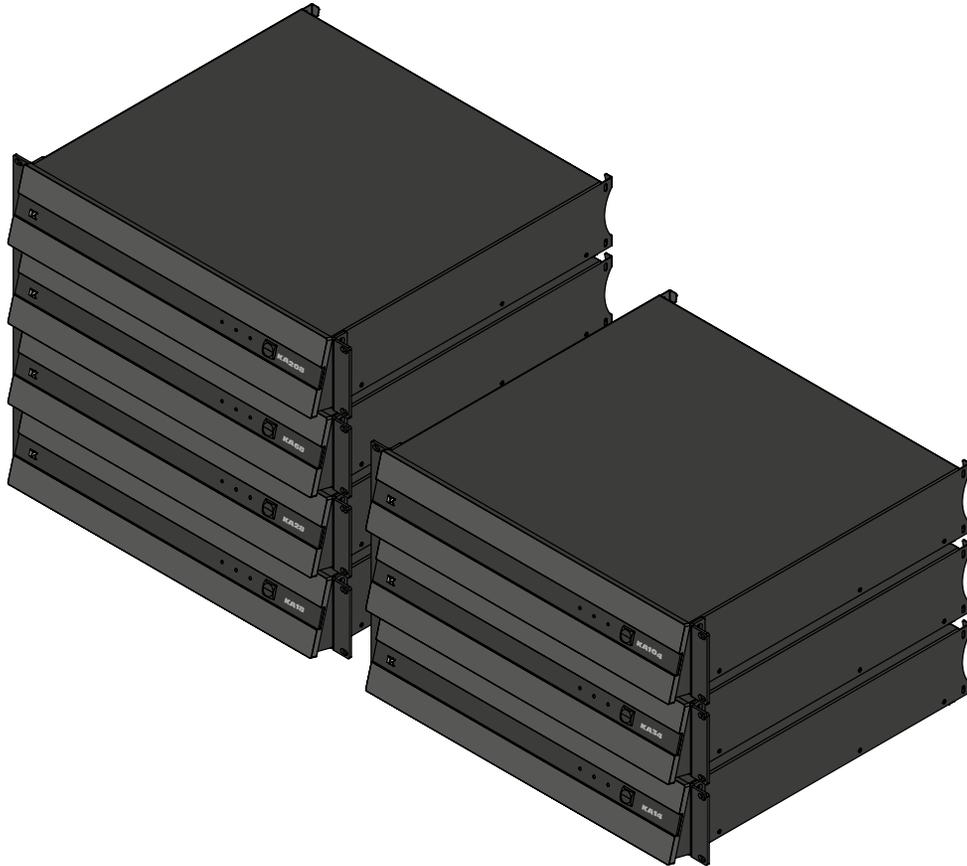


Kommander-KA

Digital Processing Multi-Channel Amplifiers

USER GUIDE



K-ARRAY
Unique Audio Solutions

IMPORTANT SAFETY INSTRUCTIONS



CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN



ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**



This symbol alerts the user to the presence of recommendations about the product's use and maintenance.



The lighting flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated, dangerous voltage within the product enclosure that may be of magnitude to constitute a risk of electrical shock.



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



Operator's manual; operating instructions
This symbol identifies the operator's manual that relates to the operating instructions and indicates that the operating instructions should be considered when operating the device or control close to where the symbol is placed.



For indoor use only
This electrical equipment is designed primarily for indoor use.



WEEE
Please dispose of this product at the end of its operational lifetime by bringing it to your local collection point or recycling center for such equipment.



This device complies with Restriction of Hazardous Substances Directive.



Warning. Failure to follow these safety instructions could result in fire, shock or other injury or damage to the device or other property.

General heed and warnings

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Only use attachments/accessories specified by the manufacturer.
- 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.
- Clean the product only with a soft and dry fabric. Never use liquid cleaning products, as this may damage the products cosmetic surfaces.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Avoid placing the product in a location under direct sunlight or near any appliance that generates UV (Ultra Violet) light, as this may change the product surface finishing and cause a change in color.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- **CAUTION:** These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- **WARNING:** Only use attachments/accessories specified or provided by the manufacturer (such as the exclusive supply adapter, battery, etc.)



These apparatus are intended for professional use.

Installation and commissioning may only be carried out by qualified and authorized personnel.

- Before turning the power on or off for all devices, set all volume levels to minimum.
- Use only speaker cables for connecting speakers to the speaker terminals. Be sure to observe the amplifier's rated load impedance particularly when connecting speakers in parallel. Connecting an impedance load outside the amplifier's rated range can damage the apparatus.
- K-array cannot be held responsible for damage caused by improper use of the loudspeakers.
- K-array will not shoulder any responsibilities for products modified without prior authorization.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:



1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

CAUTION! Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Statement

This device complies with Industry Canada's licence-exempt RSSs.

Operation is subject to the following two conditions: this device may not cause interference, and this device must accept any interference, including interference that may cause undesired operation of the device.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS-102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

CE Statement

K-array declares that this device is in compliance with applicable CE standards and regulations. Before putting the device into operation, please observe the respective country-specific regulations!



Trademark Notice

All trademarks are the property of their respective owners.

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Thank you for choosing this K-array product!

To ensure proper operation, please carefully read this owner's manual and safety instruction before using the product. After reading this manual, be sure to keep it for future reference.

Should you have any questions about your new device please contact K-array customer service at support@k-array.com or contact the official K-array distributor in your country.

Kommander-KA is the line of K-array amplifiers meticulously designed and built with powerful DSPs and Class D amp modules that extend the sound experience through intelligent sound processing that can adapt to any context.

Each amplifier of the Kommander-KA line is fully loaded on board with all the configurations necessary to drive any K-array passive product to fulfill maximum power of each output channel, of course a variety of power differ from model to model to give you a wider choice for specific applications.

The K-array Connect mobile app and K-framework software provide the control dashboards to access all Kommander-KA DSP features for system settings, fine tuning and monitoring in single unit installations and demanding applications where thousands of watts must be carefully managed.

Kommander-KA

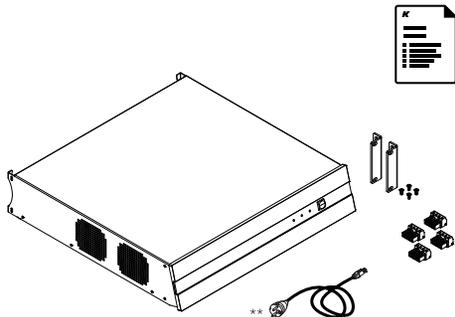
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Unpacking

Each K-array amplifier is built to the highest standard and thoroughly inspected before leaving the factory.

Upon arrival, carefully inspect the shipping carton, then examine and test your new amplifier. If you find any damage, immediately notify the shipping company. Check that the following parts are supplied with the product.

- 1x Amplifier unit: model and version shall be one from the following list:
 - a. Kommander-KA14 I
 - b. Kommander-KA18
 - c. Kommander-KA28
 - d. Kommander-KA34
 - e. Kommander-KA68
 - f. Kommander-KA104
 - g. Kommander-KA208
- 2x Rack mounting brackets with screws
- PC 4/ 4-ST-7,62 speaker output flying connectors *
- 1x Power cord
- 1x The quick guide

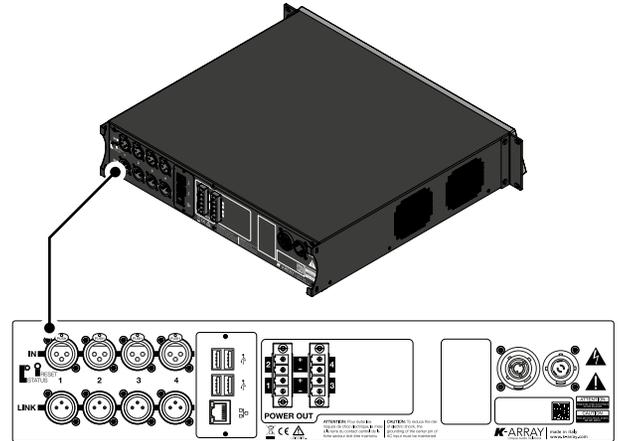


Notes

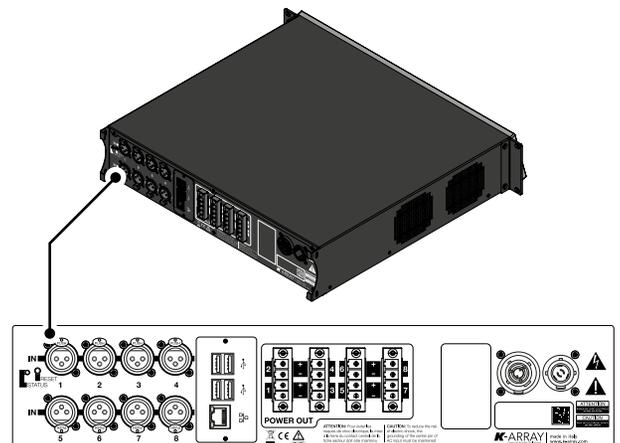
* 2 pieces in 4-channel units, 4 pieces in 8-channel units.

** The AC mains cord plug may differ from the picture according to local regulation.

4-channel units: KA14 I, KA34, KA104



8-channel units: K18, KA28, KA68, KA208



Introduction

The Kommander-KA amplifiers are available in two versions: 4-channel units and 8-channel units. Both versions implement multichannel free routing and DSP with Grouping, Input EQ, Output EQ, Level adjustment, Dynamic Limiters and Delay per channel.

4-channel units	Line inputs	Speaker outputs	Power Rating per channel
Kommander-KA14 I	4	4	600W @ 2Ω
Kommander-KA34	4	4	750W @ 4Ω
Kommander-KA104	4	4	2500W @ 4Ω

8-channel units	Line inputs	Speaker outputs	Power Rating per channel
Kommander-KA18	8	8	150W @ 4Ω
Kommander-KA28	8	8	600W @ 2Ω
Kommander-KA68	8	8	750W @ 4Ω
Kommander-KA208	8	8	2500W @ 4Ω

The dedicated K-array Connect app and the K-framework3 software for Mac and PC allow user access to the highly configurable output section and the powerful DSP making any Kommander-KA amplifier a flexible driving unit.

In order to remote control a Kommander-KA amplifier download the K-array Connect app or the K-framework3 software:



click to go



click to go



Getting Started

1. Connect the input and output signal cables according to the configuration you want to achieve.
2. Connect the power cord to an AC mains socket outlet and to the powerCon TRUE connector on the Kommander-KA rear panel: the amplifiers switches on when the powerCon TRUE connector is locked and electricity flows from the AC mains.
3. Hold your mobile device (smartphone or tablet); ensure the Wi-Fi connectivity is on;
 - a. in Android based systems the app looks for any Wi-Fi network whose SSID name starts with "K-array"; swipe down to force refresh the list of available networks;
 - b. if the list of available devices is empty, touch the SCAN QR CODE button and use the mobile device camera to frame the QR code at the bottom right corner of the Kommander-KA rear panel: this provides the mobile device to connect to the Kommander-KA Wi-Fi hotspot.
4. Enter the password to connect to Kommander-KA amplifier (see "[Connection to a single Kommander-KA](#)", [page 7](#) for details).
5. In the K-array Connect app bottom menu, select PRESET and touch the compass button for setting the loudspeaker configuration (see "[Output configuration](#)", [page 9](#)). Carefully check that the loaded presets match the actual configuration of passive speakers connected to the amplifier connectors.
6. Set the signal routing from the input channels to the output channels in the ROUTING menu (see "[Signal Routing](#)", [page 9](#)).
7. Check signal volume in the VOLUME tab (see "[Volume](#)", [page 10](#)).
8. Enjoy K-array sound!

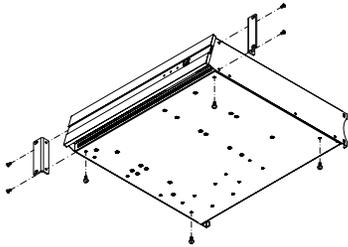
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Mounting and cooling

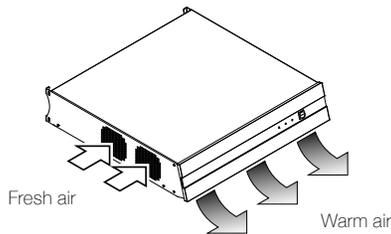
K-array Kommander amplifiers are provided with a couple of brackets for common 19" rack installation: each Kommander amplifier occupies 2 rack units. In order to set the amplifier for rack installation:

- unscrew the four bottom feet;
- assemble the lateral rack mounting brackets with screws provided within the package.



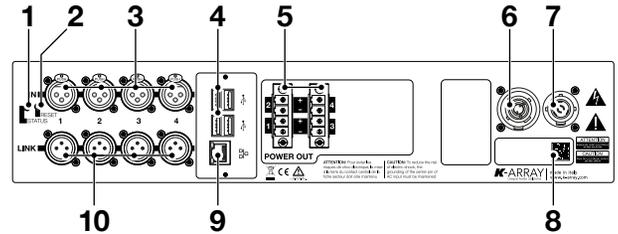
In order to prevent any mechanical issue, use both frontal and rear mounting brackets to secure the amplifier to its location.

Install the amplifier in a well-ventilated location: the ventilation openings must not be impeded by any item. Fresh air enter the amplifier from aside, warm air is expelled under the front panel.



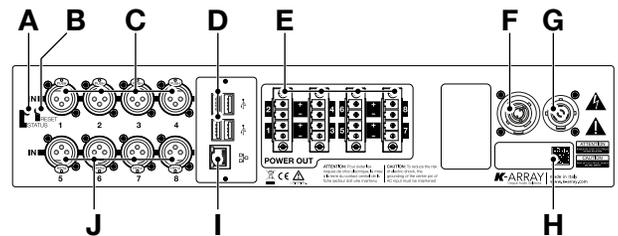
In rack mount installation leave one rack unit empty every three installed amplifiers to guarantee adequate air flow.

4-channel Amplifier Rear Panel



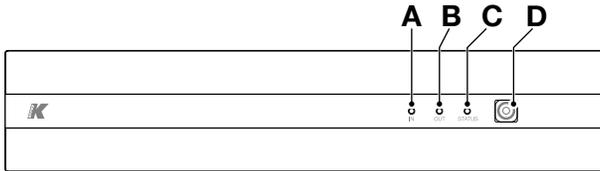
1. Status LED
2. Reset button
3. 4x XLR-F balanced line channel inputs
4. USB ports
5. 2x PC 4/ 4-ST-7,62 speaker output terminals
6. PowerCon TRUE link (AC mains out)
7. PowerCon TRUE inlet (AC mains in)
8. QR Code for the K-array Connect app remote connection
9. RJ45 Ethernet port
10. 4x XLR-M balanced line channel outputs

8-channel Amplifier Rear Panel



- A. Status LED
- B. Reset button
- C. 4x XLR-F balanced line channel 1, 2, 3 and 4 inputs
- D. USB ports
- E. 4x PC 4/ 4-ST-7,62 speaker output terminals
- F. PowerCon TRUE link (AC mains out)
- G. PowerCon TRUE inlet (AC mains in)
- H. QR Code for the K-array Connect app remote connection
- I. RJ45 Ethernet port
- J. 4x XLR-M balanced line channel 5, 6, 7 and 8 inputs

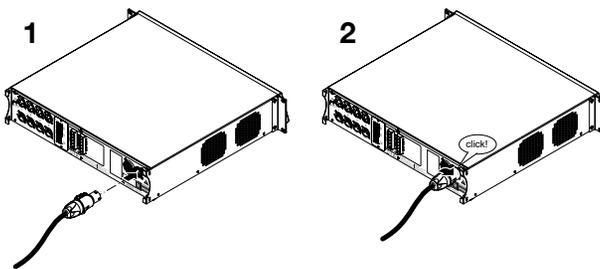
Amplifier Front Panel



- A. Input signal monitor LED
- A. Output signal monitor LED
- B. Status LED
- C. Standby button

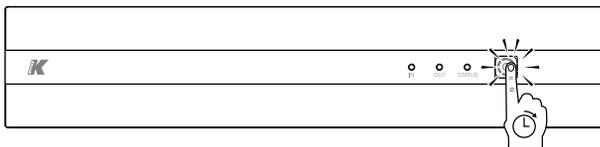
AC mains supply

The AC Main connection is made via the provided power cord: insert the powerCon TRUE flying connector into the inlet and then rotate it clockwise.



Once properly plugged, the amplifier power up: the front and back LEDs light on.

In order to set the amplifier unit in standby mode, keep pressed the button on the front panel for 2 seconds. Keep pressed the button for 2 seconds to wake up the amplifier from standby mode.



The powerCon TRUE link (AC mains out) connector allows to distribute the AC main power to other units according to their power consumption. Please don't exceed the limits stated on the next table.

	Power consumption*	Max number of cascade powered equal units
Kommander-KA14 I	400 W	4x KA14 I
Kommander-KA34	600 W	4x KA34
Kommander-KA104	1200 W	2x KA104
Kommander-KA18	300 W	6x KA18
Kommander-KA28	800 W	2x KA28
Kommander-KA68	1200 W	2x KA28
Kommander-KA208	1200 W	-

* Power Consumption at 4 Ω load, Pink noise, 1/8 rated power.

LED chart

In the front panel, the input signal monitor LED and the output signal monitor LED blink according to the presence of audio signal at any input or output channel respectively. The input and output signal monitor LEDs light on orange when the DSP is limiting the signal level.

Status LEDs

Color	Mode	Description
	orange solid	DSP software is loading
	green solid	System ready
	blue solid	User command: system identification

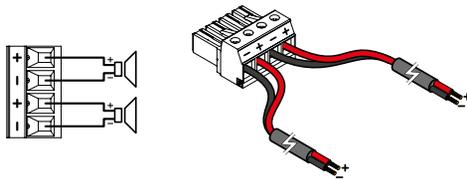
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Loudspeakers Wiring

In order to set the proper connections with the loudspeakers, a set of euroblock PC 4/4-ST-7,62 flying connectors are provided.

Each PC 4/4-ST-7,62 flying connector features four terminals designed to be connected to a couple of loudspeaker cables (carrying two wires each). Be sure to observe the correct polarity at both the loudspeaker and amplifier cable ends.



When connecting multiple loudspeakers in parallel to the same amplifier's output channel, make sure the total nominal impedance doesn't lower under the amplifier minimum recommended load impedance.

	Minimum Load	Power Rating per channel at minimum load
Kommander-KA14 I	2 Ω	600 W @ 2Ω
Kommander-KA34	4 Ω	750 W @ 4Ω
Kommander-KA104	4 Ω	2500 W @ 4Ω
Kommander-KA18	4 Ω	150 W @ 4Ω
Kommander-KA28	2 Ω	600 W @ 2Ω
Kommander-KA68	4 Ω	750 W @ 4Ω
Kommander-KA208	4 Ω	2500 W @ 4Ω

Connectivity

The Kommander-KA amplifiers can be controlled remotely by a mobile device or desktop PC/MAC.

K-array Connect

K-array Connect is the mobile app that allows to directly manage and control one Kommander-KA amplifier at a time with wireless with a mobile device (smartphone or tablet).

Download the K-array Connect mobile APP from the dedicated store of your mobile device. Refer to paragraph "[K-array Connect Mobile App](#)", [page 7](#) for details about the system configuration.



K-framework3

The K-array K-framework3 is the managing and control software dedicated to professionals and operators looking for a powerful tool for designing and managing a large number of units in demanding applications (see "[K-framework3 Software](#)", [page 13](#) for details). Download the K-framework3 software from K-array website.



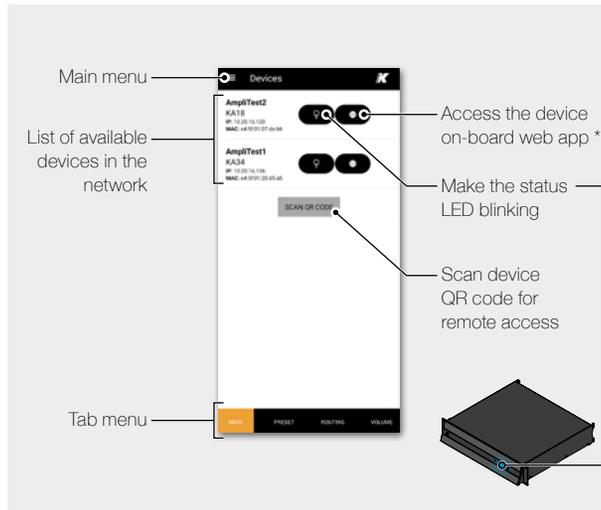
Connectivity Reset

Keep pressed the RESET button for 10 to 15 seconds in order to:

- Revert the wired IP addressing to DHCP;
- Activate the built-in Wi-Fi and reset the wireless parameters to the default SSID name and password (see "[K-array Connect Mobile App](#)", [page 7](#) for details).

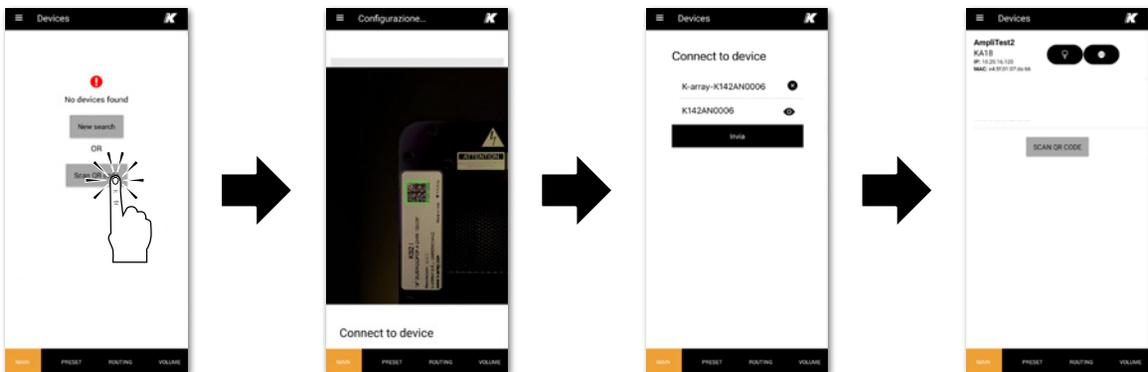
K-array Connect Mobile App

The K-array Connect mobile app can connect to the Kommander-KA amplifier both directly to the built-in Wi-Fi and wireless to an access point connected to a LAN where the Kommander-KA is wired to.



Connection to a single Kommander-KA

1. Ensure the Wi-Fi of the mobile device is on.
2. Launch the K-array Connect app.
 - a. In Android based systems the app looks for any Wi-Fi network whose SSID name starts with "K-array"; swipe down to force refresh the list of available networks.
 - b. Touch the device name to establish a connection and insert the password (see below).
3. If the list of available devices is empty touch the SCAN QR CODE button and use the mobile device camera to frame the QR code at the bottom right corner of the Kommander-KA rear panel: this provides the mobile device to connect to the Kommander-KA Wi-Fi network.
4. Enter the password to connect to the amplifier. If not modified, the default password is the device serial number, e.g. K142AN0006 (case sensitive).
5. The K-array Connect app connects directly to the Kommander-KA amplifier.



* The on-board web interface is a further user interface embedded on the built-in DSP that allows to manage the system features over a network (see "On-Board Web App", page 11 for details). The K-array Connect mobile app offers a shortcut to access the on-board web interface.

Kommander-KA

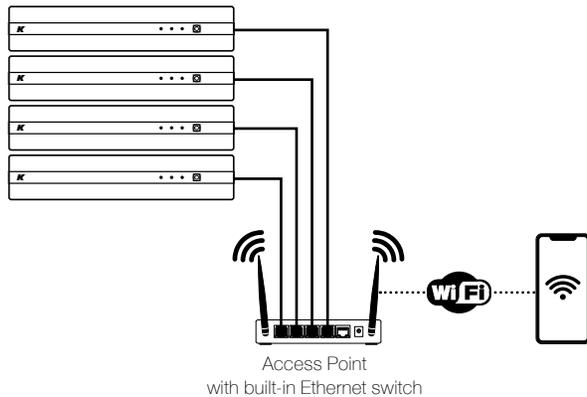
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Connection to a network of Kommander-KA

The Kommander-KA amplifiers feature an RJ45 Ethernet port on the rear panel that allows to connect the amplifiers to a local area network (LAN), in order to ease the remote control.

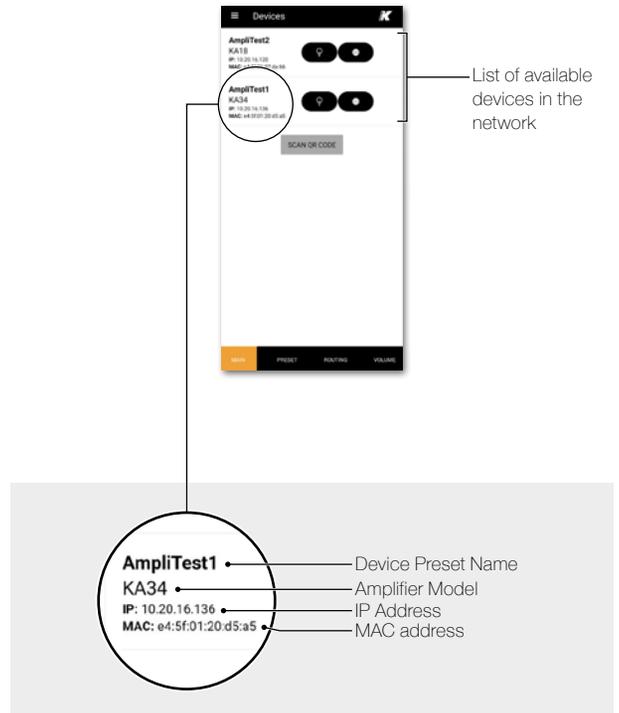
The Kommander-KA amplifiers implement the zeroconf network technologies, allowing to direct connect the amps to a PC via the Ethernet CAT5 cables, as well as including the devices into a network without any user configuration.

The simplest local network of Kommander-KA amplifiers requires the implementation of an Ethernet switch. When an access point is available, the network of Kommander-KA amplifiers can be easily managed with the K-array Connect mobile app over the LAN.



 If a DHCP service is available, it will assign an IP address to each device. If a DHCP service is not available, each Kommander-KA will self assign an IP address in the range 169.254.0.0/16 (auto-IP).

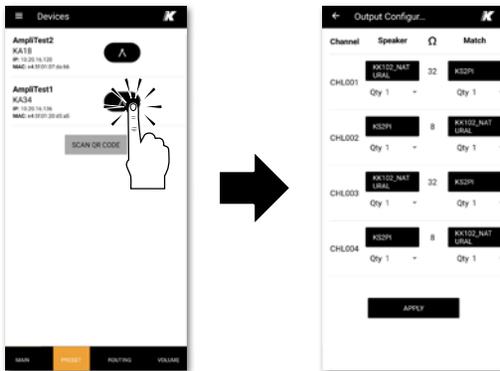
1. Connect each Kommander-KA amplifier to a Wi-Fi access point with built-in Ethernet switch: use Ethernet Cat5 or Cat6 cables.
2. Set the access point Wi-Fi network SSID and parameters.
3. Ensure the Wi-Fi of the mobile device is on.
4. Connect the mobile device to the access point Wi-Fi network.
5. Launch the K-array Connect app: the app looks for any device in the network whose name starts with "K-array" and tries to establish a connection.
6. If the list of available devices is empty swipe down to force refresh the list of available devices.



Output configuration

Once connected to the Kommander-KA amplifier (see paragraph [“K-array Connect Mobile App”, page 7](#)) the output configuration can be performed either using the on-board web interface or with the K-array Connect app, as described below.

- A. Touch the Preset tab in the tab menu at the bottom of the screen: this will modify the buttons in the list of available devices.
- B. Select the device you want to configure and touch the button to enter the Output Configuration page.



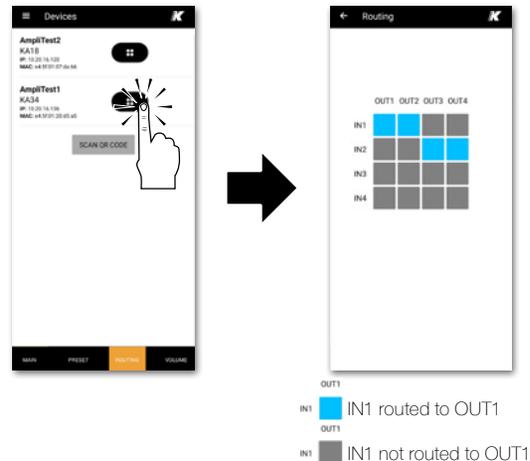
- C. In the Output Configuration page fill in the field according to the actual loudspeakers configuration: match the loudspeakers models and quantities connected to the Kommander-KA output connectors.
- D. Once completed, save the output configuration touching the APPLY button at the bottom of the page.

Signal Routing

Kommander-KA 4-channel units feature direct line output hardwired to the inputs. Analog input signals on both 4-channel and 8-channel amplifiers can be freely routed to the output channels (speaker output) via the built-in DSP matrix.

Signal routing can be configured either with the on-board web app or with the K-array Connect app, as described below.

1. Touch the Routing tab in the tab menu at the bottom of the screen: this will modify the buttons in the list of available devices.



2. Select the device you want to configure and touch the button to enter the Routing table page.
3. Touch the squares in order to toggle the connection among the input channels on the left side to the output channels in the top side.

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Volume

The Volume tab in the K-array-Connect mobile app provides access to volume adjustments for the input and output channels. In 4-channel units a further signal gain control tab is present for at the analogue, digital and media player inputs.

1. Touch the Routing tab in the tab menu at the bottom of the screen: this will modify the buttons in the list of available devices.
2. Select the device you want to configure and touch the button to enter the volume adjustment section.



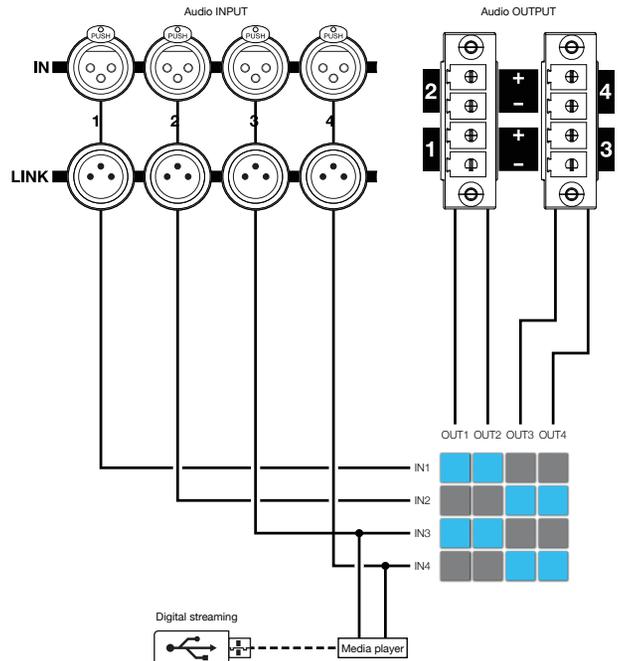
3. Input and output levels adjustments are always available: input gain adjustments are available only in 4-channel units. The media player level can always be adjusted via the built-in web app.



Media Player

The Kommander-KA amplifier built-in DSP implements a media player that can be used to playback audio files from USB devices. The media player controls are accessible via the on-board web app user interface: see [“On-Board Web App”](#), page 11 for details.

The audio signals from the media players are routed by default to the input channels 3 & 4 in 4-channel units and 7 & 8 in 8 channel units.

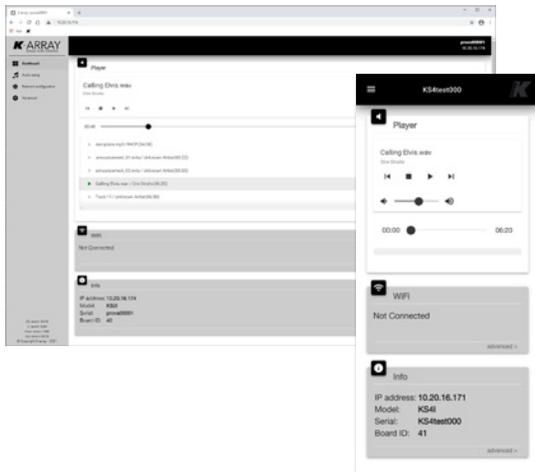


Default routing diagram of 4-channel units.

On-Board Web App

Once the IP address of a Kommander-KA amplifier is set and known, it is possible to access the built-in DSP features over a LAN with a web browser (Google Chrome is recommended);

- type the Kommander-KA amplifier IP address in the address field of the web browser (e.g. 10.20.16.171); the amplifier will push the web interface for a direct access to its DSP features.



- The K-array Connect mobile app offers a shortcut to access the on-board web interface via any mobile device.

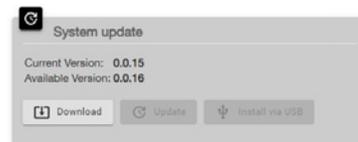
System Update

The Kommander-KA amplifier built-in DSP is managed by an embedded operating system whose name is osKar. osKar manages the user interface and communication as well as the system features. osKar can be updated via the on-board web app.

- Access the Kommander-KA on-board web app either via the K-array Connect mobile app, or with a web browser within a LAN (see [“On-Board Web App”, page 11](#)).



- Navigate the main menu and access the Advanced menu. The System Update section lists the current system version and, if the Kommander-KA amplifier is connected to a LAN with Internet access, the Available Version field is filled with the latest published system version number available on K-array website.



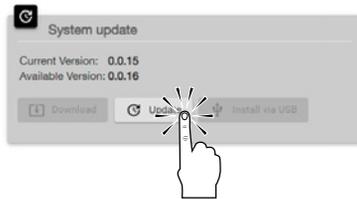
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System Update via Internet

When an Internet connection is available, the Kommander-KA amplifier's osKar embedded system can be updated directly from the on board web app.

1. Connect the Kommander-KA amplifier to a LAN with Internet access.
2. Access the Kommander-KA on board web app and open the Advanced menu page: the Download button becomes active if a higher system version is available on K-array website.
3. Click on the Download button in order to start downloading the system update file from the Internet: the file is saved inside the amplifier local memory.



4. Once the download is finished, the Update button becomes active: click on the Update button to start updating the system.

The update procedure via Internet lasts in few minutes: at the end of the updating process the system reboots.

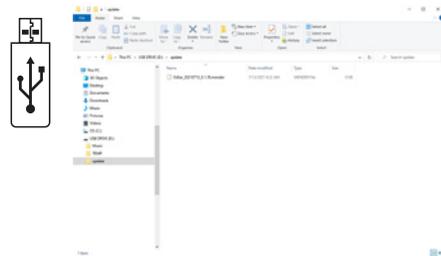
System Update via USB

In order to update the Kommander-KA amplifier's osKar embedded operating system locally, a USB key with the system update files must be prepared in advance.

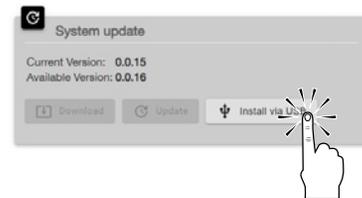
- A. Retrieve the system update file from the official K-array repository and move it into a folder named **update** on the USB key.

The system update file name ends with three numbers, e.g. 0.1.18, — namely the system version — and has **.mender** extension.

The update folder must contain only one system update file.



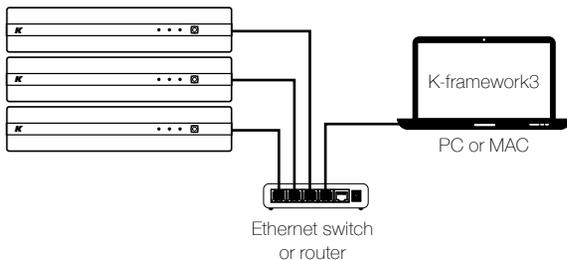
- B. Access the Kommander-KA on board web app and open the Advanced menu page: the Install via USB button becomes active if a valid update folder and .mender file are available on the USB key.
- C. Click on the Install via USB button in order to start the system update.



The update procedure via USB lasts in few minutes: at the end of the updating process the system reboots.

K-framework3 Software

Use the K-array K-framework3 to control, configure and fine tune K-array Kommander-KA amplifier platforms via a wired Ethernet network.



Any configuration made with the K-array Control mobile app or the built-in web app **will be overridden by the K-framework3.**

Discovery

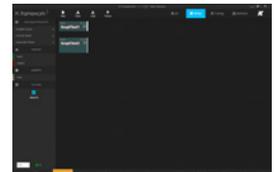
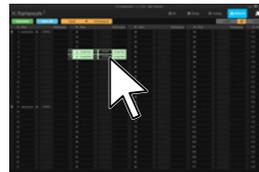
1. Ensure that any amplifier and the PC or Mac running the K-framework are properly connected to the same network.
2. Power up the amplifier(s).
3. Launch the K-framework3.
4. Open the Network window: for back compatibility with legacy amplifiers, by default the discovery over the RS485 serial communication is active.
 - a. In case no legacy amplifiers shall be discovered, disable the discovery over the RS485 serial communication.



5. Click on the Discovery button: the K-framework starts scanning the network looking for K-array devices.
 - a. If the K-framework finds two or more device with the wrong ID, a dialog window appears where unique IDs can be assigned to the amplifiers.

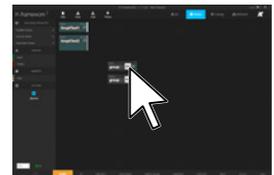
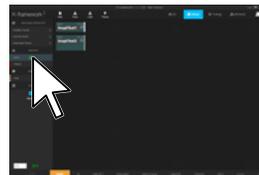


6. Once discovered, click on the SYNC button in order to synchronize the devices and import them into the workspace.



Grouping

The working paradigm is to group the amplifier's input and output channels and adjust the system performance within the groups.



- A. In Setup mode, set the amplifier local parameters (presets, routing, input gains, limiters, etc).
- B. Add INPUT and OUTPUT groups as needed.
- C. Assign the amplifier's channels to the groups.
- D. In Tuning mode align the system (eq, delay, polarity, etc).

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Service

To obtain service:

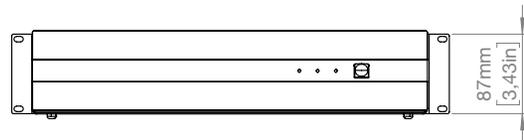
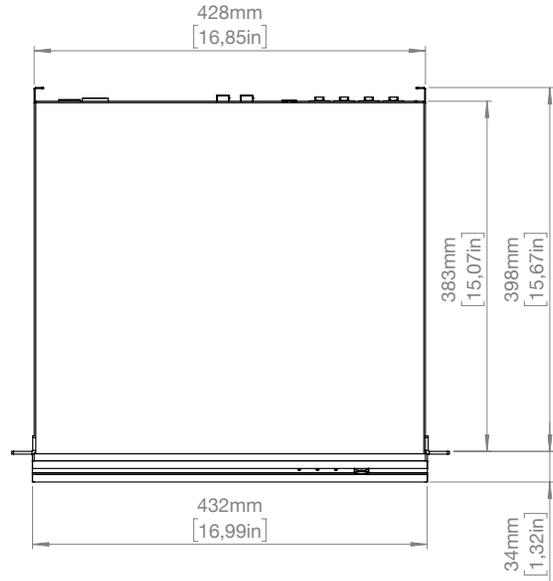
1. Please have the serial number(s) of the unit(s) available for reference.
2. Contact the official K-array distributor in your country: find the Distributors and Dealers list on [K-array website](#). Please describe the problem clearly and completely to the Customer Service.
3. You will be contacted back for on-line servicing.
4. If the problem cannot be resolved over the phone, you may be required to send the unit in for service. In this instance, you will be provided with an RA (Return Authorization) number which should be included on all shipping documents and correspondence regarding the repair. Shipping charges are the responsibility of the purchaser.

Any attempt to modify or replace components of the device will invalidate your warranty. Service must be performed by an authorized K-array service center.

Cleaning

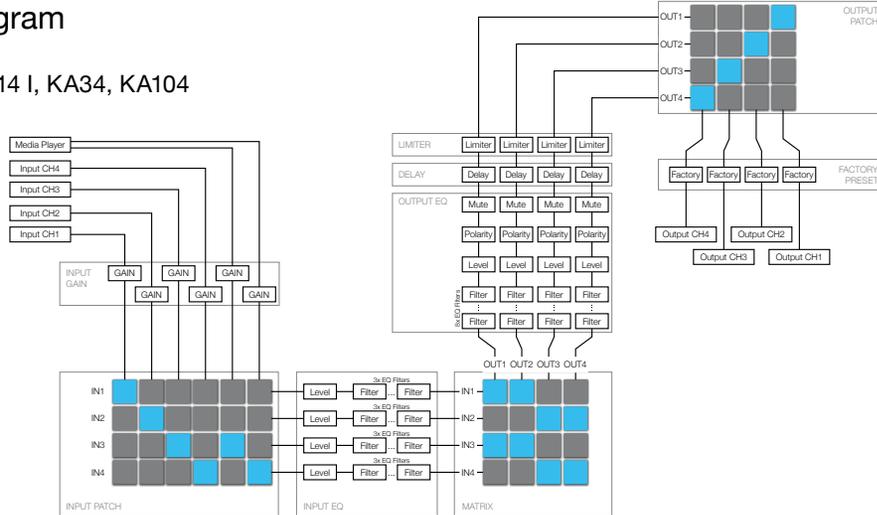
Use only a soft, dry cloth to clean the housing. Do not use any solvents, chemicals, or cleaning solutions containing alcohol, ammonia, or abrasives. Do not use any sprays near the product or allow liquids to spill into any openings.

Mechanical Drawings

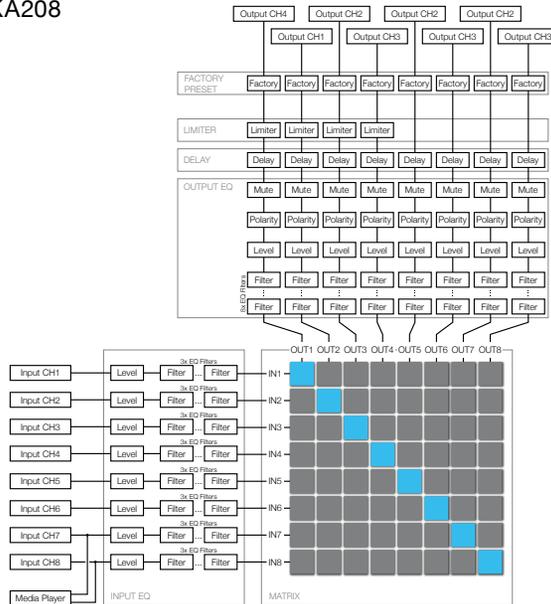


DSP Block Diagram

4-channel units: KA14 I, KA34, KA104



8-channel units: KA18, KA28, KA68, KA208



Kommander-KA

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Technical Specifications

	Kommander-KA14 I	Kommander-KA34	Kommander-KA104
Type	4ch switching mode, Class D Amplifier		
Output Power ¹	4x 600W @ 2Ω	4x 750W @ 4Ω	4x 2500W @ 4Ω
Minimum impedance	2 Ω	4 Ω	4 Ω
Frequency Response	20 Hz – 20 kHz (±1 dB)		
Connectors	Input: 4x XLR-F balanced input Output: 4x XLR-M balanced LINK output 2x PC 4/ 4-ST-7,62 speaker output	Remote connectivity: 1x Ethernet RJ45 4x USB-A Wi-Fi IEEE 802.11 b/g/n	
DSP	Input gain, routing matrix, delay, full parametric IIR filters (Peaking, Shelving, Hi/Lo pass, Hi/Lo Butterworth), On-board preset, Remote monitoring		
Remote control	Wi-Fi dedicated APP K-framework3 via wired Ethernet connection		
MAINS Operating Range	100-240V AC, 50-60 Hz with PFC		
Power Consumption	400 W @ 8 Ω load, Pink noise, 1/4 rated power	600 W @ 8 Ω load, Pink noise, 1/4 rated power	600 W @ 4 Ω load, Pink noise, 1/4 rated power
Protections	Thermal protection, output short circuit, RMS output current protection, high frequency protection, power limiter, clip limiter.		
IP Rating	IP20		
Dimensions (WxHxD)	430 x 87 x 430 mm (17 x 3,4 x 17 in)		
Weight	6 kg (13,2 lb)	7 kg (15,4 lb)	8,15 kg (18 lb)

¹ CTA-2006 (CEA-2006) Amplifier Power Standards, single channel driven.

	Kommander-KA18	Kommander-KA28	Kommander-KA68	Kommander-KA208
Type	8ch switching mode, Class D Amplifier			
Output Power ¹	8x 150W @ 4Ω	8x 600W @ 4Ω	8x 750W @ 4Ω	8x 2500W @ 4Ω
Minimum impedance	4 Ω	2 Ω	4 Ω	4 Ω
Frequency Response	20 Hz – 20 kHz (±1 dB)			
Connectors	Input: 8x XLR-F balanced input Output: 4x PC 4/ 4-ST-7,62 speaker output		Remote connectivity: 1x Ethernet RJ45 4x USB-A Wi-Fi IEEE 802.11 b/g/n	
DSP	Input gain, routing matrix, delay, full parametric IIR filters (Peaking, Shelving, Hi/Lo pass, Hi/Lo Butterworth), On-board preset, Remote monitoring			
Remote control	Wi-Fi dedicated APP K-framework3 via wired Ethernet connection			
MAINS Operating Range	100-240V AC, 50-60 Hz with PFC			
Power Consumption	300 W @ 8 Ω load, Pink noise, 1/4 rated power	800 W @ 8 Ω load, Pink noise, 1/4 rated power	1200 W @ 4 Ω load, Pink noise, 1/4 rated power	1200 W @ 4 Ω load, Pink noise, 1/4 rated power
Protections	Thermal protection, output short circuit, RMS output current protection, high frequency protection, power limiter, clip limiter.			
IP Rating	IP20			
Dimensions (WxHxD)	430 x 87 x 430 mm (17 x 3,4 x 17 in)			
Weight	7 kg (15,4 lb)	7,4 kg (16,3 lb)	8,3 kg (18,3 lb)	10 kg (22 lb)

¹ CTA-2006 (CEA-2006) Amplifier Power Standards, single channel driven.



Designed and Made in Italy

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