Fully automatic dual-channel feedback suppressor

Instructions for use

V1

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Chapter 1 Introduction

Thank you for trusting and selecting our products! This device is a high-performance dual-channel fully automatic feedback suppressor equipped with 2 analog balanced inputs and 2 analog balanced outputs. It is designed for sound reinforcement for high-quality sound reinforcement. Provide professional feedback suppressor effects, and high-quality frequency shift + notch algorithm to achieve high sound quality and low noise feedback suppression effect.

The operation is simple and clear, and the device provides 5 presets to quickly select the current usage scenario. Connecting the USB interface through the PC upper computer can fully set gain, noise gate, compressibility, frequency shift, notch and EQ, and save custom settings.

It is equipped with an RS-485 communication interface for connecting external control devices.

Application occasion

- Conference room
- Court
- Auditorium
- Multi-functional hall
- Performance

Functional features

- 48kHz sampling frequency, 32-bit DPS processor (300 megabytes of main frequency), 24-bit A/D and D/A conversion.
- 5-speed fully automatic frequency shift mode selection, suitable for various scenarios and microphone types.
- Using the 2-inch IPS true color display screen to display parameter function, with a resolution of 320*240. Optional English menu display.
- The status LED indicators of 48 notchers are displayed in real time, with 12 static + 12 dynamic notchers per channel.
- Using a single-key shuttle quick operation to quickly realize mode, pass-through, locking and Chinese-English selection functions.
- The frequency shifter is adjustable ±10Hz (1Hz step), and the notch gain, Q value and quantity are adjustable.
- Independently sets of gain, noise gate, compressor, frequency shift, notch, high and low pass, and 7-segment PEQ function.
- Provides USB and RS-485 communication interfaces, connecting to PC host computers and central control devices.
- The preset mode can be edited at any time through the PC computer, and supports mode archive and EQ archive import and export.

Chapter 2 Technical parameters

Model input channel and socket	2-channel XLR female seat + 2-channel TRS female seat analog input
Output channel and socket	2-channel XLR seat + 2-channel TRS seat analog output
Input impedance	Balance: 10KΩ
Output impedance	Balance: 470Ω
Maximum input level	≤+20dBu
Maximum output level	≤+20dBu
Frequency response	15Hz-25KHz(-0.5dB)
Dynamic range	≥110db
Signal-to-noise ratio	≥103dB @1kHz 0dBu (A weighting)
Distortion	<0.012% output = 0dbu/1kHz
Channel separation	>82dB(1kHz)

Frequency response 20Hz-20KHz±0.5dB whistle search and suppression method Fully automatic notch & frequency shift notch 12 static + 12 dynamics/frequency resolution per channel 1Hz whistle search time 0.1-0.5 seconds frequency shifter ±10Hz, 1Hz stepping sound gain 6-10dB system gain 0dB compressor-80dB noise gate-80dB-0dB upper computer interface USB Type-B drive-free communication interface RS-485, dual RJ45 sockets are connected in parallel, baud rate: 115200 display 2-inch IPS true color LCD display, resolution 320*240 processor 48kHz sampling frequency, 32-bit DSP processor (300 megama main frequency), 24-bit A/D and D/A conversion. Power consumption <20W working temperature -20°C~+60°C Product size (L×H×D) 482x44.4x265mm (excluding raised parts) Net weight 3.2 kg Transport size (L×H×D) 540x100x400mm Gross weight 4.2 kg

Chapter 3 Functional Structure

面板

背板

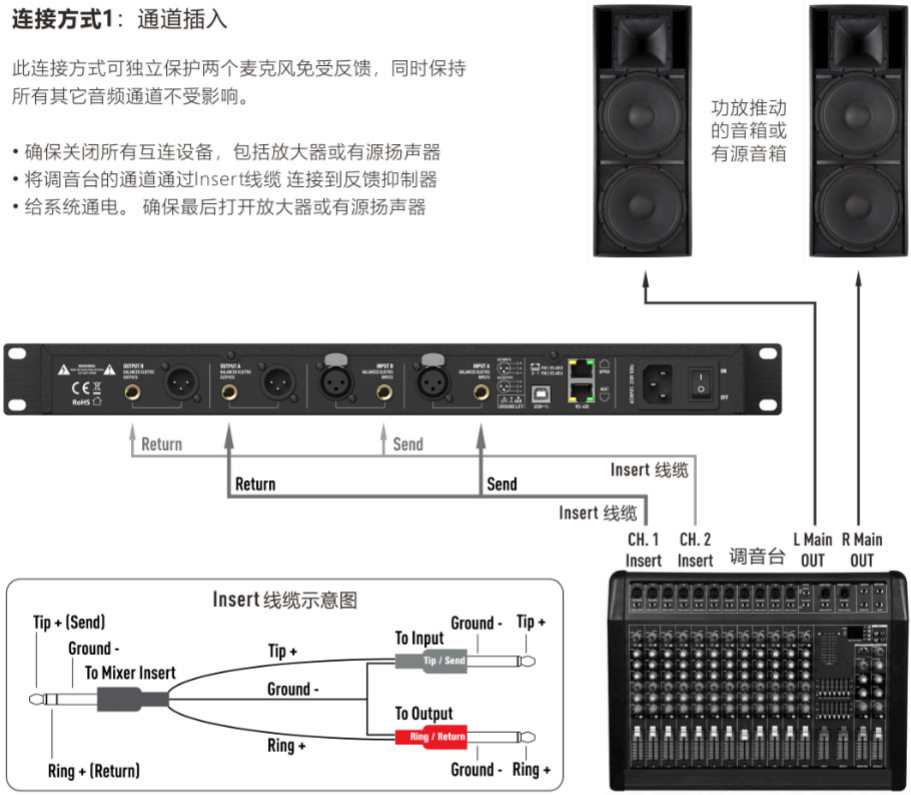
Chapter 4 Quick Use

1. Connection method to the mixer

连接方式1：通道插入

此连接方式可独立保护两个麦克风免受反馈，同时保持所有其它音频通道不受影响。

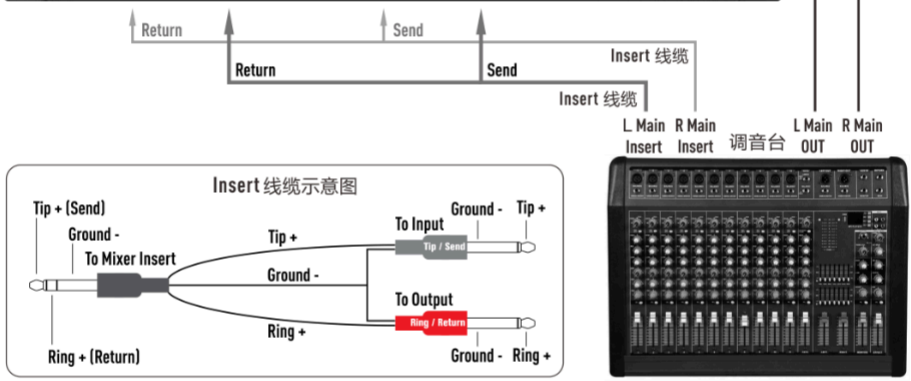
- 确保关闭所有互连设备，包括放大器或有源扬声器
- 将调音台的通道通过Insert线缆 连接到反馈抑制器
- 给系统通电。 确保最后打开放大器或有源扬声器



连接方式2：主通道插入

此连接方式可保护整个系统免受反馈。调音台必须具有主插入连接才能使用。 反馈放在主推子之前，建议使用在会议场景。

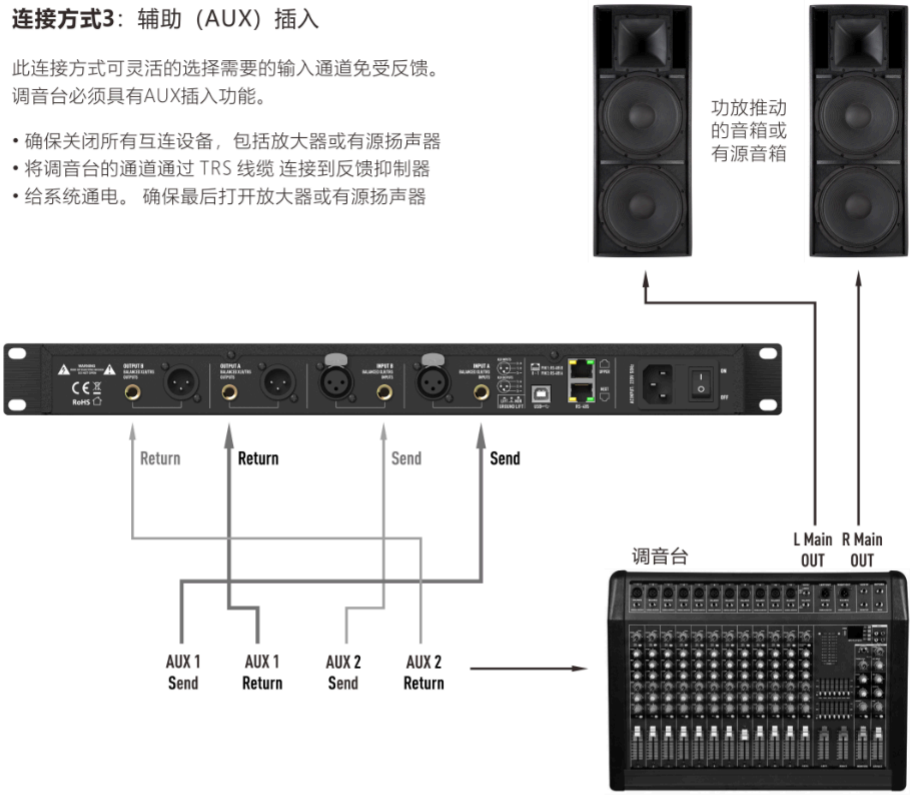
- 确保关闭所有互连设备，包括放大器或有源扬声器
- 将调音台的通道通过Insert线缆 连接到反馈抑制器
- 给系统通电。 确保最后打开放大器或有源扬声器



连接方式3：辅助（AUX）插入

此连接方式可灵活的选择需要的输入通道免受反馈。
调音台必须具有AUX插入功能。

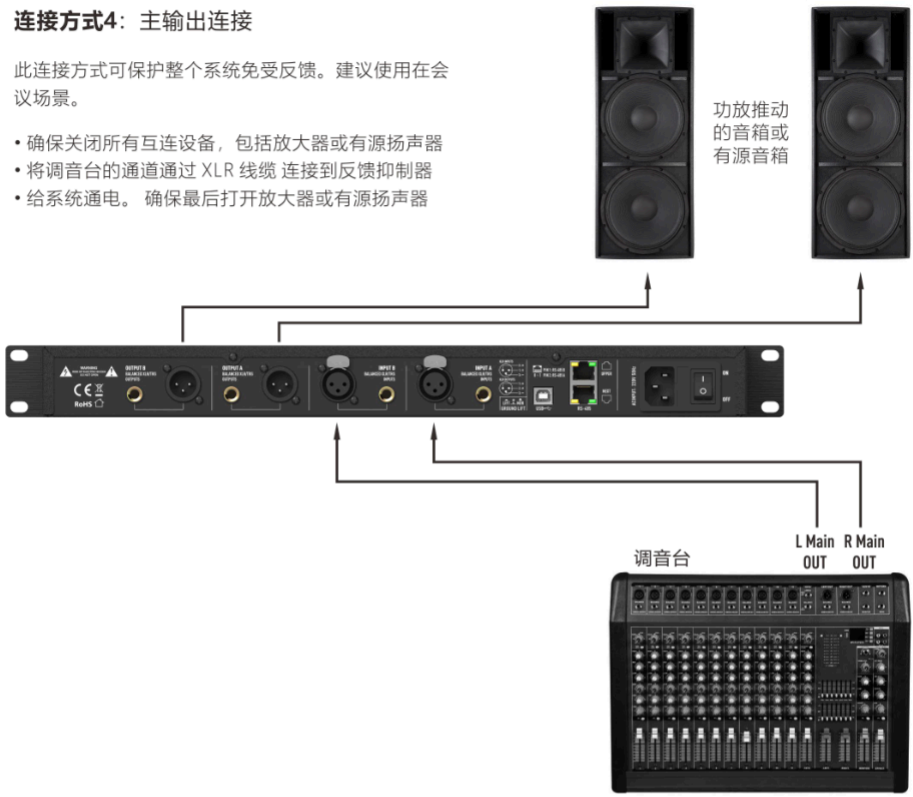
- 确保关闭所有互连设备，包括放大器或有源扬声器
- 将调音台的通道通过 TRS 线缆 连接到反馈抑制器
- 给系统通电。 确保最后打开放大器或有源扬声器



连接方式4：主输出连接

此连接方式可保护整个系统免受反馈。建议使用在会议场景。

- 确保关闭所有互连设备，包括放大器或有源扬声器
- 将调音台的通道通过 XLR 线缆 连接到反馈抑制器
- 给系统通电。 确保最后打开放大器或有源扬声器



2. Audio input and output connection

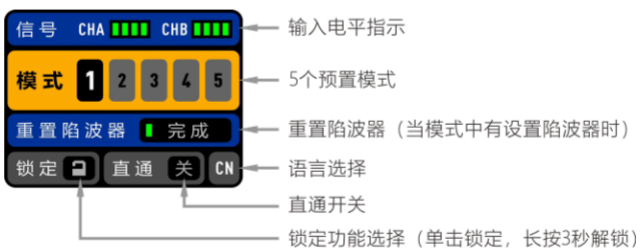
XLR socket connection instructions

1：接地（屏蔽）　2：热端（信号+）　3：冷端（信号 - ）

1/4" TRS socket connection instructions

3. RS-485 connected to this device RS-485 uses dual RJ45 network ports to facilitate series baud rate: 115200

4. The feedback mode and function selection device provides 5 preset mode selections. Rotate the knob in the device panel to select mode and function, and press the knob to take effect. The notch indicator light on the right side of the panel corresponds to the mode, displaying the number and status of static and dynamic points in the mode. The captured notch dot is always on, and the uncatched notch dots flash in cycles. 5 preset modes can be set and stored through dedicated PC software.



Note: The device will be muted for 2 seconds during mode switching and pass-through!

5. Debugging (suitable for notch mode) Increase the microphone gain to howling. After the device grabs the notch point, slowly increase the gain until all the set notch number is captured and then appropriately reduce the gain.

Chapter 5 Introduction to the upper computer management software

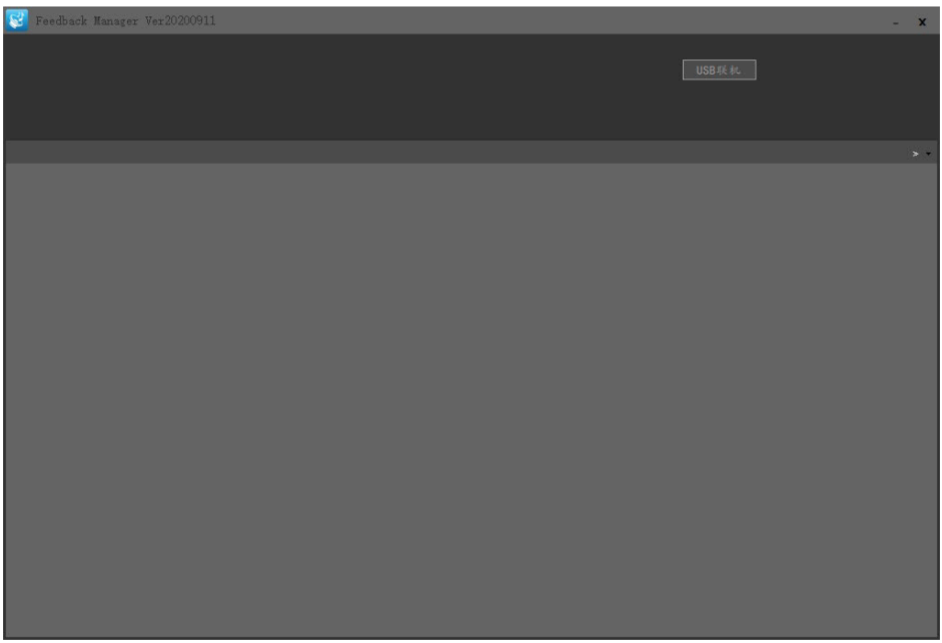
The device-based computer management software is a software that allows users to quickly interact with each parameter of one or more machines. It can store the configuration parameters of the machine into a disk file, providing a very convenient means for preset scenario configurations and parameters switching and restoration of multiple machines or different use places. This product has high execution efficiency and clear interface structure. The UI of this product adopts an independently developed control library, which enhances the user experience.

Running environment

The host computer management software is suitable for Windows WIN7/WIN8/WIN10 any x86/x64 operating systems with Microsoft .NETFramework 4.0 runtime library. Software installation

This software is in a green version and there is no need to install the main program. The software does not contain the Microsoft .NET Framework 4.0 runtime library. If it is not installed, please download and install it at the official Microsoft website. Software running

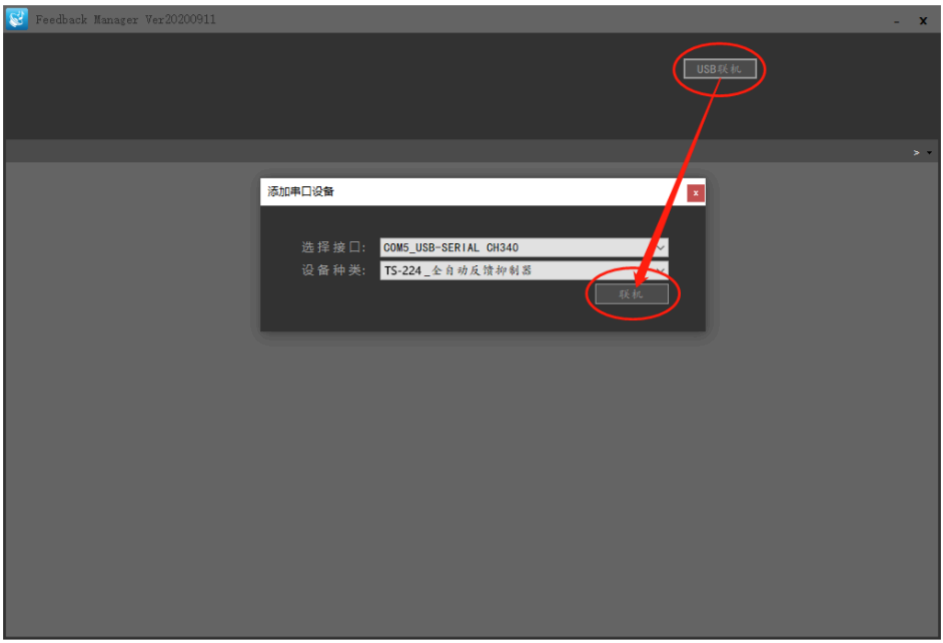
Operation steps: Double-click the executable file to enter the main software interface



Note: This software is only suitable for professional debuggers.

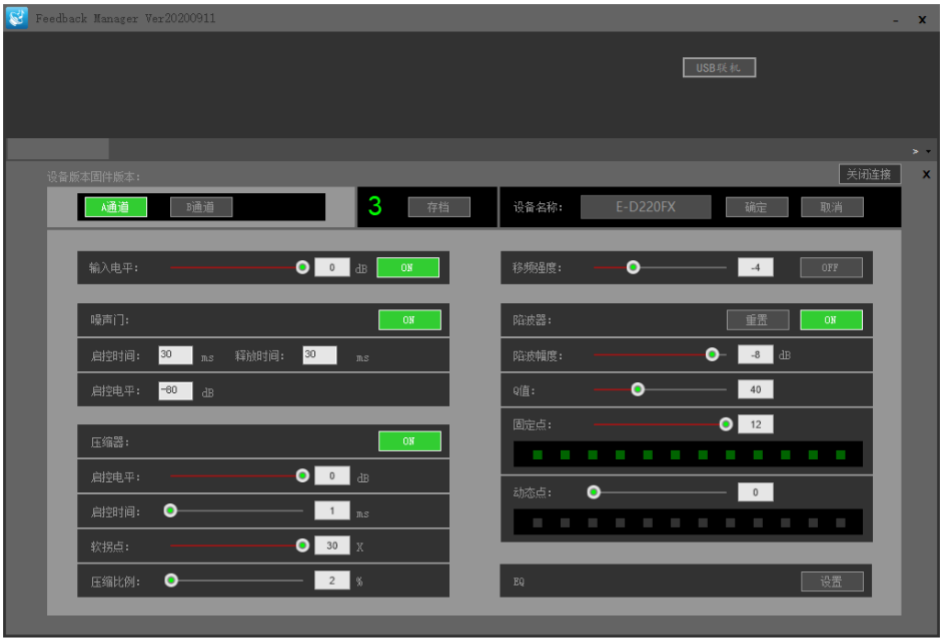
1. Connect the device to your computer using the
USB cable that comes standard with the device.
Click the "USB Online" button to go online.

Note: Select the correct serial device in the "Add Serial Device" window when you have multiple serial devices connected.



2. The interface displayed after the function interface is online is the current mode of the device when the device is online. In the main interface, you can customize the parameters of the device. The two channels A and B are set independently, pay attention to whether they are currently the channel you need. Note: After the settings are completed, you need to save the archive, otherwise the default settings will be restored after the device is powered on again!

Main interface



Note: The parameters take effect in real time during debugging, and pay attention to controlling the system volume to avoid damaging the equipment.

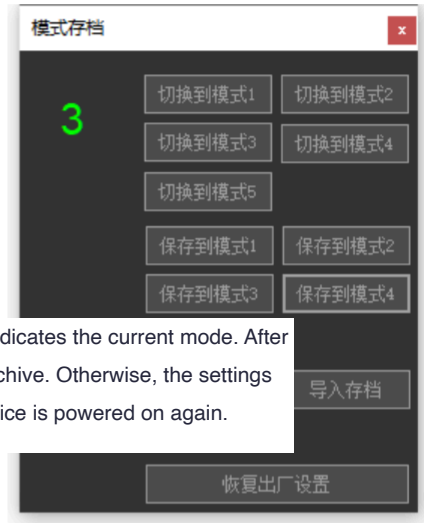
When setting the notched dot, note that when there are only fixed points, the frequency shift will be automatically turned on after the grab is completed, and when a dynamic point is selected, the frequency shift will not be automatically turned on.

EQ interface

In the EQ setting, the range of Q value: 0.5~6, and the gain range: +12~-12dB

Archive interface

4 functions of the archive interface: a. Switch mode b. Save mode c. Import and export archive d. Restore factory settings



The green number on the left side of the interface indicates the current mode. After the settings are completed, you need to save the archive. Otherwise, the settings before the modification will be restored after the device is powered on again.