

LOUDSPEAKER CONTROL SYSTEM

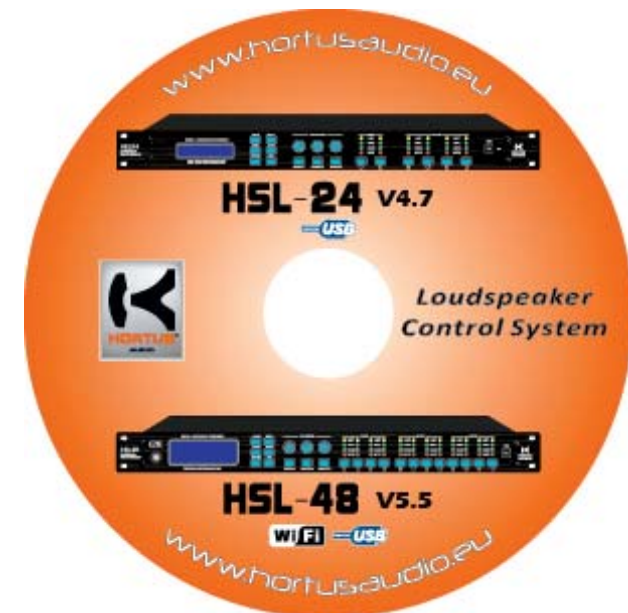
OPERATORS MANUAL



HSL-48

LOUDSPEAKER CONTROL SYSTEM

OPERATORS MANUAL



PLEASE PRINT CLEARLY

SRA #: _____ (If sending product to Crown factory service.) Model: _____ Serial Number: _____ Purchase Date: _____

PRODUCT RETURN INFORMATION

Individual or Business Name: _____

Phone #: _____ Fax #: _____ E-Mail: _____

Street Address (please, no P.O. Boxes): _____

City: _____ State/Prov: _____ Postal Code: _____ Country: _____

Nature of problem: _____

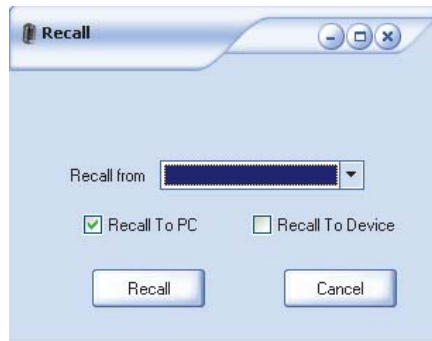
Other equipment in your system: _____



RECALL MENU:

Recall to PC : Recall all channel parameters into PC only.

Recall to Device: Recall all channel parameters into Device.



LOCK XOVER MENU:

Lock Xover can let the user locking the parameters that others can't view or edit this data.

There are 4 locking type:

1. No Lock (do not lock)
2. Lock Xover (locking all parameters except gain ,mute)
3. Lock Xover+Gain (locking all parameters except mute)
4. Lock Xover+Gain+Mute(locking all parameters)

EDIT PASSWORD MENU:

Setting the Xover's password, the default password is 000000. When locking, User must remember the password.

LOCK/UNLOCK PANEL MENU:

Lock or unlock the panel , when locking ,all the buttons are disable.

EQ UNIT MENU:

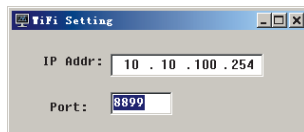
User can switch the EQ unit , use Q value or bandwidth(per octave).

Edit Logo:

Edit logo strings . Logo strings will display on device starting.

WiFi™ Wifi connection:

1. View the SSID in the device system menu, wifi setup. Like: ProAudio_XXXX.
2. Search and connect this SSID in PC, use password: proaudio8899.
3. In software menu "Wifi Setup", set IP: 10.10.100.254. port: 8899.
4. Click software menu "Wifi Connect".



Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturers instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) Use the mains plug to disconnect the apparatus from the mains.
- 16) **WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.**
- 17) **DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, ARE PLACED ON THE EQUIPMENT.**
- 18) **THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.**





Input Channel Menu

```
IN: A      Gain
Gain=+0.0dB
```

↓ Press
NEXT→

Press channel button in long time, enter this edit menu.

```
IN: A      Polarity
Polarity=+
```

↓ Press
NEXT→

Polarity selection, + or -

```
IN: A CH-A
Delay= 0.00ms
      0.000Meter
      0.000Feet
```

↓ Press
NEXT→

Delay selection

PARAMETER

- 1
- 2
- 3

- 1:step 0.01ms
- 2:step 1 ms
- 3:step 10ms

```
IN: A CH-A      EQ: 1
Parameter EQ
```

↓ Press
NEXT→

EQ type selection(OFF,Parameter EQ, Low Shelf EQ ,High Shelf EQ)

```
IN: A CH-A      EQ: 1
Freq: 100Hz
Gain: +00.0dB
Bandwidth: 1.00Oct
```

↓ Press
NEXT→

EQ parameters

PARAMETER

- 1
- 2
- 3

- 1:Frequency(1Hz)
- 2:EQ level(0.1dB)
- 3:Bandwidth(0.05Oct)

```
IN: A CH-A
Name: CH-A
Press ENTER key Edit
```

Edit channel's name



Press Enter on Utility SubMenu

```
===== UTILITY =====
>Copy Channel
Set All EQ Flat
```

Copy Channel: Copy input or output channel to another

Set All EQ Flat: make all EQ level to 0dB

Press Enter on Input SubMenu

```
==== INPUT SETUP =====
Input : Analog
```

Input SubMenu:input selection (digital or analog)

Press Enter on Security SubMenu

```
==== SECURITY MENU =====
Lock Panel
```

When lock panel, all the button are disable

↓ Press
ENTER

```
INPUT PASSWORD:
000000
```

After Inputing password,press ENTER button to confirm,press BACK or NEXT button to switch password character

↓ Press
ENTER

```
LOCK PANEL:
Locking. . Done!
```

Lock panel done

Press Enter on System SubMenu

```
====+ SYSTEM MENU =====
> LCD BackLight
Device ID Setup
Filter Q or BW
```

LCD BackLight : LCD backlight selection

Device ID Setup :Device ID setting,use in network communication

WiFi setup(optional): View WiFi SSID

Filter Q or BW : EQ parameters, Q or bandwidth

Press 5 times
NEXT→

```
====+ SYSTEM MENU =====
Scene Key Setup
Temperature
>System Info
```

Scene Key Setup : Fast recall key setting

Temperature : air temperature

System Info: Version info

CONTROL PANEL



<BACK	Previous menu
NEXT>	Next menu
MENU	Main menu
ENTER	Confirm
EXIT	Back previous menu
BYPASS	Enable or disable EQ

Channel Button:

1. Press button in short time, mute this channel
2. Press button in long time, edit this channel

Panel Menu

Press MENU button

```
=====MAIN MENU=====
>XOVER SubMenu
  Utility SubMenu
  Input SubMenu
```

- Xover SubMenu:** load/store parameters
- Utility SubMenu:** some useful tools
- Input SubMenu:** input selection (digital or analog)

Press 4 times
NEXT>

```
=====XOVER MENU=====
>Input SubMenu
  Security SubMenu
  System SubMenu
```

- Security SubMenu:** lock device
- System SubMenu:** some base settings

Press Enter on Xover SubMenu

```
=====XOVER MENU=====
>Load Xover
  Store Xover
  Erase Xover
```

- Load Xover:** load parameters form presets
- Store Xover:** save parameters to preset
- Erase Xover:** delete a preset

↓ Press 4 times
NEXT>

```
=====XOVER MENU=====
  Erase Xover
  Copy Xover
  >Lock Xover
```

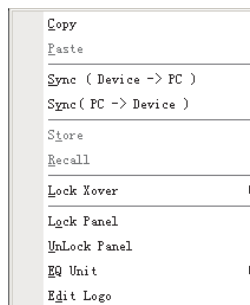
- Copy Xover:** duplicate parameters
 - Lock Xover:** lock a preset
- There are 4 locking type:
1. No Lock (do not lock)
 2. Lock Xover (locking all parameters except gain ,mute)
 3. Lock Xover+Gain (locking all parameters except mute)
 4. Lock Xover+Gain+Mute(locking all parameters)

Software

File menu instruction:

New	New : Open a new device control panel.
Open	Open : Open a file that saved in PC, it contain all channel parameters.
Save	Save : Save parameters in file.
Save As	Save As : Save parameters in a new file, not current file .
Recent File	Recent File: Files recent used.
Exit	Exit: Close software.

DSC processor menu instruction:



COPY MENU: Only A ,B channel can copy each other
Only 1,2,3,4,5,6 can copy each other

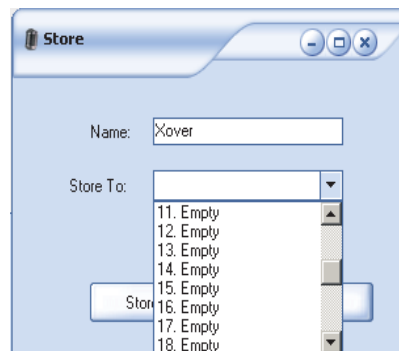
PASTE MENU: When selecting one channel and click copy menu and select another channel ,press paste menu, channel parameters duplication is done.

Sync(Device->PC):

Upload current device parameters to PC . After connecting PC and Device, this feature will be executed . It will keep PC parameters and device parameters the same.

Sync(PC->Device):

Download current PC parameters to device . if you open a file (have preset parameters),and want to send this parameters to device, use this feature.



STORE MENU:

Store all the channel parameters into device.



Output Channel Menu

```
01      Gain
Gain=>0.0dB
```

Press channel button in long time, enter this edit menu.

↓ Press NEXT→

```
01 CH-1  Route=A
IN: A IN: B IN: C IN: D
ON  OFF OFF OFF
```

Output channel route, can be A or A+B or B+C or A+B+C, etc

↓ Press NEXT→

```
01      Polarity
Polarity=+
```

Polarity selection, + or -

↓ Press NEXT→

```
01 CH-1  Delay= 0.00ms
0.000Meter
0.000Feet
```

Delay selection

- PARAMETER
- 1: step 0.01ms
 - 2: step 1 ms
 - 3: step 10ms

↓ Press NEXT→

```
01 CH-1  HPF
Freq: 100Hz
Type: Link-Riley
Slope: -24dB
```

High & Low pass filter

- PARAMETER
- 1
 - 2
 - 3

↓ Press NEXT→

```
01 CH-1  LPF
Freq: 100Hz
Type: Link-Riley
Slope: -24dB
```

- 1: Frequency (20Hz-22KHz, step 1Hz)
- 2: Type (Butterworth, Bessel , Link -Riely)
- 3: Slope (12dB , 18dB, 24dB, 48dB)



↓ Press NEXT→

```
01 CH-1  EQ: 1
Parameter EQ
```

EQ type selection (OFF, Parameter EQ, Low Shelf EQ, High Shelf EQ)

↓ Press NEXT→

```
01 CH-1  EQ: 1
Freq: 100Hz
Gain: +00.0dB
Bandwidth: 1.00Oct
```

EQ parameters

- PARAMETER
- 1: Frequency (1Hz)
 - 2: EQ level (0.1dB)
 - 3: Bandwidth (0.05Oct)

↓ Press NEXT→

```
01 CH-1  Compressor
Threshold +22dBu
Attack: 20ms
Rel: 8X Rate: 1:8
```

Compressor or Limiter

- PARAMETER
- 1
 - 2
 - 3

- 1: Threshold or Rate (use **Enter** key switch)
Threshold (-20dBu ~ +22dBu) Rate (1:1, 1:1.5, 1:2 ... 1:16, 1:INF)
- 2: Attack Time (1ms, 2ms, 5ms, 10ms, 20ms, 50ms, 100ms)
- 3: Release Time (2X, 4X, 8X, 16X, 32X)

Notice: if Rate set to INF, it will be a Limiter not compressor.

↓ Press NEXT→

```
01 CH-1
Name: CH-1

Press ENTER key Edit
```

Edit channel's name