KGUSS DX3pro+

KGUSS TOPPING DX3pro+ LDAC Headphone Amplifier User Manual

Comprehensive guide for setting up, operating, and troubleshooting your DX3pro+ LDAC Headphone Amplifier.

1. Introduction

The KGUSS TOPPING DX3pro+ is a high-performance Digital-to-Analog Converter (DAC) and Headphone Amplifier (HPA) designed for high-fidelity audio. It features multiple input options including USB, optical, coaxial, and Bluetooth, along with line out and headphone amplifier outputs. Equipped with an ES9038Q2M DAC chip and XMOS XU208 USB interface, it supports high-resolution audio up to 32-bit/768kHz PCM and DSD512. The integrated NFCA headphone amplifier circuit provides powerful and clean output for various headphones. This manual provides detailed instructions for optimal use.

2. Package Contents

Verify that all items listed below are included in your package:

- DX3pro+ Unit
- DC15V/1A Power Adapter
- Remote Control
- USB Cable
- Bluetooth Antenna
- User Manual
- Warranty Card

Figure 2.1: Contents of the DX3pro+ package.

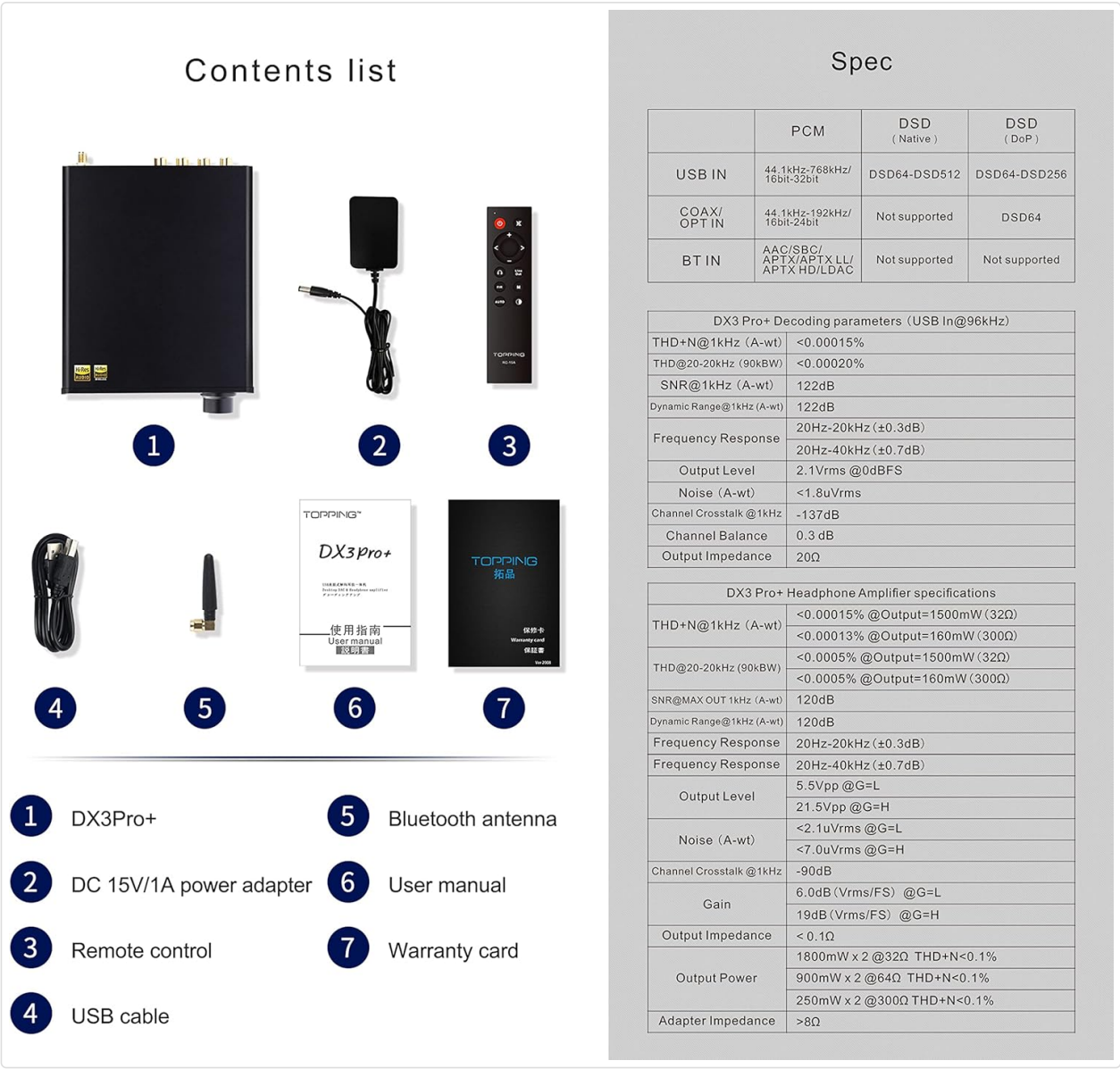
3. Product Overview

3.1 Front Panel

Figure 3.1: Front panel of the DX3pro+.

- **3.5mm Headphone Output:** Connect your headphones here.
- **LED Screen:** Displays current status, input, volume, and sample rate.
- **Remote Control Receiver:** For receiving signals from the remote control.
- **Volume Knob / Multi-function Button:** Rotate to adjust volume; press to switch inputs or enter settings menu.

3.2 Rear Panel



Spec

	PCM	DSD (Native)	DSD (DoP)
USB IN	44.1kHz-768kHz/ 16bit-32bit	DSD64-DSD512	DSD64-DSD256
COAX/ OPT IN	44.1kHz-192kHz/ 16bit-24bit	Not supported	DSD64
BT IN	AAC/SBC/ APTX/APTX LL/ APTX HD/LDAC	Not supported	Not supported

DX3 Pro+ Decoding parameters (USB In@96kHz)	
THD+N@1kHz (A-wt)	<0.00015%
THD@20-20kHz (90kBW)	<0.00020%
SNR@1kHz (A-wt)	122dB
Dynamic Range@1kHz (A-wt)	122dB
Frequency Response	20Hz-20kHz (±0.3dB)
	20Hz-40kHz (±0.7dB)
Output Level	2.1Vrms @0dBFS
Noise (A-wt)	<1.8uVrms
Channel Crosstalk @1kHz	-137dB
Channel Balance	0.3 dB
Output Impedance	20Ω

DX3 Pro+ Headphone Amplifier specifications	
THD+N@1kHz (A-wt)	<0.00015% @Output=1500mW (32Ω)
	<0.00013% @Output=160mW (300Ω)
THD@20-20kHz (90kBW)	<0.0005% @Output=1500mW (32Ω)
	<0.0005% @Output=160mW (300Ω)
SNR@MAX OUT 1kHz (A-wt)	120dB
Dynamic Range@1kHz (A-wt)	120dB
Frequency Response	20Hz-20kHz (±0.3dB)
Frequency Response	20Hz-40kHz (±0.7dB)
Output Level	5.5Vpp @G=L
	21.5Vpp @G=H
Noise (A-wt)	<2.1uVrms @G=L
	<7.0uVrms @G=H
Channel Crosstalk @1kHz	-90dB
Gain	6.0dB (Vrms/FS) @G=L
	19dB (Vrms/FS) @G=H
Output Impedance	< 0.1Ω
Output Power	1800mW x 2 @32Ω THD+N<0.1%
	900mW x 2 @64Ω THD+N<0.1%
	250mW x 2 @300Ω THD+N<0.1%
Adapter Impedance	>8Ω

Figure 3.2: Rear panel of the DX3pro+.

- **RCA Output (Rout, Lout):** Right and Left channel single-ended RCA outputs for connecting to an amplifier or active speakers.
- **Coaxial SPDIF Input (COAX 1, COAX 2):** Two coaxial digital audio inputs.
- **Optical SPDIF Input (OPTICAL):** One optical digital audio input.
- **USB Input (USB):** Connect to a computer or compatible media player for USB DAC functionality.
- **Bluetooth Antenna (ANT):** Connect the provided Bluetooth antenna for wireless audio reception.
- **Power Input (DC15V):** Connect the DC15V/1A power adapter here.

4. Setup

4.1 Power Connection

Connect the provided DC15V/1A power adapter to the "DC15V" input on the rear panel of the DX3pro+, then plug the adapter into a power outlet. The device will enter standby mode, and the screen will display a bright spot.

Your browser does not support the video tag.

Video 4.1: Demonstrates the power connection and initial setup steps for the DX3pro+.

4.2 Input Connections

Connect your audio source devices to the corresponding inputs on the rear panel:

- **USB:** Use the supplied USB cable to connect the DX3pro+ to your computer or a compatible media player. Ensure your device supports OTG external sound card functionality if connecting to a mobile phone or tablet.
- **Optical/Coaxial:** Connect digital audio sources such as CD players, game consoles, or TVs using optical or coaxial cables.
- **Bluetooth:** Screw the Bluetooth antenna onto the "ANT" connector. Pair your Bluetooth-enabled device (phone, tablet, laptop) with the DX3pro+ to stream audio wirelessly.

Figure 4.1: Connecting the DX3pro+ to a mobile device via USB for high-performance DAC functionality.

5. Operating Instructions

5.1 Power On/Off and Standby

- **Power On:** Connect the power supply. The device will automatically power on and enter standby state, indicated by a bright spot on the screen.

- **Standby:** When the device is working, press and hold the volume knob on the front panel to enter standby state. To exit standby, press the knob again or use the remote control.

5.2 Input Selection

Press the volume knob on the front panel to cycle through available input channels (USB, OPT, COAX1, COAX2, BT). The selected input will be displayed on the screen.

5.3 Volume Adjustment

Rotate the volume knob on the front panel to adjust the output volume. The volume can also be adjusted using the remote control.

5.4 Menu Settings

To enter the setup menu, press and hold the volume knob when the power is off, then power up the unit. Rotate the knob to navigate between settings and press to confirm. Press and hold the knob until "8-8" is displayed to save settings.

- **PCM Filter Setting (F-1 to F-5):** Adjust PCM filter characteristics.
- **Screen Brightness Setting (L-1 to L-3):** Adjust display brightness.
- **Automatic Standby Setting (A-O, A-C):** Enable or disable automatic standby.
- **Line Out Channel Setting (O-1 to O-3):** Select output channel mode (Headphone amp, Headphone amp + Line out, Line Out).
- **Output Mode Setting (m-P, m-d):** Select between Pre-amp mode (volume adjustable) or DAC mode (fixed 2Vrms output).
- **Headphone Amp Gain (GAIN +6dB, +19dB):** Adjust headphone amplifier gain for different headphone sensitivities.
- **Bluetooth Setting (BT ON, BT OFF):** Enable or disable Bluetooth.

Your browser does not support the video tag.

Video 5.1: Demonstrates how to navigate and adjust settings in the DX3pro+ menu.

6. Features and Specifications

6.1 Key Features

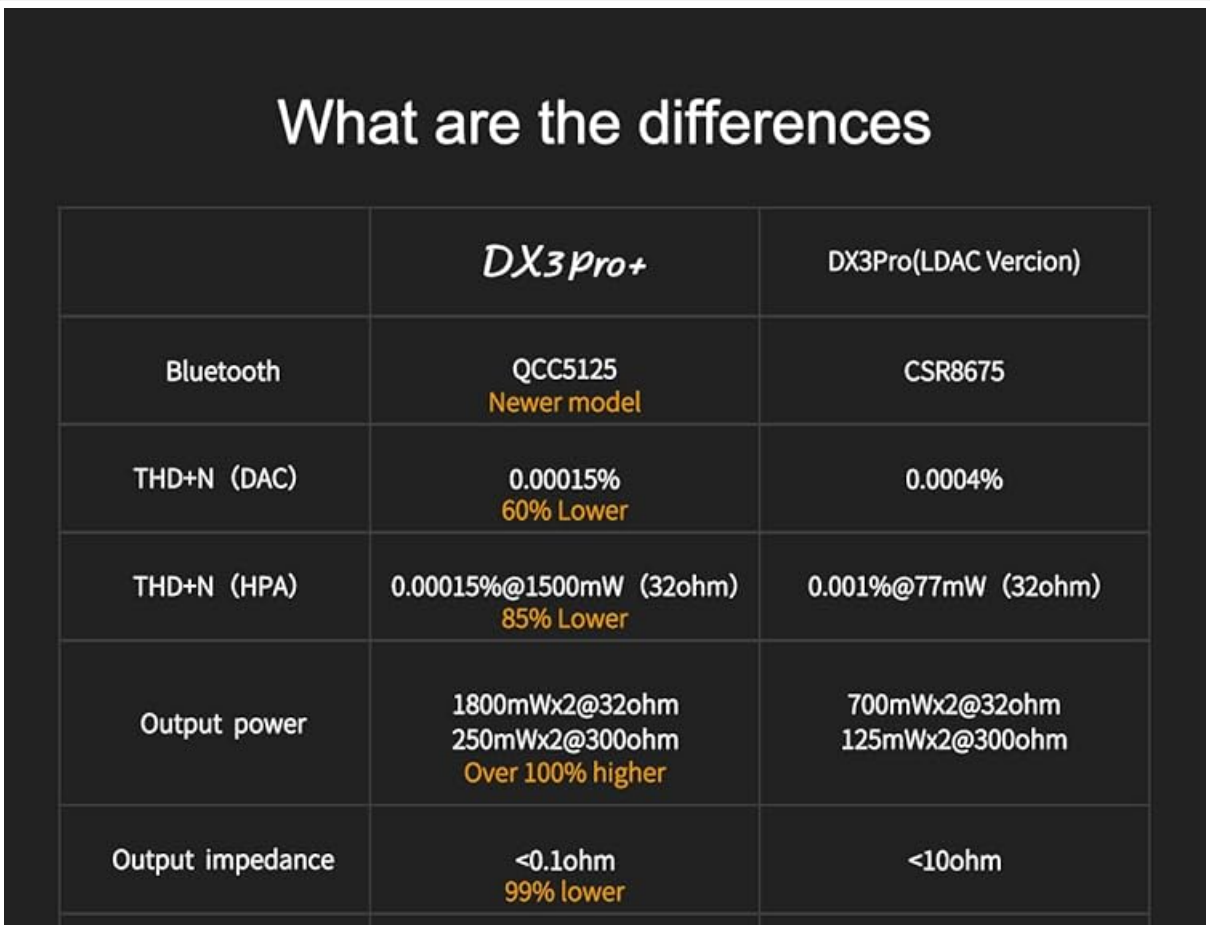
- High-performance DAC with USB, optical, coaxial, and Bluetooth inputs.
- ES9038Q2M DAC chip for high-resolution audio.
- XMOS XU208 for USB input, supporting PCM up to 32-bit/768kHz and native DSD512.
- NFCA headphone amplifier circuit with two gain settings (+6dB, +19dB).
- Bluetooth 5.0 with LDAC, AAC, SBC, APTX, APTX LL, and APTX HD protocols.
- Multiple output modes: Headphone amp, Headphone amp + Line out, DAC, and Pre-amplifier.
- Digital volume adjustment with no channel imbalance.

Figure 6.1: Key features and improvements of the DX3pro+ model.

6.2 Technical Specifications

Specification	Value

Specification	Value
Brand	KGUSS
Model Number	TOPPING DX3pro+
Dimensions	16.5cm L x 12.0cm W x 4.0cm H (6.5"L x 4.72"W)
Item Weight	420g (0.93 lbs)
Material	Aluminum
Maximum Supply Voltage	15 Volts
Interface Type	Coaxial, USB, Optical, Bluetooth
USB IN (PCM)	44.1kHz-768kHz / 16bit-32bit
USB IN (DSD)	DSD64-DSD512 (Native), DSD64-DSD256 (DoP)
COAX/OPT IN	44.1kHz-192kHz / 16bit-24bit, DSD64 (DoP)
BT IN	AAC/SBC/APTX/APTX LL/APTX HD/LDAC
THD+N @1kHz (A-wt)	<0.00015% (RCA Out), <0.00015% (HP Out @1500mW (32Ω))
SNR @1kHz (A-wt)	122dB (RCA Out), 120dB (HP Out)
Output Power (HP Out)	1800mW x 2 @32Ω THD+N<0.1%, 900mW x 2 @64Ω THD+N<0.1%, 250mW x 2 @300Ω THD+N<0.1%



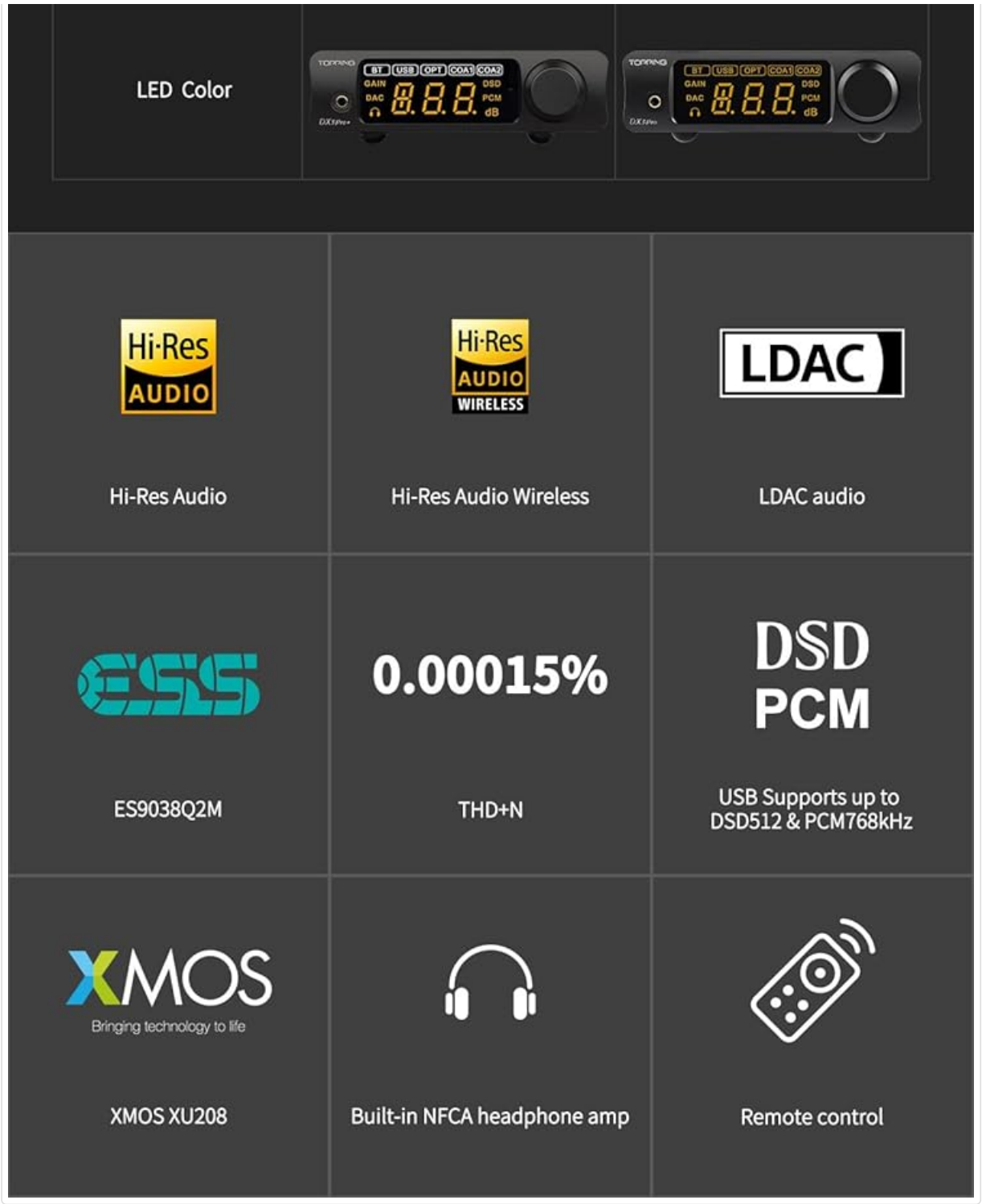


Figure 6.2: Comprehensive technical specifications for the DX3pro+.

7. Troubleshooting

This section addresses common issues you might encounter with your DX3pro+ and provides solutions. For more detailed troubleshooting, refer to the official support resources.

Your browser does not support the video tag.

Video 7.1: Official troubleshooting guide for the TOPPING DX3pro+.

Common Issues and Solutions:

Phenomenon	Solution

Phenomenon	Solution
Can't be turned on	◦ Check the power connection. ◦ Try with another DC15V power adapter. ◦ Try with another power outlet. ◦ If the device did not power on, check the power supply.
No sound	◦ Check that the proper input source is selected. Press the knob on the front panel to switch the input channel. ◦ Check the output setting. Double-press the knob to switch the output channel. ◦ Check the connections for all devices. Insert connection cables all the way in. ◦ Check the volume of all devices and whether they are muted. ◦ For Bluetooth IN: If volume is too low on phone, adjust the phone's volume. ◦ For USB IN: 1) If volume is too low on PC, check and adjust the computer system volume, music player volume, and driver volume. 2) Select the default output device of your music player or computer as this unit.
Noisy playback	◦ Try with other songs. ◦ The specifications of songs are not supported by this unit. ◦ If the noise appears only when playing DSD files, check and adjust the computer system volume, music player volume, and driver volume to the maximum. ◦ Check to see if the problem is with the source, downstream equipment, and cables. ◦ If the noise disappears after unplugging the USB cable, it may be interference from the source. Consider using a USB isolation device between this unit and the source.
One channel with noise/no output	◦ Check to see if the problem is with the source, downstream equipment, and cables. Try swapping the left and right channel connections and test with another source.
Channel imbalance	◦ Check to see if the problem is with the source, downstream equipment, and cables. Try swapping the left and right channel connections and test with another source.
Cannot pair Bluetooth	◦ Enable Bluetooth function in the setup menu first. ◦ May be already connected to another Bluetooth device. Press and hold the brightness button in the lower right corner on the remote to let this unit enter pairing mode. ◦ Bring the Bluetooth device near to this unit. ◦ Turn the power of the unit off and on again, and then try again.

Phenomenon	Solution
Bluetooth in: the sound is cut off	◦ Bring the Bluetooth device near to this unit. ◦ Remove obstructions between the Bluetooth device and this unit. ◦ To prevent electromagnetic interference, locate this unit away from microwave ovens, wireless LAN devices, and other Bluetooth devices. ◦ Reconnect the Bluetooth device.
The connected USB device does not recognize this unit	◦ USB cable did not connect properly. Check or change the cable. ◦ Try with another USB port. ◦ Driver may need to be reinstalled. ◦ May be caused by the PC. Check or try with another PC. ◦ Some phones require OTG function to be enabled first.
Remote control not responding	◦ Try to insert two fresh AAA batteries. ◦ Please aim at the remote control receiver. ◦ Bring the remote control close to the device. ◦ Use your Android phone's camera to look at the transmitter at the top of the remote; if it doesn't blink when you press the remote button, the remote is defective. ◦ If you have more than one Topping device, check that you are using the correct remote control.
The sample rate displayed on the device does not match the music file	◦ The choice of music player app, the setting of music player, and the setting of computer/phone will all have an impact on the sampling rate. ◦ The sampling rate displayed by this unit is the sampling rate of the input signal, and it will not change the sampling rate by itself. ◦ If the music player can't be set to exclusive mode, the audio signal will be resampled by the computer/phone, so the sampling rate of the output signal is the sampling rate of the original file, and the sampling rate displayed by this unit is also the sampling rate of the original file. ◦ Because some players can't be set to exclusive mode, the audio signal will be resampled by the computer/phone and then output. So this unit will always display the sampling rate set by the computer/phone. ◦ We recommend using Audirvana player on MAC OS and Foobar on Windows OS.
HP -3	◦ Incorrect firmware version. Please re-flash the correct firmware. ◦ If the computer does not recognize the unit, try entering DFU mode by pressing the headphone button on the remote control 5 times while the unit is in standby mode. If this does not work, try using another USB port, another USB cable, or even another computer.

Phenomenon	Solution
DFU	◦ If you accidentally enter DFU mode, unplug and re-plug the power cable and reboot this unit. Try to re-flash the firmware if DFU is still displayed.
HP ERR	◦ Amplifier circuit may output abnormal DC voltage. Please flash the latest firmware first. ◦ If you use the RCA output, please switch the output mode to Line out by double-pressing the knob. ◦ After changing the song or turning down the volume, unplug and re-plug the power cable and reboot the unit. ◦ Disconnect other devices and reboot. If the problem still persists, your unit may be defective.
IN Err / INH Err / INL Err	◦ Supply voltage too high/too low. Please use TOPPING's power adapter. ◦ DAC abnormal. Try using another DC15V power supply. Disconnect other devices and reboot. If the problem still persists, your unit may be defective. Please contact the store where you purchased it.
d-3	◦ Please check whether it is set to DAC mode in the setup menu.
Can't adjust this unit's volume	◦ In PRE (Pre-amplifier) mode, this unit will always display the volume level. When the sampling rate of the input signal changes, it will display the sampling rate for 2 seconds and then continue displaying the volume level. ◦ In DAC mode, it will always display the sampling rate, keep the maximum volume output, and the volume is not adjustable.

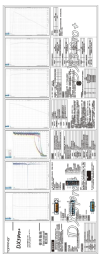
8. Warranty and Support

KGUSS and HIFI College are committed to customer satisfaction. We offer the following support:

- **30-day money-back guarantee** for any reason.
- **More than 12-month warranty** on all quality defects.
- Supports **30-day price matching**.
- For any questions or support, please contact HIFI College atHIFICOLLEGE@gmail.com.

HIFI College is an authorized distributor for KGUSS, TOPPING, GUSTARD, and FX-AUDIO/xDuoo products, ensuring authenticity and reliable support.

Related Documents - DX3pro+

	[Topping DX3Pro User Manual and Technical Specifications] Comprehensive user manual and technical specifications for the Topping DX3Pro audio DAC, including FCC compliance information.