iBasso Audio
In Pursuit of Perfection

⊏X�1⊟⊏

High Performance Digital Audio Player

USER GUIDE
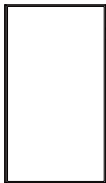
Contents

Package Components

DX180 Player

Clear TPU
protection case

USB–C cable

Screen Protector

Quick Start Guide

Warranty Card

Clear TPU protection case:

Use the TPU protection case to protect the DX180 chassis from scratches.

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 DX180 screen from scratches.

Warranty Card：

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

Quick Start Guide:

This reviews the basic functions of the DX180.

Tips for burn–in

The burn–in time is commonly 100 to 200 hours and doesn't have to be continual. You can power off the player and continue the burn–in after a few days. Or you can just listen and enjoy the music as your player goes through this process. For burn–in to occur a load is required and all that is needed is a set of IEMs or Headphones played at a normal listening volume. The point of burn–in is to help to form the new capacitors and other components.

Main Features

– Quad CS43131 DAC Chipset matrix.

– In-house developed FPGA-Master2.0 as the audio system controller, synchronizing and generating the signal to all audio clocks.

– 2 NDK ultra-low phase noise Femtosecond oscillators.

– Hardware FIR output mode.

– Bit for Bit playback with support up to 32bit/768kHz.

– Support of Native DSD up to 256x.

– 11nm Octa-Core Qualcomm Snapdragon 665 SoC.

– 3GB LPDDR4X + 32G ROM/4GB LPDDR4X + 128G ROM

– Sharp 5.0″ IPS full screen (1080*1920), with On-Cell capacitive touch panel.

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

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

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

– USB DAC function that supports up to 32bit/384kHz and native DSD256 input.

– Support of 2.4GHz and 5GHz WiFi and Bluetooth 5.0.

– Support of SDHC and SDXC Micro SD cards up to 2TB.

– Support of USB 3.1 Super speed transfer.

– 2 gain settings for hardware control.

– 100 step volume control.

– Removable back cover design.

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

– Support for M3U playlists.

– 3.8V 3200mAh Li–Polymer battery.

Specifications

3.5mm PO：

Maximum output level：	2Vrms (Low Gain)
	3Vrms (High Gain)
Output Power：	525mW + 525mW@16ohm,THD+N< 0.1%
	281mW + 281mW@32ohm,THD+N< 0.1%
Frequency Response：	10Hz~75kHz, −1 dB
S/N：	127dB
Dynamic Range：	127dB
THD+N：	−116dB (0.000156%)@1kHz (600ohm Load)
Crosstalk：	−118dB
Output impedance：	0.6ohm

4.4mm PO：

Maximum output level：	4Vrms (Low Gain)
	6Vrms (High Gain)
Output Power：	690mW + 690mW@32ohm, THD+N< 0.1%
Frequency Response：	10Hz~75kHz, −1dB
S/N：	133dB
Dynamic Range：	133dB
THD+N：	−121dB (0.000087%)@1kHz (600ohm Load)
Crosstalk：	−144dB
Output impedance：	1.1ohm

3.5mm LO：

Maximum output level：	2Vrms
Frequency Response：	10Hz~ 75kHz, −1dB
S/N：	125dB
Dynamic Range：	125dB
THD+N：	−112dB (0.00025%)@1kHz
Crosstalk：	−115dB

4.4mm Line LO：

Maximum output level：	4Vrms
Frequency Response：	10Hz~75kHz, −1 dB
S/N：	133dB
Dynamic Range：	133dB
THD+N：	−121dB (0.00089%)@1kHz
Crosstalk：	−130dB

Average Play Time:	PO low gain for 15.5 hours, PO high gain 13 hours, Line Out 30 hours. (The play time varies with different resolutions, volume used and headphone/IEMloads.)
Charging Time:	About 1.5 hours.

Names of Parts & Functions

Micro SD

USB-C

4.4mm Balanced Output

3.5mm Single-ended Output
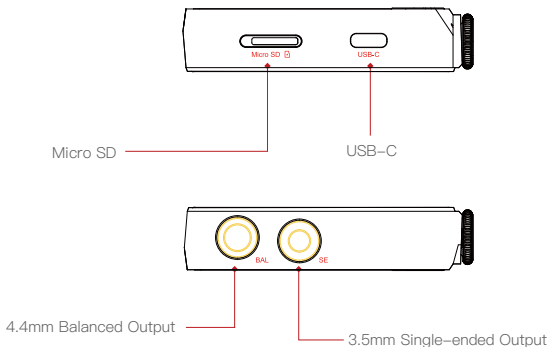
Coaxial Output Port:

Use the coaxial cable to play music stored in the DX180 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.

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 DX180 to a computer or a USB charger to charge the DX180.
Connect the DX180 to a computer to allow the DX180 to work as a card reader or an external storage.
Connect the DX180 to an OTG storage device to play music files stored in this OTG storage device.
Connect the DX180 to a Windows PC or a Mac computer to work as a USB DAC.

4.4mm Balanced output

When PO is selected on the output interface, plug in a 4.4mm balanced earphone and output sound through the 4.4mm BAL port.
When LO is selected on the output interface, plug in a 4.4mm balanced interconnect and output LO to an external amplifier.

3.5mm Single–ended Output

When PO is selected on the output interface, plug in a 3.5mm Single–ended earphone and output sound through the 3.5mm SE port.
When LO is selected on the output interface, plug in a 3.5mm interconnect and output LO to an external amplifier.

Micro SD Card Slot

Insert a Micro SD card into the DX180 to access its stored files.

Micro SD

5.0 Inch LED

USB−C

Power/Volume

Next/Fast Forward

Play/Pause

Previous/Rewind
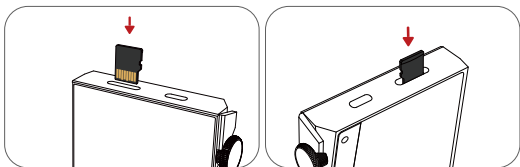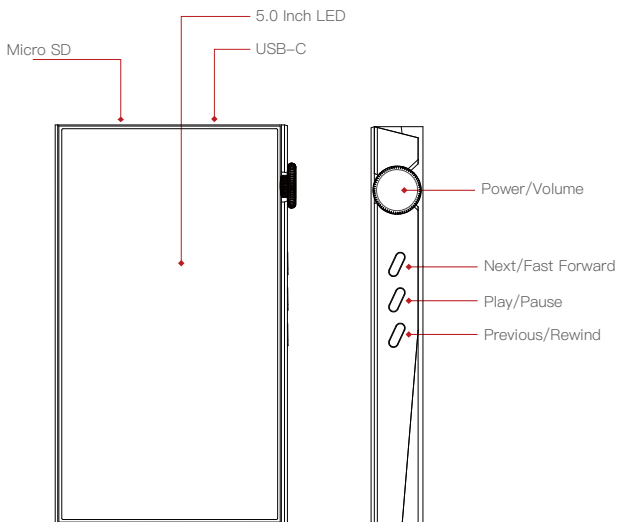
Power：

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

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.

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 DX180 is powered on, a long press of the Power button to display the pop up window, press Power Off button to power off the DX180.

Power on/off the screen:

Single press the power button to power on/off the screen after the DX180 has been powered on.

Reset:

When the DX180 stops unexpectedly during operation and the keys are no longer responsive, press and hold the power button for 10 seconds to reset the DX180.

Charging:

DX180 supports two quick charge protocols, QC3.0 and PD3.0. 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 1.5 hours with the afore mentioned quick charge types.

Connecting to a computer to work as a USB DAC:

The DX180 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 DX180 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 DX180 supports up to 32bit/384kHz PCM, and native DSD up to 256x when be used as a USB–DAC on Windows OS.

Android Basic Features Introduction

Digital Filter
Gain
Volume
Bluetooth
WiFi
Battery indicator
Time
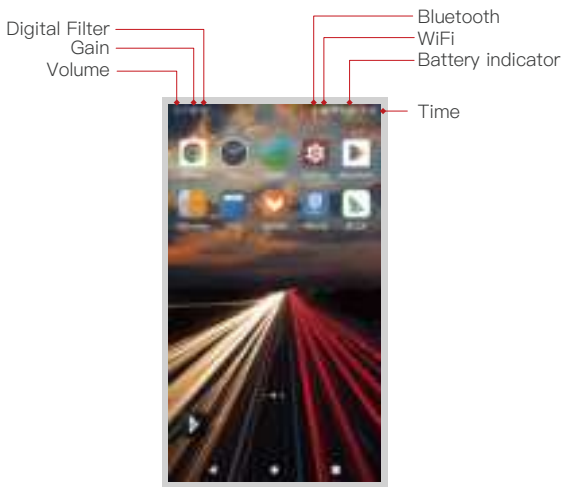
WiFi Connection:

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 DX180 will automatically search for the nearby Bluetooth device. At the same time, the DX180 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 DX180 in the Bluetooth mode.

APP Installation:

Method 1:
① Google Play and Aptoide are pre–installed on the DX180.
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.

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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 DX180 to the computer using the furnished USB–C cable. The DX180 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 DX180 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 DX180.

USB DAC:

Please refer to page13.

System Settings:

Press Settings icon on the DX180 desktop to go into system settings.

Audio Settings:

Press Settings Icon, then press Audio Settings.

① Gain:
   One of the two gains can be selected.
② Digital Filter:
   A total of five filters are available for user setting.
③ FIR Output:
   One of the two Outputs can be selected.
④ Volume Limitation:
   This sets the volume to a maximum preset point.
⑤ Volume Control knob:
   The volume knob can be set according to needs.

NOS Filter:
When using NOS filter, the pop sound when switching sample rates will be at a higher volume than the other four filters. This is part of the DAC chipset design and normal.

Firmware Update:

Online Update:

① Make sure the DX180 is connected to WiFi.
② After online update is selected, press Check Update.
③ Press Download, the DX180 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 DX180.
② Scroll down the page, the Build number is the firmware version.

Power Off And Reboot :
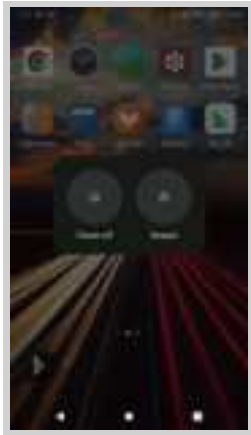
① Long press the power button for 2 seconds.
② There is a pop up window with two options.

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 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.

①   ②

Playback Screen (home screen):

Sample Rate

Equalizer

Digital Filter

L/R Balance

Gain

Volume

WiFi

Battery indicator for digital section

Settings

Music screen

Now Playing

Track title

Artist name

Music info

Play Mode

Previous/Rewind

Next/Fast Forward

Play/Pause
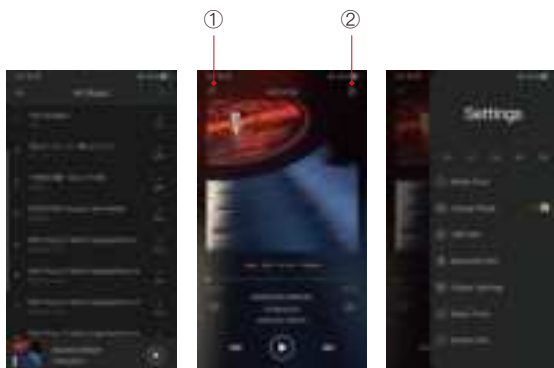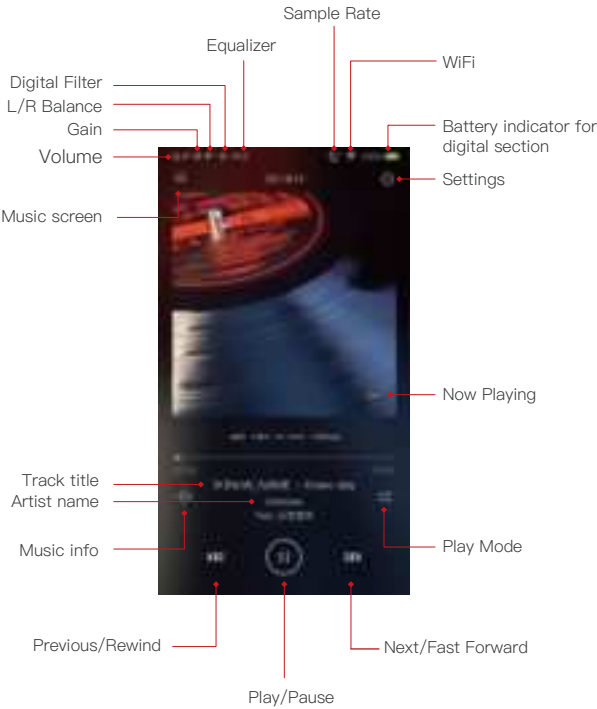
Now Playing Screen:

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.

①

Music Info Screen:

Press the Music info icon ②, the bottom of the home screen will
show the music info. Adding the current playing music into the
playlist or deleting the current playing music also can be achieved
in the music info screen. Press any areas of the upper part will
return to the home screen.

②

Music screen:

Press the Music Screen icon ① will go into the Music Screen②. Swipe from left to right on the Music Screen will bring up the Navigation Menu③.

Return to home screen①

Song sorting②

Music order

Now playing

Swipe to trigger the Navigation Menu③

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
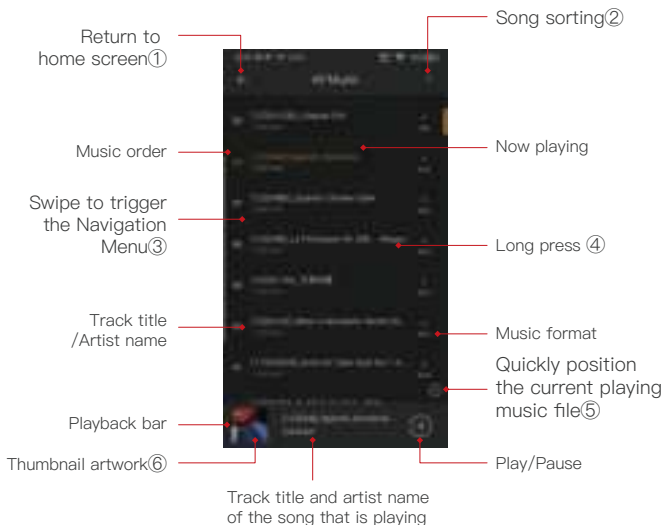
Return:

Press the Return button will move back one page at a time, until return to the home 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.

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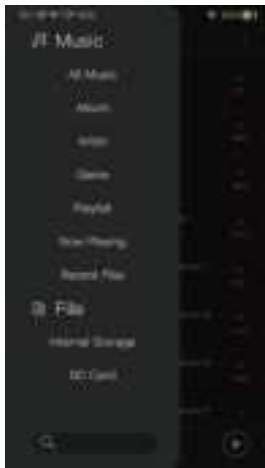
Swipe from left to right to bring up the Navigation Menu. One can choose among All Music, Album, Artist, Genre, Now Playing, Playlist, Internal Storage, and SD card. Also, the search bar is located at the bottom of the Navigation Menu.

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:
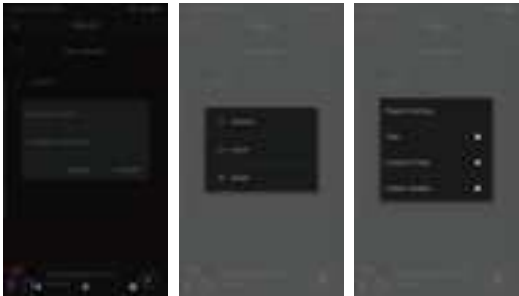
Playlist View:

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.
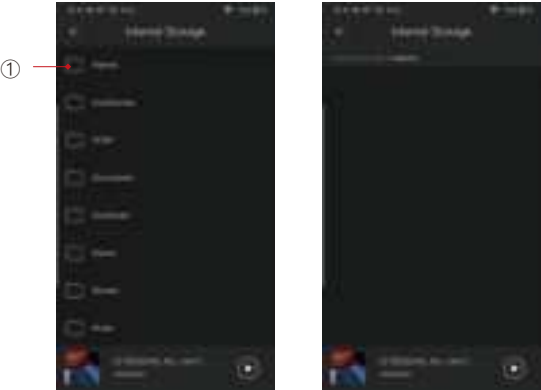
Press the return button① will move back one page at a time.

Search Screen:

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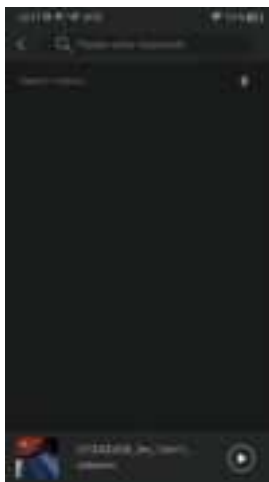
Settings Screen:

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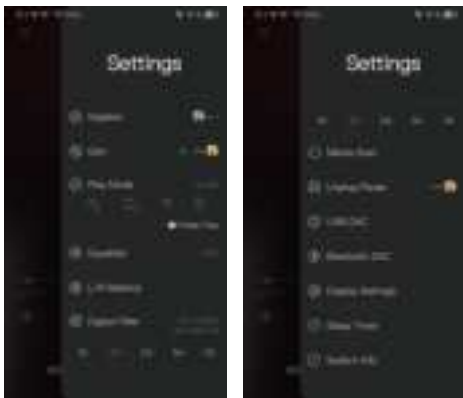
Gapless:

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

Gain:

There are two gain settings. The low gain has the lowest noise floor and 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 DX180 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.

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 DX180 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.
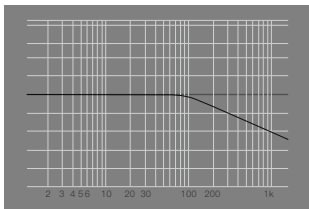
①. Q=0.7071
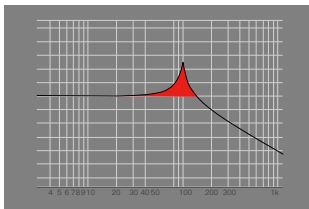
②. Q=20

2. High Pass Filter

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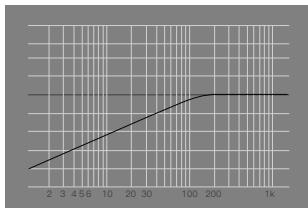
③. Q=0.7071
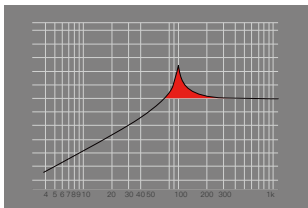
④. Q=20

3. All Pass Filter

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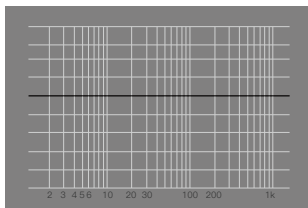
⑤.

4. Band Filter

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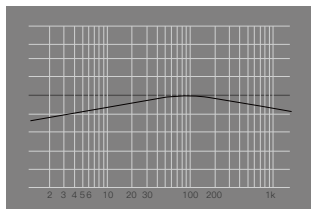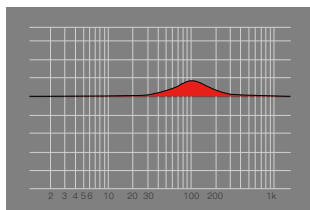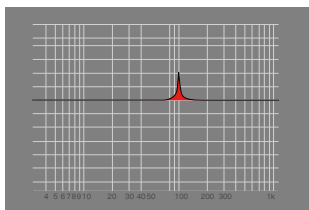

⑥. Q=0.7071
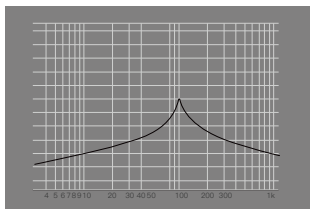
⑦. Q=20

5. Peak Filter

There is a large effect on the central frequency. The frequency beside the central frequency has similar effect.
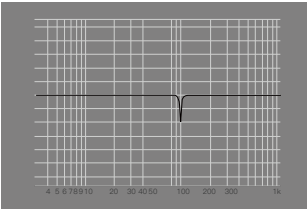

⑧. Q=0.7071

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.
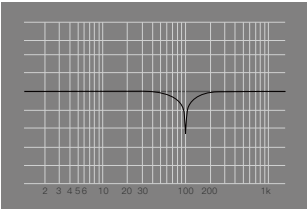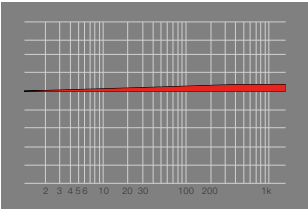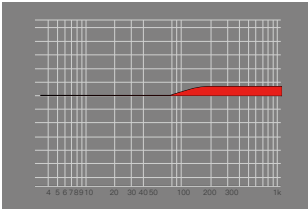

⑩. Q=0.7071

⑪. Q=20

7. High Shelf Filter

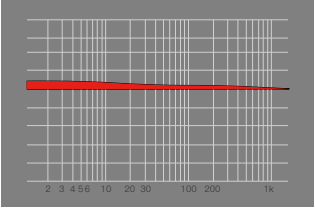There is a wide effect on the frequency that is higher than the central frequency.

⑫. Q=0.7071
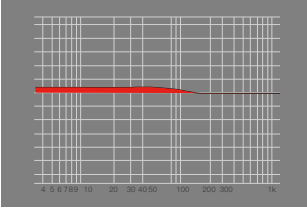

⑬. Q=20

8. Low Shelf Filter

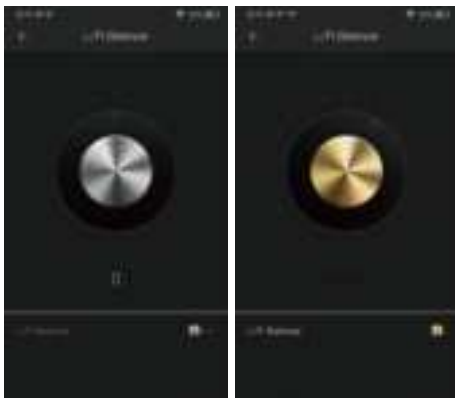There is a wide effect on the frequency that is lower than the central frequency.
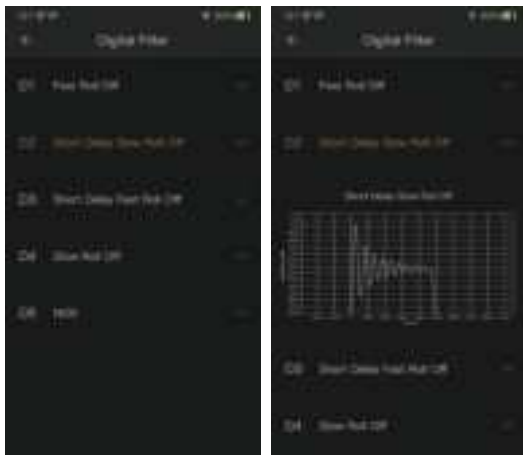

⑭．Q=0.7071

⑮．Q=20

L/R Balance:

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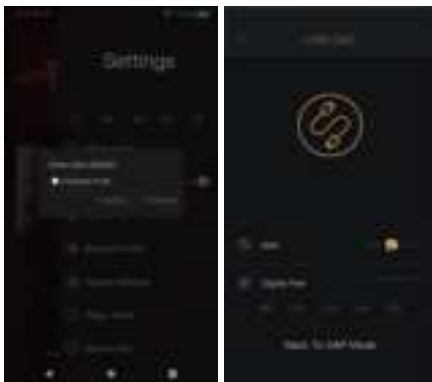
Digital Filter:

Digital Filter:

There are five digital filters available. Press a digital filter to view the figure.
When using NOS filter, the pop sound when switching sample rates will be at a higher volume than the other four filters. This is part of the DAC chipset design and normal.

Media Scan:

USB DAC:

The DX180 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 DX180 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 DX180 supports up to 32bit/384kHz PCM, and native DSD up to 256x when be used as a USB–DAC on Windows OS.

Bluetooth DAC:

DX180 Bluetooth DAC.
After turning on the Bluetooth DAC, Bluetooth devices such as a mobile phone can be paired with the DX180.
The DX180 can now stream from the connected Bluetooth device.
Note: When in Bluetooth DAC mode, the DX180 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.
Dark Mode:
After turning it on, the player is in a dark color theme.

Sleep Timer:

Set the count down sleep timer to power off the DX180.
The left hand side is the value of hours. The right hand is
the value of minutes. The DX180 will be powered off after
the counter has completed. If there are any operations
in the meanwhile, the DX180 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.