be exactly the same. However, if there is only one DivX file and one subtitle file in a single folder, the files are associated even if the file names are not the same.
- The subtitle file must be stored in the same folder as the DivX file.
- Up to 255 subtitle files may be used. Any more subtitle files will not be recognized.
- Up to 64 characters can be used for the name of the subtitle file, including the extension. If more than 64 characters are used for the file name, the subtitle file may not be recognized.
- The character code for the subtitle file should comply with ISO-8859-1. Using characters other than ISO-8859-1 may cause the characters to be displayed incorrectly.
- The subtitles may not be displayed correctly if the displayed characters in the subtitle file include control code.

- For materials that use a high transfer rate, the subtitles and video may not be completely synchronized.
- If multiple subtitles are programed to display within a very short time frame, such as 0.1 seconds, the subtitles may not be displayed at the correct time.

# Media compatibility chart General

Media	CD-R/-RW	DVD-R/-RW/-R DL	USB storage de- vice	SD memory card
File system	ISO9660 level 1, ISO9660 level 2, Romeo and Joliet	ISO9660 level 1, ISO9660 level 2, Romeo, Joliet and UDF 1.02	FAT16/FAT32	
Maximum number of folders	700		300	
Maximum number of files	999	3 500	2 500	
Playable file types	MP3, WMA, AAC, DivX		MP3, WMA, AAC, WA MPEG-4	V, AVI, WMV,

#### Note:

Maximum playback time of audio file stored in the external storage device (USB, SD): 7.5 h (450 minutes)

## **MP3** compatibility

Media	CD-R/-RW	DVD-R/-RW/-R DL	USB storage de- vice	SD memory card
File extension	.mp3			
Bit rate	8 kbps to 320 kbps (CBR), VBR			
Sampling frequency	16 kHz to 48 kHz (32 k for emphasis)	z (32 kHz, 44.1 kHz, 48 kHz 8 kHz to 48 kHz		
ID3 tag	ID3 tag Ver. 1.0, 1.1, 2	.2, 2.3	ID3 tag Ver. 1.0, 1.1, 2.2, 2.3, 2.4	

#### Notes:

- Ver. 2.x of ID3 tag is given priority when both Ver. 1.x and Ver. 2.x exist.
- The navigation system is not compatible with the following: MP3i (MP3 interactive), mp3 PRO, m3u playlist

## **WMA** compatibility

CD-R/-RW	DVD-R/-RW/-R DL	USB storage de- vice	SD memory card
.wma			
5 kbps to 320 kbps (CBR), VBR			
8 kHz to 48 kHz			
	.wma 5 kbps to 320 kbps (C	.wma 5 kbps to 320 kbps (CBR), VBR	.wma 5 kbps to 320 kbps (CBR), VBR

### Note:

The navigation system is not compatible with the following: Windows Media  $^{\rm fM}$  Audio 9 Professional, Lossless, Voice

## **WAV** compatibility

Media	CD-R/-RW	DVD-R/-RW/-R DL	USB storage de- vice	SD memory card	
File extension					
Format			Linear PCM (LPCM), IMA-ADPCM		
Sampling frequency	WAV files on the CD-FDL cannot be played.	WAV files on the CD-R/-RW, DVD-R/-RW/-R DL cannot be played.		LPCM: 16 kHz to 48 kHz IMA-ADPCM: 22.05 kHz and 44.1 kHz	
Quantization bits			LPCM: 8 bits and 16 bits MS ADPCM: 4 bits		

#### Note:

The sampling frequency shown in the display may be rounded.

## **AAC compatibility**

Media	CD-R/-RW	DVD-R/-RW/-R DL	USB storage de- vice	SD memory card	
File extension	.m4a	.m4a			
Bit rate	8 kbps to 320 kbps (C	8 kbps to 320 kbps (CBR)			
Sampling frequency	8 kHz to 44.1 kHz	8 kHz to 44.1 kHz 8 kHz to 48 kHz			
Note: The payigation system plays back AAC files encoded by iTunes.					

## **DivX compatibility**

Media	CD-R/-RW	DVD-R/-RW/-R DL	USB storage de- vice	SD memory card
File extension	.avi/.divx			
Profile (DivX version)	Home Theater Ver. 3.1 Ver. 6.x	1/Ver. 4.x/Ver. 5.x/		
Compatible audio codec	MP3, Dolby Digital			
Bit rate (MP3)	8 kbps to 320 kbps (CBR), VBR		DivX files on the exter (USB, SD) cannot be	•
Sampling frequency (MP3)	16 kHz to 48 kHz (32 k for emphasis)	Hz, 44.1 kHz, 48 kHz	(00-,0-,000	p.1.) - 2.
Maximum image size	720 pixels × 576 pixel	s		
Maximum file size	4 GB			

#### Notes:

- The navigation system is not compatible with the following:
   DivX Ultra format, DivX files without video data, DivX files encoded with LPCM (Linear PCM) audio codec
- Depending on the file information composition, such as the number of audio streams, there may be a slight delay in the start of playback on discs.
- If a file contains more than 4GB, playback stops before the end.
- Some special operations may be prohibited because of the composition of DivX files.
- Files with high transfer rates may not be played back correctly. The standard transfer rate is 4 Mbps for CDs and 10.08 Mbps for DVDs.

### Video files compatibility (USB, SD)

File extension		.avi	.mp4, .m4v	.mp4, .m4v .wmv	
Format		MPEG-4	MPEG-4	H.264	WMV
Compatible video co	dec	MPEG-4	MPEG-4	H.264	WMV
Compatible audio codec		Linear PCM (LPCM), IMA- ADPCM MP3	AAC	AAC	WMA
Recommended video specifications	Image size: QVGA (320 pixels x 240 pixels)	Bit rate: 768 kbps Frame rate: 30 fps	Bit rate: 768 kbps Frame rate: 30 fps	Bit rate: 384 kbps Frame rate: 30 fps	Bit rate: 384 kbps Frame rate: 30 fps
	Image size: WQVGA (400 pixels x 240 pixels)	Bit rate: 2 Mbps Frame rate: 30 fps	Bit rate: 2 Mbps Frame rate: 30 fps	Bit rate: 1 Mbps Frame rate: 30 fps	Bit rate: 768 kbps Frame rate: 30 fps
Maximum bit rate:	Image size: VGA (640 pixels x 480 pixels)	Bit rate: 1 Mbps Frame rate: 30 fps	Bit rate: 1 Mbps Frame rate: 30 fps	Bit rate: 576 kbps Frame rate: 30 fps	Bit rate: 576 kbps Frame rate: 30 fps
Maximum file size		2GB			
Maximum playback time		150 minutes			

### **Common notes**

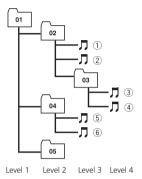
- The navigation system may not operate correctly, depending on the application used to encode WMA files.
- Depending on the version of Windows Media<sup>™</sup> Player used to encode WMA files. album names and other text information may not be correctly displayed.
- There may be a slight delay when starting playback of audio files encoded with image data.
- The navigation system is not compatible with packet write data transfer.
- This navigation system can recognize up to 32 characters, beginning with the first character, including extension for the file and folder name. Depending on the display area, the navigation system may try to display them with a reduced font size. However, the maximum number of the characters that you can display varies ac-

- cording to the width of each character, and of the display area.
- Folder selection sequence or other operations may be altered, depending on the encoding or writing software.
- Regardless of the length of blank section between the songs of original recording. compressed audio discs play with a short pause between songs.

### **Example of a hierarchy**

The following figure is an example of the tier structure in the disc. The numbers in the figure indicate the order in which folder numbers are assigned and the order to be played back.

Folde :: Folde





- This product assigns folder numbers. The user cannot assign folder numbers.
- If there is a folder that does not contain any
  playable file, the folder itself will display in the
  folder list but you cannot check any files in
  the folder. (A blank list will appear.) Also,
  these folders will be skipped without displaying the folder number.

## **Bluetooth**



Bluetooth is a short-range wireless radio connectivity technology that is developed as a cable replacement for cellular phones, handheld PCs and other devices. Bluetooth operates in 2.4 GHz frequency range and transmits voice and data at speeds up to 1 megabit per

second. Bluetooth was launched by a special interest group (SIG) comprising Ericsson Inc., Intel Corp., Nokia Corp., Toshiba and IBM in 1998, and it is currently developed by nearly 2000 companies worldwide.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Pioneer Corporation is under license. Other trademarks and trade names are those of their respective owners.

# About the SAT RADIO READY Logo



The SAT RADIO READY logo 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.

### 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.

## **HD Radio Technology**

HD Radio™ and the HD and HD Radio Ready logos are proprietary trademarks of iBiquity Digital Corporation. ■

# SD and SDHC logo



SD Logo is a trademark.



SDHC Logo is a trademark.



microSD Logo is a trademark.



microSDHC Logo is a trademark.

## WMA/WMV



Windows Media<sup>™</sup> and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

### DivX



DivX is a compressed digital video format created by the DivX video codec from DivX. Inc. This unit can play DivX video files recorded on CD-R/RW/ROM and DVD-R/RW/ROM discs. Keeping the same terminology as DVD video. individual DivX video files are called "Titles". When naming files/titles on a CD-R/RW or a DVD-R/RW disc prior to burning, keep in mind that by default they will be played in alphabetical order

#### For U.S.A.

DivX® is a registered trademark of DivX. Inc... and is used under license.

### For Canada

DivX<sup>™</sup> is a registered trademark of DivX. Inc.. and is used under license.

**ABOUT DIVX VIDEO:** DivX® is a digital video format created by DivX. Inc. This is an official DivX Certified device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

**ABOUT DIVX VIDEO-ON-DEMAND: This** DivX® Certified device must be registered in order to play DivX Video-on-Demand (VOD) content. To generate the registration code, locate the DivX VOD section in Displaying your DivX VOD registration code. Go to vod.divx.com with this code to complete the registration process and learn more about DivX VOD.

⇒ For details, refer to Displaying your DivX VOD registration code on page 171. ■

### **AAC**

AAC is short for Advanced Audio Coding and refers to an audio compression technology standard used with MPEG-2 and MPEG-4. Several applications can be used to encode AAC files, but file formats and extensions differ depending on the application which is used to encode. This unit plays back AAC files encoded by iTunes version 7.7.

# Detailed information regarding connectable iPods



- Pioneer accepts no responsibility for data lost from an iPod, even if that data is lost while using the navigation system.
- Do not leave the iPod in direct sunlight for extended amounts of time. Extended exposure to direct sunlight can result in iPod malfunction due to the resulting high temperature.
- Do not leave the iPod in any location with high temperatures.
- Firmly secure the iPod when driving. Do not let the iPod fall onto the floor, where it may become iammed under the brake or gas pedal.

For details, refer to the iPod's manuals.

## iPod



"Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.

Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

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

### **iPhone**



"Works with iPhone" means that an electronic accessory has been designed to connect specifically to iPhone and has been certified by the developer to meet Apple performance standards.

Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

iPhone is a trademark of Apple Inc.

### **iTunes**

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

# Using the LCD screen correctly Handling the LCD screen

- When the LCD screen is subjected to direct sunlight for a long period of time, it will become very hot, resulting in possible damage to the LCD screen. When not using this navigation system, avoid exposing it to direct sunlight as much as possible.
- The LCD screen should be used within the temperature ranges shown in Specifications.

- Do not use the LCD screen at temperatures. higher or lower than the operating temperature range, because the LCD screen may not operate normally and could be damaged.
- The LCD screen is exposed in order to increase its visibility within the vehicle. Please do not press strongly on it as this may damage it.
- Do not push the LCD screen with excessive force as this may scratch it.
- Never touch the LCD screen with anything besides your finger when operating the Touch panel functions. The LCD screen can scratch easily.

## Liquid crystal display (LCD) screen

- If the LCD screen is near the vent of an air. conditioner, make sure that air from the air. conditioner is not blowing on it. Heat from the heater may break the LCD screen, and cool air from the cooler may cause moisture to form inside the navigation unit, resulting in possible damage.
- Small black dots or white dots (bright dots) may appear on the LCD screen. These are due to the characteristics of the LCD screen and do not indicate a malfunction.
- The LCD screen will be difficult to see if it is exposed to direct sunlight.
- When using a cellular phone, keep the antenna of the cellular phone away from the LCD screen to prevent disruption of the video in the form of disturbances such as spots or colored stripes.

# **Maintaining the LCD screen**

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

## **LED (light-emitting diode)** backlight

A light emitting diode is used inside the display to illuminate the LCD screen.

- · At low temperatures, using the LED backlight may increase image lag and degrade the image quality because of the characteristics of the LCD screen. Image quality will improve with an increase in temperature.
- The product lifetime of the LED backlight is more than 10 000 hours. However, it may decrease if used in high temperatures.
- If the LED backlight reaches the end of its product lifetime, the screen will become dimmer and the image will no longer be visible. In that case, please consult your dealer or the nearest authorized Pioneer Service Station.

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## Navi Settings menu



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# **Glossary**

### AAC

AAC is short for Advanced Audio Coding and refers to an audio compression technology standard used with MPEG-2 and MPFG-4.

### Aspect ratio

This is the width-to-height ratio of a TV screen. A regular display has an aspect ratio of 4:3. Wide screen displays have an aspect ratio of 16:9, providing a bigger picture for exceptional presence and atmosphere.

#### **Bit rate**

This expresses data volume per second, or bps units (bits per second). The higher the rate, the more information is available to reproduce the sound. Using the same encoding method (such as MP3), the higher the rate, the better the sound

### **Built-in sensor**

The built-in sensor that enables the system to estimate your vehicle's position.

### CD-DA

This stands for a general music CD (commercial-release audio CD). In this manual, this word is sometime used for a distinction between data CDs (which include compressed audio files) and general music CDs.

### Chapter

Titles of DVD-Video are in turn divided into chapters which are numbered in the same way as the chapters of a book. With discs featuring chapters, you can quickly find a desired scene with chapter search.

### **Current location**

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

#### Destination

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

### DivX

DivX is a popular media technology created by DivX, Inc. DivX media files contain highly compressed video with high visual quality that maintains a relatively small file size. DivX files can also include advanced media features like menus, subtitles, and alternate audio tracks. Many DivX media files are available for download online, and you can create your own using your personal content and easy-to-use tools from DivX.com.

### DivX Certified

DivX Certified products are officially tested by the creators of DivX and guaranteed to play all versions of DivX video, including DivX 6.

### **Favorites**

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

### **GPS**

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

### **Guidance mode**

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

### **Guidance** point

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

### **Home location**

Your registered home location.

### ID3 tag

This is a method of embedding track-related information in an MP3 file. This embedded information can include the track title, the artist's name, the album title, the music genre, the year of production, comments and other data. The contents can be freely edited using software with ID3 tag editing functions. Although the tags are restricted by the number of characters, the information can be viewed when the track is played back.

### ISO 9660 format

This is the international standard for the format logic of DVD/CD-ROM folders and files. For the ISO9660 format, there are regulations for the following two levels:

### Level 1:

The file name is in 8.3 format (the name consists of up to eight characters, half-byte English capital letters, half-byte numerals and the "\_" sign, with a file-extension of three characters).

### Level 2:

The file name can have up to 31 characters (including the separation mark "." and a file extension). Each folder contains less than eight hierarchies.

### Extended formats

Joliet:

File names can have up to 64 characters. Romeo:

File names can have up to 128 characters.

### **JPEG**

This stands for Joint Photographic Experts Group, and is an international still image compression standard.

### **MP3**

MP3 is short for MPEG Audio Layer 3. It is an audio compression standard established by a working group (MPEG) of the ISO (International Organization for Standardization). MP3 is able to compress audio data to about 1/10th the size of a conventional disc.

#### MPFG

This stands for Moving Pictures Experts Group, and is an international video image compression standard.

### Multi-angle

With regular TV programs, although multiple cameras are used to simultaneously shoot scenes, only images from one camera at a time are transmitted to your TV. Some DVDs feature scenes shot from multiple angles, letting you choose your viewing angle as desired.

### Multi-audio (Multilingual dialog)

Some videos feature dialog recorded in multiple languages or audio recorded in multiple tracks. For example, dialog in up to eight languages can be recorded on a single DVD-Video, letting you choose the language as desired.

#### Multi-session

Multi-session is a recording method that allows additional data to be recorded later. When recording data on a CD-ROM, CD-R or CD-RW, etc., all data from beginning to end is treated as a single unit or session. Multi-session is a method of recording more than two sessions in one disc.

### **Multi-subtitle**

For example, subtitles in up to 32 languages can be recorded on a single DVD-Video, letting you choose as desired.

### **Packet write**

This is a general term for a method of writing individual files to a CD-R, etc. whenever required, just as is done with files on floppy or hard disks.

### **Parental lock**

Some DVD-Video discs with violent or adult-oriented scenes feature parental lock which prevents children from viewing such scenes. With this kind of disc, if you set the unit's parental lock level, playback of scenes inappropriate for children will be disabled, or these scenes will be skipped.

### Phone book

An address book on user's phone is collectively referred to as "Phone book". Depending on the cellular phone, the phone book may be called a name such as "Contacts", "Business card" or something else.

### Point Of Interest (POI)

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

### **Region number**

DVD players and DVD discs feature region numbers indicating the area in which they were purchased. Playback of a DVD is not possible unless it features the same region number as the DVD player.

### **Route setting**

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

### **Set route**

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

### **Title**

DVD-Video discs have a high data capacity, enabling recording of multiple videos on a single disc. If, for example, one disc contains three separate videos, they are divided into title 1, title 2 and title 3. This lets you enjoy the convenience of title search and other functions.

### Track log

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

### **VBR**

VBR is short for variable bit rate. Generally speaking, CBR (constant bit rate) is more widely used. But by flexibly adjusting the bit rate according to the needs of audio compression, it is possible to achieve compression-priority sound quality.

### Voice guidance

The giving of directions by navigation voice while in guidance.

### Waypoint

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

#### **WMA**

WMA is short for Windows Media™ Audio and refers to an audio compression technology that is developed by Microsoft Corporation. ■

C:£! 4!		AVIC-Y020RT	6.1 inch wide/16:9
Specification	ns	Effective display area:	0.1 IIICII Wide/ 10.9
General			159 mm × 84 mm
Rated power source	14.4 V.D.C		
riated power source	(allowable voltage range:		384 000 (800 × 480)
	10.8 V to 15.1 V DC)		TFT Active matrix driving
Grounding system	,	Backlight	
Maximum current co		Color system	
Waxiiiiaiii cariefii c	•	Tolerable temperature ra	
Dimensions (W $\times$ H $\times$ D		•	+14°F to +140°F
AVIC-Z120BT	<i>,</i> .	Power off	4°F to +176°F
	178 mm × 100 mm ×	Angle adjustment	
01100010	165 mm	AVIC-Z120BT	0° to 22°
	(7 in. × 3-7/8 in. × 6-1/2 in.)	AVIC-X920BT	0°
Nose	170 mm × 96 mm × 17 mm		
14000	(6-3/4 in. × 3-3/4 in. ×	Audio	
	5/8 in.)	Maximum power output	t 50 W × 4
AVIC-X920BT	0,011.,	, , , , , , , , , , , , , , , , , , , ,	$50 \mathrm{W} \times 2 \mathrm{ch}/4 \Omega + 70 \mathrm{W} \times$
	178 mm × 100 mm ×		1 ch/2 $\Omega$ (for subwoofer)
Cridoolo	165 mm	Continuous power outpo	ut 22 W × 4 (50 Hz to 15 kHz,
	(7 in. × 3-7/8 in. × 6-1/2 in.)		5 %THD, 4Ω LOAD, Both
Nose	170 mm × 96 mm × 11 mm		Channels Driven)
14030	(6-3/4 in. × 3-3/4 in. ×	Load impedance	$4\Omega$ ( $4\Omega$ to $8\Omega$ [ $2\Omega$ for 1 ch]
	3/8 in.)	·	allowable)
Weight:	0,0111.)	Preout output level (max	<):
AVIC-Z120BT	2.43 kg (5.3 lbs)	AVIC-Z120BT	
AVIC-X920BT		AVIC-X920BT	
NAND flash memory		Preout impedance:	
TW WID HOOF MICHOLING		AVIC-Z120BT	100 ohm
Navigation		AVIC-X920BT	1 kohm
GPS Receiver:		Equalizer (7-Band Graph	nic Equalizer):
	L1, C/Acode GPS	Frequency	50 Hz/125 Hz/315 Hz/800 Hz/
-, -, -, -, -, -, -, -, -, -, -, -, -, -	SPS (Standard Positioning		2 kHz/5 kHz/12.5 kHz
	Service)	Gain	±12 dB
Reception system	32-channel multi-channel	Loudness contour:	
	reception system	Low	+3.5 dB (100 Hz), +3 dB
Reception frequency			(10 kHz)
Sensitivity		Mid	+10 dB (100 Hz), +6.5 dB
Position update freq			(10 kHz)
	Approx. once per second	High	+11 dB (100 Hz), +11 dB
GPS antenna:			(10 kHz)
Antenna	Micro strip flat antenna/		(volume: -30 dB)
	right-handed helical polari-	HPF:	
	zation	Frequency	50 Hz/63 Hz/80 Hz/100 Hz/
Antenna cable	3.55 m (11 ft. 7 in.)		125 Hz
Dimensions (W × H	,	Slope	12 dB/oct
	33 mm × 15 mm × 36 mm	Subwoofer:	
	(1-1/4 in. × 5/8 in. ×	Frequency	50 Hz/63 Hz/80 Hz/100 Hz/
	1-3/8 in.)		125 Hz
Weight		Slope	18 dB/oct
- 0 -	9 (* * * <del>9</del> /	Gain	
Display		Phase	Normal/Reverse
Screen size/aspect ratio:		Bass boost:	
AVIC 7100DT	7 1 1 1-1- /10-0	Gain	OdB to ±12 dB

Gain ......0 dB to +12 dB

AVIC-Z120BT ......7 inch wide/16:9

### **DVD Drive**

System	DVD-Video, CD, MP3, WMA,
,	AAC, DivX system
Usable discs	. ,
Region number	.1
Signal format:	
Sampling frequency	44.1 kHz/48 kHz/96 kHz
Number of quantization	n bits
	16 bit/20 bit/24 bit; linear
Frequency response	5 Hz to 44 000 Hz (with DVD,
	at sampling frequency
	96 kHz)
Signal-to-noise ratio	.97 dB (1 kHz) (IEC-A net-
	work)
	(CD: 96 dB (1 kHz) (IEC-A
	network))
Dynamic range	95 dB (1 kHz) (CD: 94 dB
	(1 kHz))
Distortion	0.008 % (1 kHz)
Output level:	
Video	1.0 Vp-p/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
WMA decoding format	Ver.9.0 L3
AAC decoding format	MPEG-4 AAC (only encoded
	by iTunes):
	.m4a
DivX decoding format	
	Ver.4.X, Ver.5.X, Ver.6.X:
	.avi, .divx

### **USB**

USB standard spec	USB 2.0 High Speed
Max current supply	500 mA
File system	FAT16, FAT32
USB class	Mass storage class
Decoding format	MP3/WMA/AAC/WAVE/
	H.264/MPEG4/WMV

SD (AVIC-Z120BT)	
SD memory card, SDHC r	nemory card
Compatible physical	format
	Version 2.00
Max memory capacit	у
	16 GB
File system	FAT16, FAT32
Decoding format	MP3/WMA/AAC/WAVE
	H.264/MPEG4/WMV

### SD (AVIC-X920RT)

3D (AVIC-X320DI)	
microSD card, microSDHC	card
Compatible physical fo	rmat
	Version 2.00
Max memory capacity	
	.16GB
File system	.FAT16, FAT32
Decoding format	. MP3/WMA/AAC/WAVE/
	H.264/MPEG4/WMV

### **Bluetooth**

Version	Bluetooth 2.0+EDR
Output power .	+4 dBm Max.
	(Power class 2)

### FM tuner

Frequency range	. 87.9 MHz to 107.9 MHz
Usable sensitivity	$.9\mathrm{dBf}$ (0.8 $\mu$ V/75 $\Omega$ , mono,
	S/N: 30 dB)
Signal-to-noise ratio	.72 dB (IEC-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)
Storog congration	45 dB (at 65 dBf 1 kHz)

### AM tuner

Frequency range	530 kHz to 1 710 kHz
	(10 kHz)
Usable sensitivity	25 µV (S/N: 20 dB)
Signal-to-noise ratio	62 dB (IEC-A network)

## **CEA2006 Specifications**



Power output	14 W RMS × 4 Channels
	$(4\Omega \text{ and } \leq 1\% \text{ THD+N})$
S/N ratio	91 dBA (reference: 1 W into
	$4\Omega$ )



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

Register your product at

## http://www.pioneerelectronics.com

in Canada http://www.pioneerelectronics.ca

See "Visit our website" page

### PIONEER CORPORATION

1-1, Shin-Ogura Saiwai-ku, Kawasaki-shi Kanagawa-ken 212-0031, JAPAN

### PIONEER ELECTRONICS (USA) INC.

P.O. Box 1540, Long Beach, California 90801-1540, U.S.A.

TEL: (800) 421-1404

### PIONEER EUROPE NV

Haven 1087, Keetberglaan 1, B-9120 Melsele, Belgium/Belgique TEL: (0) 3/570.05.11

### PIONEER ELECTRONICS ASIACENTRE PTE. LTD.

253 Alexandra Road, #04-01, Singapore 159936

TEL: 65-6472-7555

#### PIONEER ELECTRONICS AUSTRALIA PTY. LTD.

178-184 Boundary Road, Braeside, Victoria 3195, Australia

TEL: (03) 9586-6300

### PIONEER ELECTRONICS OF CANADA, INC.

300 Allstate Parkway, Markham, Ontario L3R 0P2, Canada

TEL: 1-877-283-5901

TEL: 905-479-4411

### PIONEER ELECTRONICS DE MEXICO, S.A. de C.V.

Blvd.Manuel Avila Camacho 138 10 piso

Col.Lomas de Chapultepec, Mexico, D.F. 11000

TEL: 55-9178-4270

### 先鋒股份有限公司

總公司:台北市中山北路二段44號13樓

電話: (02) 2521-3588

### 先鋒電子(香港)有限公司

香港九龍尖沙明海港城世界商業中心9樓901-6室

電話: (0852) 2848-6488

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