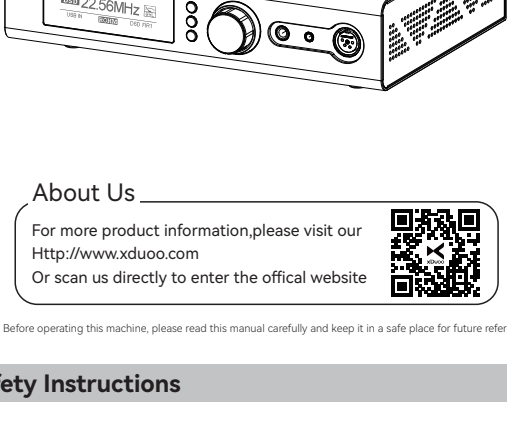




High Performance DAC & Tube Balance Headphone Amplifier



About Us

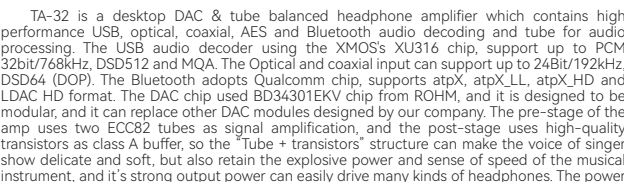
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Or scan us directly to enter the official website



Before operating this machine, please read this manual carefully and keep it in a safe place for future reference.

1. Safety Instructions

- 1、Please do not sprinkle water on this unit, please do not place vases or items filled with liquid on the machine.
- 2、When The amp is working, the tube will be very hot, please do not touch with hands directly.
- 3、Please do not open the machine for maintenance or modification by yourself. Opening the machine and arbitrarily modifying the internal circuit will make it difficult for maintenance personnel to repair the machine, and will affect the performance or quality of the machine.
- 4、Please place this unit in a well-ventilated place, avoid direct sunlight, and the machine should leave at least the following clearances:



2. Operation Notes

- 1、Turn On The Power: Before turning on the power for the first time, please check that the voltage setting of the amp is correct.
- 2、Using Mobile Phone: Using mobile phone near the amp may cause noise when playback, please move mobile phone away from the amp.
- 3、Move It: Please disconnect the power cables before moving the machine.

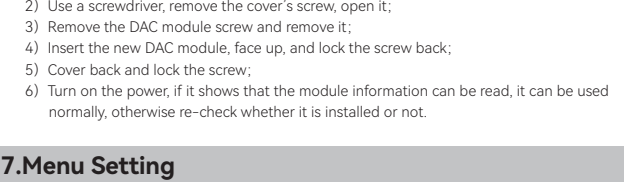
3. Product Introduction

TA-32 is a desktop DAC & tube balanced headphone amplifier which contains high performance USB, optical, coaxial, AES and Bluetooth audio decoding and tube for audio processing. The USB audio decoder using the XMOS's XU316 chip, support up to PCM 32bit/768kHz, DSD512 and MQA. The Optical and coaxial input can support up to 24Bit/192kHz, DSD64 (DOP). The Bluetooth adopts Qualcomm chip, supports atpX, atpX_LL, atpX_HD and LDAC HD format. The DAC chip used BD34301EKV chip from ROHM, and it is designed to be modular, and it can replace other DAC modules designed by our company. The pre-stage of the amp uses two ECC82 tubes as signal amplification, and the post-stage uses high-quality transistors as class A buffer, so the "Tube + transistors" structure can make the voice of singer show delicate and soft, but also retain the explosive power and sense of speed of the musical instrument, and it's strong output power can easily drive many kinds of headphones. The power supply circuit of this unit adopts tube for rectifier, which makes the sound more "tube" sense. It has unbalanced and balanced headphone output, let you feel the completely different sound of them.

This product is suitable for connecting with different audio source, such as PC, mobile phone, and other types of playback equipment. It can improve the sound quality of the original playback equipment effectively, and it also can drive a variety of high-end headphones, so that you can enjoy more real, more shocking music!

4. Product Features

- 1、With 3.12 inch OLED screen, display the information of music;
 - 2、The USB receiving chip adopts XMOS's XU316, working in asynchronous transmission mode, supports up to PCM32 Bit/768 kHz, MQA and DSD512;
 - 3、Standard with ROHM's flagship DAC chip BD34301EKV, with excellent parameters;
 - 4、Using dual active low-phase noise crystal oscillators, data shaping processing through FPGA achieves a unified clock and reduces jitter;
 - 5、Bluetooth chip uses Qualcomm's QCC5125, supports Bluetooth 5.1, supports APTX, APTX_LL, APTX_HD, LDAC formats;
 - 6、AES/Coaxial/optical supports up to PCM 24Bit/192kHz, DSD64 (DOP);
 - 7、Built-in filter circuit and high-efficiency power conversion circuit, optimize the power supply design through the LDO circuit, and separately supply power to the decoder chip, LPF, amplifier, and digital receiver chip;
 - 8、It is used digital volume adjustment chips to solve the problem of unbalanced left and right channels at low volume;
 - 9、The DAC chip module can be replaced by yourself, and experience the sound quality changes brought about by various top DAC chips;
 - 10、Adopt 5U4G tube for rectification, make the sound more "tube" sense;
 - 11、Using double ECC82 tube to amplify audio signal, make the sound sweet and refined;
 - 12、Adopt transistors for class A buffer, so it can easily drive many kind headphones with strong output power;
 - 13、Adopt the special enthusiast Japanese ELNA SILMIC(II) capacitance as the coupling capacitance, have transparent and sweet sound;
 - 14、Adopt the special enthusiast Japanese NICHICON FW(M)capacitance as the main filter capacitance, have smooth and warm sound, and splendid high frequency;
 - 15、It built-in mute circuit when turn on amplifier to avoid POP noise and make sure the tube is worked at its best condition.
- 6、3.5mm headphone jack;
 - 7、4.4mm balanced headphone jack;
 - 8、4-pin XLR balanced headphone jack;
 - 9、Amplifying tube, if you want to replace the electronic tube, please turn off and then unplug it;
 - 10、Rectifier tube, if you want to replace the electronic tube, please turn off and then unplug it;
 - 11、XLR Balance out (Right channel);
 - 12、XLR Balance out (Left channel);
 - 13、Audio source output directly from DAC, without tubes;
 - 14、Analog audio output via tube;
 - 15、AUX IN;
 - 16、XLR Balance in (Right channel);
 - 17、XLR Balance in (Left channel);
 - 18、AES in;
 - 19、Coaxial in;
 - 20、Optical in;
 - 21、USB in;
 - 22、AC switch(110V or 220V);
 - 23、Power input: connect to AC100-120V/220-240V;
 - 24、Fuse holder (fuse specification is 250V/2A);
 - 25、Power switch;
 - 26、Bluetooth antenna installation.

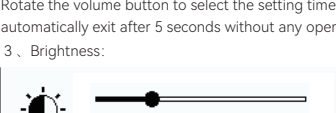


6. Replace the DAC Module

- 1、DAC module specification:
Replacement DAC module must be designed by our company, and we will not be responsible for the consequences of replacing any third-party designed DAC module;
- 2、Replacement steps:
 - 1) Turn off the power supply of this unit before operation;
 - 2) Use a screwdriver, remove the cover's screw, open it;
 - 3) Remove the DAC module screw and remove it;
 - 4) Insert the new DAC module, screw up, and lock the screw back;
 - 5) Connect back and lock the screw;
 - 6) Turn on the power, if it shows that the module information can be read, it can be used normally, otherwise re-check whether it is installed or not.

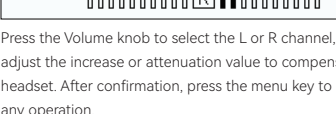
7. Menu Setting

Long press the MENU button to enter the menu window:



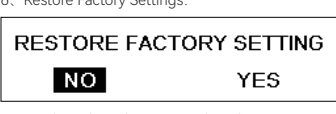
Rotate the volume button to select DAC Filter, Screen Off, Brightness, Channel Balance, Spectrum, Sleep Time, Restore Factory Settings. Press the Volume knob to enter the next setting interface:

- 1、DAC Filter:



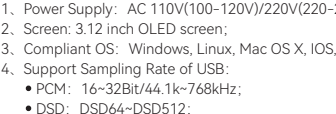
Rotate the volume button to select the DAC filter, confirm and press the menu key to exit or automatically exit after 5 seconds without any operation.

- 2、Screen Off Time:



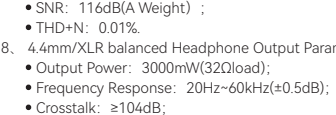
Rotate the volume button to select the setting time, confirm and press the menu key to exit or automatically exit after 5 seconds without any operation.

- 3、Brightness:



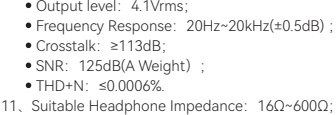
Rotate the volume button to select the brightness value, confirm and press the menu key to exit or automatically exit after 5 seconds without any operation.

- 4、Channel Balance:



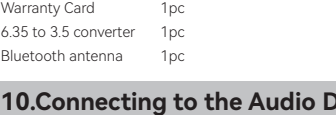
Press the Volume knob to select the L or R channel, and then rotate the volume button to adjust the increase or attenuation value to compensate for the left and right deviation of the headset. After confirmation, press the menu key to exit automatically after 3 seconds without any operation.

- 5、Display setting:



Select the screen to display the sampling rate or spectrum, and rotate the volume button to select.

- 6、Restore Factory Settings:



Rotate the volume button to select the YES, pressing the Volume knob, this unit will be returned to the factory setting value.

* Note: Factory default value: input is Bluetooth, volume is 20, filter is FIR1, screen brightness is 5, screen off time is OFF, channel balance is 0, display setting is sampling rate.

8. Parameters

- 1、Power Supply: AC 110V(100-120V)/220V(220-240V);
- 2、Screen: 3.12 inch OLED screen;
- 3、Compliant OS: Windows, Linux, Mac OS X, IOS, Android system;
- 4、Support Sampling Rate of USB:
 - PCM: 16~32Bit/44.1k~768kHz;
 - DSD: DSD64~DSD512;
 - MQA: 44.1k~384kHz.
- 5、Support Sampling Rate of COA/OPT:
 - PCM: 16~24Bit/44.1k~192kHz;
 - DSD: DSD64(DOP).
- 6、Bluetooth Support Formats: SBC, AAC, atpX, atpX_LL, atpX_HD, LDAC;
- 7、3.5mm Headphone Output Parameters:
 - Output Power: 2300mW(32Ωload);
 - Frequency Response: 20Hz~60kHz(±0.5dB);
 - Crosstalk: ≥75dB;
 - SNR: 116dB(A Weight) ;
 - THD+N: 0.01%.
- 8、4.4mm/XLR balanced Headphone Output Parameters:
 - Output Power: 3000mW(32Ωload);
 - Frequency Response: 20Hz~60kHz(±0.5dB);
 - Crosstalk: ≥104dB;
 - SNR: 118dB(A Weight) ;
 - THD+N: 0.03%.
- 9、AUX OUT Parameters:
 - Output level: 2.0Vrms;
 - Frequency Response: 20Hz~20kHz(±0.5dB) ;
 - Crosstalk: ≥108dB;
 - SNR: 117dB(A Weight) ;
 - THD+N: ≤0.0007%.
- 10、BAL-LO Parameters:
 - Output level: 4.1Vrms;
 - Frequency Response: 20Hz~20kHz(±0.5dB) ;
 - Crosstalk: ≥113dB;
 - SNR: 125dB(A Weight) ;
 - THD+N: ≤0.0006%.
- 11、Suitable Headphone Impedance: 16Ω~600Ω;
- 12、Size: 31.0CM×24.2CM×17.4CM;
- 12、Weight: 5.2KG.

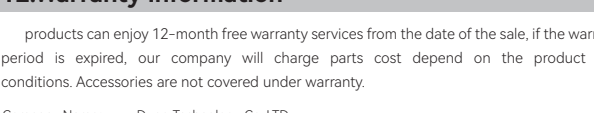
9. Accessories

AC Cable	1pc
USB Cable	1pc
User's Manual	1pc
Warranty Card	1pc
6.35 to 3.5 converter	1pc
Bluetooth antenna	1pc

10. Connecting to the Audio Device

- 1、Set this unit as USB input, and use the USB cable or OTG cable(if connect mobile phone), connect to the PC, mobile phone or Hi-Fi player, then connect headphone, playing music on computer and enjoy it.

*Note: When you connect the phone for the first time, you need to set the volume of the phone to maximum, otherwise there will be no sound output.



- 2、Set this unit as COAXIAL/OPTICAL input, use Coaxial/Optical cable to connect with player or CD which with Coaxial /Optical audio output, playing music, connect headphone and enjoy it.

- 3、Set this unit as Bluetooth input, search and connect Bluetooth to phone or computer, playing music, connect headphone and enjoy it.

- 4、Set this unit as BALANCE input, use balanced audio cable to connect your player or DAC's Balanced output, playing music, connect headphone and enjoy it.

- 5、Set this unit as AUX input, use audio cable to connect your player or DAC's AUX output, playing music, connect headphone and enjoy it.

- 6、When connect USB, COAXIAL, OPTICAL or Bluetooth, the AUX out/Balanced out can be connected to other HI-FI amplifier or Active speakers.

When connect USB, COAXIAL, OPTICAL or Bluetooth, the AUX OUT can be connected to other HI-FI amplifier or Active speakers.

11. Install USB Driver

If your PC's system is windows, you can downloaded the Driver from the official website, link: (<http://www.xduoo.net/xduoo/EnDownload.asp>), choose XDUOO USB Drive, guiding is inside the package.

12. Warranty Information

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
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