PROFESSIONAL AUDIO SYSTEM

User Manual

Attention
To reduce the risk of fire or electrics shock,
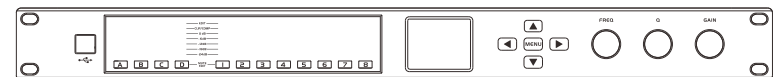not expose this apparatus to rain or moisture!

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

FREQ   Q   GAIN

‖‖DSP‖‖   PRO AUDIO SYSTEM

MAINTENANCE AND STANDARD CONFIGURATION LIST

Attention:

When it doesn't work, it is not always the problem of the device itself, maybe it is damaged in the shipment. Please check carefully by the following ways before you take the device to repair. If you sent the device back to our company for repairing, please package it, we will provide you with good services.

Failure	Reason	Solution
Output and screen doesn't work.	☒ Power socket has no power.	☑ Repair the power supply system.
	☒ Power plug is not in.	☑ Connect the power plug correctly, and make sure it is connected well.
	☒ AC 220V fuse blows.	☑ Pull out power plug and change the same type of fuse.
Output works but the screen doesn't work.	☒ Signal wires don't connect well.	☑ Connect signal wires well according to this user manual.
	☒ Main volume is turned down.	☑ Adjust the volume.
	☒ Signal wires don't connect correctly.	☑ Connect input correctly.
	☒ There is no output signal.	☑ Check the sound input system.
Only one output works.	☒ Signal wires don't connect well.	☑ Connect signal wires well according to this user manual.
	☒ Balanced potentiometer is to the extreme.	☑ Adjust the balanced potentiometer to the middle.
	☒ Signal wires don't connect correctly.	☑ Connect signal wires correctly.
	☒ Something wrong with signal wires.	☑ Check if the signal wires are open circuit.
There is no sound in the MIC or the sound is so low.	☒ MIC hasn't been turned on.	☑ Turn on the MIC.
	☒ MIC hasn't been plugged in completely.	☑ Plug in the MIC completely.
	☒ MIC volume has been turn down.	☑ Adjust the MIC volume to the reasonable level.
	☒ MIC doesn't work.	☑ Change the MIC.
Feedback happens or there is a lot of noise.	☒ MIC is too near to the loudspeaker.	☑ Keep the MIC far away from the loudspeaker.
	☒ MIC volume is too high.	☑ Adjust the MIC volume to the reasonable level.
	☒ MIC index is not the right one.	☑ Change the MIC of the same index.
	☒ MIC hasn't been plugged in completely.	☑ Plug in the MIC completely.

SAFETY FOR USERS

All safety and operating instructions should be read before the product is operated.

Power: This unit should only use the same type as shown in this manual.

Power Cord Protection: Protect the power cord from being crushed; especially the power plugs.

Humidity: The unit should always be far away from water and/or moist surfaces.

Electronic Shock: Be careful that liquid is not spilled inside the unit through ventilation openings.

Temperature: Do not install near any heat sources such as radiators, stoves, heating resistance or other appliance(s) that produce heat.

Opening or Moving Covers: Refer any/all repairs or servicing to qualified service personnel. To prevent the risk of shock, do not attempt to service/repair this equipment yourself. Opening or moving covers may expose you to dangerous voltage or other hazard(s.)

Cleaning: Do not use volatile liquid such as alcohol, paint thinner or gasoline. Clean only using a dry cloth.

Smell: In the event of any suspicious burning smells or smoke, please power off and unplug the power cord.

Long Term Idle:

1. For your safety, please power off and unplug the power cord so as to prevent fire potential.

2. Prevent water, metal or other objects from falling inside the unit to avoid fire or electronic shock. If any of these occur, power off and unplug immediately and contact authorized service center for diagnostic.

Warning: Do not tuck cable or cords under the unit or between other objects. Do not put the power cord in the crowd. Avoiding fire or electronic shock.

INTRODUCTION AND CONTENTS

Thank you for choosing this product.
Be sure to inspect packaging and contents for any damages incurred during shipping and transit.
Please read this User Manual before you connect or operate this device.

CONTENTS

TECHNICAL PARAMETERS

Input/Output channel		2Input/4Output	2Input/6Output	4Input/6Output	4Input/8Output
Input channel	Mute	✓			
	Delay	Each input channel has delay control, adj range:0-1000ms			
	Polarity	In phase(+) & reversed phase(-)			
	EQ	8 band PEQ, FREQ:20Hz-20KHz, bandwidth:0.05-3oct,Step:0.05oct, Gain:±20dB,Step:0.1dB.			
Output channel	Mute	✓			
	MIX	Each input channel can be selected to each output channel.			
	Gain	adj range: +12dB~-36dB step: 0.1dB			
	Delay	Each input channel has delay control, adj range:0-1000ms.			
	Polarity	In phase(+) & reversed phase(-)			
	EQ	Each output channel has 8 band EQ: 3 Modes : PEQ/Lo-shelf/Hi-shelf			
	X-over	LPF,HPF, PF mode:Linkwitz-Riley /Bessel/ Butterworth，FREQ：20Hz-20KHz, (Slop) :Bessel/ Butterworth: 12/18/24dB Linkwitz-Riley :12/24/36/48dB			
	Compressor	Gate level:+20dBμ~-40dBu Start time：0. 3ms-100ms， Release time: Release time can be set as twice,2/4/6/8/16/32times.			
Processor		96KHz sampling freq,24 bit AD/DA conversion.32 bit DSP chip processor			
Input impedance		Balance 20 K Ω			
Output impedance		Balance 100 Ω			
Input range		≤+18dBu			
Frequency		20Hz-20KHz(0~-0.5dB)			
S/N		＞105dB			
THD		＜0.01% (Output=0dBu/1KHz)			
Separation		＞80dB(1KHz)			
PC Port		Front panel has 1 port USB			
RMS		≤25W			
Power		AC 110V/240V 50Hz/60Hz			
Gross Weight		3.15kg			
Package Dimensions(W×H×D)		570×260×90 mm			

Specifications are subject to change without
notice for further improvement

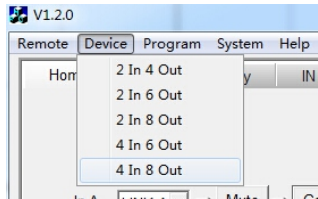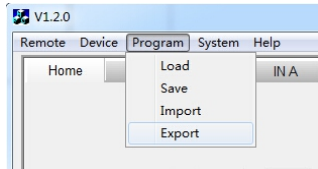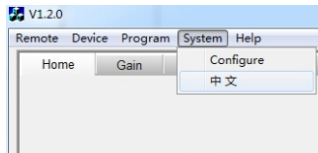| STANDARD CONFIGURATION LIST		
Number	Name	Quantity
1	Device	1 PCS
2	User Manual	1 PCS
3	Power cord	1 PCS

System menu introduction:
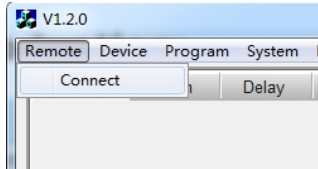
Picture1: Connect PC software with device

Picture2: Choose what model you need.

Picture3: Program menu: Load, Save, Import, Export

Picture 4: System and language setting

This device is a Professional Loud Speaker management based on DSP technology, with powerful functions and 1U frame height. It comes with 2 in 4 out, 2 in 6 out, 4 in 6 out and 4 in 8 out, flexible for multiple X-over mode. Especially suitable for using at the scene of the performance.

1) 96KHz sampling frequency, 32-bit DSP processor, 24-bit A/D and D/A converter.
2) USB, RS232 interface and WiFi are available for PC software.
3) 12 groups of user settings.
4) 8 bands PEQ , Gain (±20dB) are for each channel. Lo-shelf and Hi-shelf are for output channels.
5) Adjustable HPF/LPF. Type: Bessel, Butterworth (12dB、18dB、24 dB for selection) and Linkwitz-Riley(12dB,18dB,24dB or 48dB for selection).
6) The parameters of HPF/LPF can be adjusted independently, and the asymmetric crossover functions can be realized.
7) Each input and output channel has Delay, Polarity and mute, max delay 1000ms. Unit of delay can be chosen from ms, m or ft.
8) Gain, Limiter and Signal Input can be set for each output channel. Multiple output channels can be linked to set synchronously.

Connector operation:

This series are with USB, RS232 and WiFi connectors.

Signal level:

As with other signal processing equipment, the device should be with suitable signal level to reduce S/N. This series are with menu choice to avoid this problem.

When selecting signal level, Please choose max level ±6dB when LED indicator just lights up. As we add 3dB, so at this time, peaking clipping is actually 9dB. To operate EQ, should reduce input level to avoid peak clipping of gain. Attention: Max input level in technical parameter form is not safety level but peaking level. To make sure peaking clipping is not less than next device, and keep some extra level.
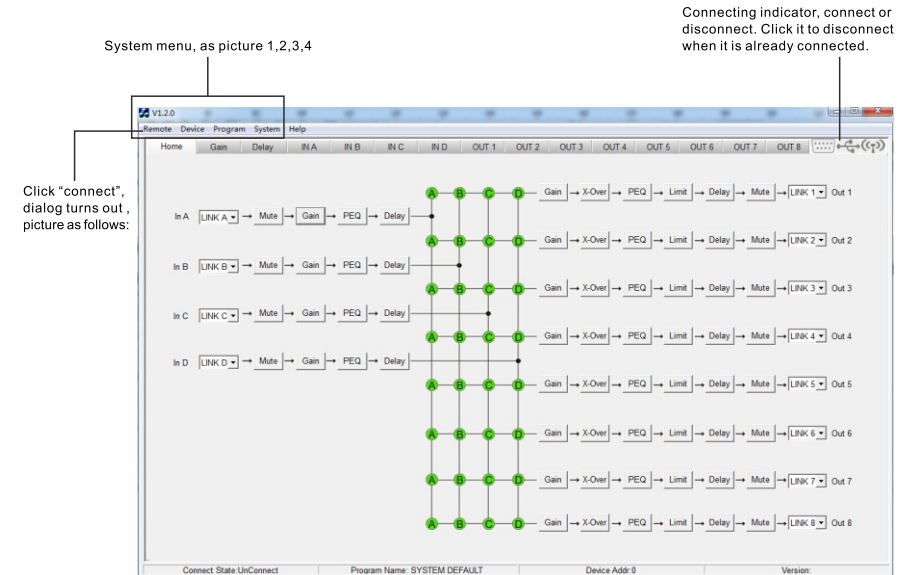
Ground connecting:

All the audio Ground Pin should be connected with power switch Ground Pin, as well as the device case. Power supply of this device must be properly grounded. Signals ground (0V) should be connected with device case ground. Avoiding Ground Loop, Signal cable can only be Grounded at the XLR interface.
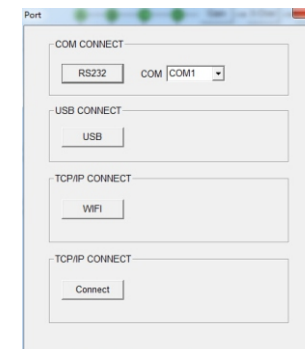
PC software operation introduction:

Power on the device, PC interface picture as follows:

Connecting indicator, connect or disconnect. Click it to disconnect when it is already connected.

System menu, as picture 1,2,3,4

Click "connect", dialog turns out, picture as follows:
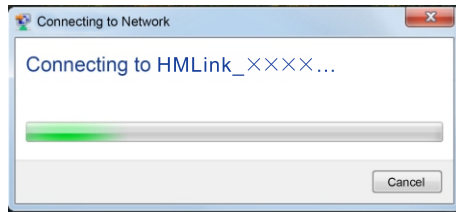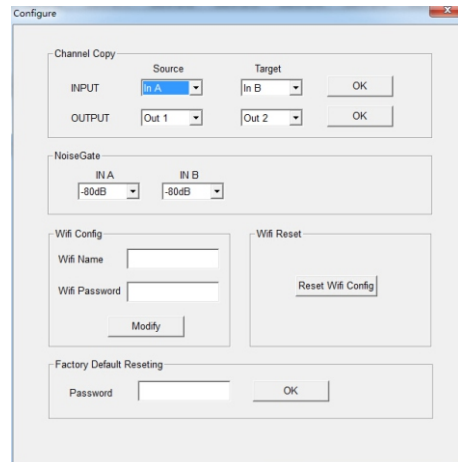
Connecting interface picture as follows:

BASIC OPERATION

3) Click "next", connect successfully. WiFi indicator is lighting up at the same time. Open software to control the device.
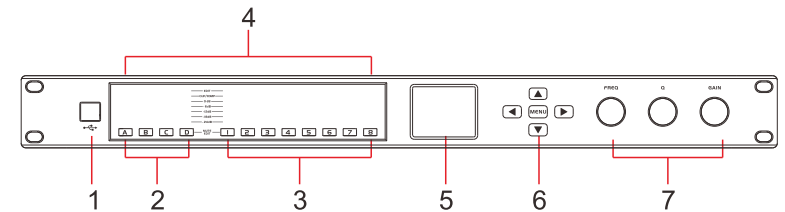

4) Network device name and Password setting
The device has a fixed name and a default connecting password, which can be set according to customers' requirement. Picture as follows:

FRONT PANEL AND FUNCTIONS

1. USB interface
   Users can connect to computer by USB to update the programs of this device or control this device by the software.

2. Input Mute & Edit button
   A. Short press: Switch between Mute and Non-mute
   B. Long press: Enter the input edit function interface

3. Output Mute & Edit button
   A. Short press: Switch between Mute and Non-mute
   B. Long press: Enter the output edit function interface

4. Level indicator: for signal level display

5. Color LCD screen
   It shows the menu function and all kinds of adjusting parameters.

6. Select & operation button

7. Data setting knob
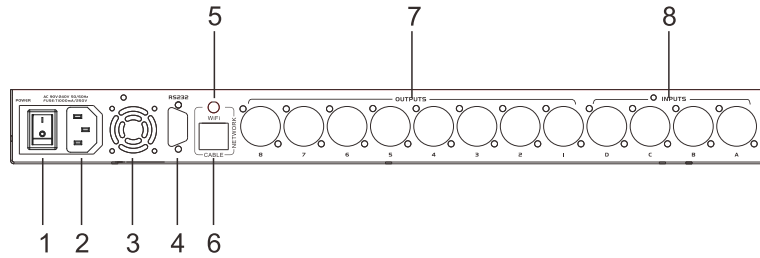
1. Power switch

2. Power Socket: AC power supply inputs, with a cable in it.

3. Cooling fan

4. RS232 port: Use for connecting with PC device. (Refer to system connecting diagram.)

5. Antenna port: for connecting with antenna.

6. Ethernet port

7. Output channel:
   8 balanced output channels (Out1-Out8), XLR socket.

8. Input channel:
   4 balanced input channels (INA—IND), XLR socket.

Connecting introduction:

1. RS232: Use suitable cable to connect, indicator light will be on once connect successfully, then control it by PC software.
2. USB: Use suitable cable to connect, indicator light will be on once connect successfully, then control it by PC software.
3. WiFi: Search device WiFi name on PC, device name is the last four numbers of code number. Input password "12345678" to connect.
4. Ethernet port

Take WiFi connection for example:

Device name "HMLink_✕✕✕✕":

1) Turn on the device, then open your laptop to search WiFi network, picture as follows:
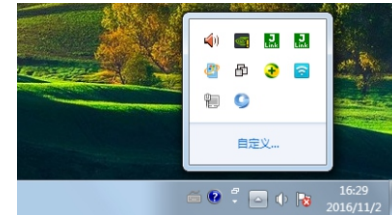
2) After searching, target device name appears, picture as follows:

Click it, input password, then connect device to laptop.

MENU FUNCTION INSTRUCTIONS

Mix Menu settings :

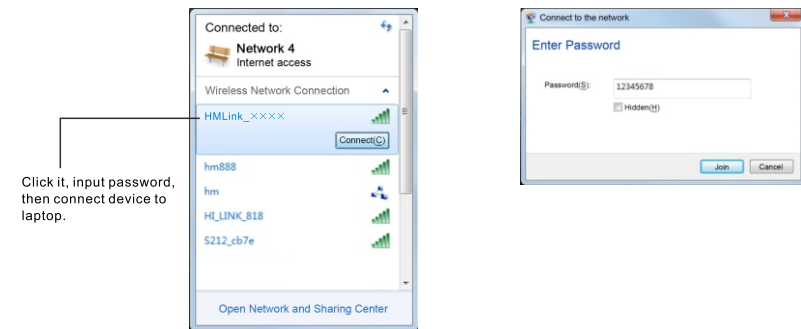Press right button to enter the MIX Menu settings, the screen will show as follow:

```
OUT7  OUT8  MIX  SYS
Exit. . .              OK
OUT1      INA      ON
          INB      ON
          INC      ON
          IND      ON
```

System Menu settings :

Press right button to enter the System Menu settings, the screen will show as follow:

```
OUT7  OUT8  MIX  SYS
Exit. . .                OK
Load      USER1      OK
Save      USER1      OK
Language        English
Panel Lock          OK
Reset               OK
```

TERMINAL CONNECTION DIAGRAM

Terminal Connection Diagram

RS232 port connection diagram

Connect to the 5th foot of the 9 pins serial port on PC
Connect to the 3rd foot of the 9 pins serial port on PC
Connect to the 2nd foot of the 9 pins serial port on PC

LCD Screen
Upon powering on, the boot interface on the LCD will appear as illustrated:

Mode	CHA Gain
USER1	0dB

```
        ─+12─
        ─ 0 ─  ▮▮▮▮   ▮▮▮▮▮▮▮▮
        ─-12─
        ─-24─
        ─-36─
A B C D        1 2 3 4 5 6 7 8
```
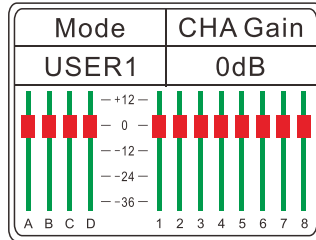
The boot interface shows the basic parameters and state of the device clearly, users can adjust it conveniently.
Press the left and right buttons on the panel to adjust the machine's effect.

MENU
Press the MENU button, then the screen will show as follow.
Then if you press the left and right button, the screen will show the following menus: INA…IND input interface, OUT1…OUT8 output interface, MIX, System. Press the up and down buttons to choose the function you want to adjust, then rotate the knob to adjust the parameter.

```
┌─────────────────────────┐
│ INA   INB   INC   IND    │
├─────────────────────────┤
│ Exit. . .           OK   │
│ Gain               0dB   │
│ Mute              Mute   │
│ Pol                  +   │
│ Delay              0us   │
│ Noisegate      -80dBu    │
└─────────────────────────┘
```
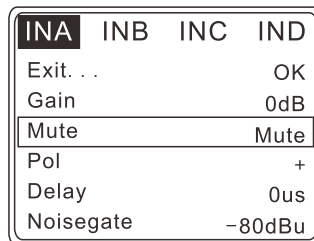
Input function settings
Input buttons (The 4 buttons are the 4 input channels: INA-IND, short press or long press);
1. Short press: Switch between Mute and Non-mute (When in mute, the bottom red right will be on; In non-mute, the bottom red right will be off.)

2. Long press: Enter the input edit function interface (the top red right will be on.)
3. Take INA input as an example to set the parameter: Long press the INA button (around 2 seconds) to enter the input A edit function interface. Press the up and down buttons to set parameter.

Output function settings
Output buttons (The 8 buttons are the 8 output channels: OUT1-OUT8, short press or long press);

1. Short press: Switch between Mute and Non-mute (When in mute, the bottom red right will be on; In non-mute, the bottom red right will be off.)
2. Long press: Enter the input edit function interface (the top red right will be on.)
3. Take OUT1 input as an example to set the parameter: Long press the OUT1 button (around 2 seconds) to enter the OUT1 edit function interface. Press the up and down buttons to set parameter.

```
┌─────────────────────────┐
│ OUT1 OUT2 OUT3 OUT4      │
├─────────────────────────┤
│ Exit. . .           OK   │
│ Gain               0dB   │
│ Mute              Mute   │
│ Pol                  +   │
│ Delay              0us   │
└─────────────────────────┘
```