

KanexPro™

AP3DBL
3-Input Audio
Amplifier

Table of Contents

.....

uction to AP3DBL

res

ge Contents

of Product Appearance

uction of Front Panel

uction of Rear Panel

nection

Precautions

n Diagram

Signal Connection

Audio Output

Audio Inputs

n Applications

rations

tions of Front Panel

Audio switching

Volume/EQ controlling

tions of IR Remote

tions of Control Software

Connection with Computer

Installation/uninstallation of RS232 Control Software

Running Environment

Function Settings

RS232 Communication Commands

ns

ing

oting and Maintenance

ation Guide

.....

ction

. Product Info

AP3DBL is a 3-Input 40-Watt audio amplifier supporting 70V or 100V. It comprises of 3-switchable (SLINK) for quick switching and sound reproduction. The audio amplifier supports MIC mixing and E, conference rooms, lecture halls and restaurants.

includes IR remote & sensor. Please make sure the contents are supplied in the box or contact you

s

switching audio amp

o output at 40Watt.

between 70V and 100V.

locking function

is for controlling between different AP3DBL amplifiers.

input, supports condenser microphone, dynamic microphone and wireless microphone.

an support balance/unbalance signals & suppresses the external noise effectively.

audio inputs and one digital audio input, switchable by button, IR remote & RS232.

ess/Treble controllable by buttons, IR remote & RS232.

cooled

tor, for power and working status.

ase design.

Contents

iL

adapter (DC 24V)

ng ears

cable

ote

iver

i

anual

Appearance
Panel



Figure 1 Front Panel

Item	Function
Input selection	To select the input audio source, after choosing the audio source, the corresponding LED indicator will be on. No.1 is for dual mono audio input (2 RCA connectors for L&R), No.2 is for stereo audio input (3.5mm mini jack), and No.3 is for digital fiber audio input.
Audio control	Adjust the volume of the MIC, Line, or the level of Bass and Treble with this button
Volume adjustment	To turn up/down or mute the corresponding audio. ▽ : Turn down the volume □ : Turn up the volume MUTE: Mute the output

nel

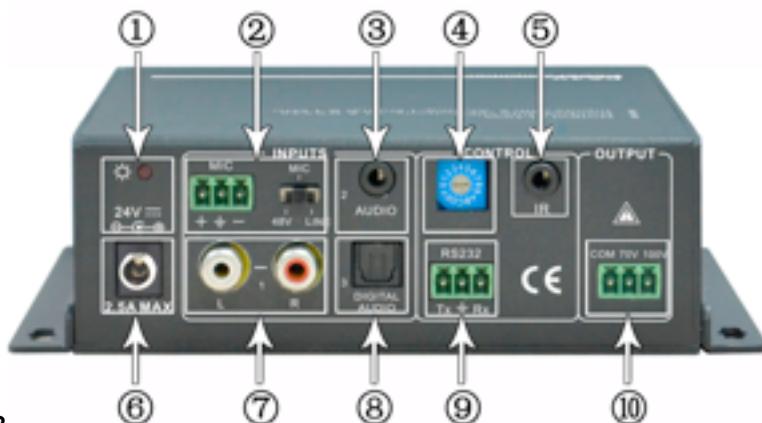


Figure 2

Figure 2 Rear Panel

Name	Function
Power Indicator	Turns red when power on.
Microphone input port	3-pole captive screw connector for microphone input, the dial switch in right side is to select the micro input kind, including 48V (for condenser microphone), MIC (for dynamic microphone) and LINE (for line audio).
Audio Inputs	3.5mm mini jack for stereo audio input, it can be connected with audio source device such as DVD player.
ID Code	16 codes range from 0 to F (hexadecimal), works together with the PC control software.
IR Eye	To connect with the IR receiver, works together with the IR remote.
Power Port	To connect with the power adapter (DC24V).
2 x RCA	Dual-mono audio input, which can be connected with audio source device such as a PC.
Digital Audio Input	Fiber connector for digital audio input, it can be connected with a device with fiber port, such as blue-ray player.
RS232	3-pole captive screw connector for serial control, it can be connected with PC (Use a 3-pole captive to 9 pin female D connector and serial control software) to control AP3DBL.
Audio Output	To connect with audio output devices, such as speakers (To select 70V or 100V depends on the input voltage of the speakers). COM is for grounding (GND).

Connection

Precautions

Diagram

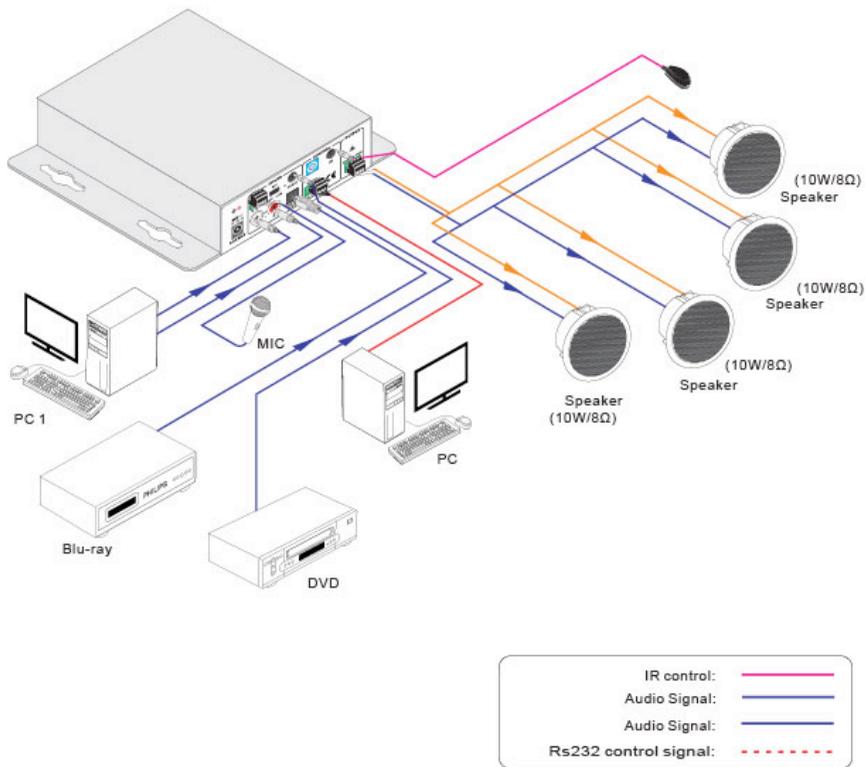


Figure 3 System Diagram

Signal Connection

Output

ports mono audio output, and the output voltage is 70V or alternative 100V. With its dual-purpose design, it can be used in different areas. The end COM is for grounding. The amplifier to be connected is mono audio output with 3DBL can be connected with several speakers in parallel connection way (Total power mustn't be more than 30W). The figure shows us how to connect with the speakers. Here we take the speakers 10Watt@8Ohms for example.

COM 70V 100V

Inputs

des with 2 stereo audio inputs, one microphone input and one digital fiber audio input. The following

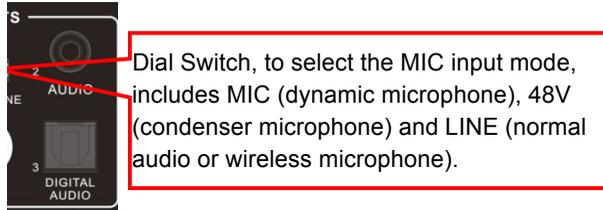


Figure 5 Audio Input Ports

48V phantom power input

When the dial turns to “48V” (It has a good frequency characteristic, high input impedance and high sensitivity) it provides a 48V phantom power. This is usually used for power supply for condenser microphone, Coaxial, “-” connects to negative and “ \perp ” to ground.

In this mode, only condenser microphone can be connected with.

When the dial turns to “MIC” (It has a low frequency characteristics, and wide frequency response in this mode) for connecting with dynamic microphone. There are two different connections:

Standard connection:

“+” connects to ground, and “-” connects to signal.

“-” connects to ground, and “+” connects to signal.

Alternative connection: “+” connects to positive, “-” connects to negative and “ \perp ” connects to ground.

Line

When the dial turns to “LINE” (It has a low frequency characteristics, and wide frequency response in this mode) for connecting with normal audio or wireless microphone output. There are two different connections:

Standard connection:

“+” connects to ground, and “-” connects to signal.

“-” connects to ground, and “+” connects to signal.

Alternative connection: “+” connects to positive, “-” connects to negative and “ \perp ” connects to ground.

Digital Input

des with a fiber optical port to connect with digital audio source device. With the SPF optical fiber, the signal is faster, more stable, reliable, and can be transmitted over a long distance without distortion.

Applications

It can be applied in different occasions, such as classroom, small meeting room, lecture hall, bar and hotel

Operations

Functions of Front Panel

EQ controlling

an control the line volume and MIC volume.

nd controlled up/down/mute will select the MIC Volume/LINE volume/LINE bass/LINE treble by the 1 the picture below:

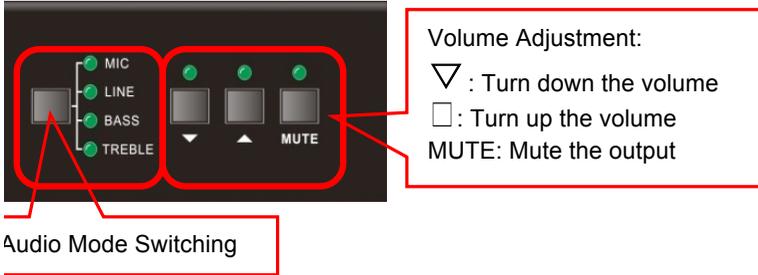


Figure 7 Audio Mode and Volume Adjustment buttons

o turn up the line volume, you should select the “LINE” first, and then press the button “ ◻ ”.

ons of IR Remote

des with an IR eye, with the IR Receiver and the IR remote, user can control AP3DBL remotely. 2 Receiver and the IR remote are all offered for charge.

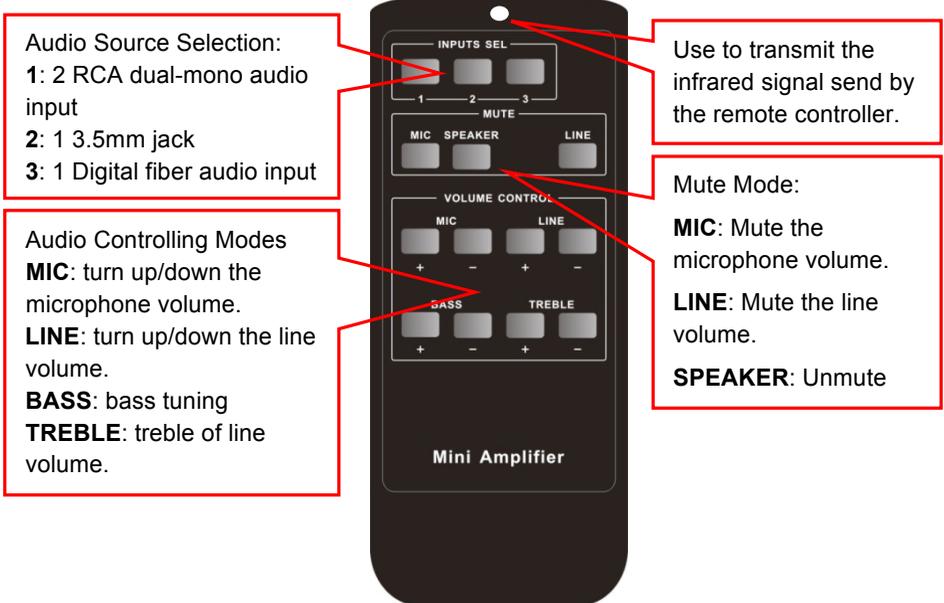


Figure 8 IR Remote

orks together remote. Please smote at the IR



3.5mm jack Insert it into the specialized PA3



Figure 10 Connection of RS232 Port

Installation/uninstallation of RS232 Control Software

1. Connect the RS232 control software to one computer, and then connect the RS232 port of this computer and AP3.

2. Run the EXE program to execute the software.

3. Run the software **CommWatch.exe** as example. The icon is showed as below:

4. After the software is installed, you can see the icon of the software in the start menu.



Figure 11 Control Software

Installation: Delete all the control software files in corresponding file path.

Environment

When the software is installed, we can activate the software through the RS232 port and set the parameter commands to control AP3DBL.

Settings

With the software, we can easily switch the input channel, mute the output, check the working status, and refer the details in *RS232 Communication Commands*.

The control software interface is shown as below:

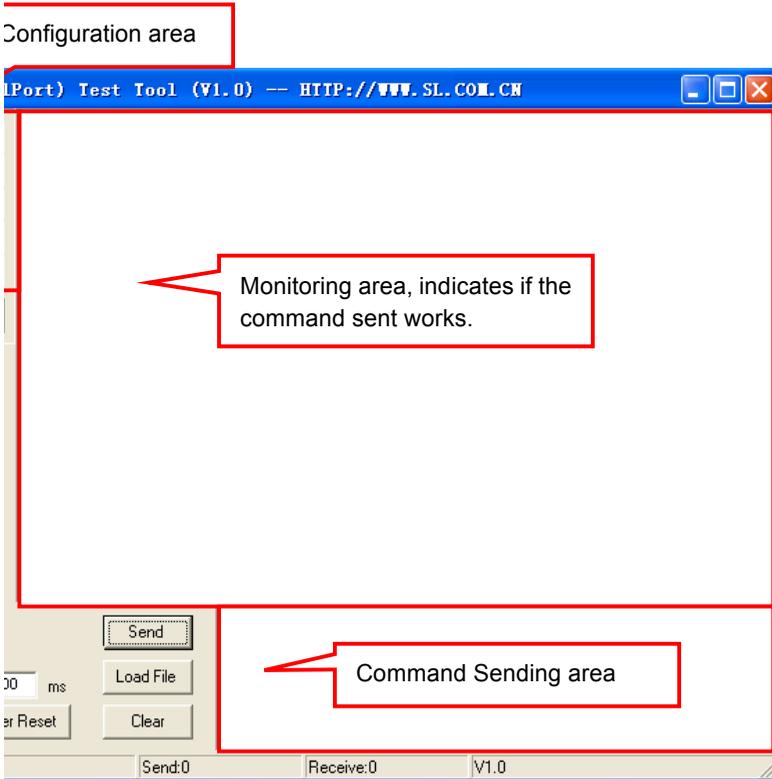


Figure 12 Main Interface of Control Software

Communication Commands

on Protocol: RS232 Communication Protocol

10 Data bit: 8 Stop bit: 1 Parity bit: none

Function Description	Feedback Code
Switching the audio to input 1	A: 1 -> 1
Switching the audio to input 2	A: 2 -> 1
Switching the audio to input 3	A: 3 -> 1
Mute Audio of MIC and Line out	Mute
Mute audio of MIC	Mute MIC
Mute audio of line out	Mute LIN
Unmute Audio	Unmute Audio
Checking the working status	A: 1 -> 1 Volume of MIC : 50 Volume of LINE : 50 Bass of LINE : 4 Treble of LINE : 4 Ducking Off
MIC volume up	Volume of MIC: 51
MIC volume down	Volume of MIC: 51
Line volume up	Volume of LINE: 51
Line volume down	Volume of LINE: 51
Bass level up	Bass of LINE: 4
Bass level down	Bass of LINE: 4
Treble level up	Treble of LINE: 4
Treble level down	Treble of LINE: 4
Initialization, back to the default setting	Init OK
Enable/disable the ducking function.	Ducking off/Ducking on
Preset the volume level of ducking function. [xx] Arranges from [00] to [60]. 61 degrees in total.	Ducking of LINE: 50
Preset MIC volume, [xx] arranges from [00] to [60]. 61 degrees in total.	Volume of MIC: 50
Preset line volume, [xx] arranges from [00] to [60]. 61 degrees in total.	Volume of LINE: 50
Preset the bass level, [xx] arranges from [00] to [08]. 9 degrees in total.	Bass of LINE: 4
Preset the treble level, [xx] arranges from [00] to [08]. 9 degrees in total.	Treble of LINE: 4

inside bracket [] is the variable code, which is changeable.

at [] is not included to the RS232 commands.

after the letters is part of the commands.

Function:

When using MIC, the volume of the line audio will be automatically turned down to the preset volume level, signal after 5 seconds, then the volume will be automatically turned up to the original one. If you need to enable the ducking function, just send the command "610%" again.

AP3DBL ranges from 0 to F (hexadecimal), when sending RS232 commands, please take note of the code.

When the ID code is 0, any RS232 command is available.

When the ID code is 1~F, it has one unique ID code (If the ID code is not the same with the address, no RS232 command is available).

When the ID code is in 1~F, please add "ID/" before sending the command.

For example, if the ID code is 5, the RS232 command needed is "604%", the correct command is in this format: "ID/5604%".

When the ID code is 0, you do not need to add "ID/" before the command when the ID code is 0.

When the input 2 is turned on, the command is: 2A1.

When the volume of line audio is turned down, the command is: 603%.

When the MIC volume is turned to "21" degree, the command is: 521%.

When the working status of AP3DBL is turned on, the command is: 600%.

When the ID code is 0, sending command 601% is able to turn up the MIC volume.

When the ID code is 2, sending command 601% will not work, and the MIC volume remains unchanged. The right command is: ID/2601%.

ations

		Audio Output	
	2 stereo audio 1 MIC	Output	1 amplifier 1 Stereo audio
	2 RCA 1 3.5mm jack 1 3-pole 3.81mm captive screw connector	Output Connector	1 Captive Screw 1 x 3.5mm Jack
	>10K Ω	Output Type	50 Ω /stereo, 4~8 Ω /Amplifier
ral			
	120Hz ~ 20KHz	CMRR	>70dB@20Hz~20KHz
	80dB (Max)	Bandwidth	120Hz ~ 20KHz
	40Watt @8Ohms	THD + Noise	1%@1KHz, 0.3%@20KHz at nominal level
	32dB		
ction			
ol	1 3-pole 3.81mm captive screw connector	Front Panel Control	Buttons
	16 ID codes for control.		
	IR remote & TCP/IP controlled		
	-20 ~ +70 \square	Humidity	10% ~ 90%
	DC 24V power adapter	Power Consumption	5W
	1.5"x3.78"x3.45" (HWD)	Product Weight	0.67 lbs. (0.3Kg)

rawing

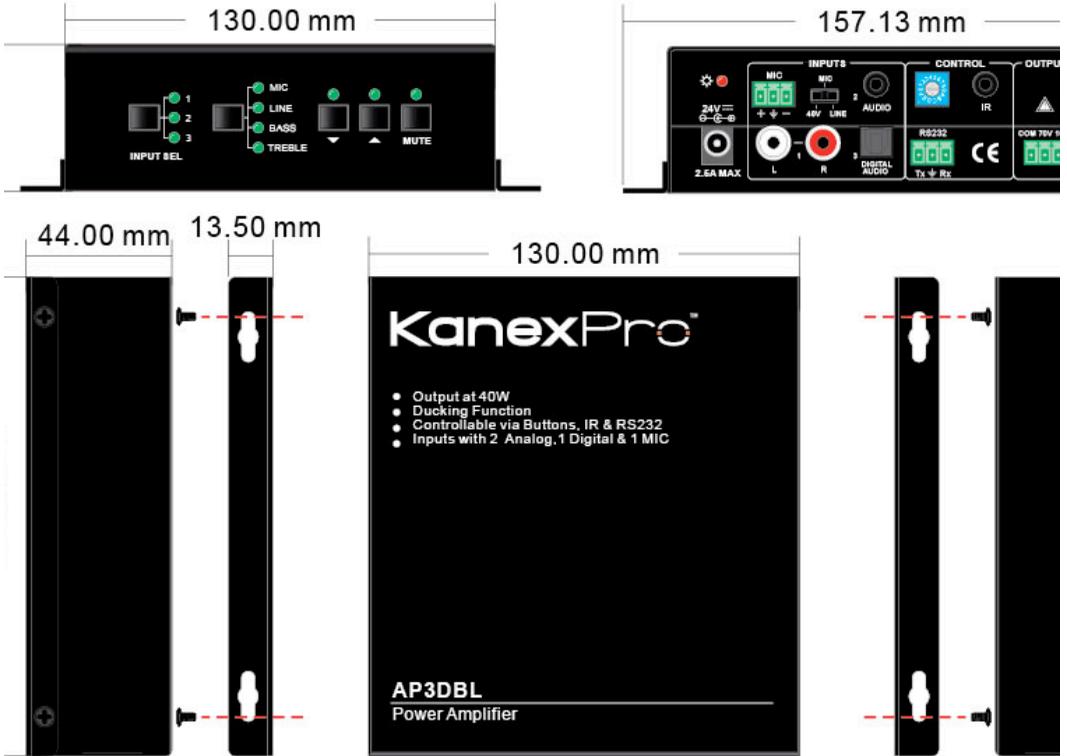


Figure 13 Panel Drawing

shooting and Maintenance

There is no output audio:

There is any signal at the input.

There is any signal at the output.

Check these by using an oscilloscope or a multimeter. If there is no signal input/output, maybe the input connectors are loose, please change for another cable.

The output port number is the same with the controlled one.

For the problem mentioned above, probably there is something broken inside the unit; please contact technical support.

If the **POWER** indicator doesn't work or no response to any operation, please make sure the power cord connection is correct.

If the sound is interfered, please make sure the system is grounded well.

If the sound becomes stronger when connecting the audio connectors, it probably is due to bad grounding, please check the grounding and make sure it is connected well, otherwise it would damage the amplifier.

If the unit cannot be controlled by the front panel, RS232 port or the IR remote, please contact technical support.

Operation Guide

To guarantee the reliable operation of the equipment and safety of the staff, please abide by the following operating and maintenance instructions:

The power supply must be earthed properly. Please do not use two-blade plugs and ensure the alternating power supply voltage is 0V and from 50Hz to 60Hz.

Do not place the equipment in a place that is too hot or too cold.

Due to the equipment generating heat when running, the working environment should be maintained with fine ventilation, and avoid overheating.

Turn off the general power switch in humid weather or if left unused for a long time.

During long-term operation, ensure that the alternating current wire is pulled out of the power supply.

Do not disassemble or replace any components of the equipment.

Do not rejoin any pin or other link of the equipment.

Do not touch the equipment professionally or without permission, please DO NOT try to open the casing of the equipment, DO NOT touch the internal components, to avoid the risk of accident or increasing the damage of the equipment.

Do not splash any chemical substance or liquid on the equipment or around it.

ly

WARRANTY

warrants that (a) its products (the "Product") will perform greatly in agreement with the accompanying 3 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship and service for a period of 3 years.

REMEDIES

Entire liability and Customer's exclusive remedy shall be, at KanexPro option, either return of the price paid or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to Customer within 30 days of receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misuse. Any Product that is replaced under this Limited Warranty will be warranted for the remainder of the original warranty period of 3 year, whichever is longer.

OTHER WARRANTIES

In the maximum extent permitted by applicable law, KanexPro disclaims all other warranties, either express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with regard to the products. This limited warranty gives customers specific legal rights. Customers may have other rights depending on applicable law.

LIABILITY FOR DAMAGES

In the maximum extent permitted by applicable law, in no event shall KanexPro be liable for any damages whatsoever, including but not limited to special, incidental, consequential, or indirect damages (including personal injury, loss of business profit, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use the products, even if KanexPro has been advised of the possibility of such damages.

Kanex