



# Fosi Audio

## Fosi Audio T20 User Manual



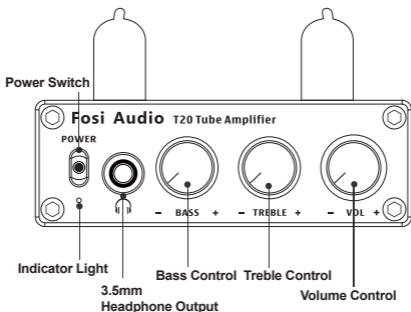
Thanks for choosing us!

# Product Specifications

Thanks again so much for your purchasing! This is a creative audio amplifier for you, it combines the beauty of traditional vacuum tube and the power of digital amplifier. It has BASS & Treble adjustable function, Bluetooth apt-X connection, support audio output through passive speaker or 3.5mm headphone. And, the vacuum tube is also replaceable as you like, it is a fantastic amplifier that suit for your personal PC desk, book room, or for your home theater in your living room. Bring joy and happiness to your smarter life!

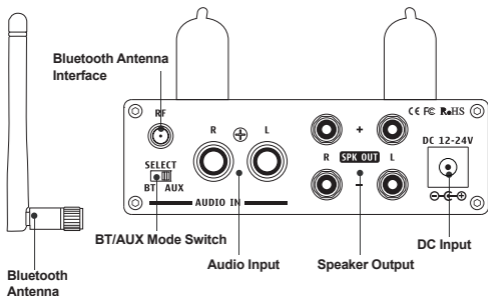
<b>Power Adapter:</b>	24V/4.5A
<b>DC Input Range:</b>	12V - 24V
<b>Terminating Impedance:</b>	2 $\Omega$ - 8 $\Omega$
<b>Max Power Output:</b>	50W x 2@4 $\Omega$
<b>THD:</b>	$\leq 0.04\%$
<b>SNR:</b>	$\geq 99\text{dB}$
<b>Amplifier Chip:</b>	TPA3116
<b>Input Sensitivity:</b>	$\leq 280\text{mV}$
<b>Frequency Range:</b>	20Hz - 20kHz ( $\pm 1$ dB)
<b>Input Mode:</b>	Bluetooth and AUX
<b>Bluetooth Transmission Distance:</b>	Up to 50ft(15m)
<b>Bluetooth Transmission Distance:</b>	Up to 50ft(15m)

# Product Overview & Control Functions



## Front Panel

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## Back Panel

# Package Contents

T20 Tube Amplifier\*1  
Vacuum Tube\*2  
Bluetooth Antenna\*1  
24V/4.5A Power Adapter\*1  
User Manual \*1

## Quick Setup

### Preparation

**Prepare 1:** T20, 24V power supply, passive speakers, speaker wires or banana plugs;

**Prepare 2:** Insert the tube carefully and make sure that all pins are fully inserted.

**Prepare 3:**

- Connect the T20 to the passive speakers via the speaker wires, you can connect the speaker's wire via the bare wire or the banana plugs;
- Or Connect a wired headset to the Headphone Output on the front panel of the T20, the speaker output will disconnect once the headset is plugged in.

**Prepare 4:** Connect the 24V power supply to the DC input;

**Prepare 5:** Turn on the Power Switch.

**Note:** Before turning on the power switch of the amplifier, please turn the volume button to the lowest position.

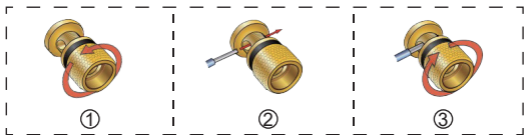
**Note:** Be sure that the power switch is on the OFF position before connect the power supply. Please turn on the T20 first and then turn on the speakers to avoid noise.

## How to connect the speaker wire?

### Method 1: Bare wire connection illustration

- ① : Release the horn terminals block terminals;
- ② : Insert the two ends of the speaker wire into the amplifier and speaker terminal holes;
- ③ : Tighten the horn terminals;

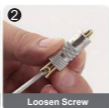
**Note:** Please make sure that the speakers' wire are not attached with each other, the speaker connection area is very narrow, it is easy to cause the positive and negative speakers' wires to contact each other, which will result in no sound output.



### Method 2: Banana plugs connection illustration

- ① : Release the banana jacket;
- ② : Loosen the screw;
- ③ : Insertion speaker wire and tighten the screw;
- ④ : Tighten the banana jacket;
- ⑤ : Insert the banana plug into the horn terminals of the speaker and amplifier.

**Note:** Please make sure that the speakers' wire are not attached with each other, the speaker connection area is very narrow, it is easy to cause the positive and negative speakers' wires to contact each other, which will result in no sound output.



## Bluetooth Input

Prepare your Bluetooth device (take a phone as an example)

**Step 1:** Install the Bluetooth antenna.

**Step 2:** Select the input mode switch to BT on the back panel of the T20, The indicator is blue and flashing.

**Step 3:** Turn on the Bluetooth on your phone and search “ Fosi Audio” or “Fosi Audio T20”, the indicator stays blue after a successful pairing.

**Step 4:** Open the audio application, play and enjoy!

## AUX Input

Prepare: audio source (take a TV as an example), a RCA cable or a 3.5mm AUX to RCA cable.

**Step 1:** Select the input mode switch to AUX on the back panel of the T20, the indicator light shows red light;

**Step 2:** Connect your TV to “Audio Input” via a RCA cable;

**Step 3:** Open your TV, play and enjoy!

## Troubleshooting/QA

### 1: What type of speakers work best with T20 Amplifier?

- Fosi Audio Amplifiers work great with any 2-8 ohm passive speakers. You can connect passive speakers via the Speaker Output or active speakers via the Headphone Output.



## **2: Can I connect a turntable to T20 amp, why is the volume is extremely Low?**

- As for the turntables do not have a built-in preamp, you need to add an external phono preamp before connecting T20, such as our BOX X1, or BOX X2.
- As for the turntables which have a built-in preamp, you need to switch the preamp on before connecting T20.

## **3: Why does the sound is cracking or make a lot of electric noise?**

- Please make sure all the cables completely pushed into the devices, incompletely connection will cause this cracking.
- Please remove all the inputs then check whether cracking noise disappear or not, the cracking maybe from the audio source or input cables.
- If you are not using the original factory standard power supply, please replace the power supply before testing. Many power supply in the market have large interference coefficient, which will cause a lot of current sound.
- Please check if the vacuum tube is completely plugged in, and try to change the left and right vacuum tubes.

## **4: My Bluetooth device cannot pair with T20?**

- Make sure that you have selected the input mode switch to BT on the back panel of the T20.
- Make sure that T20 is powered on.
- Make sure that T20 is not paired with other devices.
- Make sure that the distance between your device and T20 is not too long.
- Make sure there are no barriers between your device and T20, barriers will affect the Bluetooth operation distance.
- Please reconnect the power supply to the T20, and move the T20 to another room to have a try.



- Restart the T20 and then try to connect again, try to use another Bluetooth device.

### **5: Why Bluetooth is intermittent?**

- Please try with another Bluetooth device.
- Make sure there is no interference from other electronic devices between the T20 and the audio source.
- Place your device close to the T20, and plug in the power adapter again.

### **6: How much power does it take in standby mode? Can this amp be left on all the time?**

- This is the class D amplifier, it will cost very low power when it is in standby mode. It can be connected all the time and it is safe without power consumption.

### **7: Sound quality is not good?**

- Make sure all the cables are fully connected.
- Adjust the treble and bass control of the power amplifier to achieve the right tone.
- Please try to change the sound source and cables to test.
- Please check if the vacuum tube is broken or completely plugged in.

### **8: Can T20 accept signal from a Bluetooth microphone?**

- Please make sure your Bluetooth microphone must be the transmitter. Because T20 is a Bluetooth receiver amplifier.
- Please make sure that microphone's Bluetooth can be connected to the T20's Bluetooth by your operation.

### **9: Why does the sound cut in and out?**

- Please try to change the sound source.
- Lower the treble and bass of the T20.

- Make sure that the positive and negative terminals of the speaker outputs do not touch each other. Some of the larger banana plugs can easily touch each other and cause a short circuit

#### **10: Can I bridge channel 1 and channel 2 to get 100watts?**

- No, this amplifier can't be bridged.

#### **11: Why does distortion occur?**

- Because the vacuum tubes amplify the sound. If you turn the sound up too loud, distortion may occur. Please try turning the volume down a little.

#### **12: Can I replace the vacuum tubes?**

- If necessary, there are substitutions: EF95, 6AK5, 6AK5W, 403A/403B, 6J1, 6J1P, 6J2, 6J3, 6J4, 6J5 vacuum tubes, etc. You can replace the vacuum tubes to DIY your stereo system.

**Note:** Please must remember switch off the power BEFORE you pull out the tube, or it might damage the device.

#### **13: Why the T20 came with a broken vacuum tube?**

- Due to the long-distance, the vacuum tube may be damaged during transportation. If you find that the vacuum tube is broken or there is other problems, please contact our email, and we will replace the vacuum tube for you.

#### **14: Can headphones and speakers play at the same time?**

- No, when the headphones plug in, the speakers' output will be interrupted.

**Output priority:**

**3.5mm Headphone Output > Speaker Output**

### **15: How can I connect T20 to TV?**

- The 3.5mm AUX jack is the audio input. It can through 3.5mm AUX input to connect your TV.

### **16: Why there is no voice from my amplifier?**

- Please check whether the cable of power supply is connected to T20 and whether the power indicator is on.
- Make sure the T20's indicator light is on when the power is turned on.
- Please check that the T20 and your source components are turned on and not set to minimum volume, if possible replace your source and test again.
- Check that the wire connections from the audio source to each speaker in the amplifier are connected correctly.
- Please check that the cable is not loose, damaged. Incomplete connection is one of the main reasons for no sound.
- Please make sure the Bluetooth is paired or not, if Bluetooth is connected, AUX input will be disconnected. If you want to connect this amplifier with a 3.5mm AUX cable, you need to disconnect the Bluetooth first.
- Please make sure that the headset is connected or not. If the headset is connected, the speaker will be disconnected.

### **17: Which Bluetooth chip does T20 have?**

- The T20 is equipped with QCC3031 Bluetooth chip, which supports Apple acc and aptx.

**Note:** QCC3031 Bluetooth chip does not support apt-X LL.

### **18: an I use Bluetooth head phones with this unit?**

- This tube amplifier is a Bluetooth receiver, not a Bluetooth transmitter. It works with 3.5mm wired headphones.

# Warranty Information

- All Fosi Audio products have an 18-month limited warranty on parts and labor from the date of purchase. Please contact us if you have any problems.

## About Fosi Audio

- Fosi Audio designs and builds innovative audio products with all your music in mind. Great sound, simple but elegant designs, high-quality materials, and truly useful features are what Fosi Audio is about. We sincerely hope you get as much enjoyment from our products as we've had to create them!

**Our website:** [www.fosiaudio.com](http://www.fosiaudio.com)

**Amazon store:** [www.amazon.com/fosiaudio](http://www.amazon.com/fosiaudio)

**Our Youtube channel:** Fosi Audio

**Our Facebook page:** Fosi Audio

**After-sale Service and Technical Support Email:**

[support@fosiaudio.com](mailto:support@fosiaudio.com)

[fosiaudio@hotmail.com](mailto:fosiaudio@hotmail.com)



Fosi Audio Product's User Manual