



1AA925 - 2 X 100W Class D Amplifier with Bluetooth, Remote & Power Supply

Modesty Series:

Welcome to use this self-made 2 x 100W Audio Amplifier Explorer version.

This is the explorer version of AA-AS32186. Besides the original analog inputs, one TOSLINK input in S/PDIF format and one Bluetooth 2.1 input channel are added to this amplifier. Those input methods can be used with many common entertainment devices such as mobile phones, Blu-ray players, Apple TV, etc.

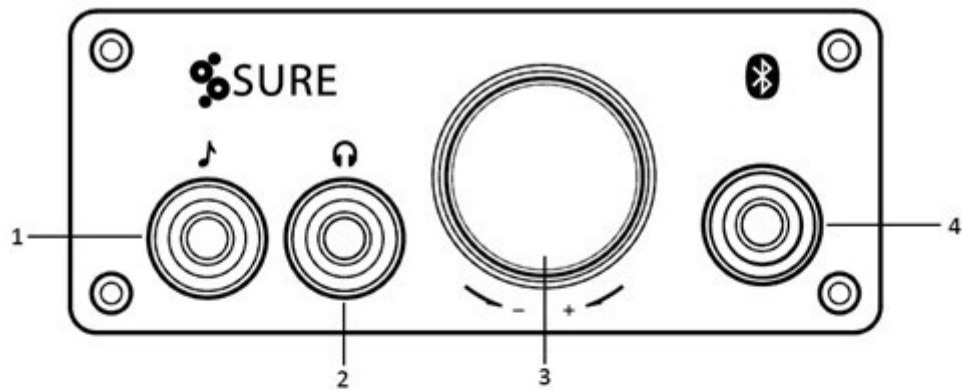
Remote controller is also available in this version so that customers can sit in the sofa and enjoy the music without any interruption. It makes this amplifier ever more powerful and convenient. We strongly recommend our (AA-AB31191) 1 x 300 Watts audio amplifier to be used along with. The self-build 2.1 system will impressively enhance the audio performance of your original system. Remote control function is also provided to help you use the amplifier in a much easier way and keep you away from the amp to focus on what you are listening.

Features

- Size: 8.3 " x 4.9 " x 1.9 "
- Power supply: DC 14V to 36V
- Over / under voltage turn off
- Over current protection
- Over temperature protection

Applications

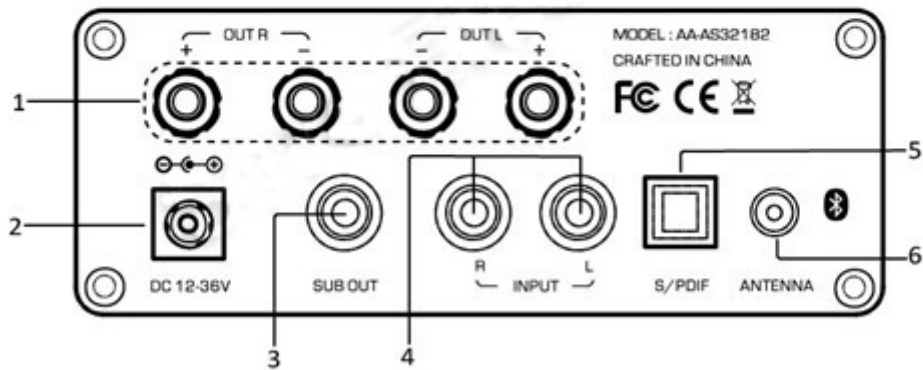
- Desktop amplifier
- Enhanced amplifier for TV or TOPBOX system
- Wireless audio receiver and amplifier
- Great partner for Apple TV or other devices



1—3.5mm audio input
3—Volume knob

2—3.5mm headphone output
4—IR remote receiver

REAR PANEL FIGURE 1-3 (AA-AS32186)



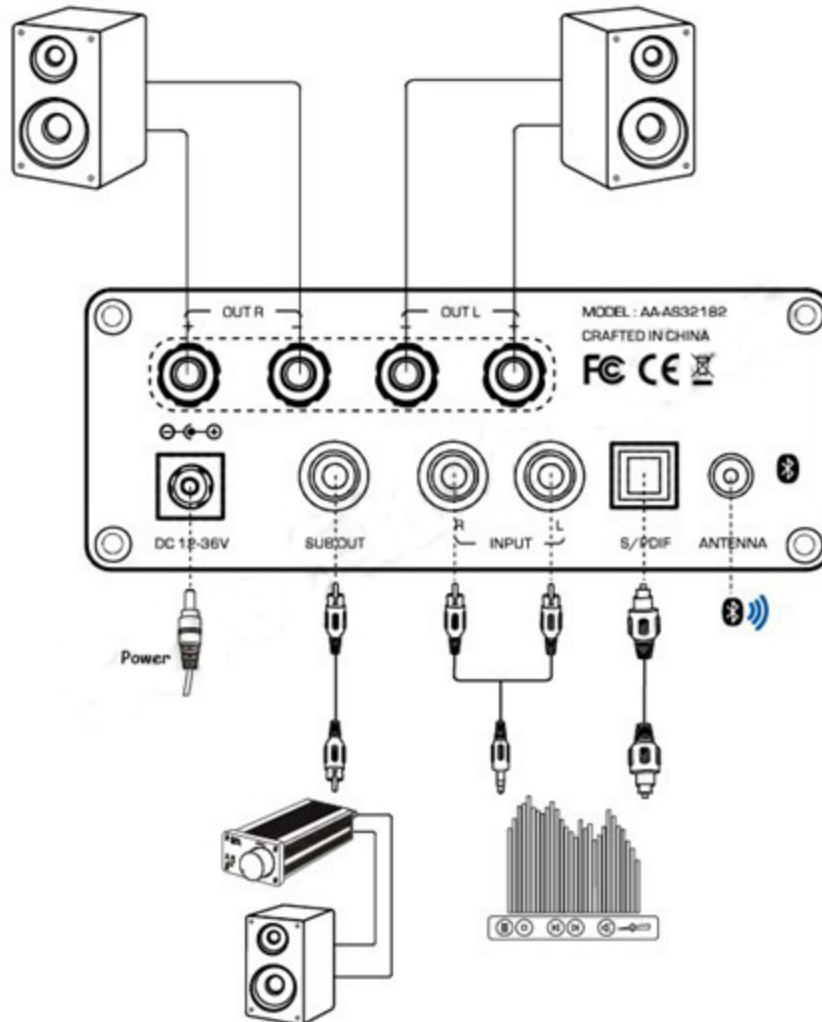
1—Speaker output terminal
3—Subwoofer output
5—Optical fiber input

2—Power input
4—Audio signal input terminal (RCA)
6—Bluetooth receiver

Connection

Modesty Series

FIGURE 1-8 CONNECTING SCHEMATICS



Power Connection:

A voltage-regulated power of high-performance is necessary to provide basic and enough power so that this product could work stably, otherwise any problem caused by poor power is out of the warranty.

Switch Setting

When the switch is ON, the machine is working and LED is lighting all the time. When the switch is OFF, the machine is in standby mode and LED shows breathing-effect lighting.

Table 2-1 Switch function

State	Function	LED state
ON	Amplifier working	LED always lighting
OFF	Amplifier not working	LED lighting in a breathing-effect state

When powered up, the machine is staying in standby mode with warm LED breathing behind. After switched to operation mode the LED will turn off and the amplifier will start to work. Push on the volume knob to switch between operation mode and standby mode.

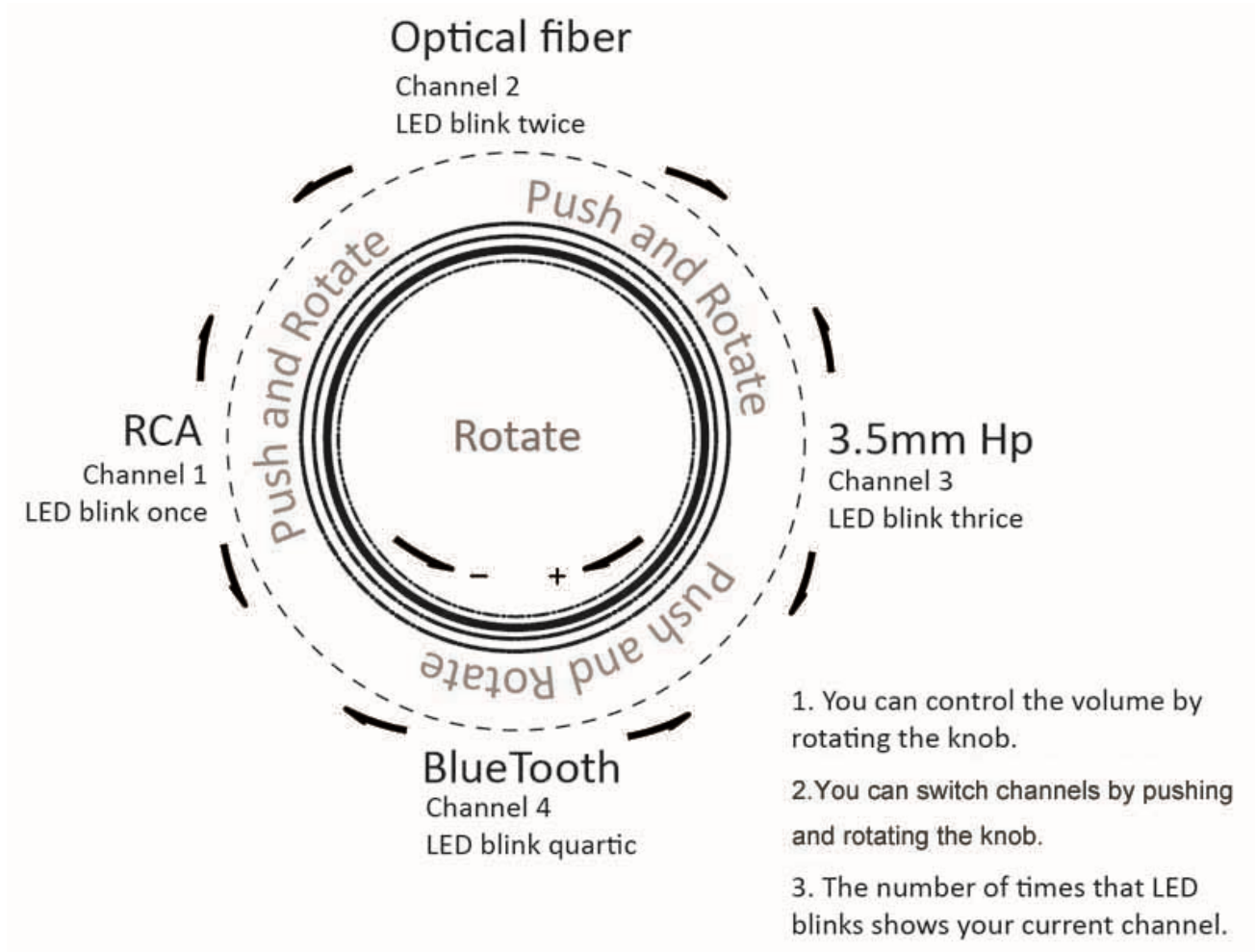


Table 2-2 Switch function

State	Function	LED state
Standby	Amplifier not working	LED lighting in a breathing-effect state
Operation	Amplifier working	LED turn off

Inspiration Series

When the power is connected, the machine is working and LED lighting in a breathing-effect state. When the Bluetooth connection is successful, the LED is lighting all the time.

Table 2-3 Switch function

State	LED state
PowerON	LED lighting in a breathing-effect state
Bluetooth connected	LED always lighting

Input Connection

There are four various methods for audio amplifier.

- a) Audio signal input terminal (HP)
- b) Audio signal input terminal (RCA)
- c) Optical fiber input terminal
- d) Bluetooth signal input

The priority of Input signals: Bluetooth > Optical fiber > Hp > RCA

You can switch channels by using remote control.

Output Connection

The most high-end version adopts -

- a) Amplified output signal for headphone at the front panel
- b) Banana socket with two output channels to output amplified audio signal. Pay attention that LOU+ and LOU- are Left Output Channels, ROU+ and ROU- are Right Output Channels.
- c) Subwoofer output signal.

Note: LOU- and ROU- are not in the same net and can not be connected together. Moreover, LOU+, LOU-, ROU+, ROU- can not be connected to the ground.

Volume Control

We adopt digital volume potentiometer of high-quality in Modesty series which can adjust the volume precisely after long-time use.

You can touch the induction (“+”,“-”) to adjust the volume in Inspiration series.

LED Indicators

Our products are based on MCU which controls the indicators to display dynamic LED state and make our products more fashionable and attractive. Please refer to table 2-1, 2-2, 2-3 for details.

Infrared remote

With the remote controller accompanying our product, you could operate several functions as follow:

- a) Switching audio signal channel.
- b) Volume control.
- c) Input channel switch.

TABLE 3-4 ELECTRICAL CHARACTERISTICS

Following table lists all typical data of the Amp board. For full specification, please refer to the data sheet of ST's TDA7498 chip.

$T_A = 25\text{ }^\circ\text{C}$, $f_{IN} = 1\text{ kHz}$ sine wave, $R_L = 6\Omega$, $V_{CC} = 36\text{V}$. (Unless otherwise stated)

Parameter	Min	Typ	Max
Supply Voltage (V)	14	32	36
Quiescent Current (mA)	-	100	-
Input Sensitivity (mV)	-	RCA input	496
		3.5mm input	294
		optical fiber input	1430
		BT input	228
Input Impedance (Kohm)	-	19	-
Gain (dB)	-	37.6	-
Output Power (W rms) ($V_{CC} = 32\text{V}$, $R_L = 6\Omega$)	-	100W, THD+N<1%	-
Efficiency (%)	-	90% @ 2 x 100W	-
Minimum Load (ohm)	4	6	-
Frequency Response (dB)	20	-	22k
Operating Temperature ($^\circ\text{C}$)	0	20	50

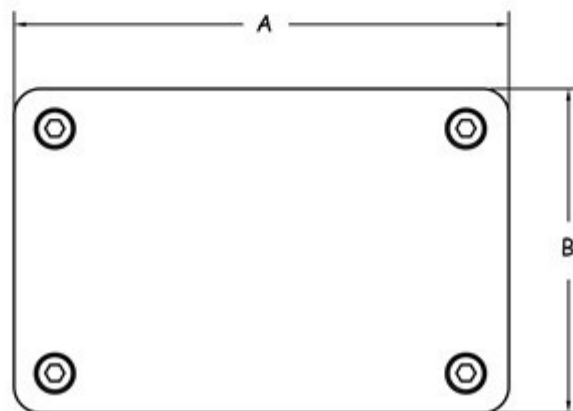
MODESTY SERIES AUDIO AMPLIFIER MECHANICAL DRAWING**FIGURE 4-1-1 Front panel**

FIGURE 4-1-2 Rear panel

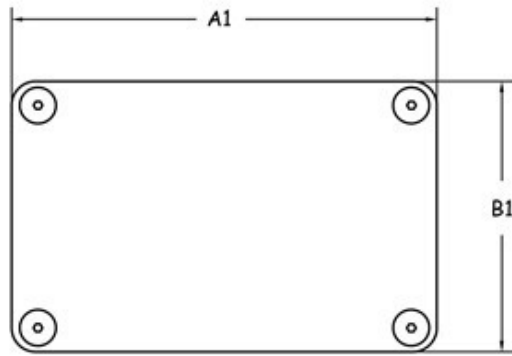
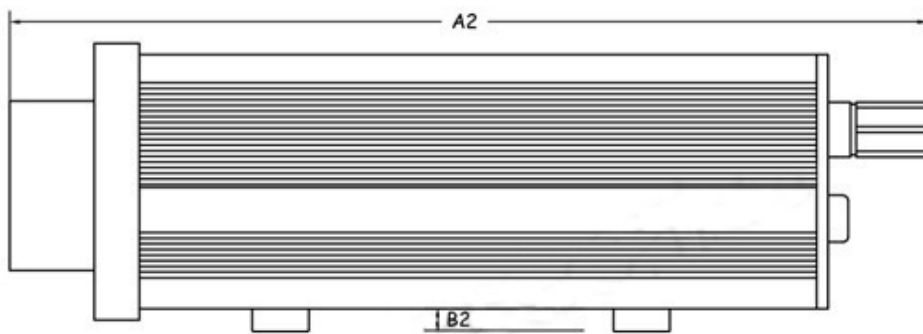


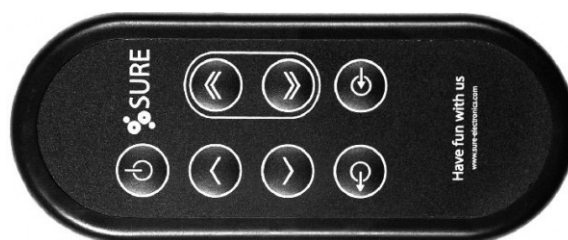
FIGURE 4-1-3 side view



Dimension	D1(inch/mm)	D2(inch/mm)
A	2.94/74.6	4.88/124
A1	2.78/70.6	4.72/120
A2	6.41/162.7	8.36/212.4
B	1.93/49	1.93/49
B1	1.77/45	1.77/45
B2	0.16/4	0.16/4

Wireless Remote Control

Product Number	MB-CM11111
Product Name	Small 7-key User-definable Remote Control
Size (only PCB)	110.00(L) X 45.00 (W) X 18.30(H) ±0.20mm
Net Weight	46g/1.6oz



Brief Introduction:

DIY enthusiasts? This 7-key remote control is really a good item for you. This product is user-definable, allowing you to redefine the keys' functions to realize the remote control to the devices you want, such as volume or power control in amplifier application, movement control of curtains, brightness, color and power control of lights, etc. Use an infrared decoder to receive and transmit the data of the keys to a processor (like PC, MCU) on which you can write new programs to redefine the keys' functions. Sure makes the process easier by supplying the corresponding hexadecimal of each key.

This remote control utilizes NEC IR encoding mode and integrates SC6122 IC as the remote control transmitter which utilizes CMOS Technology specially designed for use on infrared remote control applications. This remote control is small in size and easy-to-use with only 7 keys. Its smooth rounded shape fits perfectly in your hand for natural, balanced operation.








Seven dome keys integrated are sensitive and durable to use.

You may refer to the manual in download center for details of NEC protocol. In addition, we also provide the combination (product No: RMB-CM11112) of the remote control and a mating decoder.

Features:

- Size: 110.00(L) × 45.00 (W) ×18.30(H)±0.20mm
- Compact and durable
- Black, ABS packaging
- Powered by two 1.5V AA batteries
- Long service time: 3 years
- Straight transmission distance: 8m
- Available to use keys 100.000 times
- Low power consumption

Key Description:

Key	Function	Address code	Command code
	ON/OFF	0x20	0x1C
	Volume Up (+)	0x20	0x10
	Volume Down (-)	0x20	0x1D
	Next Channel (++)	0x20	0x18
	Previous Channel (- -)	0x20	0x15
	Channel Indication	0x20	0x19
	Reserved	0x20	0x11

- Channel 1: RCA
- Channel 2: Optical fiber
- Channel 3: 3.5mm phone jack
- Channel 4: Bluetooth

Specifications:

Parameter	Value	Condition
Power Voltage	DC2.2V- DC3.2V	-
IC Quiescent Current	> 0.1 mA	
IC Low-voltage Detection	2.4V ± 0.1V (OTP) 2.4V ± 0.1V (Normal)	-
Power Consumption (Average)	8-10mA	-
Power Consumption (Max)	30-50mA	-
Storage Temperature and Humidity	-10°C + 60°C, 90%RH (MAX) < /strong>	-
Operating temperature and humidity	0°C + 55°C, 85%RH(MAX)	-
Resonant Frequency	Resonant frequency: 455KHZ ± 1.5KHZ Carrier wave: 37.9KHZ ± 125KHZ	Temp 25°C Humidity: 65%- 80%RH
Straight Distance	8.0m	Temp 25°C Humidity: 65%- 80%RH

		H Supply voltage: 3.0V Test environment: 35 0Lux Same receiver Supply voltage: 3.0V Test environment: 35 0Lux Same receiver
Direction	Up, down, left, right direction 1 5° at min. 5.0m distance	-
Leakage Current	<5uA	No key pressed
Power Supply	DC 2.2V-DC 3.2V	-
Material of Keys	PET, force: 120-180g	-
LED consumed	35mA ± 0.5mA	VDD DC 3.0V

Applications:

- Volume control in amplifier application
- Smart Home like color, brightness and power control of lights, movement control of curtains
- Other remote control applications

Note:

The accessories might be a little different from what you've seen on webpage since the accessories you received might be from different batch. However, it won't affect your use. Sure Electronics assumes no liability for any ambiguity caused by the product photos.

Specification:

MODEL	WXY-PD2405
INPUT	100-240VAC 50/60Hz 1.5A
OUTPUT	24V 5A
WEIGHT	304g
DIMENSIONS	150*65*38(mm)

Applications:

- Provide consistent power and reliable performance

Package Including:

- 24V 5A 120W Watt AC/DC Power Adapter × 1;
- Remote Control