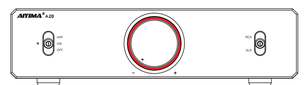
AIYIMA® AUDIO



Shenzhen Yima Technology Co.,Ltd

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Location:4Floor, Building C,Getailong Industrial Zone,No.227,Bulong Road,Bantian Street,Longgang District, Shenzhen

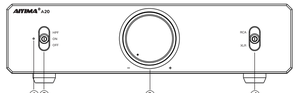
It is forbidden to place equipment waste marked with the symbol of a crossed-out trashbin together with other waste . This equipment is subject to collection and recycling .

A20 User Manual

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Front and Rear Panel Instructions



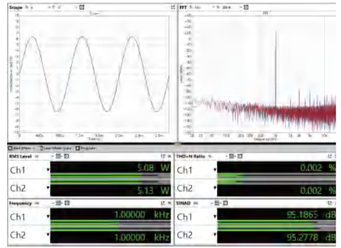
① Power Indicator Light
② On/Off/HPF (High-Pass Filter)
③ Volume Control Knob
④ Input Mode Switch
⑤ XLR Input
⑥ RCA Input
⑦ RCA Gain Switch（3dB）
⑧ HPF (High-Pass Filter) Knob
(Available only in High-Pass Filter Mode)
⑨ BYPASS Button (Hold for 3 seconds to switch)
⑩ SUB Output
⑪ Speak Output (Red/Positive, Black/Negative;
L connects to the left speaker, R connects to the right speaker)
⑫ 12V Trigger Input
⑬ Power Input (DC 24~48V)

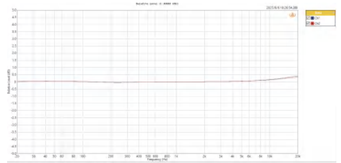
Packing Contents

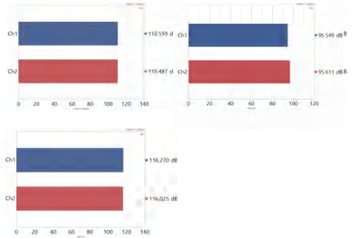
1. AIYIMA A20 Balanced Stereo Power Amplifier x1.
2. 12V Trigger Cable x 1.
3. Power Adapter x 1.
4. User Manual x1.
5. Warranty card x1.

Specification and Test Images

Channel	2.1	
Power Amplifier Chip	TPA3255	
Input	RCA .XLR	
Output	Speaker Output , Active Subwoofer Output	
SNR	≥116dB	
SINAD	95dB	
THD+N	0.002%	
Dynamic Range	110dB	
Frequency Response	20Hz~20kHz（±0.4dB）	
HPF (High-Pass Filter) Adjustable Range	60~200Hz	
Rated Output Power	48V10A	250W*2(@4Ω)
	48V5A	120W*2(@4Ω)
	32V5A	78W*2(@4Ω)
Speaker Impedance	4~8Ω	
Power Input	DC 24~48V	
Package Weight	1.75kg	
Package Size	L296*W228*H77mm	







Operation Guide

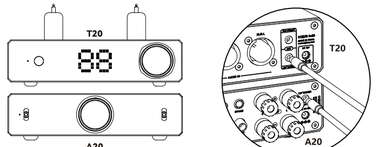
Important: Do not connect the power cord until all connections are complete.

1. Ensure the switch lever of A20 is in the OFF position.
2. Connect the passive speakers to the speaker output terminals of A20 using speaker cables.
3. Select the appropriate cable (RCA or XLR) according to the audio source device to be used, and connect the audio source device to the corresponding audio input interface of A20 through the cable.
4. Connect the original power supply (DC 24~48V), and switch to the desired mode (ON or HPF) by moving the switch upward.
5. Switch to the corresponding input channel by moving the right lever, play music, and you can start listening.

Setup Instruction

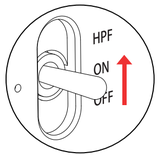
12V Trigger Input

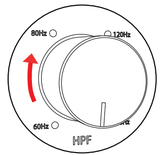
Set the A20 switch to the desired mode, and connect the DAC or preamplifier's trigger output interface to this device's 12V trigger input interface using a 3.5mm signal cable. The device will then follow the master device's power on/off status. (The DAC/preamp must support 12V trigger function)



High-pass Filter Mode

Switch the left toggle to the HPF position and adjust the output cutoff frequency by rotating the HPF adjustment knob at the back of the device. Please check the frequency range of your main speakers before adjustment to achieve optimal listening experience.





BYPASS Mode

Hold down the BYPASS button on the back of the device for three seconds to switch to volume bypass mode. Note that the amplifier volume will be at its maximum level. Before switching to pass-through mode, please reduce the volume at the source to avoid hearing damage and speaker damage.

Replaceable Op-Amp Chip

Op-Amp Chip Replacement Procedure:

1. Power off the device and discharge static electricity from your body to prevent electrostatic discharge (ESD) damage to the chip.
2. Use tweezers to remove the old chip vertically. Align the round mark in the groove of the new op-amp chip with the notch on the socket, then gently press and insert the chip, ensuring all pins are fully seated.
3. Make absolutely sure the chip is installed in the correct orientation, otherwise it may be damaged or destroyed.







Precautions

Note the following:

1. Do not open the casing by yourself. Improper operation may cause electric shock.
2. Please use a switching power supply from a regular manufacturer; otherwise, there is a risk of damaging the machine.
3. Do not place the machine in an environment with high temperature and high humidity for operation.
4. When this device is not in use for an extended period, please turn it off to prevent overheating and ensure normal operation in the future.

Frequently Asked Questions

Q: All cables are connected, but there's no sound output. Why?

A: 1. Check if the cables are properly connected, the unit is powered on, and the correct input mode is selected.
2. Check if the volume is set too low. If so, increase the volume.
3. If both of the above are normal, check whether the audio source device is paused, muted, or set to minimum volume.

Q: Why is the sound distorted?

A: This may occur if the input signal level is too high. If both the amplifier's volume and the input source are set to maximum, distortion is likely. Simply reduce the volume on either the source device or the amplifier.

Q: Why does the volume level differ when switching between audio sources (e.g., from CD to phone) even though the amplifier's volume setting remains the same?

A: Different playback devices output different signal voltages. For example, a phone typically outputs 0.35V, while a CD player outputs 1V. This naturally results in varying volume levels.

Q: Why is there a loud humming or buzzing noise from the speakers?

A: 1. If you are not using the original power adapter, try replacing it. Many third-party power supplies have high ripple noise, which can cause significant hum.
2. If unshielded signal cables are left unconnected, interference may enter the amplifier and get amplified. Try using shielded cables or disconnect the signal cables.
3. If the noise persists after checking the above, determine whether it is external or internal. Disconnect all input sources, leaving only the power and speaker connections. If the noise disappears, the issue is with the audio source. If the noise remains, it may be due to power interference or an internal amplifier issue.

Q: Why is there no sound or very low sound after connecting the amplifier to the speakers?

A: 1. First, check the input source and volume settings.
2. Ensure the speakers are compatible with the amplifier (e.g., whether they are constant-impedance or constant-voltage, and whether the speaker power rating is too high for the amplifier).

Q: Why is there a popping noise when turning the amplifier on or off?

A: Confirm the correct power sequence is followed. The proper order is:
Power on: Audio source → Preamp/DAC → Amplifier → Speakers.
Power off: Reverse the order (Speakers → Amplifier → Preamp/DAC → Audio source).
This is because internal capacitors discharge gradually after shutdown.
Turning off the preamp before the amplifier can cause a popping sound, which may damage the amplifier or speakers in severe cases.

If you have any further questions, please contact our support team or scan the QR code on the back of the manual. Email: support@aiyima.com

Product Warranty

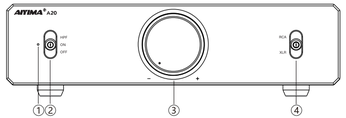
Return and Exchange within 7 Days:If the product fails under normal use within 7 days from the date of purchase, you can return or exchange it unconditionally.

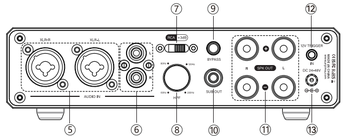
Two-Year Free Warranty:
If the product fails under normal use within two years, you can enjoy free repair service.

Purchase Date Verification:
The purchase date shall be based on the invoice or receipt; for online purchases, the order date shall be considered as the purchase date.

The following situations are not covered by warranty service:
1. Damage caused by human factors or improper operation
2. Self-disassembly or modification
3. Expiry of warranty period
4. No proof of purchase
5. Damage caused by accidents or environmental factors

前后面板说明





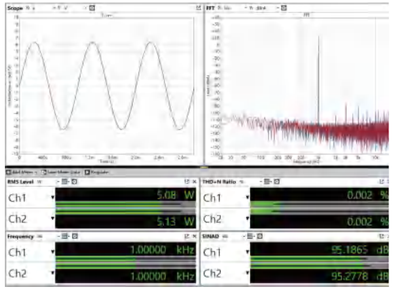
① 电源指示灯
② 开/关/HPF（高通滤波）
③ 音量调节旋钮
④ 输入模式切换
⑤ XLR输入
⑥ RCA输入
⑦ RCA增益开关（3dB）
⑧ HPF高通滤波旋钮（仅高通滤波模式可用）
⑨ BYPASS音量旁路按钮（长按三秒切换）
⑩ 低音炮输出
⑪ 音箱输出（红/正极，黑/负极；L接左音箱，R接右音箱）
⑫ 12V触发输入
⑬ 电源输入（DC 24-48V）

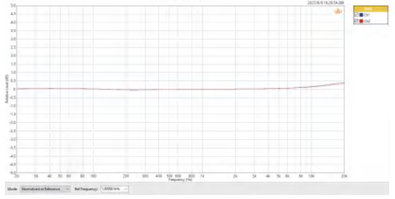
包装清单

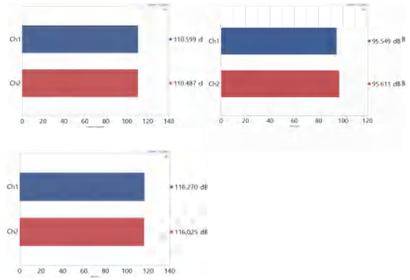
1. AIYIMA A20平衡立体声功放x1.
2. 12V 触发线x1.
3. 电源适配器x1.
4. 说明书x1.
5. 保修卡x1.

规格参数及测试图

声道	2.1	
功放芯片	TPA3255	
输入	RCA , XLR	
输出	音箱输出, 有源低音炮输出	
信噪比	≥116dB	
信纳比	95dB	
总体谐波失真＋噪音	0.0020%	
动态范围	110dB	
频率响应	20Hz~20kHz (±0.4dB)	
HPF (高通滤波) 可调范围	60~200Hz	
额定输出功率	48V10A	250W*2 (@4Ω)
	48V5A	120W*2 (@4Ω)
	32V5A	78W*2 (@4Ω)
扬声器阻抗	4-8Ω	
电源输入	DC 24-48V	
包装重量	1.75kg	
包装尺寸	长296*宽228*高77mm	







操作指南

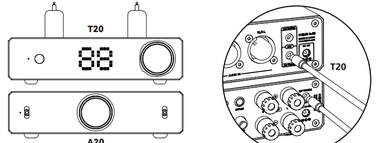
注意：在所有连接完成之前，请勿插入电源线

1. 确保A20的开关拨档处于OFF
2. 将无源音箱通过音箱线连接到A20的音箱输出端子
3. 根据将要使用的音源设备选择对应的线材（RCA或者XLR线材），并将音源设备通过线材连接到A20对应的音频输入接口
4. 连接原装电源（DC 24-48V），向上拨动开关切换到所需模式（ON或HPF）
5. 拨动右侧拨档切换到对应的输入通道，播放音乐，即可开始聆听

功能操作

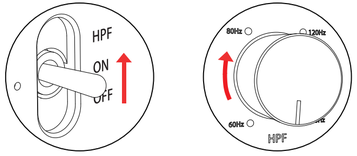
12V触发输入

将A20开关拨到所需的模式，使用3.5mm信号线连接解码器或者前级的触发输出接口到本机的12V触发输入接口，设备即可跟随主控端设备开关机。（解码器/前级功放必须支持12V触发功能）



高通滤波模式

将左侧拨档切换至HPF档位，通过旋转设备后部的HPF调节旋钮调节输出截止频率，调节前请自行查阅所用主音箱频率范围，以达到良好听音体验。



BYPASS音量旁路功能

长按设备后部BYPASS按钮三秒，即可切换至音量旁路模式，注意此时功放音量为最大状态，在切换至直通模式前，请先降低音源端的音量，以避免听力损伤和喇叭损坏。

可更换运放芯片

运放芯片更换步骤：

1. 关机并注意消除身体静电，避免静电击穿芯片。
2. 镊子垂直拔取旧芯片，新运放凹槽圆点标记对齐底座带有缺口处，轻压插入并确保引脚完全入槽。
3. 请务必确认芯片安装方向正确，否则会烧毁芯片。



注意事项

请注意以下事项：

1. 请勿私自打开外壳，操作不当可能引起触电危险。
2. 请使用正规厂家的开关电源，否则会有损坏机器的风险。
3. 请勿将机器放置在高温高湿环境下工作。
4. 在长时间不使用此设备时，请关闭该设备，以免设备过热影响后续正常使用。

常见问题

问：所有线都连接好了，为什么没有声音输出？

答：1. 检查线路连接是否正确，机器是否启动并切换到了相应的输入模式。

2. 检查音量是否处于很低的状态，如果是，请将音量调大。
3. 如以上两点都正常，检查音源输入设备是否暂停了、静音了或者音量处于最小状态。

问：为什么声音出现失真？

答：可能使用的输入信号幅度过大，如果本机器音量调到最大，而输入源也调到最大，那就很容易失真，此时你只需要将输入源或本机音量调小即可。

问：为什么机器音量不变，而接入不同的音源（如先接CD再换成手机）声音大小却不一样了？

答：不同的播放设备输出电信号幅值是不一样的，比如手机通常是0.35V，而CD则是1V。所以声音大小自然不一样。

问：为什么喇叭出现很大的电流声或者嗡嗡声？

答：1. 如你使用的不是原厂标配的电源，请更换电源后再测试。很多电源存在纹波干扰系数，系数大则会造成很大电流声。

2. 使用了不带屏蔽的信号线空载时，会有干扰信号进入到功放进行放大，建议你更换带屏蔽的信号线，或者拔掉信号线。
3. 以上两点都排除后还有噪音，需要判断是外部噪音/或是机器内部产生的噪音。断开所有输入，只保留电源和输出线，若此时噪音消失则是音源输入的噪音，若噪音还在则可能是电源受干扰或者是机器内部产生的。

问：功放接上音箱后无声或声音很小？

答：1. 首先排查输入音源和音量的调节。

2. 确认音箱与功放是否匹配（比如音箱是定阻还是定压的、音箱功率是否超过功放功率太多等）。

问：机器开关机时为什么会有砰砰声？

答：应确认使用时的开关机顺序；正常是按照信号流程：分别是播放源→前级/解码器→功放→再到音箱（关机时则相反，因为机器内部电容在关机后放电会有一段时间，若先关前级后关功放就很容易造成冲击声，严重时可能会损坏功放或者音箱）。

如果您还有其他问题，请联系我们的支持团队或者扫描说明书背后二维码。

邮箱：support@aiyima.com

产品退换货及保修规定

7日内退换：产品自售出之日起7日内，在正常使用情况下出现故障，可无条件退换货。

两年免费保修：正常使用两年内出现故障，可享受免费维修服务。

购买日期认定：购买日期以发票或收据为准；网上购买以订单日期为准。

以下情况无法享受保修服务：

1. 人为损坏或操作不当
2. 自行拆机或改装
3. 超过保修有效期
4. 无有效购买凭证
5. 意外或环境导致损坏