# KT UNICORN AMPLIFIRE

## 64 BIT OPERATION MANUAL

# DAP series

- This manual does not contain all details of the design, production or change of the relevant equipment, nor does it cover every situation that may occur during the installation operation or maintenance of the equipment.
- The information provided in this manual at the time of publication is considered to be accurate, but it may now be updated.

Dear customers:

Thank you for choosing this product! To ensure the safety of you and the machine, and to ensure you enjoy the ideal acoustics, be careful before connecting or operating the machine. After reading this instruction manual, please keep it properly for future reference.

Unpacking inspection:

After unpacking, please first confirm whether the machine is damaged in transit, and test each function by wiring according to the requirements of this manual. If there is any problem, please immediately. Contact our after sales department or professional application department to solve your problem.

◆ When purchasing, please check whether the bar code is complete and whether the random attachments are complete.

◆ Machines that have not been opened by the designated maintenance department will not be covered by three guarantees.

◆ It is recommended that you keep the unpacked packing materials and random accessories for future handling or maintenance.

## Identification

| | | | |
|---|---|---|---|
|  | Don't throw it away, recycle it |  | This product is only suitable for indoor use |
|  | High voltage electrical hazard sign |  | Attention warning mark |
|  | Product safety earthing mark | | |

# Panel functions
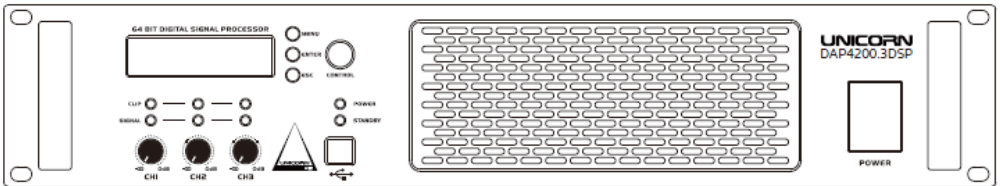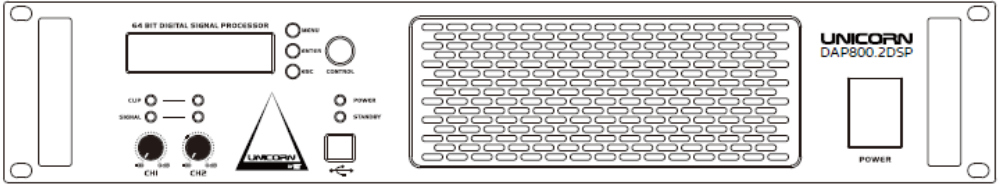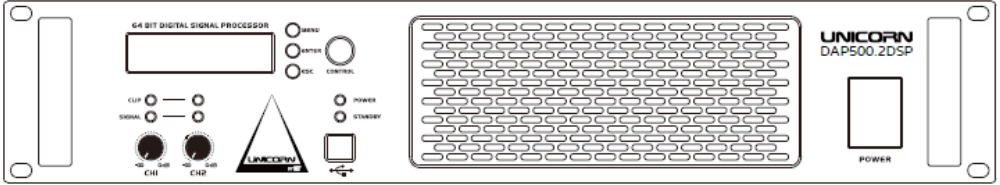


| NO. | Element | Function |
|---|---|---|
| 1 | Channel level | Level controls channel 1 to channel 4 |
| 2 | Display LED | SIGNAL: input level indication CLIP: overload |
| | | POWER: power indication |
| | | STANDBY: standby indication |
| 3 | LCD | Display various parameters convenient view |
| 4 | USB | It can connect to PC by one USB cable to operate the DSP processor |
| 5 | Edit wheel | Used to edit the setting of gain and other parameter values in edit mode |
| 6 | Edit button | MENU: The menu command |
| | | ENTER: The enter command |
| | | ESC: The esc command |
| 7 | Switch | Switches the amplifier on an off |

# Rear panel functions
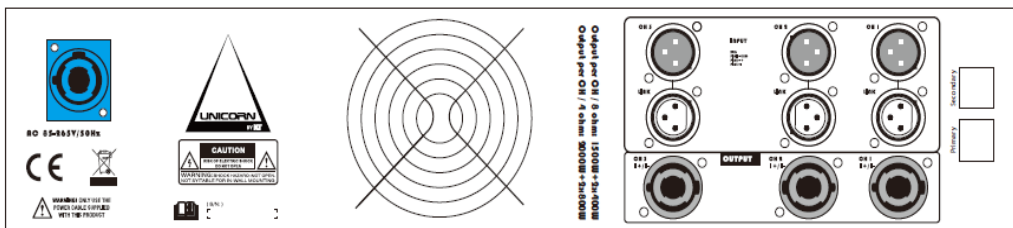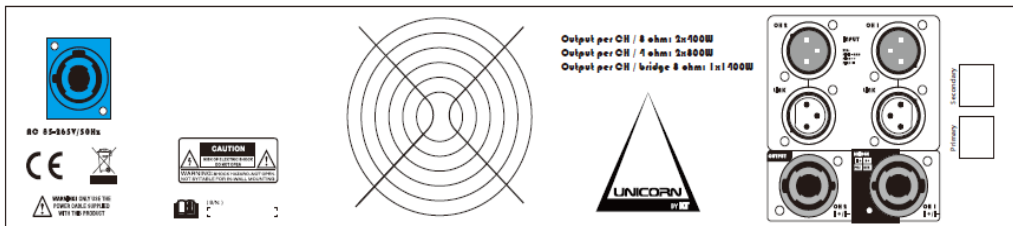
| NO. | Element | Function |
|-----|---------|----------|
| 8 | Power input | Used to plug in the supplied power cord |
| 9 | Speaker connectors | Speaker jacks and screw terminals for channel 1 to 4 |
| 10 | Input connectors | Optionally XLR jack for channel 1 to 4 for connecting units with line level |
| 11 | Ethernet interface | The communication between machine and computer is realized through Ethernet interface |
| 12 | Dante interface | The communication between machine and computer is realized through Dante interface |

# DSP interface function



| |
|---|
| 1.File: can quit the application |
| 2.Tools: can set password for this application |
| 3.Ethernet: can select the address of Ethernet |
| 4.Dante: can select the ID of Dante |



| |
|---|
| 5.File: save-- save the data from DSP processor to PC<br>        open-- load the data from PC to DSP processor<br>  Tools: Hardware--Set the standby door threshold and time<br>          Enter Device Password--Unlock device permissions options Set<br>          Device Password--Set device permissions options |
| 6.Main: can control the system and other functions |
| 7.Input sources select: analog signal and Dante signal are available for selecting audio source。 |
| 8.Store Data: Store-- save the data to DSP processor. Load-- load the data from DSP processor |
| 9.Presets: there are 10 presets available.<br>   Store-- save the data to preset. Loa-- load the data to preset. |
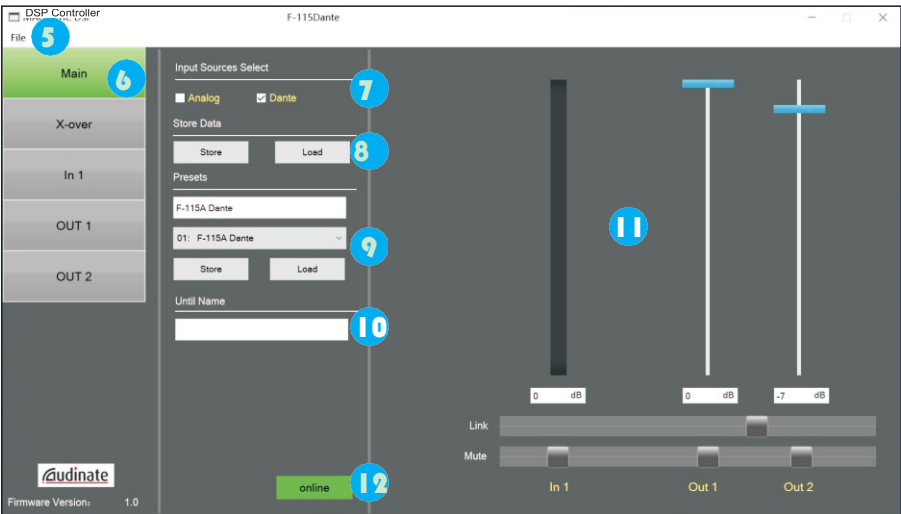
10.Until Name: can name the current processor

11.Online/Offline: when online (green) is displayed, the connection is normal
                    when offline (red) is displayed, the connection is abnormal

12.Options: can adjust Gain and Mute of In1, Out1 and Out2. Can set link of Out1 and Out2
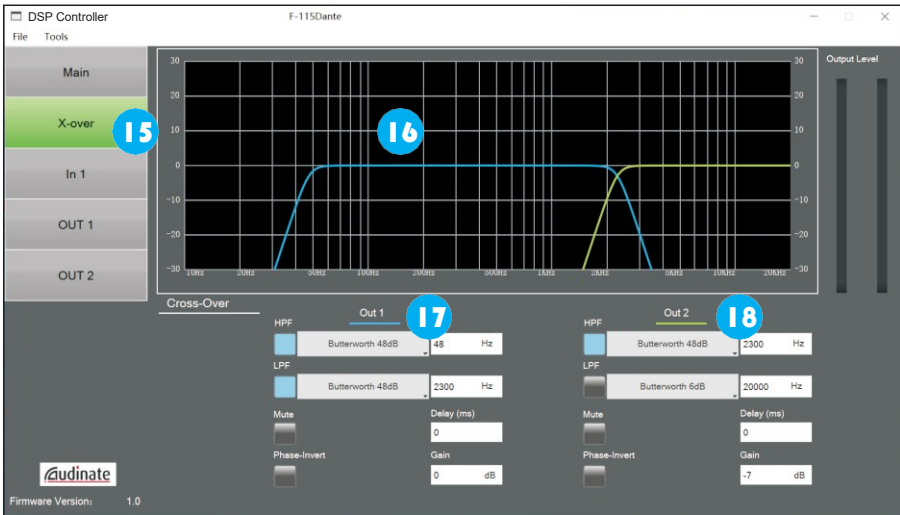
| 15.X-over: control the frequency division function of the output channel |
| --- |
| 16.Cross Over: can see the frequency division curves of out1 and out2 |
| 17.Out1 operation: HPF(the slope is set from 6dB to 48dB), LPF(the slope is set from 6dB to 48dB), Mute, Phase-Inv, Delay(from 0 to 128ms), Gain(from -80dB to 0dB) |
| 18.Out2 operation: HPF(the slope is set from 6dB to 48dB), LPF(the slope is set from 6dB to 48dB), Mute, Phase-Inv, Delay(from 0 to 128ms), Gain(from -80dB to 0dB) |

| 19.In1、 Out1、 Out2: can control the input and output channels with EQ and other functions |
| --- |
| 20.The EQ curves for In1, out1, and out2 |
| 21.EQ operation: A total of 10 EQ values can be set, can set Type(Peak, Lowpsaa, Highpass, Lowshelf, Highshelf, Notch, Bandpass), Freq, Q values, Gain |
| 22.Gain:Can increase or decrease gain of input and output channels (-80db ~0dB) |
| 23.Limit View:The voltage limit editor button, after clicking, will pop up the voltage limit editor |

| |
|---|
| 24.Can view the pressure limit and other conditions |
| 25.Threshold:Can increase and decrease the pressure limit (from -135db to 20dB) |
| 26.Ratio: can set the ratio(from 1 to 100)。 |
| 27.Knee: can set the knee(from 1 to 100) |
| 28.Attack: can set the attack(from 1ms to 500ms)。 |
| 29.Hold: can set the attack(from 1ms to 500ms)。 |
| 30.Release: can set the attack(from 1ms to 2000ms)。 |
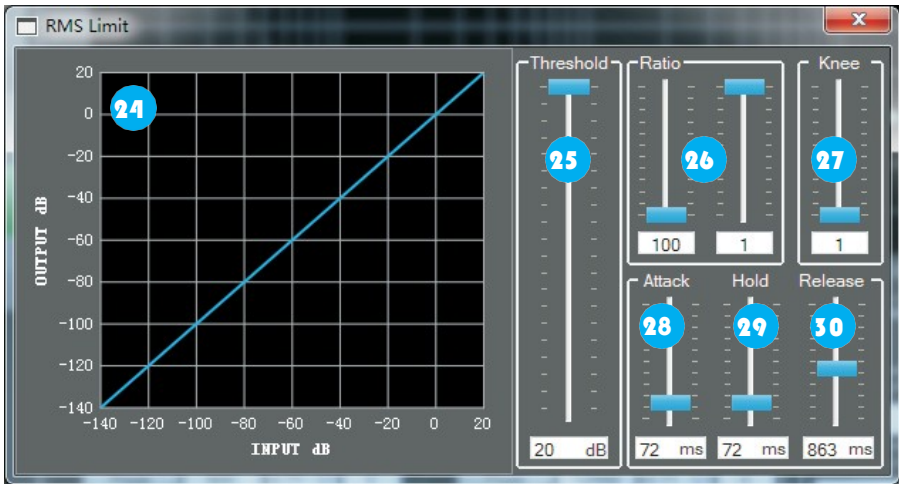
# Note: this software only runs on Windows 7 and above

# DSP Controller using attention

DSP Controller is a software application that needs to be installed. The installation software is attached to the cd-ROM (note that this software can only be used on computer operating system above WIN7).

After opening the DSP Controller, this dialog box appears, and you need to enter the password to unlock the PC interface (the password is included in the purchase agreement). As shown in figure
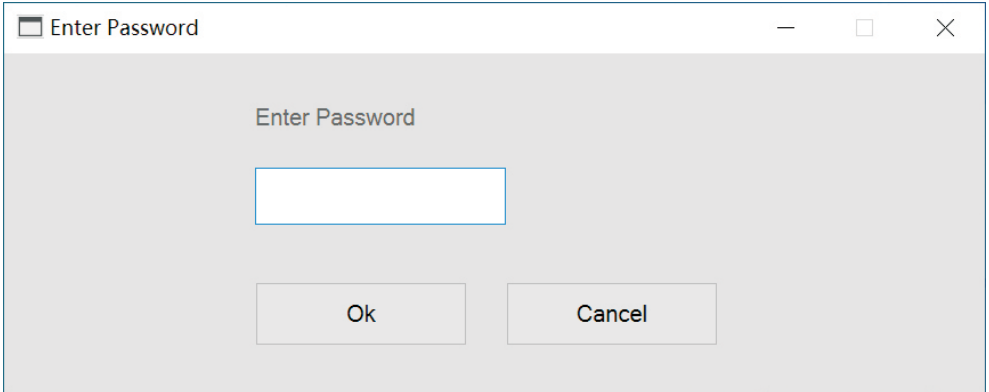


After entering the PC interface of the device, there will be only simple functional options (as shown in the figure). Most of the functions have been hidden and the device permissions need to be unlocked to use (the password is included in the purchase agreement).
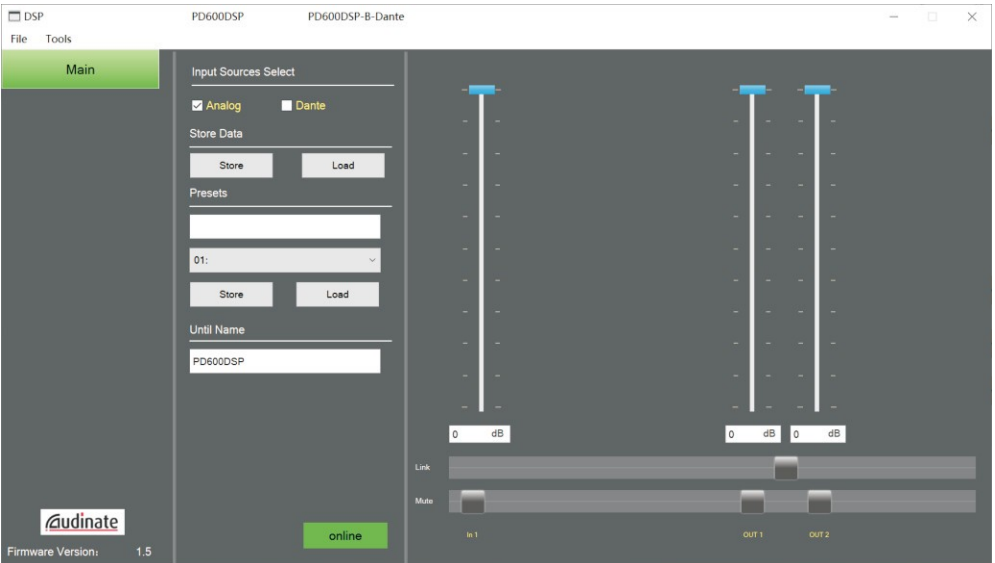
# Dante Controller introduction

Dante Controller is a free software application that lets you wire and configure devices with audio paths over the Dante Network. With automatic device discovery, one-click signal path routing, and user-editable device and channel tags, setting up the Dante Network has never been easier. Dante Controller is available for download at the Audinate website, where you can learn more about THE Dante Audio Network.

Note: this software can only run on Windows 7 and above, please refer to audinate website for details.
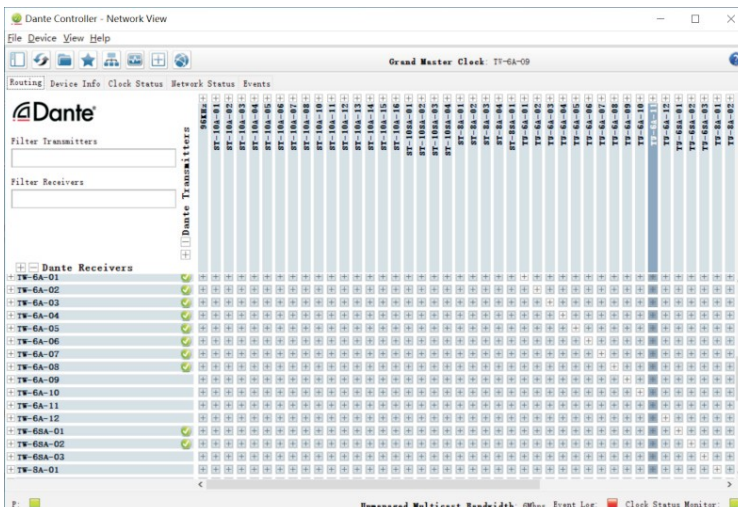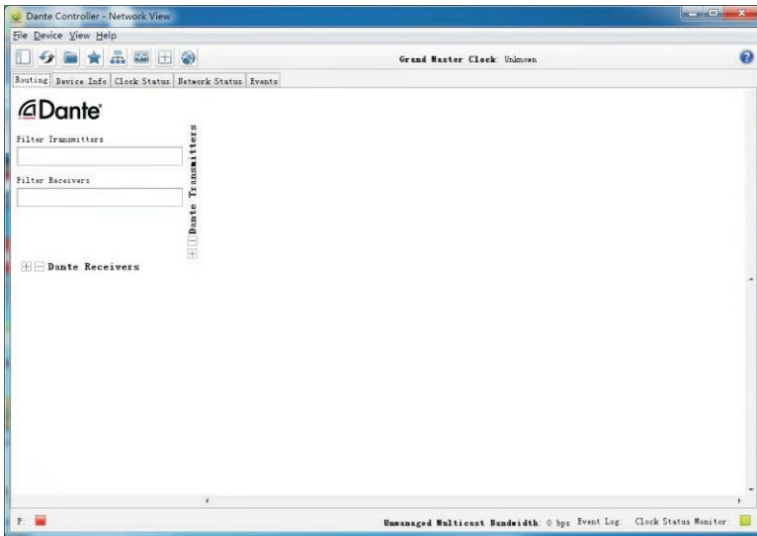
# Bridge mode

Example: CH1 Bridges Ch2

Connect the power amplifier and PC successfully, and then click the interface of OUT2 channel to light up the "Phase-Nvert" button on this interface (as shown in Figure 1) to realize CH2 output inverting, thus achieving the purpose of bridging. Then click the Main interface and click the "Store" button of "Presets" (as shown in Figure 2) to save data changes, so as not to restore the last preset of saving data after the power amplifier is restarted.
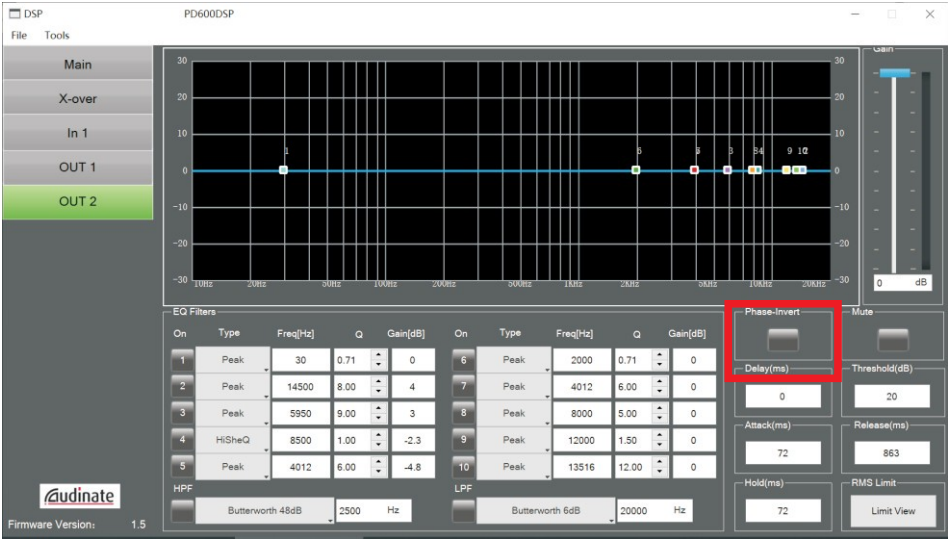


图一
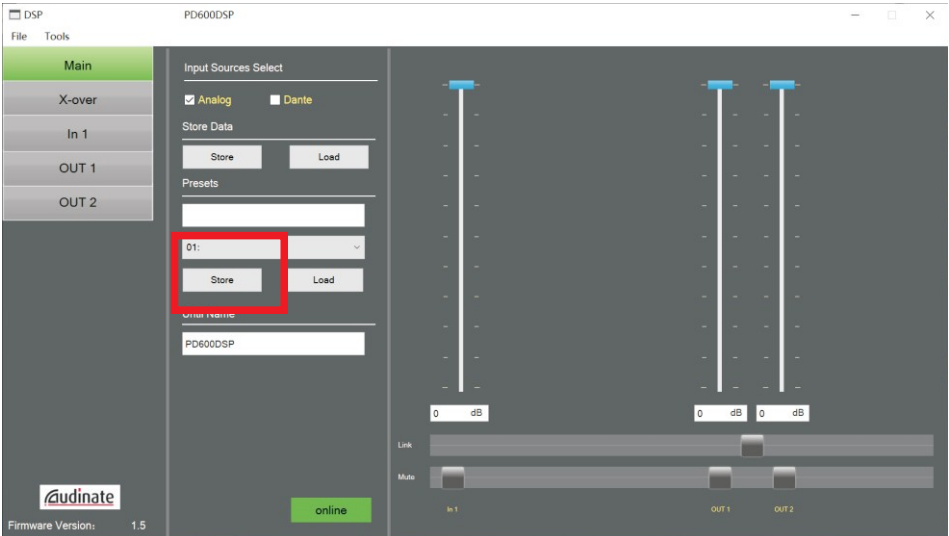


图二

# Ethernet connection method



Amplifier
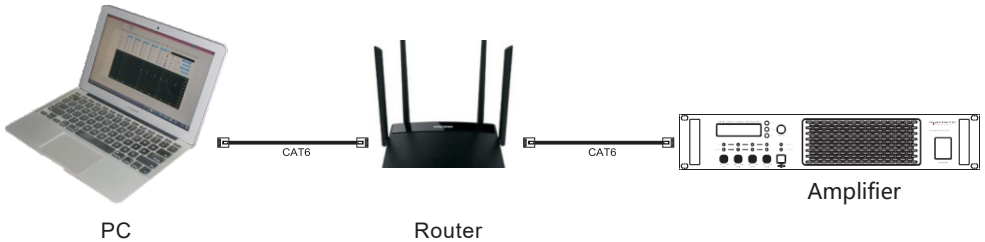
PC                    Router

1. Connect PC, router and module with CAT6 cable, as shown above.
(The PC connection router can use WIFI.)



2. Open the software, click on the "Ethernet", and then click on the "Scan IP",as shown above.



3. Wate a few seconds, the software recognizes the IP address, as shown above.

4. Click on the IP, and then Click on "Connect". When the system prompts that the connection is successful. The whole connection mode is completed. If the connection is unsuccessful, try it again.

# Dante connection method



Cat-6  Switch  Cat-6  Amplifier
PC
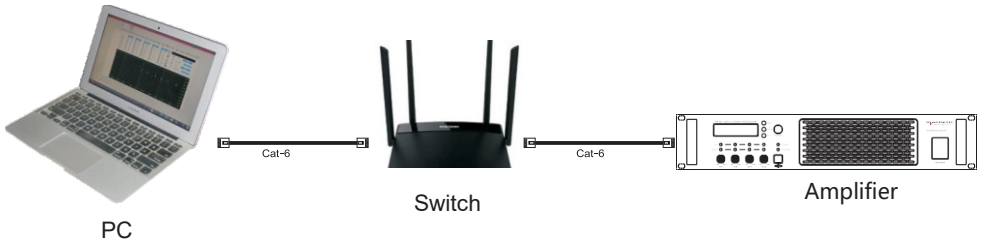
1. As shown above, a CAT6 network cable is used to connect the PC, switch and amplifier.
Note: THE PC can be directly connected to the power amplifier without going through the switch.



2. Open the app and click on "Dante," and the app will automatically scan the ID of the Dante chip.



3. After a few seconds, the software recognizes the ID name.

4. Click ID and then click "Connect." Wait for the connection to read bar. When the connection is prompted, the whole operation is completed. If the connection is unsuccessful, go through the steps again.

# XLR connector

Balanced use of XLR connectors

2  3  1

1 = Ground / Shield

2 = Hot (+)

3 = Cold (-)

1 3 2

Input

Output

In case of unbalanced use Pins 1 and 3 will be jumped
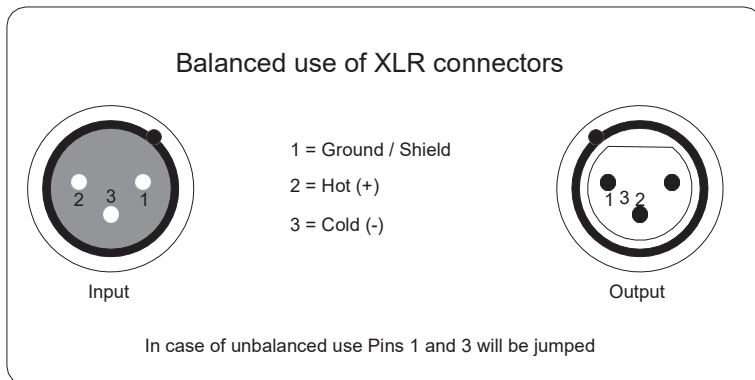
# Speakon connector

Stereo

1+  2-
1-  2+
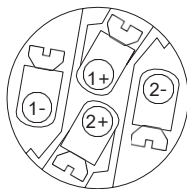
1+=Positive pole 1-

=Negative pole

Bridge

1+  2-
1-  2+

1+=Positive pole

2+=Negative pole

# Specification

| Model | DAP500.2DSP | DAP500.2DSP+Dante |
|---|---|---|
| Stereo 8ohm | 2x250W | 2x250W |
| Stereo 4ohm | 2x500W | 2x500W |
| Bridge 8ohm | 1x900W | 1x900W |
| Frequency response | 20~20KHz(±3dB) | 20~20KHz(±3dB) |
| Input sensitivity | 1.4V | 1.4V |
| Input impedance | 20KΩ/10KΩ | 20KΩ/10KΩ |
| Damping factor | >550(8ohm load, 1KHz) | >550(8ohm load, 1KHz) |
| Signal to Noise-Ratio | >80dB | >80dB |
| Working voltage | 85~265V,50/60Hz,with PFC | 85~265V,50/60Hz,with PFC |
| Dante | No | Yes |
| Standby consumption | 1W | 1W |
| Input and output connector | 2xXLR female,2xXLR male 2xSpeakon NL4 | 2xXLR female,2xXLR male 2xSpeakon NL4 |
| Dimensions(WxDxH) | 482x275x88mm | 482x275x88mm |
| Weight | 2kg | 2kg |

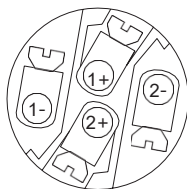| Model | DAP800.2DSP | DAP800.2DSP+Dante |
|---|---|---|
| Stereo 8ohm | 2x400W | 2x400W |
| Stereo 4ohm | 2x800W | 2x800W |
| Bridge 8ohm | 1x1400W | 1x1400W |
| Frequency response | 20~20KHz(±3dB) | 20~20KHz(±3dB) |
| Input sensitivity | 1.4V | 1.4V |
| Input impedance | 20KΩ/10KΩ | 20KΩ/10KΩ |
| Damping factor | >1000(8ohm load, 1KHz) | >1000(8ohm load, 1KHz) |
| Signal to Noise-Ratio | >120dB | >120dB |
| Working voltage | 85~265V,50/60Hz,with PFC | 85~265V,50/60Hz,with PFC |
| Dante | No | Yes |
| Standby consumption | 1W | 1W |
| Input and output connector | 2xXLR female,2xXLR male 2xSpeakon NL4 | 2xXLR female,2xXLR male 2xSpeakon NL4 |
| Dimensions(WxDxH) | 482x345x88mm | 482x345x88mm |
| Weight | 2kg | 2kg |

# Specification

| Model | DAP2500.2DSP | DAP2500.2DSP+Dante |
|---|---|---|
| Stereo 8ohm | 2x1500W | 2x1500W |
| Stereo 4ohm | 2x2000W | 2x2000W |
| Bridge 8ohm | n/a | n/a |
| Frequency response | 20~20KHz(±3dB) | 20~20KHz(±3dB) |
| Input sensitivity | 1.4V | 1.4V |
| Input impedance | 20KΩ/10KΩ | 20KΩ/10KΩ |
| Damping factor | >1000(8ohm load, 1KHz) | >1000(8ohm load, 1KHz) |
| Signal to Noise-Ratio | >120dB | >120dB |
| Working voltage | 85~265V,50/60Hz,with PFC | 85~265V,50/60Hz,with PFC |
| Dante | No | Yes |
| Standby consumption | 12W | 12W |
| Input and output connector | 2xXLR female,2xXLR male  2xSpeakon NL4 | 2xXLR female,2xXLR male  2xSpeakon NL4 |
| Dimensions(WxDxH) | 482x460x88mm | 482x460x88mm |
| Weight | 2kg | 2kg |

| Model | DAP4200.3DSP | DAP4200.3DSP+Dante |
|---|---|---|
| Stereo 8ohm | 1500W+2x400W | 1500W+2x400W |
| Stereo 4ohm | 2000W+2x800W | 2000W+2x800W |
| Bridge 8ohm | n/a | n/a |
| Frequency response | 20~20KHz(±3dB) | 20~20KHz(±3dB) |
| Input sensitivity | 1.4V | 1.4V |
| Input impedance | 20KΩ/10KΩ | 20KΩ/10KΩ |
| Damping factor | >1000(8ohm load, 1KHz) | >1000(8ohm load, 1KHz) |
| Signal to Noise-Ratio | >120dB | >120dB |
| Working voltage | 85~265V,50/60Hz,with PFC | 85~265V,50/60Hz,with PFC |
| Dante | No | Yes |
| Standby consumption | 6W | 6W |
| Input and output connector | 3xXLR female,3xXLR male  3xSpeakon NL4 | 3xXLR female,3xXLR male  3xSpeakon NL4 |
| Dimensions(WxDxH) | 482x345x88mm | 482x345x88mm |
| Weight | 2kg | 2kg |

# Specification

| Model | DAP500.4DSP | DAP500.4DSP+Dante |
|---|---|---|
| Stereo 8ohm | 4x250W | 4x250W |
| Stereo 4ohm | 4x500W | 4x500W |
| Bridge 8ohm | 2x900W | 2x900W |
| Frequency response | 20~20KHz(±3dB) | 20~20KHz(±3dB) |
| Input sensitivity | 1.4V | 1.4V |
| Input impedance | 20KΩ/10KΩ | 20KΩ/10KΩ |
| Damping factor | >550(8ohm load, 1KHz) | >550(8ohm load, 1KHz) |
| Signal to Noise-Ratio | >80dB | >80dB |
| Working voltage | 85~265V,50/60Hz,with PFC | 85~265V,50/60Hz,with PFC |
| Dante | No | Yes |
| Standby consumption | 2W | 2W |
| Input and output connector | 4xXLR female,4xXLR male 4xSpeakon NL4 | 4xXLR female,4xXLR male 4xSpeakon NL4 |
| Dimensions(WxDxH) | 482x345x88mm | 482x345x88mm |
| Weight | 2kg | 2kg |

| Model | DAP3200.4DSP | DAP3200.4DSP+Dante |
|---|---|---|
| Stereo 8ohm | 4x400W | 4x400W |
| Stereo 4ohm | 4x800W | 4x800W |
| Bridge 8ohm | 2x1400W | 2x1400W |
| Frequency response | 20~20KHz(±3dB) | 20~20KHz(±3dB) |
| Input sensitivity | 1.4V | 1.4V |
| Input impedance | 20KΩ/10KΩ | 20KΩ/10KΩ |
| Damping factor | >1000(8ohm load, 1KHz) | >1000(8ohm load, 1KHz) |
| Signal to Noise-Ratio | >120dB | >120dB |
| Working voltage | 85~265V,50/60Hz,with PFC | 85~265V,50/60Hz,with PFC |
| Dante | No | Yes |
| Standby consumption | 12W | 12W |
| Input and output connector | 4xXLR female,4xXLR male 4xSpeakon NL4 | 4xXLR female,4xXLR male 4xSpeakon NL4 |
| Dimensions(WxDxH) | 482x460x88mm | 482x460x88mm |
| Weight | 2kg | 2kg |

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