



LINUS

Startup

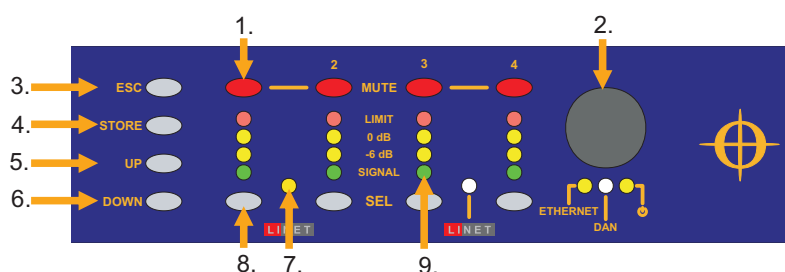
LINUS Live v.1.2.3

2017-11-23

LINUS

Unit Display Operation

Device Control Overview



• Indication:

1. Channel mute buttons
2. Rotary encoder knob. Selects, changes and enter parameters
3. "ESC" escape button. Press it any time to deny selection and / or go back to main operation page
4. "Store" user preset setting under position 1. to 5. (This feature will be added soon.)
5. "Up" skips operation pages up.
6. "Down" skips operation pages down.
7. LiNET LED Indicates if digital signal is selected - LED on Digital audio input
- LED off Analog audio input
8. Channel selection buttons
9. Input - or Output signal LED's



1. Module Number

- Move the selection field with the rotary encoder knob to the Module Number and push to enter selection.

LinusCon	Single	#01	← Rack Number
P	14:ViRAY-A		
I	1_LF 1_HF 2_LF 2_HF		
G	0.0 0.0		

Turn encoder knob to select a number from 1 to 99, push to confirm.

2. Module Number

- Go to position "P" by using the rotary encoder knob - Push enter to enable preset change.

LinusCon	Single	#01
P	14:ViRAY-A	G
I	1_LF 1_HF 2_LF 2_HF	
G	0.0 0.0	

Preset →

"G" (Group Parameter needs to be deleted to unlock preset change and tuning page.
Software tuning parameters and groups will be deleted. (Ref. point 7.)

Attention: Any time you change the preset all tuning parameters will be deleted!

3. Input Signal Routing

- Position "I" – enter selection on the corresponding output channel and push again to confirm.
 - route the signal to the channel
 - select the input signal type (Analogue or Digital)

LinusCon	Single	#01
P	14:ViRAY-A	
I	1_LF 1_HF 2_LF 2_HF	
G	0.0 0.0	

Input →

Important: Signal routing is preset dependant! Example: ViRAY-P – 4 input channel individual
LA12 – 1 input channel

Input Signal Chart: Analogue Inputs: A, B, C, D LINET (digital) Inputs: 1, 2, 3, 4, 5, 6, 7, 8

4. Input Gain

- Position "G" – Adjust the Gain of the selected channel and push to confirm.

LinusCon	Single	#01
P	14:ViRAY-A	
I	1_LF 1_HF 2_LF 2_HF	
G	0.0 0.0	

Gain →

5. Delay

- Press the "Down" button to skip to second operation page.
- Move selection field to position "D" - Delay

0	1_LF 1_HF 2_LF 2_HF
D	0.00 0.00 0.00 0.00
G	0.0 0.0 0.0 0.0
T	1-> 2->

Delay →

- Push the encoder knob on the corresponding output channel that you want to delay, choose value and confirm.
 - Delay is shown in ms (milliseconds)





6. Output Gain

- Position "G" – Push encoder of the selected output channel to adjust the gain, push it again to confirm.

	O	1_LF	1_HF	2_LF	2_HF
	D	0.00	0.00	0.00	0.00
Output Gain →	G	0.0	0.0	0.0	0.0
	T	1->	2->		

7. Tuning

- Go to position "T" and push the encoder knob to enter Tuning Page.

	O	1_LF	1_HF	2_LF	2_HF
	D	0.00	0.00	0.00	0.00
	G	0.0	0.0	0.0	0.0
Tuning →	T	1->	2->		

Tuning Page

- Array (Type in **total amount** of used Line Array elements in one hang)
- Sizing
- High Shelf
- Low Boost
- Human EQ
- Sub Sonic

<-Tune:1			EQ->
Array	8x	Sizing	1.0
HFSHlf	0.0	Human	0.0
LowBst	0.0	SubSon	0.0

- Go to position "EQ" and push the encoder knob to enter full parametric EQ's page.

<-Tune:1			EQ->
Array	8x	Sizing	1.0
HFSHlf	0.0	Human	0.0
LowBst	0.0	SubSon	0.0

← full parametric EQ

I	1K00	0.0	3.00
N	1K00	0.0	3.00
1	1K00	0.0	3.00
	1K00	0.0	3.00

↑ Output Ch ↑ Frequency ↑ Gain ↑ Q Factor

8. Device Information and Display settings

- Press the "Down" button 2x (in the main operation)

		Firmware Version	Individual Device Name	
		↓	↓	
Device Serial Number →	LinusCon	132001	V1.55	Lib 1.2 ← Preset Library Version
IP Address →	IPA	192.168.001.001	#01	← Module Number
	Disp:0	Led:0	0000	Lock->
	↑			
	Display Contrast			





9. Lock Device

- Navigate to Device overview page and select the Lock function

```
LinusCon
132001 V1.55 Lib 1.2
IPA 192.168.001.001 #01
Disp:0 Led:0 0000 Lock->
```

- Define a new Password (numbers) and confirm the new Password
- After definition of Password add it into the Current Password field and press Lock

```
Device
Lock->          Unlock->
New Password    *****
Confirm New     *****
```

- Device can be unlocked by entering the pre-defined password into the „Enter Password Field“

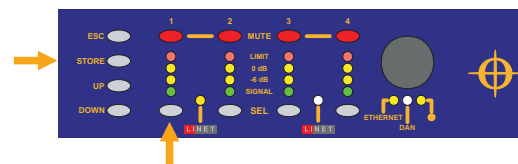
```
Enter Password
0
```

- Press Unlock to unlock the device.

```
Device
Lock->          Unlock->
New Password    *****
Confirm New     *****
```

10. Quick Lock Device

- Any time you can „Quick Lock“ your device
- Press “Store” and the 1st Channel “Selection” button (also to unlock)



Display switch automatically to the main configuration page and indicates the lock of the device with the letter “L”.

```
LinusCon Single L #01
P 14:ViRAY-A
I 1_LF 1_HF 2_LF 2_HF
G 0.0 0.0
```

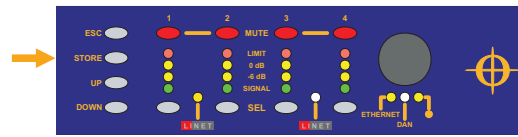
Attention: Only the functionality of the “Mute” buttons is enabled.
All other operation/ selection functions are disabled.





11. Store Customized User Preset

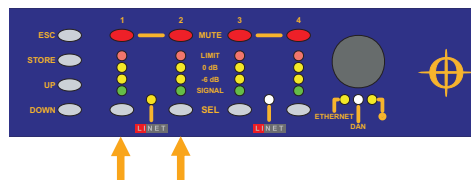
- Store your customized user preset setting to the library of the unit.



- Library positions 01 to 20 are dedicated for this purpose.
- Unique name for your customized preset.
- "Store" or "Cancel" to proceed.

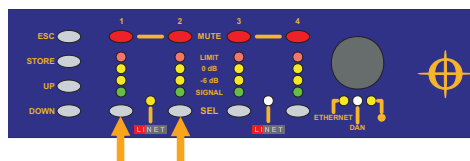
Turn the rotary encoder knob to select numbers or letters for the current digit.
Press the select button to switch between the digits.

```
Store Preset
Store to - P01 -
CUSTOM SETTING12
Cancel >      Store >
```



12. Signal LED

- Select signal In- or Output LED indication by push Selection button 1+2 at the same time.



The display will show the following messages a few seconds.

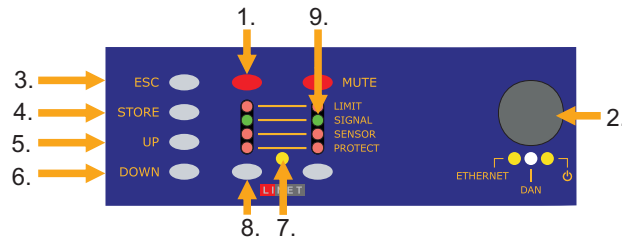
For Signal Output LED indication:

```
STATE Windows
SHOWING OUTPUT
```

For Signal Input LED indication:

```
STATE Windows
SHOWING INPUT
```





• Indication:

1. Channel mute buttons
2. Rotary encoder knob. Selects, changes and enter parameters
3. "ESC" escape button. Press it any time to deny selection and / or go back to main operation page
4. "Store" user preset setting under position 1. to 5. (This feature will be added soon.)
5. "Up" skips operation pages up.
6. "Down" skips operation pages down.
7. LiNET LED Indicates if digital signal is selected - LED on Digital audio input
- LED off Analog audio input
8. Channel selection buttons
9. Input - or Output signal LED's

1. Unit Mode

- Move the selection field with the rotary encoder knob to the Unit mode and push to enter selection.

```
Linus10 Master #01
P 14:ViRAY-A G
I 1_LF 1_HF
G 0.0 0.0
```

Turn encoder knob to select for the upper LINUS10 Master and the lower Slave, push to confirm.

2. Module Number

- Use the Master Unit to setup the module number. Slave unit will follow automatically.

```
Linus10 Master #01 ← Rack Number
P 14:ViRAY-A G
I 1_LF 1_HF
G 0.0 0.0
```

Turn encoder knob to select a number from 1 to 99, push to confirm.

3. Preset Select

- Go to position "P" by using the rotary encoder knob on the Master
- Choose Preset and push to enter selection. Slave amplifier will change the preset automatically.

```
Preset → Linus10 Master #01 ← Group Parameter
P 14:ViRAY-A G
I 1_LF 1_HF
G 0.0 0.0

Linus10 Slave #01
P 14:ViRAY-A G
I 1_LF 1_HF
G 0.0 0.0
```

"G" (Group Parameter) needs to be deleted to unlock preset change and tuning option
Attention: Master + Slave lose group parameter. Any time you change the preset all tuning parameters will be deleted!



4. Input Signal Routing

- Position "I" – enter selection on the corresponding output channel and push again to confirm.
 - route the signal to the channel
 - select the input signal type (Analogue or Digital)

	Linus10	Master	#01
	P 14:ViRAY-A		G
Input →	I 1_LF	1_HF	
	G 0.0	0.0	
	Linus10	Slave	#01
	P 14:ViRAY-A		G
Input →	I 1_LF	1_HF	
	G 0.0	0.0	

Important: Signal routing is preset dependant! Example: ViRAY-P – 4 input channel individual
LA12 – 1 input channel

Input Signal Chart: Analogue Inputs: A, B, C, D LINET (digital) Inputs: 1, 2, 3, 4, 5, 6, 7, 8

Please note: Depending on the Preset structure, Gain, Delay, Tuning needs to be set on Master and Slave units.

5. Input Gain

- Position "G" – Adjust the Gain of the selected channel and push to confirm.

	Linus10	Master	#01
	P 14:ViRAY-A		G
	I 1_LF	1_HF	
Gain →	G 0.0	0.0	

6. Delay

- Press the "Down" button to skip to second operation page.
- Move selection field to position "D" - Delay

	O 1_LF	1_HF	
Delay →	D 0.00	0.00	
	G 0.0	0.0	
	T 1->		

- Push the encoder knob on the corresponding output channel that you want to delay, choose value and confirm.
- Delay is shown in ms (milliseconds)

7. Output Gain

- Position "G" – Push encoder of the selected output channel to adjust the gain, push it again to confirm.

	O 1_LF	1_HF	
	D 0.00	0.00	
Output Gain →	G 0.0	0.0	
	T 1->		





8. Tuning

- Go to position "T" and push the encoder knob to enter Tuning Page.

Tuning →

O	1_LF	1_HF
D	0.00	0.00
G	0.0	0.0
T	1->	

Tuning Page

- Array (Type in **total amount** of used Line Array elements in one hang)
- Sizing
- High Shelf • Human EQ
- Low Boost • Sub Sonic

<- Tune:1		EQ->	
Array	8x	Sizing	1.0
HFSHlf	0.0	Human	0.0
LowBst	0.0	SubSon	0.0

- Go to position "EQ" and push the encoder knob to enter full parametric EQ's page.

<- Tune:1		EQ->	
Array	8x	Sizing	1.0
HFSHlf	0.0	Human	0.0
LowBst	0.0	SubSon	0.0

← full parametric EQ

I	1K00	0.0	3.00
N	1K00	0.0	3.00
1	1K00	0.0	3.00
	1K00	0.0	3.00

↑ Output Ch ↑ Frequency ↑ Gain ↑ Q Factor

9. Device Information and Display settings

- Press the "Down" button 2x (in the main operation)

Firmware Version		Individual Device Name	
Linus10		autoname1	
Device Serial Number	142001	V2.49	Lib 0.9
IP Address	IPA 192.168.001.001	#01	
Disp:0		Led:0	0000 Lock->

↑ Display Contrast

← Preset Library Version

← Module Number





10. Lock Device

- Navigate to Device overview page and select the Lock function

```
Linus10
132001 V2.55 Lib 1.2
IPA 192.168.001.001 #01
Disp:0 Led:0 0000 Lock->
```

- Define a new Password (numbers) and confirm the new Password
- After definition of Password add it into the Current Password field and press Lock

```
Device
Lock->          Unlock->
New Password    *****
Confirm New     *****
```

- Device can be unlocked by entering the pre-defined password into the „Enter Password Field“

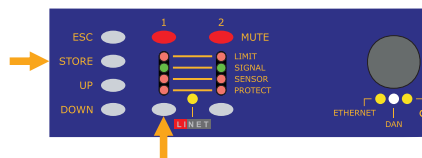
```
Enter Password
0
```

- Press Unlock to unlock the device.

```
Device
Lock->          Unlock->
New Password    *****
Confirm New     *****
```

11. Quick Lock Device

- Any time you can „Quick Lock“ your device
- Press “Store” and the 1st Channel “Selection” button (also to unlock)



Display switch automatically to the main configuration page and indicates the lock of the device with the letter “L”.

```
Linus10 Master L #01
P 14:ViRAY-A G
I 1_LF 1_HF
G 0.0 0.0
```

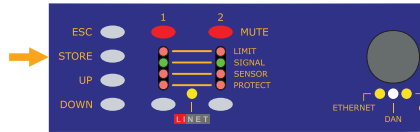
Attention: Only the functionality of the “Mute” buttons is enabled.
All other operation/ selection functions are disabled.





12. Store Customized User Preset

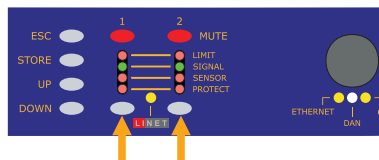
- Store your customized user preset setting to the library of the unit.



- Library positions 01 to 20 are dedicated for this purpose.
- Unique name for your customized preset.
- "Store" or "Cancel" to proceed.

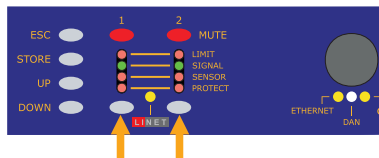
Turn the rotary encoder knob to select numbers or letters for the current digit.
Press the select button to switch between the digits.

```
Store Preset
Store to - P01 -
CUSTOM SETTING12
Cancel >      Store >
```



13. Signal LED

- Select signal In- or Output LED indication by push Selection button 1+2 at the same time.



The display will show the following messages a few seconds.

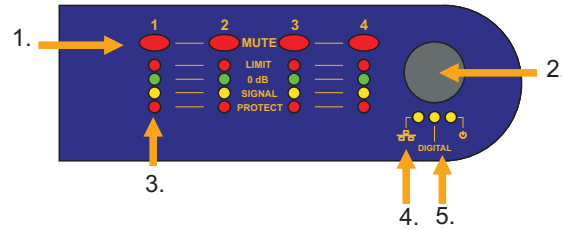
For Signal Output LED indication:

```
STATE Windows
SHOWING OUTPUT
```

For Signal Input LED indication:

```
STATE Windows
SHOWING INPUT
```





• Indication:

1. Channel mute/ action buttons
2. Rotary encoder knob. Selects, changes and enter parameters
3. Signal, Limit, protect LED's
4. Ethernet connection LED
5. Digital input signal selected (LINET-C) LED

1. Menu

- Press the Rotary Encoder Knob to enter the Menu

► 0: MAIN MENU ◀
1: SELECT INPUT

2. Select Input

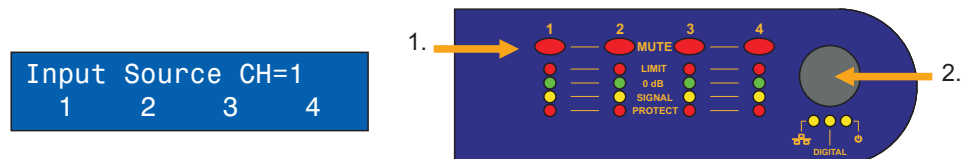
- Rotate the Encoder to the point 01: SELECT INPUT

0: MAIN MENU
► 1: SELECT INPUT ◀

- Press the Encoder Knob to enter the input source selection

Input Source CH=0
A B C D

- Press and hold (1) Channel action button for the appropriate channel and rotate the Encoder Knob (2)



Example shows Chanel 1 selected and digital input channel 1 is routed to output 1
(in 2 -> out 2, in 3-> out 3,...)

Input Routing topology

Analog = A,B,C,D

Digital = 1,2,3,4





3. Input Gain

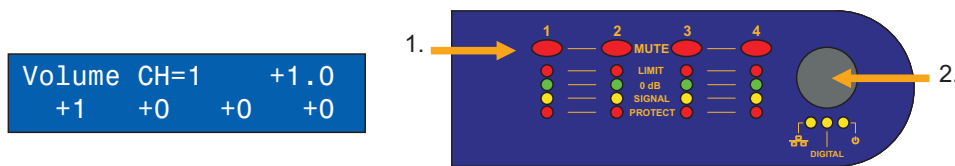
- Rotate the Encoder to the point 02: INPUT GAIN

► 2: INPUT GAIN ◀
3: INPUT DELAY

- Press the Encoder Knob to enter Gain selection

Volume
+0 +0 +0 +0

- Press and hold (1) Channel action button for the appropriate channel and rotate the Encoder Knob (2)



Example shows Channel 1 selected with +1.0 dB Gain value

4. Input Delay

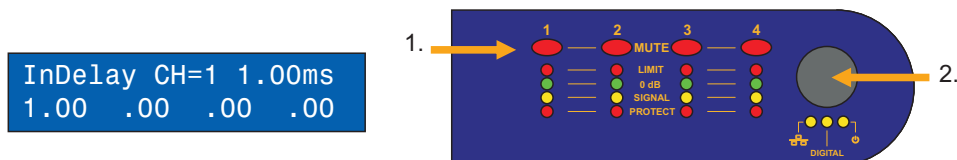
- Rotate the Encoder to the point 03: INPUT DELAY

► 3: INPUT DELAY ◀
4: TUNING 1

- Press the Encoder Knob to enter Delay selection

InDelay
.00 .00 .00 .00

- Press and hold (1) Channel action button for the appropriate channel and rotate the Encoder Knob (2)



Example shows Channel 1 selected with 1.00ms Delay

Info: You can select a larger scroll value by pressing the Rotary encoder knob and vice versa
Maximum 200ms input Delay per Channel





6. Tuning

-Rotate the Encoder to the point 04: TUNING 1

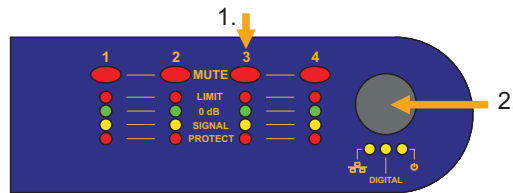
► 4: TUNING 1 ◀
5: TUNING 2

- Press the Encoder Knob to enter Tuning page

In1 Tuning: HF-Shelf
HF .0

- Press and hold (1) Channel action button 3 and rotate the Encoder Knob (2) to change Gain value

In1 Tuning: Gain
HF 1.0

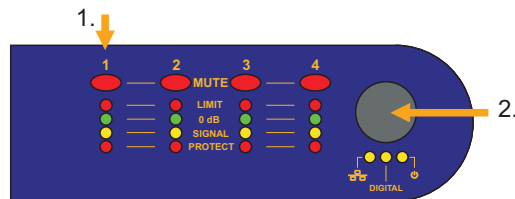


Example shows Chanel 1 High Shelf selected with +1.0 dB Gain value

- To change the Tuning Tool

press and hold (1) Channel action button 1 and rotate the Encoder Knob (2) to change Tuning Tool

In1 Tuning: Mode
Huma .0



Example shows Chanel 1 Selection mode active, Human Tuning Tool selected

- Tuning Tool Overview

In1 Tuning: HF-Shelf
HF .0

High Shelf (fixed frequency and Q-Factor)

In1 Tuning: Human
Huma .0

Human EQ (fixed frequency and Q-Factor)

In1 Tuning: LowBoost
LowB .0

Low Shelf (fixed frequency and Q-Factor)

In1 Tuning: SubSonic
SubS .0

Sub Sonic Filter (Low Shelf (fixed frequency and Q-Factor))

In1 Tuning: Distance
Dist .0

Distance - High Frequency Airabsorbption correction

In1 Tuning: PEQ1
PEQ1 1000 .0 3.0

Parametric Eq - Free configurable (4x PEQ's available)

In1 Tuning: Array
ARR. 8

Array Funktion - Line Arraylength adjustment (Only for Line Arrays!)

In1 Tuning: Sizing
SIZE 1.0

Sizing - Virtually increase or decrease Systems size





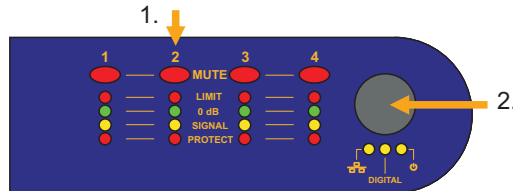
6. Tuning

-Parametric EQ configuration

Select Frequency

- Press and hold (1) Channel action button 2 and rotate the Encoder Knob (2) to change Frequency

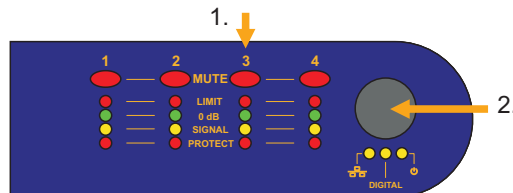
In1 Tuning: Freq
PEQ1 1000 .0 3.0



Select Gain

- Press and hold (1) Channel action button 3 and rotate the Encoder Knob (2) to change Gain value

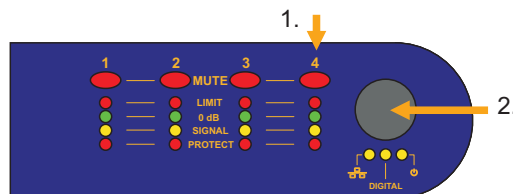
In1 Tuning: Gain
PEQ1 1000 .0 3.0



Select Q-Factor

- Press and hold (1) Channel action button 4 and rotate the Encoder Knob (2) to change Quality Factor

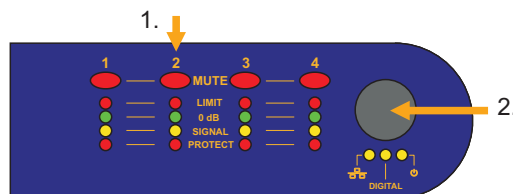
In1 Tuning: Quality
PEQ1 1000 .0 3.0



-Array Function

- Press and hold (1) Channel action button 2 and rotate the Encoder Knob (2) to change Array Count

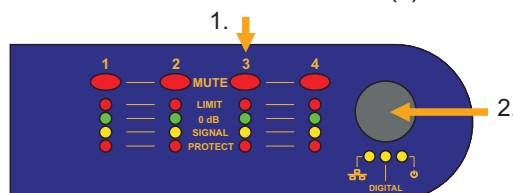
In1 Tuning: Count
ARR. 8



-Sizing

- Press and hold (1) Channel action button 3 and rotate the Encoder Knob (2) to change virtually the System Size

In1 Tuning: Gain
SIZE 1.0





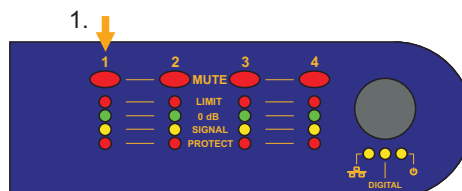
7. Lock Unit

-Rotate the Encoder to the point 08: LOCK

► 8: LOCK
9: LOAD PRESET ◀

-Press and hold (1) Channel action button 1 to Lock the Display

Lock Display
MUTE1 => LockDisplay



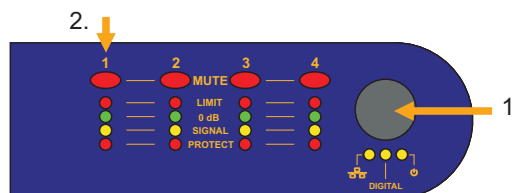
↓
01: Preset
#1

The Lock Symbol in the main display represents a locked display

-To unlock the Display Rotate the Encoder to the point 08: LOCK

-Rotate the Encoder Knob (1) to type in Password press and hold (2) Channel action button 1 to Unlock the Display

Unlock Display 0
MUTE1 => Unlock



Password to Unlcok Display will be provided by the manufacturer

8. Select Preset

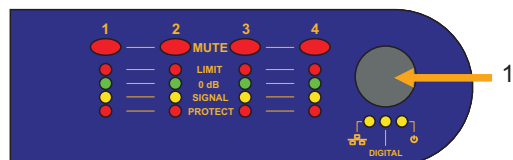
-Rotate the Encoder to the point 08: LOCK

► 9: LOAD PRESET
A: STORE PRESET ◀

- Press the Encoder Knob to enter Preset selection page

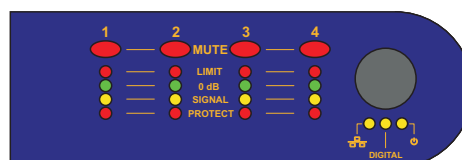
-Rotate the Encoder Knob (1) to select Preset, press Encoder knob for 4 sec. to confirm preset selection

LOAD PRESET Press b
P33: G308-F



-If the Amplifier has been connected to LINUS LIVE before, the Group parameters need to be cleared first! Repeat the above mentioned steps in Preset Selection to clear group

LOAD PRESET Press b
Clear Group? [YES]





9. Store Preset

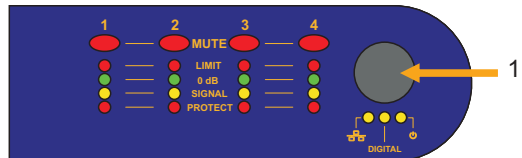
-Rotate the Encoder to the point A: STORE PRESET

► A: STORE PRESET ◀
B: SET IP

- Press the Encoder Knob to enter Store Preset page

- Rotate the Encoder Knob (1) to Select preset number for storage and press Encoder Knob 4 sec. to store

STORE PRESET Press b
P 1: D5xPW12omni100



Info:

Preset numbers 1 to 20 are User Presets which can be used as storage positions for customized User Presets.

Preset Names can't be renamed (only in Preset Builder)

10. Set IP

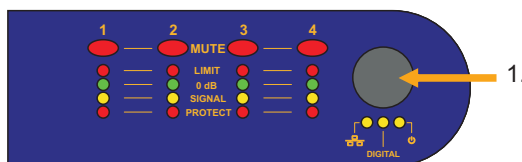
-Rotate the Encoder to the point B: SET IP

► B: SET IP ◀
C: SYSTEM TEMP

- Press the Encoder Knob to enter IP Address Setup page

- Rotate the Encoder Knob (1) to Select module number (change IP Address). Press Encoder 4 sec to accept

CHANGE IP press b
1: 192.168. 1. 1



11. System Temperature

- Rotate the Encoder to the point C: SYSTEM TEMP

► C: SYSTEM TEMP ◀
C: SYSTEM TEMP

- Press the Encoder Knob to enter Module Temperature page

MODULE TEMPERATURE
33C 306K 91F





12. Backlight

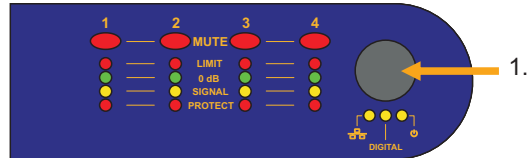
-Rotate the Encoder to the point D: BACKLIGHT

► D: BACKLIGHT
E: INFO ◀

- Press the Encoder Knob to enter Backlight setup page

- Rotate the Encoder Knob (1) to select option for permanent backlight or auto deactivate (after 25 sec)

Backlight Press b
[ON] AUTO



13. Info

-Rotate the Encoder to the point E: INFO

D: BACKLIGHT
► E: INFO ◀

- Press the Encoder Knob to enter Info page

Module Type	→	LINUSxC	
Module Serial Number	→	SN: 12345678	Vx . xx ← Firmware Version

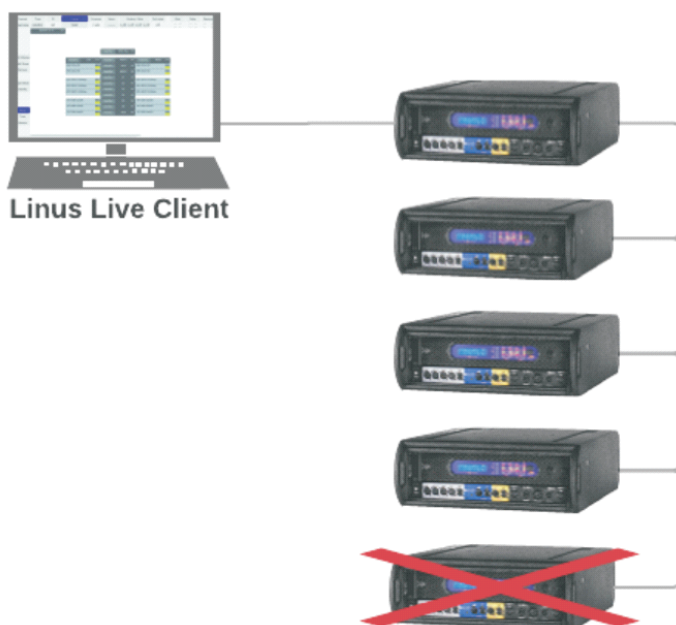




LINUS Devices should only be daisy chained 4 times, due to network restrictions

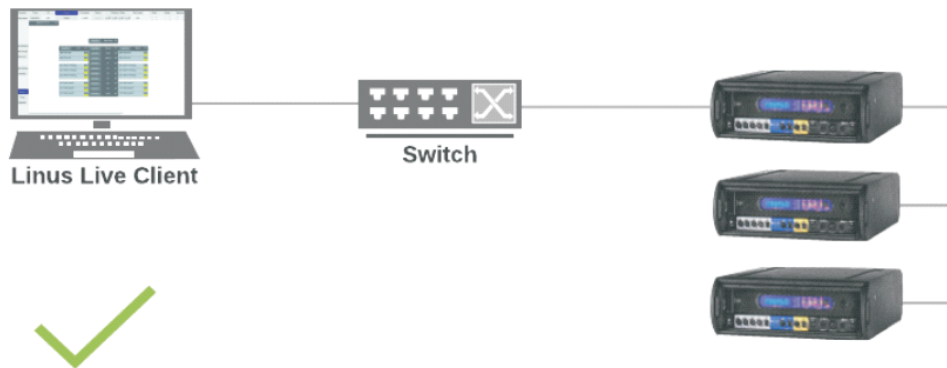


Since each LINUS Rack or LINUS14 contains a Switch, the usage of external switches limits the daisy chainable devices.





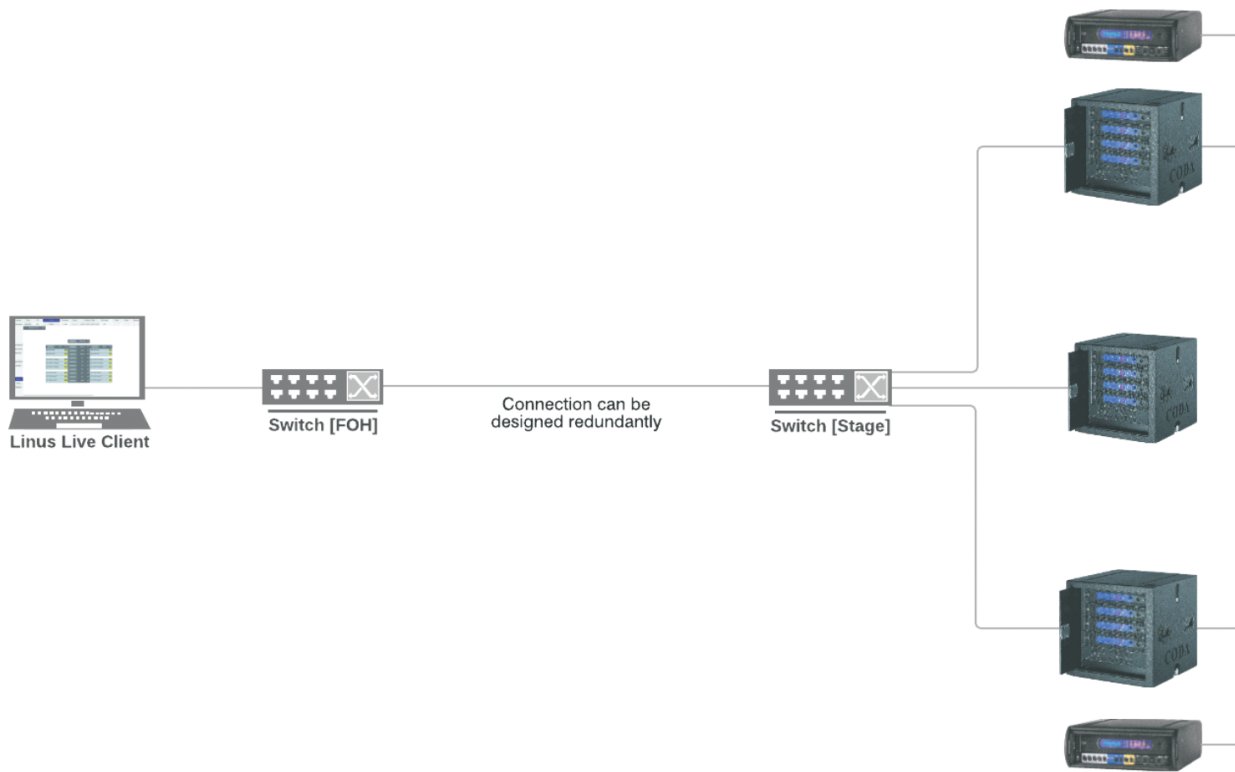
LINUS Devices should only be daisy chained 4 times, due to network restrictions



In case of noncompliance lag, interference, connection failure and more will be the consequence.
We highly recommend to not exceed the limit!



We recommend to mainly use star topology and to daisy chain as little as possible





LINUS LIVE

Remote Software

What is a LINUS System?

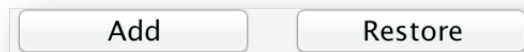
- A Linus System can have up to 75 Modules.
- A Module has got 4 channels.
- Units are identified by Module number and their physical position in the rack.
- All Units will get their IP addresses according to their Module number.
- To represent a 4 channel LINUS 10 Module every rack needs a Upper (ch 1 + 2) and a Lower Unit (ch 3 + 4).



1. Set up Module numbers in each rack.
 - A- LinusCon: Module number in display
 - B- Linus10: upper unit to MASTER (ch. 1+2), lower unit to SLAVE (ch. 3+4) and set Module number (auto ip setup will start).
2. Connect all Module via ethernet, and connect ethernet to your computer PC/MAC.
3. Set your computers ethernet device to the following settings:
 - IP address 192.168.1.XX (last digits 20, 30,40,...,90)
 - Subnet mask 255.255.0.0

Important: If you are more experienced with network infra structure you may use W-LAN, or you combine your network with other

4. Start Linus Live and try to connect to all Modules.
 - a. In case it will find a logical correct Linus system, Linus Live will offer you to "Restore" this Linus system. Or you can delete all System informations and "Add" a new empty system. We recommend to rebuild only fully recognized Systems. If a system is not fully recognized the "Add" function is recommended.



- b. System screen shows already a System, LinusLive will try to find all Modules that are part of the System. It will verify if the data on LINUS Live and Modules are identical, if not you can synchronize from LINUS Live to Modules.

Important: Module numbers, type and number of modules must match
- c. You can load or store a system what you build offline and connect it to the Modules found in the network (Module numbers, type and number of modules must match).





LINUS Live will inform you in the Device Scan window if you have to update your LINUS Modules.

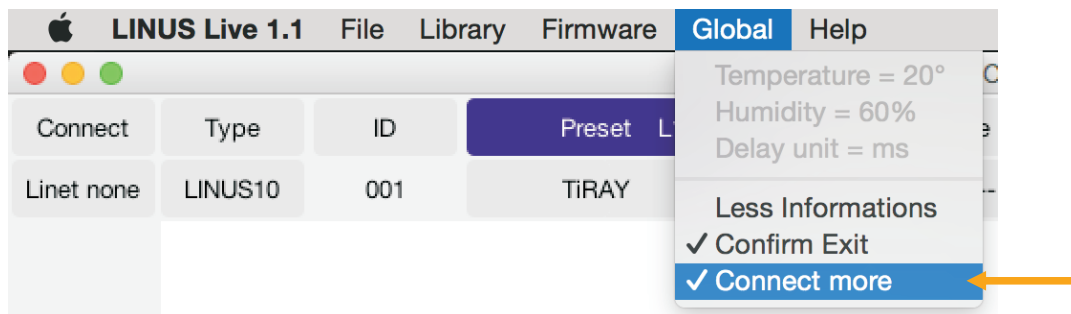
1. Firmware Update

1 2	#1	11 12	#2	21 22	Update FW #3	31 32	Update FW #4
41 42	Update FW #5	51 52	Update FW #6	61 62	#7	71 72	#8
81 82	#9	91 92	#10	101 102	#11	111 112	#12
121 122	#13	131 132	#14	141 142	#15	151 152	#16
161 162	#17	171 172	#18	181 182	#19	191 192	#20
201 202	#21	211 212	#22	221 222	#23	231 232	#24

2. Library Update

1 2	#1	11 12	#2	21 22	Update Lib1.1 #3	31 32	Update Lib1.1 #4
41 42	Update Lib1.1 #5	51 52	Update Lib1.1 #6	61 62	#7	71 72	#8
81 82	#9	91 92	#10	101 102	#11	111 112	#12
121 122	#13	131 132	#14	141 142	#15	151 152	#16
161 162	#17	171 172	#18	181 182	#19	191 192	#20
201 202	#21	211 212	#22	221 222	#23	231 232	#24

LINUS Live Scan, runs for 25x Modules (to allow a quick connection process). If you want to add more Modules in the system you need to activate the „Connect more“ function before you start the connection scan process.





2. Overview of a system in LINUS Live

Online	Type	ID	Preset	Firmware	Name	Routing / Mute	Out meter	Gain	Delay	Reserve
Linnet none	LINUS10	001	TIRAY	V x52	-----	1+PF 1+PF 1+PF 1+PF	Off	-- --	-- --	-- --

LINUS Hardware

192.168.1.X IP Adress

192.168.2.X IP Adress

192.168.3.X IP Adress

[...]

Left sidebar: Add Module, Add Group, Remove, Night Mode, Identify, Setup, Tune, Monitor, 01:04:22

Bottom: A blue arrow points from the 'Setup' button to the 'Configured setup space' section below.

LINUS LIVE - Configured setup space

Online	Type	ID	Preset	Firmware	Name	Routing / Mute	Out meter	Gain	Delay	Reserve
Linnet none	LINUS10	001	TIRAY	V x52	-----	1+PF 1+PF 1+PF 1+PF	Off	-- --	-- --	-- --

System 12 14 001

Mute	System	Left	013	Mute	AiRAY_Sys	012	Mute	Right	014
098: SC2x100	#01	Mute	Flown	011	098: SC2x100	#07			
048: AiRAY-F-90deg	#02	Mute	SC2	010	048: AiRAY-F-90deg	#08			
048: AiRAY-F-90deg	#03	Mute	AiRAY	009	048: AiRAY-F-90deg	#09			
048: AiRAY-F-90deg	#04	Mute	Z1	008	048: AiRAY-F-90deg	#10			
113: SCP-Omni70	#05	Mute	Z2	007	113: SCP-Omni70	#11			
113: SCP-Omni70	#06	Mute	Z3	006	113: SCP-Omni70	#12			
		Mute	Z4	005					
		Mute	Z5	004					
		Mute	Z6	003					

Gain 15

0.0 dB

Delay 3

0.0 ms

Setup

Tune

Monitor

01:12:52

Array 1.0 x

AiRAY_Sys

EQ1 off 0.0 dB 1000 Hz 3.0 Q

EQ2 off 0.0 dB 1000 Hz 3.0 Q

EQ3 off 0.0 dB 1000 Hz 3.0 Q

EQ4 off 0.0 dB 1000 Hz 3.0 Q

Distance 0.0 m **Sizing** 1.0 x

SubSonic -4.0 dB **LowBoost** -1.0 dB

Human 1.0 dB **HF Shelf** 1.0 dB

File safe xxxx.linuslive





3. Window Indication:

1. View buttons
2. Corresponding View button action
3. Possible mode action
4. Mode action buttons

The screenshot shows the LINUS Live interface. The top header bar contains the following columns: Online, Type, ID, Preset, L1.2, Firmware, Name, Routing / Mute, Out meter, Gain, Delay, and Reserve. The first row of data shows: Linet none, LINUS10, 001, TIRAY, V x52, -----, 1+PF, 1+PF, 1+PF, 1+PF, Off, --, --, --, --. The left sidebar contains buttons: Add Module, Add Group, Remove, Night Mode, Identify, Setup, Tune, and Monitor. The bottom left corner shows a timer: 01:04:22.

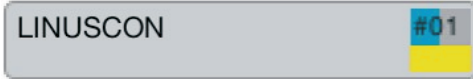
Online	Type	ID	Preset	L1.2	Firmware	Name	Routing / Mute				Out meter	Gain	Delay	Reserve	
Linet none	LINUS10	001	TIRAY		V x52	-----	1+PF	1+PF	1+PF	1+PF	Off	--	--	--	--



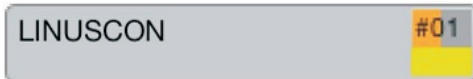


4. Module state overview

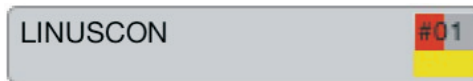
LINUS CON



Blue Flag:
Module is online and works under normal conditions



Orange Flag:
Module was disconnected from the network.
Click on the flag to Sync



Red Flag:
Module is disconnected from the network.

LINUS 10 Modules (LINUS RACK 20)



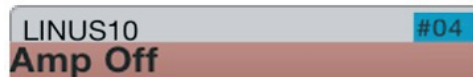
Blue Flag:
Module is online and works under normal conditions



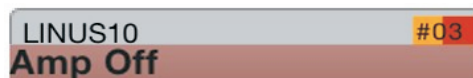
Orange Flag:
Module was disconnected from the network.
Click on the flag to Sync



Red Flag:
Module is disconnected from the network.



Slave amplifier is switched on Standby



Slave amplifier is not present in the network





5. Preset Structure

The Preset Selection has been scaled down to two types of Line Array presets

- Arrayed
- Single

For various kind of system combinations, are the time alignment informations available.

Tops	Subs	SC8		SCP (or SCV)	
		Cardio70	Cardio100	Omni70	Omni100
AiRAY/ SC2	NR	NR	NR	7,1ms	NR
LA12 / SC3	0,9ms	0ms	NR	6,5ms	NR
ViRAY / SC2	NR	NR	0,8ms	NR	7,8ms
LA8 / LA8 SUB	NR	NR	0ms	NR	6,4ms
TiRAY / TiLOW	NR	NR	NR	NR	1ms





6. Routing

Analog Audio input selection and Channel routing

1. Select Module
2. Press Routing view button
3. Select Analog input channel in the Matrix

LiNET (Digital) Audio input selection and Channel routing

1. Select Module
2. Press Routing view button
3. Select LiNET Hardware input channel pair
4. Select LiNET input channel in the Matrix





7. Signal Summation

Analog Audio input Signal Summation

1. Select Module
 2. Press Routing view button
 3. Select Analog input channel in the Matrix and add input signal channel(s) to the original source signal
 - Attention! Two Summed input signals have +6dB gain! Please ensure correct gain structure coming from your signal source
- Analog input will be represented as a Grey Flag in the Module

LiNET (Digital) Audio input Signal Summation

1. Select Module
 2. Press Routing view button
 3. Select LiNET input channel in the Matrix and add input signal channel(s) to the original source signal
 - Attention! Two Summed input signals have +6dB gain! Please ensure correct gain structure coming from your signal source
- LiNET (Digital) input will be represented as a Lime Green Color Flag in the Module





8.1. Analog Fallback

Analog Audio input selection and Channel routing for LiNET Fallback option

Online	Type	ID	Preset	L1.2	Firmware	Name	Routing / Mute	Out meter	Gain	Delay	Reserve
LiNet 96	LINUSCON	001	G308-I		V x52		1+PF 1+PF 1+PF 1+PF	Input	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	15.0 15.0 15.0 15.0

System 02.02 001

Add Module

Add Group

Remove

Night Mode

Identify

Setup

Tune

Monitor

01:09:00

Input Select

Digital / LINET

Analog / fallback

LINET AES

to Output

Pol.

Fallback ON

in A	in B	in C	in D	Li1	Li2	Li1	Li2	1	+
in A	in B	in C	in D	Li1	Li2	Li1	Li2	2	+
in A	in B	in C	in D	Li1	Li2	Li1	Li2	3	+
in A	in B	in C	in D	Li1	Li2	Li1	Li2	4	+

1. Select Module
2. Press Routing view button
3. Select LiNET input channel in the Matrix
4. Switch Fallback set ON
5. Select Analog Fallback channel in the Analog input Matrix

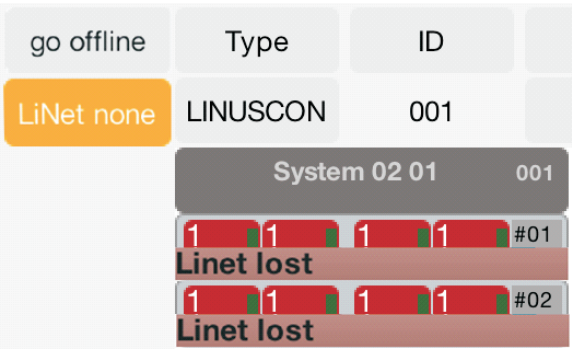
8.2. LiNET Icon Overview

- Linnet none** All Modules run on Analog Inputs
- LiNet 48** All Modules run on LiNET (Digital) Audio Inputs (48kHz detected clock)
- LiNet 96** All Modules run on LiNET (Digital) Audio Inputs (96kHz detected clock)
- LiNet some**
- LiNet 96** LiNET (Digital) Audio Inputs have been selected for all Modules in the Setup Space And Analog Fallback option has been activated (at least on one Module). (LiNET Input locked)
- LiNet none** All modules that run on LiNET have lost Clock. The effected units did fall back to Analog
- LiNet 48** Modules run on Analog Fallback. LiNET (Didital) clock has been detected for all Modules (48kHz detected clock)
- LiNet some** System runs on Analog Fallback and LiNET (Didital) clock has been detected on some Modules

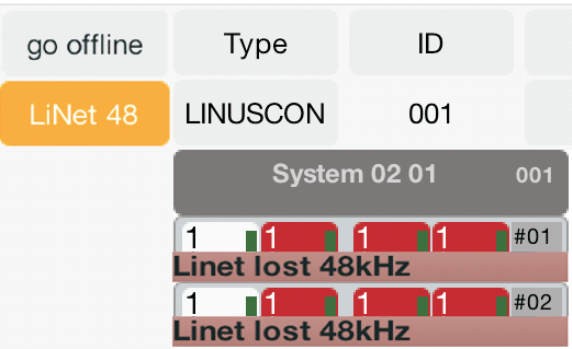




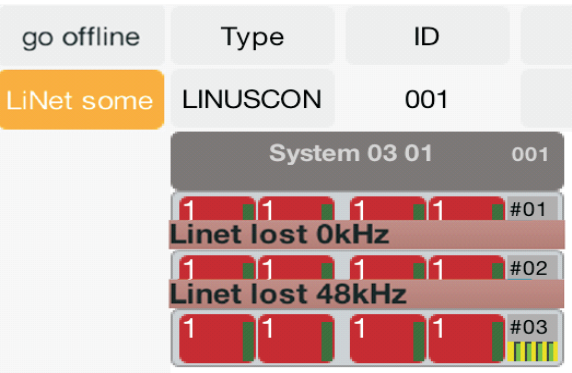
8.3 LiNET Icon Fallback Examples



All modules that run on LiNET have lost Clock. The effected units did fall back to Analog



Modules run on Analog Fallback. LiNET (Didital) clock has been detected for all Modules (48kHz detected clock)

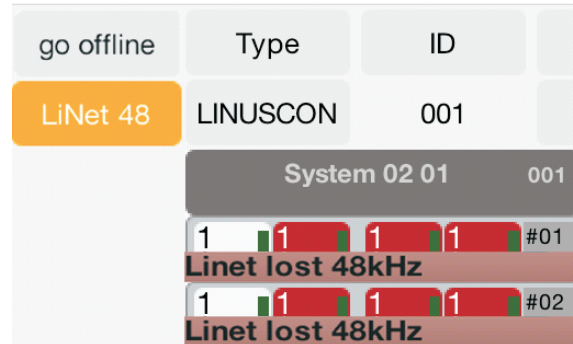


System runs on Analog Fallback and LiNET (Didital) clock has been detected on some Modules



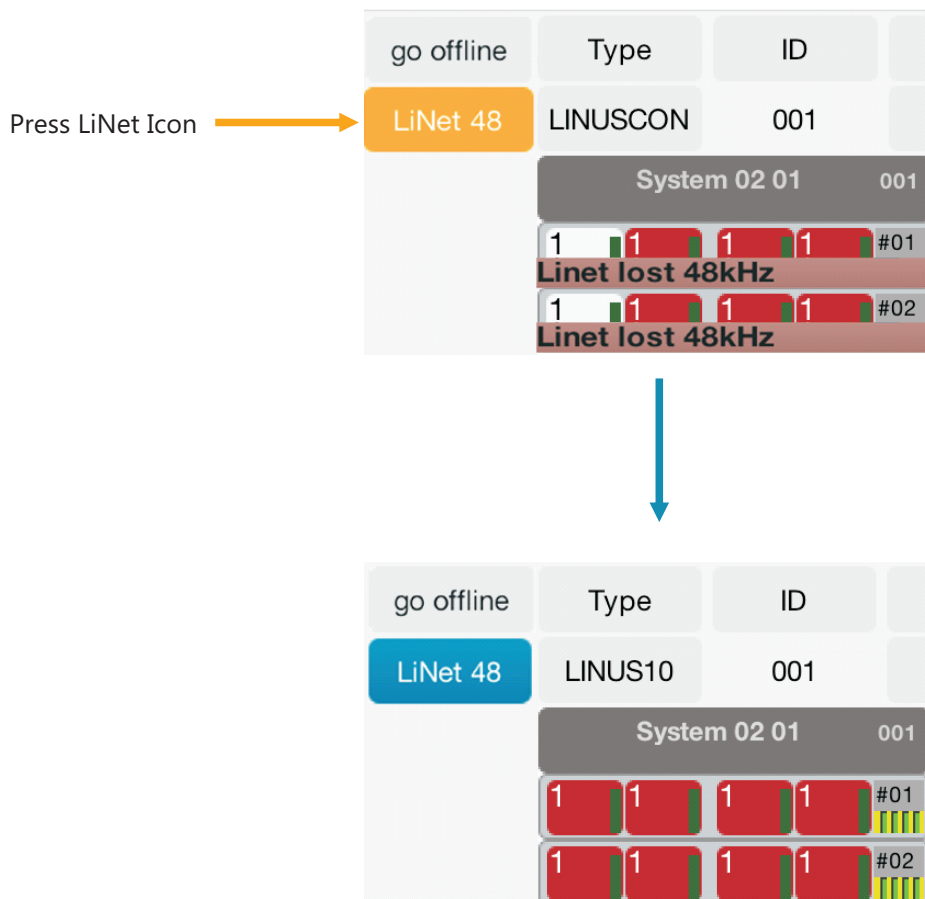


8.4. LiNET Icon Operation



If the System detects a stable LiNET (Digital) Audio Input which is locked by a given sample rate you have got the choice to switch from Analog Fallback signal back to LiNET input.

Switch from Analog Fallback signal back to LiNET



System runs completely on LiNET (Digital) Audio Inputs
And Analog Fallback option is activated. (LiNET Input locked on 48kHz sampling rate)





9. Group Editing

Online	Type	ID	Preset	L1.2	Firmware
Linnet none	LINUS10	001	TIRAY		V x52
	System 02 02	001	Add/Del	Group1	002
	048: AiRAY-F-90deg	#01			
	048: AiRAY-F-90deg	#02			

Add Module

Add Group

Remove

1. Press „Add Group” Button
2. Edit Group name, press enter to confirm.

Online	Type	ID	Preset	L1.2	Firmware
Linnet none	LINUS10	001	AiRAY-F-90deg		V x53
	System 02 02	001	Add/Del	AiRAY	002
	A+LF A+HF B+LF B+HF	#01			
	A+LF A+HF B+LF B+HF	#02			

Add Module

Add Group

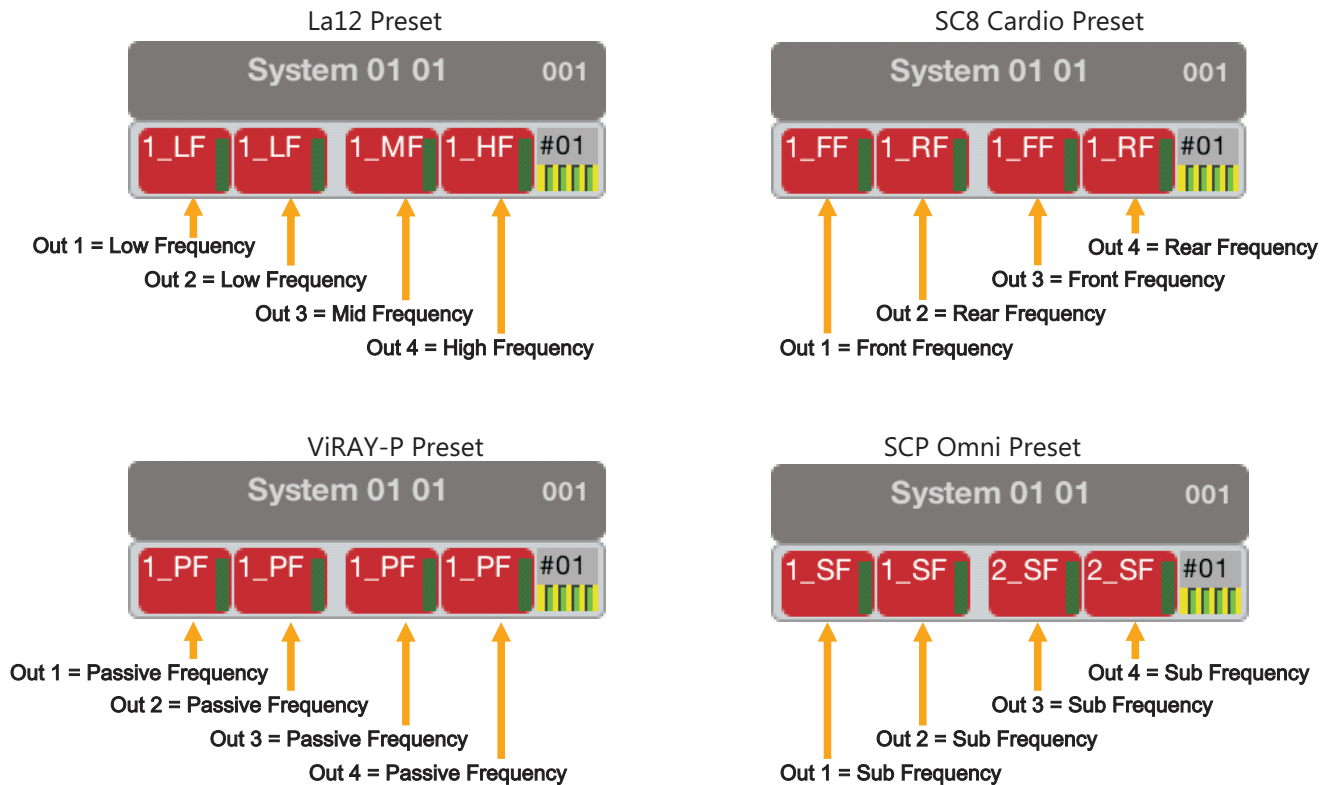
Remove

3. Press „Add/Del” Button
4. Add channels to group. Channel separation is defined by the selected preset.





10. Module Output Description for group function orientation



- Overview:

- PF** =Passive Frequency
Used for Cabinets in Passive Mode
- LF** =Low Frequency
Used for Bi Amp Cabinets (or Bass Extension presets, like TiLOW)
- MF** =Mid Frequency
Used for AIRLINE LA12 Mid range frequency
- HF** =High Frequency
Used for AIRLINE LA12 of Bi Amp cabinets
- SF** =Sub Frequency
Used for Subwoofers in Omnidirectional mode
- FF** =Front Frequency
Used for Subwoofers front Loudspeaker in Cardio Mode
- RF** =Rear Frequency
Used for Subwoofers Rear Loudspeaker in Cardio Mode





11. Meter Indication

1. Normal Condition

- Module works in normal condition. no limitation. no Gain reduction

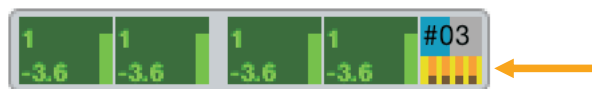


2. Gain Reduction

- Depending on the internal Speaker Limiter Settings, Gain Reduction start to operate, visualized with 4x meters at the bottom/ right position of the module. Reduction of 0db to 5db is indicated with green meters



- Reduction of 6db is indicated with orange meters



3. Input Meter

- Yellow Input Meter indication of -3dB till -0,6dB



- Red Input Meter indication of -0,5dB. Full scale Gain reduction meters = 9dB Gain Reduction

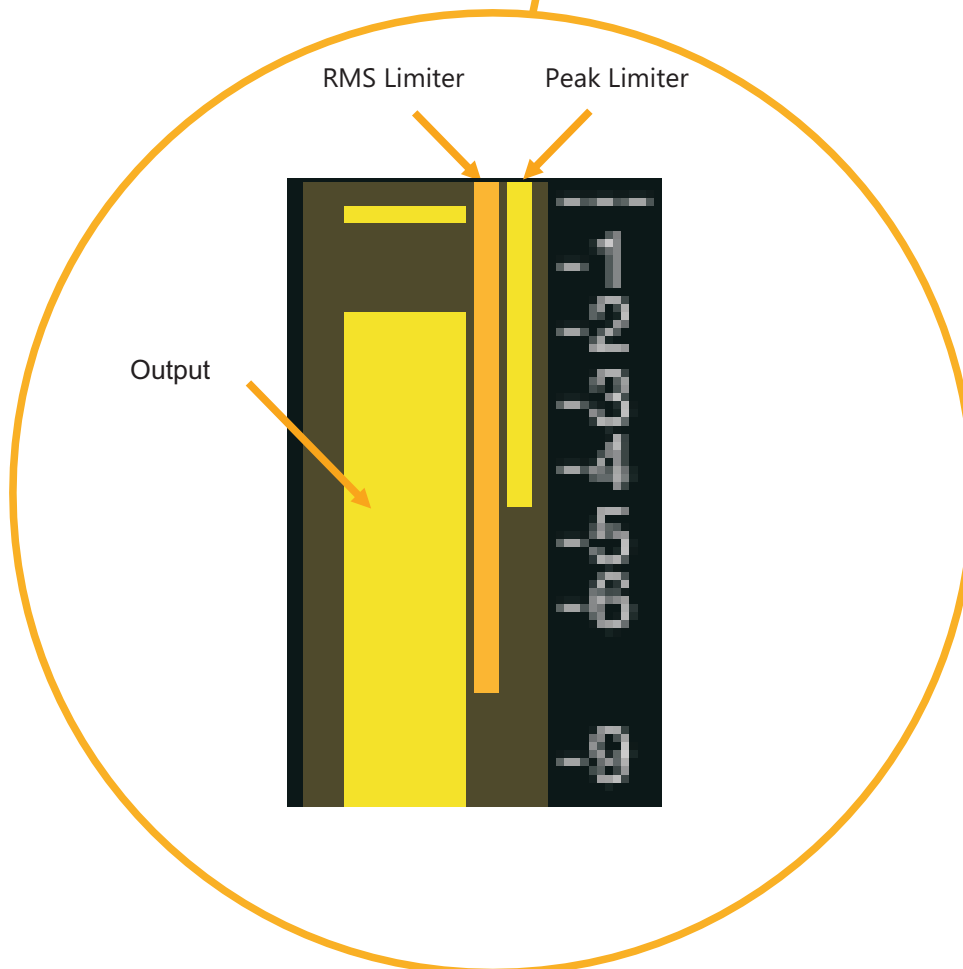
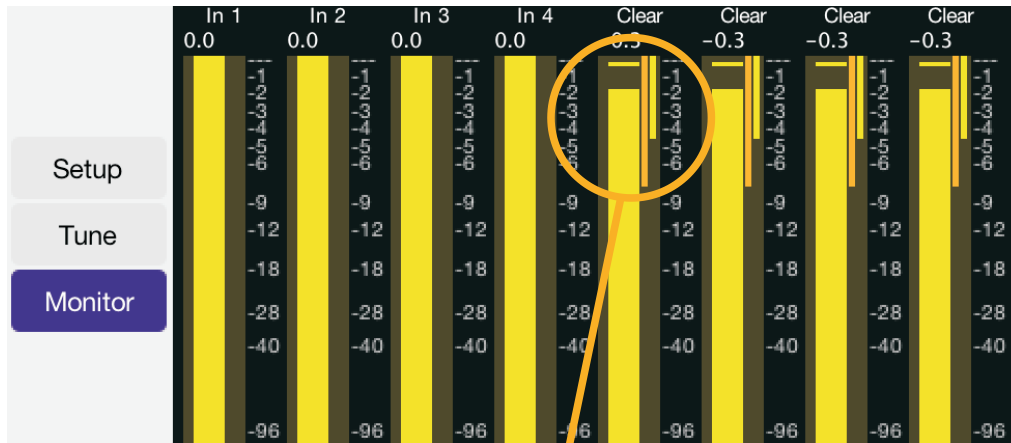




12. Meter Indication

4. Monitor Indication

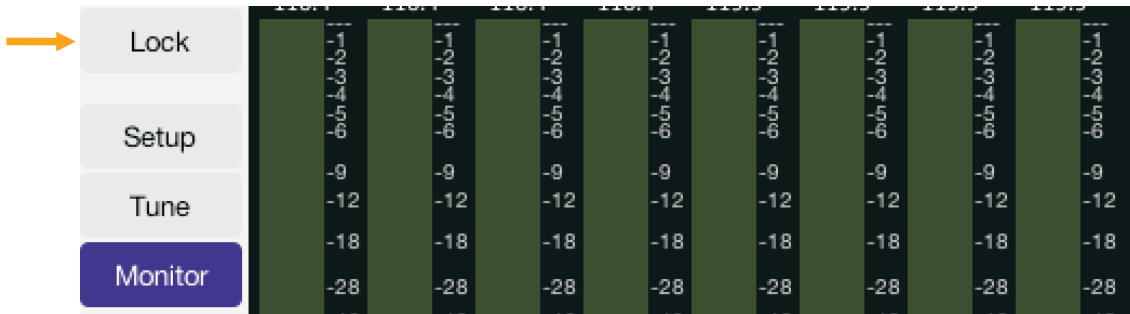
- RMS and Peak Look Ahead Limiter





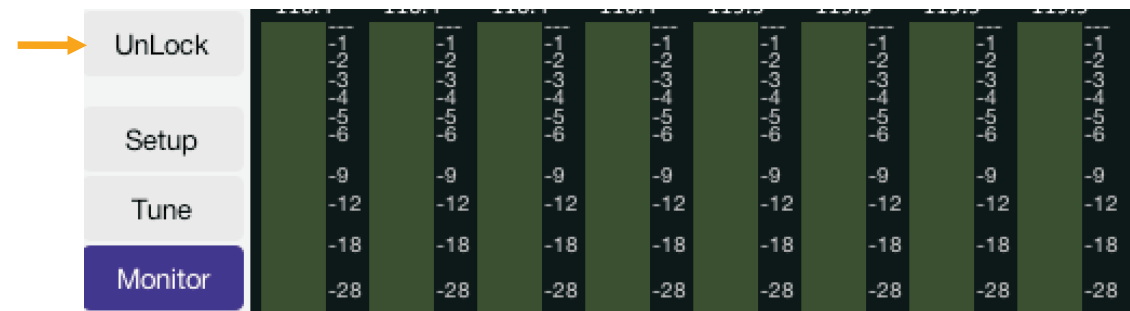
13. Monitor Mode Lock

1. Switch to Monitor mode, select a Module and press the „Lock“ Button

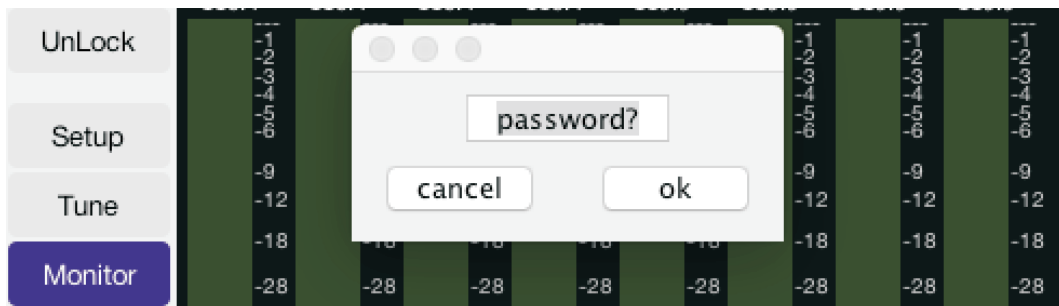


All functions beside the view buttons are now disabled

2. Unlock Monitor Mode
 - Press „Uncock“ button



- Type in Password: VFHPD



LINUS LIVE TUNING

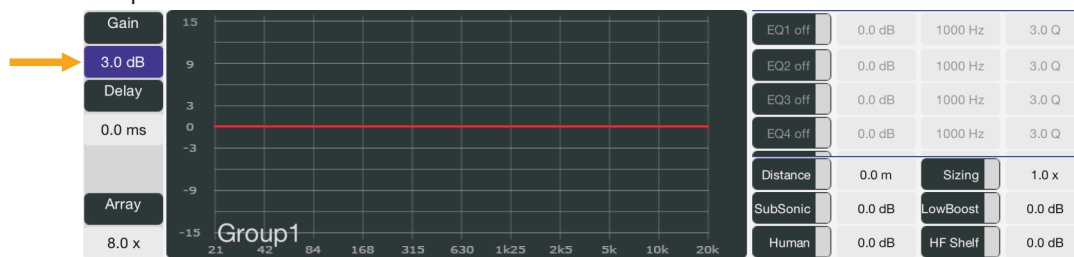
How to tune a LINUS System?



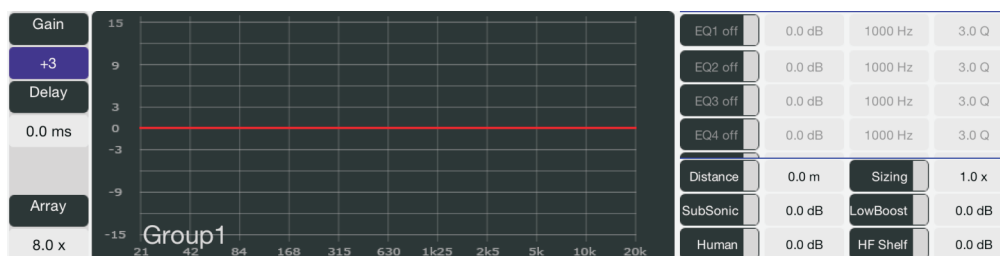
1. Gain Level

Increase or decrease the gain level of the selected System Component (Group), till you are satisfied with overall frequency response.

- Gain depends on venue and music

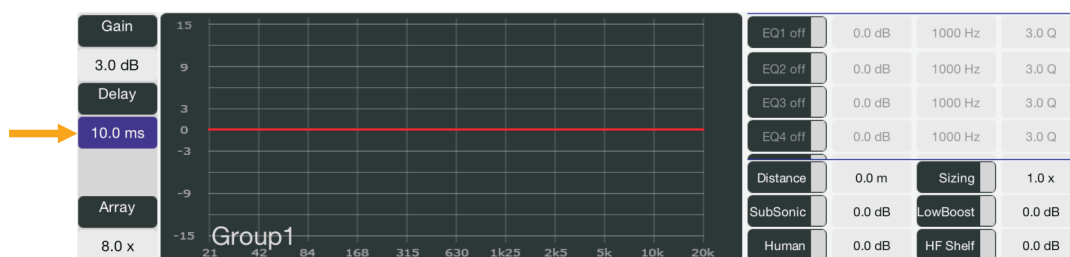


Important - Safety first! To increase the gain, type "+3", otherwise it turns into negative!



2. Time Alignment:

Configure your groups with measured delay (or use implemented Time Alignment sheet - PDF-file)



Time Alignment for LINUS Live

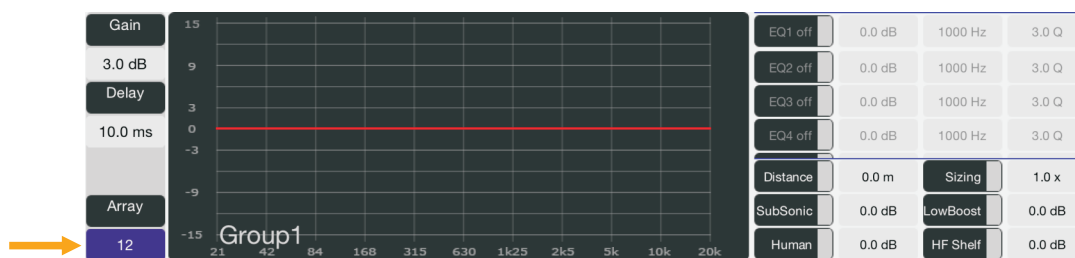
Tops	Subs	SC8		SCP (or SCV)	
		Cardio70	Cardio100	Omni70	Omni100
AiRAY/ SC2	NR	NR	NR	7,1ms	NR
LA12 / SC3	0,9ms	0ms	NR	6,5ms	NR
ViRAY / SC2	NR	NR	0,8ms	NR	7,8ms
LA8 / LA8 SUB	NR	NR	0ms	NR	6,4ms
TiRAY / TiLOW	NR	NR	NR	NR	1ms
					0ms





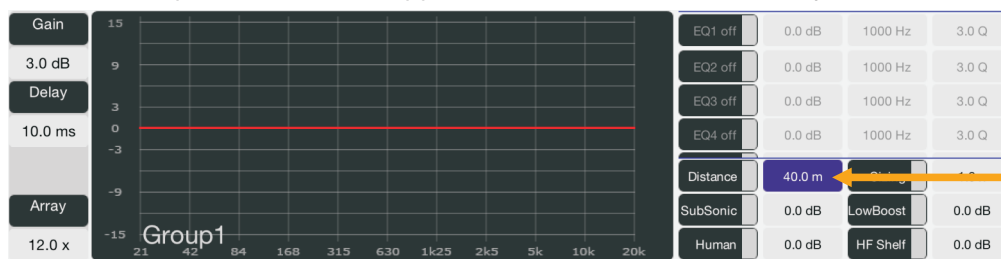
3. Array Function:

Enter the **total amount** of cabinets you use in the Line Array hang. This function is Line Array preset dependent (only!) and not available in the system group.



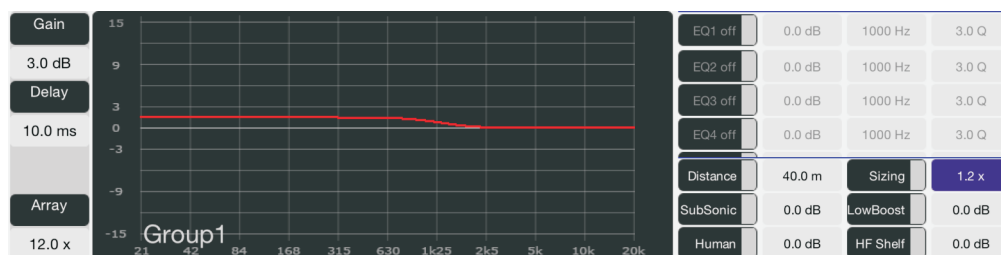
4. Distance Function:

Air absorption compensation (can be applied on Far Field aimed Line Array zones)



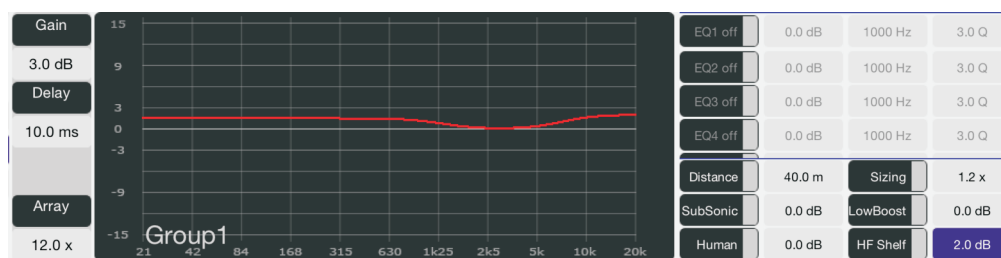
5. Sizing:

If you want to increase / decrease your System size you can do this virtually with the sizing parameter.



6. High Shelf Filter:

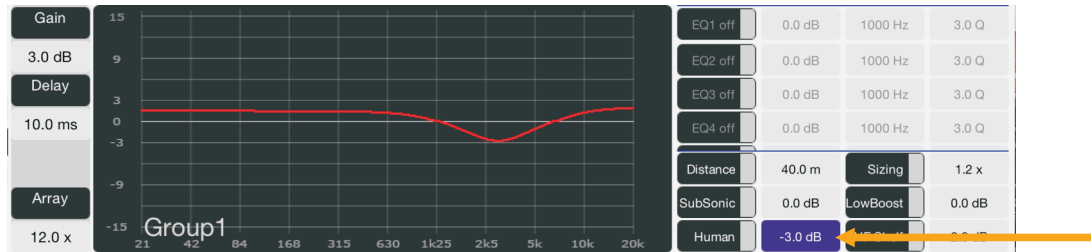
The High Shelf (HF) Filter can be used to tune your line array zones or venue related high frequency correction.





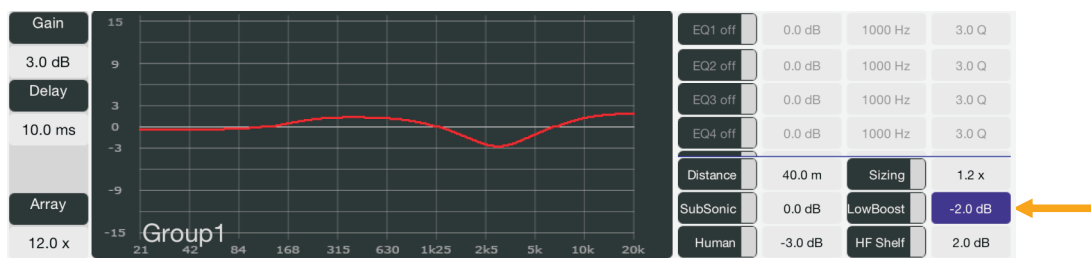
7. Human EQ Setup:

The Human EQ should be used to shape the frequency response of the system in applications requiring extremely high output. While 0 dB ensures flat frequency response, suited for the most applications, reducing / rising the EQ gain will create a linear sound feeling to the human ear.



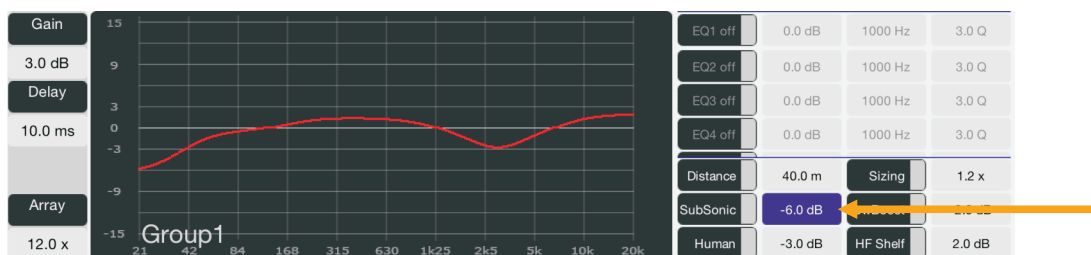
8. LowBoost:

When you feel that the system sounds thin or the low end is not sufficient, rise the gain of the Low Shelf filter in the group. Or reduce the gain if the tonality is unbalanced and the low end information covers the MF/ HF.



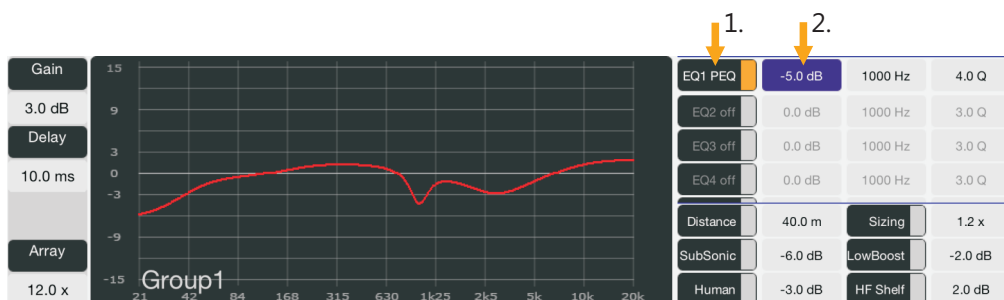
9. SubSonic:

If your local mains are limited or the main fuse is tripping you can reduce the current consumption of the system by reducing the reproduction of the very low frequencies. (less than 40Hz)



10. Parametric EQ:

There are additionally up to seven full parametric Eqs to optimize the system to the venue.

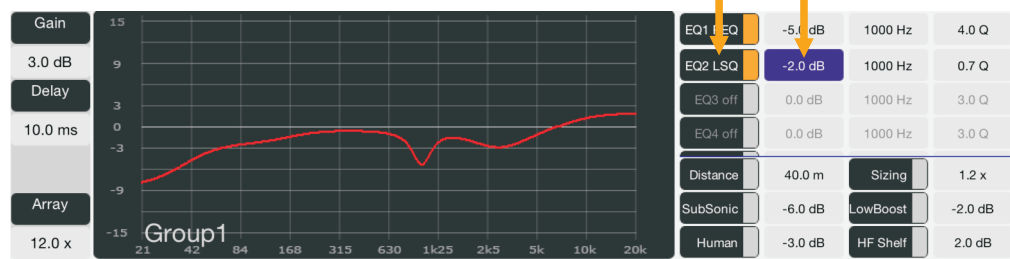




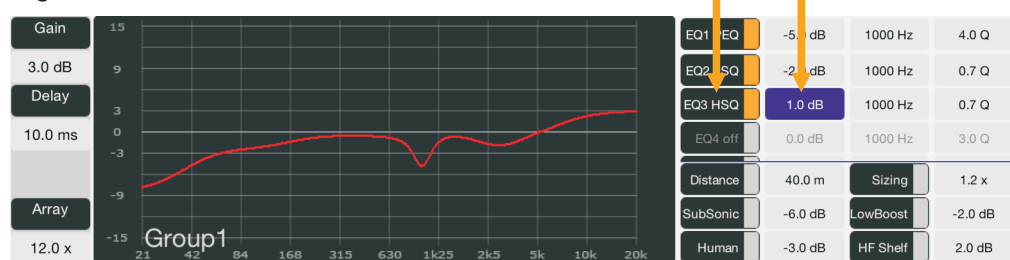
11. Shelving EQ's:

Free configurable High Shelf and Low Shelf filter can be additionally applied (define shelving type with right mouse click)

Low Shelf



High Shelf



12. Full Scale Tuning window:

Enlarge Linus Live in Tuning mode to get a full scale tuning window with graphical adjustable Parameters

