

AD-2PRO User Manual

ISO9001 Certified Enterprise

Thank you for using our audio product. We provide consumers with stable, reliable, endurable, and delightful audio technological achievements with the philosophy of "high quality, high taste, and high technology" as well as exquisite technique, classic circuit, novel technology, stable & first-class quality, and first-class service!

- Omni balance, holohedral symmetry, and differential input to class A power amplification circuit of differential BTL power output;
- Independent power supply for left & right channels to greatly improve the resolution of power amplifier;
- 200W/8Ω power output for each channel, 860W high-quality transformer, 120,000 microfarad audio frequency dedicated custom-made capacitor, high-power audio dedicated tube parallel output, extremely high current output capacity, and abundant power reserve for driving high power demanded speaker easily;
- High-end graceful aluminum alloy chassis, sturdy and endurable; meticulous and rational inner layout with strong anti-interference ability; thick and exquisite aluminum front panel looks simple and graceful;
- With ToneWinner patented technology: high/low voltage two-stage power intelligent switch management to satisfy Hi-Fi class-A power output and the green philosophy of energy conservation and environmental protection (Patent No.: ZL201420783891.8);
- Perfect power amplifier protection circuit (short circuit protection, overheating protection, and DC protection, etc.);

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Product Packing List

No.	Name	Qty/Unit
1	Manua	1 pcs
2	Power cord	1 pcs
3	Certificate of Qualification	1 pcs
4	Remote Control	1 pcs
5	Optical Cable	1 pcs

Pollution Control Sign and Content Description



The symbol indicates that the product can be reused. The figure indicates the term of service of environmental protection. The product will not cause environmental pollution or affect human body and property within the term of service expressed by the figure since the date of manufacture as long as the safety and operating precautions on the product are obeyed.

Name and Content of Toxic or Harmful Substance or Element in the Product

	Toxic or Harmful Substance or Element						
Name of Parts	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr ⁶ †)	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)	
Body/Box	0	0	0	0	0	0	
Equipped Baseplate							
/ Electrical Part	×	0	0	0	0	0	
Plastic Structural Member	0	0	0	0	0	0	
Metallic Structural Member	0	0	0	×	0	0	
Cable	0	0	0	0	0	0	
Transformer	0	0	0	0	0	0	
Loudspeaker/ Microphone	×	0	0	×	0	0	

Description:

"O" indicates that the content of the toxic or harmful substance in all homogeneous materials of the part is below the limit required in SJ/T11363-2006. "X" indicates the content of the toxic or harmful substance in at least a certain homogeneous material of the part is above the limit required in SJ/T11363-2006. Note: "X" stands for currently irreplaceable material.

I. Significant Safety Measures



Warning

Do not open the cover due to electricity inside.



- ■To reduce the risk of electrocution, please do not remove the outer cover (or rear cover)
- ■If maintenance is required, please hire eligible maintenance personnel.
- To avoid fire and electrocution, please do not put the equipment in a wet or damp environment.
- ■Safety Class: 1
- 1.Read safety measure: read carefully all the important information on protection and operation in the manual before using the equipment.
- 2.Obey User Manual: please obey the information on operation and use in the manual. Please do not violate the manual.
- 3. Please place the product in a place recommended by the manufacturer: to prevent to product from capsizing, please do not push hard or suddenly stop during movement. 4. Keep away from water and moisture: please do not place the equipment near water, such as bath tub, basin, sink, or washing machine, etc.; do not use the equipment under high temperature or humidity, such as damp basement, etc.
- 5.Cleaning: please do not use liquid or vaporific detergent. Please clean it with dry cloth. Please turn the equipment off and cut the power off before cleaning.
- 6. Power source: please use power source in accordance with the product operating sign. Lay out the wiring rationally. Please do not stomp or pull the power line to avoid damage. Pay special attention to the wires between the plug, convenient socket, and equipment. 7. Ventilation: vent holes are reserved on the outer shell of the product for the purpose of ventilation. To ensure the reliability of product performance, overheating shall be avoided. Please do not cover the equipment or use it on the surface of bed, sofa, carpet, etc. Newspaper, tablecloth, curtain, or other objects might block the vent hole. Please do not place the equipment next to curtain which might block the vent hole. If the equipment is built-in, or on the cabinet or shelf, please make sure it is sufficiently ventilated. Keep a 10cm (4") distance to the sides, top, and rear. The rear rim of the equipment support or top cover shall be 10cm (4") to the panel or wall in the back to reserve space for ventilation and heat dissipation.

8. Heating power- keep the product away from heat source, such as radiator, stove, or other objects which might generate heat (including power amplifier).

9. Prevent foreign matter or liquid-prevent object or

- liquid from entering the machine through holes because it might be exposed to current or live part and cause fire or electrocution. The product shall not be placed in rain or water. Do not place vessels containing water such as vase, etc. on the top of it.
- 10. Please properly connect all input/output lines before turning the equipment on.
- 11.Lightning: the equipment needs protection during thunder and lightning. Please pull off the power line to effectively prevent lightning strike.
- 12. Protection: 1) please pull off the plug when the product is idle. 2) Good grounding can prevent the equipment from damage.
- 13. Maintenance: please do not open the equipment shell to prevent electrocution. Please deliver the equipment to the local maintenance point of our plant if maintenance service is needed in the following cases.

 a) Foreign matter or liquid enters the equipment.
- a)Foreign matter or liquid enters the equipment b)The equipment is exposed to rain.
- c)Misoperation occurs.
- d)The equipment falls or the body is damaged.

 14.Battery: pay attention to environmental protection and do not discard used battery at will.

 15.Disconnecting device of grid power: the power plug and coupler on the equipment serve as the disconnecting devices. The power plug and coupler shall enable convenient operation.

 16.The product is only applicable to regions below 2000m altitude.
- 17. The product is only applicable to non-tropical climate.
- 18. Warning that equipment of category-I structure shall be connected to the grid power output socket with protective ground joint.

II. Overview of Functions

- 1-way coaxial and 2-way optical digital inputs; supports PCM and DSD decoding;
- 2-way unbalance and 1-way balance inputs;
- Manual/triggered on/standby function;
- Power amplifier static bias mode option: Class A/Class AB/AUTO;
- Power amplifier loudspeaker output mode option: group A/B/A+B;
- Panel standby, working, and protection display function;
- 1-way unbalance and 1-way balance bass output;
- MM/MC phono input

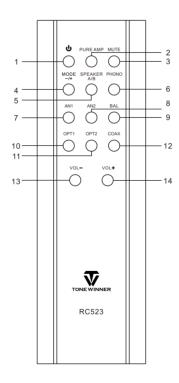
III. Overview of Features

(It is normal for a working unit's temperature is 40°C higher than the ambient temperature.)

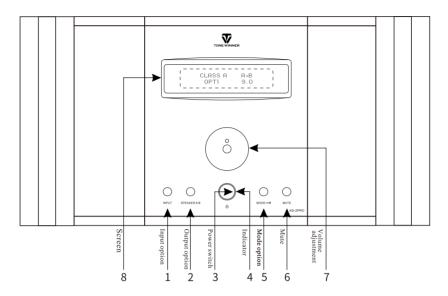
- Applies full balance, full symmetry, and differential input to Class A power amplify circuit of differential BTL power output:
- High circuit dynamics, high switching rate, low THD, low noise, good transient response, high linearity, wide frequency response, etc.;
- Cascode circuit used on voltage amplification stage to further improve power amplifier's open-loop gain and to expand high-frequency response to the extreme;
- Audion Darlington drive used on output stage and dedicated tube parallel output for high-power audio frequency to greatly improve the damping coefficient of power amplifier;
- High-front and low-rear power supply mode adopted on the preamp and power amp to show advantages of circuit more sufficiently and to further improve equipment performance;
- •A 860W high-quality ring transformer used, as high as 120,000uf audio frequency dedicated custom-made capacitors, and famous high-power audio frequency dedicated tube parallel output to provide extremely high current output capacity;
- $200W/80\Omega$ power output for each channel, and abundant power reserve for driving high power demanded speaker easily;
- Applies ToneWinner's classic independent isolated cabinets design to reduce mutual impact from swap left & right signals to the minimum;
- High/low voltage two-stage power intelligent management switching circuit set on AD-2PR0 for intelligent power supply mode to satisfy Hi-Fi Category-A power output and the green philosophy of energy conservation and environmental protection;
- Perfect power amplifier protection circuit (short circuit protection, overheating protection, high frequency protection, DC protection, etc.);
- High-frequency clean, dedicate, soft, and smooth high-frequency tone quality, thick medium-frequency & outstanding music quality and analysis, and accurate flexibility and weight of low-frequency tone without bottom.

IV. Remote Control

- 1. On/Off
- 2. Hold at least 3 seconds to enter pure power amplifier mode.
- 3. Mute
- 4. Power amp option (mode: respectively A, AB, and CLASS A-AUTO)
- 5. Power amplifier loudspeaker output option (circulate in order group A/group B/group AB)
- 6. Phono option
- 7. Analog input 1
- 8. Analog input 2
- 9. Balance input 1
- 10. Optical input 1
- 11. Optical input 2
- 12. Coaxial digital input
- 13. Volume -
- 14. Volume+



V. Front Panel Introduction



1.Input option key:

Tap the switch on the panel to choose the input signal channel.

2.Power amplifier loudspeaker output mode option key (circulate in order group A/group B/group A+B):

Group A: the power amplifier outputs at the terminals of group A loudspeakers

Group B: the power amplifier outputs at the terminals of group B loudspeakers

Note: Group A and group B cannot simultaneously drive two sets of loudspeaker system.

The function is particularly designed for users with more than one set speaker system of different styles or purposes. For example: you can connect a set of Hi-Fi speaker to group A output terminal and home theater speakers to group B output terminal. While enjoying Hi-Fi music, you can choose group A output; while watching TV with your family, you can choose group B output. It saves the trouble of changing cables.

Group A+B: the power amplifier outputs at the terminals of both group A and group B.

When your speaker is fitted with Bi-amp function, choose group A and group B for simultaneous output. For example: group A output is connected to tweeter and group B output to mid & bass horn to provide more fun (in this case, the bridging plate between the terminals of tweeter and bass must be removed; otherwise, it will cause power amplifier protection or short circuit).

3.Power Switch

4.Power Indicator:

Lake blue when working and red when standing by.

Front Panel Introduction

5. Power Amplifier Static Bias Mode Option Button (circulate in order Class A/Class AB/AUTO):

Class AB mode:

In this mode, the temperature detection circuit in the equipment will not work, and the power amplifier is maintained under Class AB mode. The heat from the heatsink apparently will reduce as compared to Class A, and the static power consumption will reduce prominently.

AUTO Mode:

In this mode, when the power amplifier is working under Class A, if the heatsink temperature rises to the set value, the equipment will automatically switch from Class A to Class AB; if the temperature drops to the set value, the equipment will automatically switch from Class AB to Class A; if this mode is selected, the heat from the power amplifier heatsink will reduce as compared to Class AB mode to keep the power amplifier in a relatively safe working condition.

Class A mode:

In this mode, the temperature detection circuit in the equipment will not work, and the power amplifier is maintained under Class A mode. The heat from the heat sink apparently will rise as compared to Class A. If the environment temperature is high or the heat dissipation capacity of the equipment is poor (such as placing the equipment in a narrow cabinet), please avoid choosing this mode, & select Class AB or AUTO to prevent safety risk or unnecessary loss.

6. Mute button:

Tap the switch to mute the equipment if it is not muted; tap again to quit muting.

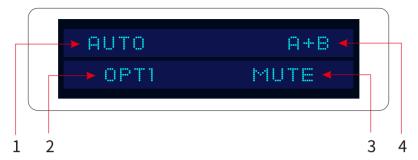
7. Volume Knob:

Rotate the knob to adjust volume.

8. Screen:

Display status and operating information.

VI. Screen Display Introduction



Main interface display after startup:

- **1. Working mode:** AUTO, A, B, optional (AUTO is recommended).1. Working mode: AUTO, A, B, optional (AUTO is recommended).
- 2. Input display: Display current input channel, which can be AN1, AN2, PHONO, COAX, OPT1, and OPT2
- **3. Output option:** A+B means group A and group B output simultaneously; group A, group B, and group A+B are available. When A+B is selected, it cannot simultaneously drive two sets of audio systems, but for Bi-amp only.
- 4. Volume status display: MUTE stands for mute.



Display software version and startup status upon startup

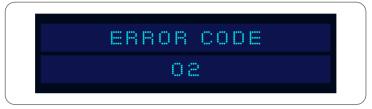


Working voltage and model

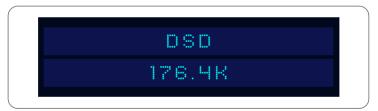
Screen Display Introduction



No digital signal display



Digital decoding error; no fault code display if normal.

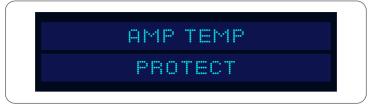


Sampling rate is 176.4K DSD digital signal



Sampling rate is 48K PCM digital signal

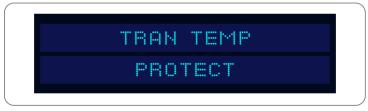
Screen Display Introduction



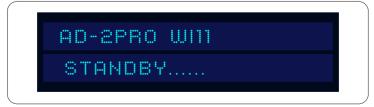
Power amplifier overheating protection display; not displayed if normal.



Display of exception protection on power amplifier, including short circuit, overload, high frequency, DC, etc.; not displayed if normal

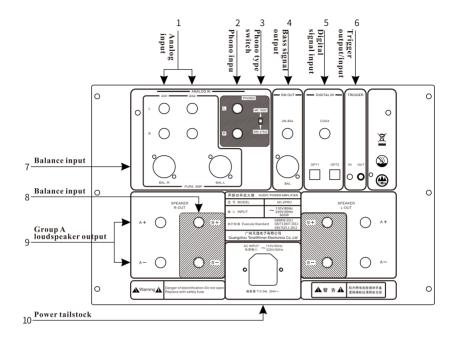


Transformer overheating protection display; not displayed if normal



Entering standby

VII. Back Panel Introduction



- 1. Analog 1/2 channel, RCA input L/R channel;
- 3. Phono MM/moving coil and MC/moving magnet type switch;
- 5. Optical and coaxial digital signal input;
- 7. XLR/balance input:
- 9. Group A loudspeaker L/R output terminal;
- 2. Phono RCA input L/R channel;
- 4. Bass balance and non-balance signal output;
- 6. Trigger input/output (12V trigger)
- 8. Group B loudspeaker L/R output terminal
- 10. Power tailstock (~110V or □ 220V input);

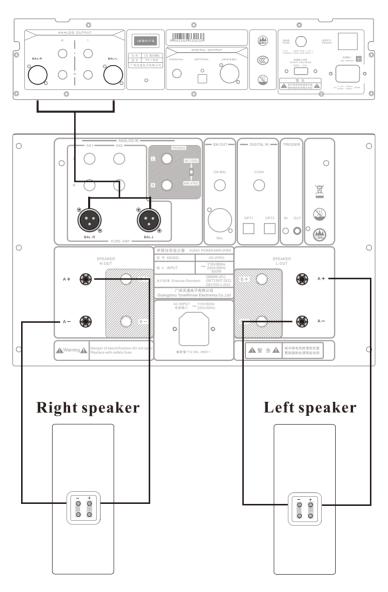
Note: group A and group B cannot simultaneously drive two sets of loudspeaker system.

Please connect the input and output of the amp properly to other audio devices before you turn it on. If the equipment is working normally, inserting or pulling signal input terminal might cause error protection to the power amplifier. Restart to shoot the trouble.

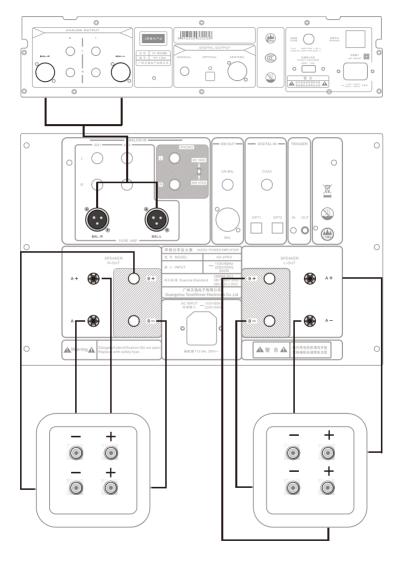
* Warning: choose moving coil/MM, and moving magnet/MC switch based on different phono types. Except phono, other analog signals are strictly forbidden to access; otherwise, it might cause damage to the equipment or other equipment (which will not be warranted by the Company).

VIII. Speaker Configuration Example

1. Wiring diagram of speaker system in standard mode: preferentially chose digital signal input. The equipment supports DSD lossless signal decoding.



2. Wiring Diagram of speaker System in Bi-amp Mode:



Right speaker

Left speaker

IX. Main Technical specification

- 1. SN: >108dB (A weighted, AMP mode)
- 2. Frequency response: 15Hz~100KHz (+1/-3dB)
- 3. Distortion: <0.05% (IKHz, normal working condition)
- 4. Output power: 200W (THD: 1%, 1KHZ, 8Ω single channel)
- 5. Rated load impedance: 8Ω
- 6. Complete machine gain: 40dB±ldB
- 7. Class A mode static power consumption: $260W\sim320W$; Class AB mode static power consumption: $70W\sim110W$
- 8. Standby power consumption: <0.5W
- 9. Net weight: 35.9kg
- 10. Unit dimensions: 444mm*424(460)mm*228(254)mm(Width X Depth X Height)
- 11. Implemented standards: GB8898-2011, GB/T13837-2012, GB17625.1-2012

X. Safety Class: Class I Equipment

- 1. Please read the manual and safety precautions carefully before use.
- 2. The product shall be mounted somewhere ventilated and dry for the convenience of heat dissipation to avoid moisture and lampblack.
- 3. Upon installation, the power plug shall be connected to AD \sim 110V/ \sim 220V and 60Hz/50Hz grid.
- 4. The output terminal of the power amplifier shall be connected to the specified load impedance. There shall not be short circuit between terminals, and the terminal cannot be connected to the shell.
- 5. Do not remove the cover during use to prevent electrocution.
- 6. Do not frequently turn it on and off. Wait a few minutes before turning it on again.
- 7. When the equipment fails, the plant implements "repair, replacement or compensation of faulty product". The user shall send it to the designated manufacturer or maintenance department for maintenance or our plant for repair. To avoid accident, do not open the rear cover for inspection or repair.
- 8. The plugs, power lines, fuses, power switch, and transformer used on the equipment are all safety parts. Upon change of safety parts, the maintenance department shall replace them in accordance with the model, specification, and designated manufacturer element specified on the drawing provided by our plant.

Remark: The specification of the product may be subject to change without further n otice.



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