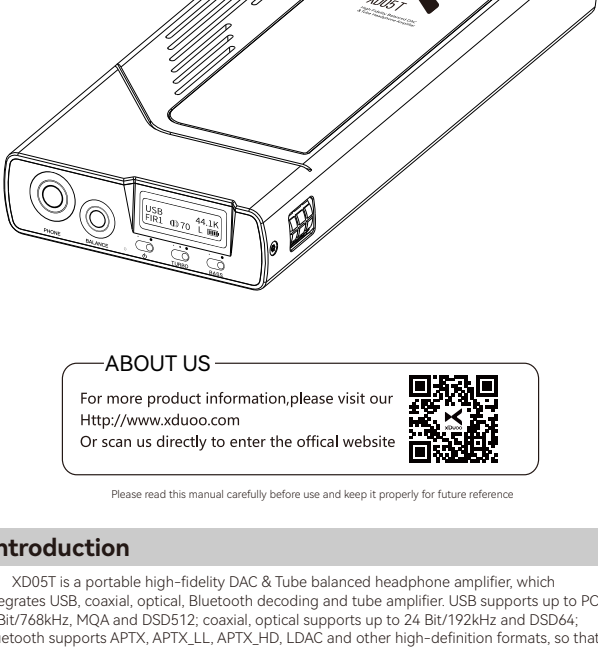




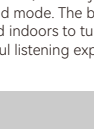
XD05T

USER MANUAL



ABOUT US

For more product information, please visit our
[Http://www.xduoo.com](http://www.xduoo.com)
Or scan us directly to enter the official website



Please read this manual carefully before use and keep it properly for future reference

Introduction

XD05T is a portable high-fidelity DAC & Tube balanced headphone amplifier, which integrates USB, coaxial, optical, Bluetooth decoding and tube amplifier. USB supports up to PCM 32Bit/768kHz, MQA and DSD512; coaxial, optical supports up to 24 Bit/192kHz and DSD64; Bluetooth supports APTX, APTX_LL, APTX_HD, LDAC and other high-definition formats, so that make wireless audio become HiFi. The DAC chip uses two high-specification ES9039Q2M chips, which have extremely low noise and higher resolution, which greatly improves the quality of sound. It used precision digital volume chips, and used two micro tubes to amplify the audio to make the sound sweet and delicate, let you won't get tired after listening for a long time. It's output power up to 1500mW per channel, can easily drive most IEM and headphones on the market.

In terms of adjustable settings, in addition to driving power, bass, filter adjustment, etc., the power supply can be selected from DC power or battery-powered mode. The battery mode can be easily carried when going out. External DC power can be used indoors to turn it into a desk mode to enhance power and dynamic output, bringing a powerful listening experience, suitable for high-end people who pursue portable/desk integration.

Features

1. With OLED display, real-time display of product working information.
2. Rich input and output interfaces meet most usage scenarios.
3. The USB receiving chip adopts XMOS's XU316, working in asynchronous transmission mode, supports up to PCM32 Bit/768 kHz, MQA and DSD512.
4. Support decoding USB audio of IOS, Android phone or Pad.
5. Coaxial/optical supports up to PCM 24Bit/192kHz, DSD64 (DOP).
6. Bluetooth chip uses Qualcomm's chip, supports Bluetooth 5.1, supports APTX, APTX_LL, APTX_HD, LDAC formats.
7. Using dual active low-phase noise crystal oscillators, data shaping processing through FPGA achieves a unified clock and reduces jitter.
8. The DAC chip uses two ESS'ES9039Q2M, with better decoding performance, extremely low noise and higher resolution, which greatly improves the sense of sound.
9. Two micro tubes are used to amplify the audio to make the sound sweet and delicate, and you won't get tired after listening for a long time.
10. The output BUF circuit uses a rail-to-rail, low distortion, high current chip, it is powerful and can easily drive most IEM and headphones on the market.
11. Precision digital volume chips are used to solve the problem of unbalanced left and right channels of traditional potentiometers at low volumes.
12. Built-in multiple low-noise power supply circuits are provided to each digital chip and analog chip respectively to ensure that there is no mutual interference between the power supplies and bring a very quiet music background.
13. External Turbo and Bass to adapt to different headphones.
14. With external power in and power selector, it can switch to the desktop mode with switch in the room, which brings a more powerful and flexible listening experience.

Parameters

Unbalanced Output Parameters:

Output Power: 750mW (32Ω, THD+N<5%)
83mW (300Ω, THD+N<5%)

Output Impedance: <0.2Ω

Peak Voltage: 15Vp-p (TURBO)

Frequency Response: 20Hz~20kHz (±0.5dB)

Crosstalk: ≥75 dB

THD+N: 0.5%

SNR: ≥114dB

AUX OUT Parameters:

Output level: 2.0V

THD+N: 0.00065%

SNR: ≥120dB

Crosstalk: ≥100dB

Balanced Output Parameters:

Output Power: 1500mW (32Ω, THD+N<5%)
565mW (300Ω, THD+N<5%)

Output Impedance: <0.2Ω

Peak Voltage: 26Vp-p (TURBO)

Frequency Response: 20Hz~20kHz (±0.5dB)

Crosstalk: ≥105 dB

THD+N: 0.5%

SNR: ≥116dB

BAL-LO Parameters:

Output level: 4.0V

THD+N: 0.00065%

SNR: ≥124dB

Crosstalk: ≥100dB

Applicable OS: windows, Linux, Mac OS, IOS, Android system

Battery: 3.7V/6000mAh

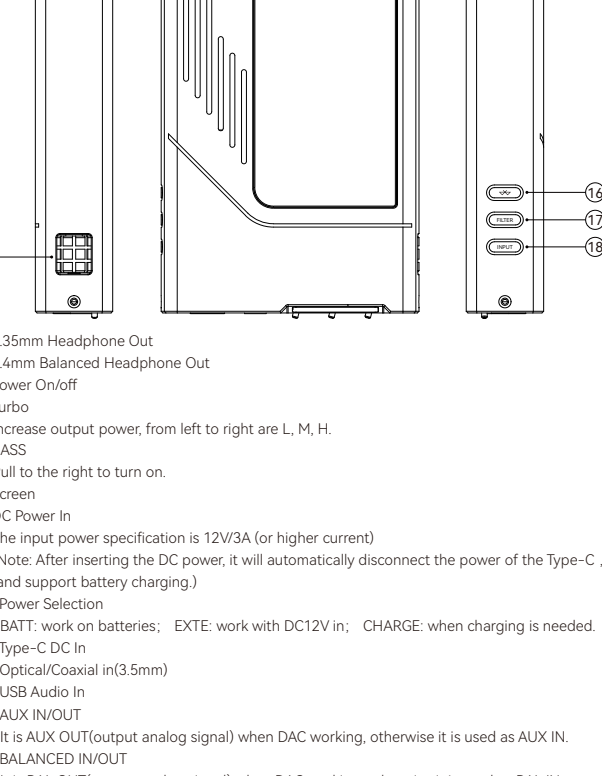
Battery Life: USB IN, SPDIF IN≥4H | AUX IN≥4.5H (ECO Mode)

Charging Time: about 4 hours (fast charging) | 10 hours (slow charging)

Size: 16.8x7.8x2.3cm

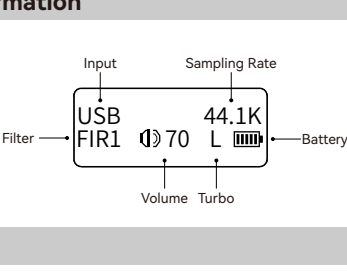
Weight: 0.4kg

Parts and Controls



1. 6.35mm Headphone Out
2. 4.4mm Balanced Headphone Out
3. Power On/off
4. Turbo
Increase output power, from left to right are L, M, H.
5. BASS
Pull to the right to turn on.
6. Screen
7. DC Power In
The input power specification is 12V/3A (or higher current)
(Note: After inserting the DC power, it will automatically disconnect the power of the Type-C, and support battery charging.)
8. Power Selection
BATT: work on batteries; EXTE: work with DC12V in; CHARGE: when charging is needed.
9. Type-C DC In
10. Optical/Coaxial in(3.5mm)
11. USB Audio In
12. AUX IN/OUT
It is AUX OUT(output analog signal) when DAC working, otherwise it is used as AUX IN.
13. BALANCED IN/OUT
It is BAL OUT(output analog signal) when DAC working, otherwise it is used as BAL IN.
14. Volume Knob
Rotate to adjust the volume (0-99).
15. Microphone, when Bluetooth input, can be used for voice calls.
16. Pairing&play (bluetooth) button
a. long press for 3 seconds to force into pairing state.
b. Short press to Play/pause; double press to play next song, three press to play previous song.
17. Filter Button
FIR1-8 (PCM filters, can only be set when playing PCM songs)
FIR1=Minimum Phase, FIR2=Linear Phase Apodizing Fast Roll-Off, FIR3=Linear Phase Fast Roll-Off, FIR4=Linear Phase Fast Roll-Off Low Ripple, FIR5=Linear Phase Slow Roll-Off, FIR6=Minimum Phase Fast Roll-Off, FIR7=Minimum Phase Slow Roll-Off, FIR8= Minimum Phase Slow Roll-Off Low Dispersion.
FIR9(DSD filter, automatically select when playing DSD)
18. Input Selection
Short press to select input source, long press to lock/unlock all the buttons.

Display Information



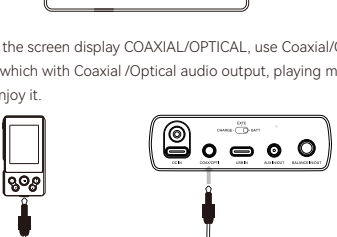
How to Use

1. Connect headphone to this unit. (*Note: The XD05T only supports dual or balanced channel headphone, does not support the mono headphone or with remote control function or microphone device.)
2. Connect audio device with this unit. For details, see "Connecting to the Audio Device".
3. Turn on the power of this unit.
4. Play music with the connected audio device.
5. Adjust the volume to your comfort value, and start enjoying music.
6. Set the Turbo or Bass according to your headphone

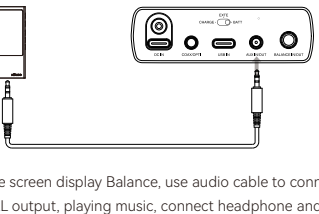
Note: When stacked with other devices, the gap between the two needs to be separated by 10mm to provide sufficient heat dissipation space for this unit.

Connecting to the Audio Device

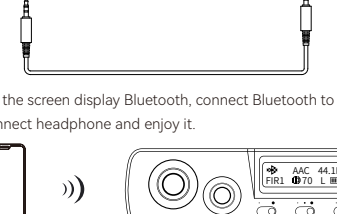
1. Pressing INPUT to the screen display USB IN, use the USB cable to connect to an Apple/windows/Linux system computer, connect headphone, playing music on computer and enjoy it. (Need to set this unit as an audio output device on the computer)



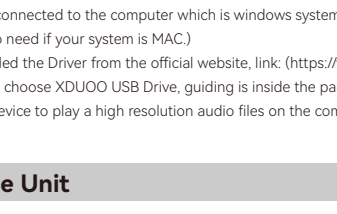
2. Pressing INPUT to the screen display USB IN, use the USB OTG cable to connect to USB audio out of an IOS/ Android phone, pad or HiFi player, connect headphone, then playing music, and enjoy it.



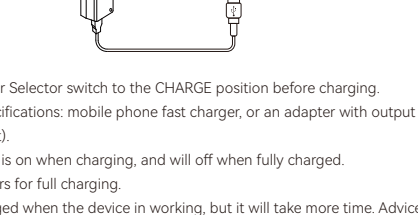
3. Pressing INPUT to the screen display COAXIAL/OPTICAL, use Coaxial/Optical cable to connect with player or CD which with Coaxial /Optical audio output, playing music, connect headphone and enjoy it.



5. Pressing INPUT to the screen display Balance, use audio cable to connect with player or DAC's which with Line out/aux out, playing music, connect headphone and enjoy it.



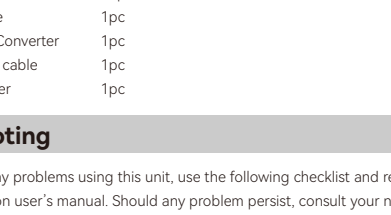
6. Pressing INPUT to the screen display Bluetooth, connect Bluetooth to phone or computer, playing music, connect headphone and enjoy it.



Install USB Driver

1. When this unit is connected to the computer which is windows system, the driver is required to be installed.(No need if your system is MAC.)
2. you can download the Driver from the official website, link: (<https://www.xduoo.net/firmware-download/>), choose XDUOO USB Driver, guiding is inside the package.
3. When using the device to play a high resolution audio files on the computer, we recommend using HiFi player.

Charging the Unit



1. Set the Power Selector switch to the CHARGE position before charging.
2. Charger specifications: mobile phone fast charger, or an adapter with output 12V/2A (or more current).
3. The red light is on when charging, and will off when fully charged.
4. About 4 Hours for full charging.
5. Can be charged when the device in working, but it will take more time. Advice you charge it after turning it off.
6. After fully charged, the power selection switch needs to be turned back to the BATT position in order to turn on the device.
7. If you planning not to use the XD05T for long time, charge it every half year to avoid excessive battery discharge.

Note: It can work while charging, but the power input must meet the following requirements:

- 1) The Type-C power in must be 5V/3A or fast charging (supporting PD protocol, 12V/1.5A or higher current) adapter.
- 2) DC power in must be 12V/3A (or higher current).

Package List

- | | |
|------------------------------|-------|
| 1. XD05T | 1pc |
| 2. Warranty Card | 1pc |
| 3. User Manual | 1pc |
| 4. Aluminum Nameplate | 1pc |
| 5. Rubber Feet | 10pcs |
| 6. Type-C USB Cable | 1pc |
| 7. USB A to Type-C Converter | 1pc |
| 8. Type-C to Type-C cable | 1pc |
| 9. 6.5 to 3.5 Converter | 1pc |

Troubleshooting

If you run into any problems using this unit, use the following checklist and read the product support information on user's manual. Should any problem persist, consult your nearest xDuoo dealer or consult us.

The unit does not turn on
→Charge the battery of the unit.
→Please check the Power Selection Switch if set to the BATT position
→When battery life reduces to half, the battery is approaching the end of its service life. Consult your nearest xDuoo dealer for replacement.

Can't be charged
→Please check the Power Selection Switch if set to the Charge position.
→Please check the charger specifications is right.
→The battery is fully charged.

No sound
→Check that the unit and the audio device are connected correctly.
→Check that the connected device is turn on.
→Turn up the volume of connected device or the unit.
→Please check whether this unit is setting correct input.
→When connected to a computer, there is no sound or sound is not played back properly, check the device setting of you computer are correct.

Warranty Information

Our products can enjoy 12-month free warranty services from the date of the sale, if the warranty period is expired, our company will charge parts cost depend on the product fault conditions. Accessories are not covered under warranty.

Company Name: xDuoo Technology Co.,LTD

Company website: www.xduoo.net

After-sales hotline: +86 0755-29799189

After-sales address: Room 1510, Building F, Mingyue Huadu, Xixiang Street, Baoan District, Shenzhen City