DARA Series

AMPLIFIERS

Networkable Amplifiers

USER MANUAL

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1. PRECAUTIONS

1.1 Important Notice

WARNING: SHOCK HAZARD - DO NOT OPEN

AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR

The flashing light with an arrowhead symbol inside an equilateral triangle on it is intended to alert the user of the presence of non-insulated "dangerous voltage" within the enclosure, which might be of sufficient magnitude to pose a risk of electric shock to users.

The exclamation mark within an equilateral triangle is intended to alert the user of the requirement for important operating and maintenance (servicing), for which instructions may be found in the literature accompanying the appliance.

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

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

WARNING: A device with Class I manufacturing ought to be connected to a mains socket outlet with a protective earthing connection.

WARNING: Ecler products have a long lifetime of more than 10 years. This product must never be discarded as unsorted urban waste, but must be taken to the nearest electrical and electronic waste treatment centre.

1.2 Key Safety Directions

1. Read the following directions.
2. Keep the following directions.
3. Observe all warnings.
4. Follow all instructions.
5. Do not use this device in proximity to water.
6. Clean only with a 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 devices (including amplifiers) that may release heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades, with one being 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, contact a qualified electrician for a 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 of exit from the device.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the device during lightning storms or when unused for long periods.
13. Refer all servicing to qualified personnel. Servicing is required when the device has been damaged in any way, such as power supply cord or plug damage, liquid spillage or objects onto the device, the device has been exposed to rain or humidity, 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, therefore, it should always remain easily accessible
15. Equipment is connected to a socket-outlet with an earthing connection by means of a power cord.
16. The marking information is located at the top/rear of the unit.
17. The device shall not be exposed to dripping or splashing liquids, and no liquid-filled objects, such as a filled up glass, shall be placed on top of the device.

1.3 Cleaning Directions

Clean the unit with a soft, dry clean cloth or slightly wet with water and neutral liquid soap only, then dry it with a clean cloth. Be careful that water never gets into the unit through any hole. Never use alcohol, benzine, solvents or abrasive substances to clean this unit.

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.

2. WARRANTY & ENVIRONMENT

Thank you for choosing Ecler DARA Series!
We greatly value your trust.

It is **VERY IMPORTANT** to carefully read this manual and to fully understand its contents before any connecting takes place in order to make the best use of this equipment, as well as to get the best performance from it.

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.

Ecler is truly committed with the environment and planet sustainability, energy saving and CO_2 emission reduction. Recycling materials and using non-contaminant components are also top priorities in our green crusade.

Ecler has deeply evaluated and analyzed the environmental impacts of all the processes involved in the production of this product, including packaging, and has alleviated, reduced and/or compensated for them.

3. PACKAGE CONTENTS

3.1 DARA-4B150, DARA-4B300, DARA-4B600, DARA-4B900

- 1 x DARA-4B Series unit.
- 1 x EU power cord + 1 x IEC power cord + UK, US & CN plug adapters.
- 6 x Euroblock connectors (4 blue for inputs and 2 green for outputs).
- 2 x Euroblock jumper.
- 4 x Desktop feet.
- 1x External Mute connector.
- 1x Remote Volume connector (GPI).
- 1 x Rack 19" installation hardware.
- 1 x First Steps Guide.
- 1 x Warranty card.

4. DESCRIPTION & FEATURES

DARA Series is a family of digital amplifiers designed to deliver exceptional audio power and flexibility through high-efficiency Class D technology combined with an advanced DSP and matrix for precise signal management. Designed for professional installations, these amplifiers support Low and High Impedance configurations by pairs of channels, as well as Bridge mode, ensuring maximum adaptability. They are fully compatible with the Ecler PULSO Series and can be controlled via the dedicated app for Android and iOS.

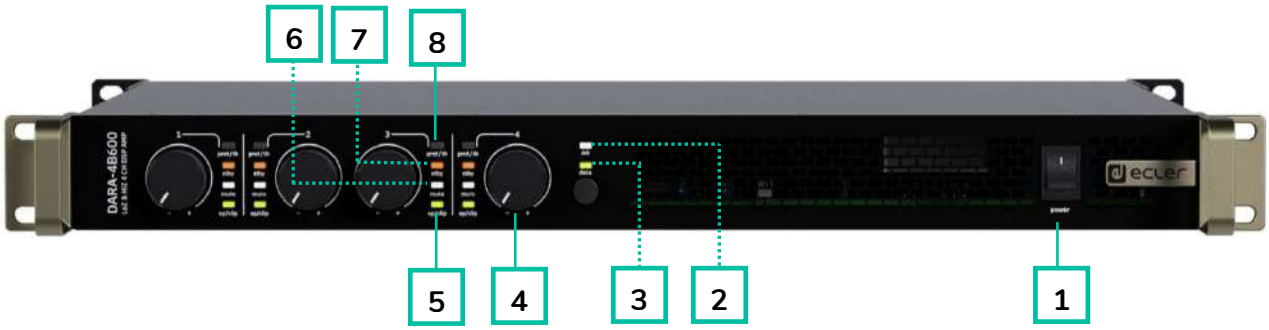
Designed to meet a wide range of installation needs, the DARA Series offers multiple configuration options that combine flexibility and power. With models available in 4- and 8-channel versions, and power ratings from 150 W to 900 W RMS per channel (@ 4 Ω), the series allows the most suitable combination of inputs and output performance to be selected for each project.

4.1 Main Features

- Low (2, 4 and 8Ω) and high impedance (70/100V) compatibility via rear panel switch.
- Support dual or bridge mode at 4/8Ω
- Euroblock input and output connectors.
- GPI and MUTE connectors.
- Euroblock connectors with anti-pulling locking system.
- Front panel lock via software for tamper-proof control.
- Internal Matrix and signal processing.
- Web application for device configuration.
- Customized user panels and presets
- Remote control user application for iOS/Android/Web.
- Two network ports with integrated switch, enabling daisy-chain connectivity for multiple amplifiers.
- High efficiency (Class D).
- Auto Standby function.
- Fan cooling.
- Thermal protection.
- Overload protection.
- High frequency protection.
- Overcurrent protection
- Anti-clip system.
- Full compatibility with PULSO Series and remote control via App (Android & iOS).
- Ecler Loudspeakers EQ Settings included.

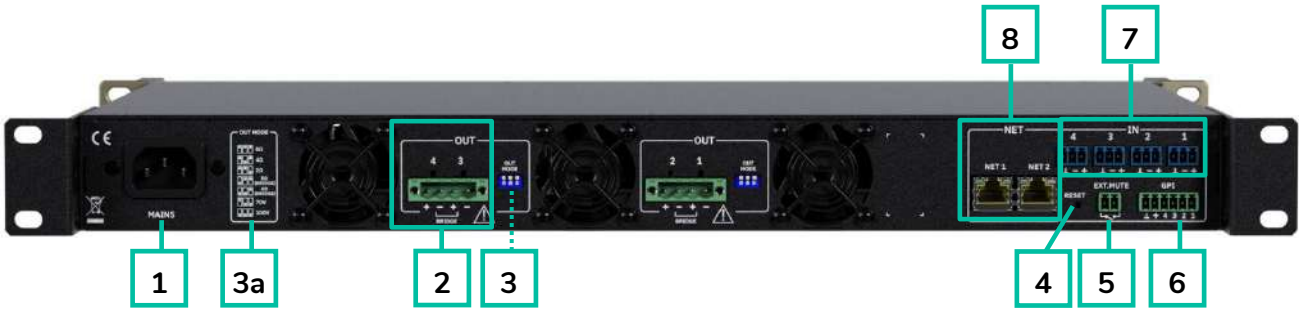
5. PANEL FUNCTIONS

5.1 Front Panel



1. **Power Switch:** Press the switch to ON to power on the device.
2. **ON LED:** lights up in green when the unit is powered ON.
3. **Data LED:** lights up in white colour when the device is communicated via RJ45 connector.
4. **Control knobs (4-8 depending on the model):** each front panel LEVEL knob controls the volume of the corresponding amplified audio output.
5. **Signal and Clip indicator LED (per channel)**: lights up in green when a signal above -40dBV is detected at the input. Lights up in red when the input signal exceeds 0.5dBV or the output signal exceeds the limiters values.
6. **Mute indicator LED (per channel):** lights up in white colour when the channel is muted via hardware or software.
7. **Standby indicator LED (per channel):** lights up in orange when any channel enters Standby mode (low power consumption mode).
8. **Protect /Thermal. indicator LED (per channel)**: lights up in red:
   - General protection circuit of the channel, fixed.
   - If temperature ≥ 75°, blinking at 1s ON and 3s OFF.
   - If temperature ≥ 79°, blinking at 500ms ON and 500ms OFF.
   - If temperature ≥ 83°, blinking at 100ms ON and 100ms OFF.
   - If temperature ≥ 125 °C (257 °F) equipment goes into protection mode.

5.2 Rear Panel



1. **Mains socket.**
2. **Amplified outputs**, OUT 1-4 to OUT 1-8 (depending on the model).
3. **Out Mode switches** for OUT 1/2 to OUT 7/8, depending on the model.

   3.a Follow the silkscreen guideline for switch selection.
4. **Reset button.**
5. **External Mute port.**
6. **GPI** ports, GPI1-4 or GPI1-8 (depending on the model).
7. **Analogue inputs,** IN 1-4 or 1-8 (depending on the model), 3-pin Euroblock, balanced.
8. **RJ-45 Ethernet ports** for LAN connection and daisy-chain networking. Both NET1 and NET2 can be used for either purpose.

6. INSTALL & CONNECT

The **equipment must be correctly grounded** (ground resistance, Rg = 30 Ohm or less). The environment must be dry and dustless. Do not expose the unit to rain or water splashes, and do not place liquid containers or incandescent objects like candles on top of the unit.

Do not obstruct the ventilation grilles with any kind of material. If the device requires any intervention and/or connection/disconnection, it must be first powered off.

Do not handle the speaker output terminals with your device turned on, there are high voltages. The output cabling should be connected by a qualified technician. Otherwise only use pre-made flexible cables. There are no user serviceable parts inside the amplifier.

⚠ **Non-compliance with the instructions or neglecting warnings may cause malfunction or even damage the unit**.

- **Avoid turning on the device without the speakers connected to its outputs** and without having previously set the volume/gain controls to minimum level.
- **Always use shielded cables** to make connections between devices.
- **In an amplifier, avoid placing the speaker output cables close to other signal cables** (micro, line...). This may cause the system to oscillate, damaging the amplifier and speakers.

6.1 Location, Assembly and Ventilation

DARA Series devices have a **19" rack format (1RU).**

It is very important not to enclose the amplifier or expose it to extreme temperatures as it generates heat.

It is also necessary to encourage the airflow through the ventilation holes of the chassis.

⚠ **If multiple products are installed in the same rack or in a cabinet with closed doors, it is highly recommended to install fans in their upper and lower ends** for a forced airflow from the bottom up. This upward air flow will help to dissipate the heat generated inside.

⚠ **Regular maintenance of dust removal is highly recommended** as dust can impede airflow and hinder heat dissipation.

6.2 Mains Connection

DARA operates on alternating voltages from 100-240 V @ 50-60Hz (±10%). This device is equipped with an oversized power supply capable of adapting **without any type of adjustment to the mains voltage of any country in the world.**

On the **front panel**, there is an **on/off switch** for the unit.

The ON Led on the front panel lights up when the unit is switched on.

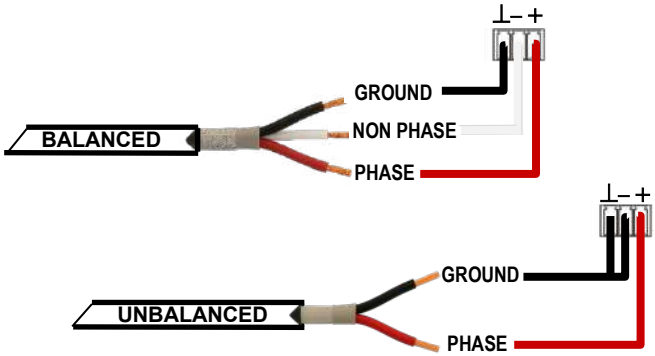
⚠ **Do not allow the mains cable to run parallel to the shielded cables** carrying the audio signal, as this may cause humming.

6.3 Analogue Input Connections

The **DARA rear panel provides analogue, balanced, line level signal inputs. The selection of hardware inputs and their routing to the unit's amplified channels are performed from its embedded web application.**

Signal input connectors are 3 position screw terminal blocks. The wiring is as follows:

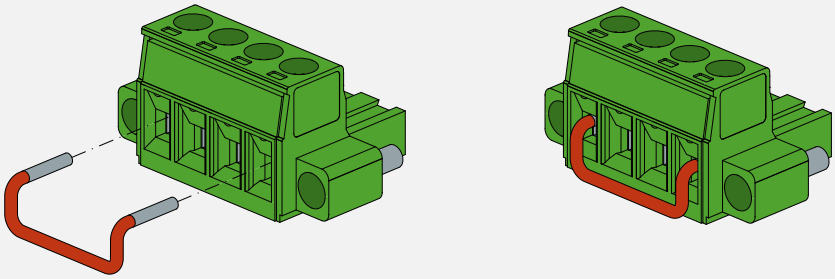
Live or direct signal	→	Pin	+
Cold or inverted signal	→	Pin	-
Ground	→	Pin	⊥



⚠ For **unbalanced connection** short-circuit pin ⊥ to pin – as reported on the picture.

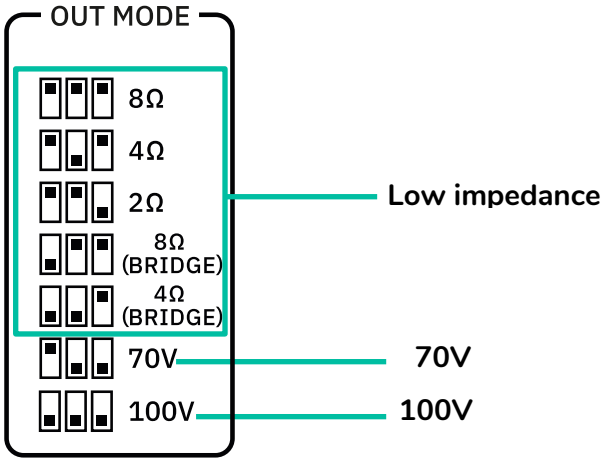
6.4 Amplified Output Connections

1. The rear panel is fitted with **4-pin Euroblock output connectors for each channel pair.**

> ⚠ **Before operating in 4/8 Ω Bridge Mode, insert the supplied Euroblock jumper as shown in the diagram below.**
>
> 

2. **The output mode is selected for each channel pair using the Out Mode switch**, as specified on silkscreen 2a. **Available modes are 2Ω, 4Ω, 8Ω, 100V, and 70V; 4/8Ω Bridge Mode.**

2.a Switch Position:



> ⚠ **Always respect the relative polarity for outputs** (+ and - on each output connector), wiring and speakers.

6.4.1 Out Configurations

Select the appropriate operation mode to avoid damaging the loudspeakers.

Never connect loads below 2 ohms.

Make sure to match the impedance of the total load connected to the loudspeakers, when working in low impedance for a correct performance.

The cable connecting the amplifier outputs to the loudspeakers must be of good quality, sufficient section and as short as possible. This is most important when the distances to cover are long ones i.e., up to 10 meters it is recommended to use a section not inferior to 2.5mm^2 and for superior distances 4mm^2.

6.5 GPI ports

DARA **rear panel provide four 0-10VDC remote control ports**, labelled "GPI 1-4", to which you **can connect analogue devices such as the TOCA series wall panels**. With the DARA web application, a function can be assigned to each of these ports: a GPI port can control remotely volume of inputs or outputs and can be assigned in direct or reverse mode.

Please refer to the WebGUI chapter for more information.

6.5.1 Connecting the GPI Remote Control Ports

The **GPI connectors are Euroblock type**. The assignment of the connection is as follows:

Positive, + 10 VDC	→	Pin +
Variable voltage, 0-10 VDC	→	Pin 1-4 or 1-8
Ground	→	Pin ⊥

- **The connection cables can be up to 500m long if a section of 0.5mm^2 is used.**
- **Check the available accessories at the Ecler website www.ecler.com.**

6.6 External Mute

DARA **includes an EXT. MUTE control input port on the rear panel (Normally Open = MUTE OFF / Closed = MUTE ON)**, which allows the activation /deactivation of the mute of audio outputs (zones) of the unit by means of a push button, relay or external potential free contact closure.

- The assignment of **outputs affected by the MUTE port is configured from DARA web application.**
- **For additional information, refer to the DARA Web Application WebGUI chapter.**

6.7 Ethernet Ports (NET1/NET2)

The rear panel of the DARA features two RJ-45 Ethernet ports, labelled NET1 and NET2. These ports allow the unit to be connected to an Ethernet network or directly to a computer or third-party control device via IP.

Both ports are identical and can be used for either of the following purposes:

- **Control:** Access to the WebGUI and communication with external control panels.
- **Daisy-chain connection:** Linking multiple DARA units in series so that additional units can be connected to the Ethernet network without requiring a separate direct connection.

Port LED Indicators

When an Ethernet cable is connected and a communication link is established, the corresponding port LED blinks.

The blinking LED only indicates that a communication link has been successfully established. It does not indicate data transmission activity or network speed.

6.8 Reset Button

The Reset button is located on the rear panel and provides two reset functions, as described below. Use a pointed, non-conductive tool to press the button.

Use only a non-conductive tool to press the Reset button.

The Reset button provides two functions:

1. **Reset network settings:** With the device powered on, press and hold the Reset button for 10 seconds to restore the network settings to their default values.

   By default, the device operates in DHCP mode.

2. **Factory reset:** To perform a full factory reset, turn on the power switch while holding the Reset button until the startup process is complete (all LEDs turn off except the ON LED).

   This process deletes all device settings, including user data, custom configuration, and network settings. The current firmware version is retained.

7. START-UP & OPERATION

7.1 Start-up

When the **front panel Power switch is ON,** the amplifier is powered, and **it will automatically switch on.**

When the ON LED of the front panel is lit in green, the device is operational.

In a complete audio installation, **it is important to start up the equipment in the following sequence**:

1. sound sources
2. mixer
3. equalizers
4. active filters
5. processors
6. power amplifiers.

To turn them off the sequence should follow an inverse pattern.

8. TECHNICAL DATA

8.1 Technical Specifications

8.1.1 DARA-4B150

DARA-4B150	
CHANNELS	
Number of Outputs channels	4
Output connection type	2-pin Euroblock. Pitch: 5,08 mm
Output configuration	2Ω, 4Ω, 8Ω, 100V, 70V and 4/8Ω in Bridge Mode
Number of Inputs channels	4
Input connection type	3-pin Euroblock, balanced, pitch 3,5 mm
Input configuration	Digital Matrix 4 In x 4 Out
OUTPUT POWER All channels driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	150 W
Max output power @ 4Ω	150 W
Max output power @ 2Ω	150 W
Max output power @ 4Ω bridge mode	300 W
Max output power @ 8Ω bridge mode	300 W
Max output power @ 100V	150 W
Max output power @ 70V	150 W
OUTPUT POWER Single channel driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	150 W
Max output power @ 4Ω	150 W
Max output power @ 2Ω	150 W
Max output power @ 4Ω bridge mode	300 W
Max output power @ 8Ω bridge mode	300 W
Max output power @ 100V	150 W
Max output power @ 70V	150 W
SIGNAL	
Voltage gain	30.8 dB
Input sensitivity	0dBV
	2.21dBu
	1Vrms
Input impedance	20k
Max input level	+23 dBu
Frequency response	15Hz - 22kHz (-3dB, 1W any load)
THD + Noise	<0,1% (@1kHz, from 0,1W to Full Power)
SNR	95 dBA
Crosstalk	>80 dB (1kHz)
CMRR	62,2 dB
ELECTRICAL	
Power supply	Universal, regulated SMPS with PFC
AC mains requirement	100-240 V @ 50-60Hz (±10%)
Power factor correction	> 0,92
AC mains connector	IEC C14 inlet
POWER & HEAT @230VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	283,5 W
	375 VA

Current Draw	1,63 Arms
Thermal Loss	114,8 kcal/h
	455,6 BTU/h
1/8 POWER, @ 4Ω (all channels driven)	
Power	173 W
	252 VA
Current Draw	1,07 Arms
Thermal Loss	84,3 kcal/h
	334,5 BTU/h
IDLE (all channels driven)	
Power	52 W
	94 VA
Current Draw	0,78 Arms
Thermal Loss	44,7 kcal/h
	177,5 BTU/h
SLEEP MODE (all channels driven)	
Power	5 W
	60 VA
Current Draw	0,27 Arms
Thermal Loss	4,3 kcal/h
	17,1 BTU/h
POWER & HEAT @120VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	273,6 W
	293 VA
Current Draw	2,45 Arms
Thermal Loss	106,3 kcal/h
	421,8 BTU/h
1/8 POWER, @ 4Ω (all channels driven)	
Power	158,9 W
	176 VA
Current Draw	1,47 Arms
Thermal Loss	106,3 kcal/h
	421,8 BTU/h
IDLE (all channels driven)	
Power	51,3 W
	88 VA
Current Draw	0,82 Arms
Thermal Loss	44,1 kcal/h
	175,1 BTU/h
SLEEP MODE (all channels driven)	
Power	4,3 W
	22,7 VA
Current Draw	0,19 Arms
Thermal Loss	3,7 kcal/h
	14,7 BTU/h
TECHNOLOGIES	
Amplification technology	Class D
Energy saving	Auto standby function selectable
Efficiency	70%
Cooling	3 fans
Maximum fan noise	57 dBA

DSP	
AD converters	24 Bit Tandem™ @ 48 kHz 115 dB-A Dynamic Range - 0.0018% THD+N
DA converters	24 Bit Tandem™ @ 48 kHz 120 dB-A Dynamic Range - 0.0018% THD+N
Sample rate converter	24 bits @ 48 kHz
Internal precision	32 bits floating point
Latency	1,5 ms
Memory/Presets	15 amplifiers presets 40 Speakers presets (22 Ecler presets + 18 Custom presets)
Delay	20 ms (input) + 300 ms (output) for time alignment
Equalizer	Custom FIR, Parametric IIR: Peaking, Low Shelf, High Shelf, AllPass 1st, AllPass 2nd, General Low, General High, Butterworth Low, Butterworth High, Bessel Low, Bessel High
Limiters	RMS and Peak voltage limiter
Digital processing	32 bits
Inputs processing	Delay, Parametric and Graphic EQ, Compressor
Outputs processing	Delay, Parametric and Graphic EQ, Polarity, Compressor, FIR filters, RMS and Peak Limiter
Others	Presets management, Panels and Users, Internal matrix, Linking and Stereo options, Selectable Auto-standby, Panel Operating Range, Knobs and GPI Matrix, Custom and Ecler speakers settings, Network Parameters, Finder, Remote control and configuration via PULSO Series (Android / iOS App)
PROTECTIONS	
AC protection	Yes
DC protection	Yes
HF protection	Yes
Short-circuit protection	Yes
Clip limiter	Yes
Thermal protection	Yes
REMOTE CONTROL CONNECTIONS	
GPIs	x4 GPIs (0-10V)
External MUTE	Yes, contact
LOCAL CONTROL	
Attenuators	Assignable front panel knobs
Output mode settings	Back panel Dipswitch by pairs of channels BRIDGE/2Ω/4Ω/8Ω/70V/100V
RUN/SLEEP mode	Auto standby function Forced standby (Settings by embedded web application)
Power ON/OFF	Front panel switch
SETTINGS	
Attenuators	Assignable front panel knobs
Output settings	2Ω/4Ω/8Ω/70V/100V/Bridge Mode output selection by pair of channels
Auto standby function	Settings by embedded web application
Auto standby threshold	-40dB
Auto standby time	90 seconds

Power ON/OFF	Front panel switch
CONNECTIVITY	
Ethernet	Ethernet Base-Tx 100Mb CAT5 up to 100m Secondary RJ-45 port for Daisy-Chaining
Programming and control	Embedded web application
MONITORING	
Signal Present	SIGNAL LED (Green) per channel
Clipping	CLIP LED (Red) per channel
Protect	TH/PROT LED (Red) per channel
Standby	STANDBY (Orange) per channel
Mute	MUTE LED (White) per channel
Limit	TH/PROT LED (Red)
Thermal	TH/PROT LED (Red) per channel
Data	DATA LED (White) per unit
On	ON LED (Green) per unit
DIGITAL ENGINE	
Processor	32 bits
AUDIO CONVERTERS	
Sampling rate	48 kHz
Resolution	24 bits
Dynamic range	118 dB
PHYSICAL	
Operating temperature	-20º to 40º C -4º to 104º F
Operating humidity	10-90% RH, non-condensing
Storage temperature	-40º to 70º C -40º to 158º F
Storage humidity	10-95% RH, non-condensing
Installation options	Rack 19" installation & desktop
Included accessories	1 x EU & IEC power cords, UK,US & CN plug adapters, 4x Desktop feet, 1x Rack 19" installation hardware, 1 x Remote Volume connector (GPI), 1 x External Mute connector, 6x Euroblock connectors (4x 3-pin blue for inputs and 2x 4-pin green for outputs), 2x Euroblock jumper.
Dimensions (WxHxD)	484 x 44 x 296.6 mm / 19 x 1.73 x 11.67 in.
Weight	4.95 kg / 10.91 lb
Shipping dimensions (WxHxD)	590 x 80 x 474 mm / 23.23 x 3.15 x 18.66 in.
Shipping weight	7.60 kg / 16.76 lb

8.1.2 DARA-4B300

DARA-4B300	
CHANNELS	
Number of Outputs channels	4
Output connection type	2-pin Euroblock. Pitch: 5,08 mm
Output configuration	2Ω, 4Ω, 8Ω, 100V, 70V and 4/8Ω in Bridge Mode
Number of Inputs channels	4
Input connection type	3-pin Euroblock, balanced, pitch 3,5 mm
Input configuration	Digital Matrix 4 In x 4 Out
OUTPUT POWER All channels driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	300 W
Max output power @ 4Ω	300 W
Max output power @ 2Ω	300 W
Max output power @ 4Ω bridge mode	600 W
Max output power @ 8Ω bridge mode	600 W
Max output power @ 100V	300 W
Max output power @ 70V	300 W
OUTPUT POWER Single channel driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	300 W
Max output power @ 4Ω	300 W
Max output power @ 2Ω	300 W
Max output power @ 4Ω bridge mode	600 W
Max output power @ 8Ω bridge mode	600 W
Max output power @ 100V	300 W
Max output power @ 70V	300 W
SIGNAL	
Voltage gain	33.8 dB
Input sensitivity	0dBV 2.21dBu 1Vrms
Input impedance	20k
Max input level	+23 dBu
Frequency response	15Hz - 22kHz (-3dB, 1W any load)
THD + Noise	<0,1% (@1kHz, from 0,1W to Full Power)
SNR	97 dBA
Crosstalk	>80 dB (1kHz)
CMRR	73 dB
ELECTRICAL	
Power supply	Universal, regulated SMPS with PFC
AC mains requirement	100-240 V @ 50-60Hz (±10%)
Power factor correction	> 0,81
AC mains connector	IEC C14 inlet
POWER & HEAT @230VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	473 W 605 VA
Current Draw	2,64 Arms
Thermal Loss	148,8 kcal/h 590,4 BTU/h

1/8 POWER, @ 4Ω (all channels driven)	
Power	276,3 W
	293 VA
Current Draw	2,45 Arms
Thermal Loss	108,6 kcal/h
	431,1 BTU/h
IDLE (all channels driven)	
Power	54,3 W
	140 VA
Current Draw	0,62 Arms
Thermal Loss	46,7 kcal/h
	185,3 BTU/h
SLEEP MODE (all channels driven)	
Power	5 W
	60 VA
Current Draw	0,27 Arms
Thermal Loss	4,3 kcal/h
	17,1 BTU/h
POWER & HEAT @120VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	468,6 W
	490 VA
Current Draw	4,1 Arms
Thermal Loss	145 kcal/h
	575,4 BTU/h
1/8 POWER, @ 4Ω (all channels driven)	
Power	267,6 W
	287 VA
Current Draw	2,4 Arms
Thermal Loss	101,1 kcal/h
	401,1 BTU/h
IDLE (all channels driven)	
Power	50,2 W
	93 VA
Current Draw	0,73 Arms
Thermal Loss	43,2 kcal/h
	171,3 BTU/h
SLEEP MODE (all channels driven)	
Power	4,3 W
	22,7 VA
Current Draw	0,19 Arms
Thermal Loss	3,7 kcal/h
	14,7 BTU/h
TECHNOLOGIES	
Amplification technology	Class D
Energy saving	Auto standby function selectable
Efficiency	76%
Cooling	3 fans
Maximum fan noise	57 dBA

DSP	
AD converters	24 Bit Tandem™ @ 48 kHz 115 dB-A Dynamic Range - 0.0018% THD+N
DA converters	24 Bit Tandem™ @ 48 kHz 120 dB-A Dynamic Range - 0.0018% THD+N
Sample rate converter	24 bits @ 48 kHz
Internal precision	32 bits floating point
Latency	1,5 ms
Memory/Presets	15 amplifiers presets 40 Speakers presets (22 Ecler presets + 18 Custom presets)
Delay	20 ms (input) + 300 ms (output) for time alignment
Equalizer	Custom FIR, Parametric IIR: Peaking, Low Shelf, High Shelf, AllPass 1st, AllPass 2nd, General Low, General High, Butterworth Low, Butterworth High, Bessel Low, Bessel High
Limiters	RMS and Peak voltage limiter
Digital processing	32 bits
Inputs processing	Delay, Parametric and Graphic EQ, Compressor
Outputs processing	Delay, Parametric and Graphic EQ, Polarity, Compressor, FIR filters, RMS and Peak Limiter
Others	Presets management, Panels and Users, Internal matrix, Linking and Stereo options, Selectable Auto-standby, Panel Operating Range, Knobs and GPI Matrix, Custom and Ecler speakers settings, Network Parameters, Finder, Remote control and configuration via PULSO Series (Android / iOS App)
PROTECTIONS	
AC protection	Yes
DC protection	Yes
HF protection	Yes
Short-circuit protection	Yes
Clip limiter	Yes
Thermal protection	Yes
REMOTE CONTROL CONNECTIONS	
GPIs	x4 GPIs (0-10V)
External MUTE	Yes, contact
LOCAL CONTROL	
Attenuators	Assignable front panel knobs
Output mode settings	Back panel Dipswitch by pairs of channels BRIDGE/2Ω/4Ω/8Ω/70V/100V
RUN/SLEEP mode	Auto standby function Forced standby (Settings by embedded web application)
Power ON/OFF	Front panel switch
SETTINGS	
Attenuators	Assignable front panel knobs
Output settings	2Ω/4Ω/8Ω/70V/100V/Bridge Mode output selection by pair of channels
Auto standby function	Settings by embedded web application
Auto standby threshold	-40dB
Auto standby time	90 seconds

Power ON/OFF	Front panel switch
CONNECTIVITY	
Ethernet	Ethernet Base-Tx 100Mb CAT5 up to 100m Secondary RJ-45 port for Daisy-Chaining
Programming and control	Embedded web application
MONITORING	
Signal Present	SIGNAL LED (Green) per channel
Clipping	CLIP LED (Red) per channel
Protect	TH/PROT LED (Red) per channel
Standby	STANDBY (Orange) per channel
Mute	MUTE LED (White) per channel
Limit	TH/PROT LED (Red)
Thermal	TH/PROT LED (Red) per channel
Data	DATA LED (White) per unit
On	ON LED (Green) per unit
DIGITAL ENGINE	
Processor	32 bits
AUDIO CONVERTERS	
Sampling rate	48 kHz
Resolution	24 bits
Dynamic range	118 dB
PHYSICAL	
Operating temperature	-20º to 40º C -4º to 104º F
Operating humidity	10-90% RH, non-condensing
Storage temperature	-40º to 70º C -40º to 158º F
Storage humidity	10-95% RH, non-condensing
Installation options	Rack 19" installation & desktop
Included accessories	1 x EU & IEC power cords, UK,US & CN plug adapters, 4x Desktop feet, 1x Rack 19" installation hardware, 1 x Remote Volume connector (GPI), 1 x External Mute connector, 6x Euroblock connectors (4x 3-pin blue for inputs and 2x 4-pin green for outputs), 2x Euroblock jumper.
Dimensions (WxHxD)	484 x 44 x 296.6 mm / 19 x 1.73 x 11.67 in.
Weight	4.95 kg / 10.91 lb
Shipping dimensions (WxHxD)	590 x 80 x 474 mm / 23.23 x 3.15 x 18.66 in.
Shipping weight	7.60 kg / 16.76 lb

8.1.3 DARA-4B600

DARA-4B600	
CHANNELS	
Number of Outputs channels	4
Output connection type	2-pin Euroblock. Pitch: 5,08 mm
Output configuration	2Ω, 4Ω, 8Ω, 100V, 70V and 4/8Ω in Bridge Mode
Number of Inputs channels	4
Input connection type	3-pin Euroblock, balanced, pitch 3,5 mm
Input configuration	Digital Matrix 4 In x 4 Out
OUTPUT POWER All channels driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	300 W
Max output power @ 4Ω	600 W
Max output power @ 2Ω	1000 W
Max output power @ 4Ω bridge mode	2000 W
Max output power @ 8Ω bridge mode	1200 W
Max output power @ 100V	600 W
Max output power @ 70V	600 W
OUTPUT POWER Single channel driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	300 W
Max output power @ 4Ω	600 W
Max output power @ 2Ω	1000 W
Max output power @ 4Ω bridge mode	2000 W
Max output power @ 8Ω bridge mode	1200 W
Max output power @ 100V	600 W
Max output power @ 70V	600 W
SIGNAL	
Voltage gain	34dB
Input sensitivity	0 dBV
	2,21 dBu
	1 Vrms
Input impedance	20kΩ balanced
Max input level	+20,8dBV
	23 dBu
Frequency response	15Hz - 22kHz (-3dB, 1W any load)
THD + Noise	<0,1% (@1kHz, from 0,1W to Full Power)
SNR	96,9 dBA
Crosstalk	>90dB (@1kHz)
CMRR	> 50 Typ (from 20Hz to 20kHz)
ELECTRICAL	
Power supply	Universal, regulated SMPS with PFC
AC mains requirement	100-240 V @ 50-60Hz (±10%)
Power factor correction	> 0,97
AC mains connector	IEC C14 inlet
POWER & HEAT @230VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	809 W
	859 VA
Current Draw	3,75 Arms
Thermal Loss	179,7 kcal/h
	713,3 BTU/h

1/8 POWER, @ 4Ω (all channels driven)	
Power	471,7 W
	514 VA
Current Draw	2,25 Arms
Thermal Loss	147,7 kcal/h
	586,0 BTU/h
IDLE (all channels driven)	
Power	99 W
	157 VA
Current Draw	0,71 Arms
Thermal Loss	85,1 kcal/h
	337,9 BTU/h
SLEEP MODE (all channels driven)	
Power	5,5 W
	71,7 VA
Current Draw	0,33 Arms
Thermal Loss	4,7 kcal/h
	18,8 BTU/h
POWER & HEAT @120VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	848,4 W
	864 VA
Current Draw	7,33 Arms
Thermal Loss	213,6 kcal/h
	847,8 BTU/h
1/8 POWER, @ 4Ω (all channels driven)	
Power	485,2 W
	498 VA
Current Draw	4,19 Arms
Thermal Loss	159,3 kcal/h
	632,1 BTU/h
IDLE (all channels driven)	
Power	97,6 W
	118 VA
Current Draw	0,98 Arms
Thermal Loss	83,9 kcal/h
	333,1 BTU/h
SLEEP MODE (all channels driven)	
Power	4,2 W
	27,4 VA
Current Draw	0,23 Arms
Thermal Loss	3,6 kcal/h
	14,3 BTU/h
TECHNOLOGIES	
Amplification technology	Class D
Energy saving	Auto standby function selectable
Efficiency	74% (1/4 POWER, @ 4Ω)
Cooling	2 fans
Maximum fan noise	57 dBA

DSP	
AD converters	24 Bit Tandem™ @ 48 kHz 105 dB-A Dynamic Range - 0.0018% THD+N
DA converters	24 Bit Tandem™ @ 48 kHz 120 dB Dynamic Range - 0.001% THD+N
Sample rate converter	24 bits @ 48 kHz
Internal precision	32 bits floating point
Latency	1,5 ms
Memory/Presets	15 amplifiers presets 40 Speakers presets (22 Ecler presets + 18 Custom presets)
Delay	20 ms (input) + 300 ms (output) for time alignment
Equalizer	Custom FIR, Parametric IIR: Peaking, Low Shelf, High Shelf, AllPass 1st, AllPass 2nd, General Low, General High, Butterworth Low, Butterworth High, Bessel Low, Bessel High
Limiters	RMS and Peak voltage limiter
Digital processing	32 bits
Inputs processing	Delay, Parametric and Graphic EQ, Compressor
Outputs processing	Delay, Parametric and Graphic EQ, Polarity, Compressor, FIR filters, RMS and Peak Limiter
Others	Presets management, Panels and Users, Internal matrix, Linking and Stereo options, Selectable Auto-standby, Panel Operating Range, Knobs and GPI Matrix, Custom and Ecler speakers settings, Network Parameters, Finder, Remote control and configuration via PULSO Series (Android / iOS App)
PROTECTIONS	
AC protection	Yes
DC protection	Yes
HF protection	Yes
Short-circuit protection	Yes
Clip limiter	Yes
Thermal protection	Yes
REMOTE CONTROL CONNECTIONS	
GPIs	x4 GPIs (0-10V)
External MUTE	Yes, contact
LOCAL CONTROL	
Attenuators	Assignable front panel knobs
Output mode settings	Back panel Dipswitch by pairs of channels BRIDGE/2Ω/4Ω/8Ω/70V/100V
RUN/SLEEP mode	Auto standby function Forced standby (Settings by embedded web application)
Power ON/OFF	Front panel switch
SETTINGS	
Attenuators	Assignable front panel knobs
Output settings	2Ω/4Ω/8Ω/70V/100V/Bridge Mode output selection by pair of channels
Auto standby function	Settings by embedded web application
Auto standby threshold	-40dB
Auto standby time	90 seconds

Power ON/OFF	Front panel switch
CONNECTIVITY	
Ethernet	Ethernet Base-Tx 100Mb CAT5 up to 100m Secondary RJ-45 port for Daisy-Chaining
Programming and control	Embedded web application
MONITORING	
Signal Present	SIGNAL LED (Green) per channel
Clipping	CLIP LED (Red) per channel
Protect	TH/PROT LED (Red) per channel
Standby	STANDBY (Orange) per channel
Mute	MUTE LED (White) per channel
Limit	TH/PROT LED (Red)
Thermal	TH/PROT LED (Red) per channel
Data	DATA LED (White) per unit
On	ON LED (Green) per unit
DIGITAL ENGINE	
Processor	32 bits
AUDIO CONVERTERS	
Sampling rate	48 kHz
Resolution	24 bits
Dynamic range	112 dB
PHYSICAL	
Operating temperature	-20º to 40º C -4º to 104º F
Operating humidity	10-90% RH, non-condensing
Storage temperature	-40º to 70º C -40º to 158º F
Storage humidity	10-95% RH, non-condensing
Installation options	Rack 19" installation & desktop
Included accessories	1 x EU & IEC power cords, UK,US & CN plug adapters, 4x Desktop feet, 1x Rack 19" installation hardware, 1 x Remote Volume connector (GPI), 1 x External Mute connector, 6x Euroblock connectors (4x 3-pin blue for inputs and 2x 4-pin green for outputs), 2x Euroblock jumper.
Dimensions (WxHxD)	484 x 44 x 411.6 mm / 19 x 1.73 x 16.20 in.
Weight	7.65 kg / 16.87 lb
Shipping dimensions (WxHxD)	590 x 80 x 590 mm / 23.23 x 3.15 x 23.23 in.
Shipping weight	10.74 kg / 23.68 lb

8.1.4 DARA-4B900

DARA-4B900	
CHANNELS	
Number of Outputs channels	4
Output connection type	2-pin Euroblock. Pitch: 5,08 mm
Output configuration	2Ω, 4Ω, 8Ω, 100V, 70V and 4/8Ω in Bridge Mode
Number of Inputs channels	4
Input connection type	3-pin Euroblock, balanced, pitch 3,5 mm
Input configuration	Digital Matrix 4 In x 4 Out
OUTPUT POWER All channels driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	550 W
Max output power @ 4Ω	900 W
Max output power @ 2Ω	1600 W
Max output power @ 4Ω bridge mode	3200 W
Max output power @ 8Ω bridge mode	1600 W
Max output power @ 100V	900 W
Max output power @ 70V	900 W
OUTPUT POWER Single channel driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	550 W
Max output power @ 4Ω	900 W
Max output power @ 2Ω	1600 W
Max output power @ 4Ω bridge mode	3200 W
Max output power @ 8Ω bridge mode	1600 W
Max output power @ 100V	900 W
Max output power @ 70V	900 W
SIGNAL	
Voltage gain	36dB
Input sensitivity	0 dBV
	2,21 dBu
	1 Vrms
Input impedance	20kΩ balanced
Max input level	+20,8dBV
	23 dBu
Frequency response	15Hz - 22kHz (-3dB, 1W any load)
THD + Noise	<0,1% (@1kHz, from 0,1W to Full Power)
SNR	97,8 dBa
Crosstalk	>90 dB (@1kHz)
CMRR	> 52 Typ (from 20Hz to 20kHz)
ELECTRICAL	
Power supply	Universal, regulated SMPS with PFC
AC mains requirement	100-240 V @ 50-60Hz (±10%)
Power factor correction	> 0,96
AC mains connector	IEC C14 inlet
POWER & HEAT @230VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	1236 W
	1300 VA
Current Draw	5,7 Arms
Thermal Loss	289 kcal/h
	1146 BTU/h

1/8 POWER, @ 4Ω (all channels driven)	
Power	692,5 W
	744 VA
Current Draw	3,25 Arms
Thermal Loss	208,6 kcal/h
	827,7 BTU/h
IDLE (all channels driven)	
Power	100 W
	163 VA
Current Draw	0,71 Arms
Thermal Loss	86 kcal/h
	341,3 BTU/h
SLEEP MODE (all channels driven)	
Power	4,8 W
	81 VA
Current Draw	0,35
Thermal Loss	4,1 kcal/h
	16,4 BTU/h
POWER & HEAT @120VAC	
1/4 POWER, @ 4Ω (all channels driven)	
Power	1321 W
	1337 VA
Current Draw	11,45 Arms
Thermal Loss	362,1 kcal/h
	1436,9 BTU/h
1/8 POWER, @ 4Ω (all channels driven)	
Power	725 W
	739 VA
Current Draw	6,27 Arms
Thermal Loss	236,5 kcal/h
	938,6 BTU/h
IDLE (all channels driven)	
Power	97,6 W
	118 VA
Current Draw	0,97 Arms
Thermal Loss	83 kcal/h
	329,4 BTU/h
SLEEP MODE (all channels driven)	
Power	4,2 W
	27,3 VA
Current Draw	0,23 Arms
Thermal Loss	3,6 kcal/h
	14,3 BTU/h
TECHNOLOGIES	
Amplification technology	Class D
Energy saving	Auto standby function selectable
Efficiency	74% (1/4 POWER, @ 4Ω)
Cooling	2 fans
Maximum fan noise	57 dBA

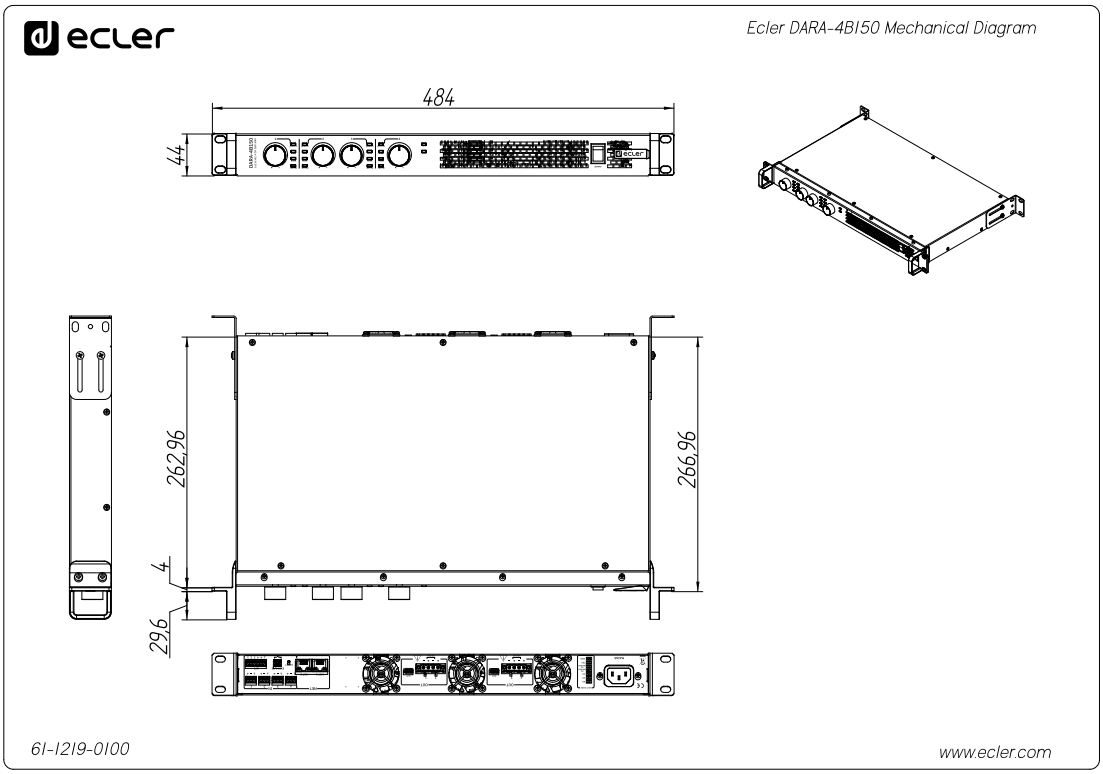
DSP	
AD converters	24 Bit Tandem™ @ 48 kHz 105 dB-A Dynamic Range - 0.0018% THD+N
DA converters	24 Bit Tandem™ @ 48 kHz 120 dB Dynamic Range - 0.001% THD+N
Sample rate converter	24 bits @ 48 kHz
Internal precision	32 bits floating point
Latency	1,5 ms
Memory/Presets	15 amplifiers presets 40 Speakers presets (22 Ecler presets + 18 Custom presets)
Delay	20 ms (input) + 300 ms (output) for time alignment
Equalizer	Custom FIR, Parametric IIR: Peaking, Low Shelf, High Shelf, AllPass 1st, AllPass 2nd, General Low, General High, Butterworth Low, Butterworth High, Bessel Low, Bessel High
Limiters	RMS and Peak voltage limiter
Digital processing	32 bits
Inputs processing	Delay, Parametric and Graphic EQ, Compressor
Outputs processing	Delay, Parametric and Graphic EQ, Polarity, Compressor, FIR filters, RMS and Peak Limiter
Others	Presets management, Panels and Users, Internal matrix, Linking and Stereo options, Selectable Auto-standby, Panel Operating Range, Knobs and GPI Matrix, Custom and Ecler speakers settings, Network Parameters, Finder, Remote control and configuration via PULSO Series (Android / iOS App)
PROTECTIONS	
AC protection	Yes
DC protection	Yes
HF protection	Yes
Short-circuit protection	Yes
Clip limiter	Yes
Thermal protection	Yes
REMOTE CONTROL CONNECTIONS	
GPIs	x4 GPIs (0-10V)
External MUTE	Yes, contact
LOCAL CONTROL	
Attenuators	Assignable front panel knobs
Output mode settings	Back panel Dipswitch by pairs of channels
RUN/SLEEP mode	Auto standby function Forced standby (Settings by embedded web application)
Power ON/OFF	Front panel switch
SETTINGS	
Attenuators	Assignable front panel knobs
Output settings	2Ω/4Ω/8Ω/70V/100V/Bridge Mode output selection by pair of channels
Auto standby function	Settings by embedded web application
Auto standby threshold	-40dB
Auto standby time	90 seconds
Power ON/OFF	Front panel switch

CONNECTIVITY	
Ethernet	Ethernet Base-Tx 100Mb CAT5 up to 100m Secondary RJ-45 port for Daisy-Chaining
Programming and control	Embedded web application
MONITORING	
Signal Present	SIGNAL LED (Green) per channel
Clipping	CLIP LED (Red) per channel
Protect	TH/PROT LED (Red) per channel
Standby	STANDBY (Orange) per channel
Mute	MUTE LED (White) per channel
Limit	TH/PROT LED (Red)
Thermal	TH/PROT LED (Red) per channel
Data	DATA LED (White) per unit
On	ON LED (Green) per unit
DIGITAL ENGINE	
Processor	32 bits
AUDIO CONVERTERS	
Sampling rate	48 kHz
Resolution	24 bits
Dynamic range	112 dB
PHYSICAL	
Operating temperature	-20º to 40º C -4º to 104º F
Operating humidity	10-90% RH, non-condensing
Storage temperature	-40º to 70º C -40º to 158º F
Storage humidity	10-95% RH, non-condensing
Installation options	Rack 19" installation & desktop
Included accessories	1 x EU & IEC power cords, UK,US & CN plug adapters, 4x Desktop feet, 1x Rack 19" installation hardware, 1 x Remote Volume connector (GPI), 1 x External Mute connector, 6x Euroblock connectors (4x 3-pin blue for inputs and 2x 4-pin green for outputs), 2x Euroblock jumper.
Dimensions (WxHxD)	484 x 44 x 411.6 mm / 19 x 1.73 x 16.20 in.
Weight	7.65 kg / 16.87 lb
Shipping dimensions (WxHxD)	590 x 80 x 590 mm / 23.23 x 3.15 x 23.23 in.
Shipping weight	10.74 kg / 23.68 lb

8.2 Mechanical Diagrams

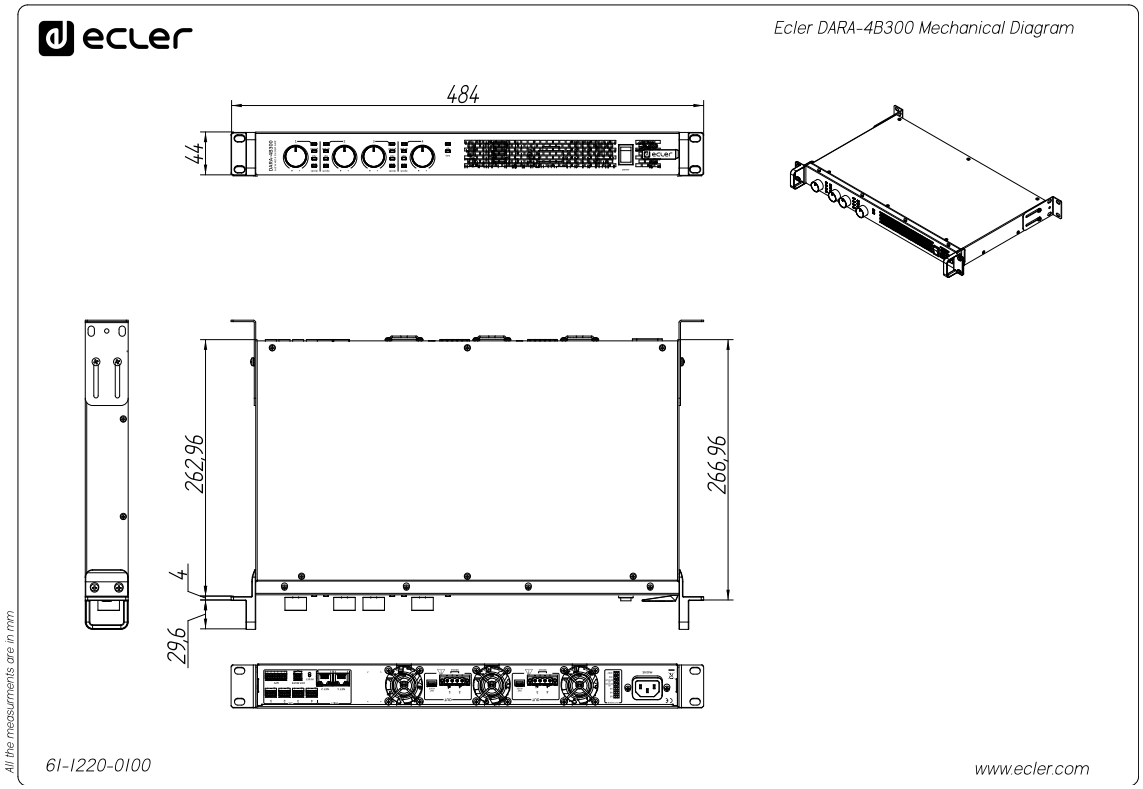
8.2.1 DARA-4B150

All measurements are **in mm.**



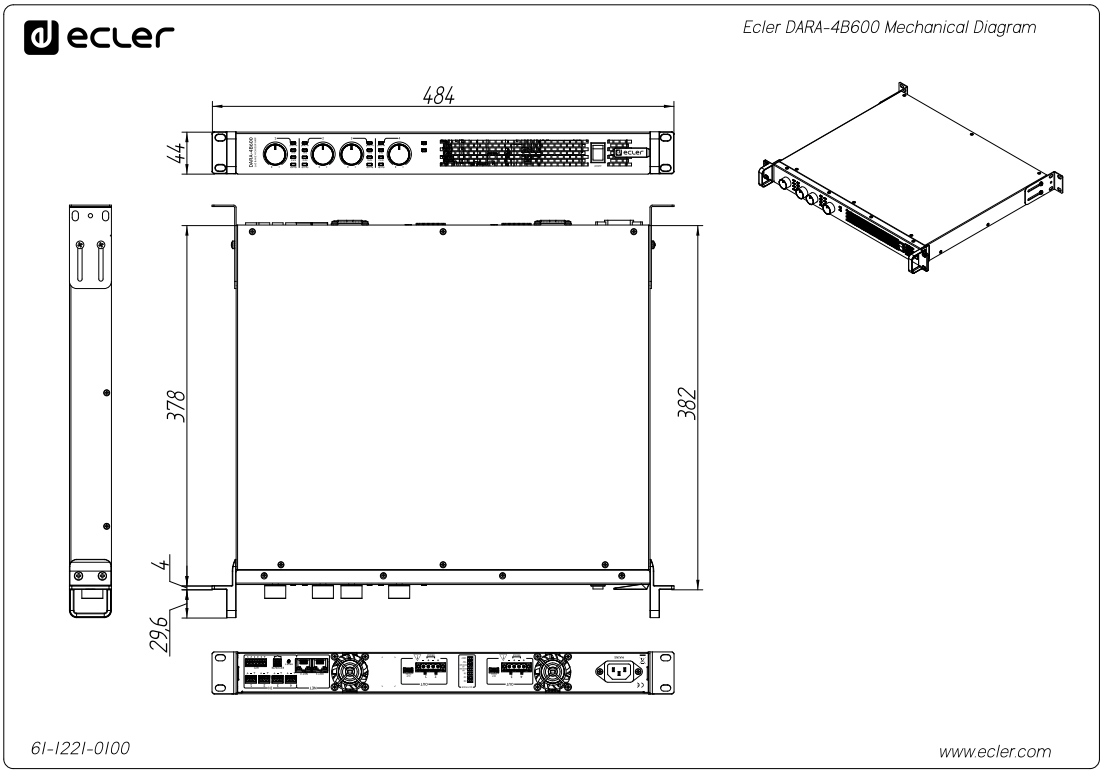
8.2.2 DARA-4B300

All measurements are **in mm.**



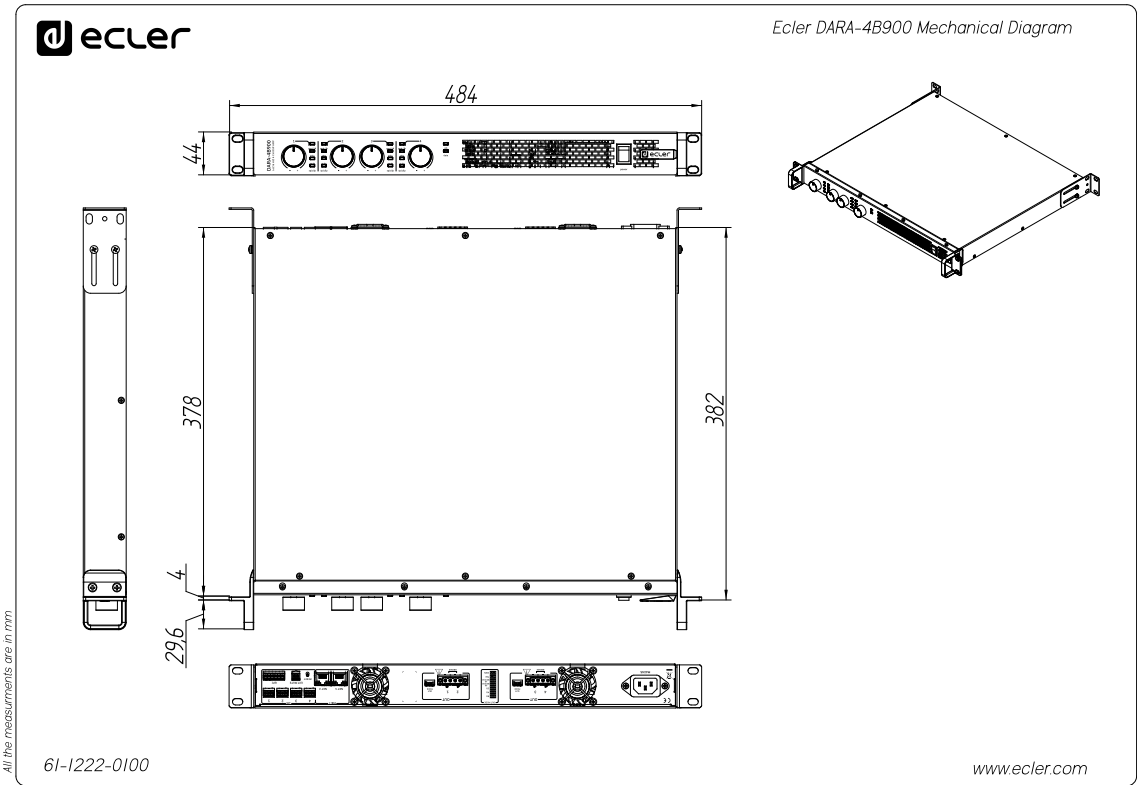
8.2.3 DARA-4B600

All measurements are **in mm.**



8.2.4 DARA-4B900

All measurements are **in mm.**



9. WebGUI

9.1 Updates

Firmware Update Required

For correct operation and full functionality, the device must be updated to the latest firmware version available before commissioning.

Verify the currently installed firmware version and, if necessary, update it using the "Check Update" feature. Operating the unit with an outdated firmware version may result in limited functionality, reduced performance, or compatibility issues.

To perform the update, an active Ethernet connection to the device shall be established and the WebGUI shall be accessed. The Check Update option is available in Settings chapter.

For a complete list of updates, please refer to the Release Notes files available in the Firmware/Software folders within the Software section for the corresponding model on our website www.ecler.com.

9.2 First Steps

Connecting to and Accessing the System

Before configuring audio routing or DSP parameters, a physical network connection between the computer and the amplifier must be established to access the integrated WebGUI. The device is equipped with two RJ45 ports for this purpose.

Setup procedure:

1. **Physical connection:** Connect an Ethernet cable from the local network switch, router, or directly from the computer to one of the amplifier's RJ45 ports.
2. **IP addressing:** Ensure that your computer is connected to the same local network (subnet) as the device. By default, the amplifier operates in DHCP mode and automatically obtains an IP address from the network.

If no DHCP server is detected, the device automatically assigns itself a Link-Local IP address, typically in the 169.254.x.x range.

If a DHCP server is available but the device does not connect correctly, reboot the device once and check the connection again.

3. **Accessing the interface:** Open a standard web browser on the computer. The software interface can be accessed using one of the following methods:
   - **Via IP address:** Enter the IP address assigned to the amplifier in the browser address bar.
   - **Via hostname:** Enter http://dara-4b900-XXXX.local/ in the browser address bar. Replace XXXX with the last four characters of the device MAC address and use the corresponding device model in the hostname, for example: dara-4b900 or dara-8b300...

Once the connection is successfully established, your browser will load the authentication screen, allowing you to log in and begin system configuration.

9.3 Login

To access the DARA control interface, log in with a valid user account. Enter a valid Username and Password in the corresponding fields.

(Optional)Check the **Keep me logged in** option. Enabling this option will securely save your session, allowing you to bypass the login screen for future access.

By default, only exist a valid Username with administrator permission:

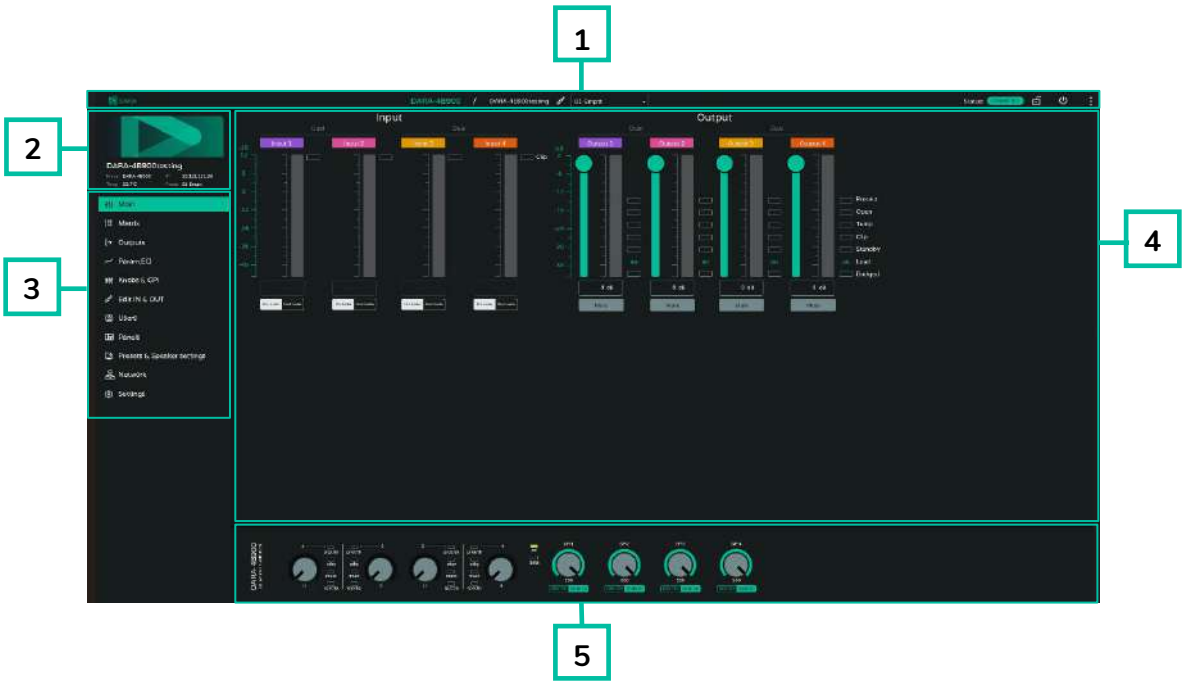
- **Username**: admin
- **Password**: admin

Once logged in, the administrator username and password can be modified in Profile settings.

Enable the "Keep me logged in" option to securely save your session and skip the login screen on future visits.

9.4 Navigation

After a successful login, the user is directed to the main interface. The layout is divided into five main sections, designed to provide continuous visibility of key amplifier parameters while allowing flexible navigation across configuration modules.



1. **APP BAR / Global Header**

   Always visible at the top of the screen, this bar displays global system information, including the DARA amplifier model, device name, status, screen lock, forced standby mode, and other configuration options.

   A. **DARA amplifier model.**

   B. **Device name:** The device name can be customized by clicking the pencil icon.

   C. **Preset selection:** Use this drop-down menu to load saved configurations. For detailed instructions on creating and managing presets, refer to **Presets & Speakers Settings.**

   D. **Amplifier status.**

   E. **Screen Lock:** When enabled, the WebGUI enters read-only mode. All system information and metrics remain visible, but user interaction is disabled. Activating this feature after completing the configuration is strongly recommended to prevent accidental changes.

F. **Power:** This option allows the amplifier to be placed into low-power standby mode. To reactivate the device, click the button again and wait a few seconds for the amplifier to restart.

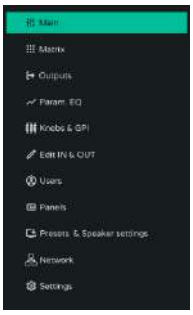
> ⚠ **Enabling this option immediately stops all active audio sources.**

G. **More Options:** Clicking the three-dot icon opens a menu with additional system settings. From here, Profile Settings can be accessed to modify the username and password or select the About option to view additional information such as legal notices and open-source software licenses.

2. Devices Status Panel

Located in the upper-left corner and always visible, this panel provides real-time critical information about the connected amplifier's hardware status, such as IP address, internal temperature, and the active preset name.

3. Sidebar Navigation



Located on the left side, below the status panel, this is the main navigation menu. Use these tabs to switch between different operating modules, such as Matrix, Outputs, Param. EQ, Network Settings...

4. Main Workspace

The large central area of the interface. This dynamic workspace changes depending on the module selected in the Sidebar Navigation. All main audio routing, mixing, and DSP adjustments are performed here.

5. Contextual Panel

Located at the bottom of the screen, this dynamic support area displays detailed parameters, additional physical control representations, or specific visual feedback depending on the selected element in the Main Workspace.

9.5 Main

This section provides a comprehensive overview of both input and output audio levels. It also displays the real-time status of each channel through virtual LED indicators. These on-screen indicators mirror the physical LEDs on the amplifier's front panel, enabling accurate remote monitoring.

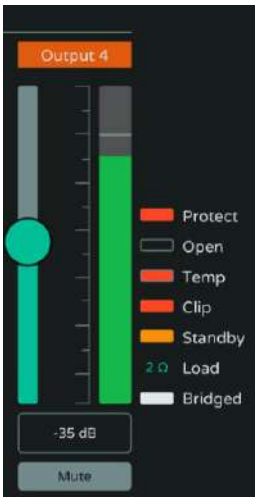
1. **Input source pre-Fader / post-Fader selector**

   Metering Mode (Pre-Fader / Post-Fader): Use this control to select how the input signal is displayed on the meters.

- **Pre-Fader** displays the actual input level directly from the source, before any internal processing is applied.
- **Post-Fader** displays the signal level after it has passed through the internal DSP processing.

2. **Output basic control & information**

   The output volume can be adjusted using the slider and muted using the Mute button. The channel status is shown on the left side of the level meter.



- **Protect:** Indicates that the channel has entered protection mode. Audio output is disabled until the underlying fault is resolved. Possible causes include overvoltage, short circuit, thermal overload, or critical hardware failure.

⚠ **If the Protect indicator is active on all channels simultaneously and the fan is not operating, the amplifier has likely entered a global protection state. In this case, a full power cycle or professional hardware service may be required.**

- **Open:** Indicates that the channel is active, but an open circuit has been detected at the output (no load connected).

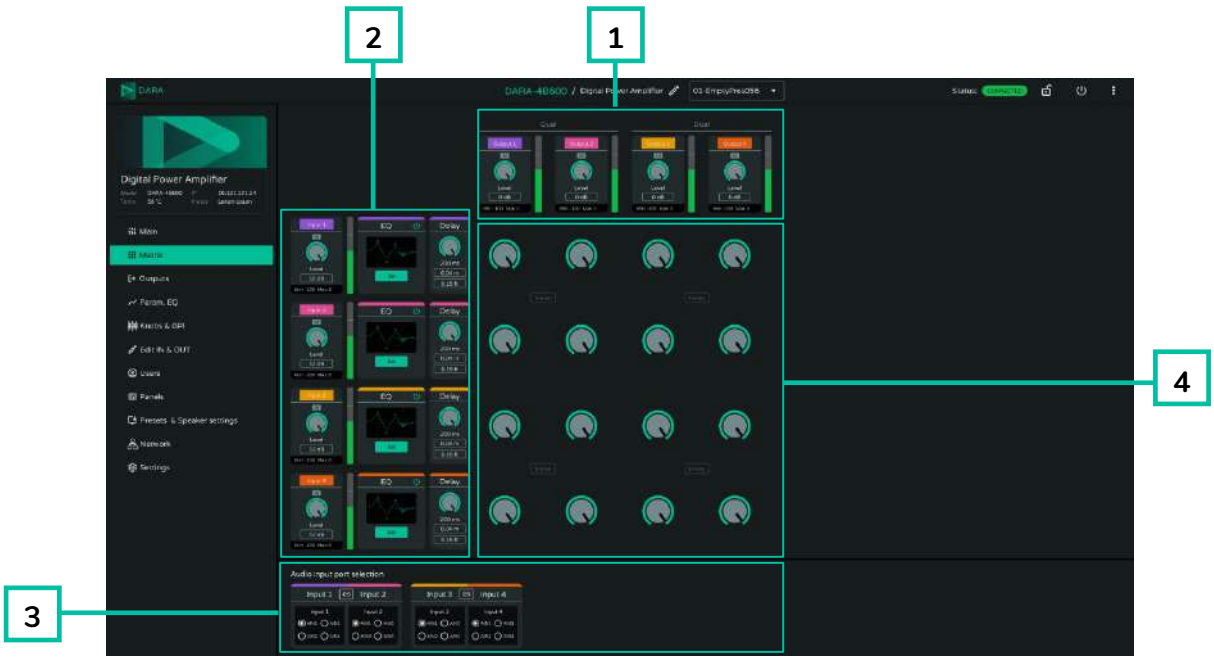
Check the wiring to ensure that the speakers are correctly and securely connected.

- **Temp:** Indicates the thermal status of the channel. The indicator may blink according to the channel temperature:
  - ≥ 75 °C: 1 s ON / 3 s OFF
  - ≥ 79 °C: 500 ms ON / 500 ms OFF
  - ≥ 83 °C: 100 ms ON / 100 ms OFF
- **Clip:** Indicates that the channel signal is clipping. Reduce the amplification level or lower the source signal level.
- **Standby:** Indicates that the channel is in standby mode (low power consumption).
- **Load:** Indicates the current output load setting (2 Ω, 4 Ω, 8 Ω, 70 V, 100 V, or Bridge mode). This parameter must be configured physically using the DIP switches located on the rear panel of the amplifier.
- **Bridge:** Indicates that the channel is operating in Bridge mode. In this configuration, two adjacent channels are combined into a single output to deliver higher power to a single load.

Enabling this mode requires physical changes to the wiring. The output connections must be reconfigured and the Euroblock jumper must be installed on the rear terminals.

9.6 Matrix

This section allows independent routing and mixing of input signals to the available output buses. It provides flexible signal distribution for zone feeds, auxiliary outputs, and custom system configurations.

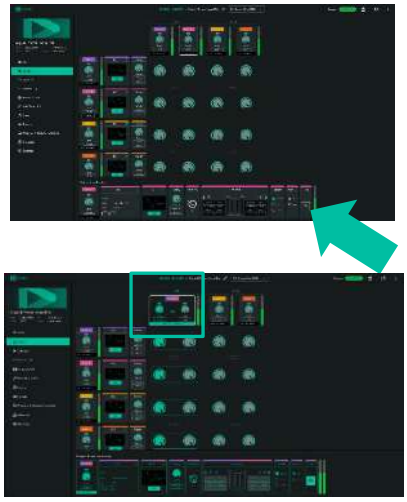


1. **Output signal processing**

   The main view provides a simplified overview of the output stages. **Clicking any output channel opens its dedicated Audio Strip in the lower Contextual Panel,** where the DSP tools and configuration options for that channel are available.

   For detailed instructions on parameter configuration, refer to the Outputs chapter.

Click any output channel to open its dedicated Audio Strip in the lower Contextual Panel.



Click ⛓ **to link two adjacent output channels and synchronize their settings.**

2. **Input Signal Processing**

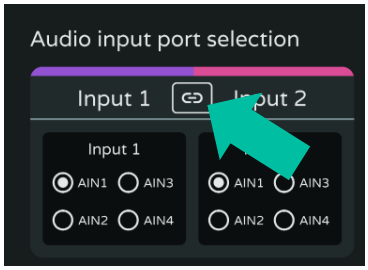
This section provides control over the incoming audio signal before it reaches the matrix mixer. Each input channel includes the following processing tools:

- **Level Control & Metering:** Use the rotary control to adjust the input gain. The adjacent meter provides real-time visual feedback of the incoming signal level.
- **Min and Max** indicate the volume limits defined for all users. These limits can be modified in Panels **(see section Panels)**.
- **EQ (Equalization)**: Opens the parametric EQ module, allowing adjustment of the input signal frequency response (**see section Param. EQ**).
- **Delay:** Adjusts the delay applied to the source for accurate time alignment across the audio system.

3. **Audio Input Port Selection**

When interacting with the input section, the Contextual Panel at the bottom of the screen updates to display the routing configuration.

- **Source Assignment:** Allows any physical hardware input connector to be assigned to any logical software input channel, providing maximum routing flexibility regardless of the physical wiring layout.



- **Click to link two adjacent input channels and synchronize their settings.**

4. **Matrix**

The central Matrix grid allows any input signal to be routed to any output channel and lets the level of each individual crosspoint be adjusted independently.

- **Routing and Level Control**

  Each circular control in the grid represents a routing crosspoint (X-Point) between an input (row) and an output (column). Rotate the control to adjust the send level from that input to that output. Double-click the control to enable or disable the crosspoint.

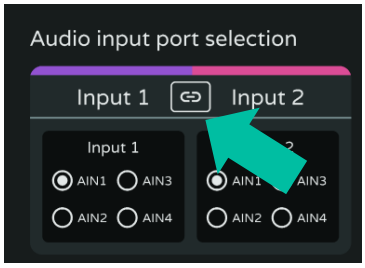
- **Stereo Mode**

  Within the central Matrix grid, a Stereo button appears between adjacent channel intersections.

By default, this button is disabled. and unavailable for selection. This button enables quick and accurate stereo signal routing.

1. **Requirements for Activation**

   To enable Stereo mode, a fully linked signal path must be created by enabling both of the following:



- **Input Link:** Click to link two adjacent input channels and synchronize their settings.

- **Output Link:** Click to link two adjacent output channels and synchronize their settings.

2. **Stereo Operation**

Once both input and output links are enabled, the Stereo button becomes available. Clicking it creates a stereo routing path automatically. The software assigns the crosspoints to maintain the correct stereo image, routing the left input to the left output and the right input to the right output, while linking both level controls for simultaneous adjustment.

- **Bridge Mode**

Bridge mode allows two adjacent output channels to operate as a single channel with increased power delivery to the connected load.

When Bridge mode is configured, the software interface updates automatically to reflect the hardware status. In the Matrix grid, the two bridged channels (for example, Outputs 3 and 4) are shown as a single control strip labelled with the primary channel number (Output 3). The routing column for the secondary channel (Output 4) is removed automatically to prevent routing errors.

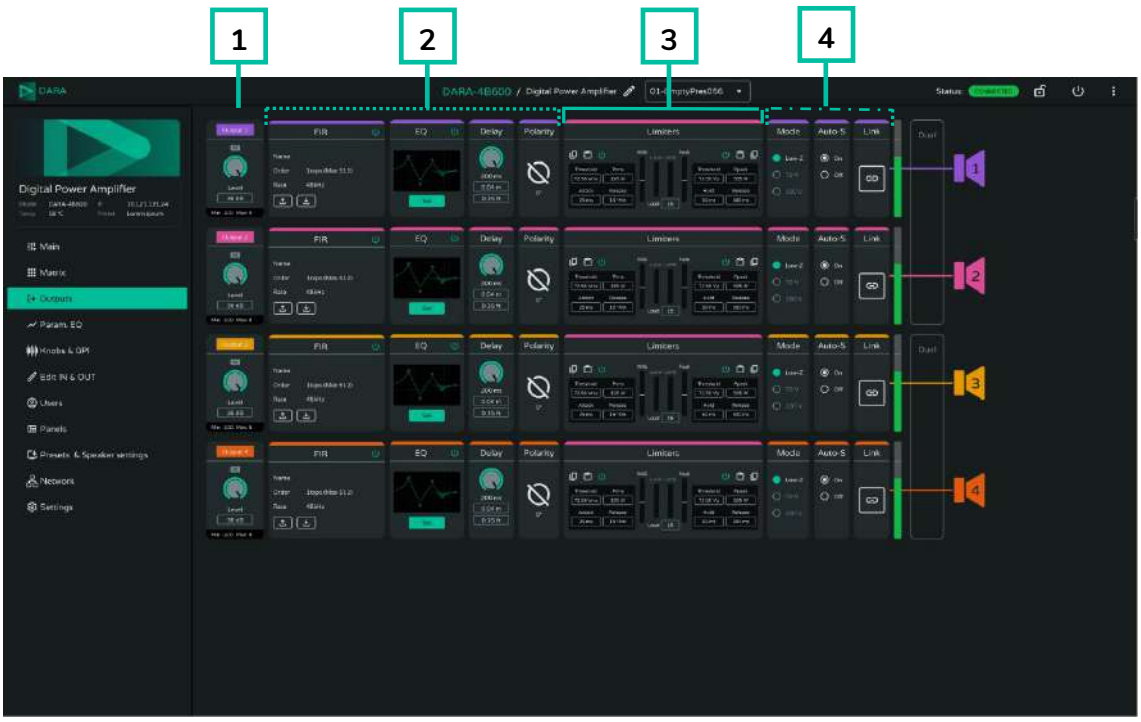
⚠ **Bridge mode is not enabled from the software interface. It must be configured using the DIP switches on the rear panel of the DARA amplifier. Depending on the application, either 4 Ω Bridge or 8 Ω Bridge mode can be selected.**

⚠ **Physical wiring: Changing the DIP switch setting alone is not sufficient. The loudspeaker wiring at the output terminals must also be manually reconfigured. In addition, the Euroblock jumper must be installed (see the section Amplified Output Connections for details on installing the Euroblock jumper).**

⚠ **Bridge mode and Stereo mode cannot be used simultaneously on the same pair of outputs. If two channels are configured in Bridge mode, a stereo signal path cannot be routed through those outputs in the Matrix.**

9.7 Outputs

This section provides comprehensive control over the final processing stages before the audio signal reaches the loudspeakers. Each channel includes an identical set of tools, organized into the following functional groups.



1. **Level Control**
   - **Output Level:** Use the primary rotary knob to adjust the overall output volume for the channel. The adjacent meters provide real-time visual feedback.

2. **Signal Processing (DSP)**
   - **FIR:** Import and export custom FIR (Finite Impulse Response) filter coefficients. Use the power icon (⏻) to easily enable or disable the filter.
   - **EQ (Equalization):** Click "Set" to access and customize the parametric equalization for the output. The power icon toggles the EQ block on or off.
   - **Delay:** Apply time alignment to the output signal, adjustable from 0 ms up to a maximum of 200 ms.
   - **Polarity:** Inverts the phase of the audio signal by 180°, which is essential for correcting acoustic phase cancellations between different speakers in a venue.

3. **Speaker Protection**
   - **Limiters:** Designed to strictly limit output power and protect connected speakers from severe damage. This module is divided into two independent stages, each with its own ON/OFF toggle and copy/paste functionality:

- **RMS Limiter:** Protects against thermal damage from continuous, excessive power. You can adjust the Threshold (Vrms), continuous power target (Prms), Attack, and Release times.
- **Peak Limiter:** Prevents mechanical damage from sudden, loud transients. Adjustable parameters include Threshold (Vp), peak power target (Ppeak), Hold, and Release times.

4. **Hardware & System Settings**
   - **Mode:** A visual indicator displaying the current hardware impedance configuration of the channel (Low-Z, 70V, or 100V).
   - **Auto-S (Auto-Standby):** When set to "On," the individual amplifier channel will automatically enter a low-power standby state after 90 seconds without detecting any incoming audio signal.
   - **Link:** Bonds two adjacent channels (e.g., Output 1 & 2, or Output 3 & 4) together. When linked, adjusting the DSP or level settings on one channel will automatically mirror those exact changes on the linked channel.

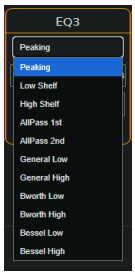
9.8 Param. EQ

This section describes the equalisation tools available for each input and amplified output, including the graphic EQ, crossover filters, and preset management functions.

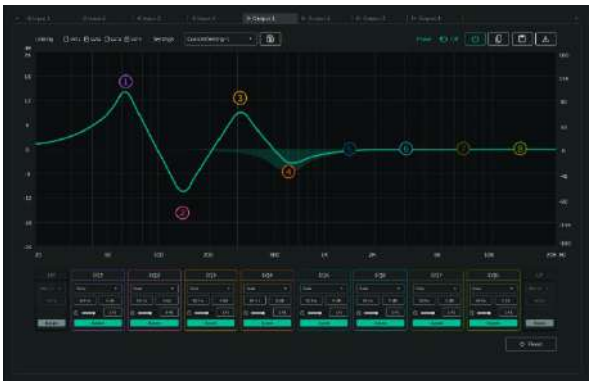
Independent 8-band graphic equaliser with High Pass and Low Pass filter available for each input and amplified output.

The Bypass option allows each band to be enabled or disabled independently.

Each EQ band features a selectable filter type, allowing you to choose between Peaking, Low/High Shelf, All-Pass, and specialized Low/High pass filters (General, Butterworth, and Bessel).



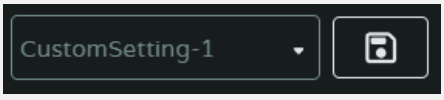
Use the controls to customize each band by modifying its frequency, gain, and Q factor.



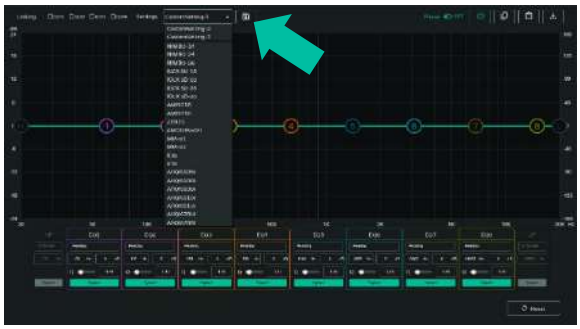
1. **ON/OFF button**: Enables or disables EQ processing for the selected channel.
2. **Copy/Paste**: Copies EQ settings from one channel and pastes them to any other input or output channel.
3. **Import:** Loads an EQ configuration from an external file.
4. **Phase:** Enables or disables phase display on the EQ graph.
5. **Linking:** Links multiple channels so that slave channels follow the settings of the master channel (the first selected channel).
6. **Reset:** Restores all EQ bands and filters to their default flat settings.

The EQ settings for each input and output can be saved to and recalled from the selected Speaker Setting.

When any parameter is modified, the selected Custom Speaker Setting name turns grey to indicate that the current changes have not been saved.

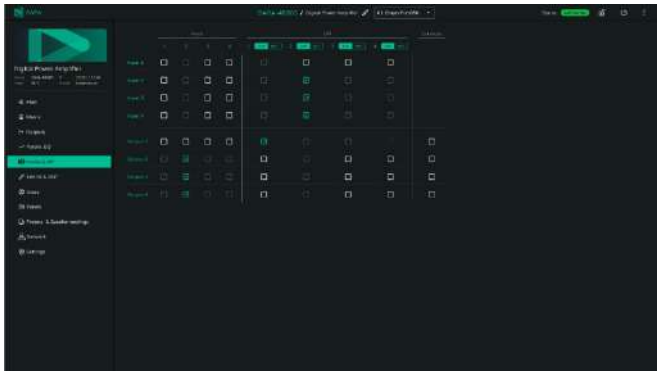


The dropdown menu provides access to Ecler factory speaker settings and user-defined configurations. To store any modifications, the save icon opens the corresponding dialog, where Save overwrites the current preset and Save as creates a new preset with a custom name and notes.



9.9 Knobs & GPI

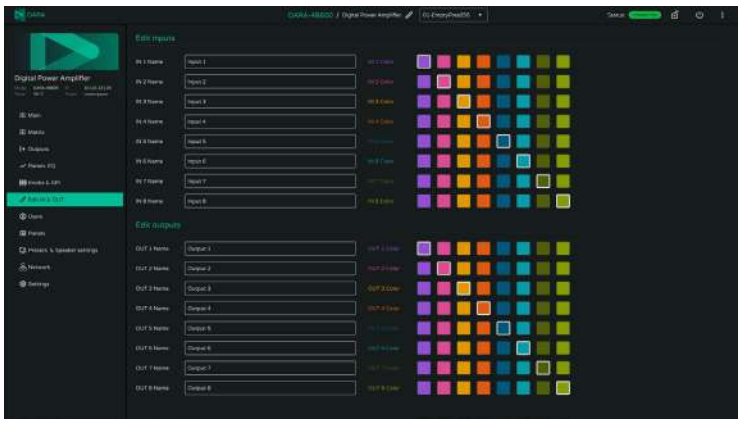
This section includes an assignment matrix used to map the amplifier's physical controls (Knobs, GPIs, and External Mute) to specific input and output channels.



- **Knob Assignment:** Defines which input or output channels are controlled by each physical knob on the amplifier. If no channel is assigned to a given knob, that knob remains bypassed (disabled), and any adjustments made with that knob do not affect the signal level.
- **GPI Assignment:** Assigns the General Purpose Inputs (GPIs) to the required input or output channels. Each GPI can also be configured with DIR (Direct) or REV (Reverse) polarity to match the required control logic.
- **Ext Mute (External Mute):** Defines which outputs are immediately muted when the external mute contact closure is activated.

9.10 Edit IN & OUT

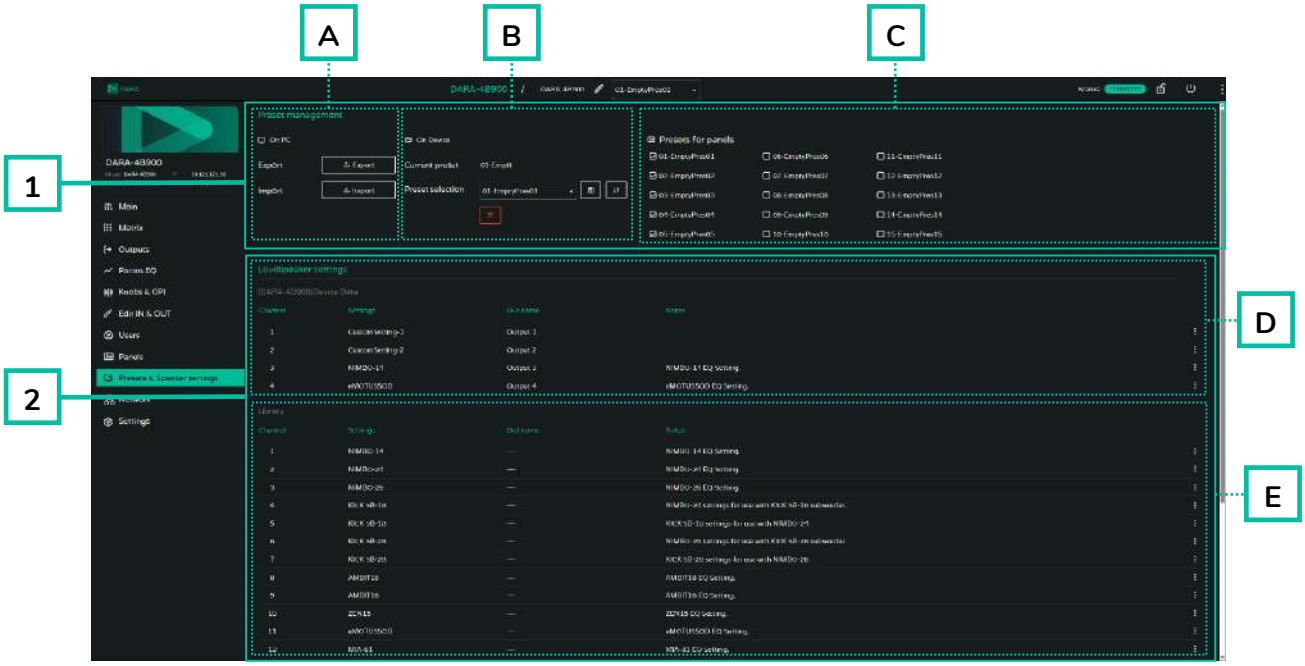
This section is used to customize and visually organize system channels for easier identification and routing throughout the software.



- **Channel Naming:** Each input and output channel can be renamed using a custom text label to match the corresponding hardware connection or audio source.
- **Color Coding:** A distinctive colour can be assigned to each input and output channel from the available colour palette. This colour scheme is applied globally across other views, including the matrix and processing windows.

9.11 Presets & Speakers Settings

This section provides centralized access to the management, storage, and recall of device configuration presets, as well as to the assignment and handling of loudspeaker settings.



1. **Preset Management:**
   A. **Export/Import:** Exports the current device configuration to a computer file for backup purposes or imports a previously saved preset file into the amplifier.
   B. • **Current Preset Display:** Displays the name of the preset currently loaded in the amplifier.

   If the current configuration contains unsaved changes, an asterisk (*) is shown next to the preset name. This indication also appears in the global preset drop-down menu at the top of the screen.

   • **Preset Selection & Recall:** The Preset selection drop-down menu is used to browse the presets stored in the device. To load a selected preset into the amplifier, the Recall button must be pressed. Otherwise, the amplifier continues operating with the previously loaded configuration.
   • **Save Preset:** Saves the current configuration to the selected preset slot in the device.
   • **Delete All Presets:** Permanently deletes all custom user presets stored in the amplifier and restores the preset slots to their factory-default empty state.
   C. **Presets for panels:** Selects which presets are available in the drop-down menus of the control panels, allowing only specific configurations to be accessible to the user.

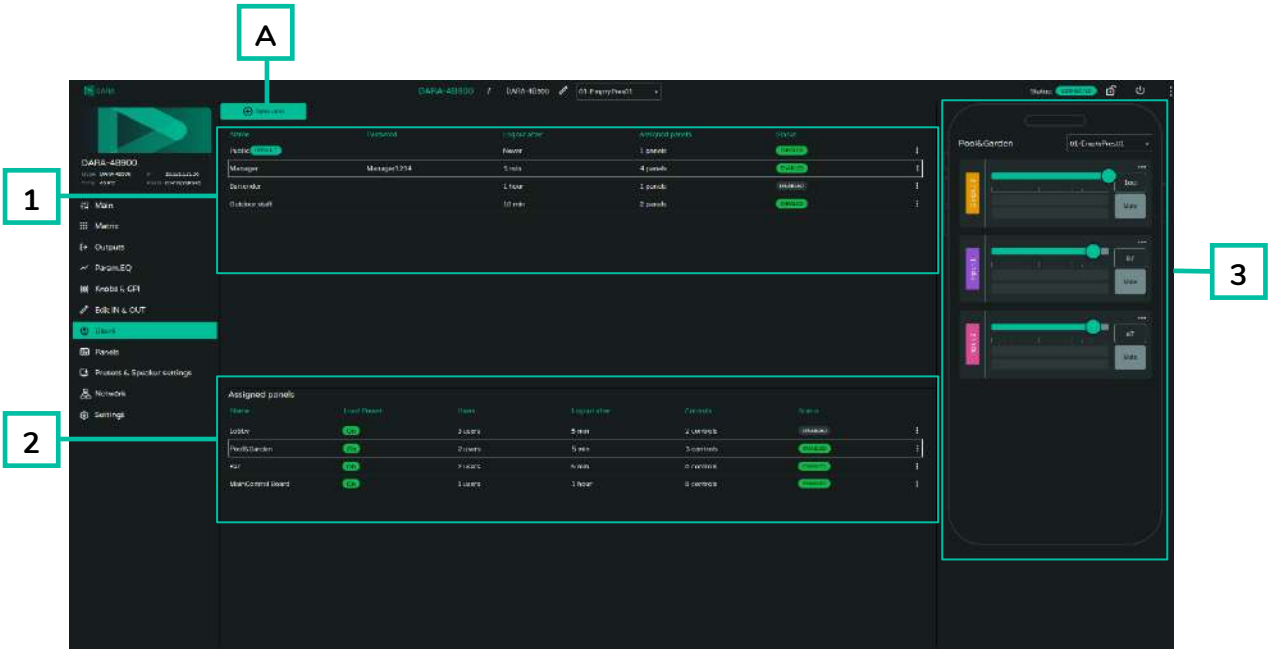
2. **Loudspeaker settings:**

   D. **Device Data:** Displays the loudspeaker profiles currently assigned to each output channel. Click the three-dot options menu ⋮ on the right to copy and paste loudspeaker settings across different outputs.

   E. **Library:** Contains the global database of available loudspeaker profiles. Official Ecler presets are listed first, followed by user-defined custom profiles. The three-dot options menu ⋮ on the right of each entry allows individual loudspeaker profiles to be imported or exported, and custom profiles to be edited directly.

9.12 Users

This section is used to manage user access permissions, allowing the creation and configuration of user profiles with specific, localized privileges.

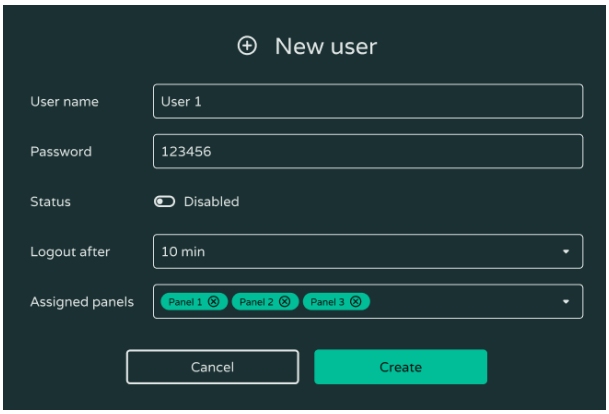


The main interface is divided into 3 key sections:

1. **User List:** Displays all created user profiles together with their basic credentials (user name and password), inactivity logout settings, the number of assigned control panels, and the current account status (Enabled or Disabled).
2. **Assigned Panels:** When a user is selected from the upper list, this lower list is automatically updated to display the control panels assigned to that user, which the user is authorized to access and operate.
3. **Real-Time Preview:** Selecting any panel from the assigned panels list opens a live smartphone/tablet preview on the right side of the screen. This preview shows exactly what is available to the selected user in the client interface, allowing direct verification of operational permissions.

A. Clicking the **New user** button

opens a configuration dialogue box with the following parameters:



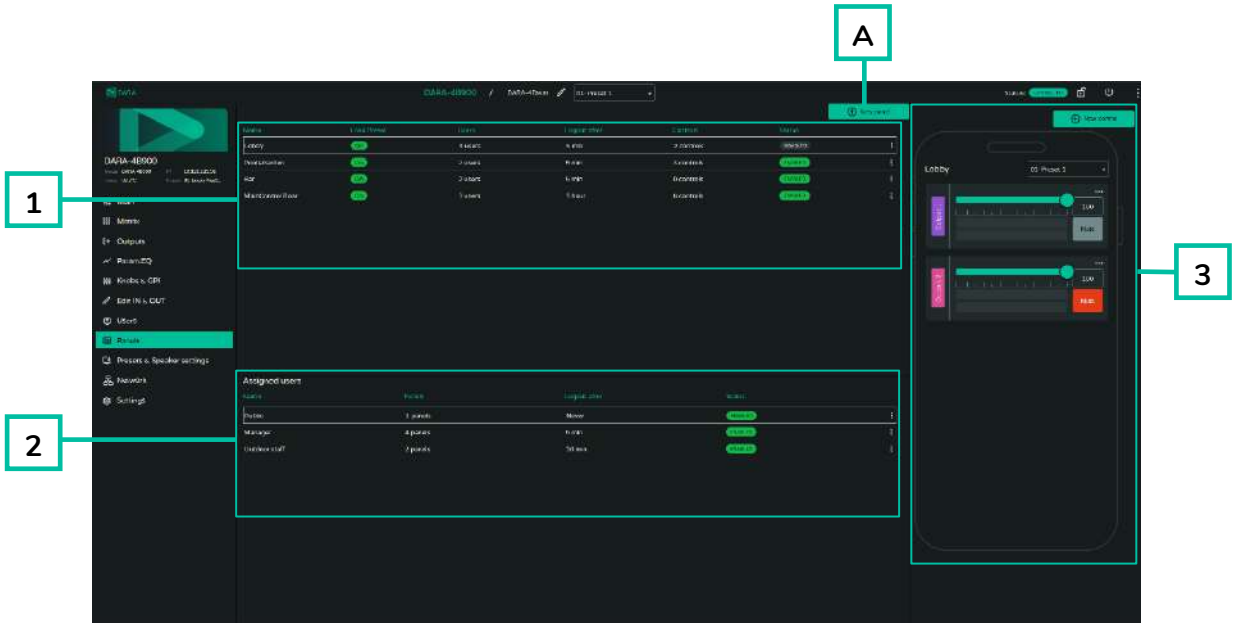
- **User name:** Defines a unique identifier or descriptive name for the user profile (e.g., *Manager*, *Bartender*, *Outdoor staff*...).
- **Password:** Defines the password required to log in to the assigned interfaces.

If this field is left blank, the user account is created without password protection.

- **Status:** Enables or disables the user account, allowing access permissions to be granted or revoked instantly.
- **Logout after:** Defines the inactivity timeout period, from minutes to hours, or Never. When no activity is detected during the configured period, the user is logged out automatically and the interface is locked.
- **Assigned panels:** Multi-selection drop-down menu used to assign one or more virtual control panels to the selected user profile. Assigned panels can be removed at any time.

9.13 Panels

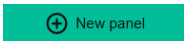
This section is used to design, configure, and manage virtual control surfaces adapted to different zones or installation requirements. This section provides full control over user interaction with the system from external control devices or dedicated client interfaces.



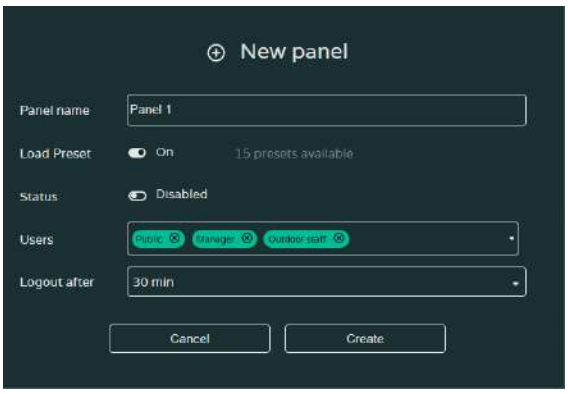
The main interface is divided into 3 key sections:

1. **Panel List:** Displays all created virtual panels together with their general status, including whether preset loading is enabled, the number of authorised users, the inactivity logout time, and the total number of controls included in each panel.
2. **Assigned Users:** When a panel is selected, this lower list is automatically updated to display the specific user accounts authorised to access it.
3. **Real-Time Preview:** Selecting a panel opens a live smartphone/tablet preview on the right side of the screen. This interactive view shows exactly how the controls are presented and operated by the end user, including sliders, mute controls, and preset selection drop-down menus.

The smartphone preview panel is fully functional, allowing operation testing of the control widgets, switching between available presets, and loading them in real time exactly as performed on a physical mobile device.

A. Clicking the **New panel** button 

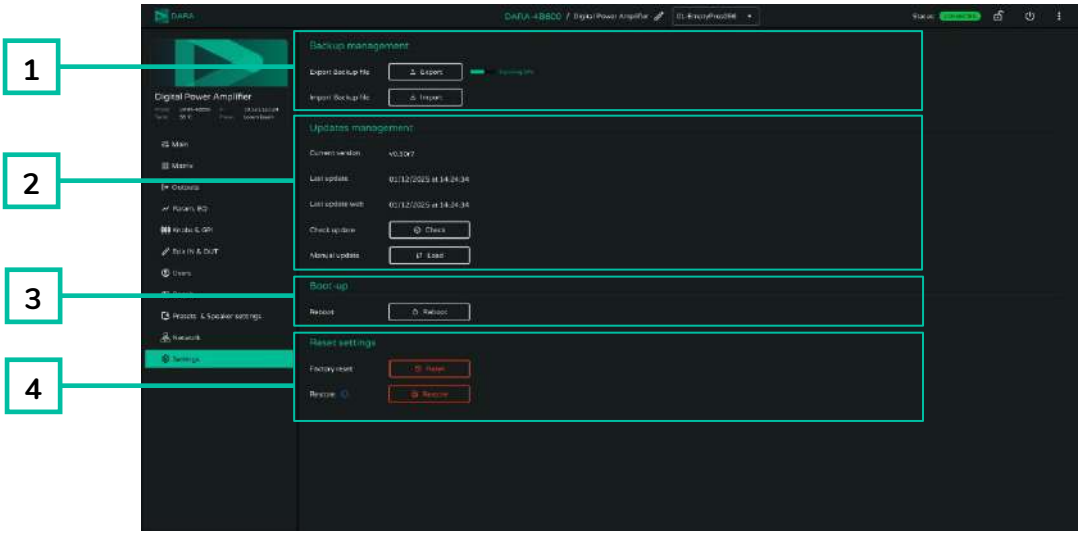
opens a configuration dialogue box with the following parameters:



- **Panel name:** Defines a descriptive identifier for the virtual control interface (for example, Lobby, Bar, or Pool & Garden...).
- **Load Preset:** Enables or disables permission for users operating this panel to change the amplifier global presets from the panel interface.
- **Status:** Sets the panel to Enabled or Disabled in order to grant or revoke user access.
- **Users:** Displays a drop-down menu used to assign authorised user groups or individual profiles to the control surface.
- **Logout after:** Defines the inactivity timeout period, ranging from minutes to hours, or Never, after which the panel interface is automatically logged out when not in use.

9.14 Settings

This section provides access to the amplifier's global administration, maintenance, and recovery functions.



1. **Backup management**
   - **Export Backup:** Generates and downloads a complete snapshot of the amplifier's current configuration to the local computer. This file includes all device settings, user profiles, control panels, DSP configurations, and presets, with the sole exception of the network settings (IP configuration, subnet mask, etc.). This ensures that restoring a backup does not generate network conflicts.
   - **Import Backup:** Uploads a previously exported backup file to restore the complete amplifier configuration.
2. **Updates management**
   - **Current version:** Displays the firmware version currently running on the device.
   - **Last update:** Shows the timestamp of the last update carried on.
   - **Check update:** Connects to the remote server to verify whether a newer web or system firmware version is available. If the installed version is older than the version available on the server, the update procedure is proposed.
   - **Manual Update:** Allows a firmware update file to be selected and uploaded manually from the local computer. User data created in a newer firmware version may not be fully compatible with an older version.

   ⚠ **If the firmware update fails, refer to the troubleshooting instructions in the Firmware Recovery and Rollback chapter below to resolve the issue.**
3. **Boot-up**
   - **Reboot:** Performs a complete soft reboot of the amplifier. Activating this function restarts the system remotely and is functionally equivalent to switching the physical power switch OFF and ON.

4. **Reset settings**

- **Factory reset:** Deletes all software parameters, custom presets, user profiles, control panels, including all network settings, restoring the amplifier to its factory default state. This function is equivalent to performing a physical hardware factory reset (**see Chapter Reset Button for additional information**).
- **Restore:** Performs a selective initialization. This function permanently deletes all DSP processing parameters and stored presets, while preserving all user accounts, control panels, and network settings.

9.14.1 Firmware Recovery and Rollback

In the event of a firmware update failure -such as a sudden loss of mains power or a network interruption during the process- the amplifier may become unresponsive. To recover the system, a hardware-based firmware rollback procedure is available to restore the device to its previous stable firmware version.

To initiate firmware rollback manually on the amplifier, the following power-cycle sequence must be performed exactly as indicated:

1. Power ON the amplifier, wait 2 seconds (the interval must be between 2 and 5 seconds), and then power it OFF.
2. Wait another 2 seconds (interval again between 2 and 5 seconds), and power the amplifier ON again.
3. Repeat this power cycle 10 consecutive times.
4. After the 10th power-on cycle, leave the amplifier in the ON state.

Rollback LED Indicator Behavior

The front panel LED indicators provide visual feedback during the restoration process:

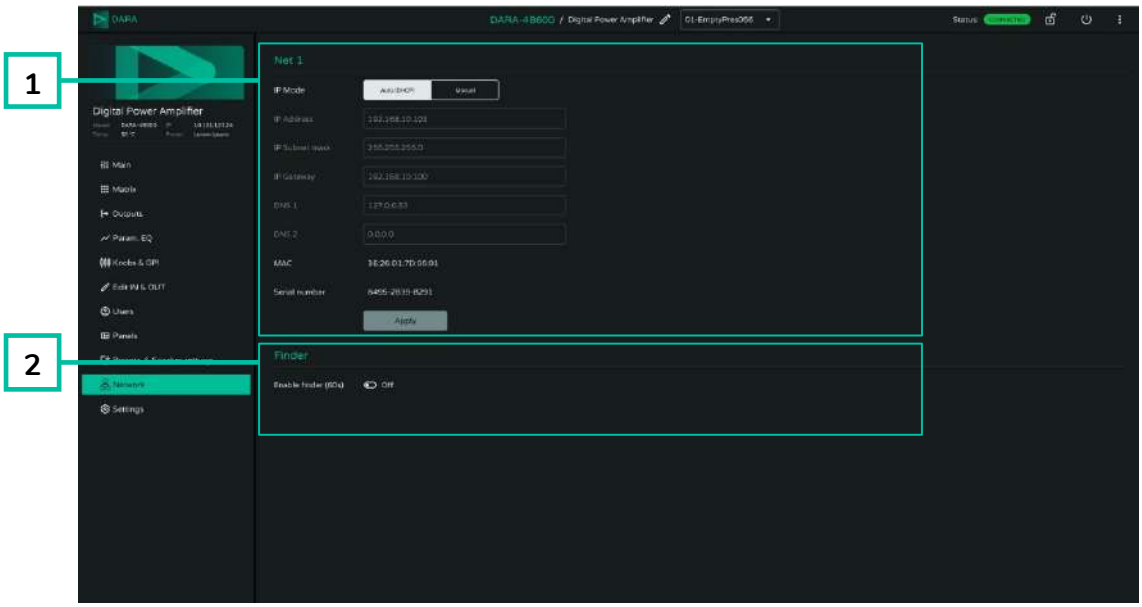
- **Trigger Confirmation:** f the timing sequence has been performed correctly, all LED indicators flash 3 times (500 ms ON, 500 ms OFF) during the 10th power-on cycle.
- **Rollback in Progress:** After confirmation, all Protect LEDs flash continuously (500 ms ON, 500 ms OFF). The firmware restoration process takes approximately 4 minutes to complete.

  ⚠ **Power must not be interrupted during this period.**

- **Rollback Complete:** Once the firmware has been successfully restored, all LED indicators flash 3 times (500 ms ON, 500 ms OFF), indicating that the process has finished and the amplifier is ready for normal operation.

9.15 Network Settings

This section is used to configure the amplifier's IP settings and to identify the unit physically within an installation rack.



1. **IP Configuration (Net 1)**
   - **Auto (DHCP):** By factory default, the IP mode is set to Auto (DHCP), allowing the amplifier to obtain an IP address automatically from the network router or server.
   - **Manual (Static IP):** To assign a static IP address, the IP mode must be set to Manual. The required network parameters must then be entered manually, including IP Address, Subnet Mask, Gateway, and DNS servers.
   - **Apply Changes:** After the new manual parameters have been entered, click Apply to save and apply the new configuration.

Changing the IP address immediately terminates the current connection to the WebGUI. To regain access to the interface, open a new browser tab and enter the newly assigned IP address, or reconnection using the device's Local Hostname.

2. **Device Identification: Finder**

   When multiple amplifiers are installed in a rack or server room, identifying a specific unit may be difficult. Enabling Finder (60 s) makes all front-panel LED indicators on the amplifier blink simultaneously for 60 seconds, allowing the device to be identified quickly and easily.

9.16 Android / iOS APP

The application is currently under development. It will be available soon. Detailed information will be added to this user manual once it becomes available.