ALMA26

DIGITAL PROCESSOR

Digital Loudspeaker Manager

USER MANUAL

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1. IMPORTANT REMARK

WARNING: SHOCK HAZARD - DO NOT OPEN

AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING (If applicable): The terminals marked with symbol of "  " may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the use of ready-made leads or cords.

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

WARNING: An apparatus with Class I construction shall be connected to a mains socket-outlet with a protective earthing connection.

2. IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the apparatus during lightening sorts or when unused for long periods of time.
13. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Disconnecting from mains: When switching off the POWER switch, all the functions and light indicators of the unit will be stopped, but fully disconnecting the device from mains is done by unplugging the power cable from the mains input socket. For this reason, it always shall remain easily accessible.
15. Equipment is connected to a socket-outlet with earthing connection by means of a power cord.
16. The marking information is located at the bottom of the unit.
17. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on apparatus.

WARNING: This product must not be discarded, under any circumstance, as unsorted urban waste. Take to the nearest electrical and electronic waste treatment centre.

NEEC AUDIO BARCELONA, S.L. accepts no liability for any damage that may be caused to people, animal or objects due to failure to comply with the warnings above.

3. IMPORTANT NOTE

Thank you for choosing our Ecler **ALMA26 Digital Loudspeaker Manager**!

It is **VERY IMPORTANT to carefully read this manual and to fully understand its contents before any connection** in order to maximize your use and get the best performance from this equipment.

To ensure optimal operation of this device, **we strongly recommend that its maintenance be carried out by our authorised Technical Services**.

All ECLER products are covered by warranty, please refer to www.ecler.com or the warranty card included with this product for the period of validity and conditions.

4. COMPLIANCE WITH INTERNATIONAL STANDARDS

The ALMA26 processor complies with the following international standards:

- EN55103-1 Electromagnetic Compatibility.
  Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use
  Part 1: Emission
- EN55103-2 Electromagnetic Compatibility.
  Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use
  Part 2: Immunity
- EN60065 Audio, video and similar electronic apparatus. Safety requirements.
  Complying with the requirements of directives 73/23/EC and 2004/108/EC

5. INTRODUCTION

ALMA26 is a digital signal processor featuring 2 audio inputs and 6 audio outputs, USB connectivity and two ports of volume remote control (0-10VDC).

5.1 Main features

- 2 audio inputs and 6 audio outputs, with XLR connectors
- DSP with 24-bit quantization and 48kHz sampling frequency
- 2x20 characters LCD display in front panel
- 4 setup keys + digital rotary encoder to navigate in the menus and set the parameters
- 1 LED backlit key (MUTE function) for each input and each output (8 in total)
- Level meters for each input and each output
- 2 REMOTE ports to control the volume of the inputs or outputs (0-10VDC) from external devices, such as WPm series panels
- USB interface and compatibility with EclerCOMM software (free download from http://www.ecler.com/en/products/software.html)
- Processing:
    - Controls of gain, phase, MUTE, etc., per input and output
    - 4 pEQ (parametric filters) per input/8 pEQ per output
    - Butterworth, Bessel or Linkwitz-Riley crossovers on the outputs (up to 48 dB/oct)
    - Delays on the inputs and outputs
    - Compressor/limiter on the outputs (with make-up gain)
    - 3 LINK groups (linking output channels)
- System templates for the creation of user setups:
    - T1: 3 x 1 stereo way
    - T2: 2 stereo ways + 1 stereo way
    - T3: 3 stereo ways
    - T4: 4 mono ways + 2 mono auxiliaries
    - T5: 5 mono ways + 1 mono auxiliary
    - T6: 6 mono outputs
- Each system template automatically sets the operating and control mode of the channels and their settings, including the LINK group they pertain to. Example: in a stereo setup, the settings applied to a left channel output will be automatically applied to the output which is assigned to the right channel, and vice versa (same LINK group)
- User presets: 20
- Editing names (labels) of inputs, outputs, presets and device
- Two front panel lock modes with password protection (full lock or excluding MUTE keys).

6. INSTALLATION

The ALMA26 can be mounted in a standard 19” rack (482.6 mm) taking up one height unit (44 mm).

For professional use it is recommended to place the processor in the same rack as the power amplifiers.

Given the small power consumption of the unit, no ventilation is required. Nevertheless, it is advisable not to expose the unit to extreme temperatures as well as ensure a dry and dust-free operating environment.

It is important not to place the processor next to electrical noise sources such as transformers, voltage dimmers, motors, etc. or their mains supply cables. The metal cover of the device should never be removed under any circumstance for that same reason.

The ALMA26 operates with alternate current (AC) between 100 and 240V at 47 to 63Hz. This device features an oversized power supply which adapts itself to any mains voltage around the world, without the need of manual adjustment.

Even though the noise produced by powering up is minimum, it is always advisable to follow this power up sequence: signal sources, mixing unit, processor and, finally, power amplifiers. The power down sequence must follow exactly a reverse order. By closely following this sequences, all peaks or transients produced by switching on and off devices do not affect the next devices in the chain and, of course, never reach the loudspeakers, which are extremely sensitive about this.

6.1 Ground Loops

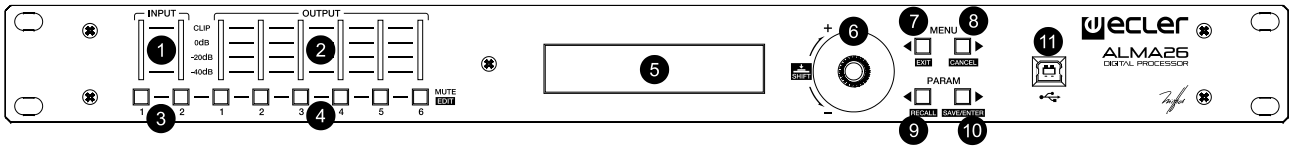
Care should be taken, so that the different mechanical and electrical grounds, as well as the chassis and ground connections arriving to the device, to be independent from each other.

Ground loops can be easily detected through a low frequency hum noise (50Hz). Depending on the level of this noise, it can interfere on the music quality.

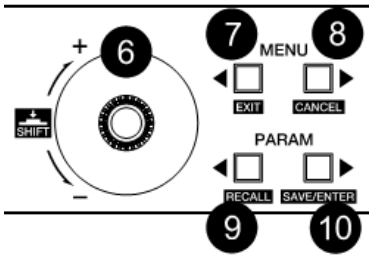
6.2 Audio connections

Usually, many people do not care enough about the quality of cables. Many times, because of a bad connection or bad quality cables, there can be important problems during the music reproduction.

7. FRONT PANEL



- **Input and output VU meters**
  Each input (**1**) or output (**2**) VU meter allows you to read the level of the audio signal, with 40dB, -20dB, 0dB and CLIP indications.
- **MUTE keys**
  These keys, one for each input (**3**) or output (**4**), allow to mute the selected input or output by pressing them. The LED integrated in the key itself indicates the status of its MUTE function (lit red = MUTE ON).
- **LCD display (5)**
  Display showing numeric data and setup menus, settings and device information.
- **Encoder-type rotary selector**
  The rotary selector (**6**) allows you to modify the value of the parameters displayed on the LCD screen, by increasing or decreasing them depending on the direction of rotation. The rotary ENCODER features a push function ("SHIFT") in addition to the rotation function. The SHIFT function allows you to access advanced setup modes and alternate functions of the four navigation keys of the front panel (reverse silk-screen printing: EXIT, CANCEL, RECALL and SAVE/ENTER).
- **Setup keys**
  The four front panel setup keys allow you to navigate through the various menus and their pages, and access special features thanks to certain combinations of keys pressed simultaneously:



The **left and right MENU keys** (**7, 8**) allow you to scroll through the different pages of the unit's setup menus.

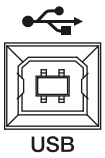
The **left and right PARAM keys** (**9, 10**) allow, within a menu and a page, to select the parameter whose value has to be modified with the rotary encoder (6): the name of the targeted parameter flashes in the display while its value can be edited.

The special combinations of the setup keys are:

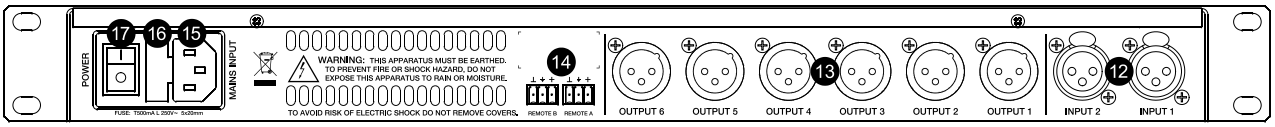
- **Left and right MENU simultaneously for 2 seconds**: access to the unit's SETUP menu (see chapter 9)
- **Left and right PARAM simultaneously for 2 seconds**: access to the unit's front panel locking/unlocking and password management (see chapter 10)
- **SHIFT + left MENU (EXIT):** bring back to the main screen, from any menu
- **SHIFT + right MENU (CANCEL):** undo the last parameter editing and recall the value as before the change
- **SHIFT + left PARAM (RECALL):** load one of the presets (device setups) stored in the memory
- **SHIFT + right PARAM (SAVE/ENTER):**
  - SAVE: save a preset (device setup) into memory
  - ENTER: confirm a critical modification (e.g.: password change)
- **Right MENU, kept pressed while powering up the unit**: load preset #1, designed to be edited and saved in order to be used as booting setup. This operation is allowed even when the unit's front panel is locked with a password.

- **USB Connector**

A type-B USB connector (11) is used to connect the ALMA26 to a PC and perform the unit management and control from EclerCOMM Manager software.



8. BACK PANEL



The back panel features the following connections:

- **Mains, fuse and power switch (15, 16, 17)**
  Due to the switched mode power supply, the operating voltage range is 100V – 240V AC, with a frequency between 47Hz and 63Hz. Before powering up the unit, make sure that the ALMA26 is correctly connected to ground in a facility that complies with local regulations.
- **Input (12) and output (13) connectors**
  The ALMA26 has two balanced audio inputs (CH1 and CH2) on 3-pin female XLR connectors (pin 1 to ground, pin 2 to signal + (positive) and pin 3 to signal – (negative)). The ALMA26's signal output is performed through six balanced outputs (OUTPUT1-6), on 3-pin male XLR connectors. As for inputs, the connectors are configured with the pin 1 to ground, pin 2 to signal + (positive) and pin 3 to signal – (negative).
- **REMOTE connectors (14)**
  The A and B REMOTE connectors allow you to simultaneously control the volume of one or multiple inputs, or one or multiple outputs through a WPm series wall panel or similar (0-10VDC). The inputs or outputs controlled through each REMOTE port are selected using the device setup menu (front keys and LCD display) or from EclerCOMM Manager software.

9. MAIN SCREEN/PRESET MANAGEMENT

After powering up the unit, its main screen displays the name or label of the device (default is ALMA26) on the top line of text. The lower line shows the number and name (LABEL) of the active preset or template:

An asterisk to the right of the preset number indicates that it has been modified and not yet saved in the memory of the ALMA26.

9.1. Recall Preset Menu

The ALMA26 has 6 operating templates, which are used as a starting point for the configuration of an operating mode:

- T1: 3 x 1 stereo way
- T2: 2 stereo ways + 1 stereo way
- T3: 3 stereo ways
- T4: 4 mono ways + 2 mono auxiliaries
- T5: 5 mono ways + 1 mono auxiliary
- T6: 6 mono outputs

It is therefore possible to recall one of these templates, to edit its parameters and save the resulting setup as a PRESET or user memory.

System templates are displayed on the screen with the Txx prefix, where xx is the template number (between 01 and 06), followed by its name or LABEL. These files are not rewritable.

User presets are displayed on the screen with the Pxx prefix, where xx is the preset number (between 01 and 20), followed by its name or LABEL. The default name of all user presets is USER PRESET, but it can be modified when you save one of them in memory.

The procedure for recalling a preset or a user template is the following one:

- From the main menu, press SHIFT + RECALL
- The RECALL PRESET message is displayed and a preset number is flashing

- Select the preset or template using the rotary control, and then select one of the two following options:
    - Press SHIFT + RECALL to validate the selection and activate the new preset, bringing you back to the main screen, this time with data from the new active preset

      Or

    - Press SHIFT + CANCEL to cancel the selection and display again the preset from the selection list

Pressing SHIFT + EXIT at any point during the above process cancels the selection and brings the main screen back.

9.2. Save Preset Menu

Once you have edited the active preset or template, the procedure to save the current setup in a user preset memory is the following one:

- From the main menu, press SHIFT + SAVE
- The SAVE PRESET message is displayed and a preset number is flashing

- Select the user preset using the rotary control, and then select one of the two following options:
    - Press SHIFT + SAVE to validate the selection

      Or

    - Press SHIFT + CANCEL to cancel the selection and display again the preset from the selection list

Pressing SHIFT + EXIT at any point during the above process cancels the selection and brings the main screen back.

If the selection is validated (SHIFT + SAVE) the following screen is displayed, allowing you to rename the destination preset:

To rename the preset:

- Press the right PARAM key to select the first character to edit
- Edit the new character with the rotary control
- Press the left or right PARAM key to select another character to edit
- Edit the new character with the rotary control
- Etc...
- Pressing SHIFT + CANCEL cancels all previous changes, displays the original name and maintains the edit mode in order to be able to rename the preset again
- Once all the desired characters are edited, confirm the changes by pressing SHIFT + SAVE, displaying the PRESET SAVED message for a few seconds. The preset is stored in memory, but is not selected as active preset just by the fact of having been saved
- The main screen returns, showing again the current preset at the time, and it is not necessarily the newly saved preset

Pressing SHIFT + EXIT at any point during the above process cancels the selection and brings the main screen back.

The parameters stored in a preset are:

- All the input and output settings, including their names (labels)
- The A and B REMOTE ports setup
- The internal signal generator setup

10. INPUT EDIT MENU

To open the edit menu for the settings of an input, you have to press SHIFT + MUTEx, MUTEx being the input 1 or 2 MUTE key.

Once in the edit menu for an input, and in one of its pages, it is possible to obtain the same page for the other input by pressing SHIFT + MUTEx, MUTEx being the input 2 MUTE key if you were editing the input 1, or 1 if you were editing the input 2.

The new edited values are activated in real time. You can cancel an edit operation, bringing back the value before editing, by pressing SHIFT + CANCEL.

To exit the Edit menu and return to the main screen:

- Press SHIFT + EXIT
- Press SHIFT + MUTEx (the MUTE key of the input x currently edited)
- Stay 2 minutes without operating any control on the front panel

The next page shows the full structure and options of the menu for setting inputs.

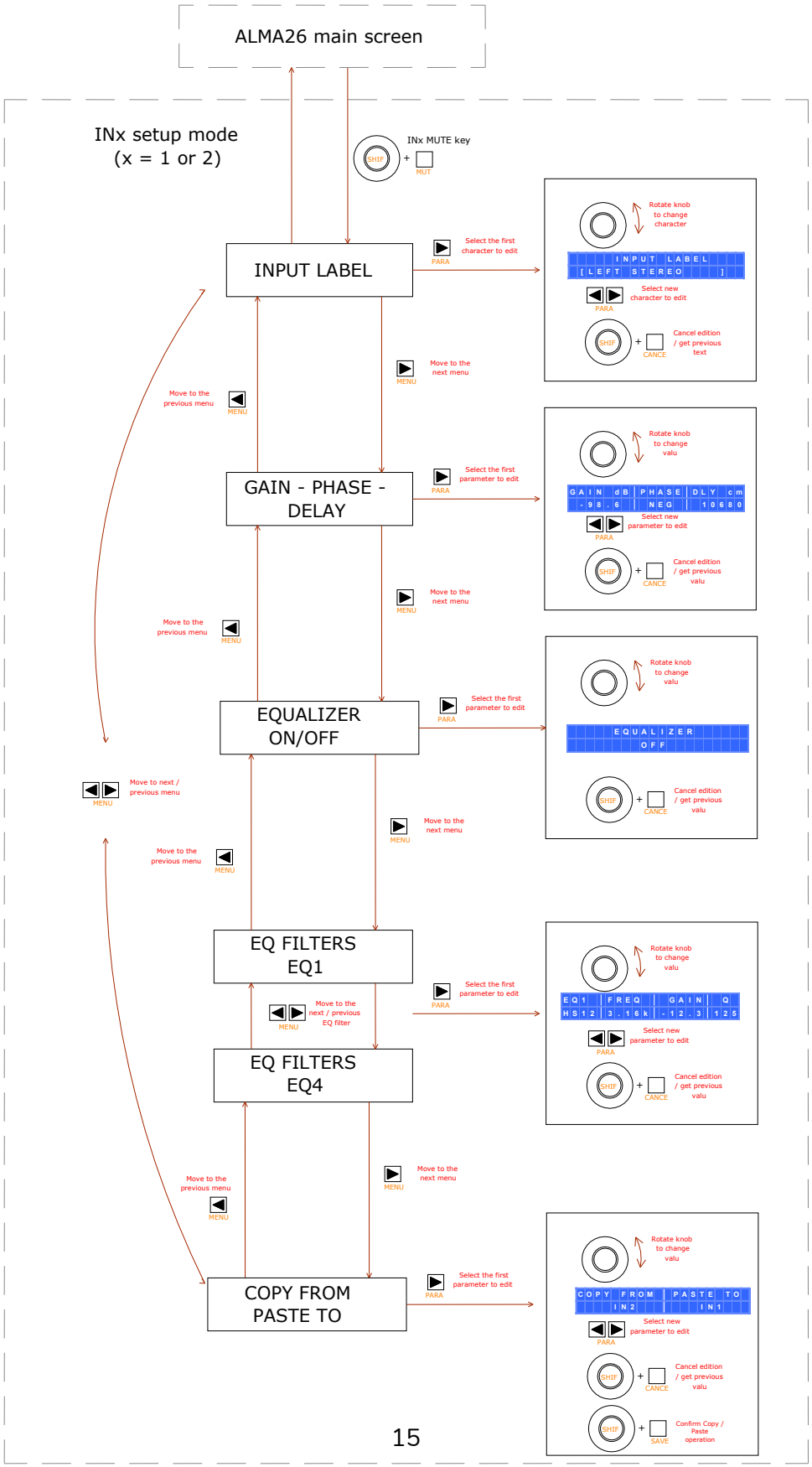
NOTES:

1. In the setting pages of the 4 parametric filters available for each input, the displayed abbreviations meaning is:
    - BYP: BYPASS (filter not activated)
    - PEQ: PARAMETRIC EQ
    - HS6 / HS12: HIGH SHELF 6 or 12 dB/octave
    - LS6 / LS12: LOW SHELF 6 or 12 dB/octave
    - HP6 / HP12: HIGH PASS 6 or 12 dB/octave
    - LP6 / LP12: LOW PASS 6 or 12 dB/octave
    - AP1 / AP2: ALL PASS 1st or 2nd order

2. The COPY FROM – PASTE TO operation copies all the settings from the source input to the destination input, except for its name (LABEL)

Front panel Inputs setup

To edit an INPUT setup, press & hold SHIFT (front knob press) and the IN1 or IN2 MUTE key. You will then enter into the INPUTs setup menu.
Press SHIFT + EXIT or wait 2 minutes to exit the setup mode.
Once in the setup mode of an input, press SHIFT + INx MUTE key to move to the current setup menu of the new INx input.



11. OUTPUT EDIT MENU

To open the edit menu for the settings of an output, you have to press SHIFT + MUTEx, MUTEx being the output 1 to 6 MUTE key.

Once in the edit menu for an output, and in one of its pages, it is possible to obtain the same page for another output by pressing SHIFT + MUTEx, MUTEx being the MUTE key for the other output.

The new edited values are activated in real time. You can cancel an edit operation, bringing back the value before editing, by pressing SHIFT + CANCEL.

To exit the Edit menu and return to the main screen:

- Press SHIFT + EXIT
- Press SHIFT + MUTEx (the MUTE key of the output x currently edited)
- Stay 2 minutes without operating any control on the front panel

The next page shows the full structure and options of the menu for setting outputs.

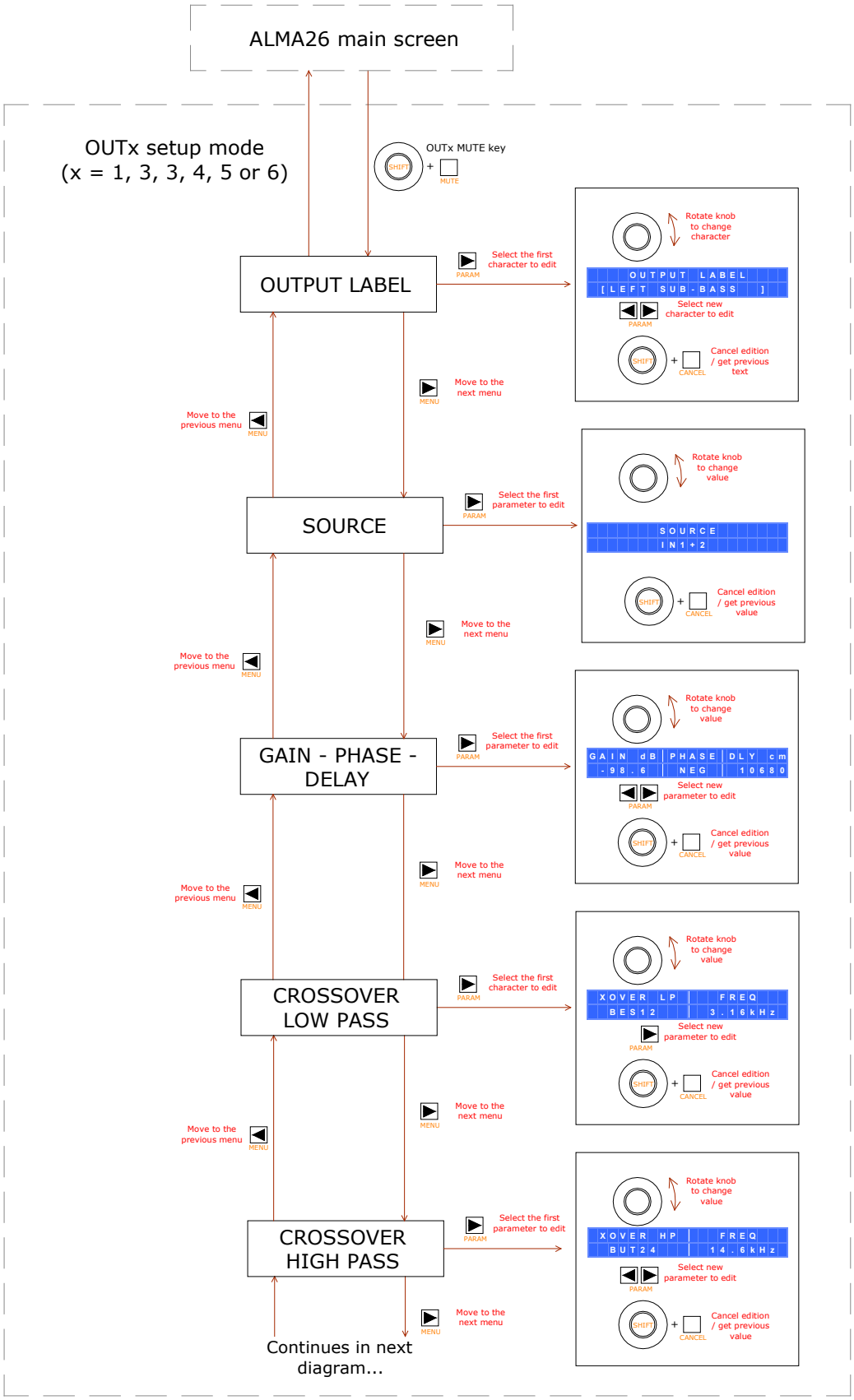
NOTES:

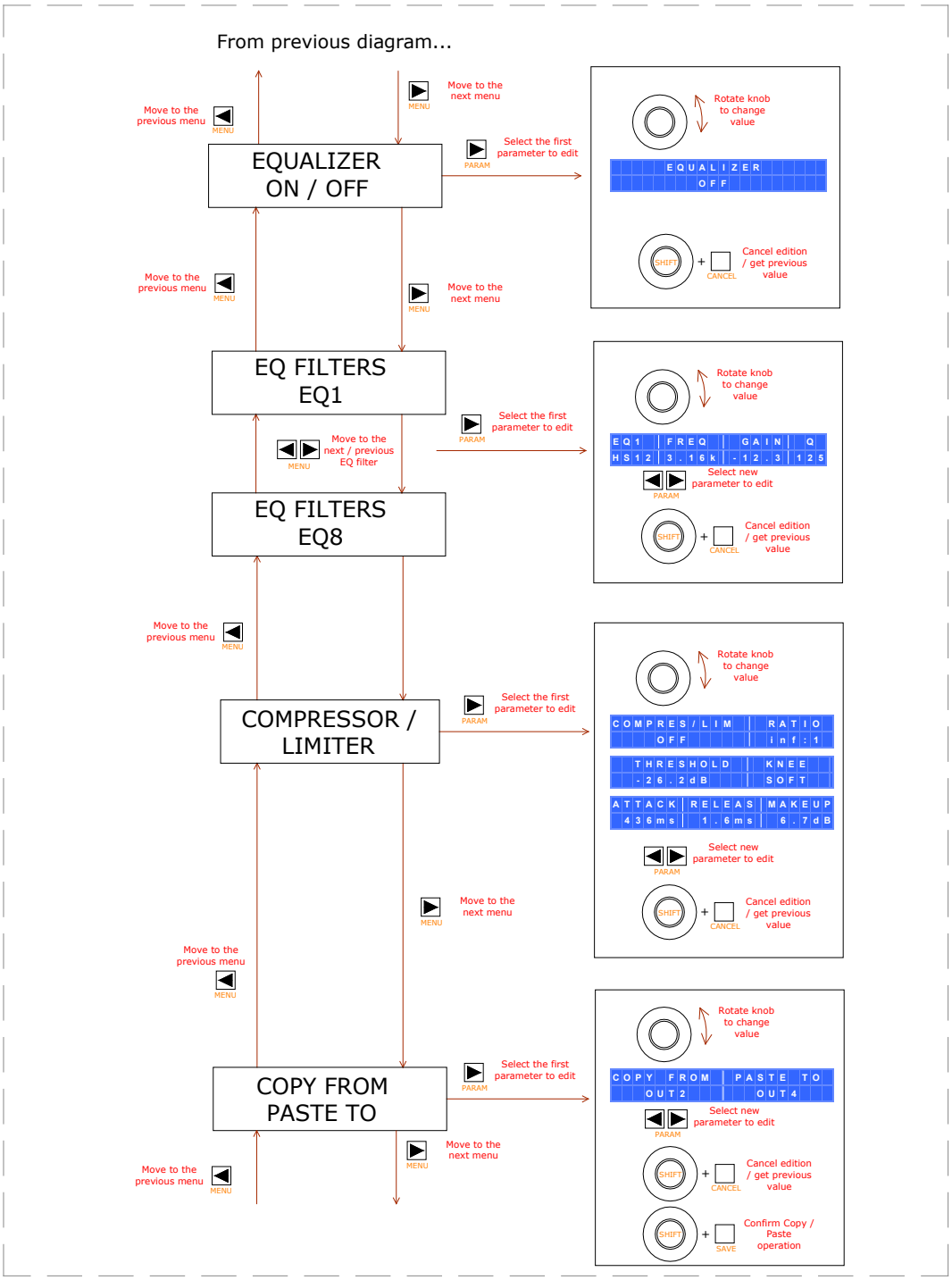
1. In the setting pages of the 8 parametric filters available for each output, the displayed abbreviations meaning is:
    - BYP: BYPASS (filter not activated)
    - PEQ: PARAMETRIC EQ
    - HS6 / HS12: HIGH SHELF 6 or 12 dB/octave
    - LS6 / LS12: LOW SHELF 6 or 12 dB/octave
    - HP6 / HP12: HIGH PASS 6 or 12 dB/octave
    - LP6 / LP12: LOW PASS 6 or 12 dB/octave
    - AP1 / AP2: ALL PASS 1st or 2nd order
2. In the setting pages of the Hi-Pass and Low-Pass crossover filters available for each output, the displayed abbreviations meaning is:
    - BYP: BYPASS (filter not activated)
    - BES12, 18, 24, 48: BESSEL-type filter, 12, 18, 24 or 48 dB/octave
    - BUT6, 12, 18, 24, 48: BUTTERWORTH -type filter, 6, 12, 18, 24 or 48 dB/octave
    - LR12, 24, 48: LINKWITZ-RILEY-type filter, 12, 24 or 48 dB/octave
3. The COPY FROM – PASTE TO operation copies all the settings from the source output to the destination output, except for its source selection (SOURCES) and its name (LABEL)

Front panel OUTPUTS setup

To edit an OUTPUT setup, press & hold SHIFT (front knob press) and an OUT1 to OUT6 MUTE key
You will then enter into the OUTPUTs setup menu.

Press SHIFT + EXIT or wait 2 minutes to exit the setup mode.
Once in the setup mode of an output, press SHIFT + OUTx MUTE key to move to the current setup menu of the new OUTx output.




From previous diagram...
EQUALIZER ON / OFF
EQ FILTERS EQ1
EQ FILTERS EQ8
COMPRESSOR / LIMITER
COPY FROM PASTE TO
Move to the previous menu
Move to the next menu
Select the first parameter to edit
Move to the next / previous EQ filter
Select new parameter to edit
Rotate knob to change value
Cancel edition / get previous value
Confirm Copy / Paste operation
EQUALIZER
OFF
EQ1 FREQ GAIN Q
HS12 3.16k -12.3 125
COMPRES/LIM RATIO
OFF Inf:1
THRESHOLD KNEE
-26.2dB SOFT
ATTACK RELEAS MAKEUP
436ms 1.6ms 6.7dB
COPY FROM PASTE TO
OUT2 OUT4

12. SETUP MENU

The ALMA26 offers a general setup menu (hereinafter SETUP menu), with parameters that globally affect the unit, such as unit name, internal signal generator, functions assigned to the REMOTE ports, etc.

To open the SETUP menu you have to simultaneously press and hold down the left and right MENU keys.

The new edited values are activated in real time. You can cancel an edit operation, bringing back the value before editing, by pressing SHIFT + CANCEL.

To exit the Edit menu and return to the main screen:

- Press SHIFT + EXIT
- Stay 2 minutes without operating any control on the front panel

The next page shows the full structure and options of the SETUP menu.

NOTES:

1. In the assignation page of the REMOTE 1 or REMOTE 2 ports to the volume control of inputs or outputs, the signs displayed under the number of an input or output have the following meanings:

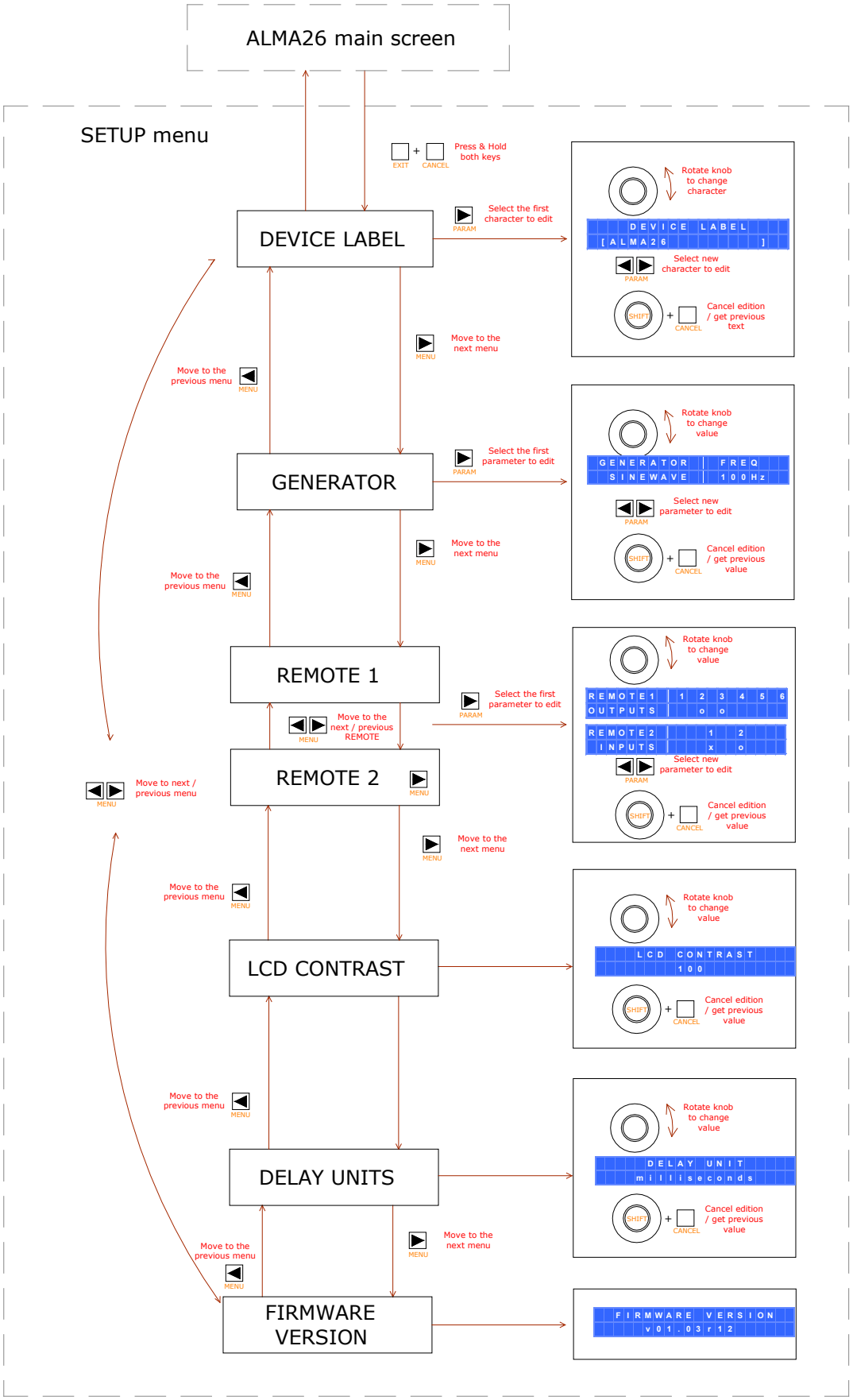
   Blank = Input or output not assigned to any remote port
   ● = Remote port assigned to the input or output
   X = Input or output already assigned to the other remote port

2. In the internal signal generator page, the displayed abbreviations meaning is:

   - PINK N. : Pink noise
   - WHITE N. : White noise
   - SINEWAVE : Sinusoidal signal, with adjustable frequency
   - POLARITY : Polarity check signal, with adjustable frequency

SETUP setup

To enter SETUP menu press & hold MENU left & right front keys.
Press SHIFT + EXIT or wait 2 minutes to exit the setup mode.



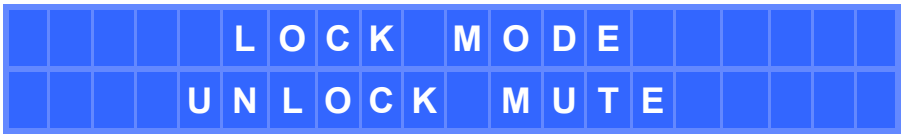
13. FRONT PANEL LOCKOUT MENU

The ALMA26 has a front panel lockout feature, protecting the unauthorized access to the device with a password.

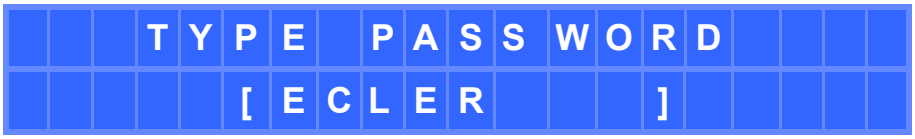
The locking feature has three operating modes:

- UNLOCK ALL: Lock function disabled, allowing access to all functions and menus of the equipment
- LOCK ALL: the lock is enabled, until an alphanumeric password is entered. The front panel controls are disabled, needing access to the lock menu to enter the password and re-enable them.
- UNLOCK MUTE: the lock is enabled, until an alphanumeric password is entered. The front panel controls are disabled, except the MUTE keys for inputs and outputs, needing access to the lock menu to enter the password and re-enable them.

To access the lock menu, you have to press simultaneously the left and right PARAM keys for 2 seconds, until the next screen appears on the LCD display:



Using the rotary control, it is possible to change the desired locking mode and then press SHIFT + ENTER to confirm the selection. If you select one of the two password protected modes (LOCK ALL or UNLOCK MUTE), the next screen prompts you to enter the lock password:

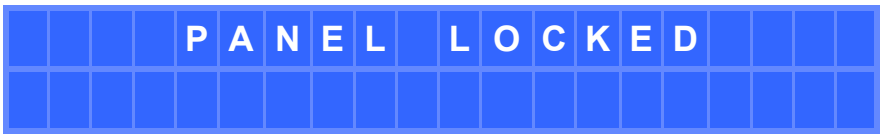


Using the rotary control, edit the selected character, and using the PARAM keys, select the next character to edit. Finally, press SHIFT + ENTER to validate the entered password.

In the password edit mode, you can cancel an edit operation, bringing the initial password back, by pressing SHIFT + CANCEL. Pressing SHIFT + CANCEL for five seconds erases all the characters of the password, to start the edition from scratch.

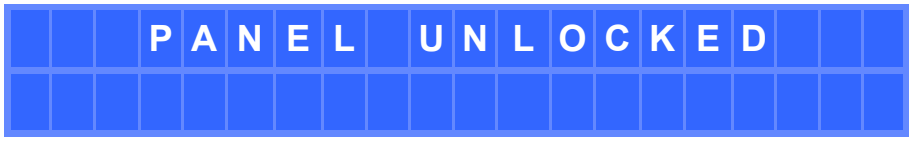
At any time it is possible to leave the lock menu by pressing SHIFT + EXIT.

Once in one of the password protected locking modes (LOCK ALL or UNLOCK MUTE), the equipment displays the following screen if you press any disabled front panel control:



To re-enable the front panel controls, it is necessary to enter the stored password. To do this, access the lock menu (left and right PARAM keys simultaneously for 2 seconds). The following screen is displayed:

Enter the password and press SHIFT + ENTER to validate it.



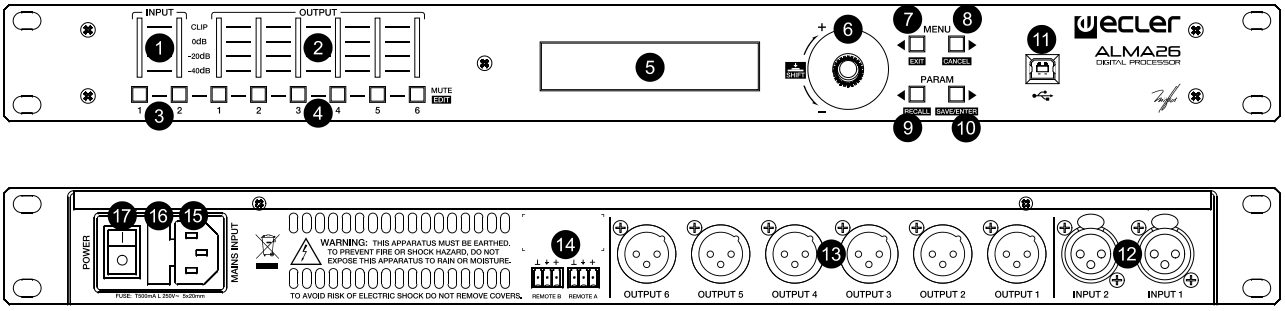
The equipment will be temporarily unlocked, until it remains 2 minutes without any activity on the front panel or returns to the lock menus (left and right PARAM simultaneously for 2 seconds) to confirm or modify the lock mode, in which case it will go back to the password request (the same or a new one), which will be active starting from your validation (SHIFT + ENTER).

To permanently unlock the equipment, access the lock menu and select the UNLOCK ALL mode as new locking mode.

14. CLEANING

The control panel must not be cleaned with any dissolvent, abrasive or petroleum derived substance else paint and silk-printing could be damaged. Whenever cleaning should be necessary use a soft cloth slightly wet with water and neutral liquid soap. Be careful that no liquid gets into the unit through its orifices. Never use sharp or erosive objects to scratch the control panel.

15. FUNCTION LIST and DIAGRAMS



1 LED VU-Meter, INPUTS
2 LED VU-Meter, OUTPUTS
3 Mute keys, INPUTS
4 Mute keys, OUTPUTS
5 Front panel LCD display
6 Rotary encoder knob
7 Setup key, MENU / EXIT
8 Setup key, MENU / CANCEL
9 Setup key, PARAM / RECALL
10 Setup key, PARAM / SAVE/ENTER
11 USB connector
12 XLR input connectors
13 XLR output connectors
14 Screwable terminals for remote control, REMOTE
15 Mains socket
16 Fuse holder
17 Power switch

16. TECHNICAL SPECIFICATIONS

ALMA26

INPUT SELECTION	
Sensitivity	0dBV
Input impedance	>20k electronically balanced
CMRR	>55dB (20Hz ÷ 20kHz)
Input connector	XLR3 female
OUTPUT SELECTION	
Nominal Output level	0dBV
Output impedance	300Ω electronically balanced
Output connector	XLR3 male
A/D & D/A	24bit / 48kHz
FREQUENCY RESPONSE	<10Hz ~ 20kHz
OUTPUT NOISE FLOOR (FFT)	<-115dB (from 20Hz to 20kHz)
THD + NOISE	< 0.0028% (1kHz, 1Vrms)
CROSSTALK	>95dB, 30Hz ÷ 20kHz
CROSSOVER FILTERS	
Slopes	6, 12, 18, 24 or 48dB/octave (Filter type dependant)
Type	Linkwitz-Riley, Butterworth or Bessel
DELAYS	
Input delay / step	1seg / 20,8µs
Output delay / step	1seg / 20,8µs
EQ	
Input EQ quantity	4 per channel
Output EQ quantity	8 per channel
Parametric EQ: Type	Parametric EQ: Q: 0.3 to 200
	Low & High Shelf 6/12 dB/oct
	Low & High Pass 6/12 dB/oct
	All Pass order 1 or 2
Gain	-60 dB ~ +12dB step 0.1dB
Frequency	20Hz ÷ 20kHz
COMPRESSOR	
Threshold	-36 / +12dBV
Attack time	0.1 ~ 500ms
Release time	1ms ~ 5s
Ratio	1:1 to ∞ :1
GENERAL	
Mains	100-240VAC
Power consumption	25VA
Dimensions WxHxD	482.6x44x120mm
Weight	1.75kg

All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications

For technical queries contact your supplier, distributor or complete the contact form on our website, in Support / Technical requests.

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