

User's Manual

Version 3.0 December.2007



C3 Professional sound processor

DPA-260 Speaker Management

[Http://www.seed-digital.com](http://www.seed-digital.com)



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SAFETY INSTRUCTIONS



In order to avoid damage to unit hardware and electronic parts, during unit use and/or maintenance, It is necessary to follow the safety instructions. Before using the unit, please read these instructions. Follow all instructions and keep this instruction manual.

- Be careful that unit operation may not cause damage to people.
- Place the unit in a location protected from weather and far from water and moisture.
- Don't place this unit close to heat sources (radiators, spots, amplifiers etc.).
- Avoid any liquid entering inside the unit.
- Connect this unit to a power supply line able to support unit power consumption, checking power supply line good operating conditions.
- Be careful that power supply line has an efficient ground line. ⚡
- Disconnect the unit from a.c. power socket during lightning storms or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as:

- Defective connections and/or on connections cables.
- Liquid has spilled inside the unit.
- The unit has fallen or has been damaged or doesn't operate normally.

No user-serviceable parts inside. Refer servicing to an authorized maintenance centre.

Marani Sound Processor units comply with EMC Directive 89/336/CEE (Directive on approximation of member nation's ordinance concerning the electromagnetic compatibility) and following modifications 92/31/CEE and 93/68/CEE, as stated in EN 500821:1997, EN 55013:1990, EN 55020:1994 standards. These units comply to Low Voltage Directive 73/23/EEC (Directive on approximation of member nation's ordinance concerning electric equipment designed to be used within the specified voltage range), and following modifications 93/68/CEE, as stated in EN 60065:1998 standard.

To avoid electric shock don't open this unit. To prevent risks of fire and/or electric shock, don't expose this unit to rain or moisture.

PACKAGING

This unit package has been submitted to ISTA 1A integrity tests. We suggest you control the unit conditions immediately after unpacking it. If any damage is found, immediately advise the dealer. Keep all unit packaging parts to allow inspection. Marani is not responsible for any damage that occurs during shipment.

SHIPMENT AND COMPLAINT

Products are sold "delivered ex warehouse" and shipment is at charge and risk of the buyer. Possible damages to unit should be immediately notified to forwarder. Each complaint for manumitted package should be done within eight days from product receipt.

WARRANTY AND PRODUCTS RETURN

Marani Sound Processor products have operating warranty and comply their specifications, as stated by manufacturer. Marani warrants all materials, workmanship and proper operation of this product for a period of two years from the original date of purchase. If any defects are found in the materials or workmanship or if the product fails to function properly during the applicable warranty period, the owner should inform about these defects the dealer or the distributor, providing receipt or invoice of date of purchase and defect detailed description. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse. Marani will verify damage on returned units, and when the unit has been properly used and warranty is still valid, then the unit will be replaced or repaired. Marani is not responsible for any "direct damage" or "indirect damage" caused by product defectiveness.

INSTALLATION

Product installation is in professional 19" standard rack.

DISCLAIMER

Marani Sound Processor products have been expressly designed for audio application, with signals in audio range (20Hz to 20kHz). Marani has no liability for damages caused in case of lack of maintenance, modifications, improper use or improper installation non-applying safety instructions.

POWER SUPPLY

Marani Sound Processor products are provided with 9V a.c. power, these units may be damaged when used with a different power supply or a power supply supplying d.c. power. The use of different power supply or adapters will expire terms of Marani liability as well as the terms of warranty.

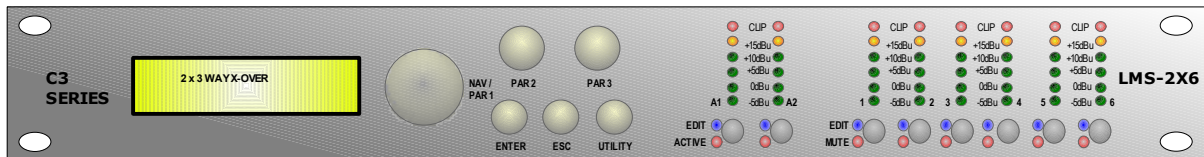
SEED reserves the right to change these specifications at any time without notice.



LMS-2x6 Digital Speaker Processor

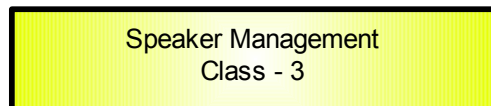
Quick User's Manual

Referring to the front panel here below, the description of the LMS-2x6 functions with reference to the control buttons and encoders.

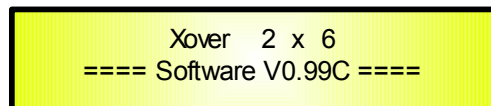


● Getting Started

As soon as the LMS-2x6 is turned ON, on the LCD will appear in sequence the Device Model Name



and the Control Sw Version



The above screens are temporary ones and after a while they'll disappear leaving the place to the "Default Screen".

If no presets are available yet, or if the LMS-2x6 has been reset so to rescue the factory preset, then the "Default Screen" will be the following



Otherwise, if the LMS-2x6 was running a selected preset, then the "Default Screen" will display the preset's name, i.e. if the last preset loaded was "Stage1 2x3", then the screen will be the following





- **Encoders and ENTER, ESC buttons**

The LMS-2x6 is equipped with 3 Relative Encoders, "NAV/PAR1", "PAR2" and "PAR3", used for the "screen navigation" during the several operations allowed by the powerful user interface and editing section of the processor.

Together with the 3 encoders, the buttons "ENTER" and "ESC" allow to perform the all editing operations available on the LMS-2x6.

The 3 encoders allow then the user to navigate within the screen for the selection of sub-menus, pages and for the selection of parameters and values to be assigned to them during the several editing operations to be used for navigating, and the "ENTER" and "ESC" buttons allow the euser to confirm or NOT confirm the operations performed by the encoders.

- **UTILITY, A1/A2 and 1/2/3/4/5/6 buttons**

The all editing possibilities of the LMS-2x6 can be accessed through the use of the UTILITY button, for entering the sub-menus allowing the User to set the general characteristics of the Processor, the buttons A1 and A1, allowing to the User to enter the Editing Menus of the Processor's Input Channels and the buttons 1, 2, 3, 4, 5 and 6, allowing the User to enter the Editing Menus of the Processor's Output Channels.

Particularly, the A1 and A2 buttons so as the 1, 2, 3, 4, 5 and 6 buttons have a double functions accessible with different "push timings"

Actually A1 and A2, if pushed quickly without maintaining them pressed (but they have to be pressed for at least 100ms), allow to MUTE or UN-MUTE the Input Channels 1 and 2.

The MUTE condition of the Input Channel is shown by the "ACTIVE" led which will turn ON.

When the "ACTIVE" led is OFF, then the related Input Channel is UN-MUTED.

Pushing the A1 and A2 buttons and maintaining them pressed for almost 2 sec, it is possible to enter the Editing Menu for the Input Channels (see later for the Input Channel Editing details)

Also for the 1, 2, 3, 4, 5, and 6 buttons, if pushed quickly without maintaining them pressed (but they have to be pressed for at least 100ms), allow to MUTE or UN-MUTE the Output Channels 1,2 ,3 ,4 ,5 and 6.

The MUTE condition of the Output Channel is shown by the "MUTE" led which will turn ON.

When the "MUTE" led is OFF, then the related Output Channel is UN-MUTED.

Pushing the 1, 2, 3, 4, 5 and 6 buttons and maintaining them pressed for almost 2 sec, it is possible to enter the Editing Menu for the Output Channels (see later for the Input Channel Editing details)

- **LMS-2x6 Menus and Sub-Menus block schemes**

Starting from the "Default Screen" coming after turning On the LMS-2x6, i.e. the following if getting started with the factory preset

2 x 3 WAY X-OVER

The sub-menus accessible thanks to the "UTILITY", "A1/A2", "1/2/3/4/5/6", "ENTER" and "ESC" buttons, and the accessible parameters and values ranges thanks to the "NAV/PAR1", "PAR2" and "PAR3" encoders, are resumed by the "trees" schemes of the following pages:



MENU "MAIN" [Accessible pushing the "UTILITY" button]

NAV/PAR1 Encoder

[to navigate between menus]

PAR2 or PAR3 Encoder

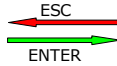
[to chose option, then ENTER to load it; (*) indicates the not selected option]

1 MAIN MENU:.....

Xover Sub-Menu >>



1.1 XOVER MENU:.....
Load a Xover >>



Load a Xover
01: Preset 1
: :
08: Preset 8

1.2 XOVER MENU:.....
<< Design a Xover >>



Design a Xover
Type: 2x2 WAY XOVER
: :
Type: 6 WAY XOVER

1.3 XOVER MENU:.....
<< Store a Xover >>



Store a Xover
01: Preset 1
: :
01: Preset 8

1.4 XOVER MENU:.....
<< Erase a Xover >>



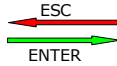
Erase a Xover
01: Preset 1
: :
01: Preset 8

2 MAIN MENU:.....

<< System Sub-Menu >>



2.1 SYSTEM MENU:.....
Initialing Wake-up >>



Initialing Wake-up
Wake-up: Mute Hold
Wake-up: Fade-In *

2.2 SYSTEM MENU:.....
<<DelayTime/Distance>>



DelayTime/Distance
Display: Time(ms)
Display: Metres *

2.3 SYSTEM MENU:.....
<< Rotuing Options >>



Rotuing Options
Input Source: Analog
Input Source: Digital

SYSTEM MENU:.....
<< Device Name Title >>



[ENTER] to Editing
Title: Class-3 LMS 2x6

(For Editing the Device's Name, refer to the Details on the "Utility Menus Use" Section)

3 MAIN MENU:.....

<< Interface Sub-Menu >>



3.1 INTERFACE MENU:.....
Interface Setup



Remote Interface Setup
Master Source: USB
Master Source: RS485 *



Remote Id Num = 1
:
32

4 MAIN MENU:.....

<< Security Sub-Menu



4.1 SECURITY MENU:.....
Unit Lock



Enter Password
[]

(For the details about the Password Setting and Unit Lock, refer to the "Utility Menus Use" Section)



MENU "InputA/B" Input Channels Editing [Accessible pushing the "A1/A2" buttons]

NAV/PAR1 Encoder
[to navigate between menus]

NAV/PAR1 Enc. **PAR2 Enc.** **PAR3 Enc.**
[to chose values for the paramters, no need to confirm the chosen values, which are automatically loaded during the encoders use]

<p>1. InputA/B Gain Gain = + 0.0 dB</p>	PAR1 N.U.	-12 db : +12 dB	Same as PAR2
<p>2. InputA/B Delay Delay = 0.000 mS</p>	PAR1 N.U.	000.000mS [1 mS steps] 2500.979ms	000.000mS [21 uS steps] 001.000mS
<p>3. InputA/B PEQ: 1 1.00kHz Q=1.00 + 0.0dB ENTER ↓ ↑ ESC -> 1.00kHz Q=1.00 + 0.0dB [PEQ from 2 to 9] : : : :</p>	[Freq.] 20Hz : 20kHz	[Q] 0.05 : 3	[Amp.] -15.0 dB : +15.0 dB
<p>12. InputA/B PEQ: 10 1.00kHz Q=1.00 + 0.0dB ENTER ↓ ↑ ESC -> 1.00kHz Q=1.00 + 0.0dB</p>	: : : :	: : : :	: : : :
<p>13. InputA/B LoSHF 1.00kHz Bypass + 0.0dB ENTER ↓ ↑ ESC -> 1.00kHz Bypass + 0.0dB</p>	[Freq.] 20Hz : 20kHz	Bypass Lo-1st. Lo-2nd.	[Amp.] -12.0 dB : +6.0 dB
<p>14. InputA/B HiSHF 1.00kHz Bypass + 0.0dB ENTER ↓ ↑ ESC -> 1.00kHz Bypass + 0.0dB</p>	[Freq.] 20Hz : 20kHz	Bypass Hi-1st. Hi-2nd.	[Amp.] -12.0 dB : +6.0 dB
<p>15. InputA/B Polarity Polarity = [+]</p>	PAR1 N.U.	[+] [-]	Same as PAR2
<p>16. InputA/B NoiseGate A: 5ms R: 0.2s -90dB ENTER ↓ ↑ ESC -> A: 5ms R: 0.2s -90dB</p>	[Atk time] 5ms : 200ms	[Rel time] 0.2s : 2.0s	[Amp.] -90.0 dB : OFF dB
<p>17. InputA/B MasterG Gain = + 0.0 dB</p>	PAR1 N.U.	-12 db : +12 dB	Same as PAR2



MENU "1/2/3/4/5/6 Output Channels Editing" [Accessible pushing the "1/2/3/4/5/6" buttons]

NAV/PAR1 Encoder

[to navigate between menus]

NAV/PAR1 Enc.

[to chose values for the paramters, no need to confirm the chosen values, which are automatically loaded during the encoders use]

PAR2 Enc.

PAR3 Enc.

1. Output[x] [Name] HPF
20.0 Hz No Cut-Off

PAR1 N.U.

[Freq.] 20Hz
:
20kHz

[Type/Slope] No Cut-Off
:
Chebyshev 24dB/Oct

2. Output[x] [Name] LPF
20.0 Hz No Cut-Off

PAR1 N.U.

[Freq.] 20Hz
:
20kHz

[Type/Slope] No Cut-Off
:
Chebyshev 24dB/Oct

3. Output[x] [Name] PEQ: 1
1.00kHz Q=1.00 + 0.0dB

ENTER ↓ ↑ ESC

-> 1.00kHz Q=1.00 + 0.0dB

[Freq.] 20Hz
:
20kHz

[Q] 0.05
:
3

[Amp.] -15.0 dB
:
+15.0 dB

[PEQ from 2 to 3]
: : : :
: : : :
: : : :
: : : :

6. Output[x] [Name] PEQ: 4
1.00kHz Q=1.00 + 0.0dB

ENTER ↓ ↑ ESC

-> 1.00kHz Q=1.00 + 0.0dB

: : : :

: : : :

: : : :

[Freq.] 20Hz
:
20kHz

[Q] 0.05
:
3

[Amp.] -15.0 dB
:
+15.0 dB

7. Output[x] [Name] Shelf
1.00kHz Bypass + 0.0dB

ENTER ↓ ↑ ESC

-> 1.00kHz Bypass + 0.0dB

[Freq.] 20Hz
:
:
:
20kHz

Bypass
Lo-1st.
Lo-2nd.
Hi-1st.
Hi-2nd.

[Amp.] -12.0 dB
:
:
:
+6.0 dB

8. Output[x] [Name] Delay
Delay = 0.000 mS

PAR1 N.U.

000.000mS
[1 mS steps]
2500.979mS

000.000mS
[21 uS steps]
001.000mS

9. Output[x] [Name] Limiter
A: 5ms R: 0.2s +20dB

ENTER ↓ ↑ ESC

-> A: 5ms R: 0.2s +20dB

[Atk time] 5ms
:
200ms

[Rel time] 0.2s
:
2.0s

[Amp.] -10.0 dB
:
+20.0dB (OFF)

10. Output[x] [Name] Polarity
Polarity = [+]

PAR1 N.U.

[+]
[-]

Same as PAR2

11. Output[x] [Name] Gain
Gain = + 0.0 dB

PAR1 N.U.

-12 db
:
+12 dB

Same as PAR2

12. Output[x] [Name] Source
Source = A

PAR1 N.U.

A (ChannelA)
B (Channel B)
A+B (Channel A+ Channel B)

Same as PAR2

13. Output[x] [Name] Name
Name = [Name]

ENTER ↓ ↑ ESC

-> Name = _

(For Editing the Device's Name, refer to the Details on the "Utility Menus Use" Section)



● **Menu "MAIN" [accessed pushing the "UTILITY" button]**

From the "Default Screen", it is possible access the "MAIN" menu pushing the "UTILITY" button and the Sub-Menus pages can be selected just rotating clockwise and counter-clockwise the "NAV/PAR1" encoder.

Once selected the sub-menu page, using the "ENTER" button can be accessed the Sub-Menus pages, again "scrollable" using the "NAV/PAR1" encoder and accessible for the parameters' editing pushing again the "ENTER" button.

Through the "ESC" button, it is any time possible to go back to the action and page preceding the "ENTER" button use.

Once inside the Sub-Menus pages, the several options can be scrolled and using the PAR2 or PAR3 encoders and selected/confirmed pushing the "ENTER" button.

Note: in the all pages' options, the all possible selections appear with an **asterisc "*" aside the option's definition, so to indicate the NOT CURRENTLY RUNNING Options.**

The Currently selected and running options **HAVE NOT THE ASTERISC** aside the option's definition.

Once a not currently running option, displayed with the asterisc aside, is entered (pushing the "ENTER" button), then the asterisc will disappear and the shown option will take place as the currently running one.

Xover Sub-menu – this sub-menu allows to access several operations related to the LMS-2x6 operative mode and to manage the presets storable and recallable with the Unit.

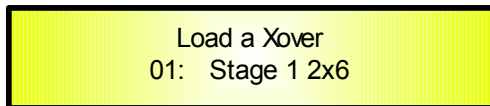
From the "Xover sub-menu", just pushing the "ENTER" button and then using the "NAV/PAR1" encoder for sliding the pages, the following pages can be accessed

- **Load a Xover:** page allowing the Loading of a preset, of 8 allowed, already stored in the LMS-2x6 memory.

From this page and rotating the "PAR2" or "PAR3" encoder, it is possible to slide the all current AVAILABLE presets and their location.

If NO PRESETS are stored yet, the screen will advise that "no presets are available" and automatically the system will jump back to the "Default" screen.

If Presets are available, then they'll be shown in the "Load a Xover" page



Using the "PAR2" or "PAR3" encoder it is possible to select the wanted preset to recall.

Pushing furtherly the "ENTER" button, the "[Enter] for Recall." page will be entered, showing the selected preset for recalling





Confirming the preset pushing again the "ENTER" button, will force the LMS-2x6 to load as current preset the selected one and the following transitory screen will appear



Once loaded the new preset, the LMS-2x6 will exit the "Load a Xover" page automatically and the above screen will disappear leaving the place to the "Default" one which will show the name of the loaded preset and now the current one performed by the LMS-2x6



Note: any time is possible to quit the recalling action just pushing the "ESC" button.

- **Design a Xover:** page allowing to define the operative mode of the LMS-2x6, from a selection of 5 options.

2x2 WAY XOVER... in this operative mode, the LMS-2x6 is performing a 2 Input to 6 Outputs X-Over, where the 2 Inputs are automatically assigned to the Outputs as follow:
Input A to the Outputs 1/2.

Input B to the Outputs 3/4

the Sum of the 2 Inputs (A+B) to the Outputs 5/6

2x3 WAY XOVER... in this operative mode, the LMS-2x6 is performing a 2 Input to 6 Outputs X-Over, where the 2 Inputs are automatically assigned to the Outputs as follow:
Input A to the Outputs 1/2/3

Input B to the Outputs 4/5/6

4 WAY XOVER... in this operative mode, the LMS-2x6 is performing a 2 Input to 6 Outputs X-Over, where the 2 Inputs are automatically assigned to the Outputs as follow:
Input A to the Outputs 1/2/3/4

Input B or Sum of the 2 Inputs (A+B) to the Outputs 5/6

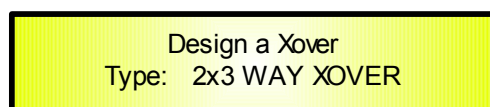
5 WAY XOVER... in this operative mode, the LMS-2x6 is performing a 2 Input to 6 Outputs X-Over, where the 2 Inputs are automatically assigned to the Outputs as follow:
Input A to the Outputs 1/2/3/4/5

Input B or Sum of the 2 Inputs (A+B) to the Outputs 6

6 WAY XOVER... in this operative mode, the LMS-2x6 is performing a 2 Input to 6 Outputs X-Over, where the 2 Inputs are automatically assigned to the Outputs as follow:
Input A to the Outputs 1/2/3/4/5/6

From this page and rotating the "PAR2" or "PAR3" encoder, it is possible to slide the all available X-Over operative modes presets.

The "Design a Xover" page will appear as follow



Once selected the desired operative mode for the LMS-2x6, to load it it is enough to push the "ENTER" button.



In the case of the following presetted operative modes "2x2 WAY XOVER", "2x3 WAY XOVER" and "6 WAY XOVER", pushing the "ENTER" button to load them, will take to the following screen, asking for confirming the will to load the selected operative mode

New Xover
[ENTER] to confirm

And if confirmed the will to load the selected operative mode, the LMS-2x6 will be settled accordingly.

In the case, instead, of the following presetted operative modes "4 WAY XOVER" and "5 WAY XOVER", pushing the "ENTER" button will be entered a page asking to assign the Input for the remaining Output channels (the Outputs 5&6, for the "4 WAY XOVER" and the Output 6 for the "5 WAY XOVER").

Design a Xover
Output 5&6 Source: A+B

Once assigned the Inputs for the above operative modes, then pushing again the "ENTER" button the system will go ahead as previously described.

As soon as the operative mode will be loaded, the system will exit automatically the "MAIN MENU" to jump back to a screen displaying the loaded operative mode.

For the "4 WAY XOVER" operative mode, i.e., the screen will be the following

4 WAY X-OVER + 2

- **Store a Xover:** page allowing the Storing of a new preset in the LMS-2x6 memory. From this page and rotating the "PAR2" or "PAR3" encoder, it is possible to slide the all current presets, showing the already existent presets' names, or the available empty (identified by "Empty Program") locations for new presets. If No presets are stored yet, the "Store a Xover" page will appear as follow

Store a Xover
01: Empty Program

If we are ready to store an edited configuration of the LMS-2x6, we just need to select the location we want to use for storing the preset, selecting the location from **8 available** through the "PAR2" or "PAR3" encoder.

Once selected the location (i.e. the location number 1), for editing the Configuration Name it is necessary to push again the "ENTER" button for entering the "**Set Memory Name**" page.

In this page the User can edit an **up to 16 Characters** Preset's Name just using the "PAR2" or "PAR3" encoder to chose the character and the "NAV/PAR1" encoder to move between the 16 available locations for the name's characters positioning.

The current position of the cursor for the characters' entering is shown by a "blinking underscore".



During this editing phase, the display is as follow (i.e. assigning to the preset the "Stage 1 2x6" name to the location 01)

Set Memory Name.
01: Stage 1 2x6

Once chosen the name for the preset, to store it need to push again the "ENTER" button. The above action will enter the "**Enter to Store**" page, which will show the selected location for the preset and the final edited name for it. If anything is matching our desires, pushing again the "ENTER" button, the preset will be stored in the selected location with the chosen name and the following transitory screen will take place on the LCD

Stored to Memory.
01: Stage 1 2x6

Once the preset is stored, the above screen will disappear leaving the place to the "Default" one.

The "Store a Xover" menu will be exited automatically and if the current loaded preset on the X-Over was "Stage 1 2x2", then the screen will be the following

Stage 1 2x2

If during the Preset Storing phase an already occupied location is chosen once in the "**Store a Xover**" page, then before to access the "**Set Memory Name**" page, after having pushed the "ENTER" button, a further page is entered called "**[ENTER] to Overwrite**" asking to confirm the will to Overwrite with the new Preset the one currently stored in the selected location.

If pushed then again the "ENTER" button, the LMS-2x6 will go ahead with the "**Set Memory Name**" page and then with the previously described steps until the preset storing process end.

Note: any time is possible to quit the storing action just pushing the "ESC" button.

- **Erase a Xover:** page allowing to Erase a preset already stored in the LMS-2x6 memory. From this page and rotating the "PAR2" or "PAR3" encoder, it is possible to slide the all current AVAILABLE presets and their location. If NO PRESETS are stored yet, the screen will advise that "no presets are available" and automatically the system will jump back to the "Default" screen.

If Presets are available, then they'll be shown in the "Erase a Xover" page

Erase a Xover
01: Stage 1 2x6

Using the "PAR2" or "PAR3" encoder it is possible to select the preset that has to be erased.



Pushing furtherly the "ENTER" button, the "[Enter] to Erase." page will be entered, showing the selected preset will be erased

[ENTER] to Erase.
01: Stage 1 2x6

Confirming the preset pushing again the "ENTER" button, will force the LMS-2x6 to erase the selected preset and the following transitory screen will appear

Erasing Xover Memory.....
01: Stage 1 2x6

Once erased the preset, the LMS-2x6 will exit the "Erase a Xover" page automatically and the above screen will disappear leaving the place to the "Default".

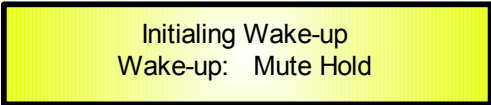
Note: any time is possible to quit the recalling action just pushing the "ESC" button.



System Sub-menu – this sub-menu allows to access several operations related to the LMS-2x6 Start Up and General Configuration.

From the "System sub-menu", just pushing the "ENTER" button and then using the "NAV/PAR1" encoder for sliding the pages, the following pages can be accessed

- **Initialing Wake-up:** page allowing to chose the way of Turning On the LMS-2x6 after switched the Unit ON.
From this page and rotating the "PAR2" or "PAR3" encoder, it is possible to between to options: "Mute Hold" and " Fade In".



The currently NOT running option will be displayed with an asterisk "*" beside the option name, and the running option without.

After selected the desired option, it can be made active just pushing the "ENTER" button. In details, the 2 available options are leading the LMS-2x6 to the following behaviour after turned ON:

MUTE HOLD... when this option is active, after Turning ON the LMS-2x6, the all Outputs, independently from their status before to turn OFF the Unit, will be MUTED automatically, so to inhibit the LMS-2x6 to have active Outputs after having been turned ON.

FADE-In... when this option is active, after Turning ON the LMS-2x6, the all Outputs not previously muted, before to turn OFF the Unit, will be activated and allowed to "sound" but the activation is performed through a "Volume Ramp", avoiding sudden sound to come.

- **DelayTime/Distance:** this page allows to select the "Measure's Unit" to be used to express the Delays: **Time** (in milliseconds "ms") or **Meters**.
Once entered the "DelayTime/Distance" page using the "ENTER" button, rotating the "PAR2" or "PAR3" encoder, it is possible to select then the Measure's Unit for expressing the Delay, which will be confirmed entering it just "pushing" the "ENTER" button.
The screen allowing the Measure's Unit for the Delay selection, is the following (i.e. when the Delay is expressed in "ms")



- **Program Mute Option:** this page allows to decide if the "Mute Status" for each output channel has to be stored together with the all other parameters creating a preset or if it has to be an independent parameter being everytime ON once turned on the LMS-2x6.
Once entered the "program Mute Option" page using the "ENTER" button, rotating the "PAR2" or "PAR3" encoder, it is possible to select the desired option for the Mute Status:
OFF: the Mute on the all output channels will be Activated any time on the LMS-2x6 will be recalled a User's Preset.
ON: the Mute on the all output channels will be Activated or Not on each channel independently, depending from its last Status before to save as preset the configuration of the LMS-2x6.



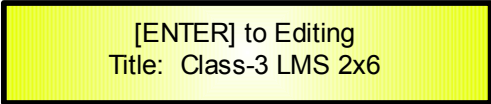
The screen allowing the Program Mute Option setting, is the following (i.e. when the Program Mute Option is set on OFF)



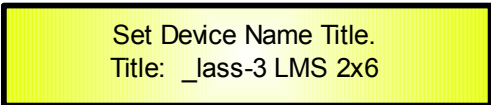
- **Routing Options:** the LMS-2x6 Processor is equipped with 2 Analog Inputs (Balanced Female XLR) and a stereo S/PDIF Digital Input (RCA connector). The "Routing Options" page allows Once entered the "Routing Options" page using the "ENTER" button, rotating the "PAR2" or "PAR3" encoder, it is possible to select the Main Inputs for the LMS-2x6, allowing the User to chose between the Analog ones or the S/PDIF Digital ones. The selection can be confirmed "pushing" the "ENTER" button. The screen allowing the Input Selection, is the following (i.e. when the Analog Input is the selected one)



- **Device Name Title:** page allowing the Define and Store in the LMS-2x6 an Identifying Name that the User can chose for the Unit. This Name will remain in the Unit Memory and shown any time the "Device Name Title" page is entered. To set the Name for the LMS-2x6, in this page, it is enough to push the "Enter" button so to acces the "[ENTER] to Editing" page, where the current Unit's Name will be shown (if i.e. the Unit's current name is "Class-3 LMS 2x6")



From this page, pushing again the "ENTER" button, the following "Set Device Name Title" can be accessed, where it is possible to change the current assigned Name and Edit a new one..

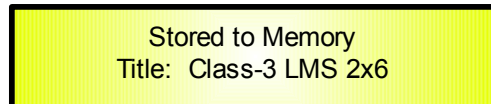


In the above page the User can edit an **up to 16 Characters** LMS-2x6 Identifying Name just using the "PAR2" or "PAR3" encoder to chose the character and the "NAV/PAR1" encoder to move between the 16 available locations for the name's characters positioning. The current position of the cursor for the characters' entering is shown by a "blinking underscore".



Once chosen the name for the Unit, to store it need to push again the "ENTER" button. The above action will enter the "**Enter to Store**" page, which will show the edited Identifying Name for the LMS-2x6.

If anything is matching our desires, pushing again the "ENTER" button, the Identifying Name will be stored in the LMS-2x6 Mamory and the following transitory screen will take place on the LCD



Once the LMS-2x6 Identifying Name is stored, the above screen will disappear leaving the place to the "Default" one.

Note: any time is possible to quit the storing action just pushing the "ESC" button.



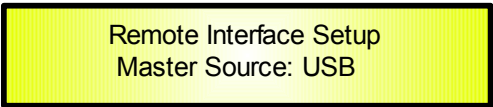
Interface Sub-menu – this sub-menu allows to access just one Page for the definition of the Remote Control interface to be used for controlling One or More LMS-2x6 (if working with the RS485 interface).

From the "Interface sub-menu", just pushing the "ENTER" button the following page can be accessed

- **Interface Setup:** this "single page" page allows to chose the way of controlling the LMS-2x6 by a remote control system.

From this page, pushing the "ENTER" button, can be accessed the futher page allowing to chose the Physical Layer for the Remote control of the LMS-2x6.

Particularly, the LMS-2x6 can be remotely controlled by an USB interface or by a RS485 interface



If the USB option is selected, then the LMS-2x6 can be controlled 1 to 1 by a Remote Control System (as the PC).

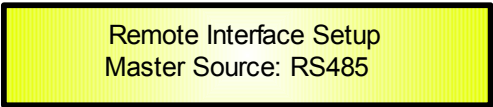
The USB connection allows the User to control with the Remote Control System ONLY one LMS-2x6 at time.

If the RS485 option is selected, then the Remote Control System can control MORE LMS-2x6 at the same time.

For controlling more LMS-2x6 at the same time, it is necessary to assign to each Unit connected to the Remote Control Net, and ID number.

Up to 32 LMS-2x6 can be controlled all together by the same Remote Control System.

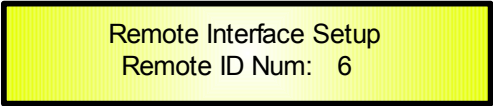
Once selected the RS485 option for the Remote Interface



Rotating clockwise the "NAV/PAR1" encoder, the page "Remote ID Num" can be accessed and in this page just using the "PAR2" or "PAR3" encoder, the ID number for the LMS-2x6 can be assigned, for the Mutli devices Remote Control.

Once assigned the ID number, it has to be confirmed by the "ENTER" button.

If i.e., the ID Number 6 is assigned to the unit, the page will show the following





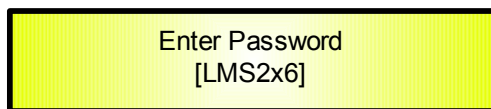
Security Sub-menu – this sub-menu allows the User to set a Password for locking the LMS-2x6, making the Unit's functions and controls not accessible by the User.

- **Unit Lock:** from this page, pushing the "ENTER" button, the "**Enter Password**" page is entered.

In this page the User can edit a **6 Characters** Password Name just using the "PAR2" or "PAR3" encoder to chose the character and the "NAV/PAR1" encoder to move between the 6 available locations for the password name's characters positioning.

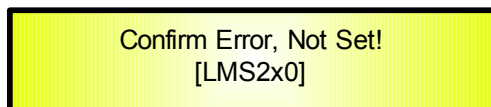
The current position of the cursor for the characters' entering is shown by a "blinking underscore".

During this editing phase, the display is as follow (i.e. assigning to the password the "LMS2x6" name)



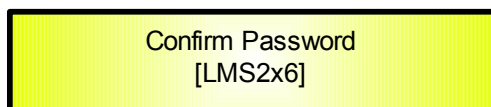
Once edited the Password's name, pushing again the "ENTER" button the "**Confirm Password**" page is entered and the LMS-2x6 will ask to write again the previously edited password for confirming it.

If the password entered in the "Confirm Password" page is not matching the one edited in the "Enter Password" page (as i.e. Entering "LMS2x0"), then the screen will show the following message



And the LMS-2x6 will exit the "Unit Lock" sub-menu and jump to the "Default" screen.

If the password entered in the "Confirm Password" page is matching the one edited in the "Enter Password" page



Then the following Temporary screen will appear



After the unit is locked, the "Unit Lock" menu will be exited automatically and the LMS-2x6 will go back to the "Default" screen showing the current preset running and aside its name a "Lock" icon indicating that the LMS-2x6 is locked.

In "**Locked Status**", the all LMS-2x6 functions are inhibited to the User, with the exception of the ACTIVE A1/A2 and MUTE 1/2/3/4/5/6 buttons, which can be used for muting the Input and Output Channels.

Note: to "Unlock" the LMS-2x6, it is enough to press the "Lock" button and enter the Correct Password.



- **Menu "Input A/B" Input Channles Editing [accessed pushing and maintaining pressed for at least 1 second the "A1/A2" buttons]**

From the "Default Screen", it is possible access the "Input A1/A2" menu pushing the "A1" or "A2" button and the Sub-Menus pages can be selected just rotating clockwise and counter-clockwise the "NAV/PAR1" encoder.

For the parameter editing it is on some page enough to use the "PAR2" and "PAR3" encoder for editing and setting the parameters' values, on some other page, for editing and changing properly the parameters' values (as i.e. For the filters' parameters setting) need to push the "ENTER" button in order to enter a page's sub-menu allowing to use each encoder for setting 3 independent parameters.

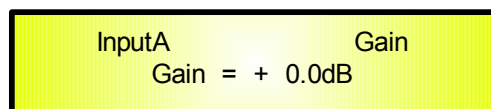
Note: in the all pages' options, the all possible selections can be selected as said by the "NAV/PAR1", "PAR2", and "PAR3" encoders and the current shown value of the selected option is AUTOMATICALLY loaded during the encoders' use and stored as current value once left the page.

Audio Signal Input (A/B) Path Block Scheme



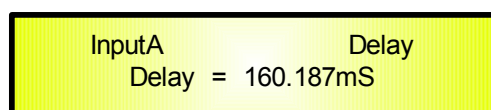
Gain page – from this page it is possible to set the Input Channels Level from -12db to +12dB, just using the "PAR1" or "PAR2".

The value set in this page it is affecting ONLY the input level of the selected Channel, A or B. The Screenshot of the "Gain" page is the following (i.e. setting the Gain of the Input Channel A to +0.0dB)



Delay page – from this page it is possible to set the Input Channels Delay Time from 000.000mS up to 680.979mS, by steps of 1mS or 21uS.

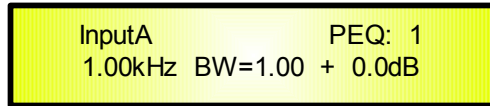
Actually to set the Delay time can be used the "PAR2" encoder for setting the Delay Time by steps of 1mS, and the "PAR3", for setting the "fine" Delay Time by steps of 21 microseconds, corresponding to the sampling period adopted by the unit, running at a sampling rate of 48kHz. The Screenshot of the "Delay" page is the following (i.e. setting the Delay Time of the Input Channel A to 160.187mS)



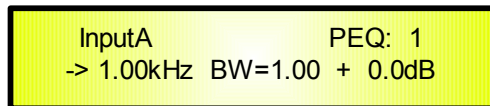


PEQ: [x] sub-menu – from this sub-menu it is possible to set the Input Channels 10 available Parametric Filters.

If "x" is i.e. The Parametric Filter Number 1, then the PEQ sub-menu screen will show the following



Actually to set the values of the Filter's parameters, it is necessary to push the "ENTER" button so to enter the Filter's edit page and to be able to use the "NAV/PAR1", "PAR2" and "PAR3" encoders for editing the Filter's Center Freq., Bandwidth BW and Gain. Particularly, the Center Frequency of the Paramteric Filter can be edited using the "NAV/PAR1" encoder, the BW the "PAR2" encoder and the Gain the "PAR3" encoder. Once entered the editing page, the above screen will change as follow



As we said, using the 3 encoders, the Center Fequency, the BW and the Gain of the filter can be edited and modified.

"Center Frequency": the range of the selectable frequencies is going from 20Hz to 20kHz by steps of 1/12 of Octave and can be accessed rotating the "NAV/PAR1" encoder.

"Bandwidth BW": the range of the selectable BW is going from 0.05 Oct to 3 Oct by steps of 0.05 Oct and can be accessed rotating the "PAR2" encoder.

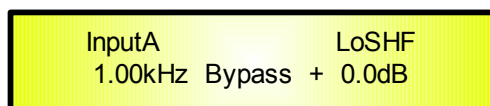
"Gain": the range of the selectable Gain is going from -15dB to +15dB by steps of 0.2 dB and can be accessed rotating the "PAR3" encoder.

Note1: once selected the desired options using the 3 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

Note2: to exit the editing filter's page, it is enough to push the "ESC" button.

LoSHF sub-menu – from this sub-menu it is possible to set the Input Channels Low Shelving Filter.

The LoSHF sub-menu screen, if the filter is bypassed, will show the following



To set the values of the Filter's parameters, it is necessary to push the "ENTER" button so to enter the Filter's edit page and to be able to use the "NAV/PAR1", "PAR2" and "PAR3" encoders for editing the Filter's Hi Cut Frequency, Filter's Order and Gain.

Particularly, the Hi Cut Frequency of the Low Shelving Filter can be edited using the "NAV/PAR1" encoder, the Filter's Order can chosen by the "PAR2" encoder and the Gain the "PAR3" encoder.



Once entered the editing page, the above screen will change as follow



As we said, using the 3 encoders, the Hi Cut Frequency, the Order and the Gain of the filter can be edited and modified.

“**Hi Cut Frequency**”: the range of the selectable frequencies is going from 20Hz to 20kHz by steps of 1/12 of Octave and can be accessed rotating the “NAV/PAR1” encoder.

“**Lo Shelving Order**”: the selectable Low Shelving Filter's Orders can be selected between the 1st (Lo-1st.) and the 2nd (Lo-2nd.) one.

It is also possible to Bypass the Low Shelving Filter, selecting the “Bypass” option.

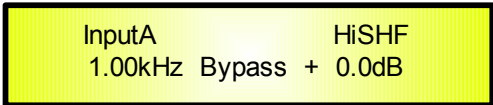
“**Gain**”: the range of the selectable Gain is going from -15dB to +15dB by steps of 0.2 dB and can be accessed rotating the “PAR3” encoder.

Note1: once selected the desired options using the 3 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

Note2: to exit the editing filter's page, it is enough o push the “ESC” button.

HiSHF sub-menu – from this sub-menu it is possible to set the Input Channels High Shelving Filter.

The HiSHF sub-menu screen, if the filter is bypassed, will show the following



To set the values of the Filter's parameters, it is necessary to push the “ENTER” button so to enter the Filter's edit page and to be able to use the “NAV/PAR1”, “PAR2” and “PAR3” encoders for editing the Filter's Low Cut Frequency, Filter's Order and Gain.

Particularly, the Low Cut Frequency of the High Shelving Filter can be edited using the “NAV/PAR1” encoder, the Filter's Order can chosen by the “PAR2” encoder and the Gain the “PAR3” encoder.

Once entered the editing page, the above screen will change as follow



As we said, using the 3 encoders, the Low Cut Frequency, the Order and the Gain of the filter can be edited and modified.

“**Low Cut Frequency**”: the range of the selectable frequencies is going from 20Hz to 20kHz by steps of 1/12 of Octave and can be accessed rotating the “NAV/PAR1” encoder.

“**High Shelving Order**”: the selectable Low Shelving Filter's Orders can be selected between the 1st (Hi-1st.) and the 2nd (Hi-2nd.) one.

It is also possible to Bypass the High Shelving Filter, selecting the “Bypass” option.

“**Gain**”: the range of the selectable Gain is going from -15dB to +15dB by steps of 0.2 dB and can be accessed rotating the “PAR3” encoder.

Note1: once selected the desired options using the 3 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

Note2: to exit the editing filter's page, it is enough to push the “ESC” button.



Polarity page – from this page it is possible to set the Input Channels Polarity, just using the "PAR1" or "PAR2".

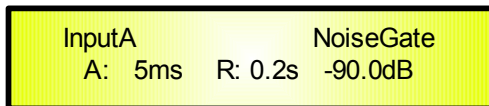
The polarity can be "Normal" or "Inverted" (which means rotated of 180 Degrees).

The Screenshot of the "Polarity" page is the following (i.e. setting the Polarity of the Input Channel A to "Normal")



NoiseGate sub-menu – from this sub-menu it is possible to set the Input Channels Noise Gate Process.

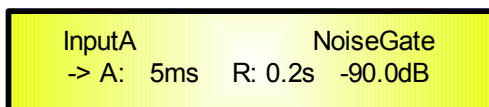
If i.e. The Attack Time of the Noise Gate is 5ms, the Release Time 0.2Sec and the Intervent Threshold set at -90dB, then the NoiseGate sub-menu screen will show the following



Actually to set the values of the Noise Gate's parameters, it is necessary to push the "ENTER" button so to enter the Noise Gate's edit page and to be able to use the "NAV/PAR1", "PAR2" and "PAR3" encoders for editing the Noise Gate's Attack Time [A]., Release Time [R] and Intervent Threshold.

Particularly, the Attack Time [A] of the Noise Gate can be edited using the "NAV/PAR1" encoder, the Release Time [R] the "PAR2" encoder and the Intervent Threshold the "PAR3" encoder.

Once entered the editing page, the above screen will change as follow



As we said, using the 3 encoders, the Attack Time [A], the Release Time [R] and the Intervent Threshold of the filter can be edited and modified.

"Attack Time [A]": the range of the selectable Noise Gate's Attack Time is going from 5ms to 200ms by steps of 1ms from 5ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms.

The Noise Gate's Attack Time can be accessed rotating the "NAV/PAR1" encoder.

"Release Time [R]": the range of the selectable Noise Gate's Release Time is going from 0.2s to 2s by steps of 0.1s and can be accessed rotating the "PAR2" encoder.

"Intervent Threshold": The range of the selectable Noise Gate's Threshold is going from OFF (-100dB; Noise Gate not active) to -90.0dB by steps of 1.0 dB and can be accessed rotating the "PAR3" encoder.

Note1: once selected the desired options using the 3 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

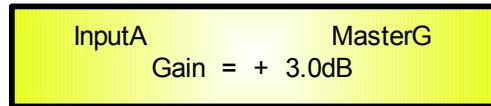
Note2: to exit the editing filter's page, it is enough o push the "ESC" button.



Master Gain page – from this page it is possible to set the Input Channels Master Level from -12db to +12dB, just using the "PAR1" or "PAR2".

The value set in this page it is affecting the input level of both Channels A and B.

The Screenshot of the "Gain" page is the following (i.e. setting the Master Gain +3.0dB)





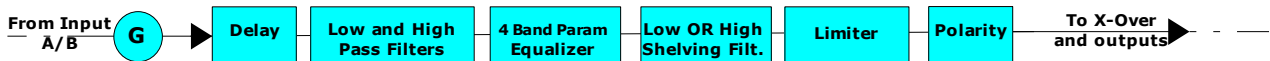
● Menu "Output 1/2/3/4/5/6" Output Channels Editing [accessed pushing and maintaining pressed for at least 1 second the "1/2/3/4/5/6" buttons]

From the "Default Screen", it is possible access the "Output 1/2/3/4/5/6" menu pushing the "1" or "2" or "3" or "4" or "5" or "6" button and the Sub-Menus pages can be selected just rotating clockwise and counter-clockwise the "NAV/PAR1" encoder.

For the parameter editing, it is on some page enough to use the "PAR2" and "PAR3" encoder for editing and setting the parameters' values, on some other page, for editing and changing properly the parameters' values (as i.e. For the filters' parameters setting) need to push the "ENTER" button in order to enter a page's sub-menu allowing to use each encoder for setting 3 independent parameters.

Note: in the all pages' options, the all possible selections can be selected as said by the "NAV/PAR1", "PAR2", and "PAR3" encoders and the current shown value of the selected option is AUTOMATICALLY loaded during the encoders' use and stored as current value once left the page.

Audio Signal Output (1/2/3/4/5/6) Path Block Scheme



HPF sub-menu – from this sub-menu it is possible to set the Output Channels High Pass Filter.

The HPF sub-menu screen, if the filter is 24dB Linkwitz/Riley on the Output1...named "Low" (see later for assigning a Name to the outputs..), will show the following



To set the values of the Filter's parameters, it is enough to use the "PAR2" and "PAR3" encoders for editing the Filter's Low Cut Frequency and the Filter's Type and Order.

Particularly, the Low Cut Frequency of the High Pass Filter can be edited using the "PAR2" encoder and the Filter's Type and Order the "PAR3" encoder.

"Low Cut Frequency": the range of the selectable frequencies is going from 20Hz to 20kHz by steps of 1/12 of Octave and can be accessed rotating the "PAR2" encoder.

"High Pass Type and Order": this page allow to select the X-Over's High Pass Filter Shape and Order.

The available shapes and orders for the High Pass Filter, accessible rotating the "PAR3" encoder, is listed below:

- NoCut-Off (High Pass Filter Bypassed)
- Butwrth 6dB (Butterworth Filter 6dB/Oct Slope)
- Butwrth 12dB (Butterworth Filter 12dB/Oct Slope)
- Lnk/Ril 12dB (Linkwitz/Riley Filter 12dB/Oct Slope)
- Bessel 12dB (Bessel Filter 12dB/Oct Slope)
- Chebysv 12dB (Chebyshev Filter 12dB/Oct Slope)



- Butwrth 18dB (Butterworth Filter 18dB/Oct Slope)
- Chebysv 18dB (Chebyshev Filter 18dB/Oct Slope)
- Butwrth 24dB (Butterworth Filter 24dB/Oct Slope)
- Lnk/Ril 24dB (Linkwitz/Riley Filter 24dB/Oct Slope)
- Chebysv 24dB (Chebyshev Filter 24dB/Oct Slope)

Note1: once selected the desired options using the 2 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

Note2: to exit the editing filter's page, it is enough to push the "ESC" button.

LPF sub-menu – from this sub-menu it is possible to set the Output Channels Low Pass Filter. The LPF sub-menu screen, if the filter is 24dB Linkwitz/Riley on the Output1...named "Low" (see later for assigning a Name to the outputs..), will show the following



To set the values of the Filter's parameters, it is enough to use the "PAR2" and "PAR3" encoders for editing the Filter's High Cut Frequency and the Filter's Type and Order. Particularly, the High Cut Frequency of the Low Pass Filter can be edited using the "PAR2" encoder and the Filter's Type and Order the "PAR3" encoder.

"High Cut Frequency": the range of the selectable frequencies is going from 20Hz to 20kHz by steps of 1/12 of Octave and can be accessed rotating the "PAR2" encoder.

"Low Pass Type and Order": this page allow to select the X-Over's Low Pass Filter Shape and Order.

The available shapes and orders for the Low Pass Filter, accessible rotating the "PAR3" encoder, is listed below:

- NoCut-Off (Low Pass Filter Bypassed)
- Butwrth 6dB (Butterworth Filter 6dB/Oct Slope)
- Butwrth 12dB (Butterworth Filter 12dB/Oct Slope)
- Lnk/Ril 12dB (Linkwitz/Riley Filter 12dB/Oct Slope)
- Bessel 12dB (Bessel Filter 12dB/Oct Slope)
- Chebysv 12dB (Chebyshev Filter 12dB/Oct Slope)
- Butwrth 18dB (Butterworth Filter 18dB/Oct Slope)
- Chebysv 18dB (Chebyshev Filter 18dB/Oct Slope)
- Butwrth 24dB (Butterworth Filter 24dB/Oct Slope)
- Lnk/Ril 24dB (Linkwitz/Riley Filter 24dB/Oct Slope)
- Chebysv 24dB (Chebyshev Filter 24dB/Oct Slope)

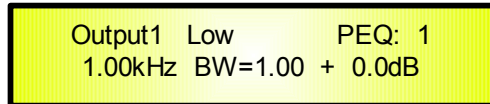
Note1: once selected the desired options using the 2 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

Note2: to exit the editing filter's page, it is enough to push the "ESC" button.



PEQ: [x] sub-menu – from this sub-menu it is possible to set the Output Channels 4 available Parametric Filters.

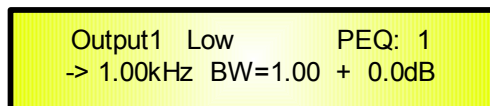
If "x" is i.e. The Parametric Filter Number 1, then the PEQ sub-menu screen will show the following



Actually to set the values of the Filter's parameters, it is necessary to push the "ENTER" button so to enter the Filter's edit page and to be able to use the "NAV/PAR1", "PAR2" and "PAR3" encoders for editing the Filter's Center Freq., Bandwidth BW and Gain.

Particularly, the Center Frequency of the Parametric Filter can be edited using the "NAV/PAR1" encoder, the BW the "PAR2" encoder and the Gain the "PAR3" encoder.

Once entered the editing page, the above screen will change as follow



As we said, using the 3 encoders, the Center Frequency, the BW and the Gain of the filter can be edited and modified.

"Center Frequency": the range of the selectable frequencies is going from 20Hz to 20kHz by steps of 1/12 of Octave and can be accessed rotating the "NAV/PAR1" encoder.

"Bandwidth BW": the range of the selectable BW is going from 0.05 Oct to 3 Oct by steps of 0.05 Oct and can be accessed rotating the "PAR2" encoder.

"Gain": the range of the selectable Gain is going from -15dB to +15dB by steps of 0.2 dB and can be accessed rotating the "PAR3" encoder.

Note1: once selected the desired options using the 3 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

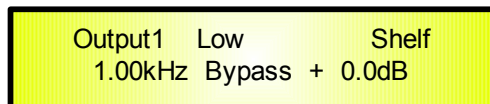
Note2: to exit the editing filter's page, it is enough to push the "ESC" button.

Shelf sub-menu – from this sub-menu it is possible to select the Shelving Filter type and Order.

The selectable Shelving filters are Lo (Low Shelving) or Hi (High Shelving) and the Filters' order can be selected between the 1st and the 2nd one.

It is also possible to Bypass the Shelving filter, selecting the "Bypass" option.

The LoSHF sub-menu screen, if the filter is bypassed, will show the following

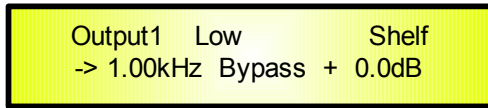


To set the values of the Filter's parameters, it is necessary to push the "ENTER" button so to enter the Filter's edit page and to be able to use the "NAV/PAR1", "PAR2" and "PAR3" encoders for editing the Filter's Cut Frequency, Filter's Type and Order and Gain.

Particularly, the Cut Frequency of the Selected Shelving Filter can be edited using the "NAV/PAR1" encoder, the Filter's Type and Order can chosen by the "PAR2" encoder and the Gain the "PAR3" encoder.



Once entered the editing page, the above screen will change as follow



As we said, using the 3 encoders, the Cut Frequency, the Type and Order and the Gain of the filter can be edited and modified.

“**Cut Frequency**”: the range of the selectable frequencies is going from 20Hz to 20kHz by steps of 1/12 of Octave and can be accessed rotating the “NAV/PAR1” encoder.

“**Shelving Type Order**”: the selectable Shelving Filter's Type can be selected between Low and High Shelving, and the Orders can be selected between the 1st (Lo/Hi-1st.) and the 2nd (Lo/Hi-2nd.) one.

It is also possible to Bypass the Shelving Filter, selecting the “Bypass” option.

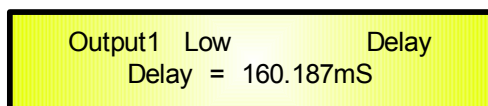
“**Gain**”: the range of the selectable Gain is going from -15dB to +15dB by steps of 0.2 dB and can be accessed rotating the “PAR3” encoder.

Note1: once selected the desired options using the 3 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

Note2: to exit the editing filter's page, it is enough to push the “ESC” button.

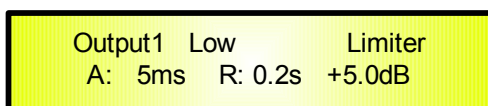
Delay page – from this page it is possible to set the Output Channels Delay Time from 000.000mS up to 680.979mS, by steps of 1mS or 21uS.

Actually to set the Delay time can be used the “PAR2” encoder for setting the Delay Time by steps of 1mS, and the “PAR3”, for setting the “fine” Delay Time by steps of 21 microseconds, corresponding to the sampling period adopted by the unit, running at a sampling rate of 48kHz. The Screenshot of the “Delay” page is the following (i.e. setting the Delay Time of the Output Channel 1 to 160.187mS)



Limiter sub-menu – from this sub-menu it is possible to set the Output Channels Limiter.

If i.e. The Attack Time of the Limiter is 5ms, the Release Time 0.2Sec and the Intervent Threshold set at +5dB, then the Limiter sub-menu screen will show the following

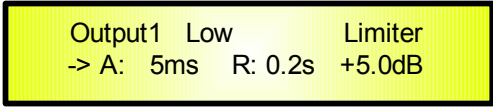


Actually to set the values of the Limiter's parameters, it is necessary to push the “ENTER” button so to enter the Limiter's edit page and to be able to use the “NAV/PAR1”, “PAR2” and “PAR3” encoders for editing the Limiter's Attack Time [A], Release Time [R] and Intervent Threshold.

Particularly, the Attack Time [A] of the Limiter can be edited using the “NAV/PAR1” encoder, the Release Time [R] the “PAR2” encoder and the Intervent Threshold the “PAR3” encoder.



Once entered the editing page, the above screen will change as follow



As we said, using the 3 encoders, the Attack Time [A], the Release Time [R] and the Intervent Threshold of the filter can be edited and modified.

“**Attack Time [A]**”: the range of the selectable Limiter's Attack Time is going from 5ms to 200ms by steps of 1ms from 5ms to 20ms, 5ms from 20ms to 30ms, 10ms from 30ms to 100ms, 20ms from 100ms to 200ms.

The Limiter's Attack Time can be accessed rotating the “NAV/PAR1” encoder.

“**Release Time [R]**”: the range of the selectable Limiter's Release Time is going from 0.2s to 2s by steps of 0.1s and can be accessed rotating the “PAR2” encoder.

“**Intervent Threshold**”: the range of the selectable Limiter's Threshold is going from +20dB (Limiter not active) to -10.0dB by steps of 0.5 dB and can be accessed rotating the “PAR3” encoder.

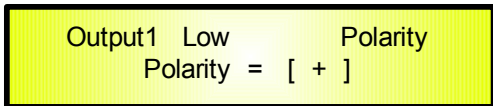
Note1: once selected the desired options using the 3 encoders, they are automatically accepted as current ones during the selection and stored in the LMS-2x6 system status once left the page.

Note2: to exit the editing filter's page, it is enough to push the “ESC” button.

Polarity page – from this page it is possible to set the Output Channels Polarity, just using the “PAR1” or “PAR2”.

The polarity can be “Normal” or “Inverted” (which means rotated of 180 Degrees).

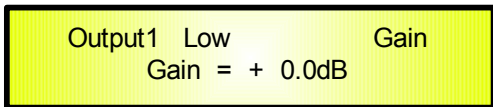
The Screenshot of the “Polarity” page is the following (i.e. setting the Polarity of the Output Channel 1 to “Normal”)



Gain page – from this page it is possible to set the Output Channels Level from -12db to +12dB, just using the “PAR1” or “PAR2”.

The value set in this page it is affecting ONLY the Output level of the selected Channel, 1/2/3/4/5 or 6.

The Screenshot of the “Gain” page is the following (i.e. setting the Gain of the Output Channel 1 to +0.0dB)

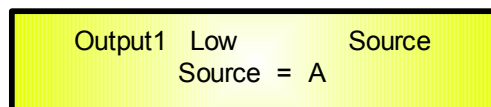




Source page – from this page it is possible to assign the Input for the edited Output Channel. Particularly, to any Output Channel can be assigned one of the following Inputs:

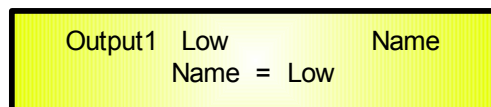
1. Input A
2. Input B
3. Sum of Input A + Input B

The Screenshot of the "Source" page is the following (i.e. Assigning to the Output Channel 1 the Input A)

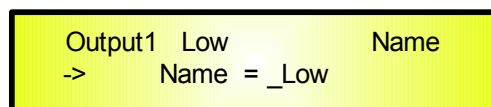


The Input for the edited Output channel can be selected rotating either "PAR2" or "PAR3".

Name page – from this page it is possible to assign a NAME to the edited Output Channel. To Edit and assign a 6 Characters Name to the edited Output Channel, it is necessary from the Name Page to push the "ENTER" button so to access the Name editing phase. The Screenshot of the "Name" page is the following (i.e. When the name is "Low" for the Output Channel 1)



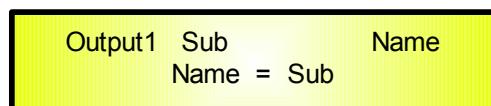
To Edit a new Name, push "ENTER" button and the following page will appear



Where the "underscore" will be blinking.

Now, just select the Character position from 6 available, sliding between them using the "NAV/PAR1" encoder, then using the "PAR2" or "PAR3" encoder, it is possible to select the desired character for Editing the desired Name.

Once defined the new Name, i.e. "Sub", push the "ENTER" button for confirming the edited Name....an the new name will take the place of the old one on the screen





● **LMS-2x6 Technical Specifications**

The LMS-2x6 Digital Speaker Processor is based on a powerful analog and digital 4xDSP platforms having the following specifications

Analog Input Signal:	ChA/ChB,	Bal. Female XLR
Maximum Input Level:	+20dBu	
Analog Output Signal:	Ch1/Ch2/Ch3/Ch4/Ch5/Ch6	Bal. Male XLR
Maximum Output Level:	+20dBu	
Digital Processing (DSP):	4xTMS57002, 24bits (data) x 32 bits (coeff.)	
A/D Converters:	AKM5383, 24bits	
D/A Converters:	AKM4393, 24bits	
Sampling Frequency:	48kHz	
S/PDIF Stereo Digital Input:	32kHz, 44.1kHz and 48kHz Sources Accepted	
S/N:	106dBA; 115dBA [With Noise Gate Active]	
THD+N:	0.005%	
Frequency Response (Bypass):	20Hz – 20kHz (+- 1 dB)	
Power Supply:	Switching Power Supply	
Remote Control:	USB, RS485 [For Multiprocessors Net]	