Zenith

LSP Series
Loudspeaker Processors
User Manual

Order codes:

PROC08 - LSP204 MKII

PROC09 - LSP408 MKII

WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

- Before your initial start-up, please make sure that there is no damage caused during transportation.
- Should there be any damage, consult your dealer and do not use the equipment.
- To maintain the equipment in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this manual.
- Please note that damages caused by user modifications to this equipment are not subject to warranty.

CAUTION!
KEEP THIS EQUIPMENT AWAY FROM RAIN, MOISTURE AND LIQUIDS

CAUTION!
TAKE CARE USING THIS EQUIPMENT!
HIGH VOLTAGE-RISK OF ELECTRIC SHOCK!!

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorised modification to the equipment.

- Never let the power cable come into contact with other cables. Handle the power cable and all mains voltage connections with particular caution!
- Never remove warning or informative labels from the unit.
- Do not open the equipment and do not modify the unit.
- Do not connect this equipment to a dimmer pack.
- Do not switch the equipment on and off in short intervals, as this will reduce the system's life.
- Only use the equipment indoors.
- Do not expose to flammable sources, liquids or gases.
- Always disconnect the power from the mains when equipment is not in use or before cleaning! Only handle the power-cable by the plug. Never pull out the plug by pulling the power-cable.
- Make sure that the available mains supply voltage is between 90~240V AC, 50/60Hz.
- Make sure that the power cable is never crimped or damaged. Check the equipment and the power cable periodically.
- If the equipment is dropped or damaged, disconnect the mains power supply immediately and have a qualified engineer inspect the equipment before operating again.
- If the equipment has been exposed to drastic temperature fluctuation (e.g. after transportation), do not connect power or switch it on immediately. The arising condensation might damage the equipment. Leave the equipment switched off until it has reached room temperature.
- If your product fails to function correctly, stop use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Prolight dealer for service.
- Only use fuses of same type and rating.
- We recommend this fixture should be serviced at least once every 3 months to prevent build-up of dust, dirt and debris that could affect the fixtures operation.
- Repairs, servicing and power connection must only be carried out by a qualified technician. THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.
- WARRANTY: Two years from date of purchase.

OPERATING DETERMINATIONS

If this equipment is operated in any other way, than those described in this manual, the product may suffer damage and the warranty becomes void. Incorrect operation may lead to danger e.g: short-circuit, burns and electric shocks etc. Do not endanger your own safety and the safety of others!

Incorrect installation or use can cause serious damage to people and/or property.

LSP Loudspeaker Processors

Built around a powerful processor core, the Zenith LSP loudspeaker management systems offer a wide variety of features allowing the sound technician to adjust delay, dynamics, routing, crossover and EQ either from the easy to use interface on the front panel or via the Windows based PC editing suite. The processor is pre-loaded with a range of standard presets for basic systems including 2-way stereo, each of these maybe copied, edited and saved into user presets, or alternatively the sound technician may may create and store their own. The user may backup or duplicate presets via the PC editing suite.

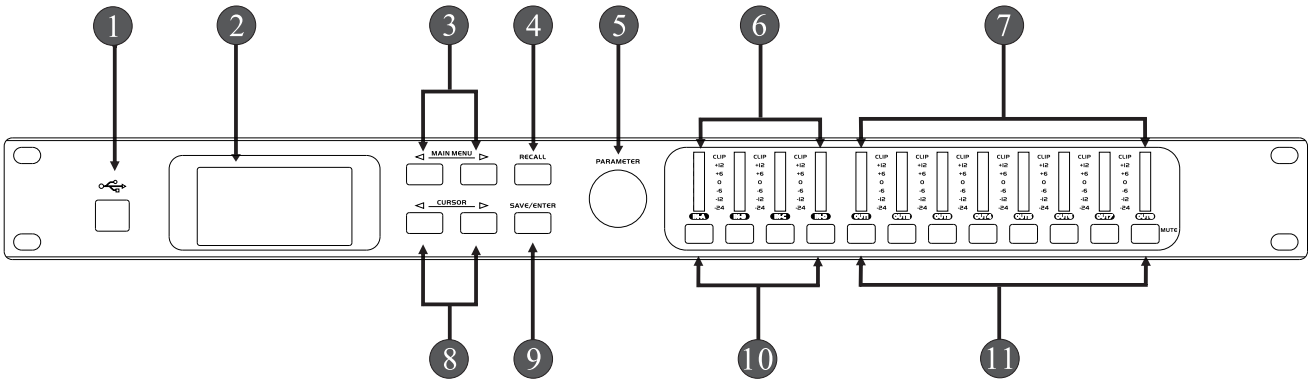
LSP204
MKII

LSP408
MKII

- **LSP204**
  2 XLR inputs, 4 XLR outputs
  LSP408
  4 XLR inputs, 8 XLR outputs
- 24-bit DSP with high performance AD/DA converters
- 48kHz sampling rate
- Input/output level control with -40dB to +12dB range in 0.1dB increments
- **LSP204**
  7 band PEQ (parametric EQ) for each input and each output
  LSP408
  4 band PEQ (parametric EQ) for each input and
  5 band PEQ (parametric EQ) for each output
- Each EQ features parametric, low shelf 6dB, low shelf 12dB,
  high shelf 6dB and high shelf 12dB
- PEQ frequency range: 19.7Hz thru 21.9kHz, gain range -30dB to +15dB, bandwidth: 0.017 to 4.750 octave
- Output high pass and low pass filter, each filter has multiple slopes and types
- Filter slopes: 12dB/Oct, 24dB/Oct,36dB/Oct, 48dB/Oct
- Filter types: Butterworth, Bessel or Linkwitz-Riley
- Up to 1 second of delay for each input and output, switchable and selectable
- Compressor for each input and output with adjustable threshold, ratio, attack-time, release-time and knee type
- Phase reverse for each input and output
- Copy function allows settings to be copied between channels
- Multi-channel parameters can be set simultaneously via the channel linking function
- Jog wheel control for parameter adjustment
- LCD display
- 7 segment LED level indicator for each input and output
- User friendly and intuitive Windows PC software on USB flash drive

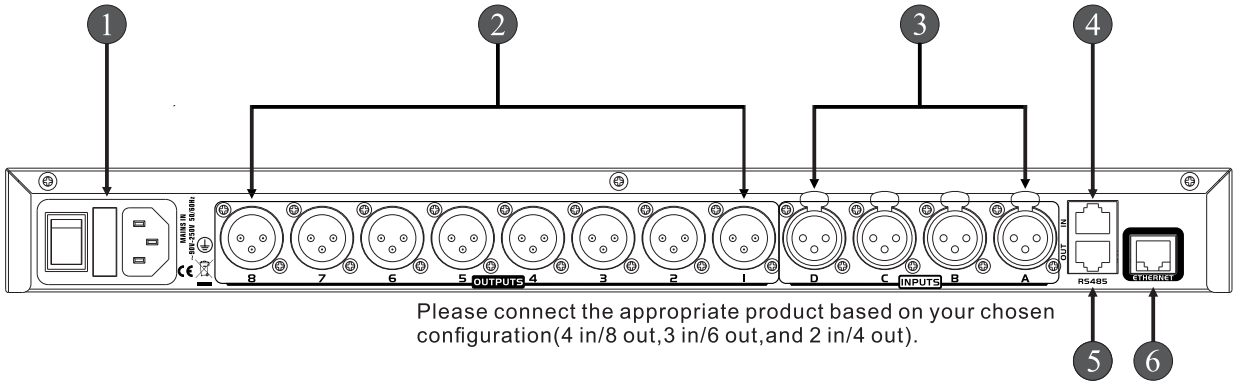
Specifications	
Power supply	90~240V, 50/60Hz
Dimensions (H x W x D)	45 x 482 x 158mm
Weight	2.13kg
Order codes	PROC08 - LSP204 PROC09 - LSP408

Introduction to panel controls



1. USB INTERFACE
2. 128 * 64 LCD MONITOR
3. MAIN MENU
4. RECALL
5. PARAMETER
6. 7-segment LED level display for inputs
7. 7-segment LED level display for outputs
8. CURSOR
9. SAVE / ENTER
10. INPUT "MUTE" button. long-press the "MUTE" button to access the channel parameter editing menu.
11. OUTPUT "MUTE" button. long-press the "MUTE" button to access the channel parameter editing menu.

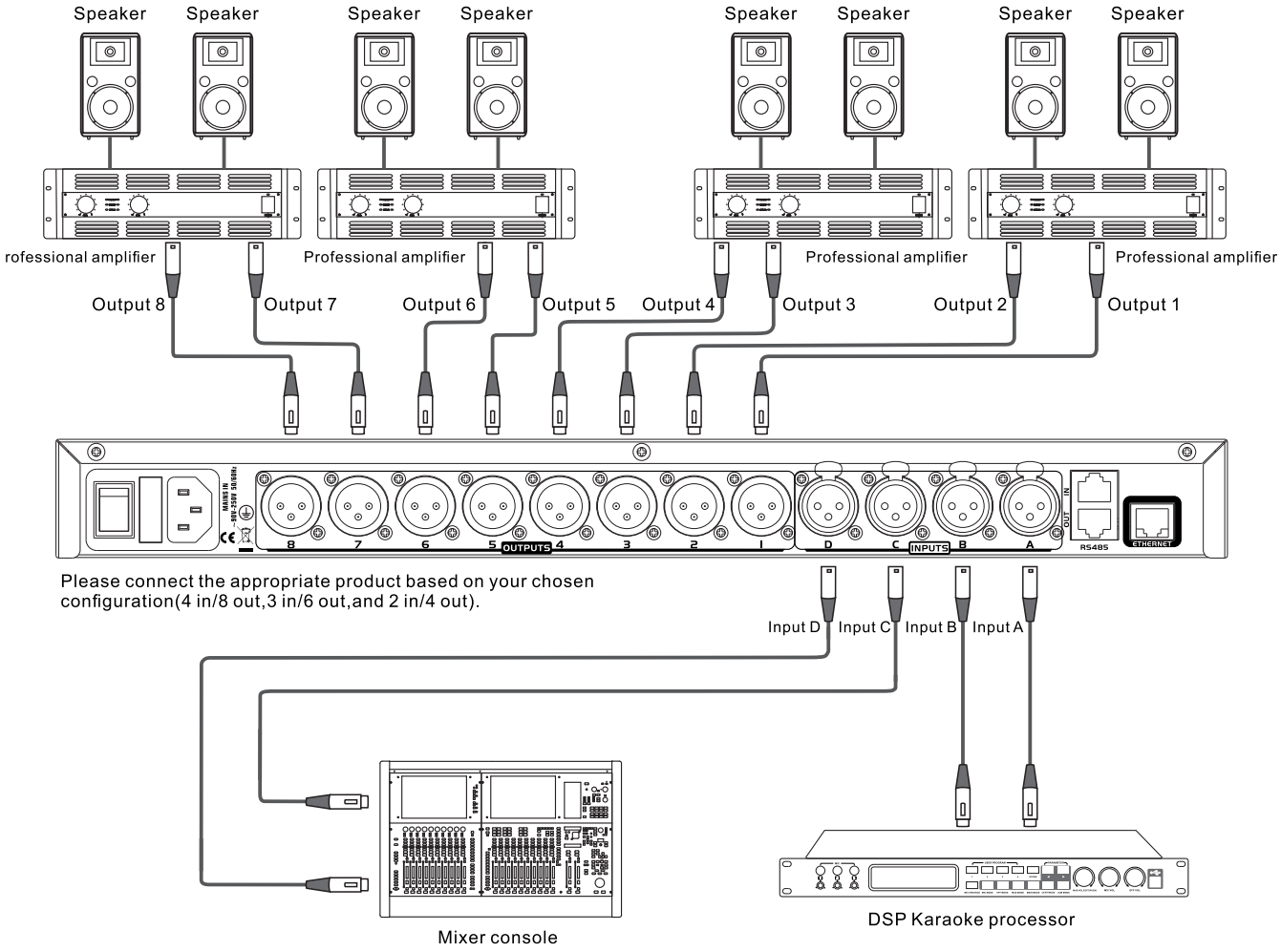
Introduction to rear panel controls



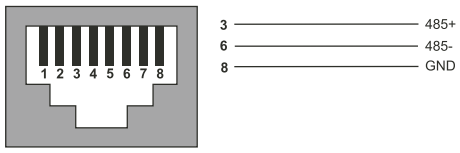
Please connect the appropriate product based on your chosen configuration(4 in/8 out,3 in/6 out,and 2 in/4 out).

1. POWER INTERFACE & SWITCH
2. XLR OUTPUTS
3. XLR INPUTS
4. RS485 IN INTERFACE
5. RS485 OUT INTERFACE
6. AES67 ETHERNET INTERFACE

System connection diagram



RS485 communication interface network definition diagram



Main features:

- 24-bit DSP technology with high-performance AD/DA for superior performance and convenient operation.
- Flexible combination of 4 inputs and 8 outputs (or 3 inputs and 6 outputs, or 2 inputs and 4 outputs) with multiple frequency modes.
- Volume control for input and output, ranging from -40dB to +12dB with a minimum step increment of 0.1dB.
- Each input/output channel of the 4x8 configuration has 4/5-band parametric equalization (PEQ), while the 3x6 and 2x4 configurations have 7/7-band PEQ. Each PEQ band supports parameters like Parametric, Low-Shelf 6dB, Low-Shelf 12dB, High-Shelf 6dB, and High-Shelf 12dB, offering a variety of EQ types. The EQ can also be set as an all-pass filter with a frequency range of 19.7Hz to 20.2KHz.
- Parametric equalization (PEQ) frequency ranges from 19.7Hz to 21.9kHz, with gain ranging from -30dB to +15dB, and bandwidth ranging from 0.017 to 4.75 times the frequency range (Oct).
- Multiple options for frequency division, FIR filter, and IIR filter.
- FIR filter types include flat, HP, LP, BP, with orders of 64, 96, or 114. Frequency range is 397Hz to 21.9kHz, supporting window functions like Bartletty, BartLettHann, Rectangular, Hann, Bohman, Parzen, Hamming, BlackMan, BlackManHarris, FlatTop, Nuttal.
- Output high-pass and low-pass filters with various slopes and types: -12dB, -24dB, -36dB (supported up to -48dB for the 3x6 and 2x4 models). Filter types include Butterworth, Bessel, and Linkwitz-Riley.
- Each input/output channel can have a maximum delay of 1000.00ms with a delay on/off option.
- Compression available on each output channel, adjustable threshold, compression ratio, attack time, release time, and hard/soft knee points (5-level adjustment).
- Peak limiter function on each output channel for effective speaker protection.
- Phase inversion function available on each output channel.
- Channel copy function for convenient adjustment.
- Multi-channel link function for simultaneous parameter settings of multiple channels.
- Intuitive and user-friendly interface with multiple connectivity options including USB, Ethernet, etc., for connection with external devices.
- 128*64 display screen.
- 7-segment LED level display for inputs and outputs.
- Mute dispay LED light, button indicator LED light.
- Power supply: AC 90V~250V, 50Hz/60Hz.

The normal boot-up process is as follows:

(1). Connect the power cord properly, then press the power switch on the back panel of the machine. The display screen will show the brand and model number, followed by the version number.

(2). After the loading process is complete, the startup interface will appear, displaying the current program number, program name, and machine ID number.

Machine panel button functions:

(1). MUTE Button:

- Short press: used to toggle between mute and unmute for each channel. Operation: press and release the MUTE button of the desired channel within 2 seconds to switch between mute and unmute.
- Long press: used to enter the corresponding channel parameter setting menu. Operation: press and hold the MUTE button of the desired channel until the LCD screen displays the channel parameter setting interface (approximately 3 seconds), then release to enter the corresponding channel parameter setting menu.

(2). PARAMETER Encoder:

- Rotation: used to change parameter values. Rotate clockwise to increase the parameter value and counterclockwise to decrease it.
- Press: used to lock or unlock the encoder. Long press the encoder for approximately 3 seconds to display the lock or unlock key menu, follow the prompts to operate. Operation: long press the encoder for approximately 3 seconds until the menu appears, then release.

(3). MAIN MENU < and > Buttons:

- Function A: when in the channel parameter setting interface, used to switch between parameters of the same channel.
- Function B: when in the program management and function setting menu interface, used to switch between different menus. Operation: press the buttons and release.

(4). CURSOR < and > Buttons:

- Used to move the cursor position for adjusting parameter values. Operation: press the buttons and release.ameter value at the cursor position.

(5). RECALL Button:

- Function A: used to enter the user program calling menu.
- Function B: used to return to the previous menu. Operation: press the button and release.

(6). SAVE/ENTER Button:

- Function A: used to enter the user program saving menu.
- Function B: used to enter the next-level submenu or confirm function. Operation: press the button and release.

Machine panel menu operations:

The channel parameter settings is as follows:

(1). To access the channel parameter settings menu:

- Long press the MUTE button of the desired channel for approximately 3 seconds. This will take you to the corresponding channel parameter settings menu.

(2). To switch between different types of parameters for the same channel:

- Press the MAIN MENU < or > buttons. This will allow you to toggle between different parameter types within the same channel.

(3). To move the cursor position and adjust parameter values:

- Use the CURSOR < or > buttons to move the cursor position.
- Rotate the PARAMETER encoder to adjust the parameter value at the cursor position.

Input/output parameter settings:

(1). Input/Output Mute (MUTE) Settings:

A. Press the corresponding channel MUTE button and release within 2 seconds to toggle between mute and unmute for each channel.

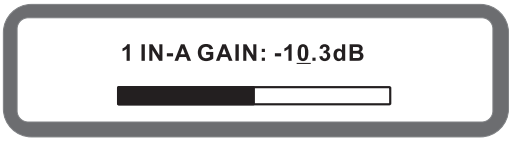
B. When muted, the corresponding channel's mute LED will be illuminated; when unmuted, the mute LED will be off.

(2). Input/Output Gain (GAIN) Settings:

A. Press the MAIN MENU < or > buttons to switch to the Gain (GAIN) settings screen.

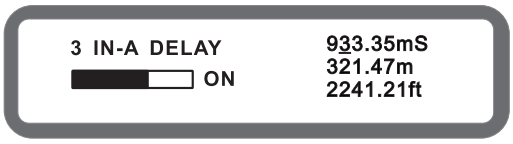
B. Rotate the PARAMETER encoder to change the parameter value with a 1dB step size (default).

C. Use the CURSOR < or > buttons and then rotate the PARAMETER encoder to adjust the parameter value with a 1dB or 0.1dB step size.



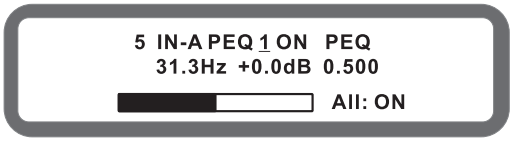
(3). Input/Output Delay (DELAY) Settings:

A. Press the MAIN MENU < or > buttons to switch to the Delay (DELAY) settings screen.
B. Rotate the PARAMETER encoder to change the parameter value with a 0.021ms step size.
C. Use the CURSOR < or > buttons and then rotate the PARAMETER encoder to change the delay value with step sizes of 105ms, 10.5ms, 1.05ms, 0.105ms, or 0.021ms, or to adjust the delay switch.
D. The display will show three types of delay units: ms, m, ft, corresponding to milliseconds, meters, and feet, respectively.



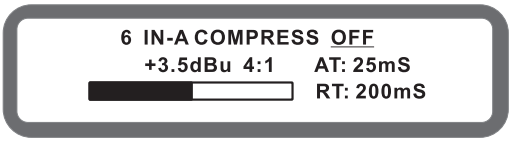
(4). Input/Output Parameter Equalization (PEQ) Settings:

A. Press the MAIN MENU < or > buttons to switch to the Parameter Equalization (PEQ) settings screen.
B. Use the CURSOR < or > buttons to move the cursor.
C. Rotate the PARAMETER encoder to change the parameter value corresponding to the cursor position.
D. The parameters for frequency and gain can be adjusted with both coarse and fine-tuning based on the cursor position.
E. The "ALL" option controls the enable/disable of EQ for all input/output channels following it.
F. In the PEQ type selection, PEQ, LS1, LS2, HS1, and HS2 correspond to Parametric, Low-Shelf 6dB, Low-Shelf 12dB, High-Shelf 6 dB, and High-Shelf 12 dB, respectively.



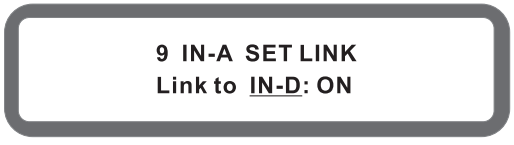
(5). Output Compressor (COMPRESS) Settings:

A. Press the MAIN MENU < or > buttons to switch to the Compressor (COMPRESS) settings screen.
B. Use the CURSOR < or > buttons to move the cursor.
C. Rotate the PARAMETER encoder to change the parameter value corresponding to the cursor position.
D. In the COMPRESS type selection, Off, Hard Knee, Soft Knee 1~Soft Knee 5 correspond to compressor bypass, hard knee threshold, and soft knee threshold 1~soft knee threshold 5, respectively.
E. "AT" represents attack time, and "RT" represents release time.



(6). Input/Output Link (LINK) Settings:

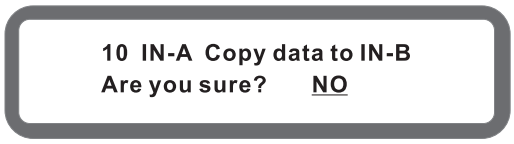
A. Press the MAIN MENU < or > buttons to switch to the Link (LINK) settings screen.
B. Use the CURSOR < or > buttons to move the cursor.
C. Rotate the PARAMETER encoder to change the parameter value corresponding to the cursor position.
D. Press the SAVE/ENTER button to enter the Link settings confirmation screen.
E. By default, it is set to "No," indicating no link settings. Rotate the PARAMETER encoder to toggle between "Yes" and "No."
F. Press the SAVE/ENTER button again to confirm the link settings performed. Note that when selecting "Yes" for link settings, the parameters of the source channel will be copied to the target channel.



(7). Input/Output Channel Data Copy (COPY):

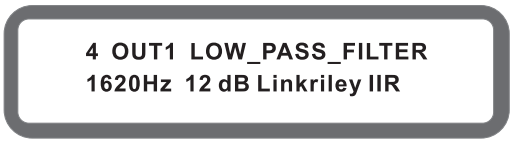
A. Press the MAIN MENU < or > buttons to switch to the Channel Copy (COPY) settings screen.
B. Rotate the PARAMETER encoder to change the target channel number.
C. Press the SAVE/ENTER button to enter the Channel Copy (CCOPY) confirmation screen.
D. By default, it is set to "No," indicating no copy operation. Rotate the PARAMETER encoder to toggle between "Yes" and "No."
E. Press the SAVE/ENTER button again to confirm the copy operation performed.

Note: that when copying settings, the parameters of the source channel will be copied to the target channel.



(8). Output High/Low Pass Filter Settings:

A. Press the MAIN MENU < or > buttons to switch to the High/Low Pass Filter settings screen.
B. Use the CURSOR < or > buttons to move the cursor.
C. Rotate the PARAMETER encoder to change the parameter value corresponding to the cursor position.
D. The frequency of the High/Low Pass Filter can be adjusted with both coarse and fine-tuning based on the cursor position.

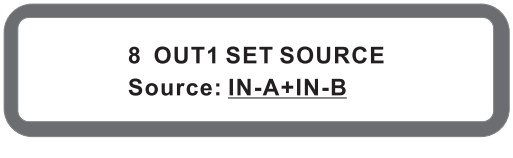


(9). Output Phase (PHASE) Settings:

A. Press the MAIN MENU < or > buttons to navigate to the Phase (PHASE) settings screen.
B. Rotate the PARAMETER encoder to adjust the phase value.

(10). Output Signal Source (SOURCE) Settings:

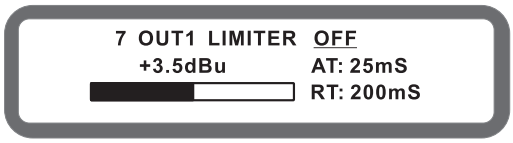
A. Press the MAIN MENU < or > buttons to switch to the Input Source (SOURCE) settings screen.
B. Rotate the PARAMETER encoder to change the source parameter value.



(11). Output Limiter (LIMITER) Settings:

A. Press the MAIN MENU < or > buttons to switch to the Link (LIMITER) settings screen.

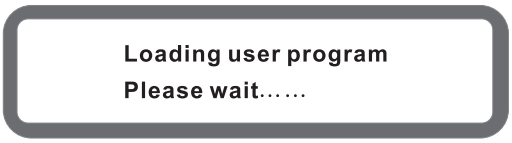
B. Use the CURSOR < or > buttons to move the cursor.
C. Rotate the encoder to change the parameter value corresponding to the cursor position.
D. "AT" indicates the attack time, and "RT" indicates the release time in the display.



Program management and function settings menu operations:

1. To call up a user program:

A. Press the RECALL button repeatedly until the User Program Menu appears.
B. Rotate the encoder to change the program number.
C. Press the SAVE/ENTER button to complete the operation of calling up the user program.



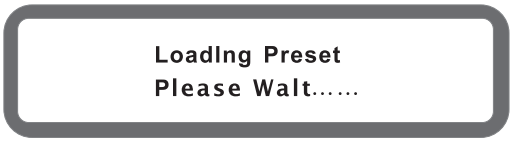
2. To save a user program:

A. Press the SAVE/ENTER button (or first press the RECALL button to return to the Program Management and Function Settings menu) until the Save User Program Menu appears as shown in the below image.
B. Use the CURSOR < or > buttons to move the cursor.
C. Rotate the encoder to change the program number or modify the program name.
D. Press the SAVE/ENTER button to complete the operation of saving the user program.
E. Press the SAVE/ENTER button to enter the Save User Program Confirmation Menu.
F. By default, it is set to "No" to not save the user program. Rotate the encoder to change the "Yes/No" status and then press the SAVE /ENTER button to complete the operation of saving the user program.

Note: To modify the program name, use the CURSOR < or > buttons to move the cursor to the program name field, and then rotate the encoder to modify the program name.

To call up a preset program:

1. While on the Channel Parameter Settings screen, press the RECALL button to return to the Program Management and Function Settings menu. Then, press the MAIN MENU < or > buttons until the Call Preset Program Menu appears as shown in the below image.
2. While on the Program Management and Function Settings menu screen, directly press the MAIN MENU < or > buttons until the Call Preset Program Menu appears as shown in the below image.
3. Rotate the encoder to change the preset program number.
4. Press the SAVE/ENTER button to complete the operation of calling up the preset program.



To delete a user program:

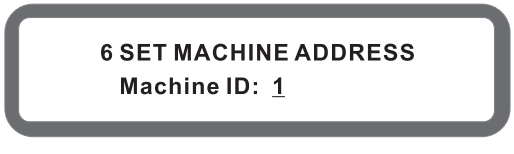
A. While on the Channel Parameter Settings screen, press the RECALL button to return to the Program Management and Function Settings menu. Then, press the MAIN MENU < or > buttons until the Delete User Program Menu appears as shown in the below image.
B. While on the Program Management and Function Settings menu screen, directly press the MAIN MENU < or > buttons until the Delete User Program Menu appears as shown in the below image.
C. Rotate the encoder to select the user program number that you want to delete.
D. Press the SAVE/ENTER button to enter the Delete Program Confirmation Menu.
E. By default, it is set to "No" to not delete the program. Rotate the encoder to change the "Yes/No" status, and then press the SAVE /ENTER button to confirm the deletion of the program.

Note: Cannot delete the current program.

To set the machine address:

A. While on the Channel Parameter Settings screen, press the RECALL button to return to the Program Management and Function Settings menu. Then, press the MAIN MENU < or > buttons until the Machine Address Settings Menu appears as shown in the below image.
B. While on the Program Management and Function Settings menu screen, directly press the MAIN MENU < or > buttons until the Machine Address Settings Menu appears as shown in the below image.
C. Rotate the encoder to change the machine address.
D. Press the SAVE/ENTER button to complete the machine address settings.

Note: The machine address setting must match the computer interface ID address setting in order to establish communication.



To set machine lock/unlock settings:

A. While on the Channel Parameter Settings screen, press the RECALL button to return to the Program Management and Function Settings menu. Then, press the MAIN MENU < or > buttons until the Machine Lock/Unlock Settings Menu appears as shown in the below image.

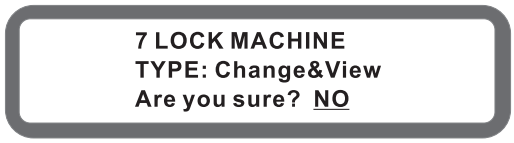
B. While on the Program Management and Function Settings menu screen, directly press the MAIN MENU < or > buttons until the Machine Lock/Unlock Settings Menu appears as shown in the below image.

C. Use the CURSOR < or > buttons to move the cursor.

D. Rotate the encoder to change the lock type or modify the password.

E. Press the SAVE/ENTER button to complete the machine lock setting.

F. By default, it is set to "No" to not lock the machine. Rotate the encoder to change the "Yes/No" status, and then press the SAVE/ENTER button to complete the machine lock/unlock setting operation.



To operate the keypad and encoder lock/unlock settings:

A. Press and hold the encoder for approximately 3 seconds until the Lock or Unlock button menu appears.

B. Rotate the encoder to select "Yes" or "No".

C. Press the encoder or the SAVE/ENTER button to confirm your selection and complete the lock/unlock operation.

The power-on reset function:

The power-on reset function is used to restore the user programs 1-30, machine address, and machine lock status to their factory defaults.

To perform the operation:

A. Press and hold the SAVE/ENTER button.

B. While holding the SAVE/ENTER button, turn on the power to the machine.

C. Continue holding the SAVE/ENTER button until the LCD display screen shows the following information.

D. Release the SAVE/ENTER button.

Please note that performing a power-on reset will erase all user programs and settings, so make sure to backup any important data before proceeding.

The adjustment ranges and step increments for each parameter:

	Range	Stepping
Call User Program	1-30	1
Save User Program	1. Program number: 1-30 2. Program name: ASCII code	1
Call Preset Program	1-10	1
Delete User Program	1-30	1
Machine Address Settings	1-32	1
Machine Lock/Unlock Settings	1. Lock type: Modify, Modify & View, Modify & Mute 2. Password: ASCII code	

To connect machine via PC:

1. To establish communication between the machine and the computer using USB or Ethernet connection, follow these steps:

A. Connect the computer and the machine using a communication cable, then turn on the machine's power.

B. Open the interface software on the computer. In the interface software, click on "Connect" and select either "Ethernet" or "RS232". Then click on "Device - Find Online" to automatically search for the machine connected to the computer.

C. Select the machine from the list and click on the "Connect" button to establish the connection.

Note:

a. The ID address setting in the computer interface must match the machine's address setting for successful communication.

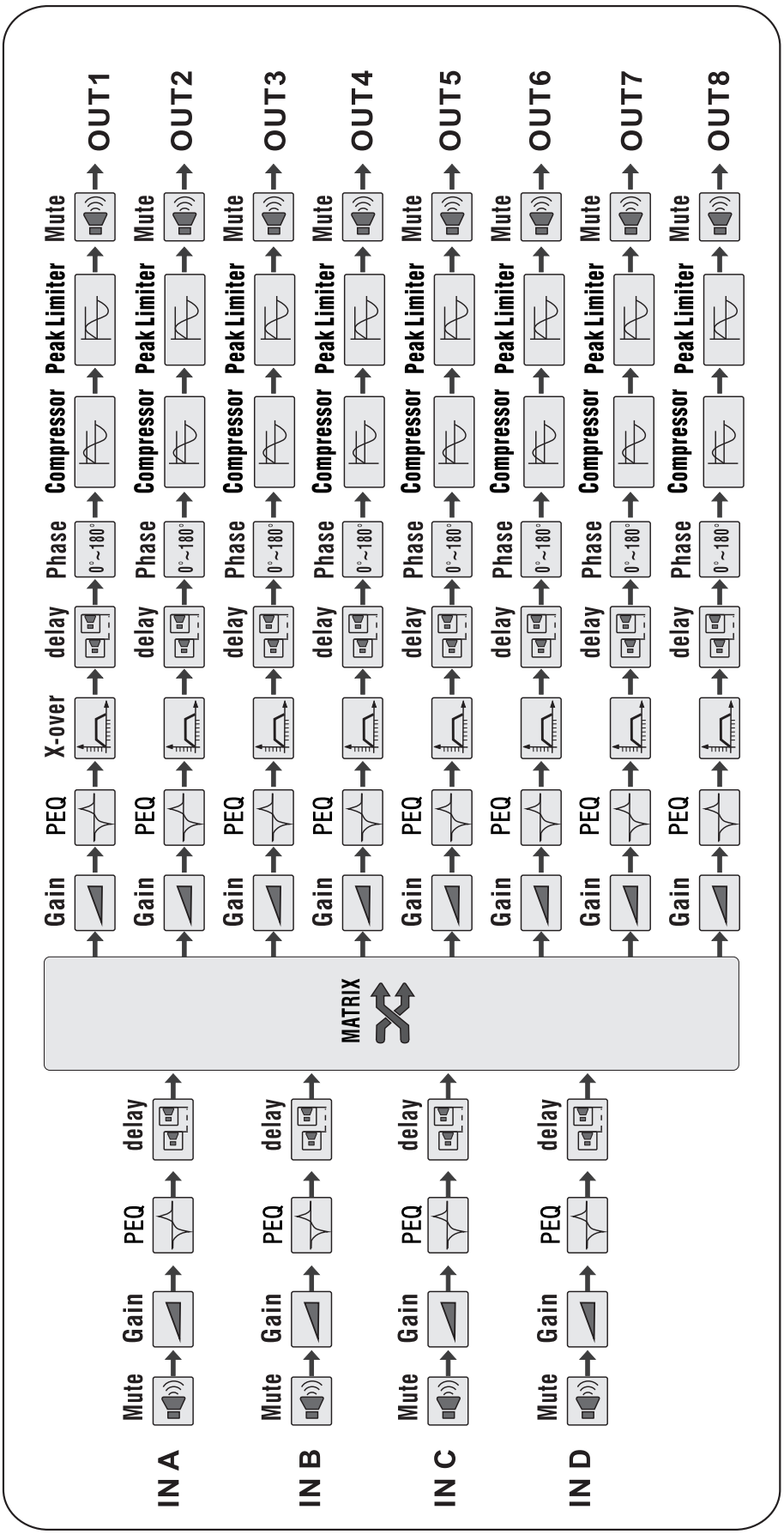
b. Ensure that you have connected the communication cable and powered on the machine before opening the interface software. Otherwise, the computer may not detect the communication port, resulting in connection issues.

2. For instructions on operating the computer interface software, refer to the documentation or user manual provided with the software. It will provide detailed information and guidance on how to navigate and use the features of the interface software.

Troubleshooting:

Symptom	Troubleshooting steps:
The LCD display screen of the machine shows no display, and the LED lights are not illuminated.	1. Check the power connection: Ensure that the power cable is properly connected to the machine. Check both ends of the cable to ensure a secure connection. 2. Check the fuses: Locate the fuse(s) in the machine's power supply or control panel. Inspect the fuses to see if they are burnt or broken. If any fuses are found to be faulty, replace them with fuses of the same type and rating. 3. Verify power switch: Confirm whether the power switch of the machine is turned on. Sometimes, due to accidental switch-off or power interruptions, the machine may not receive power. Turn on the power switch and check if the LCD display creen and LED lights come on. If these steps do not resolve the issue, further troubleshooting may be necessary. It is recommended to refer to the machine's user manual or contact the manufacturer's customer support for more specific troubleshooting instructions based on the model and make of the machine.
If a single machine is unable to connect and operate with the PC	1. Check communication cable: Ensure that the communication cable between the machine and the computer is properly connected. Check for any loose or damaged connections. Reconnect the cable securely. 2. Verify power supply: Make sure that the machine's power is turned on. Check if the power switch is in the correct position and the machine has a stable power supply. 3. Check USB driver installation: If the connection is made through a USB interface, confirm whether the USB driver is correctly installed on the computer. If not, install the appropriate USB driver provided by the machine's manufacturer. 4. Restart GUI software: Close the GUI software on the computer and then reopen it. Sometimes, restarting the software can resolve temporary glitches or connection issues. If the issue persists after these troubleshooting steps, consider the following additional measures: • Try using a different communication cable or interface, if available, to rule out any potential issues with the existing setup. • Update the GUI software to the latest version provided by the machine's manufacturer. • Consult the machine's user manual or contact the manufacturer's technical support for specific troubleshooting instructions or further assistance with the connection issue. Remember to follow proper safety precautions and ensure compatibility between the machine and the computer system when attempting any troubleshooting steps or making changes to the configuration.
If the machine is experiencing a lack of signal output in a specific channel	1. Check the signal cables: Ensure that the input and output signal cables for the affected channel are correctly connected. Verify that the cables are securely plugged in at both ends and there are no loose or damaged connections. 2. Check the mute function: Look for the corresponding channel's mute LED indicator. If the LED is illuminated, it indicates that the channel is muted. Press the corresponding channel's MUTE button to cancel the mute function and restore the audio signal. If the issue persists, consider the following additional measures: • Inspect the audio source or device connected to the affected channel. Ensure that it is functioning properly and providing an audio signal. • Check the settings on the machine or the audio mixer to ensure that the affected channel is not inadvertently set to a low volume or disabled. • Consult the machine's user manual or contact the manufacturer's technical support for specific troubleshooting instructions or further assistance with the signal output issue. Remember to follow proper safety precautions and consult the relevant documentation or support resources provided by the machine manufacturer when performing troubleshooting steps or making changes to the configuration.

Signal flow diagram:



Specifications:

Model	4 in 8 out	3 in 6 out	2 in 4 out
Input impedance	10kΩ		
Max input/output level	19dBu		
Sampling rate	48kHz		
Input/output gain	-40 ~ +12dB, (step 0.1 dB)		
Input delay	1s, (step 21us)		
Output delay	1s, (step 21us)		
Input PEQ	Each channel has 4-band	Each channel has 7-band	Each channel has 7-band
Output PEQ	Each channel has 5-band	Each channel has 7-band	Each channel has 7-band
Input/output PEQ Gain	-30 ~ +15dB, (step 0.1db)		
Input/output PEQ Type	PEQ、Low shelf (6db/12db)、High shelf(6db/12db)、All-pass crossover		
Input/output PEQ Frequency	19. 7Hz～21. 9kHz		
Input/output PEQ Bandwidth	0.017～4.750 OCT		
All pass crossover frequency	19. 7Hz～20. 2kHz		
FIR crossover	Type: Straight、HP、LP、BP		
	Order：64、96、114		
	Frequency range: 397Hz～21.9kHz		
	WINDOW FUNCTION：Bartlett/BartLettHann/Rectangular/hann/Bohman/Parzen /Hamming/BlackMan/BlackManHarris/FlatTop/Nuttal		
HP/LP crossover frequency	19. 7Hz～21. 9kHz		
HP/LP crossover classification	Bessel、Butterworth、Linkwitz-Riley		
HP/LP crossover slope	12dB, 24dB, 36dB	12dB, 24dB, 36dB, 48dB	12dB, 24dB, 36dB, 48dB
Compressor threshold	-20dB ~ +20dBu, (step 0.1 dB)		
Compressor ratio	1.2, 1.5, 2, 3, 4, 6, 10, 20, 40, 128		
Compressor attack time	50 ~ 6000ms, (step 1ms)		
Compressor release time	100 ~ 10000ms, (step 50ms)		
Peak limiter threshold	-20dB ~ +20dBu, (step 0.1 dB)		
Attack time	1 ~ 100ms, (step 1ms)		
Release time	50 ~ 1000ms, (step 50ms)		
Dynamic range	113dB A Weighting		
Frequency response	20Hz ~ 20kHz(±0.5dB)		
CMMR	> 50dB(30Hz ~ 20kHz)		
Crosstalk	>90dB, re+4dBu		
Distortion	0.02% (1kHz, 0dBu)		
Maximum number of user programs	30 user programs.		
Voltage	AC 90V~240V 50Hz/60Hz		
Fuse	T1AL 250V		
Weight	2.13kg		
Size	482mm × 164mm × 45mm		

The above specifications are subject to change without prior notice.

XLR setup and connection:

The system uses standard balanced 3-pin XLR connectors for reliable signal transmission.

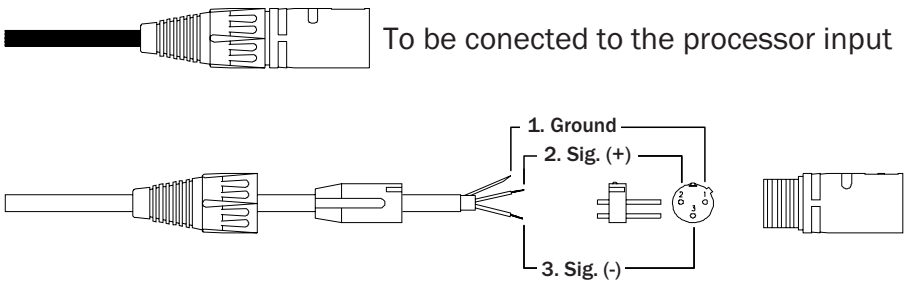
Each connector follows a simple configuration:

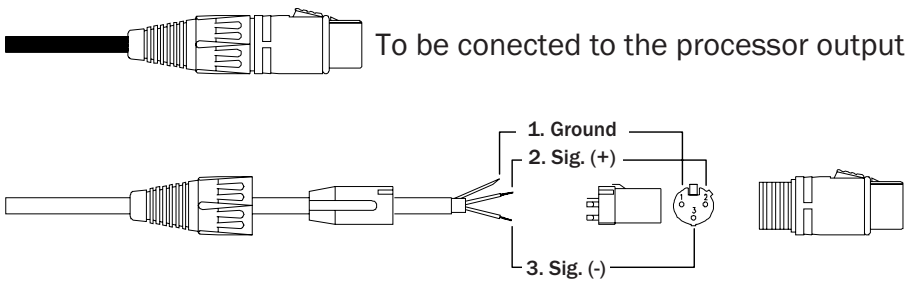
Pin 1: Ground Pin 2: Signal (+) Pin 3: Signal (–)

Inputs receive the signal from the sound console or mixer, while outputs can be connected to amplifiers or powered loudspeakers. Proper connection ensures stable performance and optimal signal integrity throughout the setup.

Connectors and connections:

XLR socket connectors





Further XLR cables can be purchased from all good sound and lighting suppliers or Prolight Concepts dealers. Please quote:

CABL920 – 0.5m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL921 – 1m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL922 – 1.5m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL923 – 2m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL924 – 3m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL925 – 5m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL926 – 10m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL927 – 15m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL928 – 20m Neutrik XLR Male – XLR Female Microphone Cable, Silver
CABL929 – 25m Neutrik XLR Male – XLR Female Microphone Cable, Silver

Correct Disposal of this Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.