iBasso Audio
In Pursuit of Perfection

⊓X∃⊓⊓
Reference DAP

Gain

USER GUIDE

Contents

Package Components

DX300 Player
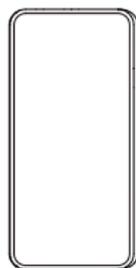
Leather Case

Coaxial Cable

Balanced Burn-in Cable
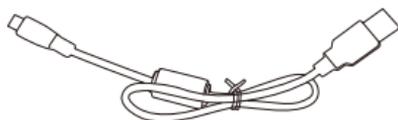
USB-C cable

Screen Protector

Quick Start Guide

Warranty Card

Leather Case：

Use the leather case to protect the DX300 chassis from scratches.

Coaxial Cable：

Connect the coaxial cable to an external DAC, to allow the DX300 to work as a digital transport.

Balanced Burn-in Cable：

Plug the burn-in cable into the output socket and keep playing music to burn-in the DX300. The burn-in process helps the DX300 sound reach its full potential by forming the capacitors and stabilizing the electronic components used.

USB-C Cable：

Connect the USB-C cable to a computer for charging, data transfer, and USB-DAC function.The USB-C cable can also be used with a USB charger to charge the battery.

Screen Protector：

Use the screen protector to protect the DX300 screen from scratches.

Warranty Card：

The warranty will be requested at the time of warranty repair. Please retain the warranty card.

Quick Start Guide:

This reviews the basic functions of the DX300.

Tips for burn-in

The use of the cable is very straightforward. The burn-in cable is used to form the capacitors and to condition the rest of the circuitry. The method for burn-in is to use normal resolution music, as higher resolution causes more heat due to the higher demand on the system. Also, use a normal listening volume, as the higher volume will have a higher power consumption therefore more heat will be generated. While burning in the DX300, both the balanced and the single ended components are being affected and burned in.

The burn-in time can be from 100 to 200 hours and the burn-in doesn't have to be continual. You can power off the player and continue the burn-in process after a few days. It is also not mandatory to use the burn-in cable, we supply it as a convenience for when you are not listening to the DX300 and you would like to get your dap conditioned as soon as possible. You can also just listen to the player and enjoy the music as your player goes through this process while playing through IEMs or headphones.

Main Features

– Quad Cirrus Logic CS43198 DAC Chips are incorporated, with a four–channel balanced headphone amplification circuit.

– Bit for Bit playback with support up to 32bit/384kHz.

– Support of Native DSD up to 256x.

– 6.5″ IPS full screen (1080*2340), with In–Cell capacitive touch panel.

– Support of QC3.0 and PD2.0 quick charge.

– 2 Accusilicon ultra–low phase noise Femtosecond oscillators.

– USB DAC function that supports up to 32bit/384kHz and DoP DSD128.

– USB digital output that outputs up to PCM 32bit/384kHz, Native DSD256, and DoP DSD128

– 14nm Octa–Core Qualcomm Snapdragon 660 SoC.

– 6GB LPDDR4X + 128GB ROM.

– Mini coaxial output that supports up to 24bit/384kHz and DoP DSD128.

– Support of 5G WiFi with 2x2 MIMO antenna and Bluetooth 5.0.

– Support SDXC and SDHC Micro SD cards.

– Support USB3.1 Superspeed transfer.

- 3 settings for hardware gain control.

- 100 steps for volume control.

- Patented replaceable AMP card design.

- Audio Formats Supported: MQA, APE, FLAC, WAV, WMA, AAC, ALAC, AIFF, OGG, MP3, DFF, DSF, and DXD.

- Support for M3U playlists.

- Patented dual battery power structure with dedicated power management for each battery. 4000mAh 3.8V Li–Polymer battery for the digital section and 2000mAh 3.8V Li–Polymer battery for the AMP card section.

Specifications

4.4mm/2.5mm Balanced Phone Port：

Maximum output level：	7.1Vrms
Output Power：	1240mW@32ohm, 168mW@300ohm
Frequency Response：	10Hz~40kHz +/−0.3dB
S/N：	125dB
Dynamic Range：	125dB
THD+N：	−113dB (no Load, 3Vrms)
	−109dB (300R Load)
	−101dB (32R Load)
Crosstalk：	−120dB
Output impedance：	0.39ohm

3.5mm Single Ended Phone Out:

Maximum output level：	3.5Vrms
Output Power：	350mW@32ohm, 34mW@300ohm
Frequency Response：	10Hz~40kHz +/−0.3dB
S/N：	123dB
Dynamic Range：	123dB
THD+N：	−111dB (no Load, 2Vrms),
	−107dB (300R Load)
	−95dB (32R Load)
Crosstalk：	−103dB
Output impedance：	0.43ohm

4.4mm/2.5mm Balanced Line Out：

Maximum output level：	7.1Vrms
Frequency Response：	10Hz~40kHz +/−0.3dB
S/N：	125dB
Dynamic Range：	125dB
THD+N：	−111dB (no Load, 3Vrms)
Crosstalk：	−119dB

3.5mm Single Ended Line Out：

Maximum output level：	3.5Vrms
Frequency Response：	10Hz~40kHz +/−0.3dB
S/N：	123dB
Dynamic Range：	123dB
THD+N：	−111dB (no Load, 2Vrms),
Crosstalk：	−103dB

Average Play Time:	15hours
	((The play time varies with different resolutions, volume used and headphone/IEM loads.)

Names of Parts & Functions

Micro SD

Coaxial Output Port

USB–C Port

Micro SD

Coaxial

USB C

Amp Card

4.4mm Balanced

3.5mm Single Ended

2.5mm Balanced
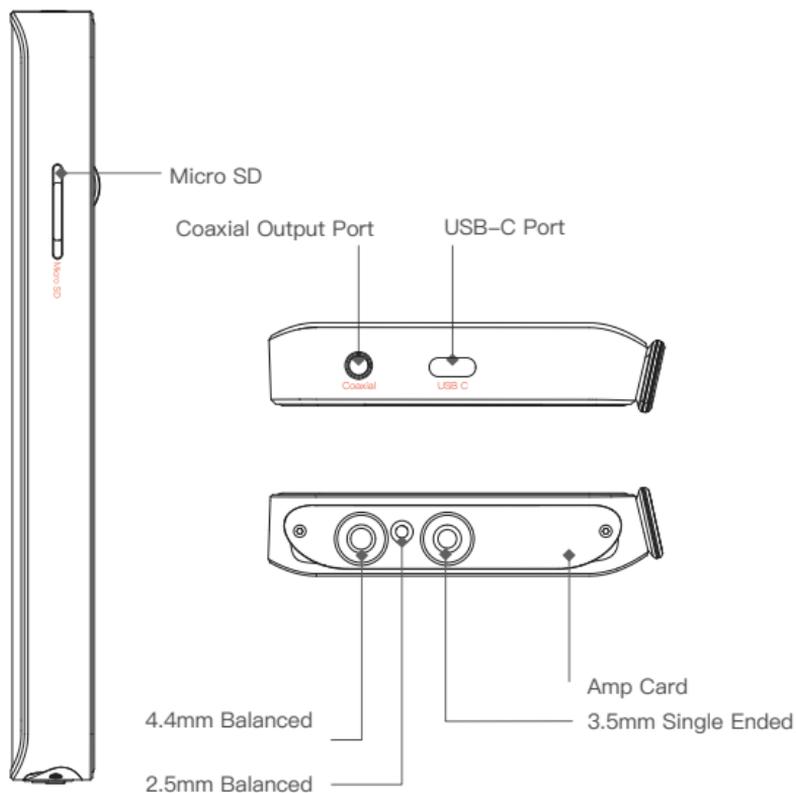
Mini Coaxial Output Port:

Use the furnished coaxial cable to play music stored in the DX300 on an external device with a coaxial input port. Mini coaxial output has the highest output priority which would close the phone out or line out when coaxial cable plugged in. The output of this port is up to 24bit/384kHz or DoP DSD128.

USB–C Port

Connect the DX300 to a computer or a USB charger to charge the DX300.
Connect the DX300 to a computer to allow the DX300 to work as a card reader or an external storage.
Connect the DX300 to an OTG storage device to play music files stored in this OTG storage device.
Connect the DX300 to a Windows PC or a Mac computer to work as a USB DAC.

3.5mm Single Ended Output

Plug in the 3.5mm single–ended monitor and output sound through the phone port.
When LO is selected, this phone out port works as a 3.5mm single ended line out port.

4.4mm Balanced Output

Plug in the 4.4mm balanced earphone and output sound through the 4.4mm balanced phone port.
When LO is selected, this port works as a 4.4mm balanced line out port.

2.5mm Balanced Output

Plug in the 2.5mm balanced earphone and output sound through the 2.5mm balanced phone port.
When LO is selected, this port works as a 2.5mm balanced line out port.

Coaxial Output Port

USB–C

6.5inch LCD

Power/Volume

Previous/Rewind

Play/Pause

Next/Fast Forward
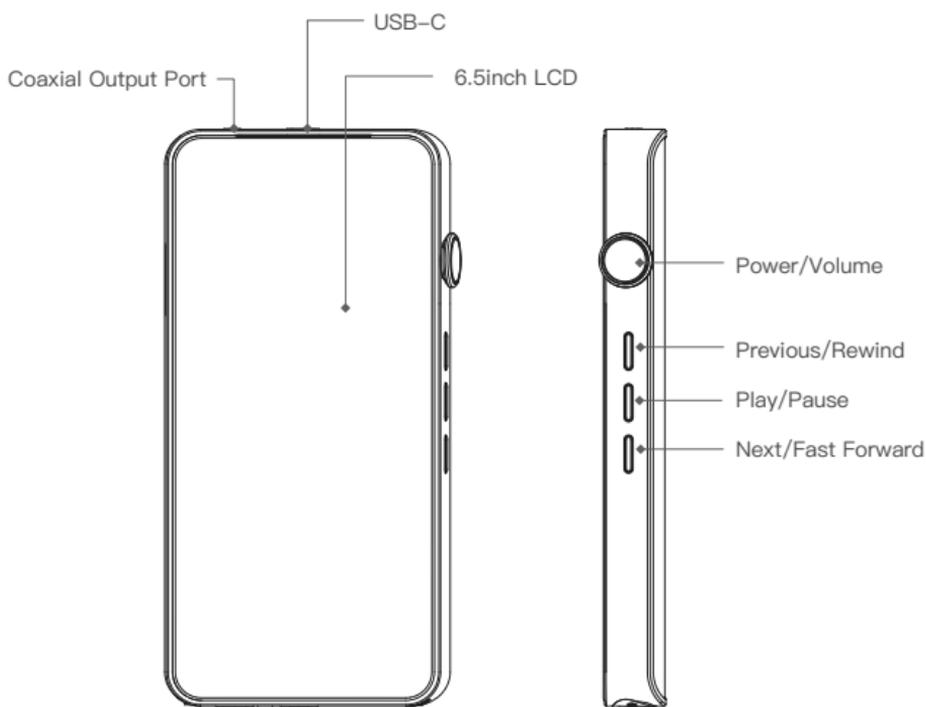
Power：

Short Press – Power the LCD screen on and off.
Long Press – To display the pop up window with three
options that are Power off, Reboot, and To Mango.

Volume：

Rotate the wheel clockwise to increase the volume.
Rotate the wheel counter clockwise to decrease the volume.

Previous/Rewind：

Short Press – Replay previous track.
Long Press – Rewind.

Play/Pause：

Short Press – Play/Pause.
On the Mango OS, long press the play button
to lock the screen.

Next/Fast Forward：

Short Press – Play the next track.
Long Press – Fast forward.

Basic Operation:

Power on/off:

1. Press and hold the power button to power on.
2. After the DX300 is powered on, a long press of the Power button to display the pop up window, press Power Off button to power off the DX300.

Power on/off the screen:

Single press the power button to power on/off the screen after the DX300 has been powered on.

Reset:

When the DX300 stops unexpectedly during operation and the keys are no longer responsive, press and hold the power button for 10 seconds to reset the DX300.

Charging:

DX300 supports two quick charge protocols, QC3.0 and PD2.0. Charging can be done with a standard 5V USB charger or with quick charger that is compliant the stated 2 protocols. A full charge takes about 2.5 hours with the afore mentioned quick charge types.

Connecting to a computer to work as a USB DAC:

Connecting to a computer to work as a USB DAC:
The DX300 can work as a USB DAC for Windows PC, Mac computer, and Linux computer. It is driver free on Windows PC, Mac computer, and Linux computer. For Windows PC, the DX300 supports WASAPI protocol.

The DX300 supports up to 32bit/384kHz PCM, and DSD DoP up to 128x when be used as a USB–DAC.

Android Basic Features Introduction

Digital Filter

Gain

Volume

WiFi

Battery indicator for analog section

Battery indicator for digital section

Time

WiFi Connection:
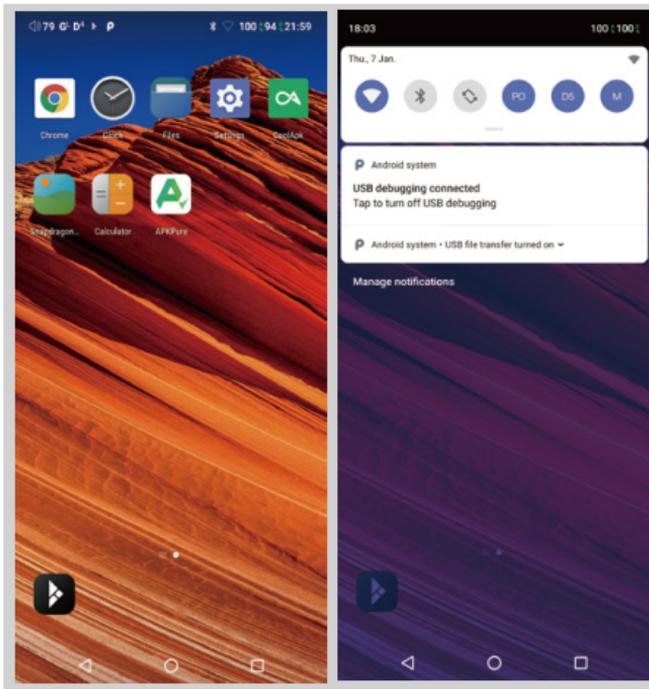
① On the Android desktop, from the top, swipe down the screen to display the notification bar.
② Press the Wireless local area network(WLAN) to turn on the WiFi function. The first time you enter the WLAN, you need to choose the hot spot you will be using and enter the password. From this point forward your password for this hotspot will be remembered and you simply press the WLAN icon to connect to the WiFi internet.

Bluetooth Connection:
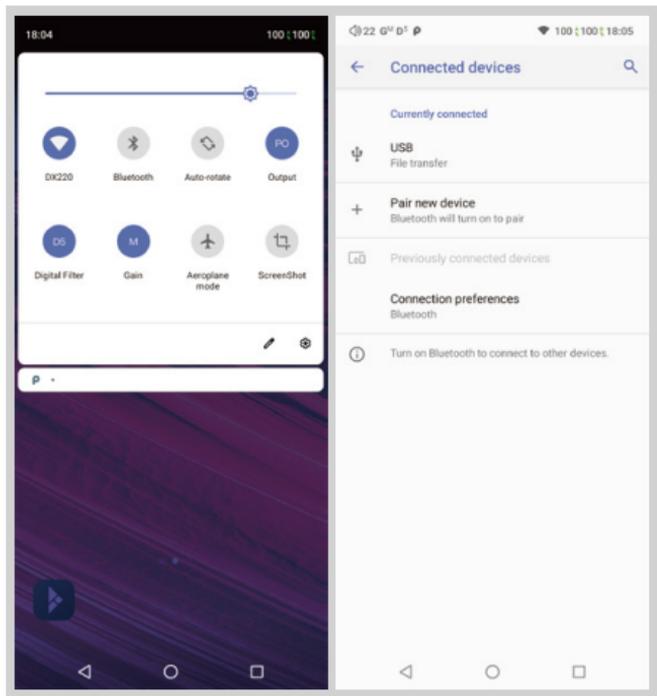
① On the Android desktop, swipe down from the top of the screen to display the notification bar.
② Press the Bluetooth icon to turn on the Bluetooth function. The DX300 will automatically search for the nearby Bluetooth device. At the same time, the DX300 will be visible to the nearby devices. Choose the device that you would like to pair with. After the device has been paired, you can use the DX300 in the Bluetooth mode.

APP Installation:
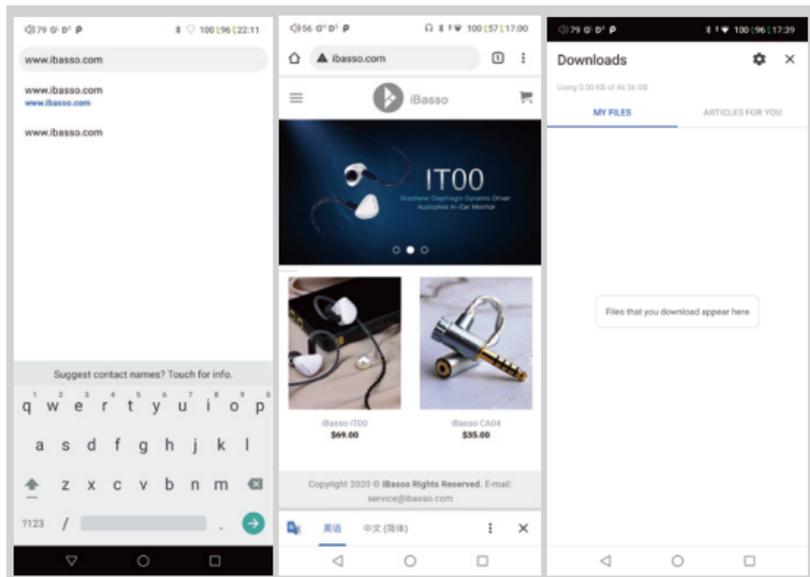
Method 1:
① APKPure and CoolAPK are pre–installed on the
   DX300. They are similar to Play Store.
② Launch one of them.
③ Search for the APP that you would like to install.
④ Download the APP and install it.
Method 2:
① Press the internet browser on the desktop.
② Enter the website address of the APP.
③ Find the download icon on the website and start
   the download.
④ Return to the desktop and open download
   manager.
⑤ Press the on downloaded app and install it.

App, to Uninstall:
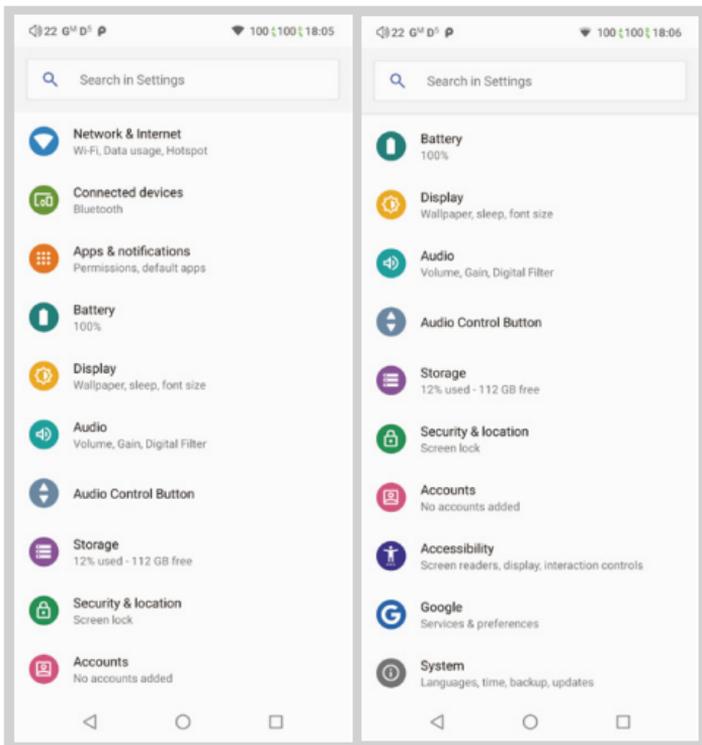
① Press the Settings icon on the desktop and scroll down and press APPs.
② Press the APP that you would like to uninstall.
③ Press uninstall to delete the APP.

USB Connections:
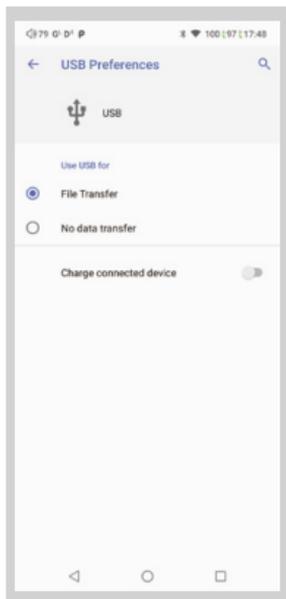
Connect the DX300 to the computer using the furnished USB–C cable. The DX300 will show on the computer as an external storage. Users can transfer files by copying and pasting.

*If you are using a Mac computer, please make sure the MTP software Android File Transfer is installed.

Charge The Connected Device:

① Connect the DX300 to a device.
② The USB option appears at the bottom of the notification bar drop down window
③ After pressing it, you can select the USB connection purpose.
 After turning on the function of charging connected devices, you can charge the devices connected to the DX300.

USB Soundcard:

Turn the DX300 to the USB DAC mode, connect the DX300 to a computer via the USB−C cable. After the DX300 is detected, the soundcard driver will be installed automatically. Now, you can select the DX300 as the audio output device and use it as the USB soundcard.

System Settings:

Press Settings icon on the DX300 desktop to go into system settings.
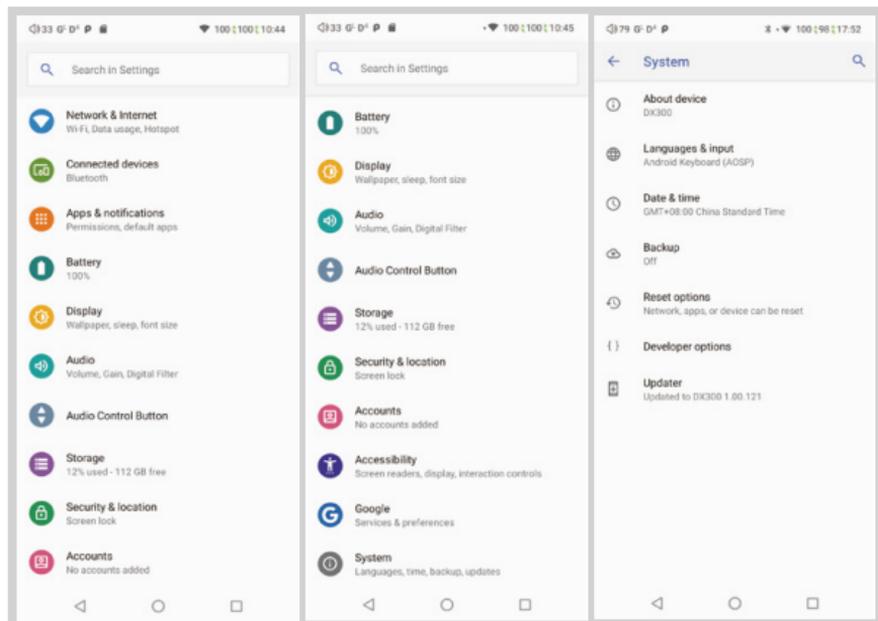
Audio Settings:

Press Settings Icon, then press Audio Settings.
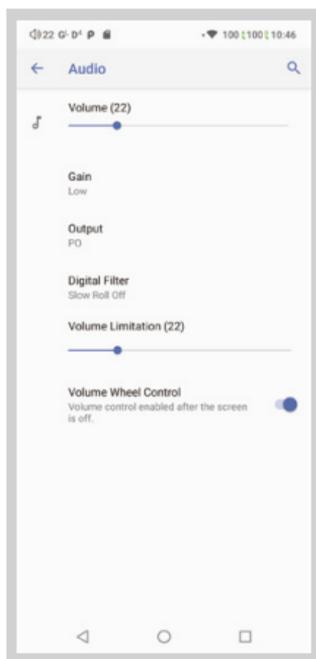
① Gain:
   One of the three gains can be selected.
② Digital Filter:
   A total of Five filters are available for user setting.
③ Volume Limitation:
   This sets the volume to a maximum preset point.
④ Volume Control Wheel:
   Volume control wheel enabled after the screen is off.

Firmware Update:
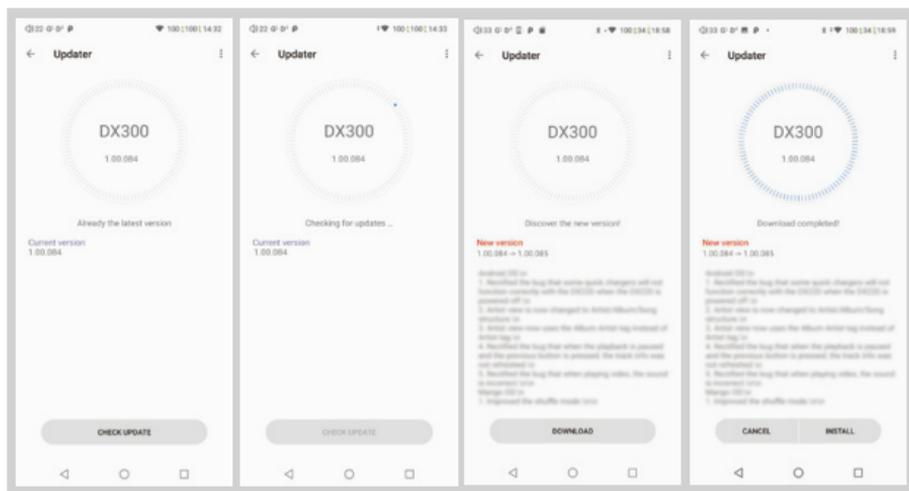
Online Update:

① Make sure the DX300 is connected to WiFi.
② After online update is selected, press Check Update.
③ Press Download, the DX300 will start downloading the available update package.
④ After the download complete, press Update Now to start the firmware update.
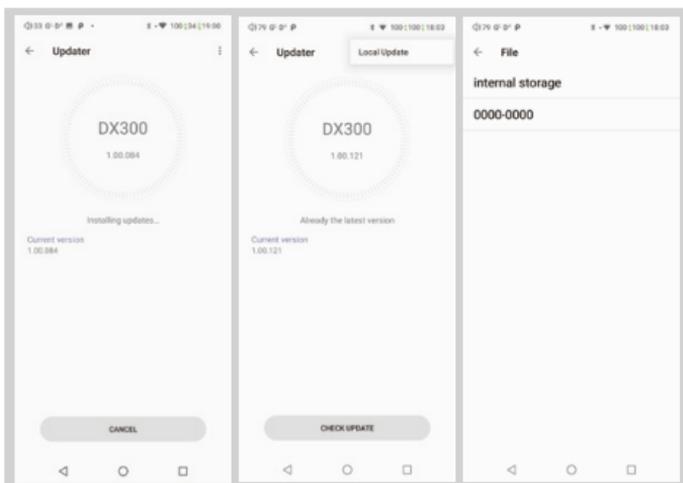
Local Update:

① Download the firmware file from our website.
   If it is a rar file, extract it.
② Press the icon located on the top right corner,
   then press Local Update.
③ Browse the folder where the firmware file is saved,
   and select the firmware file.
④ Press Update Now to start the firmware update.

Firmware Version:
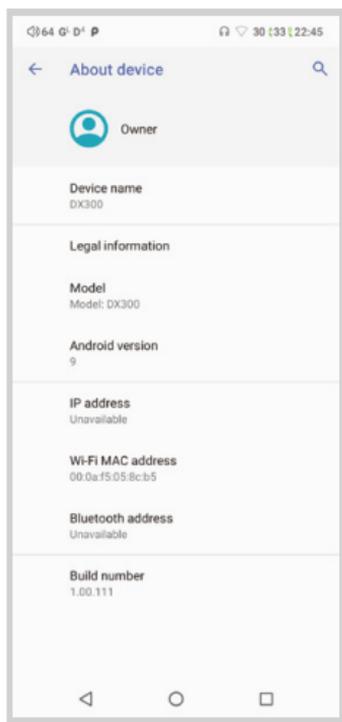
① Press Settings icon, System, About DX300.
② Scroll down the page, the Build number is the firmware version.

Power Off, Reboot, And System Switching:
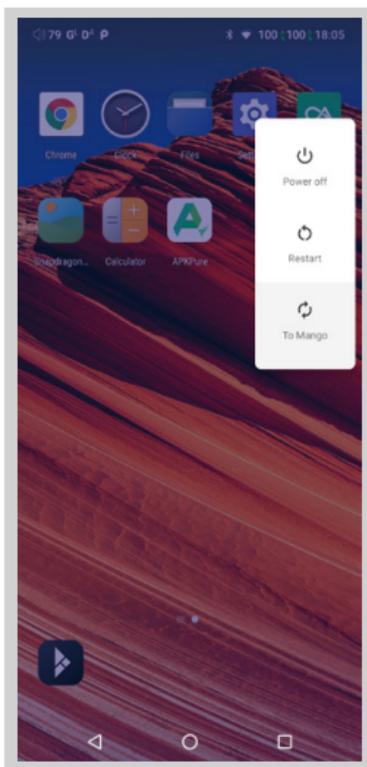
① Long press the power button for 3 seconds.
② There is a pop up window with three options.
③ When To Mango is selected, system will be switched to Mango OS.

iBasso Mango Music Player Application

iBasso Audio Mango music player is composed of the Playback screen (home screen), Music screen and Settings.

When on the playback screen, one can swipe left and right on the Album artwork area ③ to switch a song: Press the icon on the top left corner ① to go into Music Screen.
Press the icon on the top right corner ② to go into Settings.
No matter which sub screens of the Music Screen you are browsing, press the thumbnail icon on the bottom left to return to the playback screen.

Playback Screen (home screen):

Digital Filter

Equalizer

Sample Rate

L/R Balance

WiFi

Gain

Battery indicator for analog section

Volume

Battery indicator for digital section

Music screen

Settings

Now Playing

Track title

Mango Player

Artist name

iBasso Audio

Music info

Play Mode

Previous/Rewind

Next/Fast Forward

Play/Pause
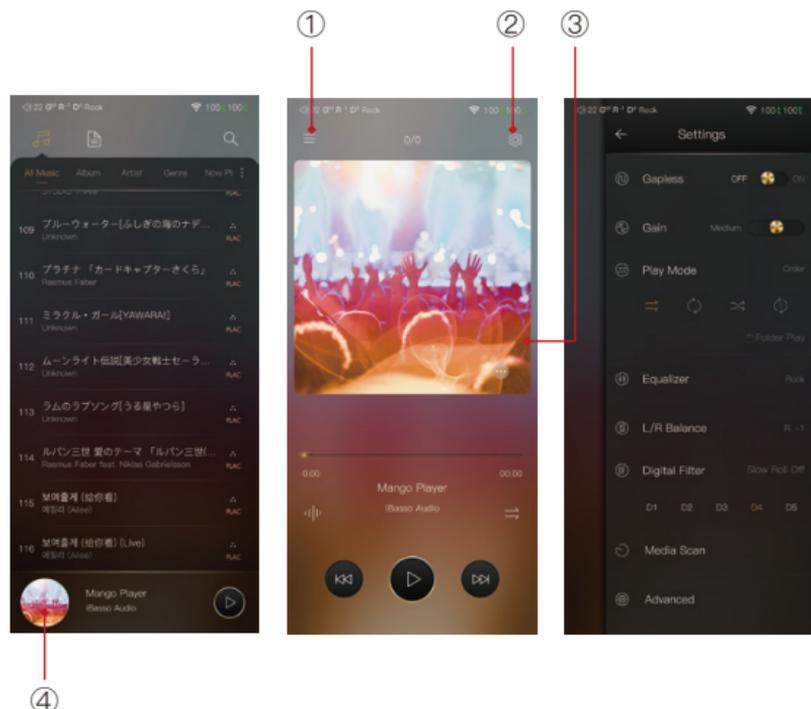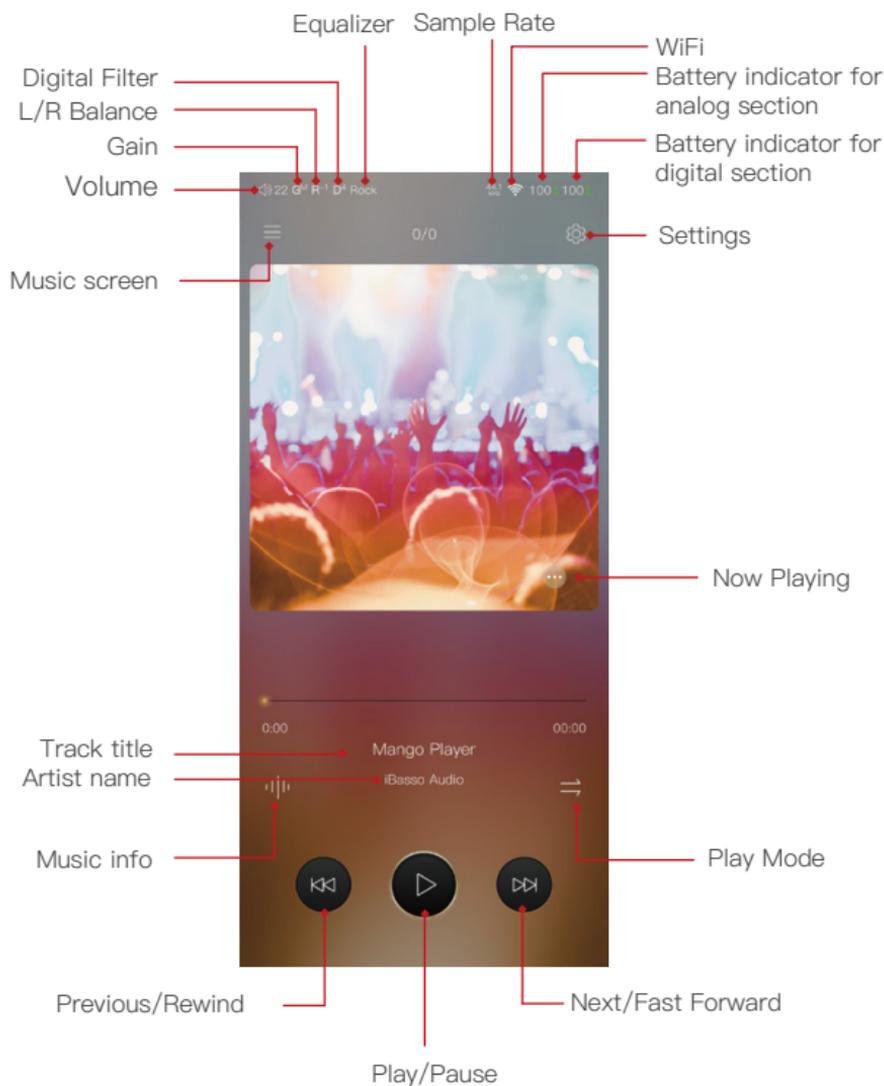
Now Playing Screen:

Press the icon located on the bottom right to display the now playing screen. One can swipe a song to the left to display the Delete button. Press the delete button to remove it from this now playing list.

Music Info Screen:

Press the Music info icon ②, the album artwork will show the music info. Press the music info icon again, it will return to album artwork.

Music Screen:

Directory view ②

Detail view ①

Navigation bar ④ — All Music Album Artist Genre Now Pl.

Search bar ③

Navigation bar management ⑥

Now playing

Music order

Music format

Track title /Artist name

Long press ⑤

Playback bar

Thumbnail artwork ⑦

Play/Pause

Track title and artist name of the song that is playing.
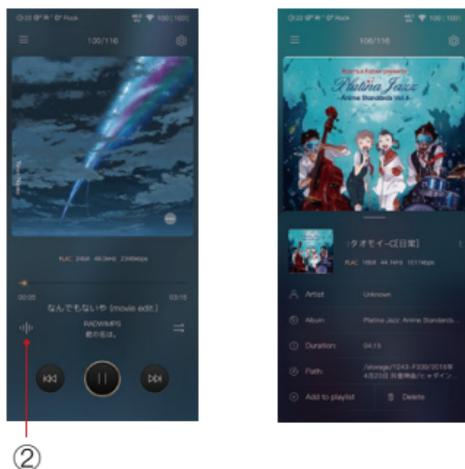
Detail View:
Press the detail view icon to browse the scanned library.

Directory View:
Press the directory view icon to browse in file structure.

Search bar:

Press the search bar to go into the search page to search the desired music or album.

Navigation Bar:

One can swipe it left or right to choose: All Music view, Album view, Artist view, Genre view, Now Playing view, or Playlist view.

Long Press:

Long pressing a song will pop up a window with more options.

Navigation Bar Management:

To customize the navigation bar and music screen.

Thumbnail artwork:

Press to return to the playback screen.

Long Press Pop-up:

Further Options:

Long Press of a song will pop up a window with further options that allows to play this song, add this song to a playlist, or delete this song.

Album View:

Thumbnail view

Artwork view

Artist View:

Thumbnail view

Artwork view

Playlist View:
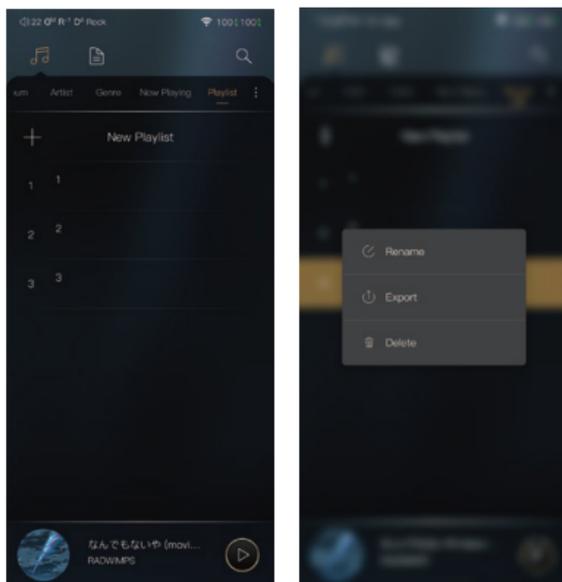
New Playlist:

Press the New Playlist to create a playlist. On the pop-up window, one can name the playlist and add playlist description.

Further Options:

A Long press of the playlist will popup a window with further options, which allows renaming the playlist, exporting the playlist, or deletion of the playlist.

The playlist can be found on the internal storage of the iBasso /mango player folder, after the playlist has been exported.

Navigation Bar Management Screen:

Press the icon located on the right side of the navigation bar to go into the navigation bar management and music sorting screen.
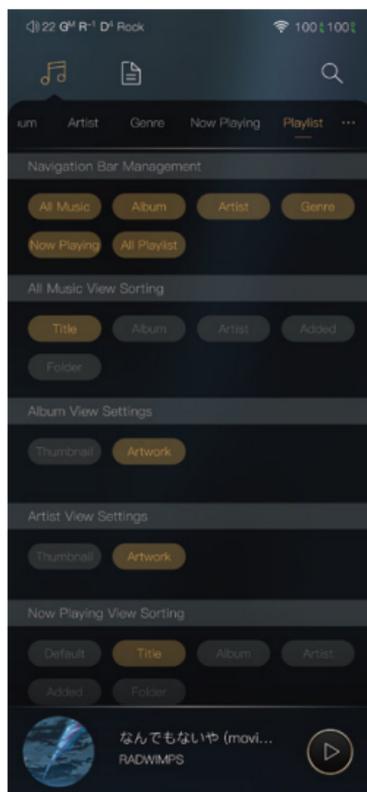
Navigation Bar Management:

One can customize the navigation bar. When selected, the icon is highlighted. Press the icon again to unselect. The selected icon will be shown on the navigation bar. Otherwise, it will not be shown.

All Music View Sorting:

One can sort the all music view by title, album, artist, added time, or folder.

Album View Settings:

One can choose between the thumbnail view and artwork view.

Artist View Settings:

One can choose between the thumbnail view and artwork view.

Now Playing View Sorting:

One can sort the Now Playing by title, album, artist, added time, or folder.

Directory View:

Press the Directory View icon① to go into directory view.
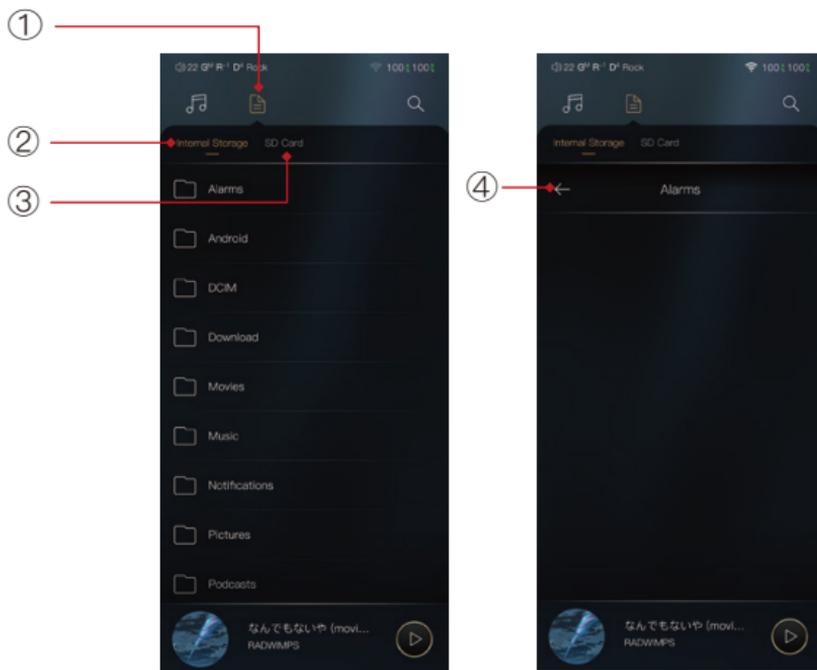
Press the Directory View icon① to go into directory view.
One can browse the music files under internal storage and
SD card via folder structure.

Press Internal Storage② to see music files under internal
storage. Press SD Card③ to see music files under SD card.
Press the return button④ will move back one page at a time.

Search Screen:

Input the keywords to search a track, an album, or an artist.
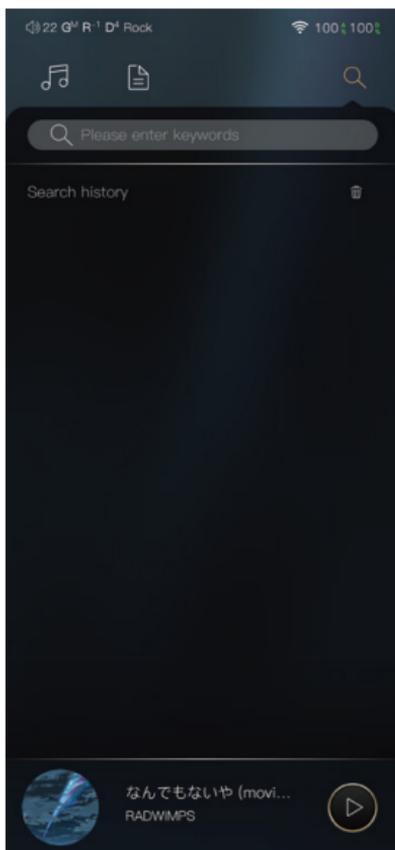
Settings Screen:

Press the Settings icon to go into settings screen.
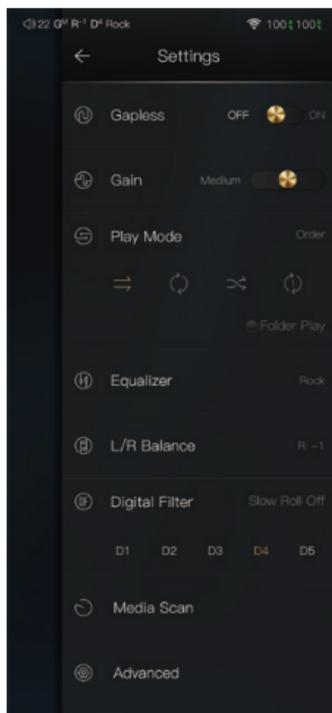
Gapless:

One can enable the gapless to eliminate the gap between two tracks.

Gain:

There are three gain settings. The low gain has the lowest noise floor, it is good for ultra sensitive IEMs.

Play Mode:

One can choose the desired play mode here.

Folder Play:

To enable the folder play function, tick the Folder Play, then select either the order play mode or loop play mode. After a full media scan, or rescan the library, you can go to Directory and select a song under a folder. After this folder is played, the DX300 will play the next folder.

L/R Balance:

Press to go into the L/R balance setting page.

Digital Filter:

There are five filters, press the number to quickly choose a filter.

Advanced:

To access to more system settings.

Equalizer:

The DX300 has two types of Equalizers, Graphic EQ and Parametric EQ.
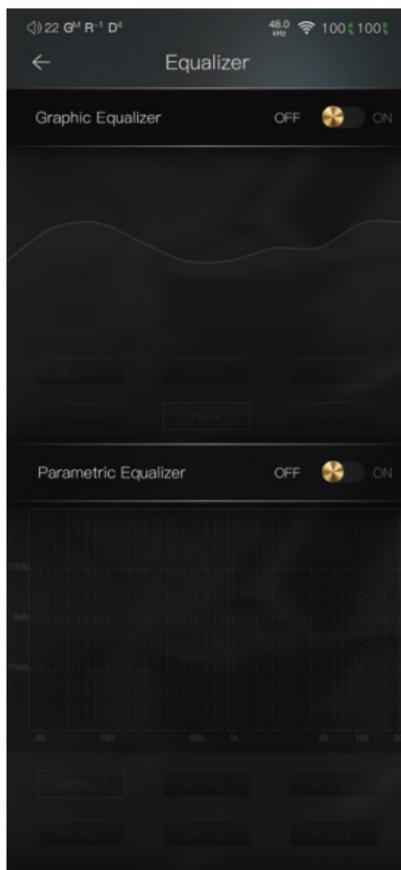
Graphic Equalizer:

Press the button of the Graphic Equalizer to enable the Graphic Equalizer.
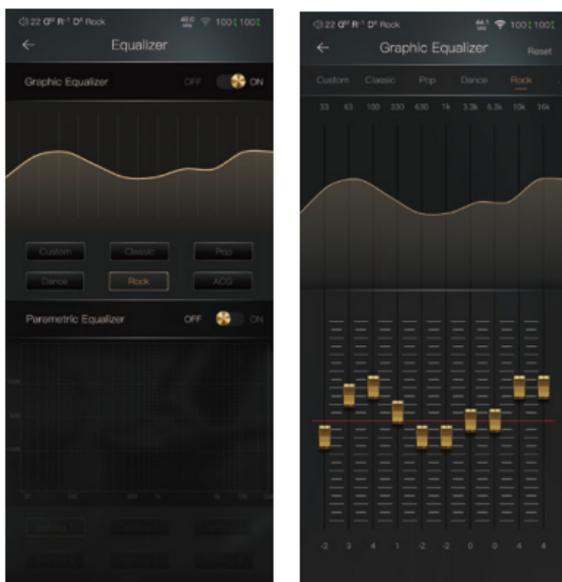
Pre-set EQ:

There are 5 kinds of pre-set EQ and a custom option. One can quickly set the equalizer as desired by selecting them.

How to Adjust The EQ Settings:

Press on the response curve, the 10 band slide bars will show up. One can adjust the EQ settings by positioning the bars up or down.

Parametric Equalizer:

Press the button of the Parametric Equalizer to enable the it.
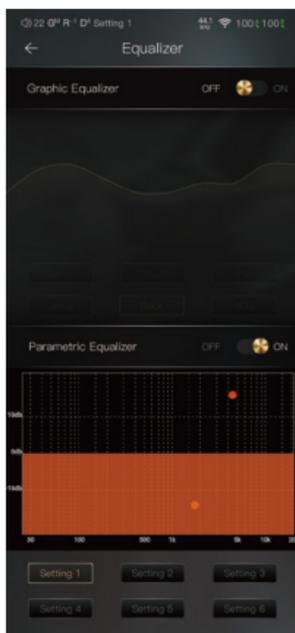
Parametric Equalizer:

Press the button of the Parametric Equalizer to enable the it.

How to Go Into The Parametric EQ Setting Screen:

Press the response curve to go into the parametric EQ setting screen.

Parametric Equalizer Setting Screen:
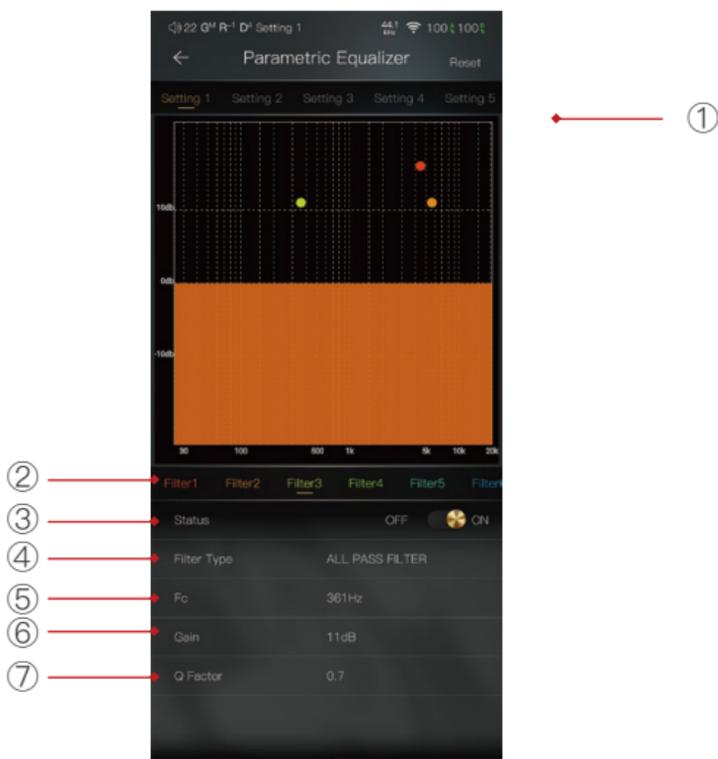
① Settings on the Selection Bar:

One can swipe left and right to select a setting.

② Filter Navigation Bar:

There are maximum of 6 filters allowed for each setting. One can swipe left and right to select a filter, then customize it.

③ Status:

Status of each filter. One can turn on or turn off the selected filter.

④ Filter Type:

There are eight kinds of filters. Select one of the filters.

⑤ Central Frequency (Fc)：

This is the central frequency. Input a value between 33Hz to 16,000Hz.

⑥ Gain:

This is the gain for each central frequency. Input a value between –20dB to 20dB.

⑦ Q Factor:

This is the quality factor. Input a value between 0.3 to 20.

Parametric Equalizer Setting Instruction:

Central Frequency (Fc):
The central frequency of each filter setting.

Gain:
The gain for the central frequency.

Quality Factor:
The range of effect of the filter.

As shown on the pictures below, the larger value of the Q factor, the smaller the effect compared the central frequency. The smaller value of the Q factor, the larger the effect in relation to the central frequency.

The following are the curves of the filters
(Fc=100Hz, gain=4dB)

1. Low Pass Filter

The frequency higher than the central frequency will be affected. Gain setting is ineffective with low pass filter.
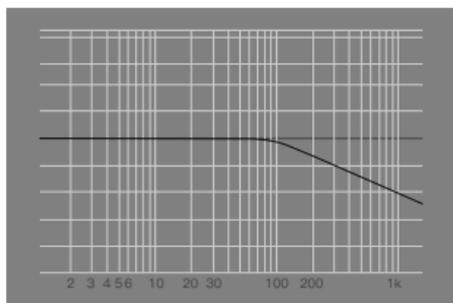
①. Q=0.7071
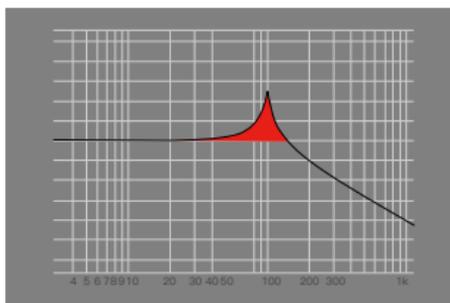
②. Q=20

2. High Pass Filter

The frequency smaller than the central frequency will be affected.
Gain setting is ineffective with high pass filter.
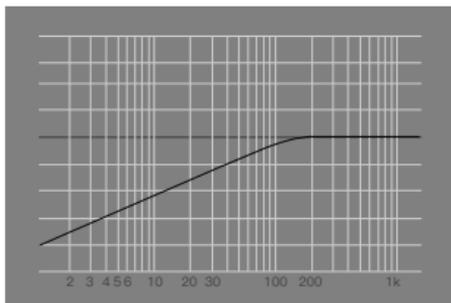
③. Q=0.7071
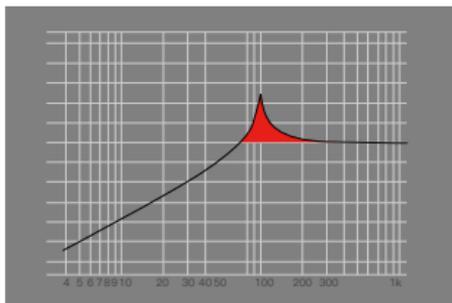
④. Q=20

3. All Pass Filte

There is no effect beside the central frequency. Gain setting is
ineffective with all pass filter.
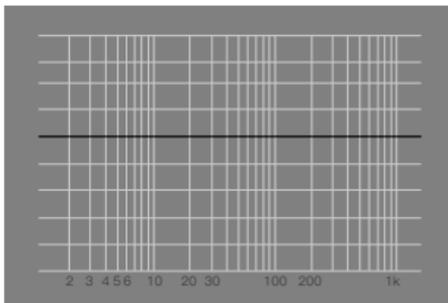
⑤.

4. Band Filter

There is not a large effect on the central frequency. The frequency beside the central frequency has similar effect. Gain setting is ineffective with band filter.
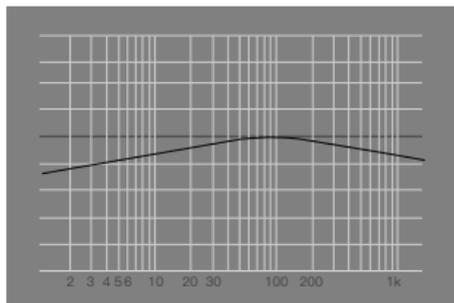

⑥. Q=0.7071
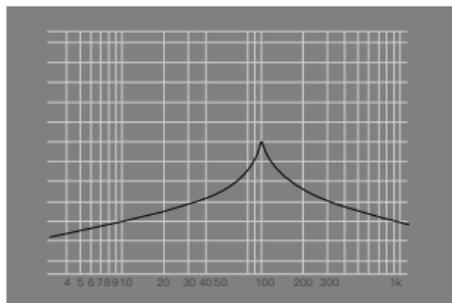
⑦. Q=20

5. Peak Filter

There is a large effect on the central frequency. The frequency beside the central frequency has similar effect.
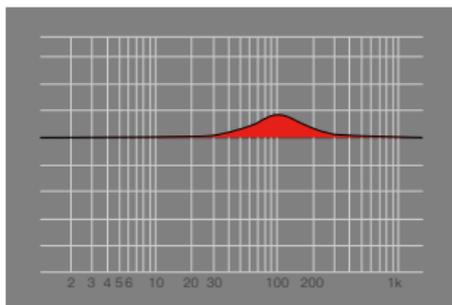
⑧. Q=0.7071
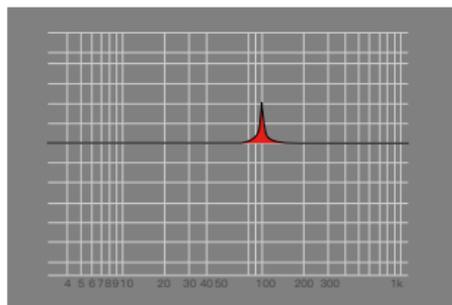
⑨. Q=20

6. Notch Filter

The central frequency has obvious reduction. The frequency beside the central frequency has similar effect. Gain setting is ineffective with notch filter.
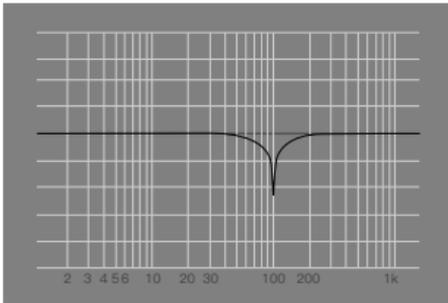
⑩. Q=0.7071
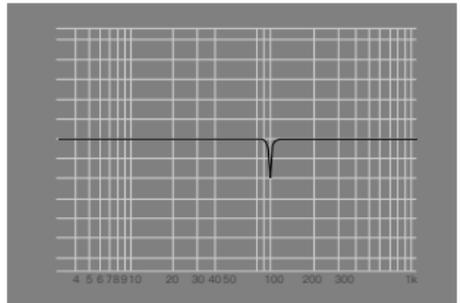
⑪. Q=20

7. High Shelf Filter

There is a wide effect on the frequency that is higher than the central frequency.
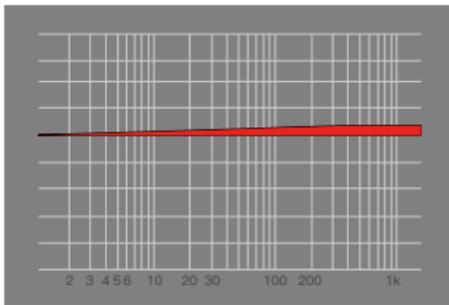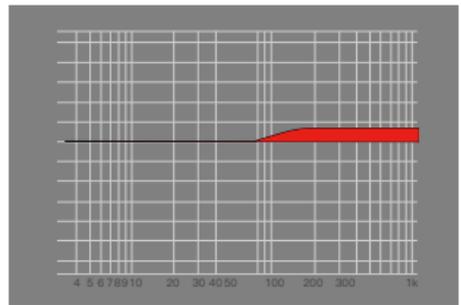
⑫. Q=0.7071

⑬. Q=20

8. Low Shelf Filter

There is a wide effect on the frequency that is lower than the central frequency.
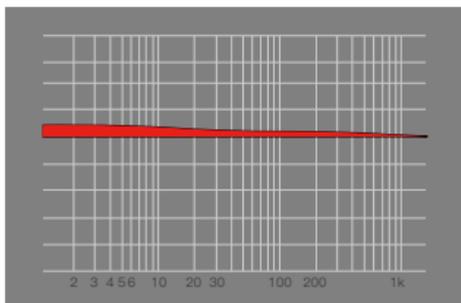

⑭. Q=0.7071
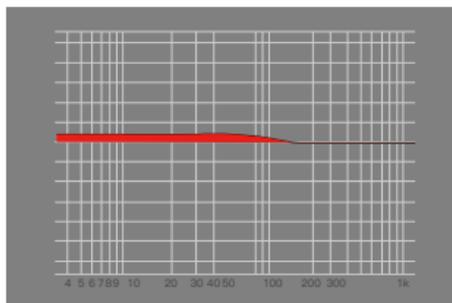
⑮. Q=20

L/R Balance:

Slide clockwise to decrease the volume in right channel. Slide in counterclockwise to decrease the volume in left channel.
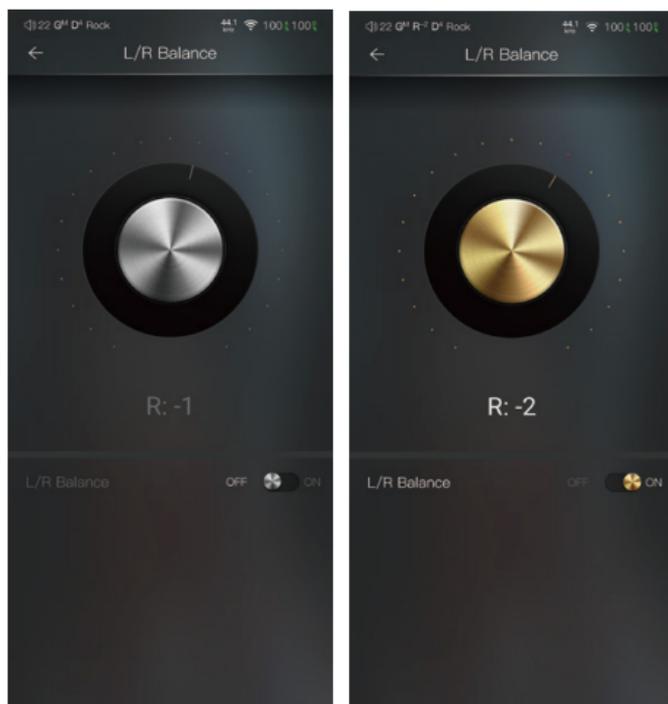
Digital Filter:
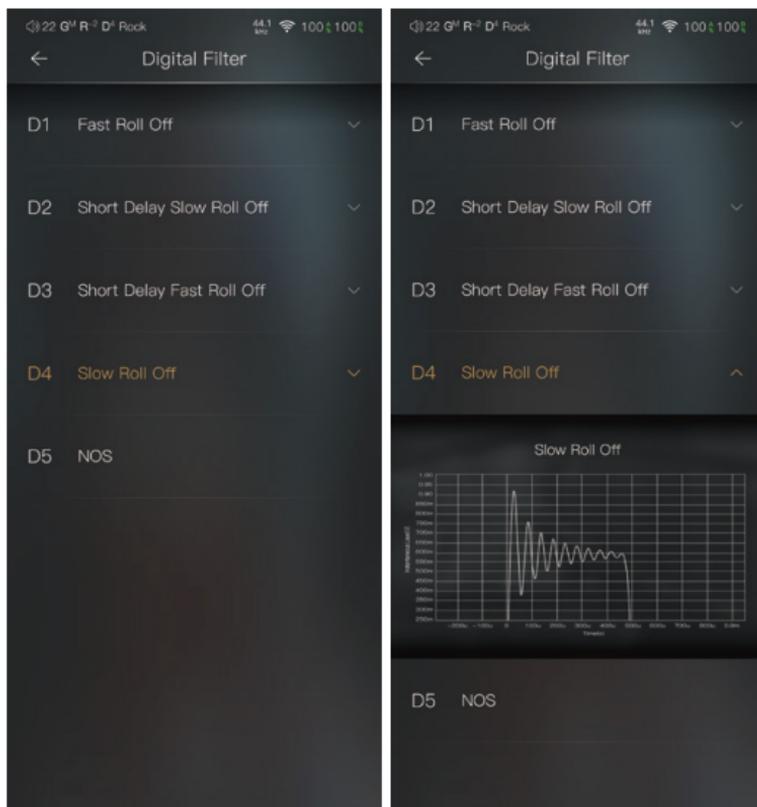
Digital Filter:

There are five digital filters available. Press a digital filter to unfold the figure.

Advanced

To access more system settings.
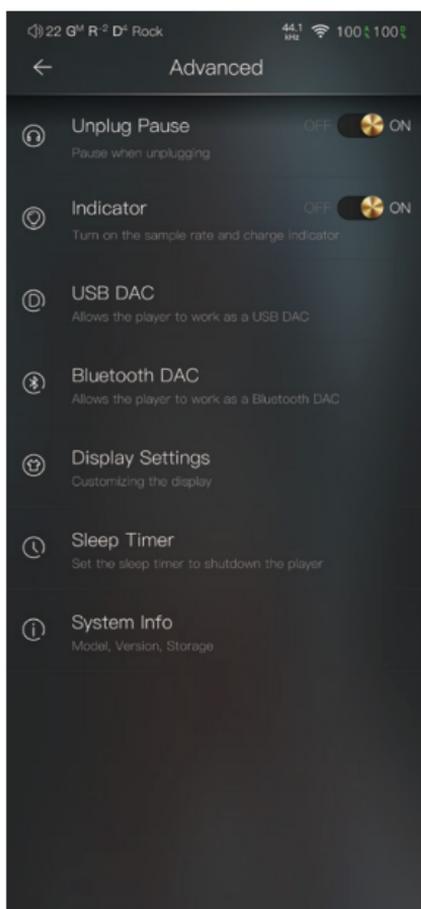
USB DAC:
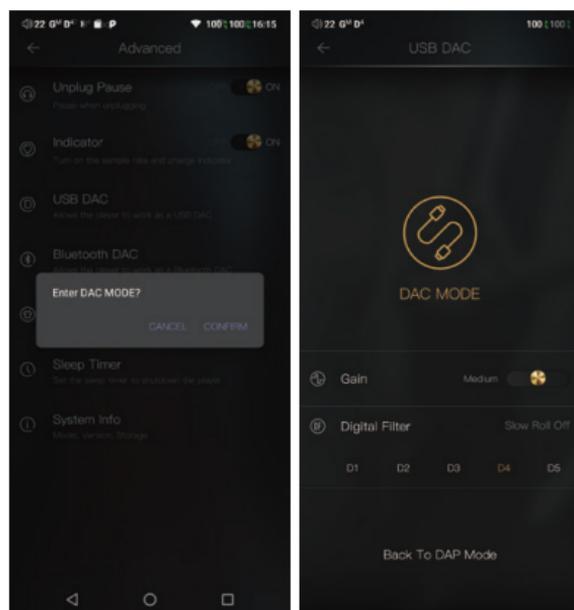
The DX300 can work as a USB DAC for Windows PC, Mac computer, and Linux computer. It is driver free. Turn the DX300 into the USB DAC mode, connect the DX300 to a computer via the USB–C cable. After the DX300 is detected, the soundcard driver will be installed automatically. Now, you can select the DX300 as the audio output device and use it as the USB soundcard. The DX300 supports up to 32bit/384kHz PCM, and DoP DSD up to 128x when be used as a USB–DAC. On Windows OS, the USB DAC function supports WASAPI.

Bluetooth DAC:
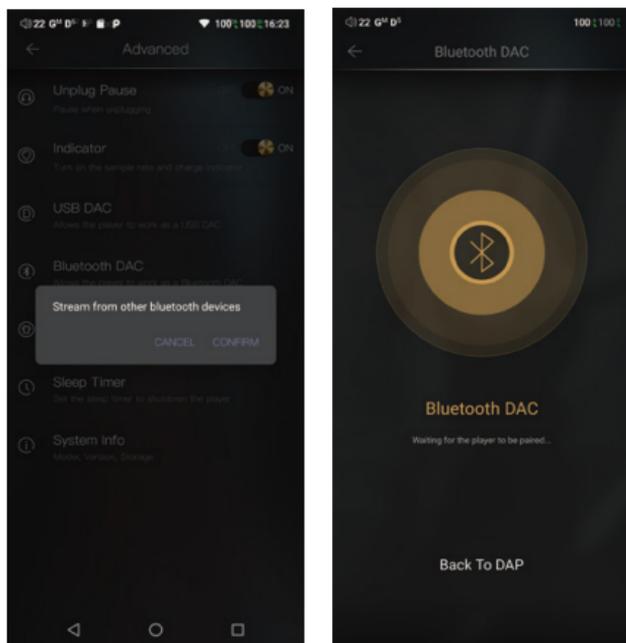
DX300 Bluetooth DAC.
After turning on the Bluetooth DAC, Bluetooth devices such as a mobile phone can be paired with the DX300. The DX300 can now stream from the connected Bluetooth device.
Note: When in Bluetooth DAC mode, the DX300 supports AAC and SBC.

Display Settings:
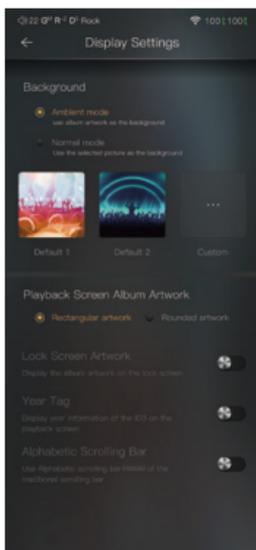
Ambient mode:
use album artwork as the background picture.
Normal mode:
use the selected picture as the background picture.
Playback screen album artwork, choose to display rectangular artwork or rounded artwork.
Lock screen artwork:
display the album artwork on the lock screen.
Year tag:
display year information of the ID3 on the playback screen.
Alphabetic scrolling bar:
use alphabetic scrolling bar instead of the traditional scrolling bar.

Sleep Timer:

Set the count down sleep timer to power off the DX300. The left hand side is the value of hours. The right hand is the value of minutes. The DX300 will be powered off after the counter has completed. If there are any operations in the meanwhile, the DX300 will start the counter again after the last operation.

System Info:
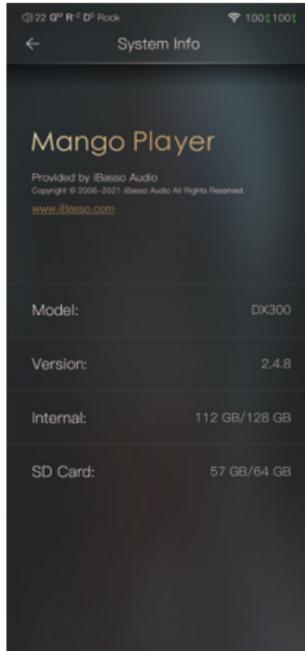
One can see the Mango music player APP version on this screen. Also, one can see the space available of the internal memory and micro SD card.

Mango OS

To reboot to Mango OS from Android, first of all, long press the power button for 3 seconds to pop up a window with three options. When "To Mango" is selected, the system will switch to the Mango OS.
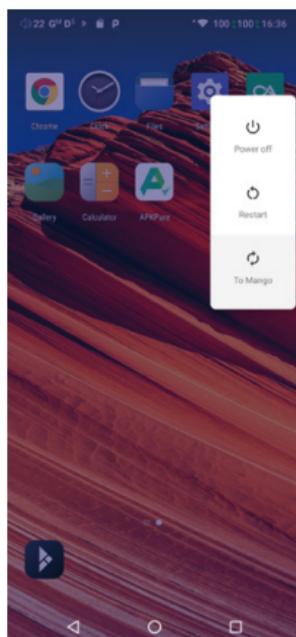
The Mango OS User interface is composed of three parts: Music playback screen (homepage), my music, and settings. On the Music playback screen, press the icon① to go to My Music, press the icon② to go to Settings.
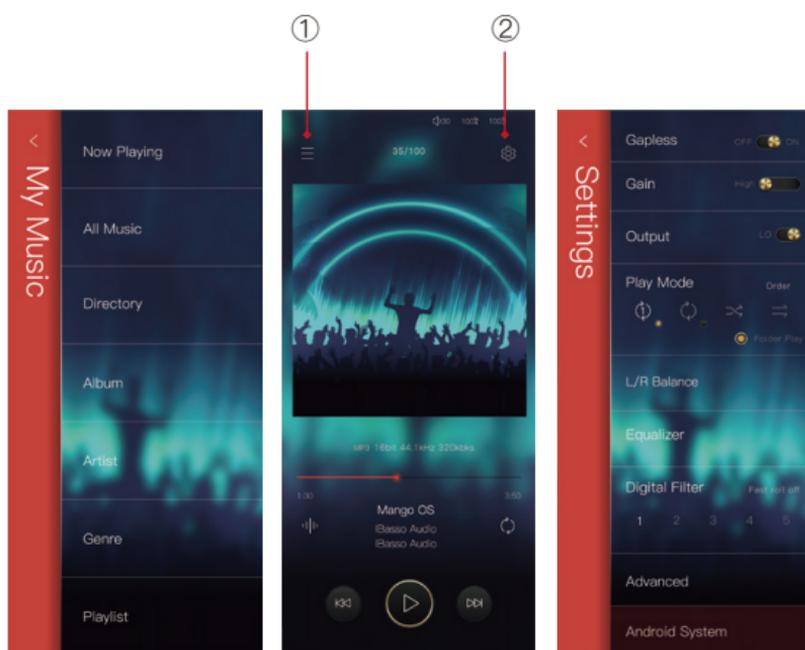

* The Mango OS operation is similar to the iBasso Mango APP, please refer to the iBasso Mango APP instruction for any questions.

To return to the Android System, go into the settings menu, press "Android System", then press "Yes".
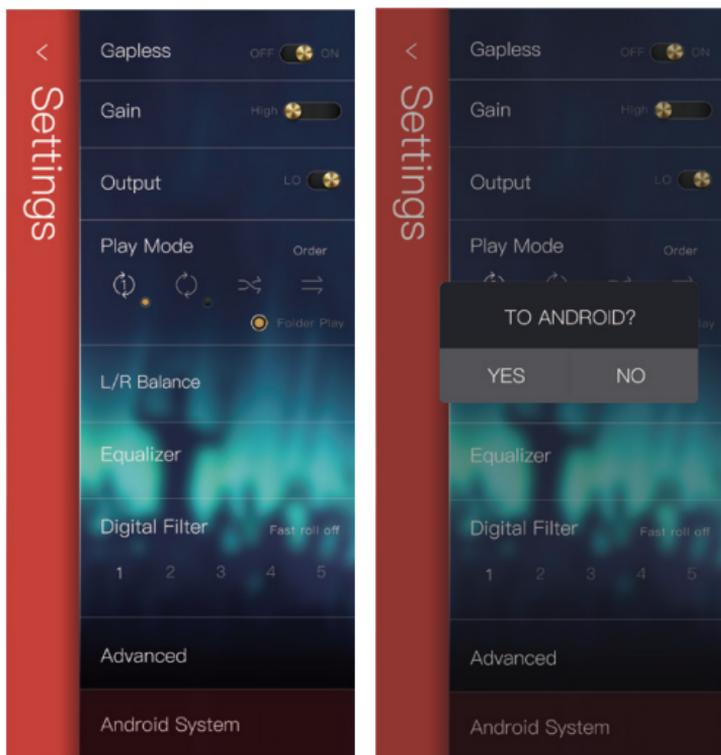
MTP (File Transfer)
After MTP is turned on, the DX300 can be connected to a
computer for file transfer.
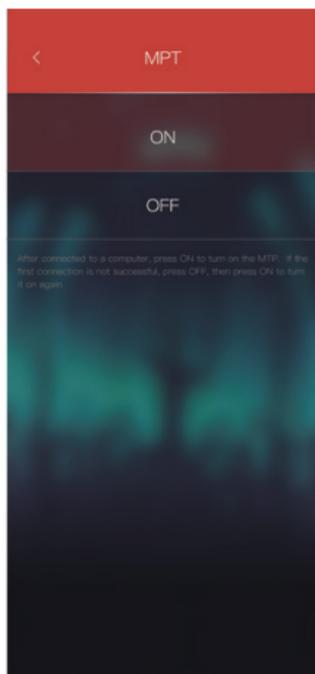
MQA (Master Quality Authenticated)

MQA is an award–winning British technology that delivers the sound of the original master recording. The master MQA file is fully authenticated and is small enough to stream or download.

'MQA' or 'MQA.' indicates that the product is decoding and playing an MQA file, and denotes provenance to ensure that the sound is identical to that of the source material. 'MQA.' indicates it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner. MQA is a registered trade mark of MQA Limited. © 2018