KANN

Astell&Kern

INSTRUCTION BOOK
User Guide

IRIVER

CONTENTS

Getting Started –01

Using the Device –02

Miscellaneous –03

Package Contents

Contents may be changed without prior notice to improve the performance or quality of the device.

KANN

Protection Film

Quick Start Guide & Warranty Card

USB Type-C Cable

SD/microSD Card Slot Cover
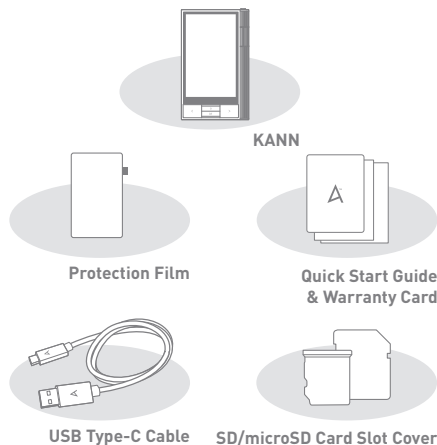
Protection Film: Protects the device's screen.
USB Type-C Cable: For charging and data transfer.
Quick Start Guide: Basic overview of device functionality.
Warranty Card: The warranty card is required for customer and technical support. Do not misplace the card.
User Guide: The User Guide can be downloaded from the Astell&Kern website.
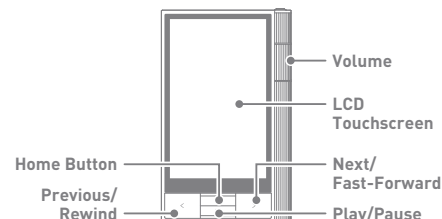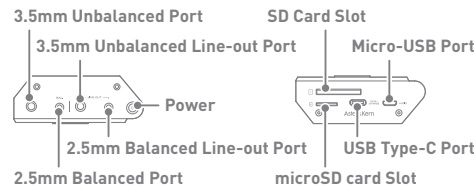[http://www.astellnkern.com/ > Support > Download].
SD/microSD Card Slot Cover: Covers the empty SD/microSD card slot. Cover is used to protect the card slot when not in use. Packed separately from device.

> ⚠ This device does not include a micro USB cable.

KANN at a Glance

The appearance of the device, as well as the printed and engraved information, may vary depending on the model.

3.5mm Unbalanced Port
3.5mm Unbalanced Line-out Port
Power
2.5mm Balanced Line-out Port
2.5mm Balanced Port

SD Card Slot
Micro-USB Port
USB Type-C Port
microSD card Slot

Volume
LCD Touchscreen
Home Button
Next/ Fast-Forward
Previous/ Rewind
Play/Pause

3.5mm Unbalanced Port: Connect earphones or headphones for audio output that utilize a 3.5mm jack.
3.5mm Unbalanced Line-out Port: Connect line-in supported devices that utilize a 3.5mm jack.
2.5mm Balanced Port: Connect earphones or headphones for audio output that utilize a 2.5mm jack.
2.5mm Balanced Line-out Port: Connect line-in supported devices that utilize a 2.5mm jack.
Power: Turn the screen on and off.
          Press and hold to turn the device on and off.

microSD/SD Card Slot: Insert a microSD/SD card and access its files.

Micro-USB Port: Connect a USB DAC for USB audio output.
Connect the A&K CD Ripper.
Connect to your computer to use as a USB DAC.
(See p. 37 - USB Audio & p. 36 - USB DAC)

USB Type-C Port: Connects the device to the computer or used to charge the device.

Volume: Control the volume by turning the wheel.

LCD Touchscreen: Display with touch control.

Home Button: Return to home screen.

Previous/Rewind: Play the previous song or restart the song.
            Press and hold - Rewind.

Play/Pause: Play or Pause a song.
            Press and hold - Return to playback screen.

Next/Fast-Forward: Skip to the next song.
            Press and hold - Fast-forward.

Power Manage- ment

Turn On/Off

1. Press and hold the [◎] button to turn on the device.
2. While the device is on, Press and hold the [◎] button to display a shutdown confirmation message.
3. Press [OK] to turn off the device.

> **(!)** This device has an automatic shutdown feature to reduce battery consumption. The device will turn off after a defined period if there is no user input. [⚙ - Power Saving - Automatic Shutdown] (See p. 45)

Turn the Screen On/Off

1. While the screen is on, press the [◎] button to turn off the screen.
2. Press the [◎] button again to turn on the screen.

> **(!)** This device has an automatic timeout feature to reduce battery consumption. The screen will turn off after a defined period of time if there is no user input. [⚙ - Power Saving - Screen Timeout] (See p. 45)

Reset Function

1. In cases of unexpected device failure or freeze, press the [◎] button for 12 seconds to force a shutdown.
   The device can be restarted after the shutdown is complete.

> **(!)** Resetting the device will not affect the stored data or time setting. Do not use the reset function while the device is in use. Doing so may corrupt the data on the device.

Charging

Charging via Computer Connection

1. Connecting to computer via USB Type-C cable will also charge the device.

> **⚠** Charging Time: Maximum 12 hours (fully drained, Power-off)
> Computer may need to be turned on to start charging depending on computer specifications.
> When charging via computer connection, the charging time may vary depending on whether the device is turned on or off.
> If a computer goes into standby/sleep mode, the device may not be charged depending on computer specifications.
> The built-in battery will gradually lose capacity over time according to the number of charges/discharges.
> Do not use cables other than USB Type-C cable. Using other cables may cause malfunctions.

Charging via USB Wall Adapter

1. Commercially available 5V 2A / 9V 1.67A adapters may be used for charging.

> **⚠** Charging Time: Fast charging: Maximum 4 hours (Completely run-down, Power-off, 9V 1.67A adapter) / Normal charging: Maximum 5 hours (Completely run-down, Power-off, 5V 2A adapter)
> A fast charger of 9V 1.67A may be used. Using a 12V adapter will not charge the device and may cause malfunctions.

Connec-tions

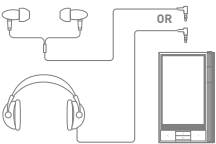### Earphone and Headphone Ports

● **3.5mm Unbalanced Port**

1. Connect earphones or headphones to the 3.5mm unbalanced port.
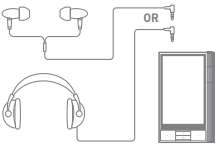
● **2.5mm Balanced Port**

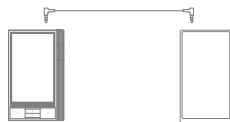1. Connect earphones and headphones to the 2.5mm balanced port.

Line-out Port

● **3.5mm Unbalanced Line-out**

1. Connect devices with line-in support.

● **2.5mm Balanced Line-out**

1. Connect devices with line-in support.

> ⚠ Warning - When connecting earphones, headphones, or receivers that support line-in to the line-out port, extreme sound volume may occur.

Balanced Audio Device

1. Connect to an external audio device by using the 3.5mm Unbalanced Port and 2.5mm Balanced Port in conjunction.

Earphones Port (Ground)   Balanced Port (LR)
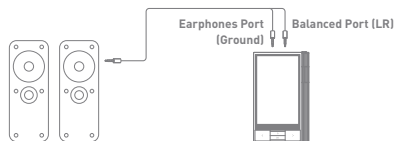
> ⚠ Astell&Kern balanced cable (PEF12, PEF21) is not supported.

Connecting to a Computer

1. Turn on the device and your computer.
2. Connecting the device to a computer using USB Type-C cable will follow the [⚙ - USB Connection] settings.
   ● Media Device (USB Drive): Transfer files from a computer to the device.
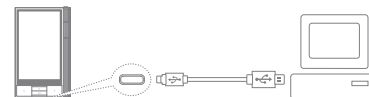
> ⚠ Mac users need to download and install the MTP program from the Astell&Kern website.
> [http://www.astellnkern.com Support > Download]
> For an optimal connection, quit any unnecessary programs before connecting the device to the computer.
> Do not use cables other than the USB Type-C cable provided with the device. Using other cables may cause malfunctions. Windows XP users require Service Pack 2 and Windows Media Player 10 to be installed for the computer to recognize the USB device.
> Download necessary Service Packs and Windows Media Player from the Microsoft website. http://www.microsoft.com

Disconnecting from the Computer

1. Before disconnecting the USB Type-C cable, check that the transfer between the device and computer is completed.

> ⚠ Disconnecting the device from the computer during an operation (e.g. file transfer) may corrupt data on the device.

Copy Files/Folders to the Device

1. To copy files/folders from your computer, select the desired files/folders and drag & drop them into the device folder.
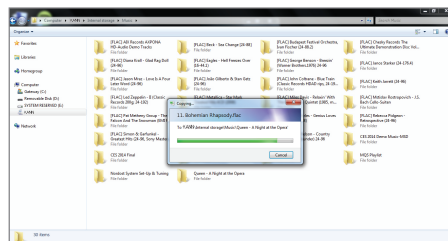

⚠ **Ensure the USB Type-C cable is properly connected.**
Turning off the device or disconnecting the USB Type-C cable while copying or moving files/folders may cause serious damage to the memory.
File transfer speeds may be affected depending on the computer and/or OS environment.

Delete Files/Folders on the Device

1. Right-click the desired file/folder then select [Delete].
2. Select [Yes] in the [Confirm File/Folder Deletion] window to delete the selected file/folder.
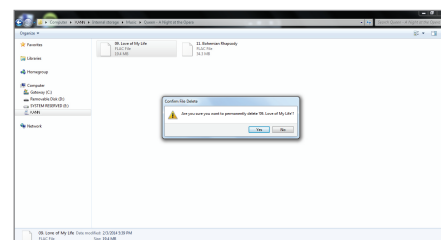
Inserting/Eject microSD/SD card for safe removal

1. Insert the microSD/SD Card into the slot as shown in the diagram below. Gently push the card in until it clicks into place.
2. Go to the notification bar on the home screen and select [Safely Remove microSD/SD Card], or go to [⚙ – System Info] and select [Eject microSD/SD Card] to safely remove the card.
3. Lightly press in the microSD/SD Card and then remove it.
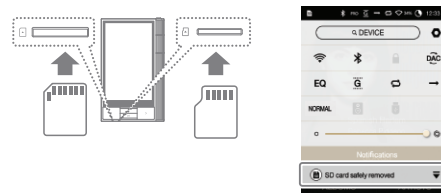
Recommended microSD/SD Card

microSD : SanDisk, Transcend / SD : SanDisk, Transcend

> ⚠ **Maximum Supported Capacity: microSD Card - 256GB / SD Card - 256GB**
>
> **Notes on Inserting microSD/SD Card**
> - Do not force the microSD/SD Card into the slot. The device and Card may be damaged.
> - Do not repeatedly insert and remove microSD/SD Cards.
> - If not inserted properly, the microSD/SD Card may cause device malfunctions and/or become lodged in the device.
>
> **Notes on Removing microSD/SD Card**
> - Follow the provided instructions to safely remove microSD/SD Cards. Otherwise, the memory or the device may be seriously damaged.
> - Do not disconnect the microSD/SD Card during use. Data deletion, device malfunction, or microSD/SD Card damage may occur.
>
> **Other Safety Notes**
> - If the microSD/SD Card is not recognized or is not functioning properly, format the Card, preferably in FAT32 system.
> - Using Cards other than the recommended microSD/SD Card may cause malfunctions.
> - microSD/SD Card is not included and must be purchased separately.

Firmware Upgrade

Wi-Fi Update / OTA (Over-the-Air)

1. Connect to a wireless network.
2. When a new firmware version is available, the screen will display a Firmware Update Guide window.
3. Select [Update].
4. Follow the on-screen instructions and proceed with the firmware upgrade.

> ⚠ **Refer to page 47 of the manual for more information on connecting to a wireless network.**
>
> The firmware upgrade may not initialize if the battery level is too low. (A minimum battery level of 50% is required.)
>
> Moving to another screen during a file download will cancel the download.
>
> Do not disconnect from the wireless network while downloading a firmware upgrade. Doing so may cause data corruption and/or damage to the system.
>
> If an error occurs or the notice in the Notification Bar disappears during an upgrade, download the firmware update again through [⚙ - Update - System Update].

Basic Operations

LCD Touchscreen

1. This device features a LCD touchscreen that allows you to perform operations by touch.
   Interact with the device by touching the screen to access various features.

> ⚠ To prevent damage, do not use a sharp object or use excessive force when touching the screen.
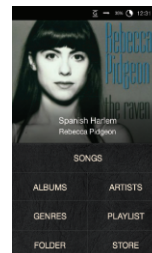
Return to the Home Screen

1. Press the [Home] button at any time to return to the Home Screen.
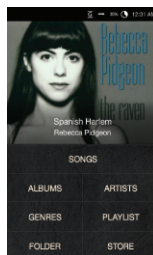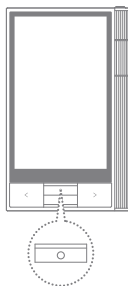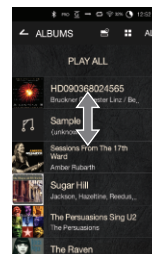
Home Screen

Moving the Home Screen Menu

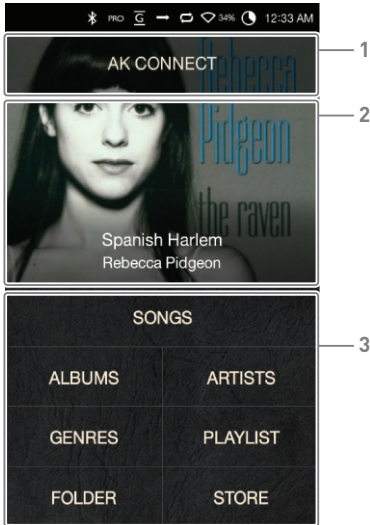1. You can move the list by dragging the menu up or down.

Navigating Up/Down in a List

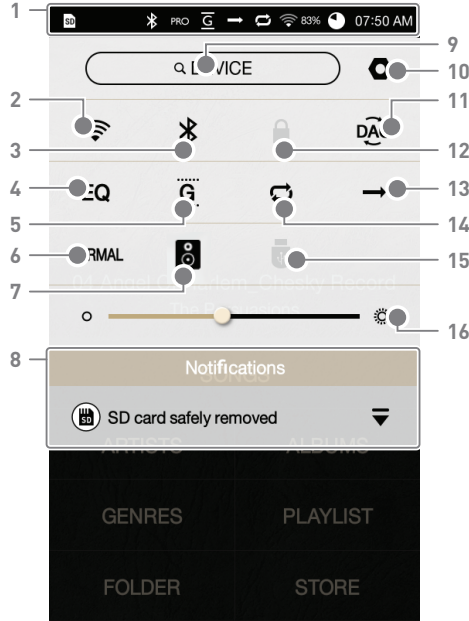1. Scroll through the list by dragging the list screen up or down.

Home Screen

1	**AK CONNECT**	Launches AK Connect.
2	**Current Song**	Currently playing song information.
3	**Search Options**	View the list of songs by different search options.

> ⓘ The search options can be Press and hold, and dragged to change their locations.

Notification Bar

1	**Notification Bar**	Open the status alert window by dragging the status bar located at the top of the screen down.
2	**Wi-Fi**	Press [ ] to turn Wi-Fi on or off.
3	**Bluetooth**	Press [ ] to turn Bluetooth on or off.
4	**EQ**	Press [EQ] to turn the EQ on or off. The most recent EQ settings are applied by default.
5	**Gapless Playback**	Press [G] to turn Gapless Playback on or off.
6	**Change AMP Output**	Change the output level of the AMP to Normal or High gain.
7	**Wi-Fi Speakers**	Turn Wi-Fi speakers on or off. (Must be on the same network.) (The icon will become enabled when AK Connect is turned on.)
8	**Notifications Display**	Notification contents are displayed in this area.
9	**File Search**	Enter keywords to display a list of items containing the search terms.
10	**Settings**	Displays a list of settings.

11	**PC Connection Mode**	Select the appropriate mode when connected to a computer. DISK :USB drive mode for transferring media files. DAC :Listen to music located on a computer through the device.
12	**Screen Lock**	Press [ ] to turn the screen lock on or off. When activated, all buttons, except power, will be disabled.
13	**Play Mode**	Press [ ] to cycle through different Play modes. → :Sequential playback. ⤬ :Shuffle playback.
14	**Repeat Mode**	Press [ ] to cycle through different Repeat modes. ⇄ :Repeat the entire playlist. ↻ :Repeat the current song. ⇄ :Disable repeat.
15	**USB Audio**	Please turn on or off USB audio output after connecting the device with the portable USB DAC (refer to p. 37).
	Ripper Power	Turn the CD Ripper on or off. (Enabled when connected to the AK CD Ripper.)
16	**Screen Brightness**	Use the adjustment bar to control the display brightness.

Press and hold an icon [/ EQ / / /] to navigate to the corresponding full settings menu screen.

Purchasing Music from a Store

Conveniently purchase music from the Store when connected to a wireless network.

Purchasing Music

1. Connect to a wireless network.
2. Select [Store] from the home screen.
3. Select the desired store.
4. Check the user guide or help menu within each store for detailed information.

> ⓘ **Refer to page 47 of the manual for more information on connecting to a wireless network.**

AK CONNECT

The KANN can access and play back music files stored on a computer or DNLA compatible devices that are on the same network as well as output sound through compatible speakers.

MQS Streaming Server Installation for Computer

1. Visit the Astell&Kern website and download the server installer that corresponds to your operating system. [http://www.astellnkern.com > Support > Download].
2. Run the downloaded installer and follow the on-screen instructions.
3. Check the User Guide within the program for detailed information on using the MQS Streaming Server.

> ⓘ **System Requirements**
> **Computer Minimum System Requirements**
> ● **OS : Windows XP, Windows 7/8/10 (32 & 64-bit)**
> **Mac Minimum System Requirements**
> ● **OS X 10.7 (Lion) or later**

Connecting to the AK Connect Server

1. Turn on the server and connect to the same network as the KANN.
   ● Run the MQS Streaming Server on your computer.
2. Turn on [AK Connect] from the device settings.
3. Press [AK Connect] from the home screen.
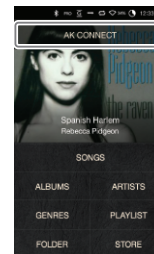
4. A list of servers on the same network as the KANN will be displayed.

5. Scroll the screen left and right to select a server. The selected server will be connected and the server home screen will be displayed.
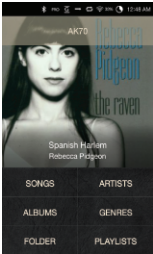
6. Select a search option on the server Home Screen Menu to display content by selected category.
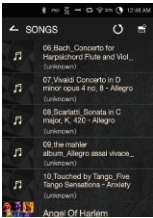
Streaming and Downloading from the Music Server

1. Select a search option from the server Home Screen to display a list of music.
2. Select a song to begin streaming.

3. Press the [▣] button at the upper-right corner of the music list.
4. Select the desired music and then press the [⬇] button at the top of the screen to begin downloading.
   ● A message on the Notification Bar will indicate when the download is complete.
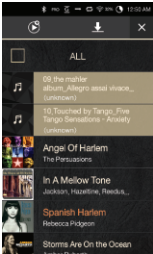
⚠ Depending on network conditions, song loading may be slow or streaming may stutter.
Server response may be slower if the computer server is running other applications in the background.
If you stream and download at the same time, it may slow down the device's response time depending on the speed of Wi-Fi network or server.
Terminating music streaming or pressing the item being downloaded within the Notification Bar will stop the downloading.

Selecting Speakers

1. Turn on the speaker(s) to be connected and connect it to the same network as the KANN.
2. Turn on [AK Connect] from the device settings.
3. Press [ ] from the notification bar to display a list of speakers available on the same network as the KANN.
4. Scroll the screen left and right to select a speaker. The selected speaker will be connected and music will be played back through the speaker.

AK Connect Usage Examples

Example 1

KANN
LIBRARY

AK T1
SPEAKER

Example 2

AK500N
LIBRARY

KANN
REMOTE

AK T1
SPEAKER

Example 3

KANN
REMOTE & LIBRARY

AK500N
SPEAKER

Example 4

KANN	AK500N	AK T1
LIBRARY	REMOTE	SPEAKER

Example 5

KANN
LIBRARY

or

AK Connect APP
REMOTE

AK500N
LIBRARY

AK T1
SPEAKER
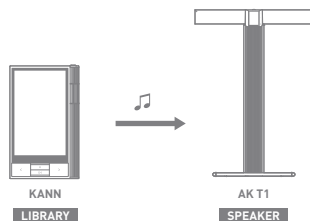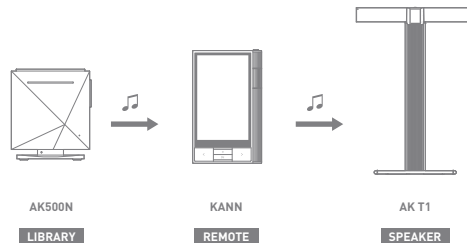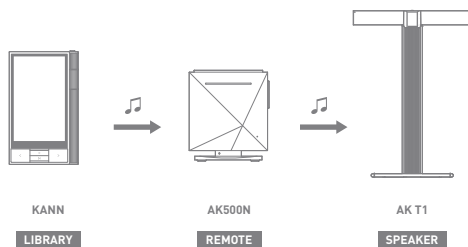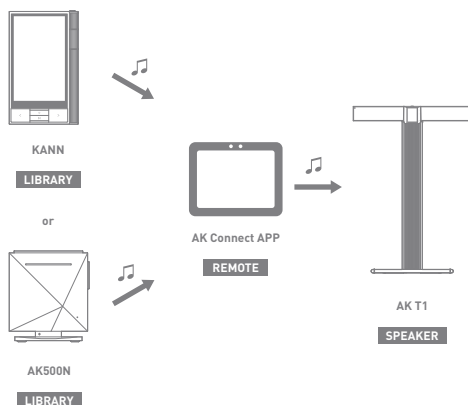
Listening to Music

Selecting Music

1. Select a search option from the Home Screen Menu to display the files by selected category.
2. Select a song from the list to begin playback.

> **Select [Folder] to search music by folder.**
> **Continuous Playing Time: Approximately 15 hours (Music: FLAC, 16bit, 44khz, Unbalanced, Normal, Volume 50, EQ Off, LCD Off)**
> **Supported Formats: PCM [8~384kHz(8/16/24/32bit)]**
> **DSD [2.8/5.6/11.2MHz]**

Listening to Music

- Press [▤] at the top of the music list to display music options.
   ▶: Add the selected file after the current/last song of the current playlist.
   ▤: Add the selected file to the playlist.
   ▥: Copy the selected file.
   ▥: Move the selected file.
   ▥ : Delete the selected file.
- Press the album cover displayed on the home screen to return to current/last song played.
- Turn the [Volume Wheel] to adjust the volume.
- Press [I>] during playback to pause and [I>] to resume playback.
- Press [< / >] to play the previous/next file or when in the playback screen swipe the album art left or right.
- Press and hold [< / >] to rewind/fast-forward the file or move the status bar to the desired point in the file.
- Press the [○] button on the device to go to the Home Screen.
- Press the album cover during playback to display or hide additional functions.

◢ : Return to the previous screen. Press and hold to
     return to home screen.

▤ : Display the current playlist.
     ○Press [☰] next to the playlist to edit the playlist
       order.
     ○Press [▤] at the top of the music list to display
       music options.
         ▤ : Add the selected file to the playlist.
         🗑 : Delete the selected file from the playlist.

✚ : Add the current song to the playlist.

☰ : Display lyrics for the current song.

i : Display current song information.

Playlist Screen
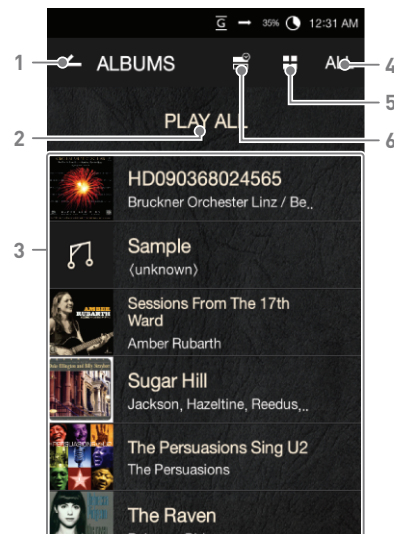
1	Current Menu Location	Indicates the current location. Press to return to the previous screen. Press and hold to return to home screen.
2	Play All	Play all songs from the current playlist.
3	Playlist	Displays the playlist for the current location.
4	List Sorting	Select a method for sorting the playlist.
5	List View	Select a view type for the list of albums.
6	Music Options	Select the checkbox to apply playlist options.

Music Playback Screen

1	◣	**Previous Screen**	Return to the previous screen.
2		**Album Cover**	Display album covers. Press the album cover to show additional functions.
3		**Song Progress**	Indicates song duration.
4	▶/❚❚	**Play/Pause**	Indicates song Play/Pause status.
5		**Details**	Displays bitrate and sampling frequency data.
6		**Title**	Song title information. File name is displayed when ID3Tag is unavailable.
7		**Artist**	Artist name.
8	✚	**Add to Playlist**	Add the current song to a playlist.
9	▣☰	**Playlist**	Displays the current playlist.
10		**Song Duration**	Indicates the song's total duration. Press to switch from total song duration to remaining time.
11		**Progress Bar**	Indicates song progress. Drag the indicator to move to the desired time.
12	☰	**Lyrics**	Lyrics for the current song.
13	*i*	**Details**	Displays current song information.

Playlist Management

Creating a Playlist

1. Press [Playlist - Playlists] from the home screen to display a list of playlists.
2. Press [+] at the upper-right corner of the screen.
3. Enter a name for the playlist, and then press [Add] to create a new playlist.
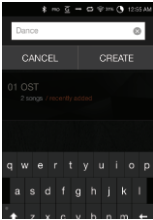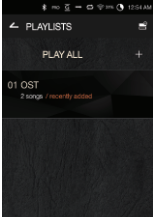
Adding a Song to a Playlist

1. Press [Playlists] to display a list of playlists.
2. Select a playlist and press [Add] to display a list of songs.
3. Select the desired songs and then press [Add] to add the song to the selected playlist.
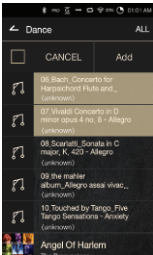
Removing a Song from a Playlist

1. Press [Playlists] to display a list
   of playlists.
2. Select the desired playlist, and
   then press [ ] at the top of
   the screen.
3. Select the desired song, and then
   press [ ] to remove the song
   from the selected playlist.
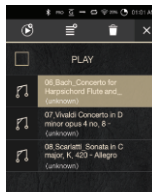
Editing the Playlist Order

1. Press [ ] next to the song and
   drag to modify the playlist order.
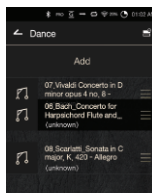
Playing a Playlist

1. Press [Playlists] to display a list
   of playlists and then press [ ]
   at the top of the screen.
2. Select the desired playlist for playback.
3. Press [ ] at the top of the screen
   to add the selected playlist after
   the current/last song of the current
   playlist.
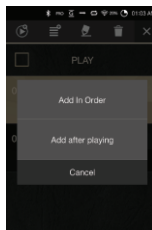
Renaming a Playlist

1. Press [Playlists] to display a list
   of playlists and then press [ ]
   at the top of the screen.
2. Select a playlist to be renamed.
3. Press [ ] at the top of the screen
   to display a rename window.
4. Enter a name for the playlist, and
   then press [Rename] to save the
   playlist under a new name.

Deleting a Playlist

1. Press [Playlists] to display a list
   of playlists and then press [ ]
   at the top of the screen.
2. Select the playlist to be deleted.
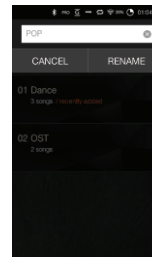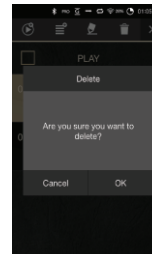3. Press [ ] at the top of the screen
   to delete the selected playlist.

USB DAC Installation

USB DAC feature is for the computer to recognize KANN via the sound card and to output the music playing on the computer through the earphone port of KANN.

USB DAC Specifications

- USB DAC-supported OS
  - Windows XP(32bit) / Windows 7(32bit/64bit) / Windows 8(32bit/64bit) / Windows 10(32/64bit) MAC OS 10.7
- USB DAC-supported Specifications
  - Supported Formats: PCM [8~384kHz(8/16/24/32bit)], DSD [2.8/5.6/11.2MHz]
- Adjust the volume with the volume wheel of KANN.

> **!** Selecting audio formats that are not supported will prevent audio playback. While connected in USB DAC, the volume control cannot be adjusted when the LCD is off and playback buttons (Previous/Rewind, Next/Fast-Forward and Play/Pause) will be disabled.
> Heavy use of the USB DAC or the computer's performance speed may hinder audio playback. Depending on the original file's quality, output performance, and the environment, the audio and the video of a movie file may not be in sync.
> The volume control provided by the computer may not control the volume. Use the volume wheel or the volume control of the program to adjust the sound level.

How to Use USB Audio

You can enjoy USB audio by linking with a portable amp and DAC available in the market.

How to Link Portable USB DAC

1. Connect the device's micro USB jack with the portable USB DAC using a dedicated cable.
2. Press [🔌] after swiping down the notification bar.
3. Once [🔌] is activated, you can enjoy the music through the portable USB DAC's audio output jack.

> **!** The USB Type-C cable provided with the device is to be used to connect to the computer for data transfer or to charge the device. For instructions on the dedicated cable, please refer to the manual of the portable USB DAC manufacturer.

How to Change USB Audio DSD Output Type

You can change the output type of DSD data coming out of USB audio.
1. Select a DSD output type on [⚙ - USB audio].
   - PCM: The device's DSD is converted into PCM and comes out through USB audio.
   - DoP: The device's DSD is converted into DoP and comes out through USB audio.

> **!** The portable USB DAC must be able to receive digital input through the micro USB's OTG cable.
> Output may not be produced properly depending on the digital input specs of the micro USB of the portable USB DAC. This is not a defect in the device and not a ground for exchange or refund.
> In the case of using DoP as a DSD output type, no sound may come out except noise depending on the specs of the portable USB DAC.

CD Ripping

Connect the AK Ripper (sold separately) to rip CDs.

Activate/Deactivate the AK Ripper

1. Connect the AK Ripper to the micro USB port of KANN, and press [🔌] to activate the AK Ripper.
2. While the AK Ripper is activated, pull down the notification bar and press the CD ripping icon to stop the AK Ripper operation.

Automatic CD Ripping

1. Turn on Wi-Fi in the settings menu of KANN.
2. Activate the AK Ripper and insert a CD.
3. The metadata (ID3 tags) for the inserted CD will be retrieved via Gracenote.
4. CD ripping will begin automatically after the metadata has been retrieved.
5. When finished, press [OK] on the results prompt to complete automatic CD ripping.

Manual CD Ripping

1. When the AK Ripper is connected and a CD is inserted, the [CD Ripping] menu will be activated on the home screen.
2. Press the [CD Ripping] menu and select the desired file format (FLAC or WAV).
3. The Gracenote database will be searched for matching CD metadata after the file format is selected.
4. When the database search is complete, press [Start] to begin CD ripping.
5. Rip only selected songs.

CD Ripping Results

- ● : Indicates that CD ripping is complete, or that although an error occurred, CD ripping was successfully completed via error correction.
- ✕ : Indicates that the song currently being ripped can be canceled via user input.
- ⚠ : Indicates that CD ripping failed due to a scratch on the CD or other similar reasons. Also indicates that CD ripping was canceled due to user interruption.

> ❗ To search the Gracenote database, the KANN must be connected to the Internet via Wi-Fi. The database access time may vary depending on the network environment.
> Please note that metadata for certain CDs may not be available on the Gracenote database.
> You may not access the Home screen while CD ripping is in progress.
> The AK Connect service will be disabled during CD ripping and will automatically restart when CD ripping is complete.
> Music playback will be disabled during CD ripping and tracks that have been ripped will not be available for playback until the entire CD has been ripped.
> You can set the desired file format and ripping speed from the [⚙ - CD Ripping] menu.
> Several attempts at correction will be made for data with errors when the feature is enabled under [⚙ - CD Ripping - Error Correction]. Please note that the CD ripping speed will be affected when this feature is enabled.

Using Bluetooth

Connect a Bluetooth device to listen to music wirelessly.

Turning Bluetooth On/Off

A Bluetooth device must be paired with the KANN prior to use. Refer to the Bluetooth device's instruction manual for details.
1. Select [ ] from the Notification Bar, or select [On/Off] from [- Bluetooth].
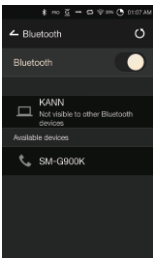
Connecting a Bluetooth Device

1. Select the Bluetooth device from the list of available devices.

Disconnecting a Bluetooth Device

1. Press the connected Bluetooth device and confirm the message prompt to disconnect the device.
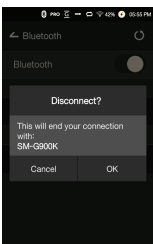
Removing a Bluetooth Device

1. Press [ ] to the right of the paired device to be redirected to the settings screen.
2. Select [unpair] to complete the process.
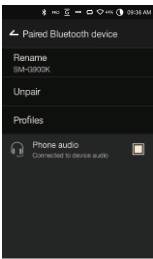
Bluetooth Support Specifications
- **Profile: A2DP, aptX HD**
- **Device performance may be affected during Hi-Fi playback. (48 kHz or lower is recommended.)**

Do not turn off the device while connected to Bluetooth.
Power cycle the Bluetooth device in case of malfunction.
Pairing methods may differ for each individual Bluetooth device. Always refer to the respective instruction manual for details.
When connecting the device to a Bluetooth device, the distance between the two must be within 20 cm.
Audio quality will degrade with longer distances and the pairing may disconnect at a distance of 2 m (6.5 ft) or more. (Distances may vary depending on device and environment.)
Crosstalk may be heard while using Bluetooth.
For multipoint devices, make the necessary connections prior to use.
Car audio Bluetooth connections are not supported.
Malfunction, noise, and other undesirable effects may occur due to the device's battery level and environmental factors:
- If signal interference affects data transmission. (e.g. holding the device while wearing a Bluetooth device, holding the device while holding another electronic device, etc.)
- If the device or Bluetooth headset's radio transmitters are touching parts of the body.
- If the transmission strength is affected by walls, corners, partitions, etc.
- If devices using the same frequencies cause interference. (e.g. medical devices, microwave ovens, Wi-Fi, etc.)
- Areas with an excessive amount of interference or weak signals. (e.g. elevators, underground, etc.)

Settings Set up the device according to the user's needs. The settings menu may vary depending on the firmware version.

Setup

1. Select [⚙] from the home screen notification bar.
2. Select the desired item for setup.

Wi-Fi

● Change wireless network settings and turn Wi-Fi on or off.

❗ Refer to page 47 of the manual for more information on connecting to a wireless network.

Bluetooth

● Connect a Bluetooth device to listen to music wirelessly.

❗ Refer to [Using Bluetooth] on page 40 of the manual for more information on setting up a Bluetooth connection.

AK CONNECT

● Set whether to use AK Connect.

Equalizer

● Set the equalizer according to the user's preferences.
  ○ Pro EQ: EQ Preset recommended by professionals.
  ○ Custom EQ: Adjust the frequencies according to the user's preferences.

❗ Supported Formats for EQ: PCM [8 – 192 kHz (8/16/24-bit)] DSD [2.8/5.6/11.2MHz]
Using the equalizer may negatively affect device performance.
Refer to pages 48 - 50 of the manual for more information on using the equalizer.

Gapless Playback

● Play the next song without any interruptions/silence.
  ○ Gapless playback is only supported between two files with identical bit rates, sample rates, and channels.

Line Out

● Set the voltage that is provided when connected to the Line Out terminal.

❗ Volume through line-out cannot be adjusted.
Do not use earphones or headphones with the Line Out feature is enabled. Doing so may cause permanent hearing loss.

L-R Balance

● Adjust the left-right balance for earphones/headphones.

AMP

● Change the output level of the AMP to Low or High gain.

CD Ripping

- Set the automatic CD ripping function as well as the file format and ripping speed.

USB Audio

- Select the output type of DSD coming out through the portable USB DAC.

Screen Brightness

- Adjust screen brightness settings.

Theme

- Change the theme.

Button Lock

- When activated, all buttons, except power, will be disabled.

Date & Time

- Set the current date and time.

Device Name

- Set the name of the device.
  - The maximum name length is 30 characters.

Language

- Select the display language.
  - Supported languages: English, Korean, Japanese, Chinese (Simplified/Traditional), French, Russian, German

Keyboard

- Select the keyboard language.
  - Supported languages: English, Korean, Japanese, Chinese (Simplified/Traditional), Russian

Power

- Automatic Shutdown: The device will turn off after a defined period if there is no user input.
- Screen Timeout: The screen will turn off after a defined period when there is no user input.
- Sleep Timer: Music playback will stop, and the device will turn off after a defined period.

USB Connection

- Media Device (USB Drive): Connect to a computer to transfer media files.
- DAC Input: Listen to music located on a computer through the device.

Downloads

- Select a folder for downloaded files.

ⓘ The default folder is set when using AK Connect to download files. When [Select Folder] is selected, the user is prompted to choose a download folder each time a file is downloaded.

Update

- System Update: Update the system when a new version is found.
- Application Update: Update the default applications (including the Store) when new versions are found.

System Information

- System Information: View model number, firmware version and data storage information. The microSD or SD card can be ejected and data can be erased.

> ⓘ Formatting the microSD card will delete all data on the memory card. Be sure to backup any important files before formatting. When formatting the microSD card from a computer, be sure to select the FAT32 system.

System Restore

- Database Initialization: Reset the internal database. The database initialization time may vary depending on the number of files stored on the device.
- Default Settings: Revert all user settings back to their original settings.
- Factory Reset: Delete all user data and restore the device to its original factory settings.

Connecting to a Wireless Network

Connecting to a Network

1. Press and hold [📶] from the Notification Bar or select [⚙ - Wi-Fi] to display a list of access points (AP).
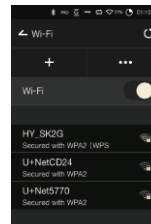
2. Select the desired AP to connect to the wireless network.
   - Additional information (encryption key, index, etc.) may be required depending on the network settings.
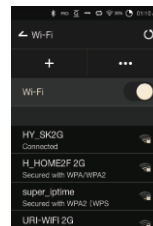
3. Press and hold the network name and select [Network Settings] to edit specific network settings.
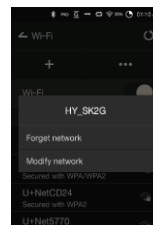
> ⓘ Networks requiring browser or other additional certifications are not supported.
> Channels 1 through 11 are supported.

Equalizer Setup

Configure Equalizer

1. Hold [EQ] on the notification bar or turn on [⚙ - Equalizer] in the settings menu.
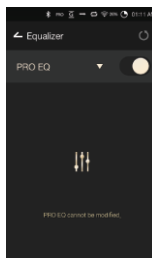
2. Press [PRO EQ] on top-left, then select [+].
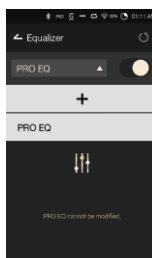
3. Name the Equalizer, then press [Add].
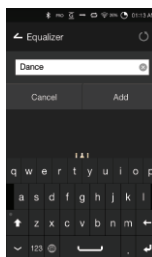
4. Adjust the equalizer by moving it up and down according to your preference.
5. Use the numbers on the lower-left to set the details.
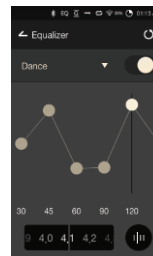
6. Press [▮▮] on the lower-right to display PEQ setting view. Adjust Freq/Gain/Q.
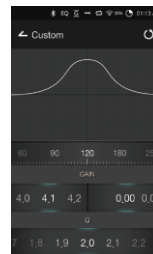
Reset Equalizer

1. Select the equalizer to reset, and press [↻] on the top.

Remove Equalizer

1. Press [PRO EQ] on the top-left of the equalizer screen.
2. Press [🗑] button to the right of the equalizer to be deleted.
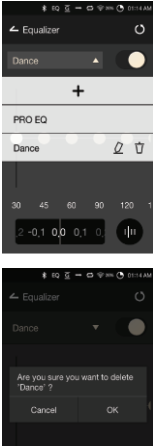
Rename Equalizer

1. Press [PRO EQ] on the top-left of the equalizer screen.
2. Select [✎] button to the right of the equalizer and enter the new name.
3. Press [Rename] to change the name of the selected equalizer.
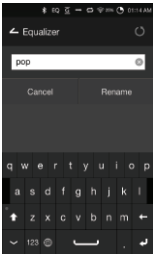
Safety Precautions

Device

- When a plug is inserted into the earphones, balanced, or USB port, do not apply any force or shock to the plug.
- Do not insert any metal objects (coins, hairpins, etc.) or flammable debris into the device.
- Do not place heavy objects on the device.
- In case the device gets wet (rain, water, chemicals, medicine, cosmetics, sweat, moisture, etc.), do not power on the device and allow it to dry thoroughly. Contact the nearest iriver Customer Support Center. (Malfunctions due to exposure to liquids will be repaired for a fee regardless of the warranty period and such damage may not be repairable.)
- Avoid exposing the device to direct sunlight or extreme temperatures (-5℃ - 40℃; 23°F - 104°F) such as the inside of a car during the summer.
- Do not store or use in hot and humid places such as saunas.
- Avoid places with excess moisture, dust, or smoke.
- Do not use for extended period on blankets, electric blankets, or carpet.
- Do not place near a fire or in a microwave.
- Never attempt to disassemble, repair, or alter the device.
- Do not store for extended periods in a confined space with the power on.
- Do not place the device near magnetic objects (magnets, televisions, monitors, speakers, etc.).
- Never use chemicals or cleaning devices on the device since they can damage the paint and surface coating.
- Avoid dropping or subjecting the device to a strong impact (excessive vibration, etc.).
- Do not press multiple buttons simultaneously.
- Do not disconnect the USB Type-C cable during data transfer.
- When connecting the micro-USB cable, use a USB port on the back of the computer. Connecting to a defective or damaged USB port may damage the device.
- Displaying one image for an extended period may cause screen burn-in (afterimage).

- Using poor quality protective films or adhesive stickers on the screen may cause damage.
- Do not insert any foreign objects into the earphones port.
- If playing for extended periods, the device can be very hot, so please keep in mind when using.

Other

- Do not use earphones/headphones or operate the device while operating any type of vehicle. It is not only dangerous but may be a violation of the law in certain regions.
- Do not use the device during physical activities (driving, walking, hiking, etc.).
- Always use in a safe environment to avoid the risk of accidents.
- Always be aware of your surroundings when using the device while moving.
- Avoid using the device during thunderstorms to reduce the possibility of electric shock.
- If there is a ringing in the ears during or immediately after use, reduce the volume or discontinue using the device and obtain medical advice.
- Do not listen to music at excessive volumes for extended periods.
- Do not use earphones/headphones at excessive volumes.
- Be careful not to get the earphones/headphones caught in other objects.
- Do not sleep with earphones in your ears or leave them in for extended periods.

Trouble-shooting

Check for solutions to common problems.

1. The device won't turn on.
    - The battery may need to be recharged. Charge the device for at least one hour and try again.
    - Reset the device and try again. (See p. 5)

2. I connected the device to a computer using a micro USB cable, but it will not charge the battery.
    - Connect to the computer using the USB Type-C cable.
    - Connecting to a computer via a micro USB cable will not charge the device.
    - Connect the adapter using the USB Type-C cable.
3. The computer won't recognize the device or an error occurs when connected.
    - Use a USB port on the back of the computer.
    - Check that the USB Type-C cable is properly connected.
    - For Windows XP, verify that Service Pack 2 (or higher) and Windows Media Player 10 (or higher) are installed.
    - Check if the device connects properly on a different computer.
4. The screen turns off repeatedly.
    - The screen turns off automatically after a defined period to reduce battery consumption. Set the time at [⚙ - Power Saving - Screen Timeout].
5. The screen does not display images properly.
    - Check the screen for debris.
6. There is no sound, or there is static/interference.
    - Check that the volume setting is above [0].
    - Check that the earphones are plugged in properly, and make sure debris isn't obstructing the port connection.
    - Check if the music file is corrupted.
    - Verify that the audio settings have been properly set. (Balanced out, line out, etc.)
7. A file does not play, or the device is unstable when a certain file is used.
    - The following may occur due to the condition of the file:
        - Playback is unstable or difficult.
        - The device may not work normally.
        - The file may sound different from a computer.
        - There may be a difference in the performance of playback or other functions.
        - There may be differences in the playable specs.
    - A file conversion or use of a different file is recommended.

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KANN conducted design and audio tuning with advice from MSD.

Certifications

KC / FCC / CE / TELEC
Class B Device (Communication equipment for residential use): This is a Class B Device and is registered for EMC requirements for residential use. This device can be used in residential and all other areas.

> ⚠ **FCCID: PPM41**
> **This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.**

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual: NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Body-Worn operation
This device was tested for typical body-worn operations with the back of the portable music player kept 5mm. from the body. To maintain compliance requirements, use only belt-clips, holsters or similar accessories that maintain a 5mm separation distance between the user's Body and the back of the Portable music player, including the antenna. The use of belt-clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with CE RF exposure requirements, and should be avoided.
Body-worn accessory exposure conditions "Specific information must be included in the operating manuals to enable users to select body-worn accessories that meet the minimum test separation distance requirements. Users must be fully informed of the operating requirements and restrictions, to the extent that the typical user can easily understand the information, to acquire the required body-worn accessories to maintain compliance. Instructions on how to place and orient a device in body-worn accessories, in accordance with the test results, should also be included in the user instructions. All supported bodyworn accessory operating configurations must be clearly disclosed to users through conspicuous instructions in the user guide and user manual to ensure unsupported operations are avoided. All body-worn accessories containing metallic components must be tested for compliance and clearly identified in the operating manual. The instruction must inform users to avoid using other body-worn accessories containing metallic components to ensure RF exposure compliance."

Specifi-cations

General Specifications		
Device Name		KANN
Model		PPM41
Body Color		Astro Silver, Eos Blue
Body Material		Aluminum
Display		4inch WVGA(480x800) Touch Screen
Supported Audio Formats		WAV, FLAC, WMA, MP3, OGG, APE(Normal, High, Fast), AAC, ALAC, AIFF, DFF, DSF
Sample rate		PCM : 8kHz ~ 384kHz (8/16/24/32bits per Sample) DSD Native: DSD64(1bit 2.8MHz), Stereo / DSD128(1bit 5.6MHz), Stereo / DSD256 (1bit 11.2MHz), Stereo
Output Level	**Phone Out**	Normal : Unbalance 2 Vrms / Balance 2 Vrms (Condition No Load) High: Unbalance 4 Vrms/ Balance 7 Vrms(Condition No Load)
	Line Out	Unbalance 2 Vrms / Balance 2 Vrms (Condition No Load)
DAC		AKM AK4490 x 1 (Single DAC)
Decoding		Support up to 32bit / 384kHz Bit to Bit Decoding
Input		USB Type C input (for charging & data transfer (PC & MAC)) Connection Mode: MTP(Media Device)
Outputs	**Phone Out**	PHONES(3.5mm) / Balanced Out(2.5mm, only 4-pole supported) /
	Line Out	PHONES(3.5mm) / Balanced Out(2.5mm, only 4-pole supported) /
	USB Audio	micro USB Connection / PCM : Up to 32bit 384kHz / DSD 2.8/5.6MHz
Wi-Fi		802.11 b/g/n (2.4GHz)
Bluetooth		V4.0 (A2DP, AVRCP) / aptX HD
Dimensions		2.80" (71.23mm)(W) x 4.56" (115.8mm)(H) x 1.01" (25.6mm)(D)
Weight		9.83oz (278.7g)
Operating temperature		-5℃ ~ +45℃ (23℉ ~ 113℉)
Feature Enhancements		Firmware upgrade supported (OTA)
Audio Specifications		
Frequency Response	**Phone Out**	±0.067dB (Condition: 20Hz~20kHz) Unbalance / ±0.067dB (Condition: 20Hz~20kHz) Balance ±0.75dB (Condition: 20Hz~70kHz) Unbalance / ±0.75dB (Condition: 20Hz~70kHz) Balance
	Line Out	±0.07dB (Condition: 20Hz~20kHz) Unbalance / ±0.07dB (Condition: 20Hz~20kHz) Balance ±0.75dB (Condition: 20Hz~70kHz) Unbalance / ±0.75dB (Condition: 20Hz~70kHz) Balance
S/N	**Phone Out**	110dB @ 1kHz, Unbalance/ 109dB @ 1kHz, Balance
	Line Out	116dB @ 1kHz, Unbalance/ 117dB @ 1kHz, Balance
Crosstalk	**Phone Out**	-108dB @ 1kHz, Unbalance/ -130dB @ 1kHz, Balance
	Line Out	-135dB @ 1kHz, Unbalance/ -135dB @ 1kHz, Balance
THD+N	**Phone Out**	0.004% @ 1kHz, Unbalance/ 0.0008% @ 1kHz, Balance
	Line Out	0.0008% @ 1kHz, Unbalance/ 0.0007% @ 1kHz, Balance

IMD SMPTE	**Phone Out**	0.0008% 800Hz 10kHz(4:1) Unbalance/ 0.0008% 800Hz 10kHz(4:1) Balance
	Line Out	0.0006% 800Hz 10kHz(4:1) Unbalance/ 0.0006% 800Hz 10kHz(4:1) Balance
Output impedance	**Phone Out**	PHONES 3.5mm (0.65ohm)/ Balanced out 2.5mm (1.3ohm)
	Line Out	PHONES 3.5mm (1.9ohm)/ Balanced out 2.5mm (5ohm)
Clock Jitter		30ps(Typ)
Reference Clock Jitter		200 Femto Seconds
Memory		
Built-in Memory		64GB(NAND)
External Memory		microSD(Max. 256GB) x 1 / SD(Max. 256GB)
Battery		
Capacity		6,200mAh 3.7V Li-Polymer Battery
Supported OS		
Supported OS		Windows XP, Windows 7,8,10(32/64bit) MAC OS X 10.7. and up

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Qualcomm® aptX™ HD

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The manufacturer, importer, and distributor shall not be liable for damages including accidental and personal injury due to the improper use or operation of this device.
The information in this user manual was written based on current device specifications. The manufacturer, iriver Limited, is adding new complementary features and will continue to apply new technologies in the future.
All specifications may be changed without prior notice.
There is no warranty against data loss due to the use of this device.

⚠ **Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.**