

KDC-168U

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Software & Firmware

iPod and iPhone

[Audio File](#)

Audio File Specification

About MP3, WMA, WAV and FLAC

The playable MP3/WMA/WAV/FLAC file (hereafter called Audio file) and the media format has the following limitation. The Audio file, which is not conforming to the specification, may not play normally, or the file and folder names may not display correctly.

Playable Audio file

MP3	Extension	.mp3
	Format	MPEG 1/2 Audio Layer 3 file
	Transfer bit rate	8-320 kbps / Variable Bit Rate
	Sampling frequency	8/ 11.025/ 12/ 16/ 22.05/ 24/ 32/ 44.1/ 48 kHz
	Joint STEREO	●
	ID3 Tag (Ver.1)	Ver1.0/ 1.1 (Title/ Artist/ Album)
	ID3 Tag (Ver.2)	Ver2.2/ 2.3/ 2.4 (Title/ Artist/ Album : Does not support picture display.)
WMA	Extension	.wma
	Format	The file in accordance with Windows Media Audio (Except for the file for Windows Media Player 9 or after which applies the new functions)
	Transfer bit rate	32-192 kbps / Variable Bit Rate
	Sampling frequency	8/ 11.025/ 12/ 16/ 22.05/ 24/ 32/ 44.1/ 48 kHz
	DRM file	—
	Professional	—
	Lossless	—
	Voice	—
	WMA Tag (Content Description)	● (Title/ Artist)

	WMA Tag (Extended Content Description)	● (WM/Album Title)
WAV (USB device)	Extension	.wav
	Format	RIFF waveform Audio Format (only for LinearPCM)
	Sampling frequency	44.1 KHz
	Bit count	16 bit
	Channel	Stereo/Monaural
FLAC (USB device)	Extension	.flac
	Format	Free Lossless Audio Codec (FLAC)
	Sampling frequency	8/ 11.025/ 12/ 16/ 22.05/ 24/ 32/ 44.1/ 48 kHz
	Channel	Stereo/Monaural
	Bit count	16 bit
	Compression level	0/ 1/ 2/ 3/ 4/ 5/ 6/ 7/ 8

- Do not attach the extensions to files other than the Audio file. If the extension is attached, the file, which is not the Audio file, will play and outputs a loud noise, causing damage to the speaker.
- The files with copy protection cannot be played.
- Audio files cannot be played depending on the encoding software setting, USB device type, and/or recording conditions.
- The unit may not be compatible with upgrade of compression format standard and additional specifications.
- There are times when play time is not displayed correctly depending on the Audio file recording conditions.
- Supreme is not applied for songs that have been encoded at a variable bit rate.
- Sound of WAVE file may be interrupted depending on the performance of the recording media.

Playable storage media file system

CD-R/RW	File system (Windows)	ISO 9660 Level 1/2	●
		ISO 9660 Level 3	—
		Romeo	—
		Joliet	●
		Long File Name	●
	File system (Macintosh)		—
	File system (UNIX)		—
	Multi-Session		● *1
USB device	File system (Windows) *2	FAT12	●
		FAT16	●
		FAT32	●
	File system (Macintosh)		—
	File system (UNIX)		—

- CD-RW discs which are quick formatted by the writing software cannot be used.
- When recording to the maximum CD-R/RW media capacity at once, the writing software is set to "Disc at once".
- Joliet is recommended for file system of CD-R/RW. With other file systems, the display may not be shown correctly depending on the operating conditions.
- *1 For CD-DA/ audio file mixed disc, the unit plays only the playback system recorded at the first setout.
- *2 Multi Partition : Not compatible (Some USB devices may have multiple partitions that will be invisible on Windows OS.)
- When the CD-R/RW recorded by CD-ROM MODE 2 (XA) format cannot be played, please record again by using CD-ROM MODE 1 writing format.

Limitation of structure for the file and the folder

CD-R/RW	Maximum number of directory levels	8
	Maximum number of folders	500
	Maximum number of files per folder	500
	Maximum number of files and folders	500
USB device	Maximum number of folder layers	8
	Maximum number of folders (per folder)	500
	Maximum number of folders (per device) *1	500
	Maximum number of files (per folder)	999
	Maximum number of files and folders (per device)	15000

- It may take time to start playing depending on the recording conditions such as file hierarchy and folder structure.
- *1 This includes the Root folder (the folder in the top level). The number of folders shown on your PC is less than it by 1.

The maximum number of characters for display

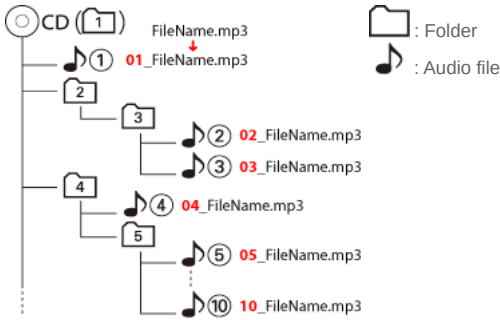
File/Folder name		64 characters (CD: 32 characters, Joliet: 16 characters)
MP3 ID3 Tag	Ver. 1.x	30 characters
	Ver. 2.x	64 characters
WMA Contents property		64 characters
WAV		64 characters
FLAC		64 characters

- Number of characters is based on byte unit.
- File/Folder name is the number of the characters including the extensions.
- This unit can display the following versions of MP3 ID3 tag: version 1.0/ 1.1/ 2.2/ 2.3/ 2.4

Playing order of the Audio file

- The Audio file plays in the order which is written by CD writing software. You may be able to set the playing order by writing the play sequence numbers such as "01" to "99" at the beginning of the file name.
- Audio files are played in order of file names. You can specify the order of playback by numbering files in a folder and writing them by folder. (USB device)

Example



About USB device

Notes on Use of the USB device

This unit can play audio files stored in the flash memory and digital audio player that have a USB port (these devices are referred to as USB devices in this document).

The following restrictions are placed on the types and usage of available USB devices:

Available USB Devices

USB standard	USB 1.1 / USB 2.0
Transfer Speed	Full speed (Max. 12 Mbps)
USB class	Mass storage class (MSC device)
USB subclass	SCSI
Protocol	Bulk Only
Current supply	Max. 1 A (iPod/iPhone) / Max. 500 mA (USB)

- USB Mass Storage Class:
USB devices that the PC can recognize as an external storage without using any special driver or application software.
- Contact the sales agent as to whether your USB device conforms to the USB mass storage class specs.
- Using an unsupported USB device can result in abnormal playback or display of the audio file.
Even if you use the USB device conforming to the above specs, audio files cannot be played normally depending on the type or condition of the USB device.
- Some of the functions is limited with a certain USB device.
- Normal operation and power supply is not guaranteed against every USB devices.

About the Connection of the USB device

- Do not directly connect the USB device to the USB connector on the panel. Connect it using a cable.
- Normal playback is not guaranteed when a cable other than the USB compatible cable is used. Connecting a cable whose total length is longer than 5 m can result in abnormal playback.
- You cannot connect a USB device via a USB hub.



- Install the USB device in the place where it will not prevent you from driving your vehicle properly.
- Do not leave the USB device in the vehicle for a long time. It can deform or damage due to direct sunlight, high temperature, etc.
- Take backups of the audio files used with this unit. The files can be erased depending on the operating conditions of the USB device.

We shall have no compensation for any damage arising out of erasure of the stored data.



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	Receivers		Accessories	
	Amplifiers			
	Speakers & Subwoofers			
	Accessories			
	Support			