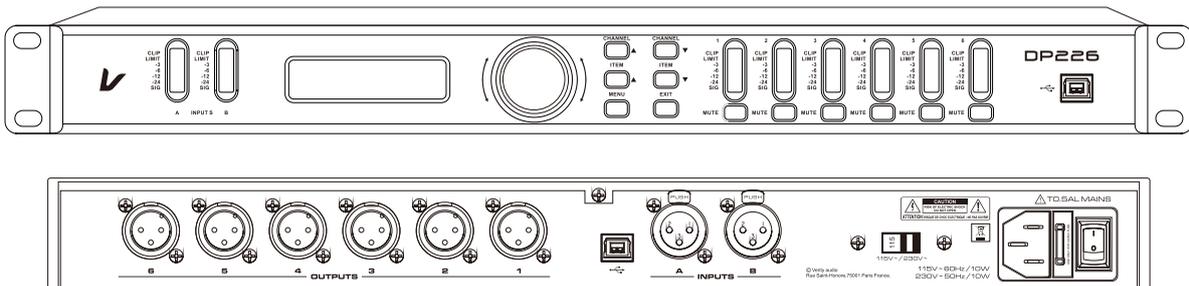


DP226

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!

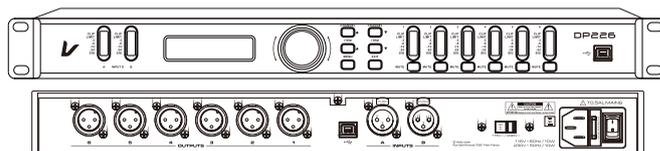


机内具有危险电压的非绝缘部分, 足以致人于触电之危。
维修时必须由专业人士检修, 不得擅自开盖!

前言

开箱

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!

一些音频处理概念

■ 数码分频

用数码分频的方法, 将全频段的声音, 分割成不同的频段, 送至放大器以推动多频段音箱系统。

■ 压缩

减少在轻重声音之间电平的不同, 来更有效地利用允许峰值电平的限制。

导致轻的声音在响度上听起来增加了。它不能使重的声音听起来更响。压缩相对缓慢地以一种类似随着增益的变化而降低动态范围。

■ 限幅

增加音频密度。增加密度可使声音听起来更响。但是它会导致难受的杂音。当设置影响被处理声音的密度的控制时, 要注意许多负面的主观影响, 这很重要。

■ 削波

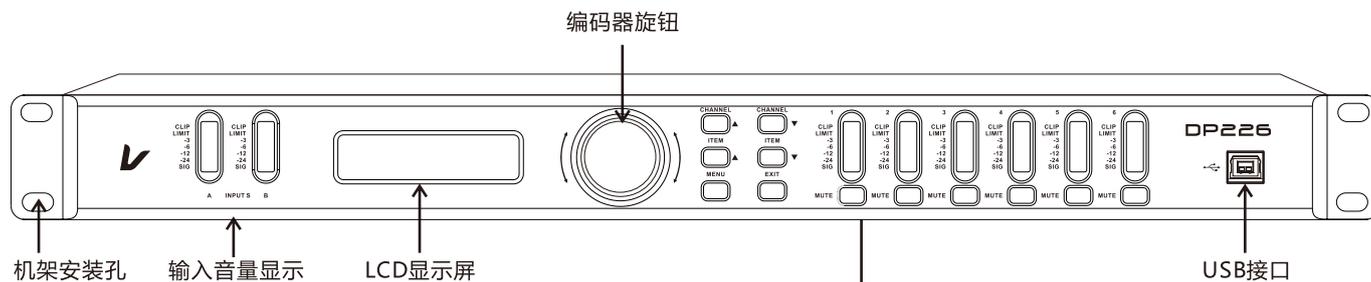
当平滑地削去尖峰并不产生任何可以听到的副作用, 过分的削波可以引起明显可以感觉到的失真。

■ 处理中的失真

在一个合理设计的管理器中, 失真只有在管理器为防止过调制而进行的削波中产生。削波越少, 听众可能听到失真声音的机会就越少。然而, 要减少削波的发生, 你必须减少驱动电平到限幅器, 而这会引起平均电平(从而对应的响度)成比例地减少。

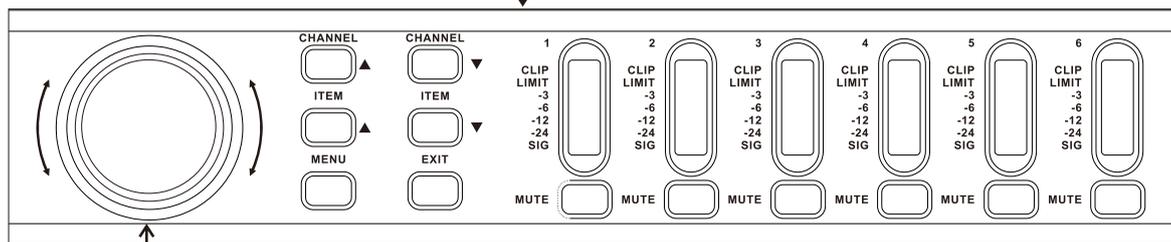
面板说明

前面板概况



信号输入指示灯(A,B)

- CLIP → 输入信号过载时亮起
- LIMIT → 输入信号达到峰值时亮起
- 3 → 输入信号幅度距削波值约为-3dB
- 6 → 输入信号幅度距削波值约为-6dB
- 12 → 输入信号幅度距削波值约为-12dB
- 24 → 输入信号幅度距削波值约为-24dB
- SIG → 有信号输入时亮起



编码器旋钮



控制按键

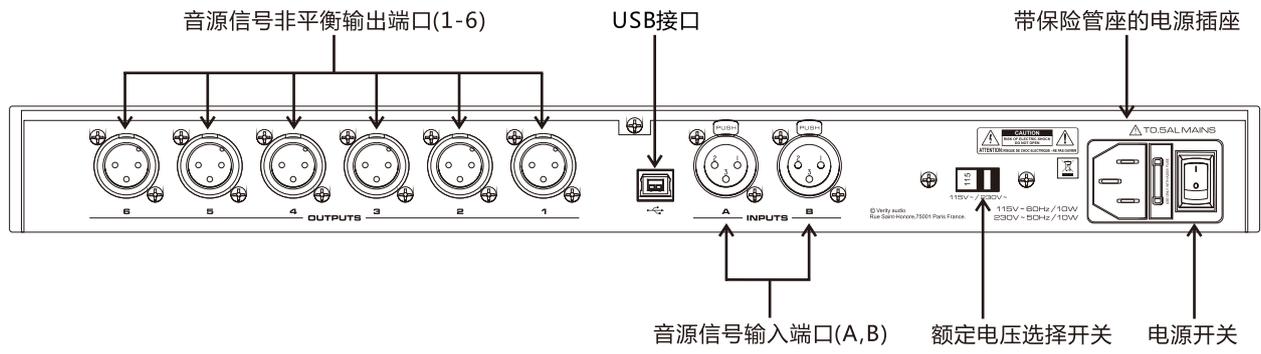
- CHANNEL UP ▲ → 通道上行选择
- CHANNEL DOWN ▼ → 通道下行选择
- ITEM UP ▲ → 参数向上调整
- ITEM DOWN ▼ → 参数向下调整
- MUNE → 返回主菜单
- EXIT → 中止、退出程序设定或者参数设置
- MUTE 1-6 → 静音状态切换

信号输出指示灯(1-6)

- CLIP → 削波电路动作时亮起
- LIMIT → 压限电路动作时亮起
- 3 → 输入信号幅度距削波值约为-3dB
- 6 → 输入信号幅度距削波值约为-6dB
- 12 → 输入信号幅度距削波值约为-12dB
- 24 → 输入信号幅度距削波值约为-24dB
- SIG → 有信号输入时亮起

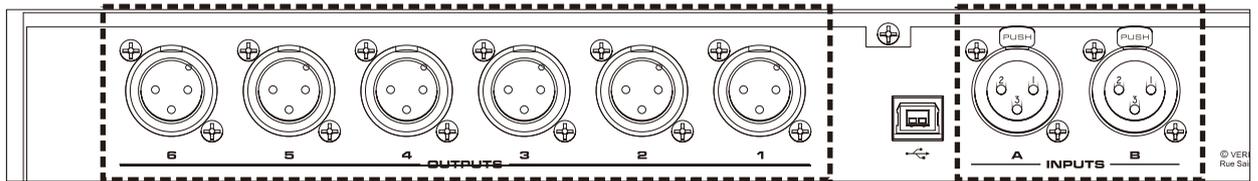
后板说明

后面板概况



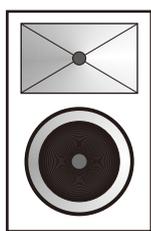
INPUT
Balanced male XLR

INPUT(ingresso)
XLR bilanciato maschio

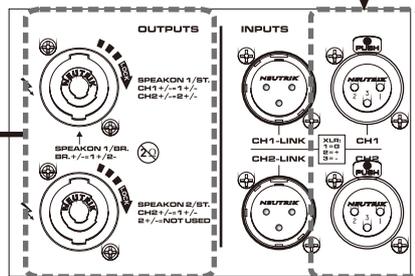


XLR 非平衡输出

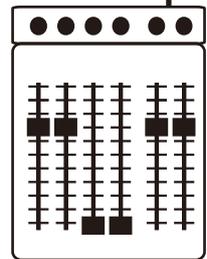
XLR输入



信号输出

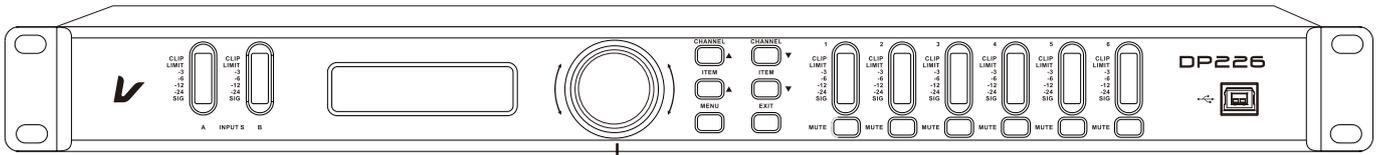


功率放大器

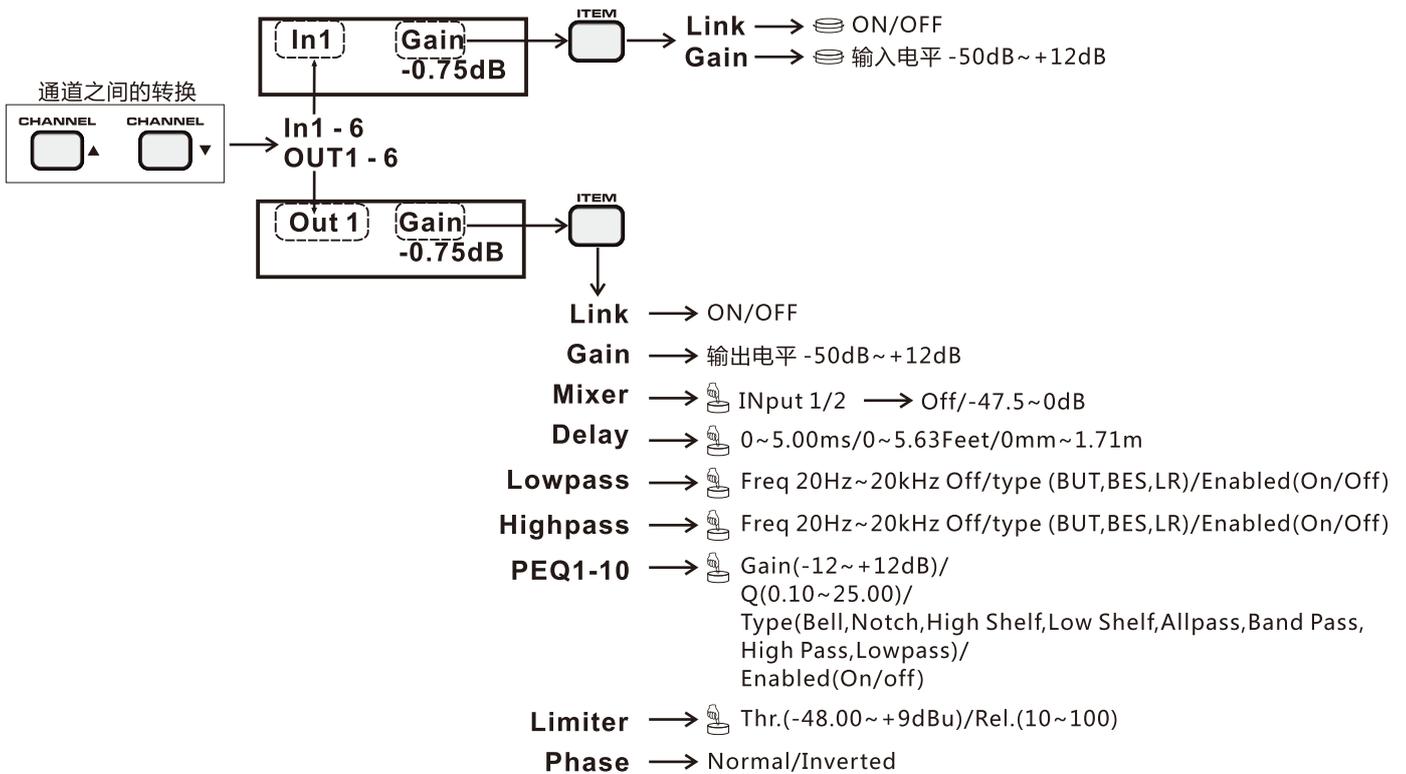


调音台信号源

DSP使用说明



编码器旋钮
切换/调节



软件使用说明

电脑软件使用说明

系统需求：

- 1. CPU: 奔腾3以上
- 2. 内存：512M以上内存
- 3. 硬盘：500M以上硬盘空间
- 4. 操作系统：Windows XP

安装与卸载

1. 安装

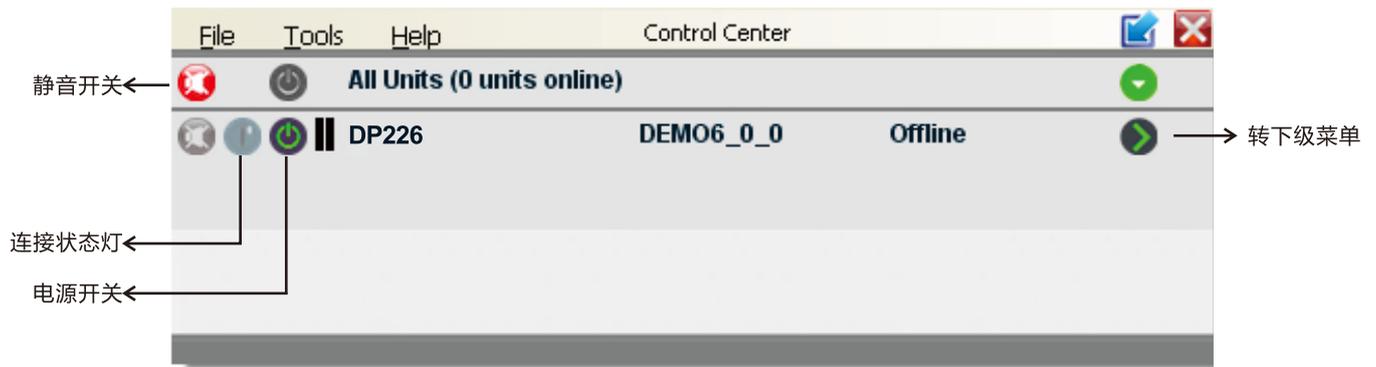
插入管理器系统安装光盘，选择管理器的安装程序：Verity_Audio_DSPControl.exe，鼠标双击即可开始执行安装。按照系统提示一步一步进行安装。

2. 卸载

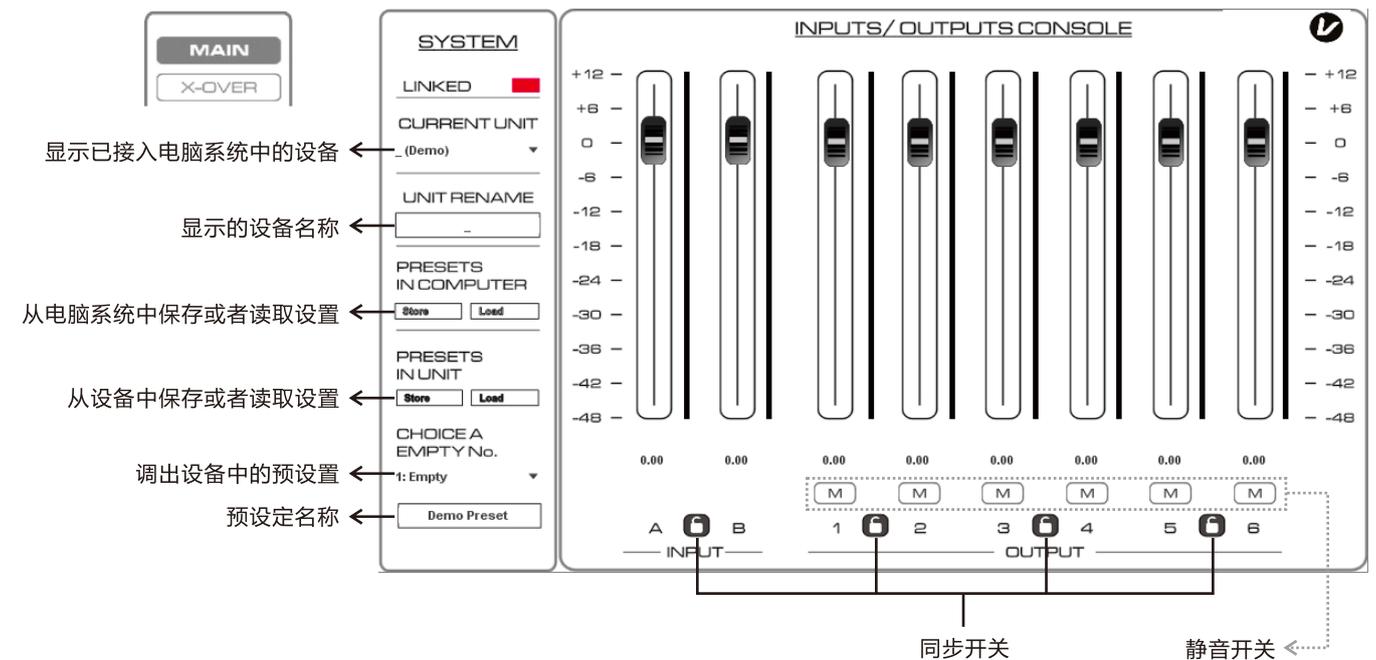
在开始菜单中，选择AllControl 再从中选择Uninstall AllControl卸载程序，将自动卸载系统中的软件。

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

A/B音源混合选择

启用该段均衡的设置或关闭

滤波器类型：

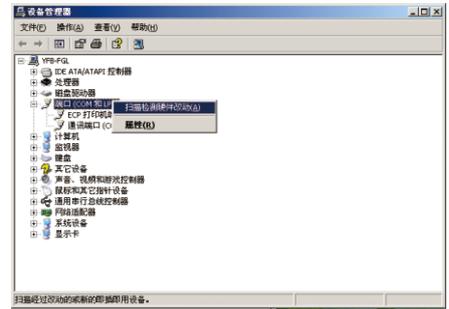
- 1) Bell:钟型滤波器
- 2) Notch:陷波器
- 3) Hi-shelf:高端帚型滤波器
- 4) Lo-shelf:低端帚型滤波器
- 5) All Pass:全通滤波器

USB驱动程序安装向导

安装向导

1.当安装好PC软件后，DP226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



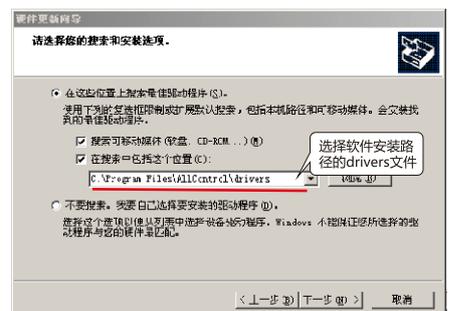
3.弹出硬件更新向导,如点【自动安装软件】找不到文件安装时,可点第二项【从列表或指定位置安装】按下一步。

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	DP226
输入	两路平衡式.
输出	六路非平衡式.
输入阻抗	$\geq 10k\Omega$
输出阻抗	$\leq 60\Omega$
输出增益	+12dB 至 -50dB 可调, 调整步距为 0.25dB.
输入增益	+12dB 至 -50dB 可调, 调整步距为 0.25dB

其他参数

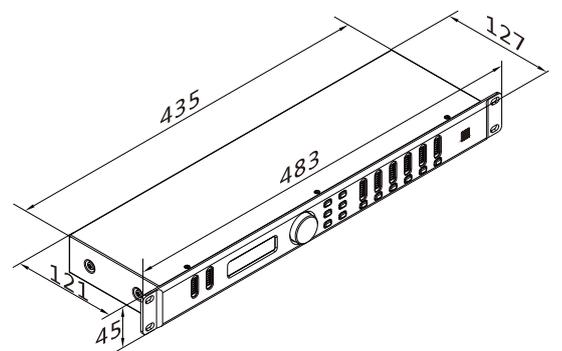
频率响应(± 0.5 dB)	20Hz - 20kHz
总谐波失真	$\leq 0.05\%$
最大时延	5ms
动态范围	≥ 80 dB
转换频率(高通/低通)	20Hz - 20kHz, 调整步距1Hz
中心频率(高通/低通)	20Hz - 20kHz, 调整步距为 1/36 倍频程 (19980 个位置)
最小负载阻抗	600 Ω
最大输出电平	+9dBu (600 Ω 负载)
滤波器增益	+12dB 至 -12dB, 步距为 0.25dB
高通及低通滤波器	Q 值 0.2-25可调 步距0.1可调/10 段 / 每路输出有 1 个滤波器,开启同关闭
频率响应	贝塞尔 / 巴特沃斯 6/12/18/24dB 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.
限幅器	阈值 +9dBu 至 -50dBu.
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	100个电脑预设置/50个本机预设置
语言选择	英语, 德语, 西班牙语, 法语, 荷兰语
版本信息	硬件,软件,DSP模块的版本信息

尺寸/重量

产品外形尺寸(mm)	483x127x44.5 (1U)
外包装尺寸 (mm)	525x195x110 (1U)
总重	3kg
耗电量	≤ 10 W
电源	6.5A电源线



Verity audio保留对以上参数的解释权, 参数有所变动恕不再另行通告, 最后参数以产品说明书为准。

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 electric 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 electric 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 information.



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.

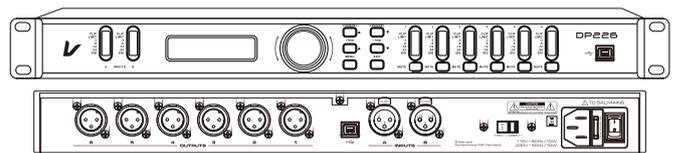
Foreword

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 SAE 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.



Some Concepts of Audio Processing

Digital Divide

- Divide full-band sound into different band, then input them to the amplifiers to promote the speakers.

Compression

- Reduce the level differences between light sound and stress sound, to use the limitation of the allowed peak level. More effectively. Make the light sound increase in loudness. It can not make the stress louder. Compression in a similar relatively slow gain changes reduce the dynamic range.

Amplitude Limiting

- Increase audio density. Increase density can make the sound louder, but it will causes afflictive noises. When setting impact is control by the sound density, pay attention to the negative subjective effects.

Clipping

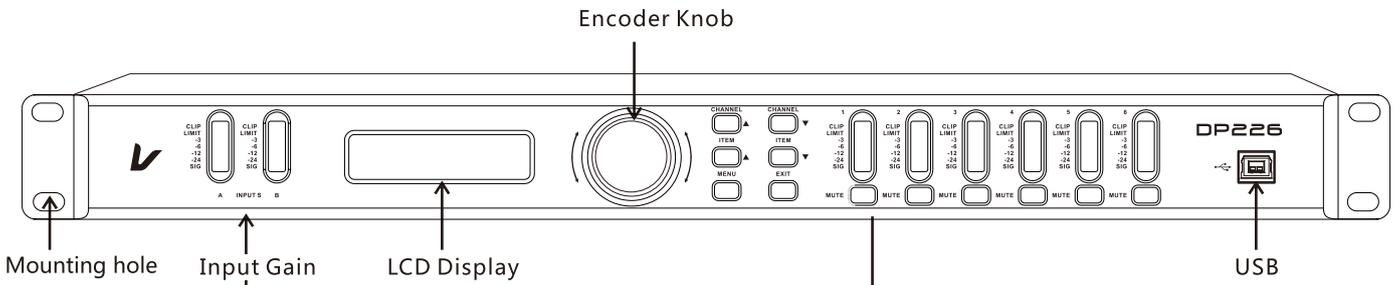
- It does not produce any side effects when clip-off the peak smoothly. But excessive clipping can cause obvious awake distortion.

Processing Distortion

- In a sensible design management, distortion only produces when the management clipping when avoid over modulation. The less clipping, the less chances the audiences can hear the distortion. However, For reducing the clipping happening, you must reduce driving level to limiter, but this will cause average level(to the corresponding loudness) reduces proportionally.

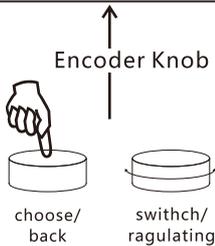
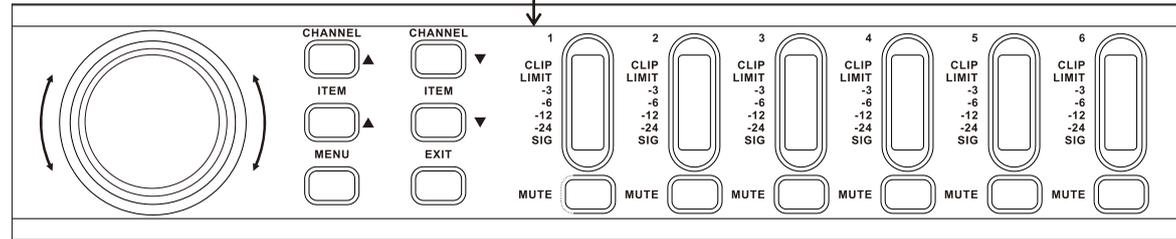
Front Panel Function

Front panel



Input signal led(A,B)

- CLIP → When the input signal overload lights
- LIMIT → When the input signal reaches a peak lights
- 3 → Distance the clipping value -3db
- 6 → Distance the clipping value -6dB
- 12 → Distance the clipping value -12dB
- 24 → Distance the clipping value -24dB
- SIG → When the signal input lights



Control key:

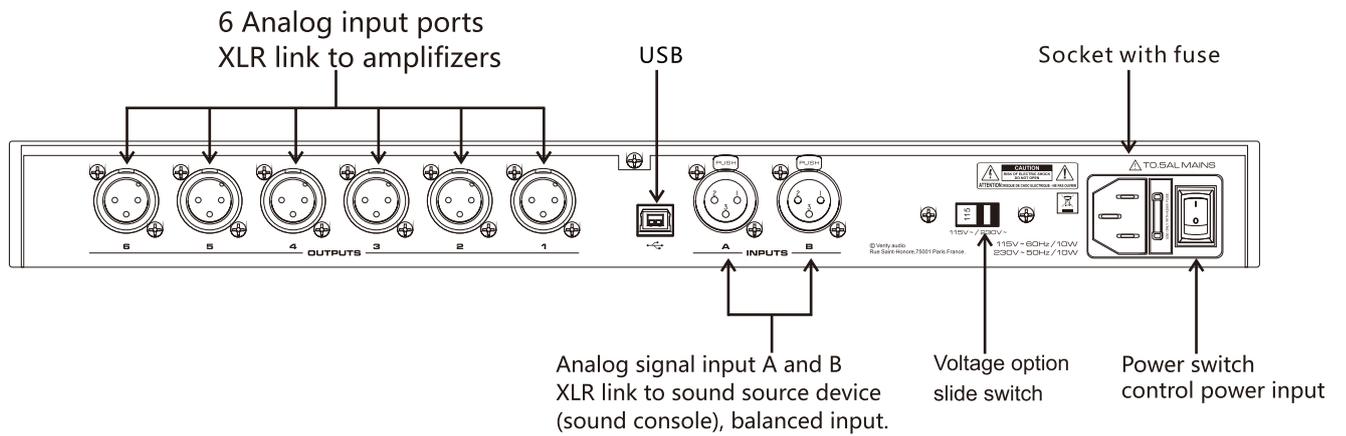
- CHANNEL UP ▲ → Up channel swithing
- CHANNEL DOWN ▼ → Down chanel swithing
- ITEM UP ▲ → Up value ragulating
- ITEM DOWN ▼ → Down value ragulating
- MUNE → Back main mune
- EXIT → Stop, exit the preety value
- MUTE 1-6 → Mute swithing 1-6

Onput signal led(1-6)

- CLIP → When the input signal overload lights
- LIMIT → When the input signal reaches a peak lights
- 3 → Distance the clipping value -3db
- 6 → Distance the clipping value -6dB
- 12 → Distance the clipping value -12dB
- 24 → Distance the clipping value -24dB
- SIG → When the signal input lights

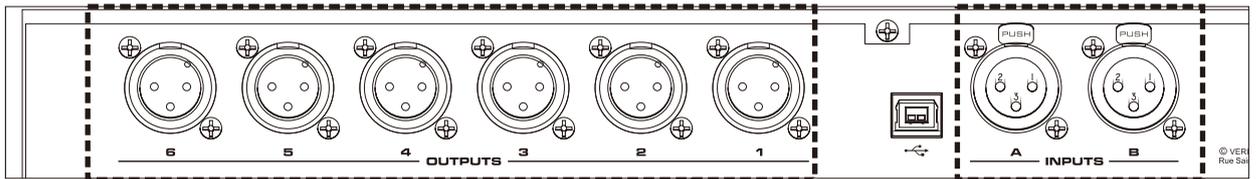
Rear Panel Function

Rear Panel



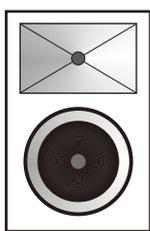
INPUT
Balanced male XLR

INPUT (ingresso)
XLR bilanciato maschio

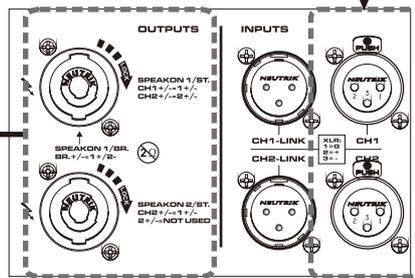


Unbalanced Type
XLR output

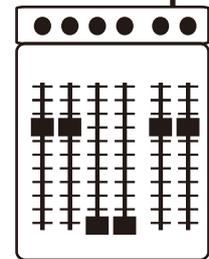
XLR INPUT



Output

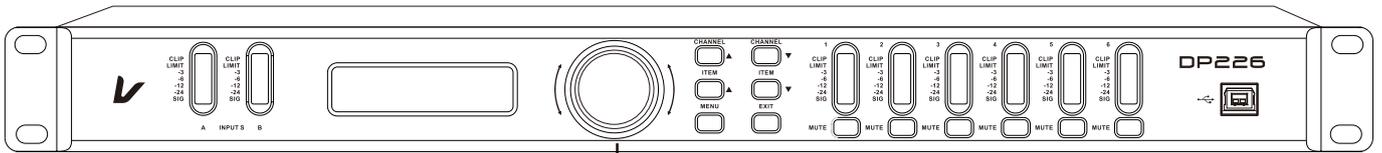


Power Amplifier



XLR
sound console
connection

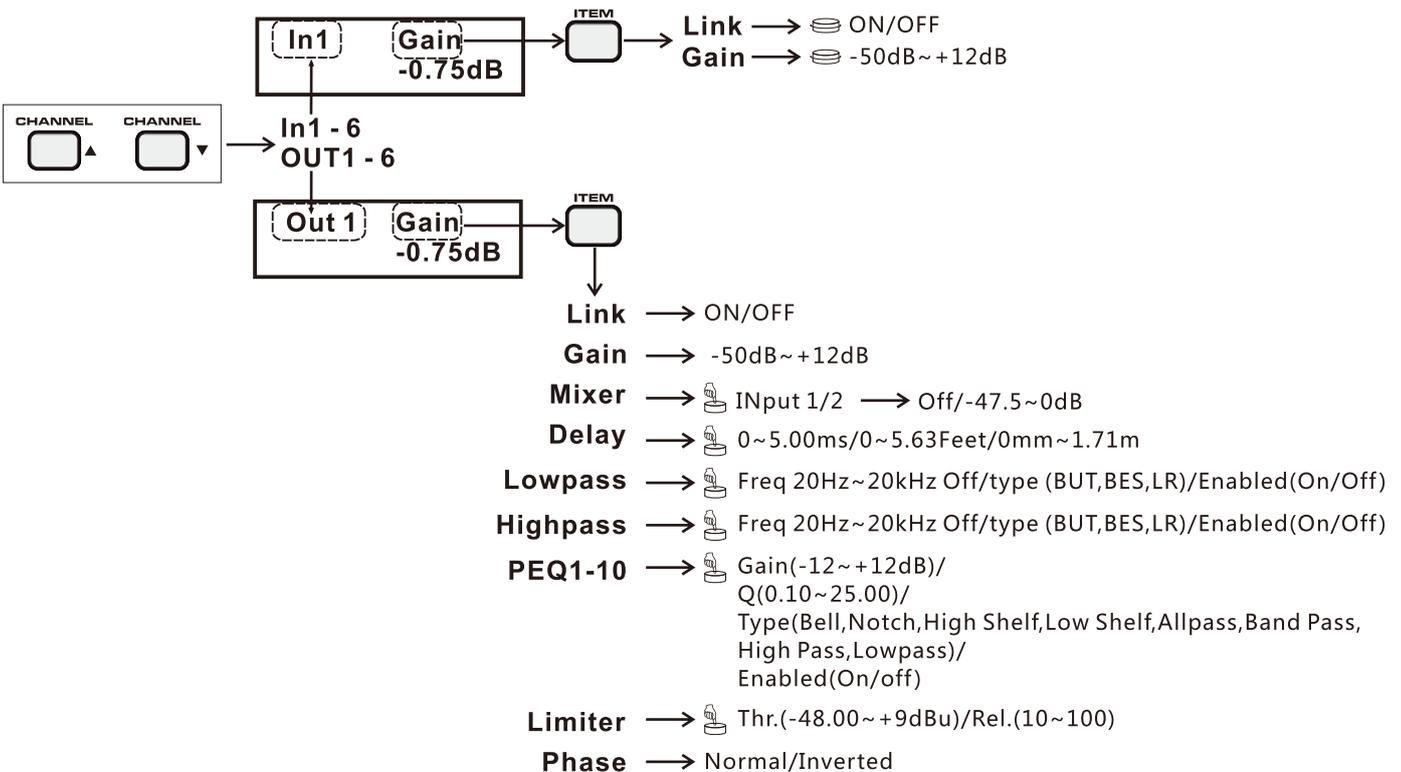
DSP instructions



Encoder knob with key function
choose parameters magnitude



Switching / regulating



Software instructions

Instructions of Computer Software

System Requirements

- 1. CPU: above Pentium 3
- 2. RAM: above 512MB
- 3. Hard Disk: above 500MB
- 4. Operating System: Windows XP

Install and uninstall

1.Install

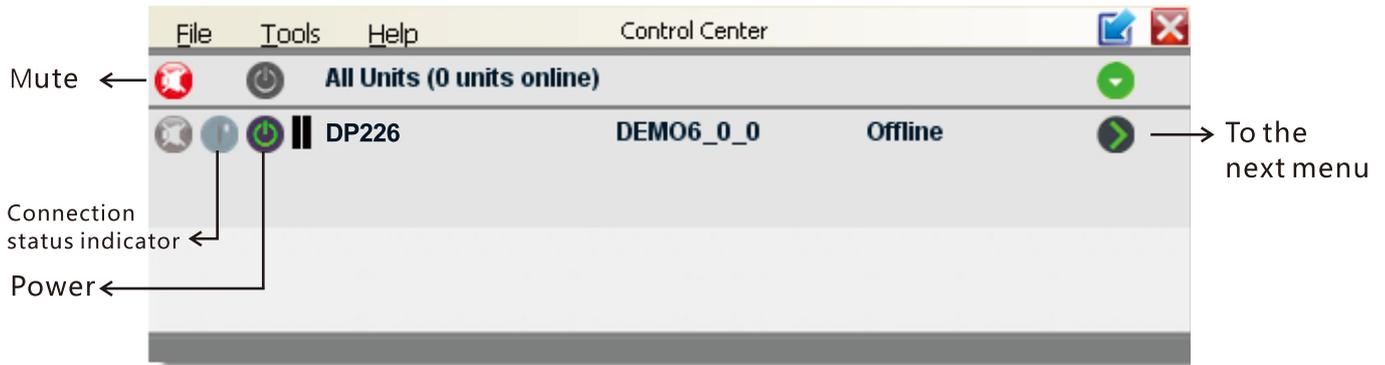
Insert the management system install CD, select the management installer: Verity_Audio_DSPControl.exe, start the installation with double click, setup step by step according to the system hints.

2.Uninstall

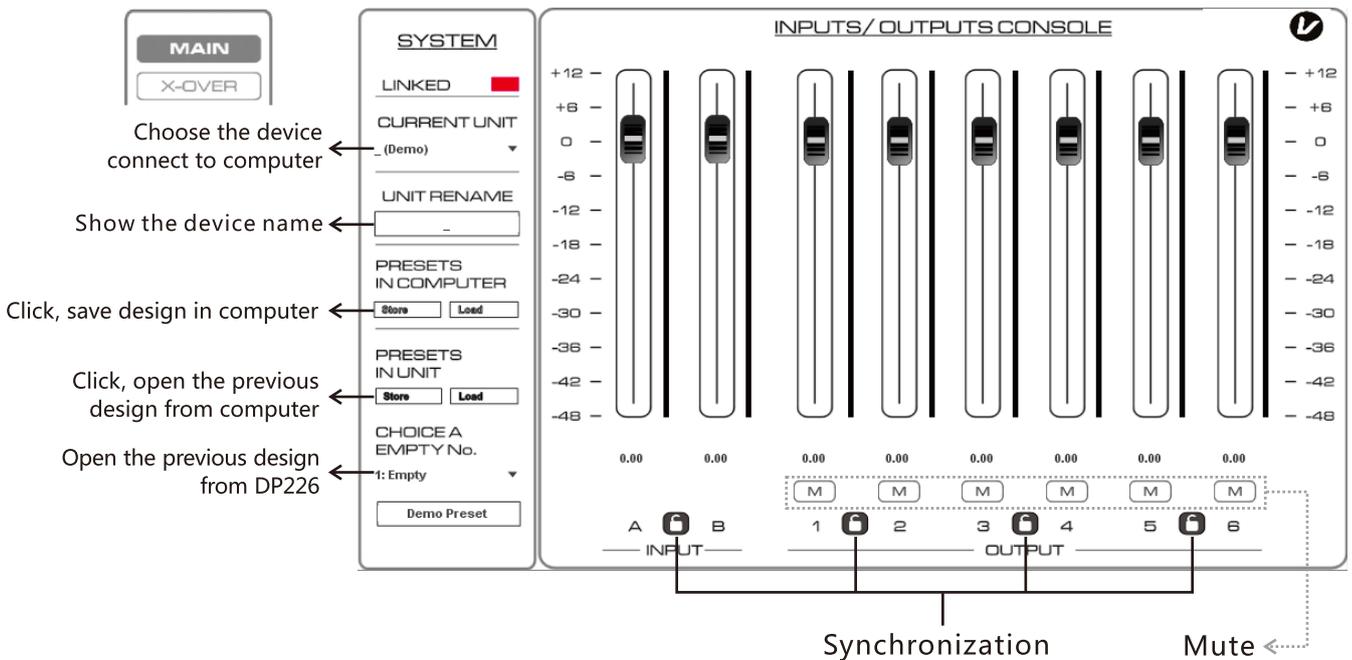
In the start menu, select AllControl then select Uninstall AllControl uninstaller. It will uninstll the software from the system automatically.

Software interface introduction

1.Equipment state control panel



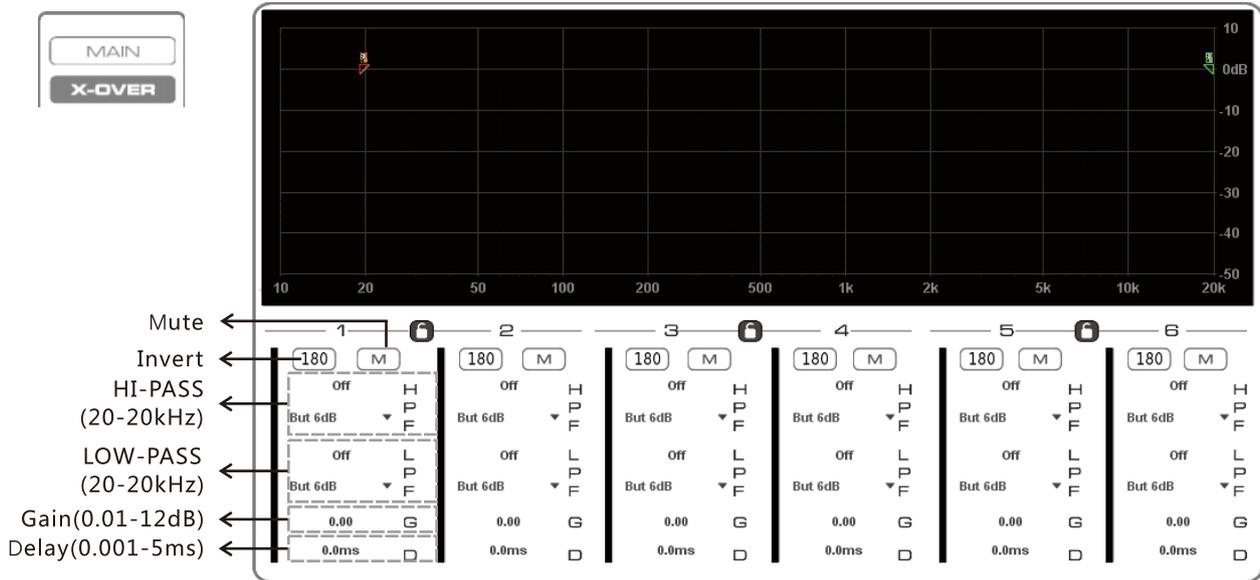
2.Main interface



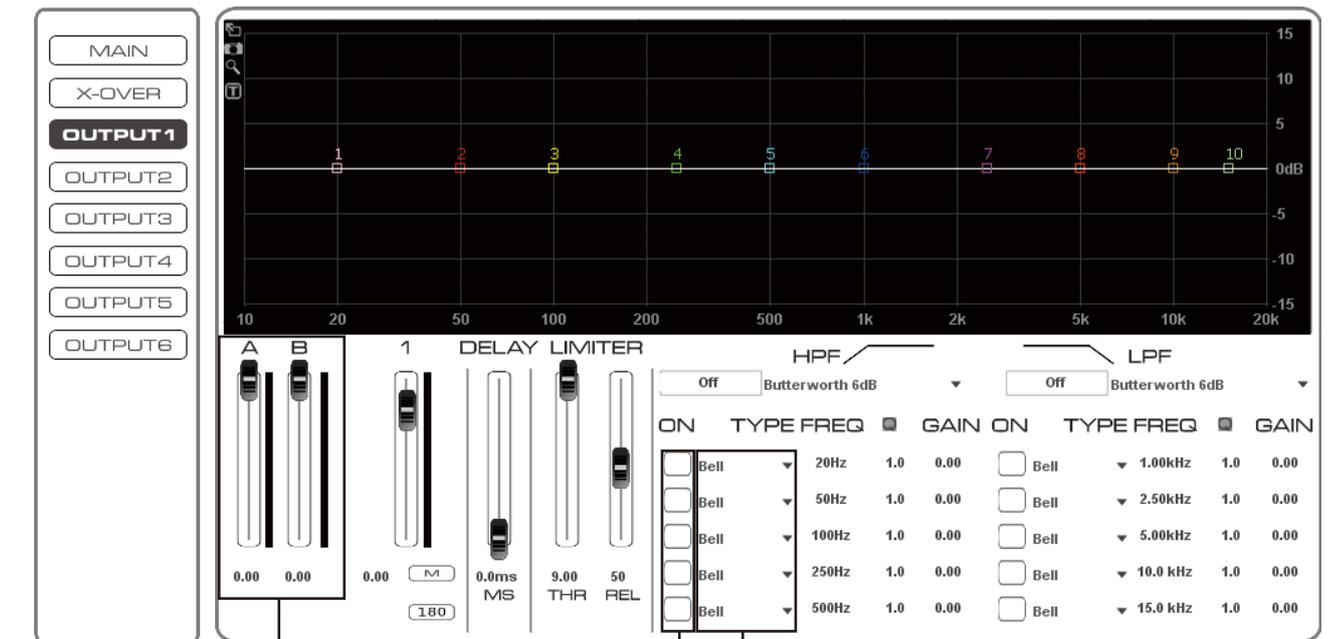
Software instructions

Software interface introduction

2.X-OVER interface



3.OUTPUT interface



MIXERT choose sound source

Start the equalization of the band or close.

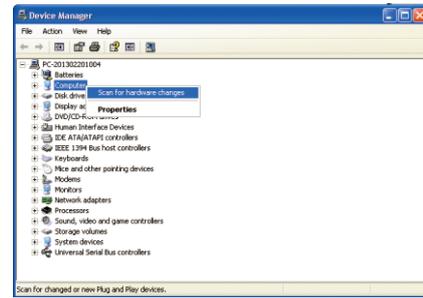
Filter Type :

- 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

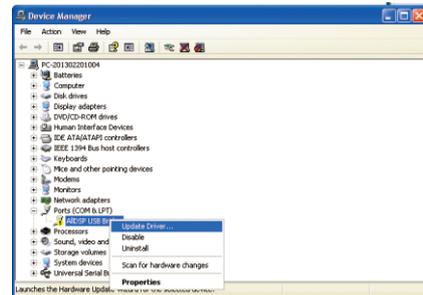
1. After setting up the PC software, connect DP226 with computer, if the computer can not recognize automatically, please right-click **【Computer】** in the **【Device Manager】** and click **【Scan for hardware change】**

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



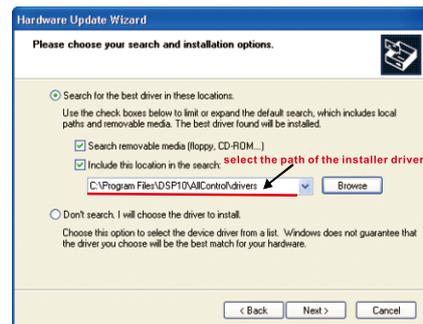
3. Hardware update wizard appears, if click **【Install the software automatically】**, can not install, then click **【Install from a list or specific location】**, and then click Next to continue.

as the right picture



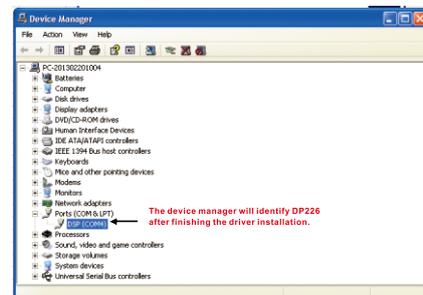
4. Tick the option **【Include this location in the search】** and select the path of the installer drivers in the blank. (You should select your own path if you change the default path of the installer.) And then Click **【Next】** to continue, if still can not search the file to install, you can click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

as the right picture



5. The device manager will identify DP226 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

Model	DP226
Input	Two ways Balanced Type.
Output	Six ways Imbalanced Type
Input Impedance	> 10k ohms.
Output Impedance	< 60 ohms.
Output Gain	From +12dB to -50dB, 0.25dB increment
Input Gain	From +12dB to -50dB , 0.25dB increment

Other Parameters

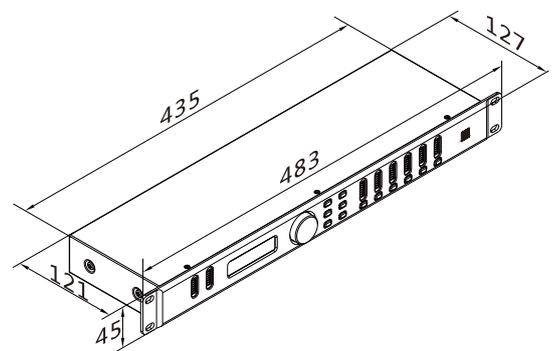
Frequency Response (-0.3dB)	20Hz - 20kHz
THD+N	<0.05%
Max Delay	5ms
Dynamic Range	≥80dB
Converts Frequency (high pass/ low pass)	20Hz - 20kHz, 1Hz increment
Centre Frequency (high pass/ low pass)	20Hz - 20kHz, 1/36 octave (19980 positions) increment
Minimum Load Impedance	600 ohms
Maximum Output Level	+9dBu (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
Frequency Response	Bessel/ Butterworth 6/12/18/24dB each octave, and Linkwitz-Riley 24dB/ octave
Protect Function	system can be set code which can prevent unauthorized person operation.

Connectors

Input Section	3 cores XLR F socket
Output Section	3 cores XLR M socket
USB Connector	Square
Power Socket	3 cores ICE socket
Limiter	Threshold +9dBu to -50dBu
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	100 computer presets/ 50 device presets
Language Options	English, Germany, Spanish, French, Dutch
Version Information	The version information of hardware, software, DSP module

Size/Weight

Product Contour Size	482x125x44.5 (1U)
Outer Packing Size	525x195x110 (1U)
Total Weight	3kg
Power Consumption	< 10W
Power	6.5A power wire.



The manufacturer reserves the rights to make changes in specification without prior notice.
The final specification is subject to the user's manual.

Verity audio reserves the right to make any changes to the product specifications without prior notice.
Final specifications to be found in the user manual.

