

# DP428s

## Loudspeaker Processor User's manual



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# 重要安全事项和符号说明

- 1. 阅读这些规定。
- 2. 保存好这本说明书。
- 3. 注意所有警告。
- 4. 遵守这些规定。
- 5. 警告: 为避免着火或电击，不要将设备暴露在雨中或潮湿的环境中。设备不应遭受水滴或水溅，而且设备上不应放置诸如花瓶一类的装满液体的物品。
- 6. 建议用干布清洁。
- 7. 根据制造商的说明进行安装。
- 8. 不要安装在会产生热量的热源附近，如散热器、热调节装置、炉子或其它设备。
- 9. 勿使接地插头的安全性失效，本设备应通过保护性接地连接到插座。
- 10. 保护电线防止被踩踏或挤压，尤其要注意插头、电源插座及其连接设备处。
- 11. 必须选择好后板开关标称电压相符的电源，若由于使用电压的不恰当而导致的设备损坏将作为有偿服务。



有重要的信息，提请注意！



机内具有危险电压的非绝缘部分，足以致人于触电之危。  
维修时必须由专业人士检修，不得擅自开盖！

## 前言

### 欢迎

非常感谢您购买本公司产品。在使用之前请详细阅读本手册，它将给您正确的使用指引，并有助于设备的正常工作，避免因操作不当而造成不必要的异常问题。



### 拆包

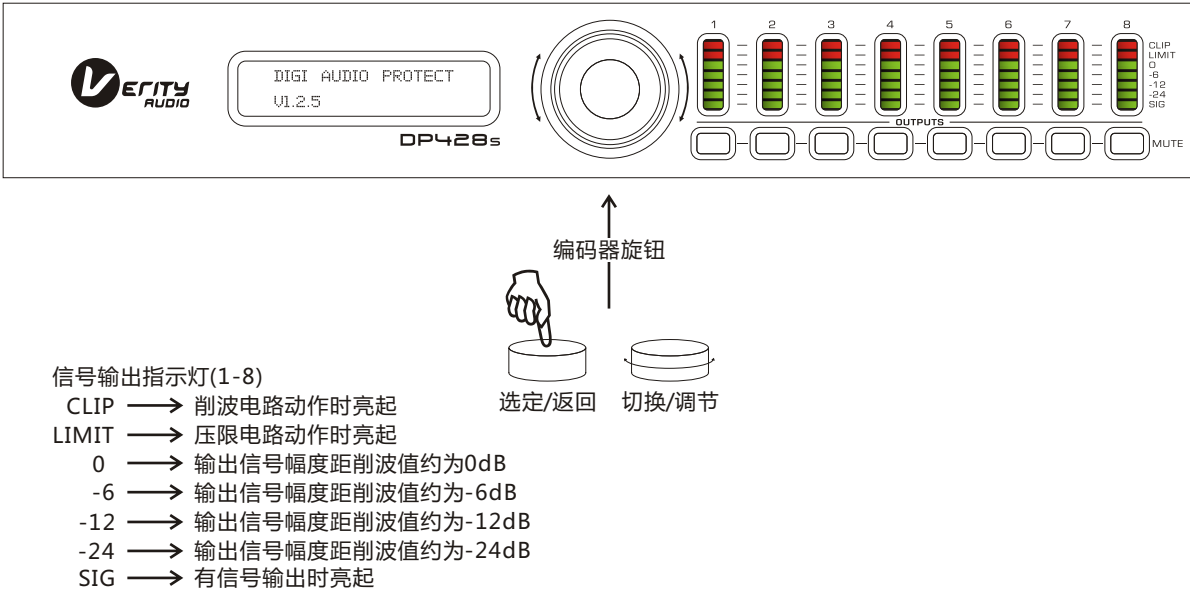
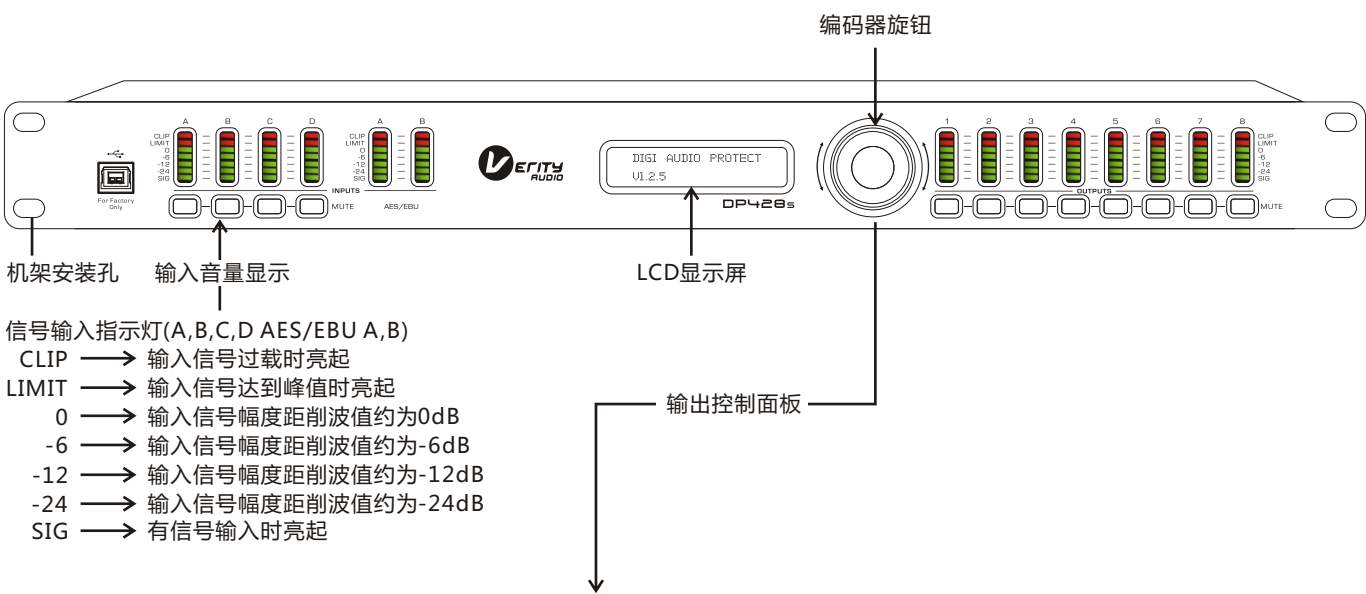
请在拆开包装后，确认产品的外观没有在运输途中遭到损坏。确认预设电压和您所在地的交流电压额定值匹配（详细信息见产品背板印刷）建议您保留包装箱，以便在需要退还时使用。

### 重要的安全注意事项

本公司的产品设计已经考虑到安全使用的要求，并遵照相关的国家的安全规定检验出厂产品，只有合格的产品才能出厂销售。但由于本产品内部有危险高压和电量，因此要求用户必须认真阅读本手册的注意事项。如果产品跌落、凹入、浸湿或者里面有部件松动，则会大大增加人被电击的危险。当发生以上的问题时，请马上切断电源线，然后将本产品送还指定的经销商进行维修，禁止自己开盖检查！

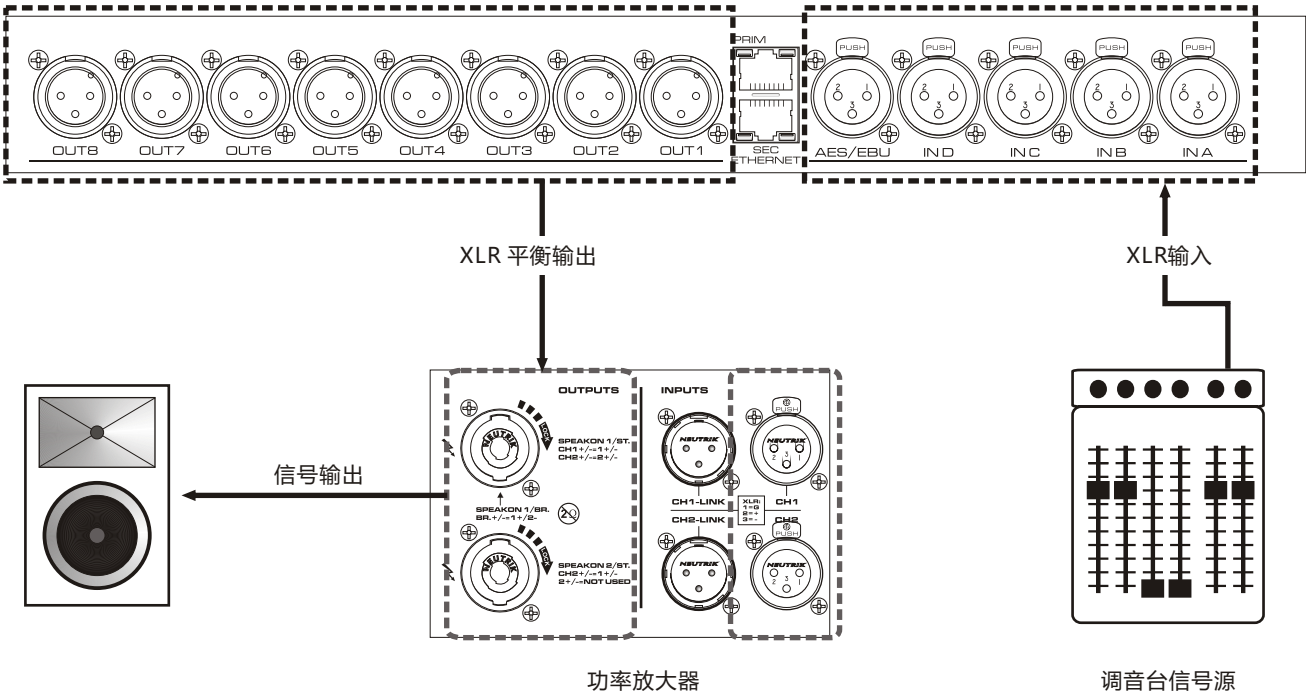
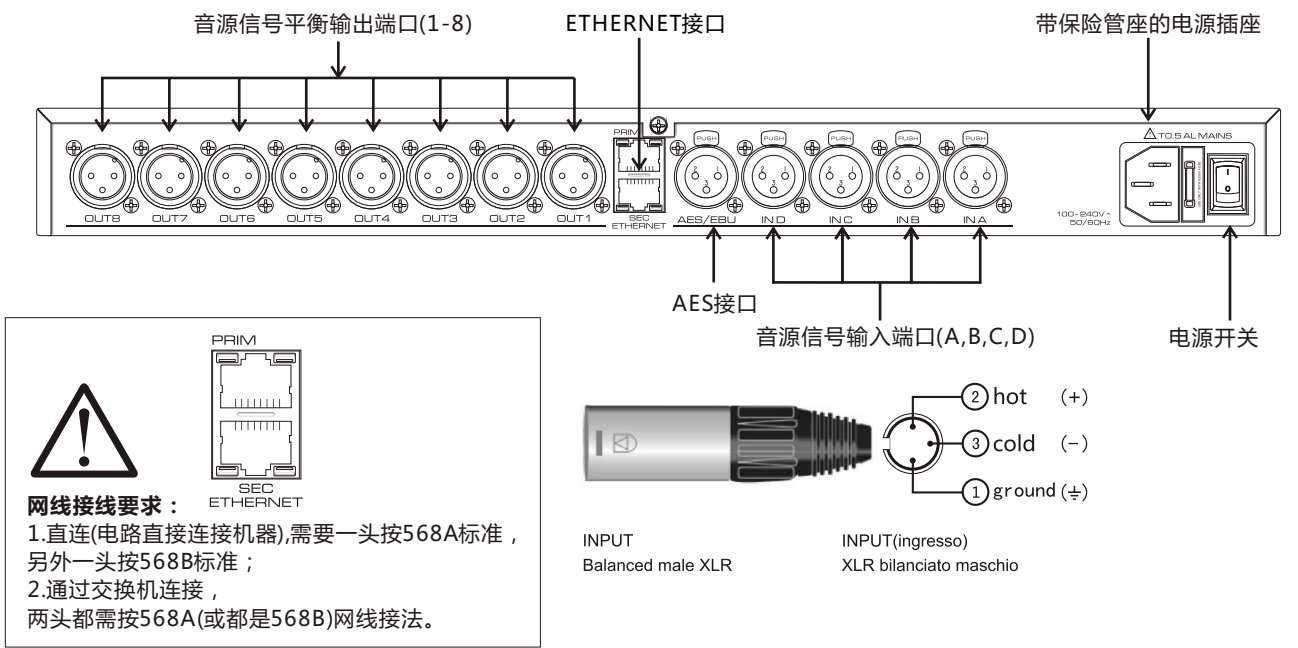
# 面板说明

## 前面板概况



# 后板说明

## 后面板概况



# DSP使用说明



软件使用注意：

本产品属于专业音频设备，须专业人员或经培训后方可使用；

软件适用于Windows(32Bit\64Bit)、Mac系统

电脑硬件要求:CPU:I3-9代或以上,内存4GB,硬盘120G或以上

软件获取，扫描产品背面二维码下载或登陆官网下载；

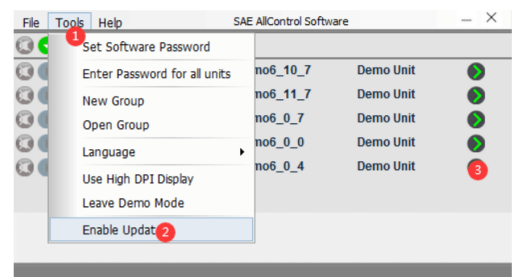
开机过程中，请勿关机或作任何操作；

Preset命名方式不能出现以下字符：\、/、:、\*、?、"、<、>、|、中文、空格等Windows、Mac系统不允许的命名规则，必须使用英文、阿拉伯数字；

屏幕显示Safe Mode安全模式:处理器的保护机制被触发，整机被锁定不能使用,请联系售后解决。

屏幕显示Recovery mode恢复模式:处理器的固件被损坏或，整机被锁定不能使用，请联系售后解决。

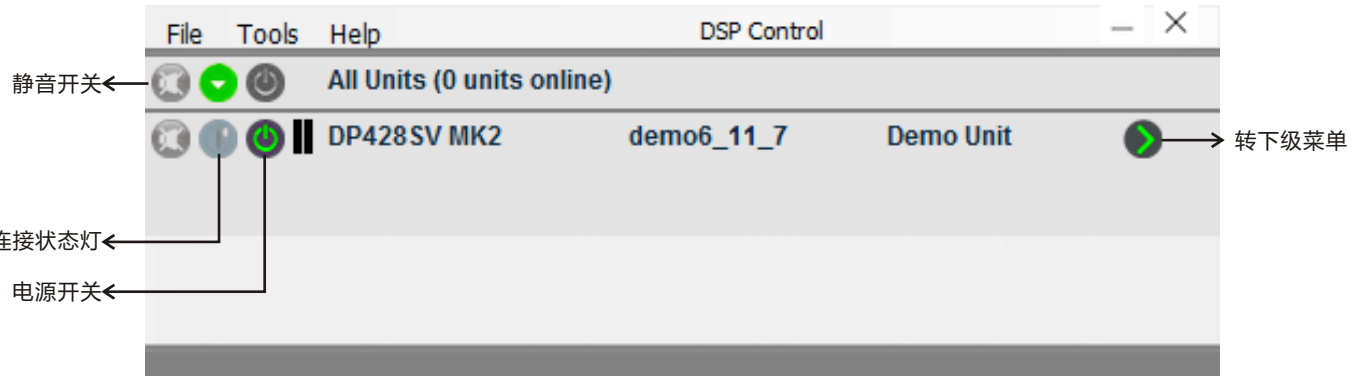
Recovery mode恢复模式修复方法：过程中按OK或确认，不需要输入密码。



# 软件使用说明

## 软件界面介绍

### 1.设备状态控制面板



### 2.设备调节控制面板



# 软件使用说明

## 软件界面介绍

### 2.设备调节控制面板

Link DP428SV MK2 (Demo)

Unit Name DP428SV MK2

USER MODE

In 1In 2In 3In 4Out 1Out 2Out 3Out 4Out 5Out 6Out 7Out 8

Output Level

+12+12+12+12+12+12+12+12

00000000

-12-12-12-12-12-12-12-12

-24-24-24-24-24-24-24-24

-36-36-36-36-36-36-36-36

-40-40-40-40-40-40-40-40

12345678

Link

1-23-45-67-8

同步开关

Mute

M M M M M M M M

静音开关

Phase Invert

00000000

相位开关

Unit

Save

Load

Demo Preset

1: None

Out 1Out 2Out 3Out 4Out 5Out 6Out 7Out 8

HPF

OffOffOffOffOffOffOffOff

But 6dBBut 6dBBut 6dBBut 6dBBut 6dBBut 6dBBut 6dBBut 6dB

LPF

OffOffOffOffOffOffOffOff

But 6dBBut 6dBBut 6dBBut 6dBBut 6dBBut 6dBBut 6dBBut 6dB

Gain

0.00dB0.00dB0.00dB0.00dB0.00dB0.00dB0.00dB0.00dB

Delay

0.0ms0.0ms0.0ms0.0ms0.0ms0.0ms0.0ms0.0ms

增益(0.01-12dB)

延时(0.001-5ms)

Link DP428SV MK2 (Demo)

Unit Name DP428SV MK2

USER MODE

In 1In 2In 3In 4Out 1Out 2Out 3Out 4Out 5Out 6Out 7Out 8

Router

0-12-24-36-48

dB

1234

1234

Gain

+12+12

00

-12-12

-24-24

-36-36

-48-48

dB

Phase Invert

00000000

静音开关

Mute

M M M M M M M M

静音开关

Delay

0.0

ms

Limiters

15.00dBu10ms50ms

THRATTREL

Unit

Save

Load

Demo Preset

1: None

12345678910

ON

12345678910

Type

BellBellBellBellBellBellBellBellBellBell

Freq

20Hz50Hz100Hz250Hz500Hz1.00k2.50k5.00k10.0k15.0k

Q

1.01.01.01.01.01.01.01.01.01.0

Gain

0.000.000.000.000.000.000.000.000.000.00

HPF

OffOffButterworth 6dB

LPF

OffOffButterworth 6dB

滤波器类型 :

1 ) Bell:钟型滤波器

2 ) Notch:陷波器

3 ) Hi-shelf:高端吊型滤波器

4 ) Lo-shelf:低端吊型滤波器

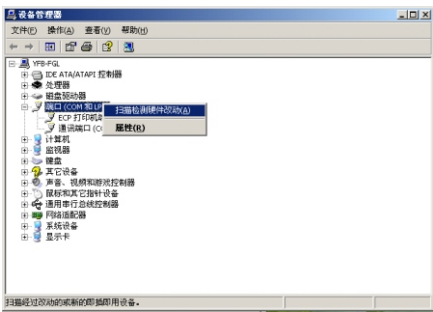
5 ) All Pass:全通滤波器

# USB驱动程序安装向导

## 安装向导

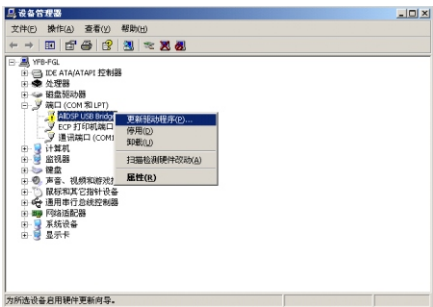
1.当安装好PC软件后，DP428设备连接到电脑，如电脑不会自动发现设备硬件，在设备管理器里右键点【扫描检测硬件改动】

如右图



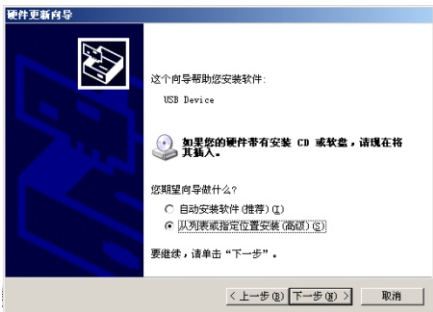
2.此时会扫描到感叹号或问号的USB硬件设备，在此项右键，点【更新驱动程序】。

如右图



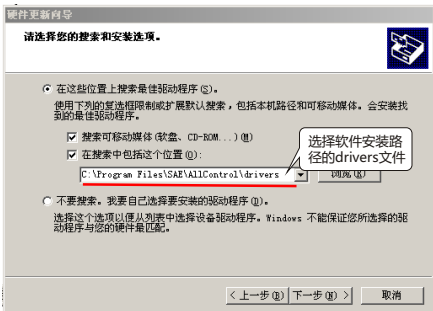
3.弹出硬件更新向导,如点【自动安装软件】找不到文件安装时,可点第二项【从列表或指定位置安装】按下一步。

如右图



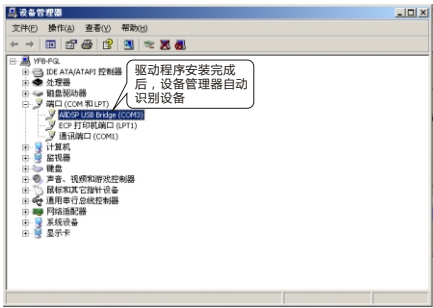
4.在弹出的窗口里的【在搜索中包括这个位置】项打勾，并在浏览框选里选择到软件安装路径的驱动程序文件（图片为软件默认安装的路径，如安装时有改动路径则要选到自己安装的路径），下一步，即会自动搜索安装。如还是搜索不到文件安装，可点【不要搜索】项,按下一步，选择DSP，再下一步进行安装。

如右图



5.在完成驱动程序安装后，设备管理器里会自动识别到设备，此时就可以连接设备了。

如右图





技术指标

|               |                                                   |
|---------------|---------------------------------------------------|
| 型号            | DP428s                                            |
| 输入            | 四路平衡式.                                            |
| 输出            | 八路平衡式.                                            |
| 输入阻抗          | 平衡式 20K 非平衡式10K                                   |
| 输出阻抗          | ≤ 100Ω                                            |
| 输出增益          | +12dB 至 -48dB 可调，调整步距为 0.25dB.                    |
| 输入增益          | +12dB 至 -48dB 可调，调整步距为 0.25dB.                    |
| 其他参数          |                                                   |
| 频率响应(-1dB)    | 20Hz - 20kHz                                      |
| 总谐波失真         | ≤ 0.008%                                          |
| 最大输入延时时间      | 2s                                                |
| 最大输出延时时间      | 50ms                                              |
| 动态范围 (A计权)    | ≥115dB                                            |
| 转换频率 (高通/低通)  | 20Hz - 20kHz，调整步距1Hz                              |
| 中心频率 (高通/低通)  | 20Hz - 20kHz，调整步距为 1/36 倍频程 (19980 个位置)           |
| 最小负载阻抗        | 600Ω                                              |
| 最大输出电平        | +18dBu ( 600Ω负载 )                                 |
| 滤波器增益         | +12dB 至 -12dB，步距为 0.25dB                          |
| 高通及低通滤波器      | Q 值 0.2-25可调 步距 0.1可调/10 段 / 每路输出有 1 个滤波器,开启同关闭   |
| FIR滤波器        | 8 x 800taps                                       |
| 频率响应          | 贝塞尔 / 巴特沃斯 6/12/16/24dB 每倍频程，林克维茨 - 瑞莱 24dB / 倍频程 |
| 保护功能          | 系统可设置密码，可以防止无关人员的操作                               |
| 连接器           |                                                   |
| 输入部分          | 3 芯 XLR 母插座.                                      |
| 输出部分          | 3 芯 XLR 公插座.                                      |
| USB 接口        | 方形                                                |
| 电源插口          | 3 芯 IEC 插座.                                       |
| 输入(Limiter)压限 | 门槛值 +24dBu 至 -48dBu.                              |
| 输出(Limiter)压限 | 门槛值 +12dBu 至 -48dBu.                              |
| 启动时间          | 0                                                 |
| 释放时间          | 1-100倍                                            |
| 采样率           | 96kHz                                             |
| 相位            | 180°相位                                            |
| 显示屏           | 2 x 16 字符型液晶屏.                                    |
| 输入电平表         | 2 x 7 点，-30dB 至数字剪峰                               |
| 输出电平表         | 6 x 7 点，-30dB 至数字剪峰                               |
| 预设置           | 大于100个电脑预设置/大于100个本机预设置                           |
| 版本信息          | 硬件,软件,DSP模块的版本信息                                  |
| 尺寸/电源线        |                                                   |
| 产品外形尺寸(mm)    | 482x231x44.5 ( 1U )                               |
| 外包装尺寸 (mm)    | 525x300x110 ( 1U )                                |
| 耗电量           | ≤10W                                              |
| 电源            | 100-240V ~/50-60Hz ±10%                           |

## Important Safety Instruction and symbol description

---

- 1.Read these rules.
- 2.Keep this instruction manual.
- 3.Pay attention to all the warning.
- 4.Follow these provisions.
- 5.Warning:do not place the device in rain or wet environment, to avoid catching fire or eletric shock.
- 6.Only dry rag can be used to clean.
- 7.Do not block the air-vent. The installation should be according to manufacturer/s instruction.
- 8.Do not install near the heat source which such as radiators, stoves and others(include amplifiers) can produce heat.
- 9.Do not disable the security of the ground pin. This device should be linked to socket through safe ground connection.
- 10.Take care of the eletric wire without trampling and squeezing, Especially pay attention to the plug, the power sockets and other connectors.
- 11.The voltage which indicated on the rear panel must be used. If the device damage is caused by using improper voltage, it will repaired out of warranty.



**When you see this sign, it means these are important infomation.**



**Dangerous without insulated sections are in the device, which can electrify people. So do not open the cover. The device must be repaired by professionals or returns to the manufacturer.**

## Foreword

---

### Welcome

DP428 is a newly developed professional speaker management from our company. And it can work with computer.Please download the control soft ware from our company brand website.  
balanced input, and Matching impedance output.  
Please read this manual carefully.



### Unpacking

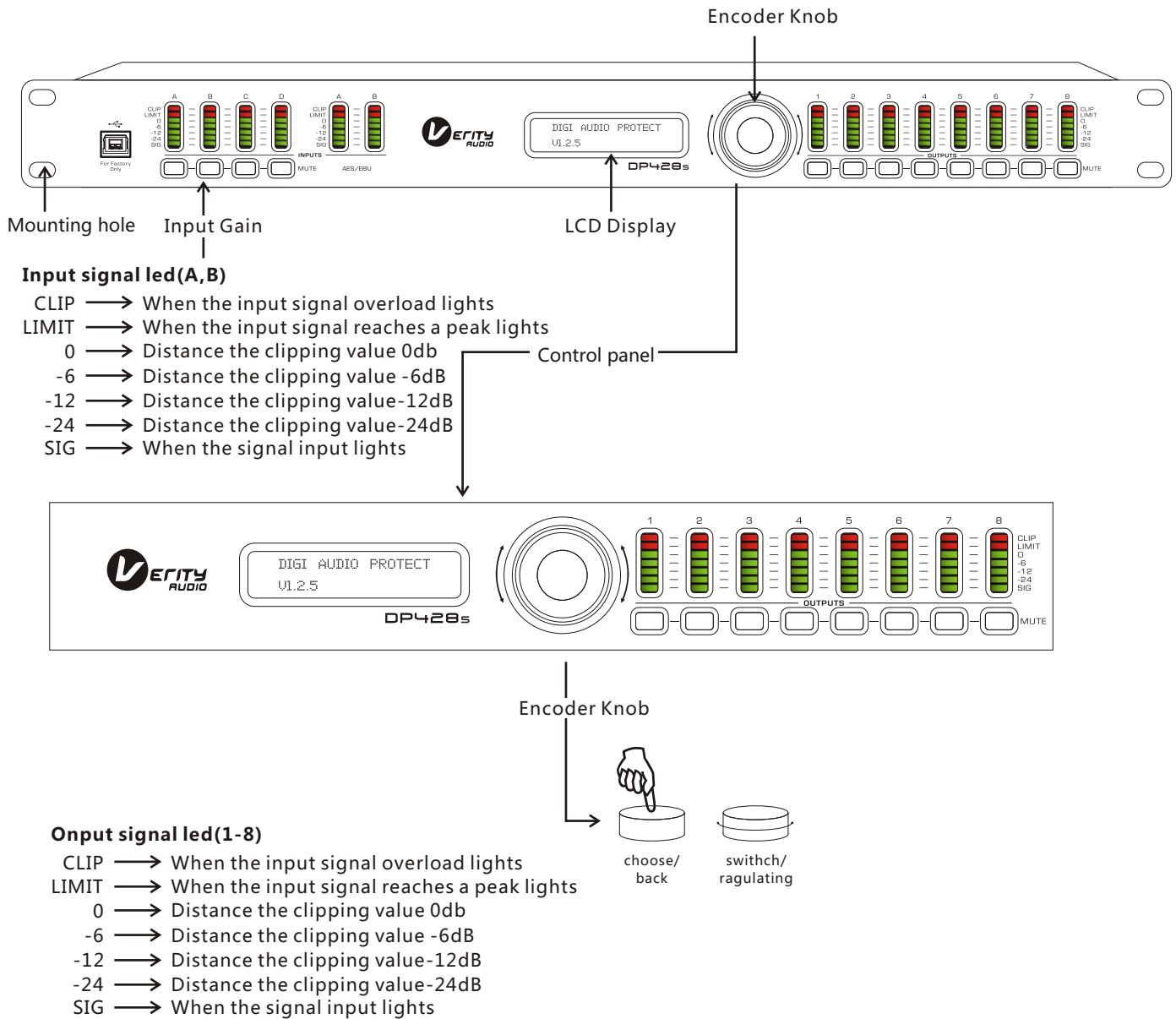
Please make sure if the appearance of the power amplifier was damaged or not during the transportation after you opened the package. Please make sure the preset voltage is matched with your local AC voltage (please check it on the rear panel of the power amplifier).  
We suggest you retain the package in case you need them for further transportation.

### Important safety precautions

The design of products has already taken the safe requirement in to consideration and all the finished products have been tested under the requirement of the government before sale. Users should read the notice in this manual before operation as there is dangerous high voltage and electricity inter the products. It will increase the chance of getting shock by the electricity if the product falls down, recess in the appearance, soaked or there were some parts loose internal. If there are problems above, please turn off power immediately and send the defective units to local distributor for service.

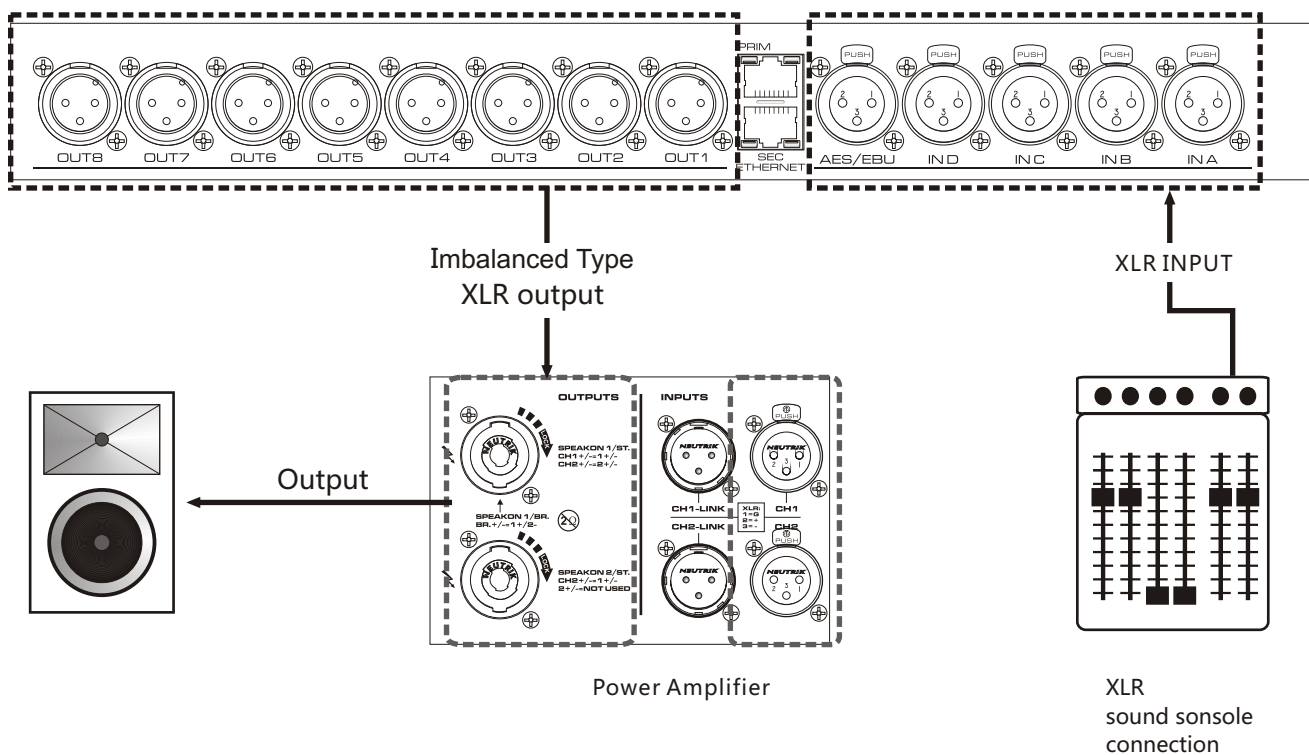
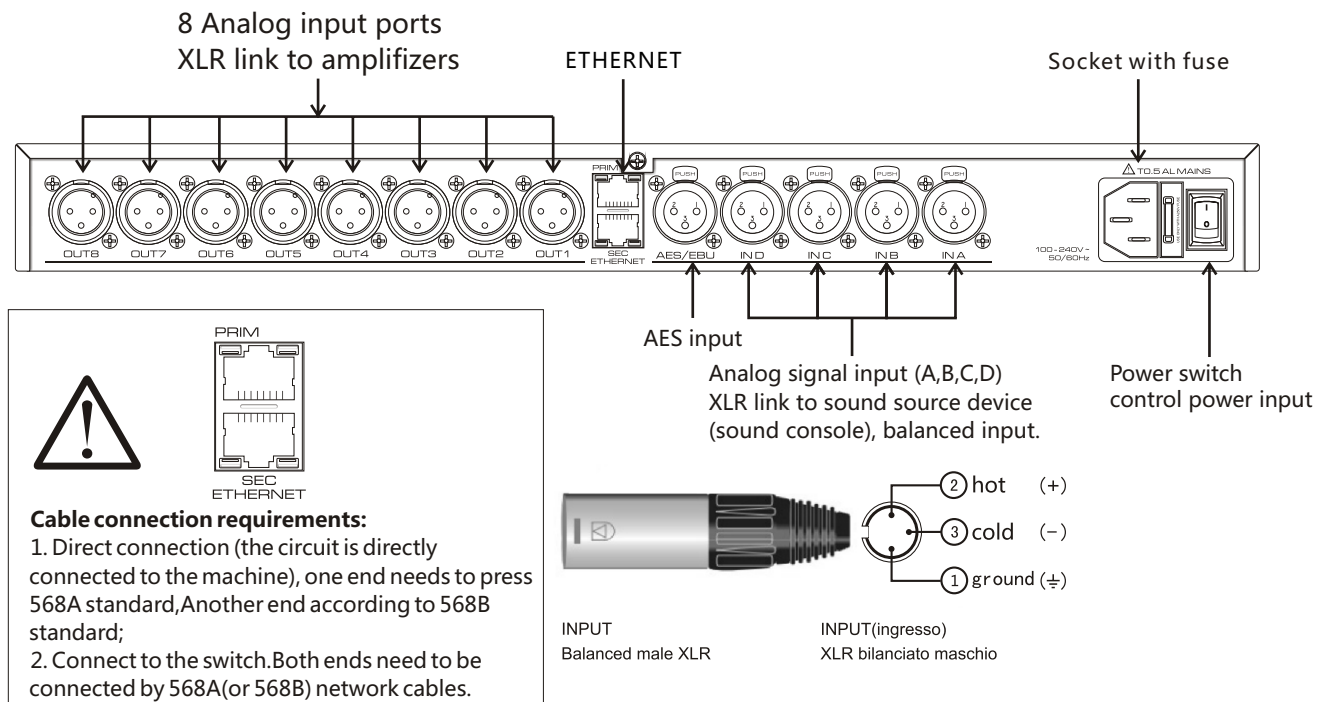
## Front Panel Function

### Front panel

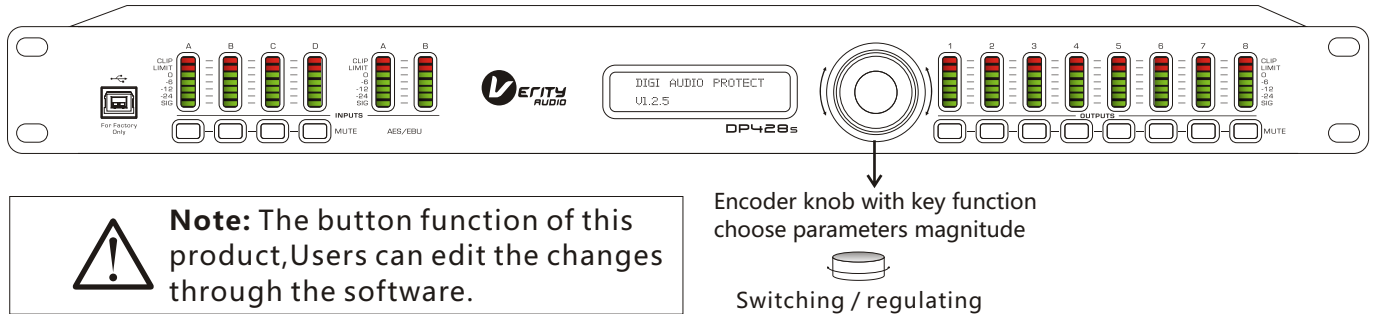


## Rear Panel Function

### Rear Panel



## DSP instructions



Software instructions for use:

This product belongs to professional audio equipment and can only be used by professional personnel or after training;

The software is applicable for Windows (32Bit/64Bit) and Mac systems

Computer hardware requirements: CPU: I3-9 generation or above, 4GB memory, 120G hard disk or above

Software can be obtained by scanning the QR code on the back of the product for download or logging into the official website for download;

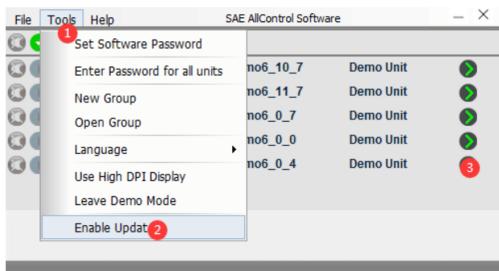
During the startup process, do not shut down or perform any operations;

The preset naming method cannot contain the following characters: \, /, :, \*, ?, ", <, >, |, Chinese characters, spaces etc. which naming rules are not allowed in Windows or Mac systems, must use English and Arabic numerals;

The screen displays Safe Mode: The protection mechanism of the processor has been triggered, and the entire machine is locked and cannot be used. Please contact the after-sales service for resolution.

The screen displays Recovery mode: The firmware of the processor is damaged or the entire machine is locked and cannot be used. Please contact after-sales service for assistance.

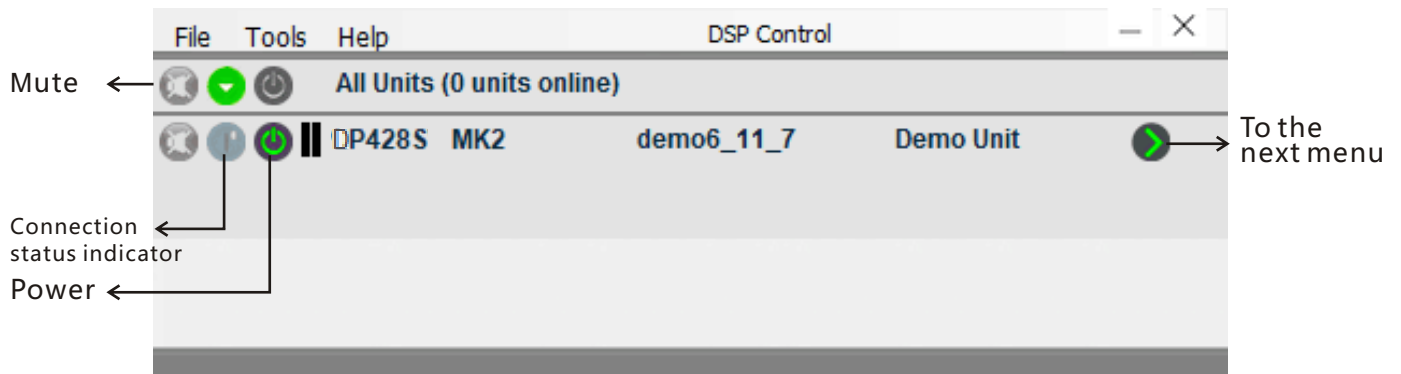
Recovery mode repair method: Press OK or confirm during the process, without entering a password.



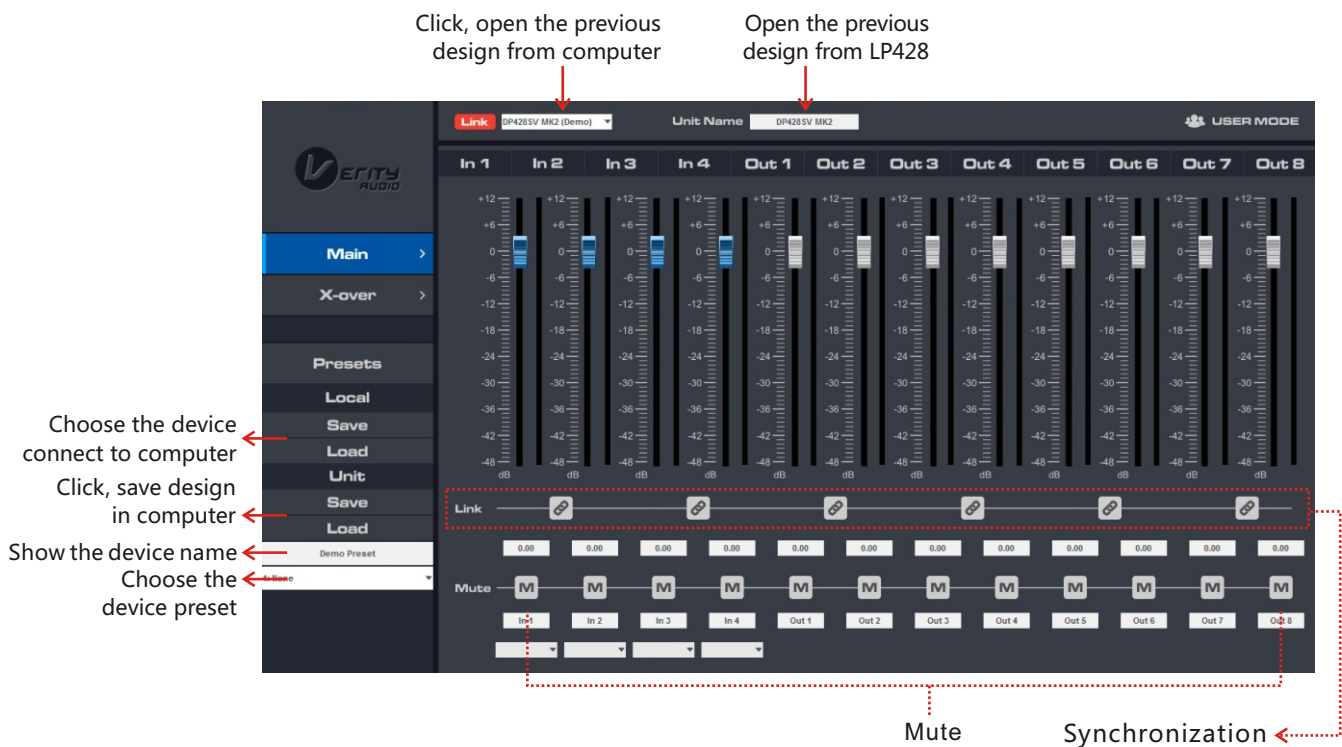
# Software instructions

## Software interface introduction

### 1.Equipment state control panel



### 2.Main interface



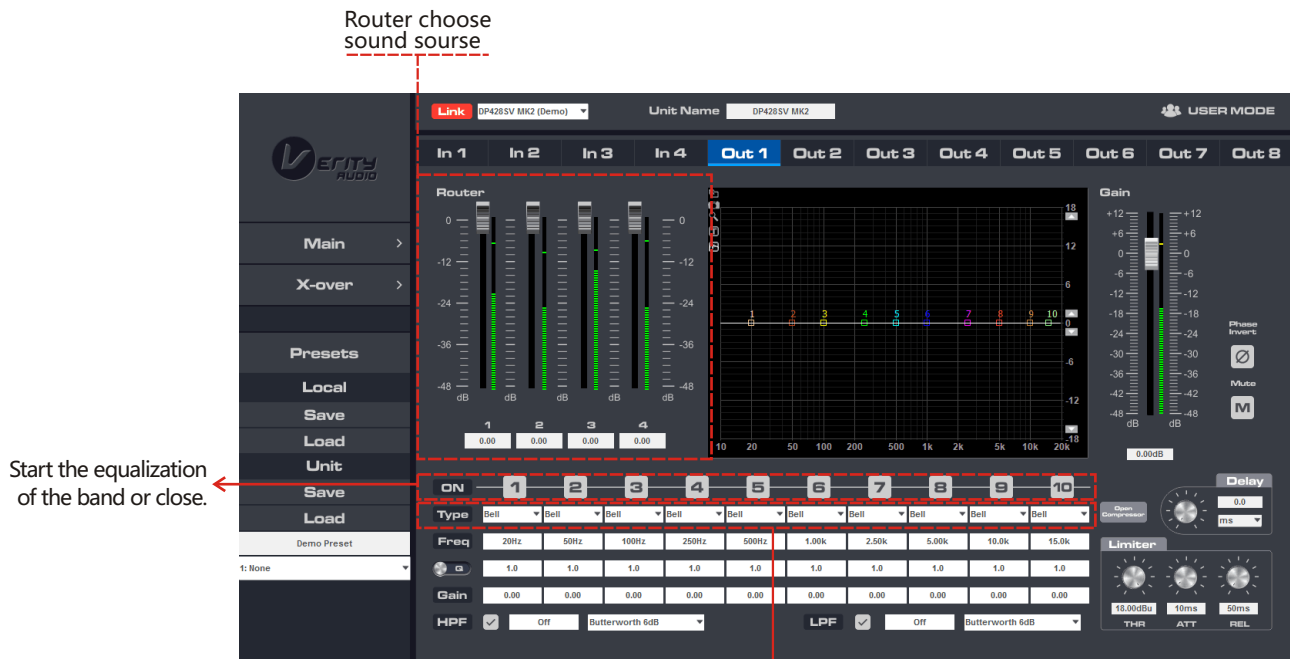
# Software instructions

## Software interface introduction

### 2.X-OVER interface



### 3.OUTPUT interface



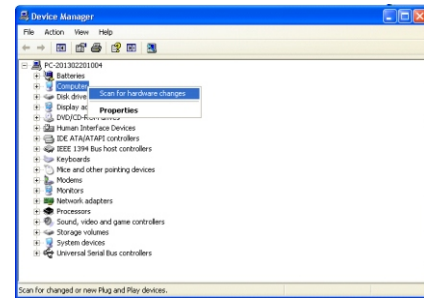
- Filter Type :
- 1) Bell: bell filter secam
  - 2) Notch: wave trap
  - 3) Hi-shelf: high-end broom-shaped filter
  - 4) Lo-shelf: low-end broom-shaped filter
  - 5) All Pass: all pass filter



# USB driver manual installation

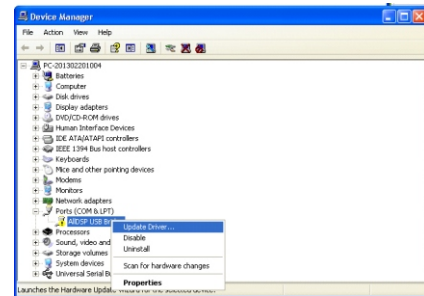
1. After setting up the PC software, connect DP428 with computer, if the computer can not recognize automatically, please right-click **Computer** in the **Device Manager**, and click **Scan for hardware change**

as the right picture



2. As Pic 2 shows, exclamation mark or question mark appear. Right click the mark, click **Update Driver**

as the right picture



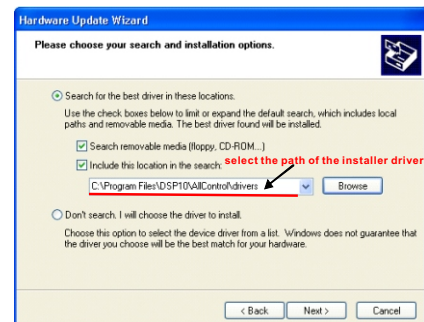
3. Hardware update wizard appears, if click **Install the software automatically**, can not install, then click **Install from a list or specific location**, and then click Next to continue.

as the right picture



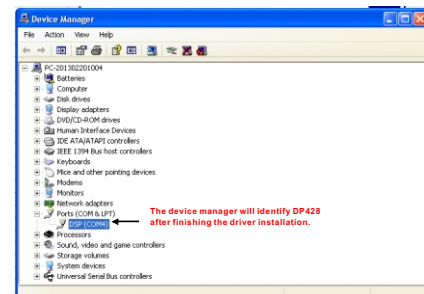
4. Tick the option **Include this location in the search** and select the path of the installer drivers in the blank. (You should select your own path if you change the default path of the installer.) And then Click **Next** to continue, if still can not search the file to install, you can click **Don't search**, choose DSP and continue to install.

as the right picture



5. The device manager will identify DP428 after finishing the driver installation. Now, the device can be connected.

as the right picture



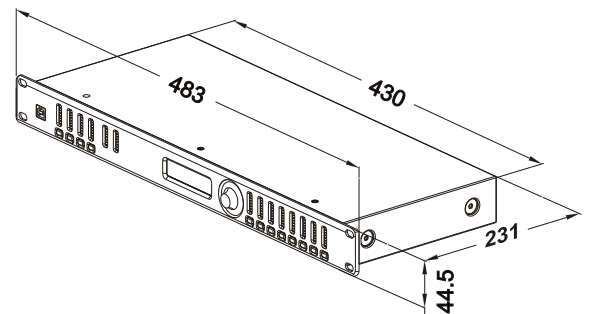
Remind:

Because the languages of Windows XP are different, the menu translation maybe is not the same in English system. However, the shortcut keys are similar, so please refer to them to help you.



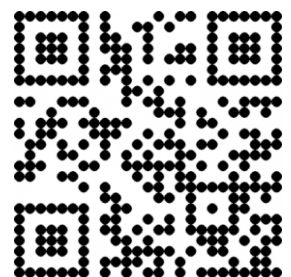
## Specifications

|                                          |                                                                                                 |
|------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Model</b>                             | <b>DP428s</b>                                                                                   |
| Input                                    | 4 ways Balanced Type.                                                                           |
| Output                                   | 8 ways Imbalanced Type                                                                          |
| Input Impedance                          | bal 20k / unbal 10k                                                                             |
| Output Impedance                         | ≤ 100 ohms.                                                                                     |
| Output Gain                              | From +12dB to -48dB, 0.25dB increment                                                           |
| Input Gain                               | From +12dB to -48dB , 0.25dB increment                                                          |
| <b>Other Parameters</b>                  |                                                                                                 |
| Frequency Response (-0.3dB)              | 20Hz - 20kHz                                                                                    |
| THD+N                                    | ≤0.008%                                                                                         |
| Maximum input delay                      | 2s                                                                                              |
| Maximum output delay                     | 50ms                                                                                            |
| Dynamic Range(A weighting)               | ≥115dB                                                                                          |
| Converts Frequency (high pass/ low pass) | 20Hz - 20kHz, 1Hz increment                                                                     |
| Centre Frequency (high pass/ low pass)   | 20Hz - 20kHz, 1/36 octave (19980 positions) increment                                           |
| Minimum Load Impedance                   | 600 ohms                                                                                        |
| Maximum Output Level                     | +18dBu (600 ohms load)                                                                          |
| Filter Gain                              | From +12dB to -12dB, 0.25dB increment                                                           |
| High Pass & Low Pass Filter              | Q value 0.2-25 adjustable, 0.1 increment/ 10 bands/1 filter each output channel, open and close |
| FIR Filter                               | 8 x 800taps                                                                                     |
| Frequency Response                       | Bessel/ Butterworth 6/12/16/24dB each octave, and Linkwitz-Riley 24dB/ octave                   |
| Protect Function                         | system can be set code which can prevent unauthorized person operation.                         |
| <b>Connectors</b>                        |                                                                                                 |
| Input Section                            | 3 cores XLR F socket                                                                            |
| Output Section                           | 3 cores XLR M socket                                                                            |
| USB Connector                            | Square                                                                                          |
| Power Socket                             | 3 cores ICE socket                                                                              |
| Input Limiter                            | Threshold +24dBu to -48dBu                                                                      |
| Output Limiter                           | Threshold +12dBu to -48dBu                                                                      |
| Start-up Time                            | 0                                                                                               |
| Release Time                             | 1-100                                                                                           |
| Sampling Rate                            | 96kHz                                                                                           |
| Phase                                    | 180° phase                                                                                      |
| LCD Display                              | 2*16 character type LCD display                                                                 |
| Input Level Match                        | 2*7 points, -30dB to clip                                                                       |
| Output Level Match                       | 6*7 points, -30dB to clip                                                                       |
| Preset                                   | More than 100 PCS preconfigured/more than 100 PCS preconfigured                                 |
| Language Options                         | English, Germany, Spanish, French, Dutch                                                        |
| Version Information                      | The version information of hardware, software, DSP module                                       |
| <b>Size/Power cord</b>                   |                                                                                                 |
| Product Contour Size                     | 482x231x44.5 ( 1U )                                                                             |
| Outer Packing Size                       | 525x300x110 ( 1U )                                                                              |
| Power Consumption                        | ≤10W                                                                                            |
| Power                                    | 100-240V ~/50-60Hz ±10%                                                                         |









Verity Audio reserves the right to make any changes to the product specifications without prior notice.