iBasso Audio
In Pursuit of Perfection

ᗡX340
Reference DAP

Contents

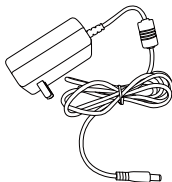# Package Components

DX340 Player

Leather Case

Coaxial Cable

Balanced Burn-in Cable

USB-C cable

12V AC Adapter

Screen Protector

Quick Start Guide

Warranty Card

Leather Case：

Use the leather case to protect the DX340 chassis from scratches.

Coaxial Cable：

Connect the coaxial cable to an external DAC, to allow the DX340 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 DX340. The burn-in process helps the DX340's 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.

12V AC Adapter：

Plug the 12V AC adapter into the AMP card's DC-IN to power the AMP card. The AMP card is now working on +/-12V, and the DC-IN super gain can be enabled. The output power is up to 2150mW+2150mW@32ohm.

Screen Protector：

Use the screen protector to protect the DX340 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 DX340.

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 DX340, 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 DX340 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

- – In–house developed discrete DAC, consisting of 16 sets of cascaded 8E PWM–DACs.

- – Support of PCM up to 32bit/768kHz.

- – Support of Native DSD up to 512x.

- – 6.0″ I080P AMOLED (1080*2160), with In–Cell capacitive touch panel.

- – Support of QC3.0 and PD3.0 quick charge.

- – In–house developed FPGA–Master3.0 as the core of the audio system.

- – 2 Accusilicon ultra–low phase noise Femtosecond oscillators.

- – Advanced harmonic adjustment function.

- – 11nm Octa–Core Qualcomm Snapdragon 665 SoC.

- – 8GB RAM + 256GB ROM.

- – USB DAC function that supports up to 32bit/768kHz and DSD512x.

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

- – Mini coaxial output that supports up to 768kHz.

- – Support of 5G WiFi and Bluetooth 5.0.

- Support of SDXC and SDHC Micro SD cards.

- Support of USB3.1 Superspeed transfer.

- 4 settings for hardware gain control.

- 100 steps for volume control.

- Patented replaceable AMP card design.

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

- Support for M3U and M3U8 playlists.

- Patented dual battery power structure with dedicated power management for each battery. 4000mAh 3.8V Li–Polymer battery for the digital section and 2100mAh 3.8V Li–Polymer battery for the AMP card section.

Specifications

4.4mm Balanced Phone Port：

Maximum output level：	8.3Vrms (12V DC–IN)
	6.23Vrms (Battery)
Output Power：	2150mW + 2150mW @32ohm, THD＜1% (12V DC–IN)
	1200mW + 1200mW @32ohm, THD＜1% (Battery)
Frequency Response：	10Hz–22kHz –0.7dB
	10Hz–40KHz –2.2dB
S/N：	123dB
Dynamic Range：	123dB
THD+N：	–119dB (A–wt, 600ohm load)
	–117dB (A–wt, 300ohm load)
	–106dB (A–wt, 32ohm load)
Crosstalk：	–140dB

3.5mm Single Ended Phone Out:

Maximum output level：	4.2Vrms (12V DC–IN)
	3.16Vrms (Battery)
Output Power：	550mW + 550mW @32ohm, THD＜1% (12V DC–IN)
	312mW + 312mW @32ohm, THD＜1% (Battery)
Frequency Response：	10Hz–22kHz –0.7dB
	10Hz–40KHz –2.2dB
S/N：	123dB
Dynamic Range：	123dB
THD+N：	–117dB (A–wt, 600ohm load)
	–117dB (A–wt, 300ohm load)
	–104dB (A–wt, 32ohm load)
Crosstalk：	–138dB

4.4mm Balanced Line Out：

Maximum output level：	2Vrms
Frequency Response：	10Hz–22kHz –0.7dB
	10Hz–40KHz –2.2dB
S/N：	123dB
Dynamic Range：	123dB
THD+N：	–119dB
Crosstalk：	–145dB

3.5mm Single Ended Line Out：

Maximum output level：	1Vrms
Frequency Response：	10Hz–22kHz –0.7dB
	10Hz–40KHz –2.2dB
S/N：	118dB
Dynamic Range：	118dB
THD+N：	–110dB
Crosstalk：	–135dB

Average Play Time: 11hours
((The play time varies with different resolutions, volume used and headphone/IEM loads.)

Names of Parts & Functions

Coaxial Output Port ——— USB–C   Micro SD

4.4mm Balanced Output ———

3.5mm Single–ended Output   12V DC–IN
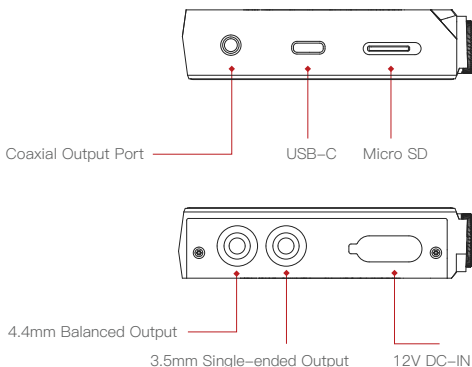
Coaxial Output Port:

Use the coaxial cable to play music stored in the DX340 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 768kHz.

—— Coaxial signal
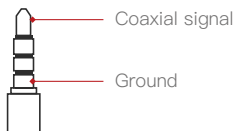
—— Ground

As shown in the picture above, users can choose TS, TRS, TRRS standard 3.5 sockets.
The first section "T" is the coaxial signal, and the last section "S" is ground.

USB–C Port

Connect the DX340 to a computer or a USB charger to charge the DX340.
Connect the DX340 to a computer to allow the DX340 to work as a card reader or an external storage.
Connect the DX340 to an OTG storage device to play music files stored in this OTG storage device.
Connect the DX340 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.

Micro SD Card Slot

Insert a Micro SD card into the DX340 to access its stored files.

USB–C

6.0inch AMOLED

Micro SD

Coaxial Output Port

Power/Volume

Next/Fast Forward

Play/Pause

Previous/Rewind
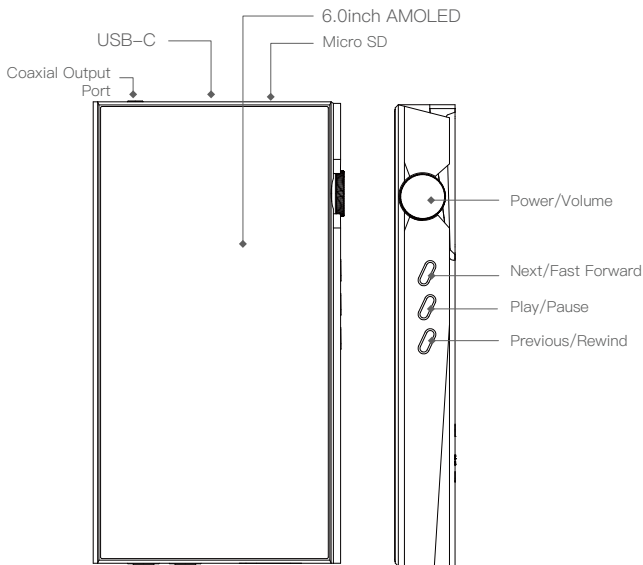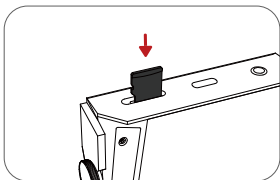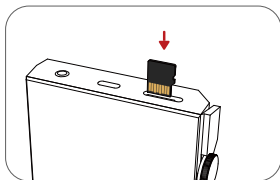
Power：

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 DX340 is powered on, a long press of the Power button to display the pop up window, press Power Off button to power off the DX340.

Power on/off the screen:

Single press the power button to power on/off the screen after the DX340 has been powered on.

Reset:

When the DX340 stops unexpectedly during operation and the keys are no longer responsive, press and hold the power button for 10 seconds to reset the DX340.

Charging:

DX340 supports two quick charge protocols, QC3.0 and PD3.0. Charging can be done with quick charger that is compliant the stated 2 protocols, or any USB charger with 5V output voltage and 2A or above output current. 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:

The DX340 can work as a USB DAC for Windows PC, Mac computer, and Linux computer. It is driver free on Mac computer and Linux computer. With Mac computers, the DX340 Supports PCM up to 32bit/384kHz and DoP DSD up to 128x. For Windows PC, one can download the driver from iBasso.com and install it following the steps, before using the USB DAC function. The DX340 supports ASIO protocol, and supports up to 32bit/768kHz PCM, and native DSD up to 512x when be used as a USB–DAC on Windows OS.

Android Basic Features Introduction

Harmonic

Volume

WiFi

Battery indicator

Time

Chrome Clock Gallery Settings Play Store

Calculator Files Aptoide Gboard 豌豆荚

WiFi Connection:
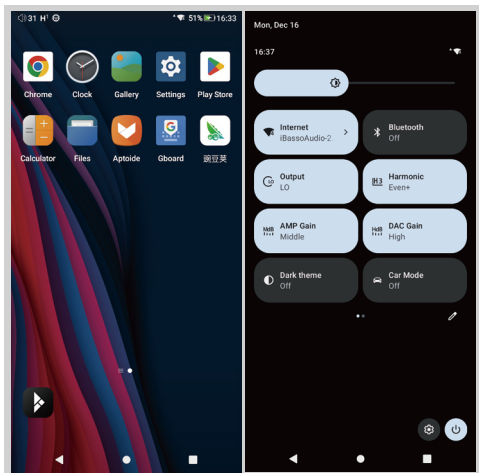

① On the Android desktop, from the top, swipe down the screen to display the notification bar.
② Press the Wireless local area network(WLAN) to turn on the WiFi function. The first time you enter the WLAN, you need to choose the hot spot you will be using and enter the password. From this point forward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

Bluetooth Connection:
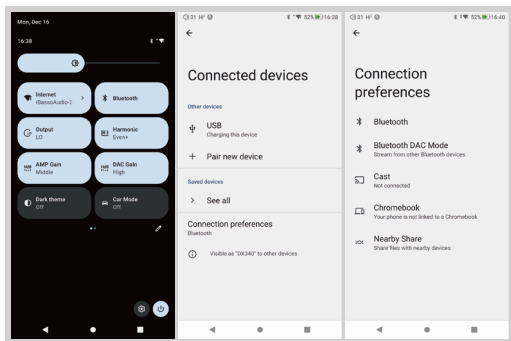
① On the Android desktop, swipe down from the top of the screen to display the notification bar.
② Press the Bluetooth icon to turn on the Bluetooth function. The DX340 will automatically search for the nearby Bluetooth device. At the same time, the DX340 will be visible to the nearby devices. Choose the device that you would like to pair with. After the device has been paired, you can use the DX340 in the Bluetooth mode.

APP Installation:
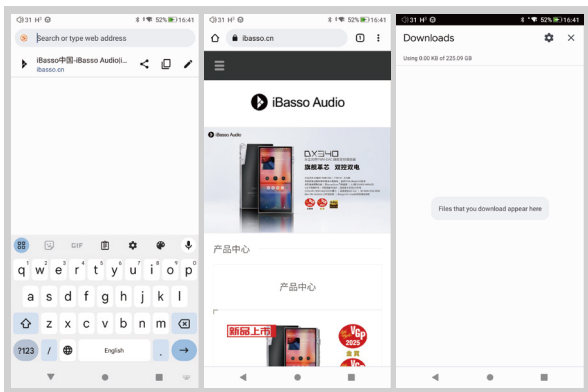
Method 1:
① Google Play and Aptoide are pre–installed on the DX340.
② Launch one of them.
③ Search for the APP that you would like to install.
④ Download the APP and install it.

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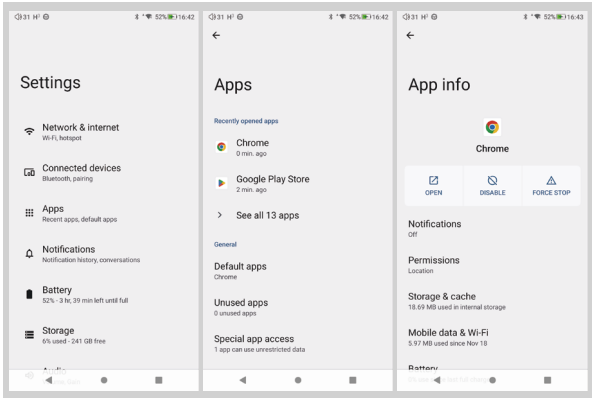
① Press the Settings icon on the desktop and scroll down and press APPs.
② Press the APP that you would like to uninstall.
③ Press uninstall to delete the APP.

USB Connections:
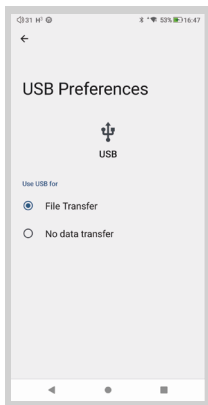
Connect the DX340 to the computer using the furnished USB–C cable. The DX340 will show on the computer as an external storage. Users can transfer files by copying and pasting.

*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 DX340 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 DX340.

USB Soundcard:

The DX340 can work as a USB DAC for Windows PC, Mac computer, and Linux computer. It is driver free on Mac computer and Linux computer. With Mac computers, the DX340 Supports PCM up to 32bit/384kHz and DoP DSD up to 128x. For Windows PC, one can download the driver from iBasso.com and install it following the steps, before using the USB DAC function. The DX340 supports ASIO protocol, and supports up to 32bit/768kHz PCM, and native DSD up to 512x when be used as a USB–DAC on Windows OS.

System Settings:

Press Settings icon on the DX340 desktop to go into system settings.
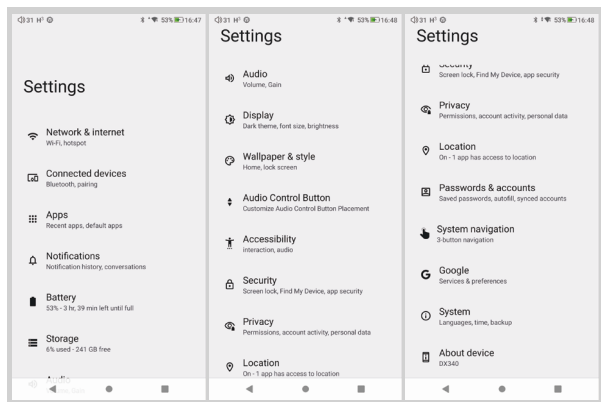
Audio Settings:

Press Settings Icon, then press Audio Settings.
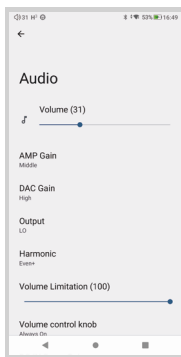
① AMP Gain: One of the three gains can be selected.
② DAC Gain: One of the two gains can be selected.
③ Output: Phone out and Line out can be selected.
④ Harmonic: One of the five options can be selected.
   One can use this setting to change the audio harmonic.
⑤ Volume Limitation: This sets the volume to a maximum preset point.
⑥ Volume Control Wheel: The volume knob can be set according to needs.
⑦ DC–IN Super Gain: This option is available after the 12V AC adapter is plugged. The output power will be greatly increased with this option ON.
⑧ Car Mode: When this option is enabled, the DX340 will power on upon connection to a USB power source. Upon booting into the OS, the audio playback will be automatically started. When the USB power source is disconnected, the audio playback will be automatically paused, and the DX340 will be powered off.

Firmware Update:
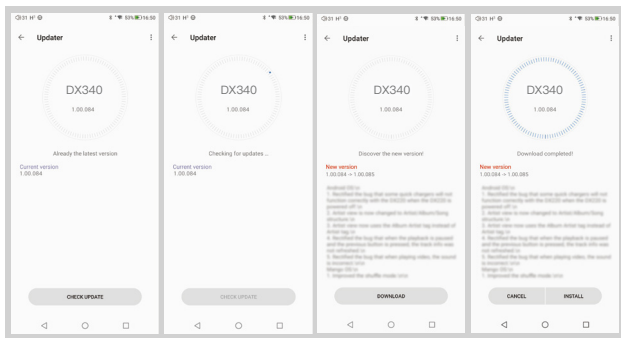
Online Update:

① Make sure the DX340 is connected to WiFi.
② After online update is selected, press Check Update.
③ Press Download, the DX340 will start downloading
   the available update package.
④ After the download is complete, press Update Now to
   start the firmware update.
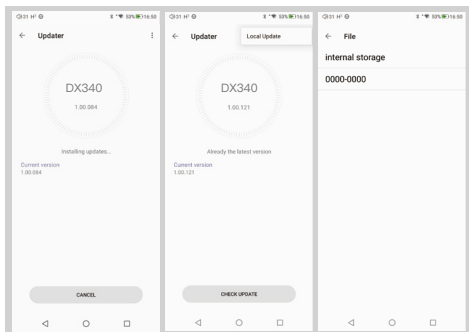
Local Update:

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:
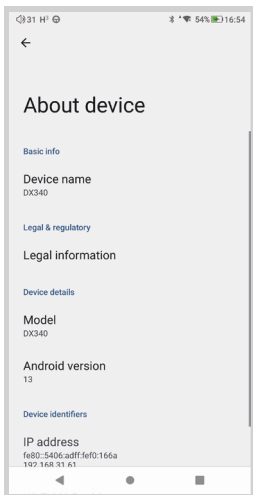
① Press Settings icon, System, About DX340.
② Scroll down the page, the Build number is the firmware version.

**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):

Equalizer

Sample Rate

WiFi

Harmonic

L/R Balance

Battery indicator

Volume

Settings

Music screen

19/30

Now Playing

1bit 11289.6kHz 22579kbps

01:57   02:50

Track title   [2♪]DSD256_3m_I Don't Hurt

Artist name   Unknown

                              03_DSD_64-256

Music info

Play Mode

Previous/Rewind

Next/Fast Forward

Play/Pause
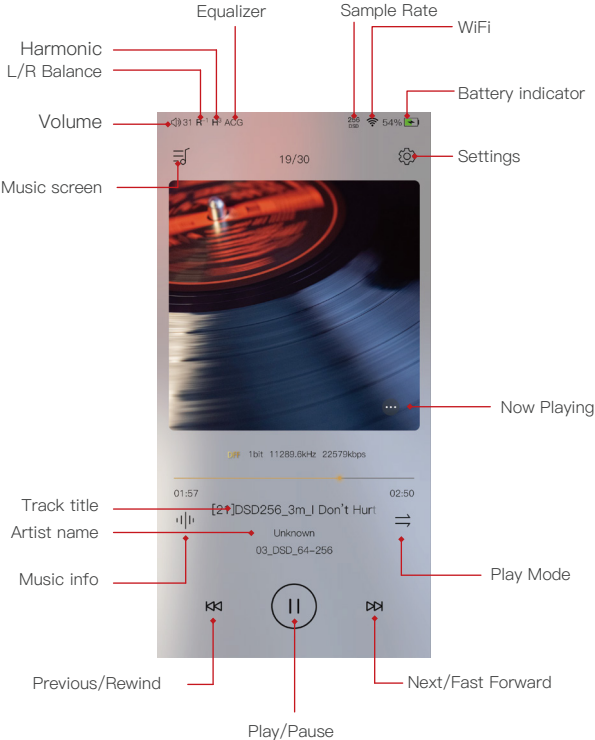
Now Playing Screen:

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.
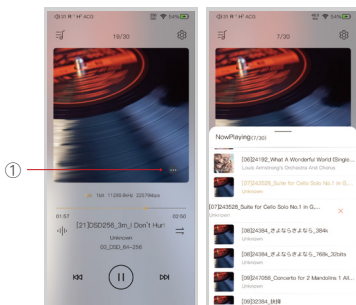
Music Info Screen:

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:

①

②

③
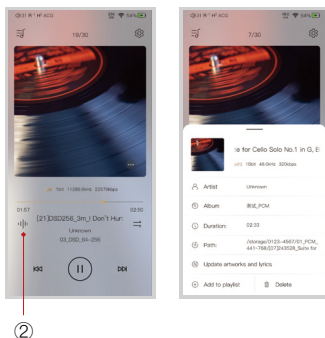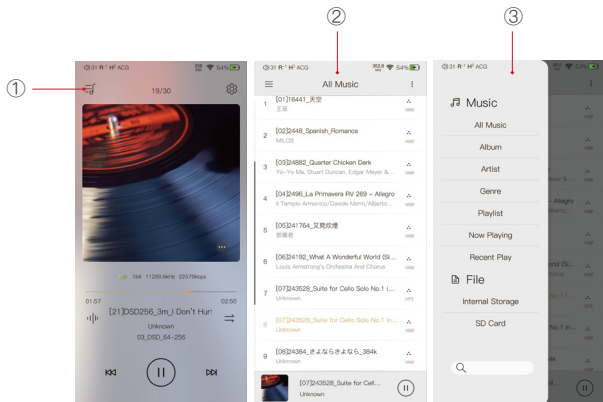
Press the Music Screen icon① will go into the Music Screen②.
Swipe from left to right on the Music Screen will bring up the
Navigation Menu③.

Return to navigation menu①

Song sorting②

Music order

Swipe to trigger the Navigation Menu③

Now playing

Long press ④

Track title /Artist name

Music format

Quickly position the current playing music file⑤

Playback bar

Thumbnail artwork⑥

Play/Pause

Track title and artist name of the song that is playing
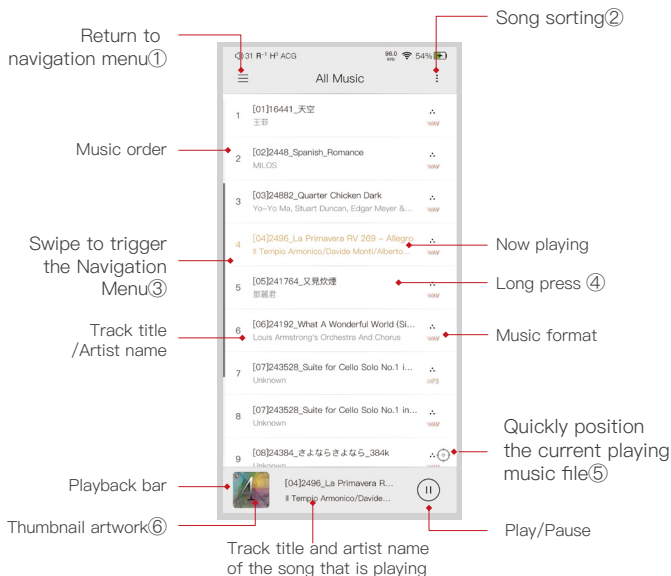
All Music

Return:
Press the Return button① will move back one page at a time, until return to the navigation menu.

Sorting:
Click the Sorting icon② to pop-up the sorting options. You can select "Title/Album/Artist/Time/Folder" to sort the All Music.

Swipe to trigger the Navigation Menu：
Swipe from left to right to bring up the navigation menu.

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

Quickly position the current playing music file:
On the All Music screen, press the Position icon to quickly position the current playing music file.

Thumbnail artwork:
Press⑥ to return to the playback screen.

Sorting:
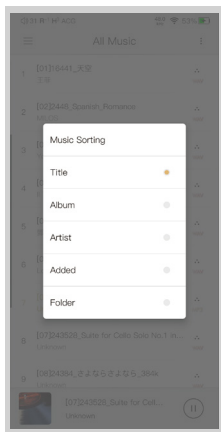
Click the Sorting icon to pop-up the sorting options. You can select "Title/Album/Artist/Time/Folder" to sort the All Music.

Navigation Menu:
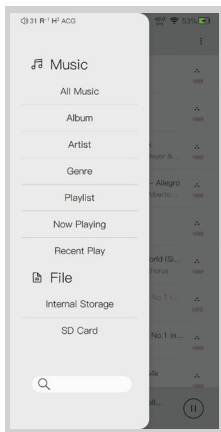
Swipe from left to right to bring up the Navigation Menu.
One can choose among All Music, Album, Artist, Genre,
Now Playing, Playlist, Internal Storage, and SD card. Also,
the search bar is located at the bottom of the Navigation
Menu.

Long Press Pop-up:
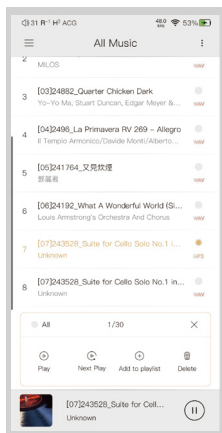
Further Options:

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
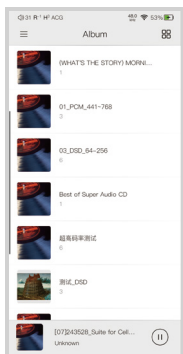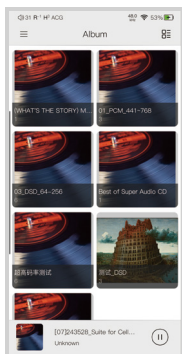
Artwork view

Artist View:

Thumbnail view
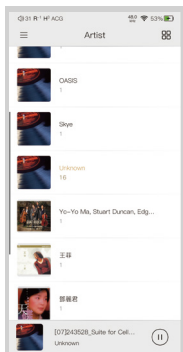
Artwork view

Playlist View:
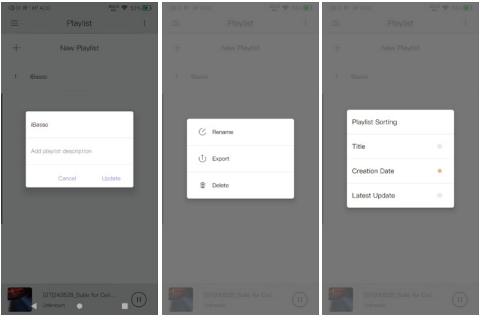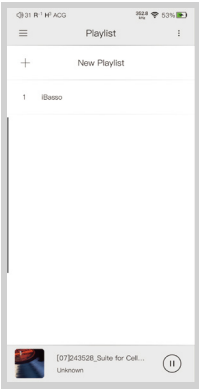
New Playlist:

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.

Sorting：

Click the Sorting icon to pop–up the sorting options. One can select "Title/Creation Time/ Latest Update" to sort the playlists.

Recent Play:

50 recently played tracks are listed.
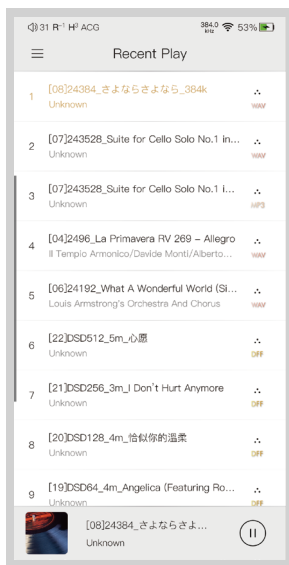
File：

Press Internal Storage or SD Card on the Navigation Menu to go into Directory view. One can browse the music files under internal storage and SD card via folder structure.
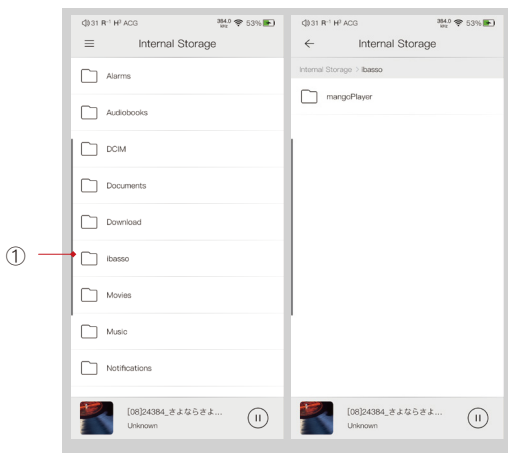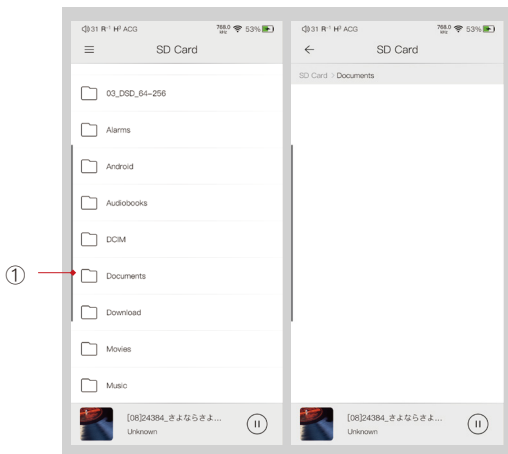
Press the return button① will move back one page at a time.

Search Screen:

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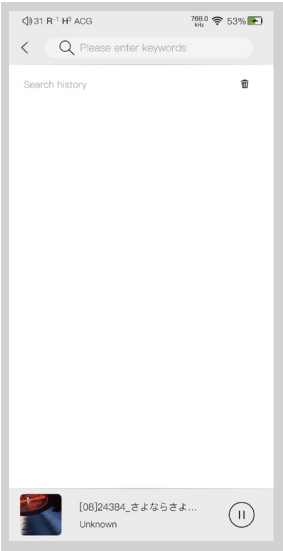
Settings Screen:

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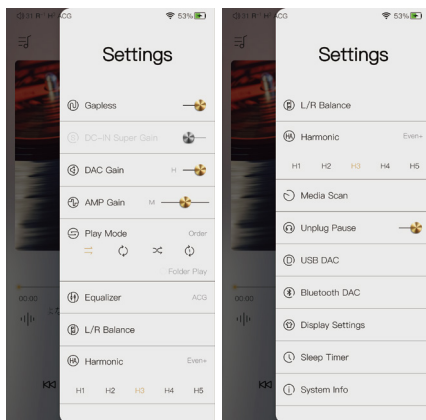
Gapless:

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

DC-IN Super Gain:

This option is available after the 12V AC adapter is plugged. The output power will be greatly increased with this option ON.

DAC Gain:

There are two gain settings.

Harmonic:

One of the five options can be selected to change the audio harmonics.
H1: Original, no harmonic adjustment applied.
H2: Natural, slight adjustments on both the odd and even harmonics to make music more natural.
H3: Even+, increases the even harmonics. The sound becomes more tube–like.
H4: Odd+, increases the odd harmonics. The sound becomes more dynamic.
H5: All, combines both the H3 and H4.

AMP Gain:

There are three gain settings.

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 DX340 will play the next folder.

L/R Balance:

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

Media Scan:

Press to go into the Media Scan settings page.

Unplug Pause:

When Unplug Pause is enable, the music playback will be paused when unplugging the earphone from the player.

Equalizer:

The DX340 has two types of Equalizers, Graphic EQ and Parametric EQ.

Graphic Equalizer:

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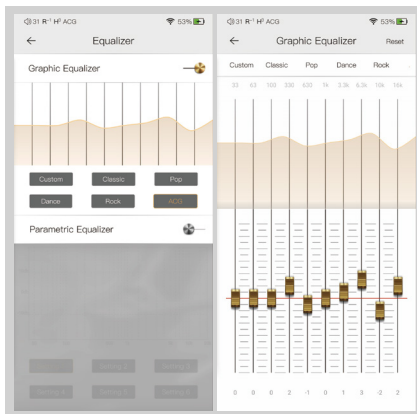
Pre-set EQ:

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 it.
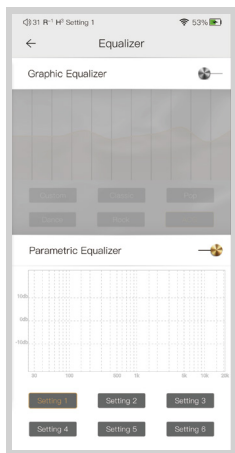
Parametric Equalizer:

Press the button of the Parametric Equalizer to enable 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:
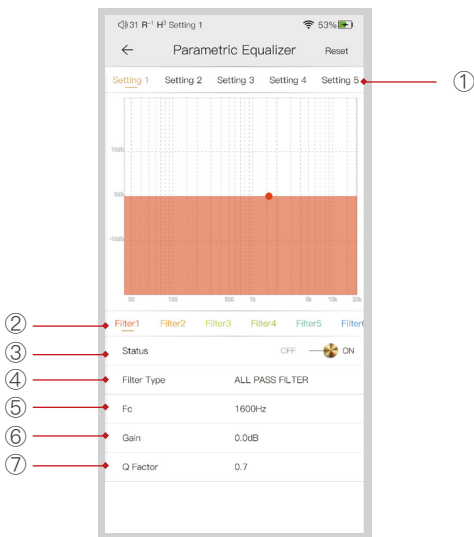
① Settings on the Selection Bar:

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.
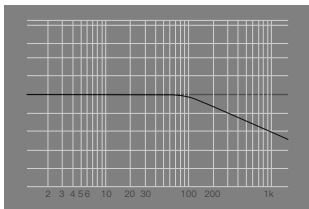
①. Q=0.7071
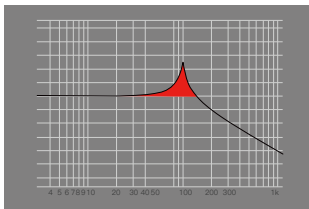
②. Q=20

2. High Pass Filter

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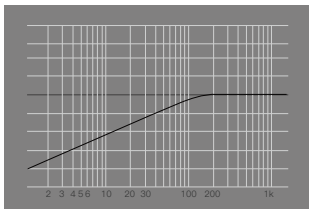
③. Q=0.7071
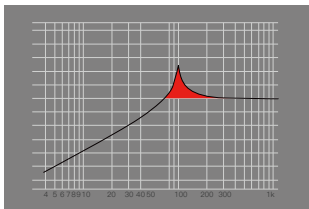
④. Q=20

3. All Pass Filte

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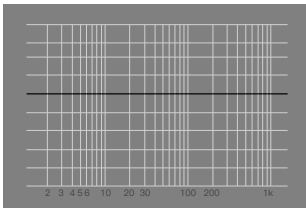
⑤.

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.
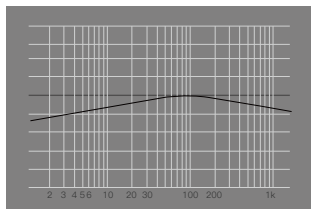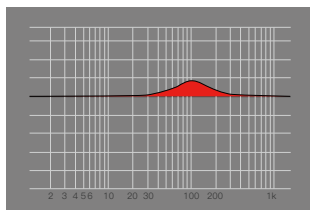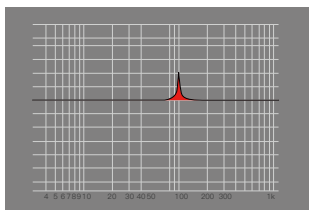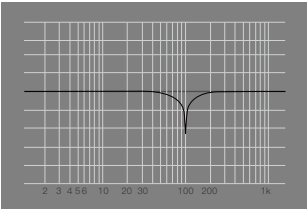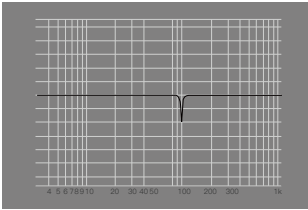

⑥. Q=0.7071
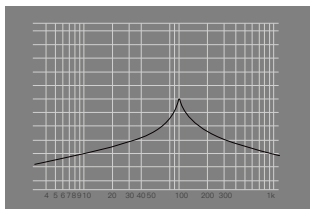
⑦. Q=20

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

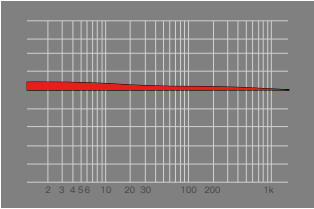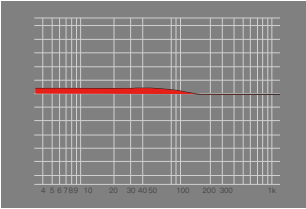There is a wide effect on the frequency that is higher than the central frequency.
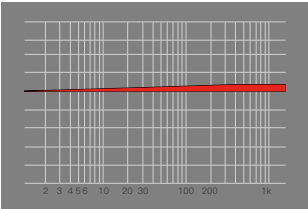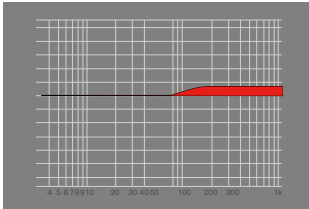
⑫. Q=0.7071

⑬. Q=20

8. Low Shelf Filter

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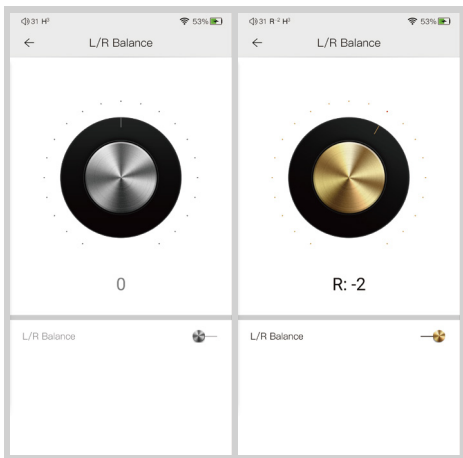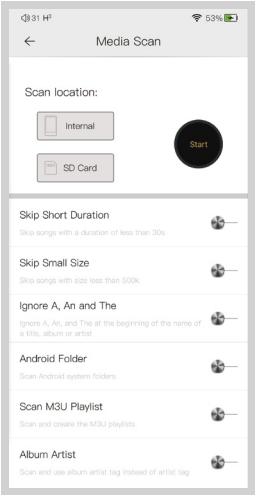

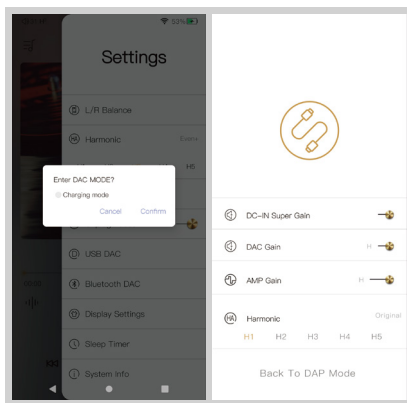⑭. Q=0.7071

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.

Media Scan:

USB DAC:

The DX340 can work as a USB DAC for Windows PC, Mac computer, and Linux computer. It is driver free on Mac computer and Linux computer. With Mac computers, the DX340 Supports PCM up to 32bit/384kHz and DoP DSD up to 128x. For Windows PC, one can download the driver from iBasso.com and install it following the steps, before using the USB DAC function. The DX340 supports ASIO protocol, and supports up to 32bit/768kHz PCM, and native DSD up to 512x when be used as a USB–DAC on Windows OS.

If Charging Mode is selected, the DX340 will charge when connected to the host device as a USB DAC.
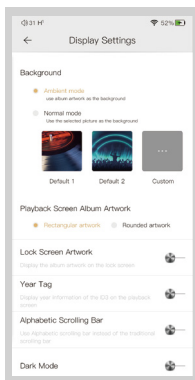
Bluetooth DAC:
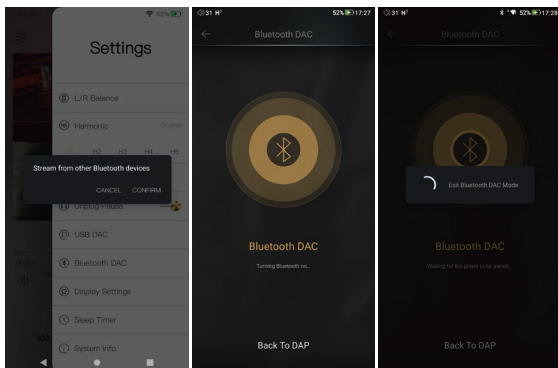
DX340 Bluetooth DAC.
After turning on the Bluetooth DAC, Bluetooth devices such as a mobile phone can be paired with the DX340. The DX340 can now stream from the connected Bluetooth device.
Note: When in Bluetooth DAC mode, the DX340 supports AAC and SBC.

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:
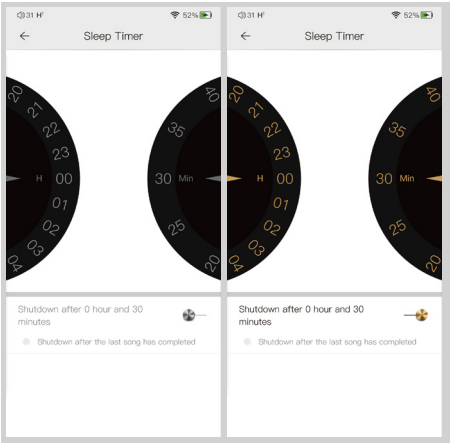Display the album artwork on the lock screen.
Year tag:
Display year information of the ID3 on the playback screen.
Alphabetic scrolling bar:
Use alphabetic scrolling bar instead of the traditional
scrolling bar.

Sleep Timer:

Set the count down sleep timer to power off the DX340.
The left hand side is the value of hours. The right hand is
the value of minutes. The DX340 will be powered off
after the counter has completed. If there are any operations
in the meanwhile, the DX340 will start the counter again
after the last operation.

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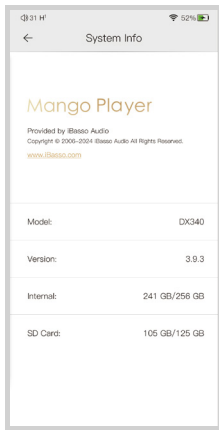
One can see the Mango music player APP version on this screen. Also, one can see the space available of the internal memory and micro SD card.

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.
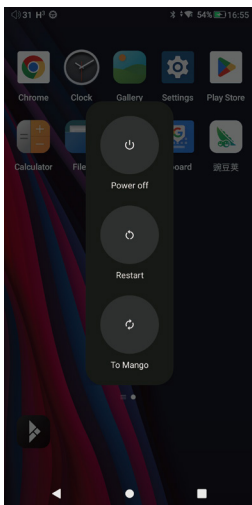
The Mango OS User interface is composed of three parts:
Music playback screen (homepage), my music, and settings.
On the Music playback screen, press the icon① to go to My
Music, press the icon② to go to Settings.

* 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".
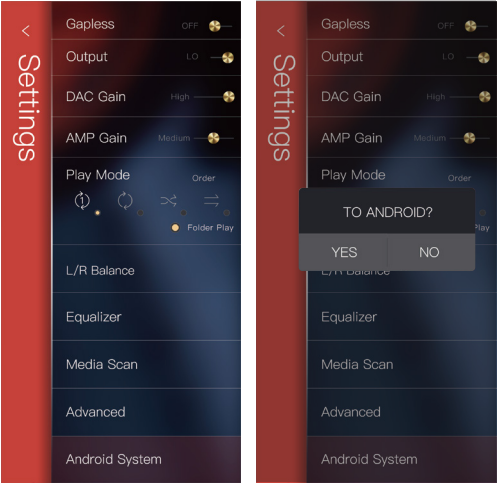
MTP (File Transfer)
After MTP is turned on, the DX340 can be connected to a
computer for file transfer.