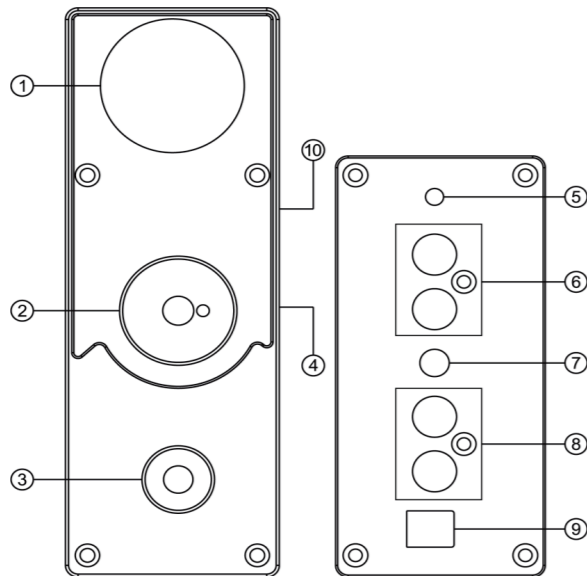


T4 PLUS front and back panel



- ① VU meter
- ② Power switch/Volume knob
(Anti-clockwise rotate to off/Vol-; Clockwise rotate to on/Vol+)
- ③ 3.5mm Headphone output
- ④ MM/MC switch; MC mode impedance setting
- ⑤ PHONO GND interface
- ⑥ PHONO input (red: right channel; white: left channel)
- ⑦ Aux input
- ⑧ RCA output interface (red: right channel; white: left channel)
- ⑨ Power interface (DC 12V)
- ⑩ VU meter sensitivity regulator

Operation steps

1. Insert the vacuum tubes into the sockets of T4 PLUS.
(please check if the pins of tube are deformed)
2. Connect active speakers or an amplifier to the RCA output of T4 PLUS, a headphone also can be connected to its headphone out. (Stereo RCA and 3.5mm headphone jack can output at the same time.)
3. PHONO IN:
Connect the turntable to the phono input of T4 PLUS, select MC/MM mode and adjust the matching impedance.
AUX IN:
Connect audio source to AUX input of T4 PLUS. (AUX input with priority, please make sure the AUX cable has been pulled out if want phono input.)
4. Connect the power adapter to T4 PLUS and then plug the power cable into the socket.
5. Clockwise rotate the knob to power on and adjust volume according to your preferences and enjoy music.
6. After use, anti-clockwise rotate the knob to power off and then disconnect the power adapter.

Parameters

| | |
|-----------------------------|----------------------------------------------------------------------------|
| Audio input | Phono/Turntable/3.5mm AUX |
| Audio output | Stereo RCA/3.5mm headphone jack |
| Headphone max output power | 150mW @32Ω |
| Matched headphone impedance | 32-300Ω |
| Working voltage | DC 12V |
| Input level | AUX: 0.775V PHONO: 0.005V |
| Frequency response | AUX: 20Hz-20KHz (±0.3dB) PHONO: conforms to RIAA characteristics (±3dB) |
| SNR | AUX: ≥110dB PHONO: ≥80dB |
| RCA max output level | AUX: 1.5V PHONO: 300mV(MM)/3V(MC) |
| THD | AUX: 0.2% PHONO: 0.8% |
| Package weight | 0.99kg/2.18lb |
| Package dimensions(W*D*H) | 230*300*65mm/9.06*11.81*2.56in |

FAQ

- Q: Why are all cables connected but there is no sound?**
A: 1. Check the LED below the tubes:
① If it can light up normally, please check if the corresponding input mode is selected.
② If it cannot light up, please use another DC 12V power supply to detect whether the fault is the power supply or T4 PLUS.
2. If the indicator light is on but there is no sound, so the power supply is normal. Please continue to check according to the order of audio signal transmission: audio source → audio cable → preamp/decoder → amplifier → speaker.
3. If all is fine, please check whether the audio source is muted, paused or the volume is too small.
- Q: Why is the sound distorted? How to adjust the treble, bass and main volume?**
A: Maybe the input amplitude is too large. If the volume of audio source and T4 PLUS both are turned to maximum, it is easy to cause distortion. Please turn down the volume of audio source or T4 PLUS. In general, adjust the volume of amplifier to about 60%, then fine-tune the volume of preamp(distortion will be greatly reduced in this way); the treble and bass are usually adjusted according to the music style/device types/ personal preference.
- Q: Why is there a loud current sound or buzzing sound on the speaker?**
A: 1. Please use the original power supply. Many power supplies in the market have interference, which will cause current sound.
2. When using unshielded signal cable in no load, there will be interface signals. Please use the shielded signal cable or unplug it.
3. If there is still noise after eliminating above situations, please confirm whether it is external noise or internal noise. Disconnect all inputs and only retain power supply and power cable. If the noise disappears, it is from audio input; if the noise is still there, it is possibly caused by .

power supply or the internal of product.

- Q: Why is there no sound output when using MC or MM mode?**
A: AUX input is with priority, please unplug the AUX input cable, otherwise there will be no sound.
- Q: Can I replace the vacuum tube without turning off the power?**
A: No, because T4 PLUS is working under high pressure internally, it will be damaged if the tubes are plugged during its work.
- Q: Why is there a thumping sound when switching on/off?**
A: Please confirm the on-off sequence is correct, normally it follows the order of signal transmission when turn on: audio source → preamp / DAC → amplifier → speaker. (The sequence is reversed when switching off. As the internal capacitors will be discharged for a while after shutdown. If turn off the preamp firstly and then turn off amplifier, impact sound will be easily caused which may damage the amplifier or speaker in severe cases).
- Q: How does the vacuum tube work when the supply voltage of the vacuum tube preamp is only 12V?**
A: In addition to the high-voltage power supply of transformer, vacuum tubes also use positive and negative voltage supply (it depends on the function of the vacuum tube in the circuit), we also have some products that adopt the step-up power supply.
- Q: Why is the sound not clear every time the vacuum tube preamp starts to be used?**
A: Unlike transistors, vacuum tubes are sensitive components which need to be warmed for a while before entering normal working status. Generally it's better to warm up for about 15 minutes.
- Q: Why is there a faint sound even when the volume is turned up to the maximum without vacuum tubes?**
A: Preamp is for audio signal amplification, other components such as capacitors or resistors will still produce a weak signal coupling although no vacuum tubes are plugged in. Please install the vacuum tube correctly before use.

Q: How long is the service life of vacuum tubes? Can I replace them by myself?

- A: The service life of the vacuum tubes is about 4000-4500 hours, they are not easy to break as long as not damaged by external forces. Before replacing, please confirm the model that can be replaced.
- Q: The vacuum tubes of T4 PLUS can be replaced by what model?**
A: Default JAN5654 vacuum tube, can be replaced by: 6J1, 6J2, 6J3, 6J4, 6J5, 6K4, 6*1N, 6*4N, 6*5N, 5725, 6AK5, EF95, 6BA6, 403B, etc.
- Q: What should be paid attention to when using vacuum tube devices?**
A: Vacuum tube is a high-resistance component, easy to be interfered with, so it should be as far away as possible from RF interference or electromagnetic interference sources and avoid vibration; The vacuum tube will generate heat when working, so it should be well ventilated and heat dissipated.
- Q: Can I replace or upgrade the op-amp by myself?**
A: Commonly used replaceable op amps: 2604 / 2134 / Muse02, etc. (dual op amps are generally available), different op amps have different sound effects. (According to the actual product models).
- Q: What is the difference between MM/MC? How to determine which type of phono cartridge is?**
A: MM: Moving-magnetic cartridge; MC: Moving-coil cartridge
You can check the product model to determine the type of phono cartridge (MM cartridges are commonly used in the record players produced currently).
- Q: What is RIAA?**
A: RIAA is a unified standard for the recording and playback of vinyl records issued by the Recording Industry Association of America, the currently produced phonograph and vinyl records basically must follow this standard.
- Q: What is the function of the phonograph GND? Why are not all phonographs grounded?**
A: Phonograph GND is to connect the phono cartridge or phonograph shell to the signal GND of preamp, to avoid inductive loads such as phono

to the signal GND of preamp, to avoid inductive loads such as phono motors from interfering with audio signals. (Old-fashioned phonographs usually with a GND wire or GND terminal, and new-style connect the GND wire to the negative pole of signal cable directly, the effect of both way is the same).

- Q: How to check and avoid current sound/interference sound from the phonographs?**
A: Due to the unique design and structure, as well as the characteristics of the direct contact between phonograph cartridges and records to read signal, the background noise of the phonograph will be more obvious when compared with phones and computers. Besides its own background noise, uneven placement, record aging, cartridge wear and dust on the surface etc. also can result in current noise (Please clean the record or replace the cartridge regularly).
- Q: Why is the sound distorted and broken?**
A: Please confirm whether the type of phono cartridge and phono preamp is matched; whether the phono output mode is correct (some phonograph with built-in phono preamp, the LINE/PHONO input switch in correct position or not); whether the gain of preamp is adjusted too high; whether the impedance is matched (for MC cartridge); whether the GND is connected well, etc.
- Q: Can the phono preamp be used as a common audio preamp?**
A: Phono preamp is designed for vinyl record players, the amplification times is larger than common audio preamp. If used as a common preamp, lots of distortion will be caused, even the amplifier and speakers will be damaged.
- Q: Why is the sound very low when the headphone is connected to the headphone amplifier?**
A: Please confirm whether the impedance, plug type and other parameters of headphone are compatible with the headphone amplifier, or whether the input signal is too low.

Q: Why is the sound from headphone distorted after connecting to the headphone amplifier?
A: Please confirm the volume of audio source and headphone amplifier. If the volume is too high that exceeds the power which the headphone can bear, distortion will be caused.

Warning

1. Please do not open the shell by yourself, improper operation may cause a risk of electric shock.
2. Please use the regular manufacturer's switching power supply, otherwise there will be the risk of damage to T4 PLUS.
3. Please do not use T4 PLUS in a high temperature and humidity environment.
4. Please do not unplug or plug the vacuum tube when T4 PLUS is on, otherwise the tubes or T4 PLUS will be damaged.
5. Please do not replace mismatched vacuum tubes, otherwise the tubes or T4 PLUS will be damaged.
6. Default 12V power adapter, and T4 PLUS will be damaged if the voltage exceeds 12V.

Contact information

- Website: www.doukaudio.com
- Email: nobsound@doukaudio.com
- WeChat/Whatsapp: +86-17704028602
- Address: Room 1329, Wang Cheng Building, Long Guan East Road, Long Hua District, Shen Zhen, Guang Dong, China, 518000

