

User Manual

Digital Audio Processor

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We reserve the right to change our products without prior notice. The product legend and appearance effect in this manual are for reference only. The actual product shall prevail

Notes:



In the triangle, the lightning mark represented by the arrow means to warn the user of the dangerous voltage in the machine. Please ground and operate carefully when using. The exclamation point in the triangle reminds the user that it is important to follow the instructions

Do not open the unit without permission



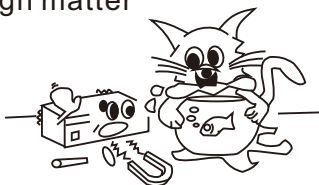
High voltage elements are used in the equipment. Do not open the case and try to inspect or modify the device to avoid the danger of electric shock. The equipment performance degradation or misoperation caused by user's modification will not fall within the scope of product quality assurance. Ventilation holes should not be obstructed by covering articles such as newspapers, tablecloths and curtains. In case of cabinet installation, keep at least 10cm gap between front and rear ventilation holes

Do not damage the power cord



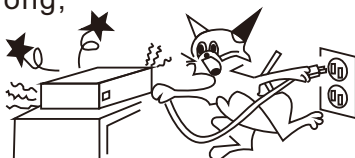
Hold the plug of the power cord before plugging it in or unplugging it. Do not use wet hands to unplug the eurotouch power cord. This can cause a short circuit or an accident. Do not place the power cord between the body and the furniture, between objects. Do not tie the power cord to other power cords, tie the cord into knots or place it in a place where people move around a lot

Do not drop water or foreign matter



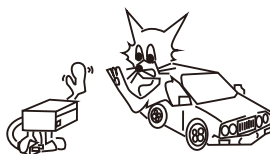
Do not insert or drop into metal objects such as hairpins, pieces of iron or COINS through air holes or other openings in the body, as well as flammable and explosive objects such as paper and matches. Because it can cause failure or fire and electric shock. Do not expose this product to rain or moisture. Also do not place on the product such as vases, fish tanks and other items. In case of water or foreign matter, ask the service center or the dealer for an inspection

In case anything goes wrong,



If any abnormal noise or odor occurs during use, please turn off the power immediately, unplug the power cord, and consult the dealer or repair center for a check. When maintenance personnel are repairing this product, components marked inside the product can only be replaced with components of the same specification

When not in use for a long time



Please turn off the power and unplug the power cord from the power socket when you are not using it for a long time. This will cause a fire due to an unexpected condition of the body

Thank you very much for choosing our audio signal processor. This processor embodies the valuable design and management philosophy of our company in the field of professional audio amplifiers for decades. Its excellent audio performance, special audio processing technology and competitive cost performance, stability and durability characteristics well ensure your interests

This product is multi-channel audio processor, from 2 in 4 out to 8 in 8 out. With ADI fourth generation SHARC floating point DSP, it has powerful audio processing capability. In operation, due to the convenience of users, the channel grouping link can be adjusted, or the copy can be executed, or even the group coordination or the channel parameter replication can be performed between multiple online devices.

2.1 Audio features

This equipment adopts 96 KHZ sampling rate and resolution of high-performance $\Delta 24 - \Sigma$ A/D and D/A conversion technology, signal processing using ADI fourth-generation floating point DSP. Each input includes gain control, feedback suppression, 10-section parametric equalization, dynamic equalization, frequency divider, compressor, delay controller and noise gate. Each output consists of a matrix mixer, a 10-section parametric equalizer, a frequency divider, a compressor, a limiter, and a delay controller.

2.2 User interface

Front panel: LCD display indicates device IP address and current default number and related information

Rear panel: Flexible adaptor from 3 in 6 out to 8 in 8 out, GPIO and 232/485 interfaces and RJ45 network interfaces


Control software: The PC control software equipped with this device can run on Win10 64BIT operating


2.3 Other characteristics

All input/output interfaces adopt perfect RF and electrostatic protection circuit to ensure the reliable operation of equipment. In addition, based on more than 10 years of professional experience in sound reinforcement design and application, our company provides a variety of recommended configurations for the convenience of user engineering applications. Users can download the configuration data of various application scenarios and common speakers through our website

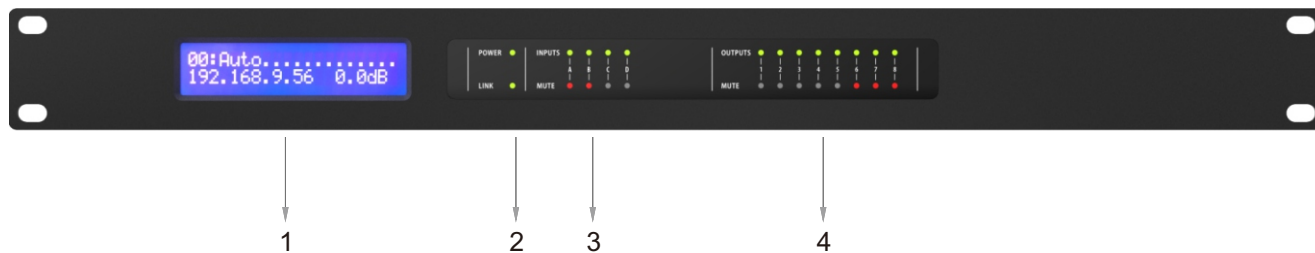
As part of our quality control system, each product is carefully and strictly packed before leaving the factory. After unpacking, please check it carefully whether the product is physically damaged. To facilitate future transportation and ensure product safety and performance, please keep all packaging materials and items well. As soon as physical damage to the machine is found, notify the distributor immediately so that a written proof containing the damage can be provided.

4 AC Power requirements

-  Before power on, please carefully check whether the voltage of local power grid is consistent with the label of this device

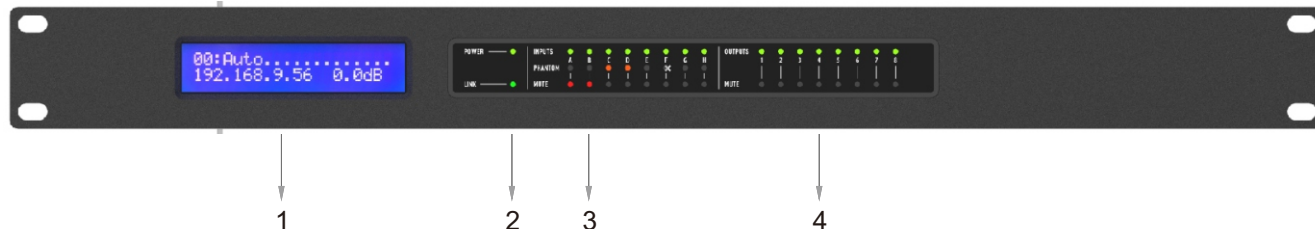
-  The fuse of the device is built in. If the fuse is damaged, please replace it with the fuse of the same model (* Before replacing the fuse, please confirm the equipment. The power line has been disconnected from the grid for your personal safety.

4in*8Out without keys(2~4inputs,2~8outputs)



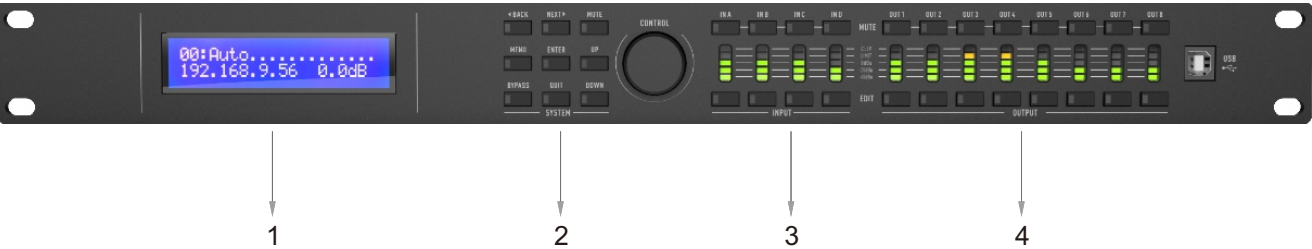
1. LCD displayer: display current preset, IP address, master volume, mute status
2. Power&Link indicator: Link Led on when online, if on editing Link Led flash
3. Input channel signal (upper row of green light) and MUTE indicator (lower row of red indicator) [Note: 3-way input model does not have D-way indicator]. Note that the input signal indicates the input of the device. Even if the input is MUTE, if there is signal input outside, the corresponding indication is still valid
4. Output channel signal (upper row of green light) and MUTE indicator (lower row of red indicator) [Note: 6-channel output model does not have 7&8-channel indicator]. Pay attention to the output signal indicating the output of the device. If output is MUTED, the corresponding channel signal indicator light will be off

8In*8Out without keys(2~8inputs,2~8outputs)



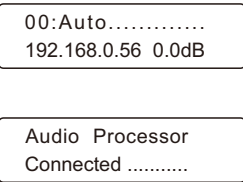
1. LCD displayer: display current preset, master volume and mute status
2. Power&Link indicator: Link Led on when online, if on editing Link Led flash
3. Input channel signal (upper row of green light) and MUTE indicator (lower row of red light) and phantom power switch indicator (middle orange). Note that the input signal indicates the input of the device. Even if the input is silent, if there is signal input outside, the corresponding indication is still valid
4. Output channel signal (upper row of green light) and MUTE indicator (lower row of red indicator)
Pay attention to the output signal indicating the output of the device. If output is MUTED, the corresponding channel signal indicator light will be off

4in*8Out with keys(2~4inputs,2~8outputs)



- 1.LCD displayer: display current preset,IP address,master volume and mute status
- 2.Function button and main knob adjustment area: preset call and setting, menu selection, etc
- 3. Input channel signal (lower row of green light) and MUTE indicator (upper row of red indicator) [Note: There is no D-channel indicator for 3-channel input model]. Note that the input signal indicates the input of the device. Even if the input is silent, if there is signal input outside, the corresponding indication is still valid
- 4. Output channel signal (upper row of green light) and mute indicator (lower row of red indicator) [Note: 6-channel output model does not have 78-channel indicator].Pay attention to the output signal indicating the output of the device. If the output is MUTED, the corresponding channel signal indicator light will be off Enter channel mute and channel select edit key

5. 1 main interface

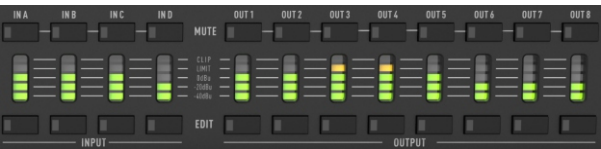


The first line shows the current default number and its name (No 0 is automatically saved and cannot be deleted)
The next line displays the device's IP address and total volume or MUTE state
When online, the display is shown in Figure 2. The panel keys are invalid, and the following line flashes if the current online editing status

5. 2 panel keys

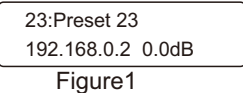


- BACK/NEXT : turn the page back and forth and select the first line setting item.system main menu optional: preset call, storage, boot preset, delete, IP Settings,Panel password,password
- MUTE : master MUTE ON or OFF
- MENU : system menu (preset/IP/password set)
- ENTER : preset recall/store/power on set/delete/IP/Password
- UP/DOWN : first line/second line parameters select
- BYPASS : output mix menu, input to output mix or not
- QUIT : return to main menu
- CONTROL : Adjust the total volume on main menu, and adjust corresponding parameters or options on other menu

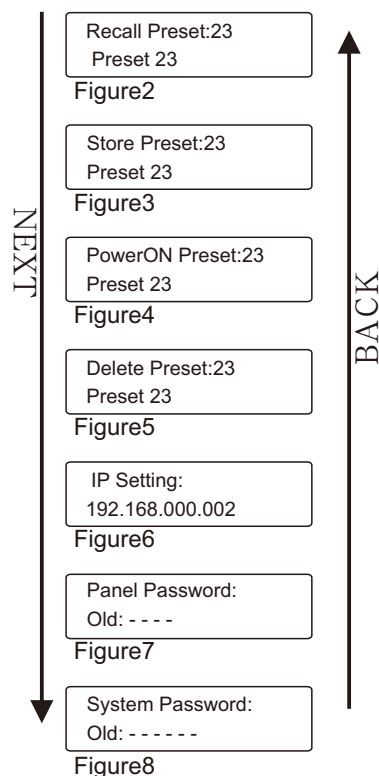


MUTE : (INA~IND/OUT1~OUT8) : Input/Output MUTE
EDIT : (INA~IND/OUT1~OUT8) : Input/Output EDIT.

5.3 MENU preset/ip set/password set



Press the QUIT key to return to the main interface of the device at any time [Figure1]
No operation under sub-menu for more than 20 seconds will automatically return to the main interface [Figure1]



5.4 Input/Output parameters set

Press Input/Output EDIT key enter into setting menu

A 0.0dB Pol+ Line
Boost:0.0dB

A 0.0dB Pol+ Sine
1000Hz -40.0dB On

Input Gain/Polarity/Input select(Line/Digital/Sine/Pink/White)
if select Sine generator
(second line include frequency/gain/OnOff set)
Sine/Pink/WhiteNoise On/Off(Independent control)

Out1 0.0dB Pol+
0.0 NoB NoC NoD

Output gain/polarity set
Output Matrix:NoX indicate not mix to output
DOWN key move cursor,BYPASS,knob adjust mix gain

HPF In-A OFF 20Hz
12dB/Oct Butterworth

LPF In-A OFF 22000Hz
12dB/Oct Butterworth

Input/Output HPF parameters
UP key move to HPF/LPF,turn knob to select
Input/Output LPF parameters

Eq01 In-A ON PEQ
0.0dB 32Hz 1.00

DlyIn-A ON 0.00ms
AFC:0

ComIn-A OFF +24dBu
1.0 A45ms R724ms

ComIn-A OFF +24dBu
1.0 A45ms R724ms

Limit Out1 +24.0dBu
R724ms OFF

DEQ1 In-A PEQ 100Hz
0.0dB Q4.32 [->]

DEQ1 In-A 0.0dBu
1.0 A45ms R724ms

5.5 Ouput FIR (*Only some models)

Press Output EDIT key enter into setting menu,Press “NEXT” to select “FIR out1~8” parameters

FIR Out1 BPF 512Taps
250Hz 20000Hz

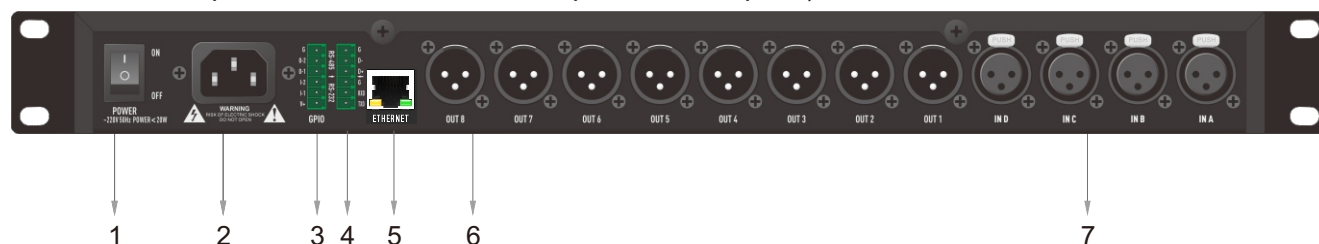
BPF: filter type(LPF/HPF/BPF/OFF/Ext),Ext---External FIR coefficient
512Taps: FIR order(256/288/320/352/384/416/448/480/512)
250Hz: Only valid for HPF&BPF
20000Hz:Only valid for LPF&BPF

FIR Out1 Att:80dB
Window:Kaiser

Att: Only for Kaiser&Sinc&Sine,21~120dB when FIR filter is not OFF or Ext
Window: FIR window type(Rect/Kaiser/Sinc/Hanning/Hamming/Blackman/
Blackman-harr/Blackman-Nutt/Nuttal/
Kaiser-Bessel/Sine)

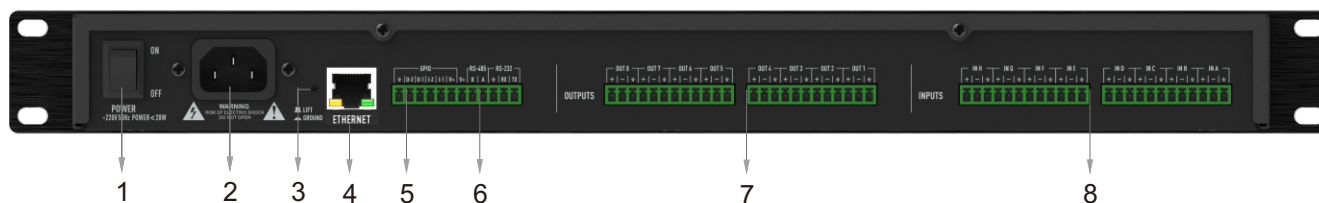
In FIR menu,After each parameter is edited, press ENTETR key to take effect

4In*8Out rear panel(carnoon IOs:2~8 inputs,2~8outputs)



- 1.Power switch
- 2.Power input socket
- 3.GPIOs
- 4.RS232/485 ports
- 5.RJ45 ethernet port
- 6.Audio output sockets
- 7.Audio input sockets

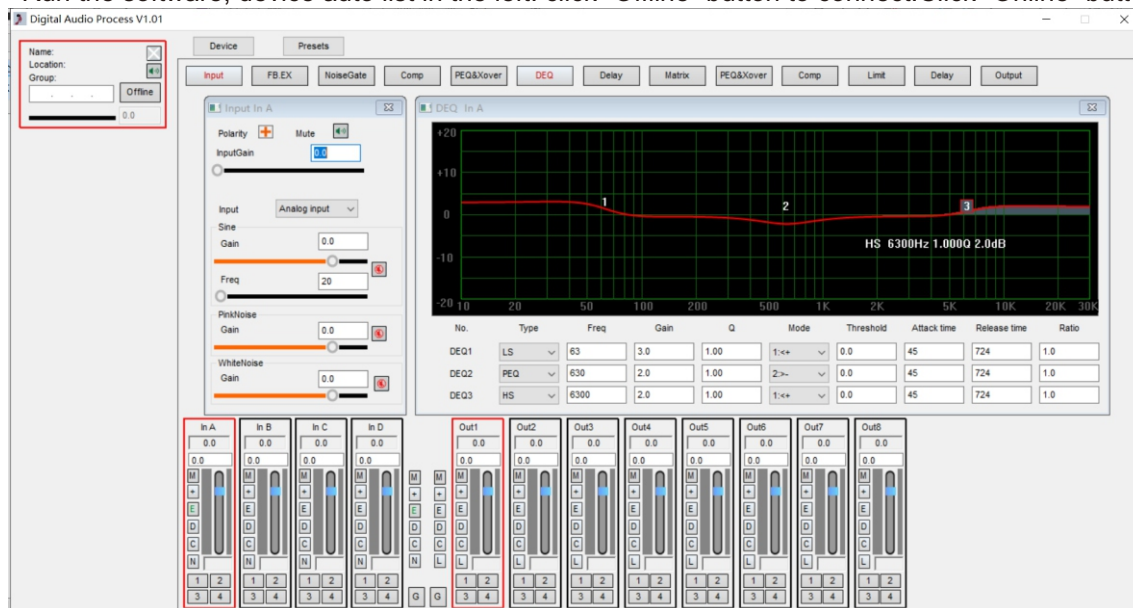
8In*8Out rear panel(2~8 inputs/outputs)



- 1.Power switch
- 2.Power input socket
- 3.Ground switch
- 4.RJ45 ethernet port
- 5.GPIOs
- 6.RS232/485 ports
- 7.Audio output sockets
- 8.Audio input sockets

7.1 Software main interface

Run the software, device auto list in the left. click "Offline" button to connect. Click "Online" button to disconnect

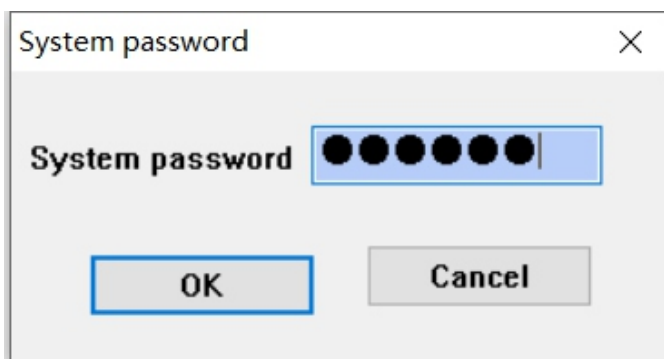


Pc software can configure and manage a single or multiple online devices over the network. You can store device parameters in a device or computer file. As many as 250. The device can be online at the same time to facilitate real-time switching and editing. Flexible parameter editing, grouping and linking provide great convenience for users to set up quickly.

7.2 software module

7.2.1 device list in left: IP, device name, location, position, group and master volume/mute information

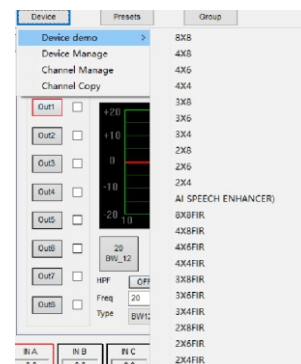
7.1 Click "Offline", input password (default: 000000) as below



7.2.2 "Device" menu: New Device (Add virtual device),

Device Manage (view/edit device information)

Channel manage and channel copy



7. 2. 3 "Device Management" interface [IP and related information can be changed when not online, and all editable changes can be made after online]

The 'Device manage' window is divided into four main sections:

- Version:** Displays 'Software:0.04', 'Firmware:1.02', and 'Hardware:2.01'.
- Information:** Includes fields for 'Name' (Audio Processor.....), 'Location' (Factory.....), and 'Group' (0). A 'Modify' button is at the bottom.
- NetConfig:** Includes fields for 'IP Address' (192.168.0.188), 'SubNet' (255.255.255.0), 'Net gate' (192.168.0.233), and 'Mac'. A text box explains IP address ranges: 'IP addresses and gateways need to be limited in range: the first byte 1 ~ 126, 128 ~ 223 [cannot be equal to 127], the second and third bytes 0 ~ 255, and the fourth byte 1 ~ 254.' A 'Modify' button is at the bottom.
- Password:** Includes radio buttons for 'SystemPWD' (selected) and 'PanelPWD'. It has fields for 'Old PWD' and 'New PWD'. A 'Modify' button is at the bottom.

You can view the hardware and firmware versions of the device
View or change device information
Change the device network configuration
Change the system password or panel password
The default system password is 000000
The panel password defaults to 0000
MAC address on the left can be used as RS485 controlled address code

7. 2. 4 The preset menu allows you to manage the presets stored in the device

The 'Presets' window contains a table with columns 'No.', 'Type', and 'Name'. It also has buttons for 'Save', 'Recall', 'Delete', 'Power ON', 'Import', 'Export', 'Import All', and 'Export All'.

No.	Type	Name
0	Valid	Auto.....00
1	Valid	Factory Default.....
2	Valid	2X4
3	PowerOn/Cur...	4X2
4	Blank	
5	Blank	
6	Blank	
7	Blank	
8	Blank	
9	Blank	
10	Blank	
11	Blank	
12	Blank	
13	Blank	
14	Blank	
15	Blank	

0: Auto preset: When the current is at 0, all parameters will be saved automatically.
1: By default, the factory cannot be deleted or overridden;
2~23: User presets, can be deleted or saved;
Power-on preset: it cannot be deleted. After setting it to power-on, the configuration parameter of the file will be used next power on
Import/Export preset: operate only on the current file, export can be stored in the computer,
Or import a single preset from the computer to the preset of the device (manually saved)
Import/Export all presets: Export user presetes from 0 to 23 to a computer
Or import from the computer presets to the device (save to the device FLASH)
* Note *: Importing all presets will overwrite all parameters in the device!!

7.3 Signal process module

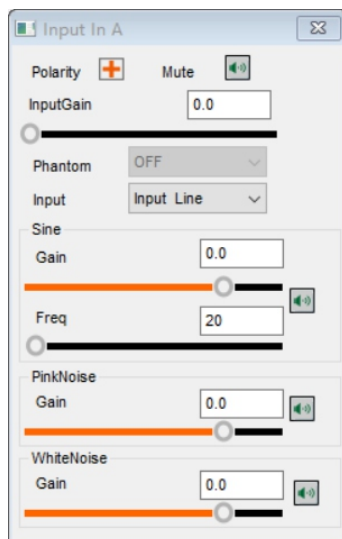
Signal generator, feedback distory, noise gate, Xover, PEQs, compressor, limiter, delay, matrix mix, automix



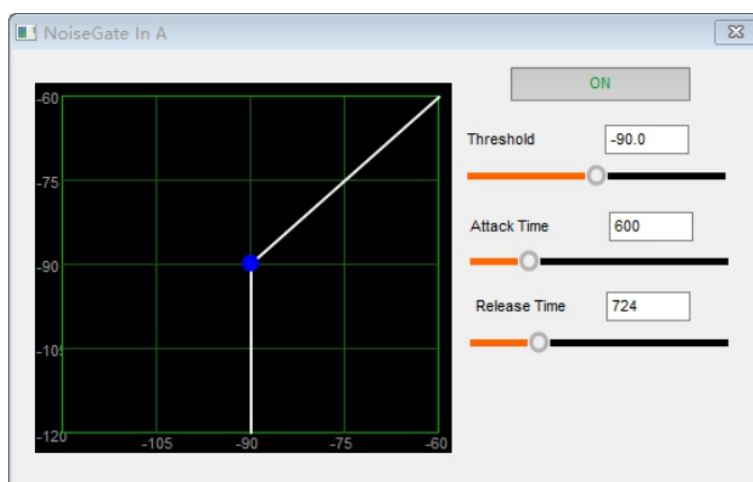
7.3.1 Signal generator

input select from Generator/analog/Line/Mic

Signal generator: sine/pink noise/white noise



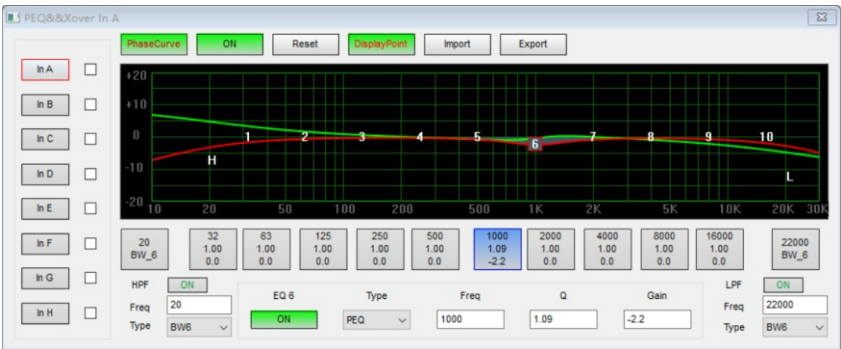
7.3.2 Noise gate



7.3.3 Input/Output PEQs&HPF&LPF

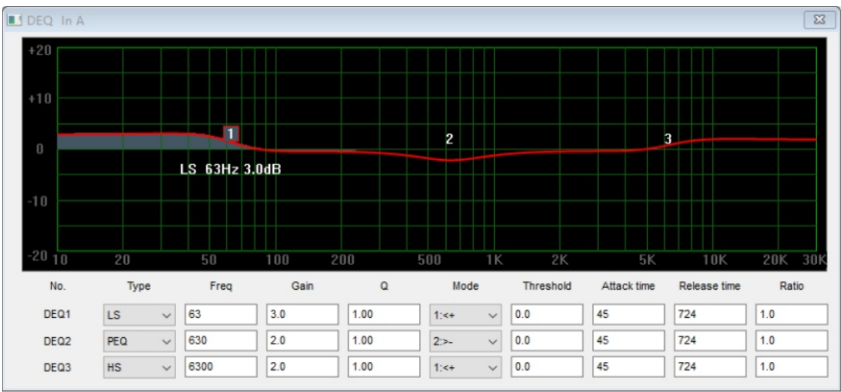
Xover type:ButterWorth/Bessel/LinkWitz(-6dB/oct~-48dB/oct)

10segments PEQs:PEQ/LSLV/HSLV/Allpass-1/2

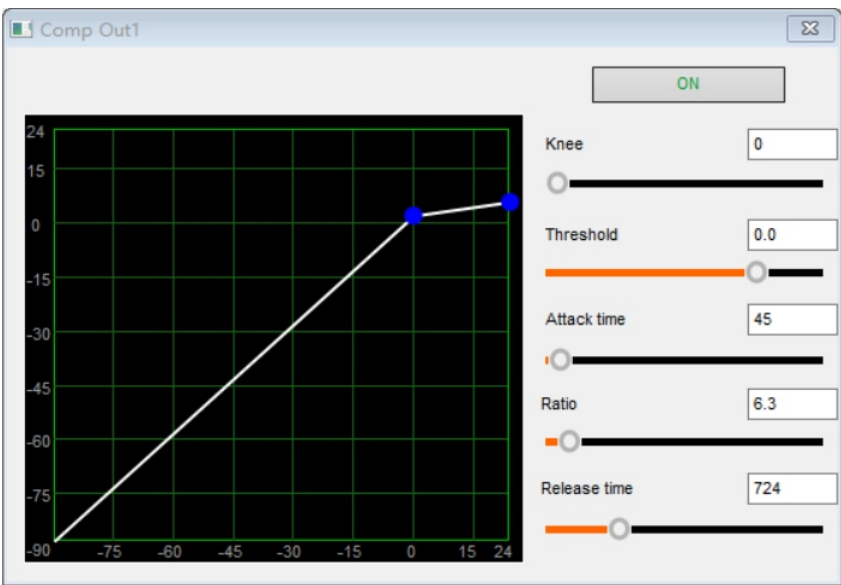


7.3.4 Input DEQs(Dynamic equalization)

3segments:LowShelf/Peaking/HighShelf or OFF



7.3.5 Input/Output compressor



7.3.6 Output FIR(In the right area of PEQ&Xover menu,Only some models)

FIR Filter type: High pass/Band pass/Low pass/Bypass/Ext(Import FIR), and may View FIR curve

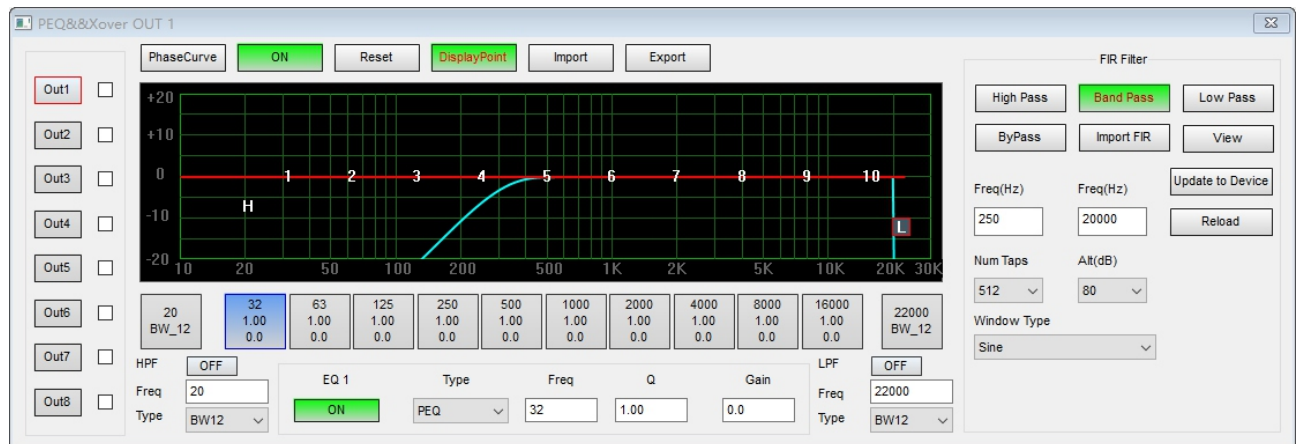
250Hz: Lower frequency, Only valid for HPF&BPF

20000Hz:Upper frequency,Only valid for LPF&BPF

FIR order:256~512Taps

Att: Only for Kaiser&Sinc&Sine,21~120dB when FIR filter is not OFF or Ext

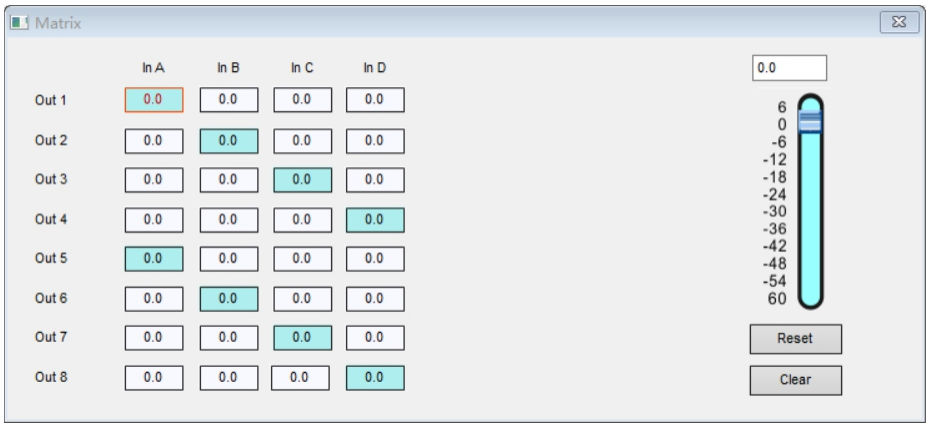
Window: FIR window type(Rect/Kaiser/Sinc/Hanning/Hamming/Blackman/Blackman-harr/Blackman-Nutt/Nuttal/Kaiser-Bessel/Sine)



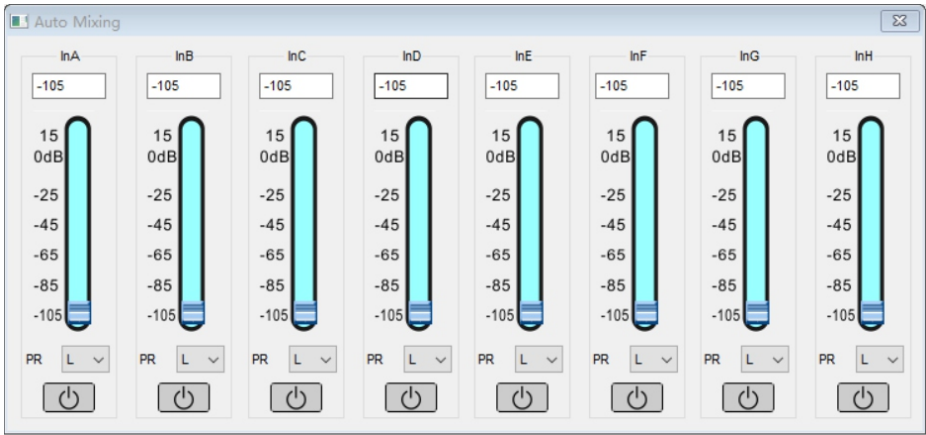
7.3.7 Input/Output delay:0~1000ms, 0.02ms/step



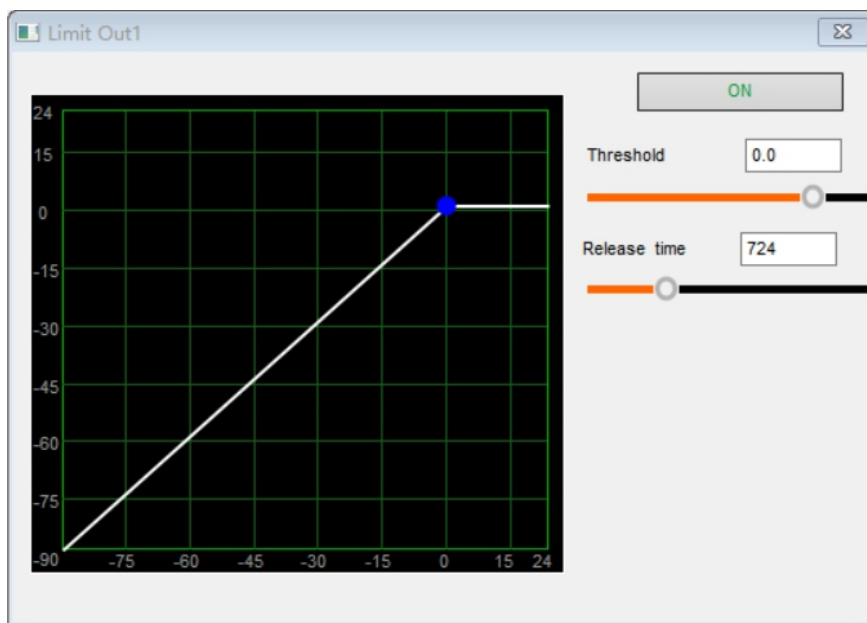
7.3.8 Matrix mix



8*8 models: Input signals can be set to intelligent AMX automatic mixing (gain sharing, high and low priority). The threshold value of each path can be set independently, and whether to participate in the automatic mixing switch can be set independently

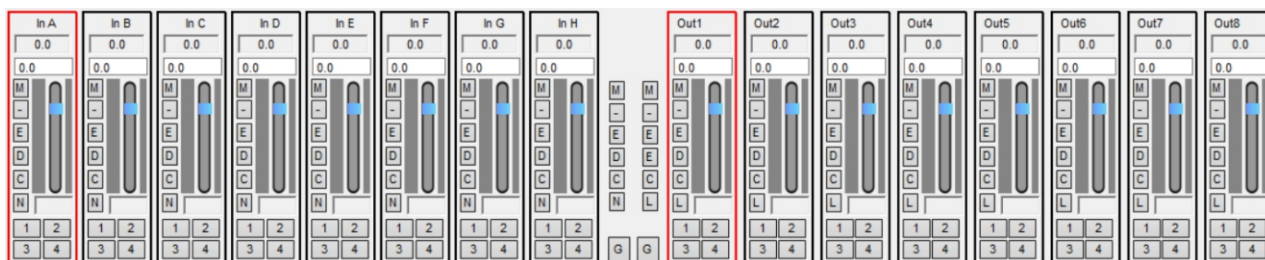


7.3.9 Output limiter

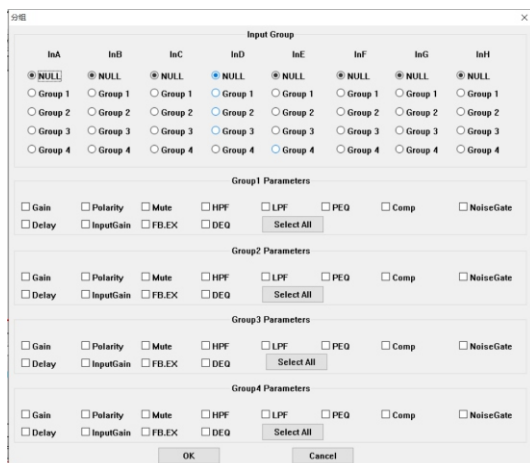


7.3.10 Signal indicator and volume, function switch and marshalling shortcut panel

The input signal can be assigned to any output channel, the gain can be set, or the option to close or open



The signal bar on the left is the signal VU indicator, the gain pusher in the middle, and the compression volume of the compressor/limiter on the right. The top digit shows the compression amount, the middle digit is the gain amount, and the bottom digit is the signal size quantity value. Switch Settings for mute, gain control, phase, compressor, noise gate, equalizer, limiter, and delay controller can be quickly implemented on this panel. The two middle G marshalling buttons can set the input and output marshalling and linking functions, and all parameters of each channel can choose whether to participate in the marshalling link



8.1 Audio related

power on failure	Is the machine power cord securely attached? Is the power switch on?
cannot connect	the establishment of TCP connection needs to be in the same LAN segment. Please change the DEVICE IP address in the same network as your computer or set the netmask 255.255.0.0
no audio output	Check if the output channel volume is off or silent. Is the output channel matrix mix configured correctly? Or check whether the channel low cut frequency is set too high or the high cut frequency is set too low?
sound defects	Please check if the channel volume is set too low. Or check if the audio connection is properly wired? Is the setting of pressure limit, noise gate and EQ reasonable
distorn/clip	Please check if the input signal is too large or the device volume is set too high VU display (including CLIP/LIMITER indicator) under the PC control software system menu. Determine if the system level is appropriate

8.2 RS-232/485/RJ45 port connect problem

If using RS-232 or RS-485 ports on the backplane, connect both ends reliably.

To use the backplane RJ-45 network port, be sure to connect directly to the computer with the network cable or to the LAN port of a switch or wireless AP device.

If direct to PC, you should manually set PC's IP&MASK(mask=255.255.0.0)

if connect to switcher, device IP should in the same net segment(192.168.X.X)

8.3 The problem of loud or small or intermittent sounds

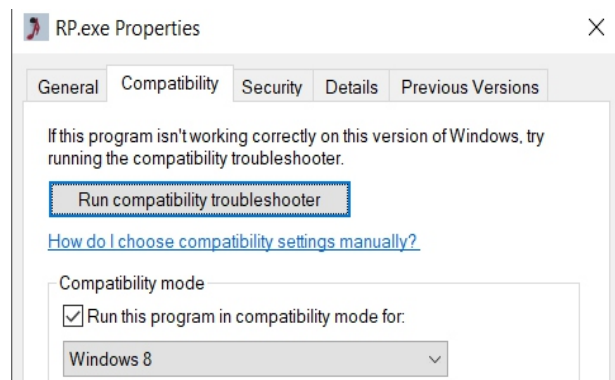
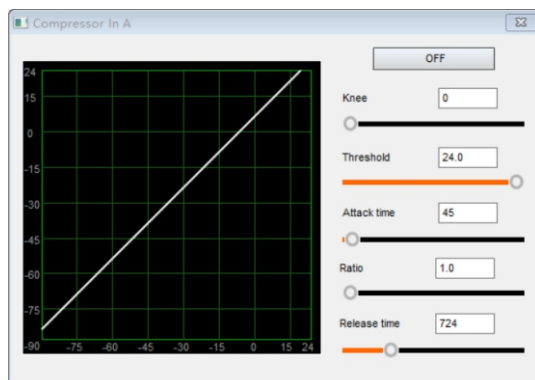
If the threshold of the noise gate is set too high, when the sound source signal is small, it is not enough to open the noise gate threshold, which may lead to intermittent sound. Please lower the noise threshold (this value should be set reasonably according to the noise status of the signal source at the front end of the device).

8.4 Program compatibility Settings(Curve showing deviation) for different windows OS

Right-click program properties to enter the compatibility setting interface

For WIN10, set compatibility to WIN8

For WIN7, set compatibility to WIN98/ME



Test conditions:normal working environment,+4dBu@1kHz sine input gain=0dB other functions bypass

Sample frequency and resolution	96kHz 24bit AD/DA 400MHz 32bit floating DSP
Frequency response	20Hz~20kHz $\pm 0.3\text{dB}$
THD+N	$< 0.003\%$ @1kHz
ADC&DAC dynamic range	$> 115\text{dB}$
Input impedance (Balanced)	10k Ω
Output impedance(Balanced)	100 Ω
Crosstalk	$< -100\text{dB}$ @1kHz
Max input level	$> 20\text{dBu}$ @1kHz
Max output level	$> 20\text{dBu}$ @1kHz
Background noise	$< -93\text{dBu}$
Device fixed delay	$< 2\text{ms}$
Signal generator	sine/pink noise/white noise
Signal processing modules	NoiseGate/feedback distroy/PEQs /HPF/LPF/ FIR(optional) /Compressor/Limiter/Delay

Power requirements $\sim 220\text{V}$ 50Hz/60Hz consumptions $< 20\text{W}$

Appearance size(W×D×H) 483× 268×45 (mm)

Net weight 3.5kg

Operating ambient tempture $0\sim +40^{\circ}\text{C}$

Storage ambient tempture $-10\sim +60^{\circ}\text{C}$

Accessories

Power supply cord 1PCS

User manual 1PCS

Control software(U disk) 1PCS

User Manual

Digital Audio Processor