

# Dolphin Speaker Management System User Manual

## Catalogue

1. Product Introduction .....	2
2. Product Specifications and Models .....	2
3. Packing list .....	3
4. Interface & Button Description .....	3
5. User guide.....	4
<b>5.1. Software.....</b>	<b>4</b>
<b>5.2. Menu Bar and Status Bar .....</b>	<b>4</b>
5.2.1. File.....	4
5.2.2. Edit .....	4
5.2.3. Language .....	5
5.2.4. Tool.....	5
5.2.5. Help .....	5
5.2.6. Setting .....	5
5.2.7. Lock Screen .....	5
5.2.8. Log in.....	5
5.2.9. Indication of device connection status.....	5
<b>5.3. Input section.....</b>	<b>6</b>
5.3.1. Input .....	6
5.3.2. Pre-Gain .....	6
5.3.3. Pre- Delayer .....	7
5.3.4. Pre- Equalizer .....	7
5.3.5. Pre-Expander .....	8
5.3.6. Pre- Compressor.....	8
<b>5.4. Mixer .....</b>	<b>9</b>
<b>5.5. Output Section .....</b>	<b>9</b>
5.5.1. Post-Delay.....	9
5.5.2. Post -Divider.....	10
5.5.3. Post-Equalizer .....	10
5.5.4. Post-Gain .....	11
5.5.5. Post- Limiter .....	11
5.5.6. Output.....	12
6. Warranty Term .....	12
7. Contact us.....	12

## 1.Product Introduction

Dolphin series products are mainly used for loudspeaker control and processing. They are mainly used in scene amplifiers, theatres, discos, concert halls and other scenes requiring speaker management.

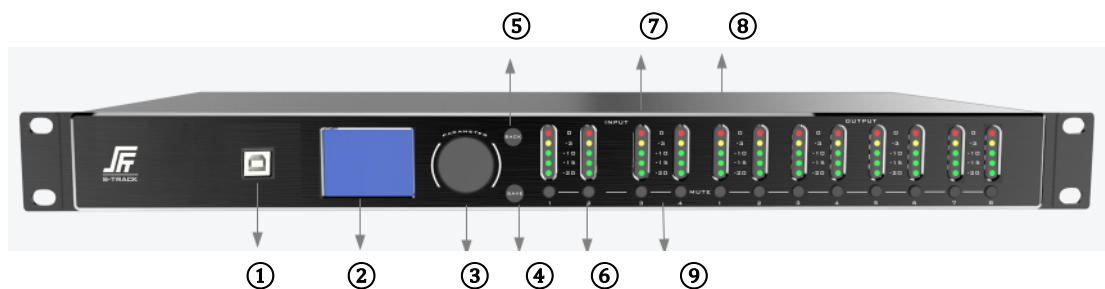
## 2.Product Specifications and Models

Software gain adjustment range	-72dB ~ 12dB
Digitalizing bit	24bit
Sampling frequency	48k
Frequency response(20~20KHz)	20HZ ~ 20K HZ ,±0.5dB
Maximum level (input/output)	+20dBu, Balanced
Ground noise	-90dBu
THD+N	<0.002% @ 4dBu
Analog/digital dynamic range	120dB
Digital/ Analog dynamic range	120dB
Input to output dynamic range	108dB
Input impedance (balanced)	20KΩ
Output impedance (balanced type)	100Ω
Input common-mode rejection	80dB @60Hz
Channel isolation @1kHz	100dB
Processing	<p><b>Input:</b> Mute, gain, <b>delayer</b> (0-100ms), 31-segment graphic equalizer, expander, compressor</p> <p><b>Mixers:</b> Mixer, gain</p> <p><b>Output:</b> delay device (0-16ms), frequency divider (Battwos/Bezier/Linckwicz filter type, 12 dB/24 dB/36 dB/48 dB filter slope;512-order custom FIR filter, 15-stage parameter equalizer, gain, limiter</p>
Model No.	<p>Dolphin 24 (2 analog input, 4 analog output)</p> <p>Dolphin 26 (2 analog input, 6 analog output)</p> <p>Dolphin 36 (3 analog input, 6 analog output)</p> <p>Dolphin 48 (4 analog input, 8 analog output)</p> <p>Dolphin D24 (2 analog input, 2 Dante input, 4 analog output)</p> <p>Dolphin D26 (2 analog input, 2 Dante input, 6 analog output)</p> <p>Dolphin D36 (3 analog input, 3 Dante input, 6 analog output)</p> <p>Dolphin D48 (4 analog input, 4 Dante input, 8 analog output)</p>
Size (LxWxH)	486mmx208mmx44mm

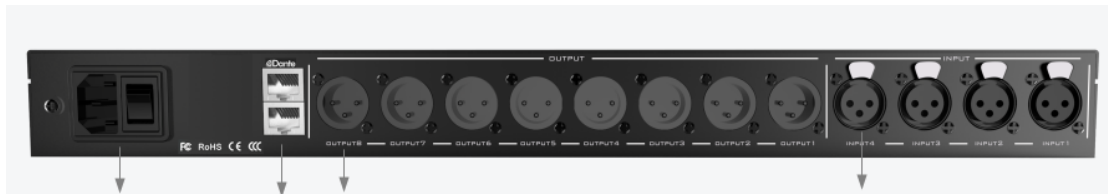
### 3. Packing List

No.	Name	Quantity
1	Device	1PCS
2	Power line	1PCS
3	USB Software	1PCS
4	Quick Guide	1Pcs
5	Certificate of qualification	1Pcs

### 4. Interface & Button Description



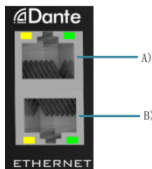
- ① **USB Port:** PC GUI software control interface
- ② **TFT Screen:** Embedded GUI display
- ③ **Control buttons:** Embedded GUI control, function selection and parameter control buttons
  - a) Rotate left and right: select function, adjust parameters, double click to save scene
  - b) Click: select current function
  - c) Rotate left and right on the basis of b): parameter adjustment
- ④ **EDIT:** Embedded GUI control, click to enter editing state
- ⑤ **BACK:** Embedded GUI control, return to the previous menu button
- ⑥ **MUTE:** Mute control
- ⑦ **Input indication:** indicate the change of input signal
- ⑧ **Output indication:** indicate the change of output signal
- ⑨ **Mute indicator light:** the red light is on in the mute state



- ①
- ②
- ③
- ④

① POWER (110~220V, 50/60Hz)

② ETHERNET: GUI software control interface (software upgrade interface) or DANTE interface



Either A) or B) can be used as GUI software control interface (software upgrade interface) or DANTE interface. The other network port is used for network cascading between devices. Multiple devices can be cascaded Multiple devices can be cascaded by daisy chain mode, and the number of devices cascaded is determined by the occupied bandwidth.

**Note: The two network ports cannot be connected to the network switch at the same time**

③ Output channel

④ Input channel

## 5. User Guide

### 5.1 Software



## 5.2. Menu Bar and Status Bar

### 5.2.1. File

Add device: used to add devices of different models

Open scene: used to import local scene

Exit: Exit the application

### 5.2.2.Edit

Copy channel (In): used to copy the input channel

Copy channel (Out): used to copy the output channel

Paste channel (In): Used to paste the input channel

Paste channel (Out): used to paste output channel

### 5.2.3Language

Chinese: switch software language to Chinese

Traditional Chinese; software language switch to Traditional Chinese

English: switch software language to English

### 5.2.4. Tools

Upgrade: upgrade device firmware, only support network connection during upgrade

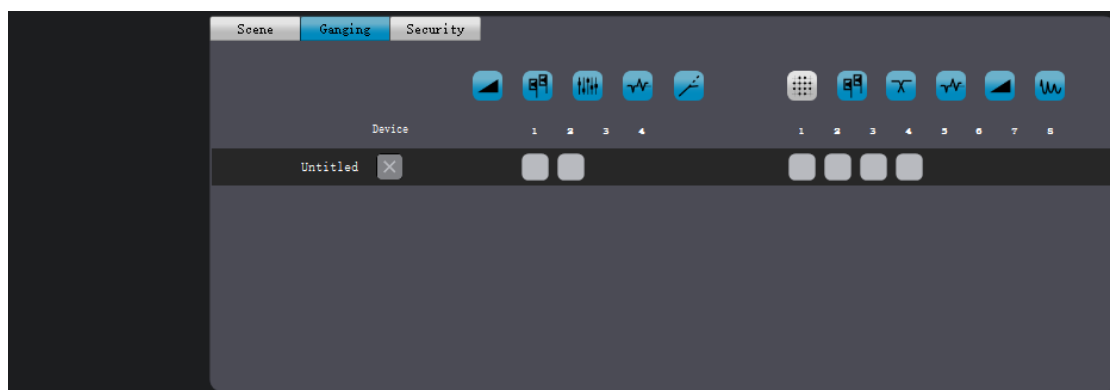
### 5.2.5. Help

About: Software version information

### 5.2.6 Setting

Scene setting: Used to load, save, import and export scenes;Control device LED display screen extinguishing;Restore factory Settings;Modify device information (Network configuration)

Binding setting: Used for binding input and output channels to each other



**How to use:** Add bindings and you can choose any channel binding you want.As shown in the figure (click any channel, then click the bound channel, the system pop-up prompt box and click OK, the binding relationship can take effect;Unbind: Double-click on any channel that needs to be unbound to cancel the binding.)

**Security Settings:** Used to add \ modify \ delete user information

### 5.2.7. Lock screen

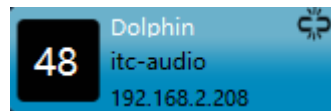
Lock screen: It is used to lock the current interface of the software and the LED screen on the device side to prevent others from misoperation



Note: Click the lock id to lock or unlock the device. You only need to enter the current login account password to unlock the device, and then unlock the device by entering the current account password

### 5.2.8. Login

Login: Used to search for device information or choose a different way to log in to the device

### 5.2.9. Indication of device connection status



Remark:  Means connected,  Means disconnected

## 5.3 Input Section

### 5.3.1. Input

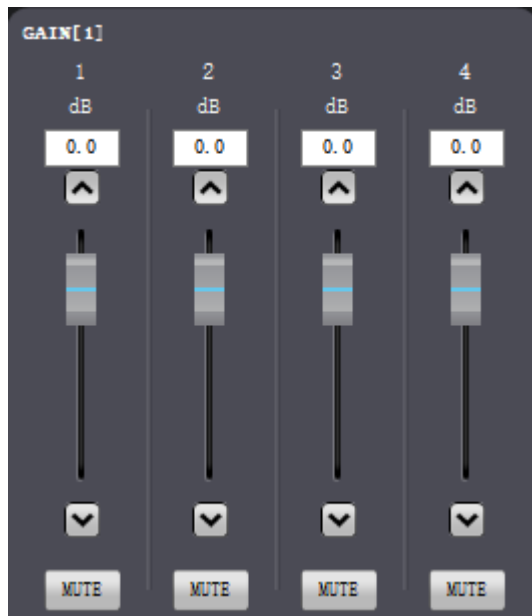


**Signal source input:** analog input signal or Dante input signal

**Name:** Signal input channel name

**Mute:** Mute switch

### 5.3.2. Pre-Gain



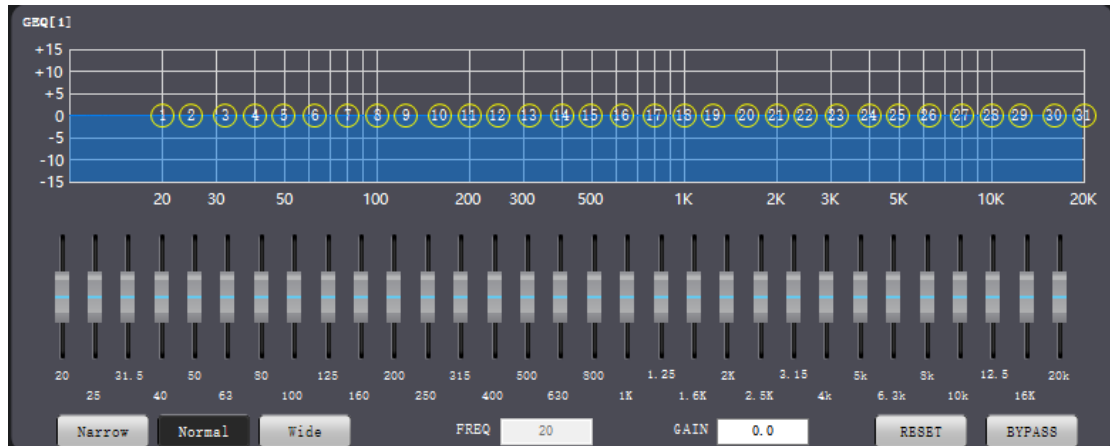
Gain: Adjust the gain through the fader (0~-72dB)

### 5.3.3. Pre-Delayer




Delayer: adjust the signal delay of the corresponding channel through the fader (0~60ms)

### 5.3.4. Pre-Equalizer



Equalizer: 31-segment graphic equalizer

: Indicates that the following parameters are the current equalization filter parameters

Narrowband: Narrowband equalization filter

Normal: regular equalization filter

Broadband: wideband equalization filter

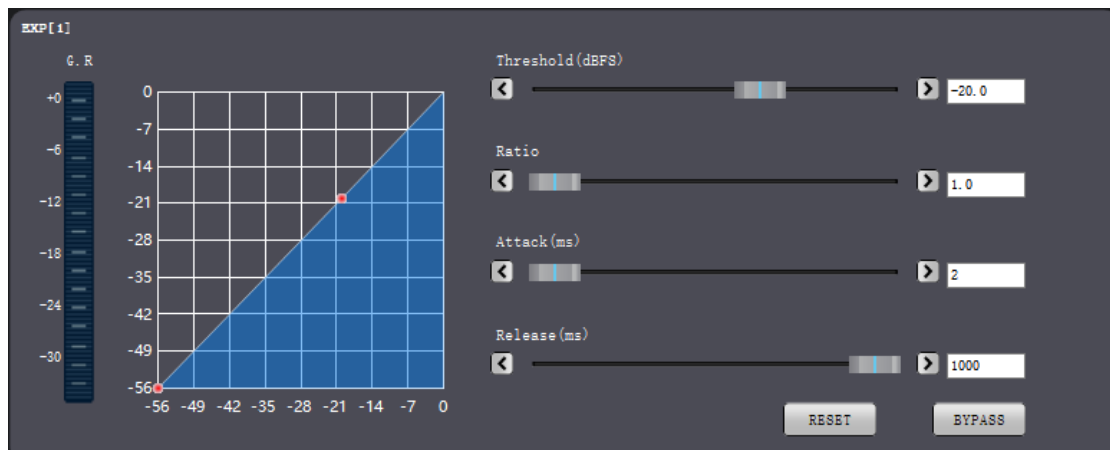
Frequency: indication of the center frequency of the current equalization filter

Gain: current equalization filter gain indication or control

Reset: restore all band gains to the default state

Enable: indicate or control whether the equalizer is enabled

### 5.3.5. Pre-Expander



The expander is to increase the dynamic range of input according to user needs.

When the input signal is less than the "threshold", the expander will compress the input signal according to the set "ratio",



**Ratio:** The number of decibels that the expander input signal changes dynamically/the number of decibels that the expander output signal changes dynamically.

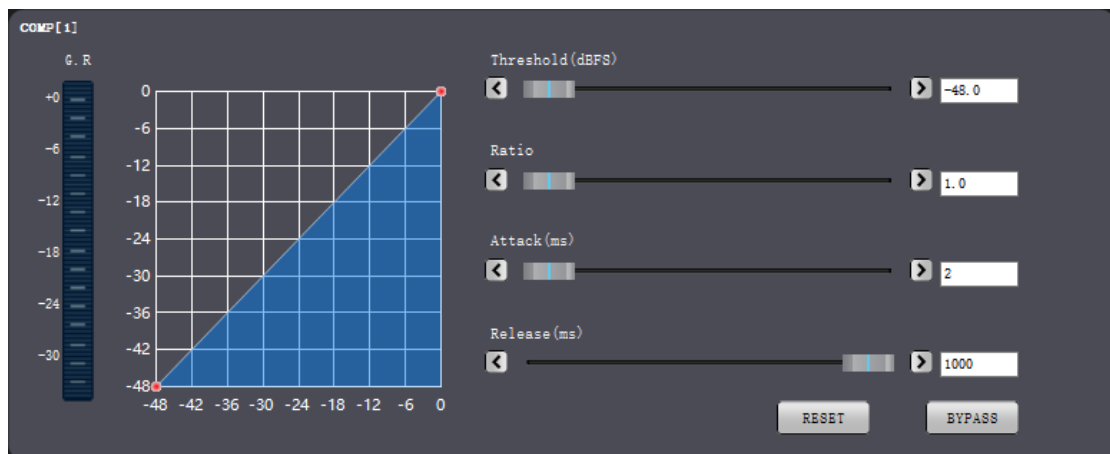
**Start-up time;** the time required for an input signal smaller than the "threshold" of the expander to enter the expanded state to output according to the set expansion ratio.

Recovery time: The time required for the input signal to return from the expanded state to the original non-expanded state.

Pass-through/Enable: Whether the extender is valid.

Reset: reset to default parameters

### 5.3.6. Pre - Compressor



Threshold: The threshold of the compressor.

Ratio: The input and output compression ratio of the compressor.

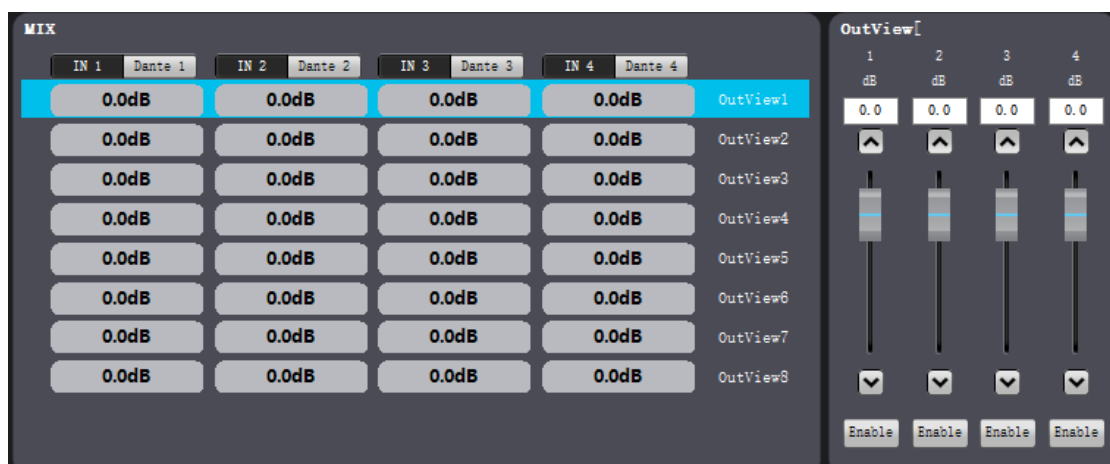
Start time: The start time of the compressor.

Recovery time: The recovery time of the compressor.

Reset: reset to default parameters

Enable: Compressor enable indication or control


## 5.4 Mixer



Control the mixing logic.

Column: input channel

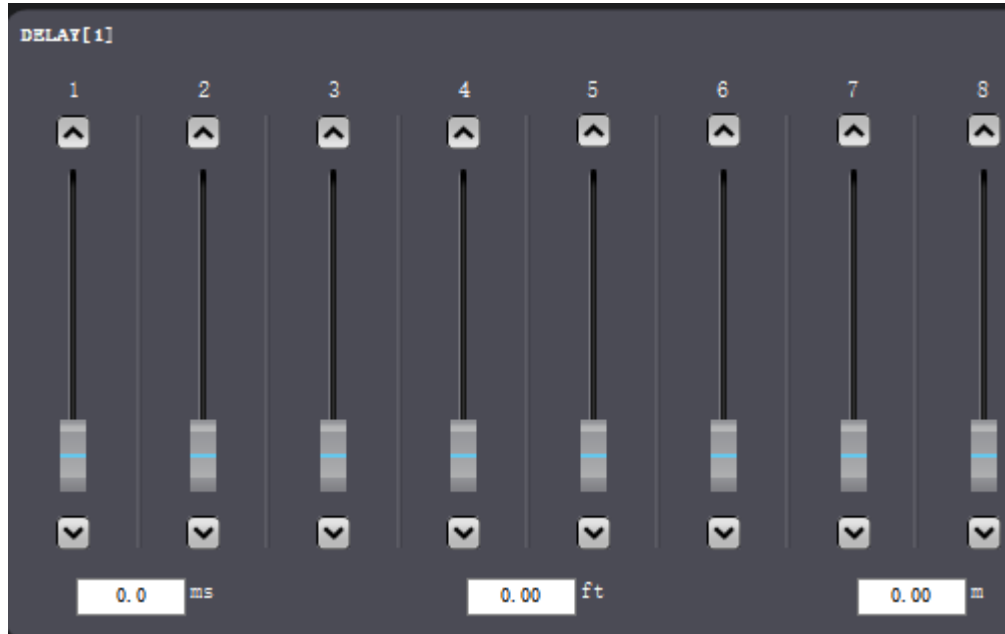
Row: output channel

: Indicates that the input channel of the corresponding column is mixed to the output channel of the corresponding row

Mixing output gain: adjust the gain through the fader (12~-72dB)

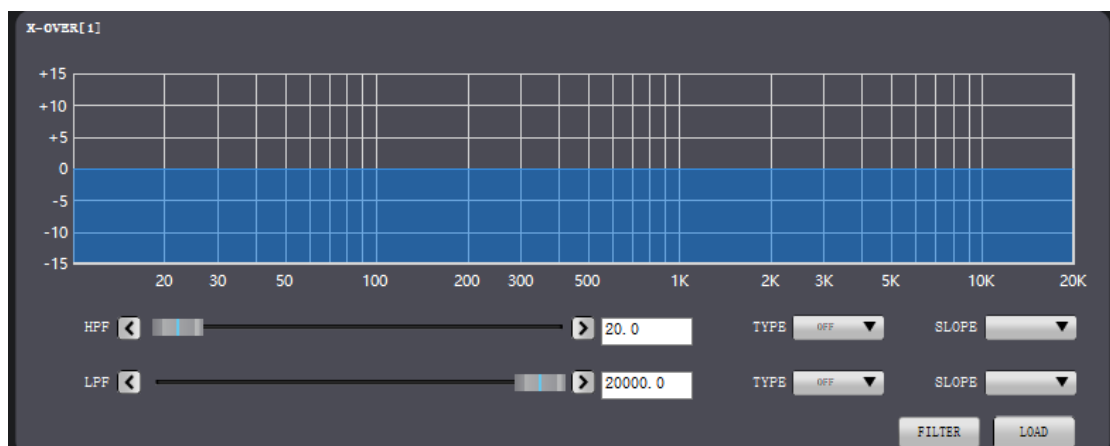
## 5.5 Output Section

### 5.5.1. Post-Delayer



Delayer: adjust the signal delay of the corresponding channel through the fader (0~180ms)

### 5.5.2. Post-Divider



High pass frequency: Cut-off frequency of high pass filter

Low pass frequency: The cutoff frequency of a low pass filter

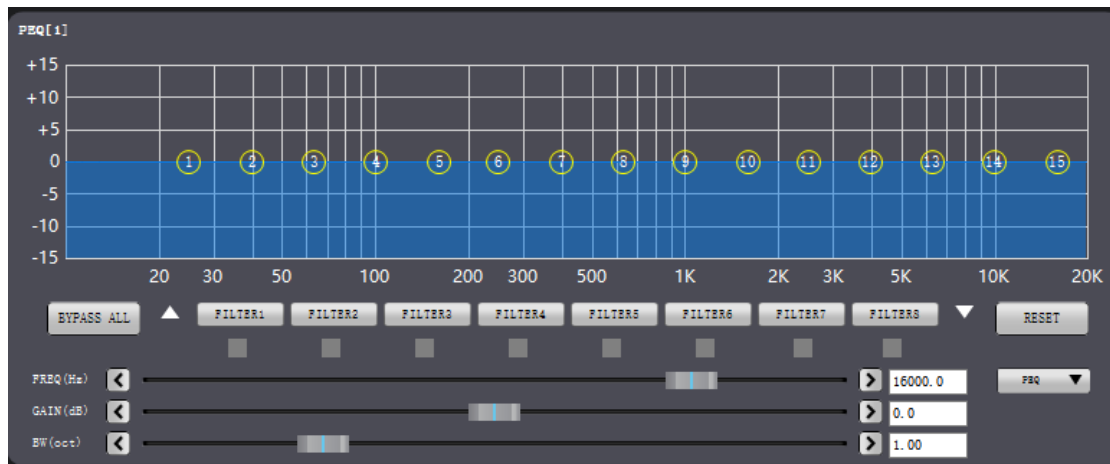
Type: Butterworth/Bessel/Linkwitch

Slope: 12 dB/24 dB/36 dB/48 dB

FIR filter: FIR filter is used to filter the channel

Import: import FIR filter coefficient, coefficient length 512, coefficient format single precision floating point number, if the coefficient length is less than 512, zero alignment

### 5.5.3. Post-Equalizer



 : Indicate the current filter parameters and control

Frequency: the center frequency of the filter

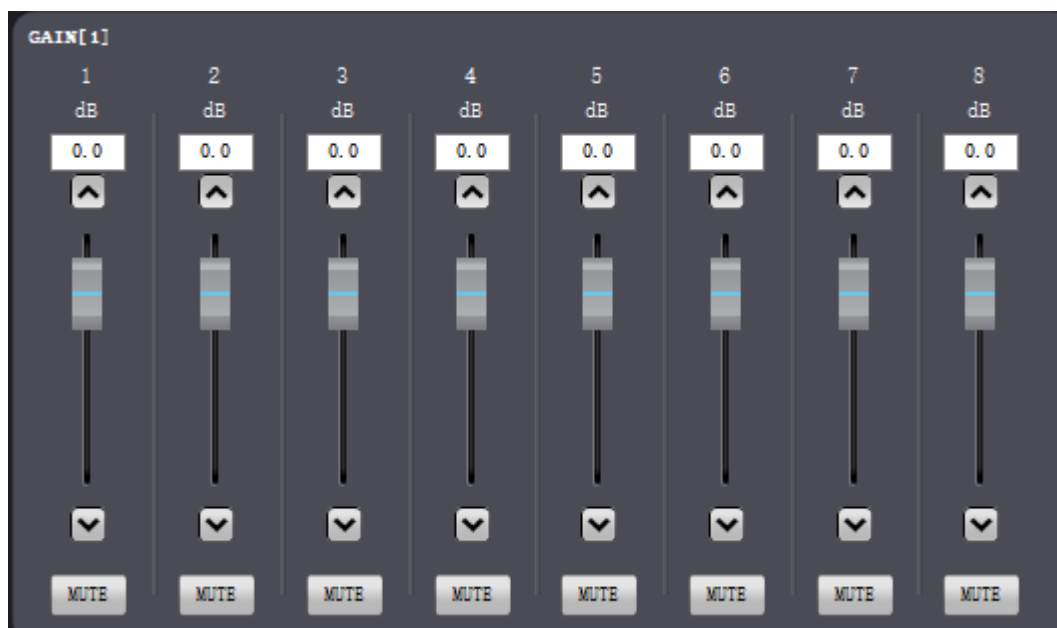
Gain: the gain of the filter

Bandwidth: the bandwidth coefficient of the filter

Filter 1~Filter 15: Filter enable control

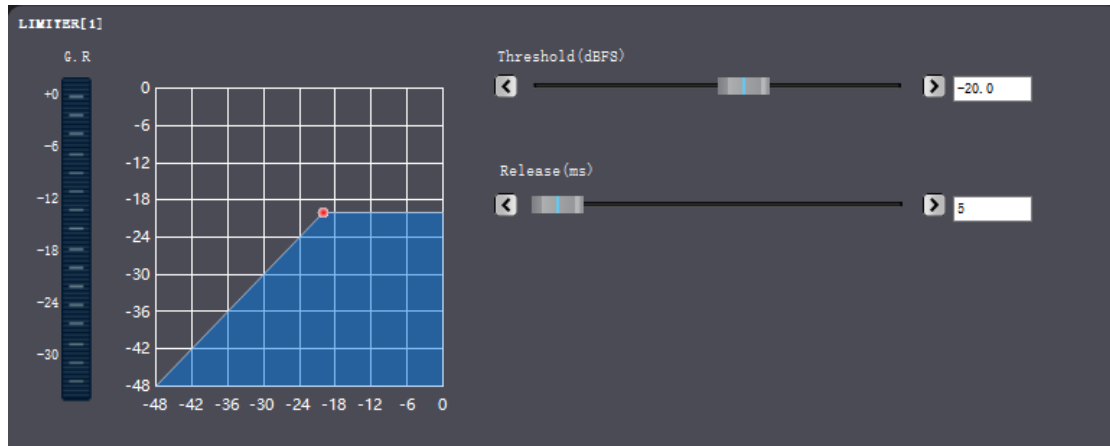
Reset: All filter parameters are reset to default values

### 5.5.4 Post-Gain



Gain: Adjust the gain through the fader (0~-72dB)

### 5.5.5 Post-Limiter



Threshold: the starting level of the limiter. When the signal is higher than the threshold, the limiter processing function is activated.

Recovery time: When the input signal is lower than the set threshold, release the limiter according to the set recovery time

### 5.5.6 Output



Name: Output channel name

Phase: 180 degree phase reversal of the output signal

Mute: Channel mute switch

## **6.Warranty Term:**

Warranty:2Years

In the warranty period, the product performance failure caused by non-human damage can enjoy three guarantees of service.

The warranty card shall come into effect after being stamped by the manufacturer. Invalid modification!

**The following situations (including but not limited to this) are not within the scope of the three guarantees:**

- No warranty card or missing valid invoice or the date has exceeded the validity period of the three guarantees;
- Failure to use, maintain, and manage in accordance with the requirements of the product manual and cause damage;
- The product model or code on the warranty certificate does not match the actual product;
- Damage caused by disassembly and repair by unauthorized service personnel;
- The normal discoloration, wear and consumption during the use of the product are not covered by the warranty;
- The product cannot be used due to the user's own network, please consult customer service.

## **7.Contact Us**

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