AUDIA FLIGHT



Owner's manual

FLS 22 dac

Dear Customer,
Audia Flight extends heartfelt congratulations and gratitude to you for selecting one of our products. The FLS22 dac has been meticulously crafted with the intention of standing out as one of the finest D/A converters currently available. Achieving this level of excellence demanded the application of our brand's extensive knowledge and a meticulous approach, incorporating the most advanced techniques in digital-to-analog conversion. Audia spared no effort in the development of this product, ensuring it was created with utmost attention, care, and employing the highest quality components.
We are confident that your investment in this device will reward you with many years of unparalleled musical enjoyment, free from any performance issues.
This manual has been crafted with the aim of guiding and assisting you in extracting the optimal performance from your D/A converter. We appreciate your trust in Audia Flight and are dedicated to ensuring your experience with our product exceeds your expectations.

Safety instructions

Before using your FLS22 dac, please carefully review the operating instructions and safety precautions outlined below.

1. Ensure the unit is unplugged before connecting or disconnecting any other audio system devices during interventions. Use the provided three-wire power cord with an AC voltage of 100-115V or 230-245V. All three wires must be used to prevent electrical shock. If your electrical outlet does not accept the plug, use an adapter that meets safety standards and establishes a stable earth connection. If unsure about your electrical system, consult a qualified professional.
2. Avoid using a power cord extension with this product. If necessary, ensure compliance with safety rules and its capacity to handle the required current intensity.
3. Refrain from using flammable or combustible chemicals for cleaning.
4. Do not attempt to open the device or use it without removing all packing materials or covering elements.
5. Avoid spilling or spraying any liquid directly on the device.
6. Never push objects through openings or ventilation slots in the unit.
7. Never remove a fuse.
8. Do not replace a fuse with a size or type other than specified.
9. Do not attempt to repair the unit yourself. In case of problems, contact your dealer or distributor.
10. Avoid exposing the device to excessively high or low temperatures.
11. Keep electrical appliances out of the reach of children.

Following these guidelines ensures the safe and optimal use of your FLS22 dac.

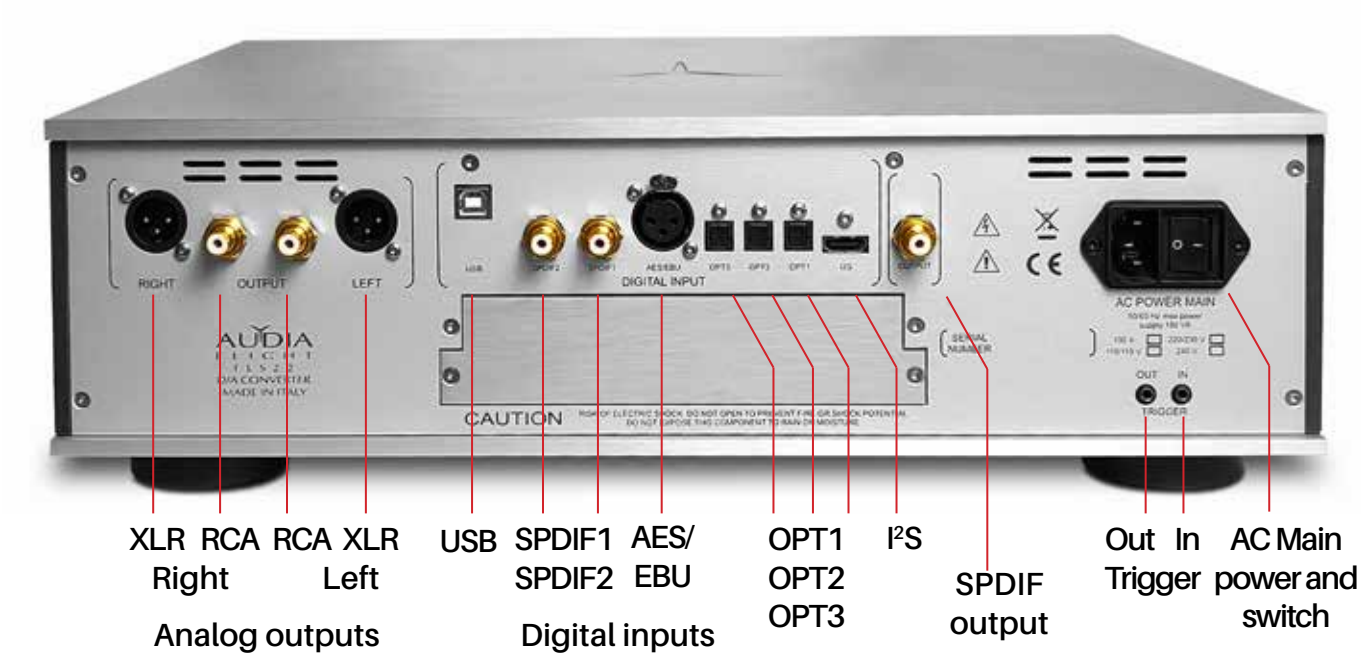
If you encounter any issues, please seek professional assistance from your dealer or distributor.

Transport and unpacking Instructions

Do not turn the package upside down; follow the directional indicators on the package.
Before opening the package, move it close to the planned installation location.
The device is enclosed within a cover and a second plastic envelope. The package includes the FLS22 dac, a detailed instruction manual, a power cord, and a remote control with screwdriver. We strongly recommend keeping the packaging for potential future shipping or transport needs. If the unit needs to be packed again, ensure all internal components are placed in the same positions. Audia Flight cannot be held responsible for any incidents or damages resulting from inadequate packaging.

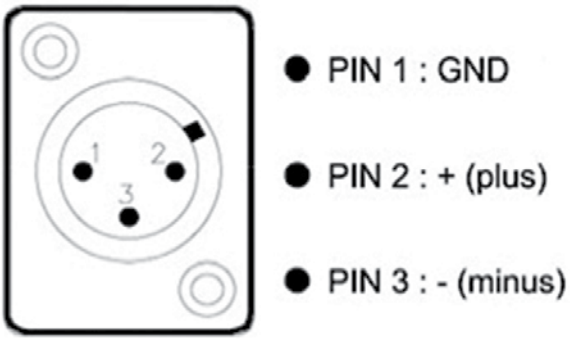
Location

Choose a location capable of supporting the weight of your device securely. Allow a space of 10 cm around the player for natural ventilation and effective heat dissipation. Keep the unit away from sources of heat or vibration. Avoid direct exposure to sunlight. Do not place the unit close to electroluminescent light sources, as they may interfere with remote control operation. Ensure the DAC is placed close to the preamplifier or integrated amplifier to minimize the length of connecting cables. If the integrated amplifier or preamplifier is not in close proximity to the FLS22 dac, use balanced interconnection cables to minimize noise.



Analogue output connections

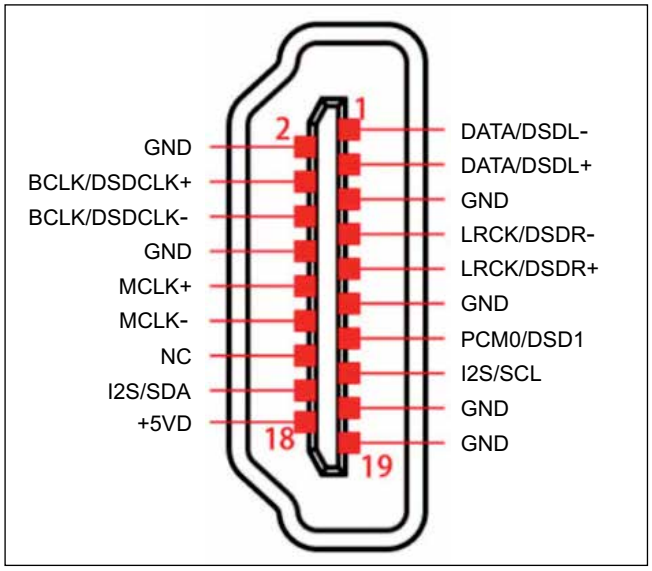
The rear of the player is equipped with two types of analogue output connectors: a balanced XLR pair and an unbalanced RCA pair. Utilize a pair of XLR-ended cables for a balanced connection or RCA-ended cables for unbalanced use. Connect the left and right channel outputs of the FLS22 DAC to the corresponding left and right channels of the stereo amplifier input. Multiple outputs can be used simultaneously for added flexibility. It is strongly recommended to use interconnect cables of the highest quality to ensure optimal audio performance. Refer to the following diagram for the correct polarity of the pin XLR connectors analogue output.



Digital input connections

Please, make sure that unit is turned off or unplugged from main power supply before making connections.

Input Name	Input type	Specifications
I2S	I²S	HDMI
OPT1	Optical	Toslink
OPT2	Optical	Toslink
OPT3	Optical	Toslink
AES/EBU	AES/EBU	Balanced, XLR plug, 110 Ω
SPDIF1	S/PDIF coaxial	Unbalanced, RCA plug, 75 Ω
SPDIF2	S/PDIF coaxial	Unbalanced, RCA plug, 75 Ω
USB	USB	USB-A/B cable
STREAMER	USB/LAN	USB-A/B cable/LAN cable



The HDMI I²S pinout used in FLS22 dac is the most widespread and popular in hi-fi market.

HDMI I²S power supply

Since the HDMI input is optically decoupled from the DAC circuitry, **it must be powered by the source connected to it**. Called EXTERNAL, this is the standard operating configuration for the FLS22 dac. If the source is not capable of powering the HDMI input, it can be powered internally by selecting the INTERNAL option in the menu.
The EXTERNAL option, if possible, is the best from a sound perspective because it decouples the source and DAC circuitry. Conversely, the INTERNAL option shares the grounds of the two devices. Due to a shared ground, certain sources may cause issues that temporarily compromise the DAC's functionality. In such cases, you must turn the device off, turn it back on, and perform a "LOAD DEFAULT" operation from the "SET" menu. See Pag.14 for further details.

Interbrand communication Interface

Located on the rear of the FLS22 dac, you'll discover a pair of connectors in 3.5 mm jack format. This designated "trigger" connection facilitates communication between devices from various manufacturers that have adopted this communication protocol. If equipped with the requisite input, these devices can synchronize the switching on/off or standby functions. This interoperability enhances the user experience by allowing seamless integration with compatible equipment from different brands.





Please make sure that mains voltage is the one which unit is designed for. It's indicated on rear panel. Plug the supplied power cord on the rear socket of your FLS22 dac and then switch the mains switch of the socket in the « I » position. The LED on the front panel lights in amber colour and indicates standby state.

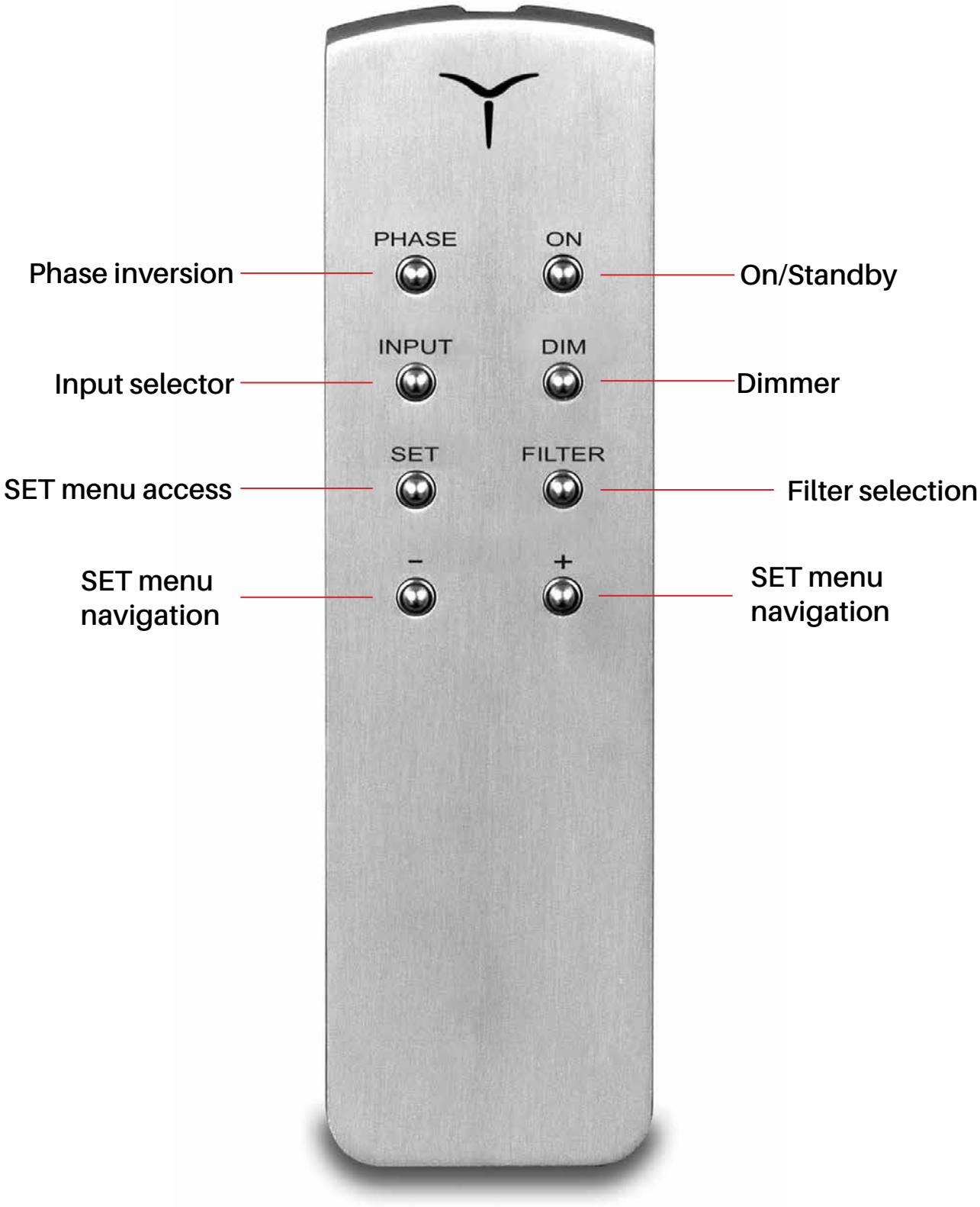
When pressing «ON» button on front panel or «ST-BY» button on remote control, LED lights in blue colour, player will be ready for operating and will display this information.
When pressing again «ON» key on front panel or «ST-BY» key on remote control, LED lights again in amber colour and unit returns in stand-by state indicated by POWER DOWN.



Remote control

You will find remote control in the accessories box with a screwdriver. Battery needed is lithium button 3V, CR2032 type. To place battery, remove the bottom of case by loosening the 3 screws with provided tool and insert battery in its compartment observing correct polarity: + pole upside.





All the commands on the front panel are replicated on the remote control.

SET menu configurations

Configuration of player and its integrated converter is only available with remote control and three of its keys: SET , + and –.
SET key allows you to access each item, + key allows you to scroll down different modes in the order of chart below, – key in the reverse order. SET key is also used with + or – keys to scroll through sub-modes. Choices are indicated by flashing characters on display and scrolled through using + or –. Confirmation of the selection is effective after a few seconds after end of flashing. The heading (or sub-heading) is displayed again to move on another one or after few seconds the return to initial screen. All settings are stored.

Keys actions	Display on screen	Function
SET	SET NAME INPUT	Renaming digital inputs
1 x (+)	SET VOLUME ACTIV	Activating, or not, the output level setting
2 x (+)	SET PCM FILTER	PCM digital filter setting
3 x (+)	SET DSD FILTER	DSD analogic filter setting
4 x (+)	SET DITHER ACTIV	PCM dithering activation or not
5 x (+)	SET HDMI POWER	HDMI power supply setting
6 x (+)	SET LOAD DEFAULT	Configuration reset
7 x (+)	SOFT FLS22 X.XX	Software version

Mode SET NAME INPUT



By this first function of menu, you can rename each digital inputs (**plus optional STREAMER input if present**), using up to 8 characters.



After entering this mode by pressing SET key, a digital input is showed. To set this entry press SET otherwise press + key to select another input or – key to reverse.

First character will then flash and you can scroll into list of characters and choose the one you want by pressing SET key. Next character will flash in wating your choice and validation by SET key. Once 8 characters or spaces are selected and validated, display returns to entry choice and in lack of in-

structions, name will be validated.
By pressing + or – keys you can go to another input and repeat same operations or after a few seconds without instructions dispaly shows initial screen and changes are stored.
Each character is selected from a list of 96, including upper and lower letters, numbers, signs and special characters or space.

Mode SET VOLUME ACTIV

By this function you can activate or deactivate output level setting.







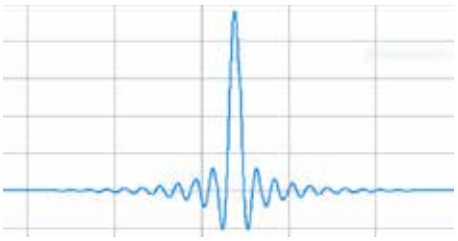
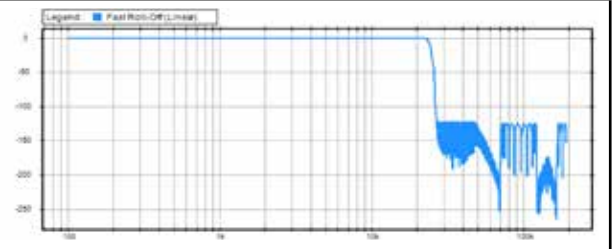
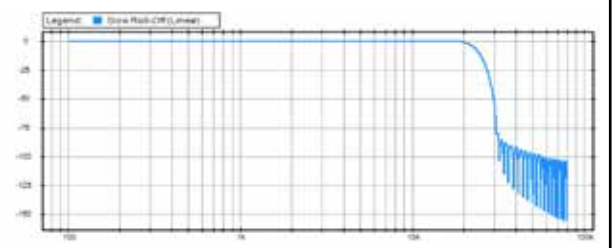
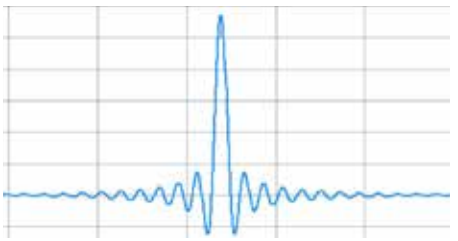
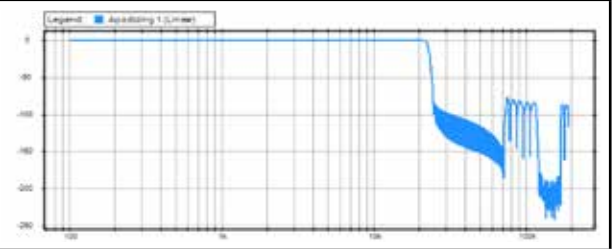
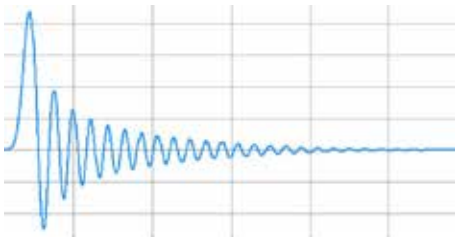
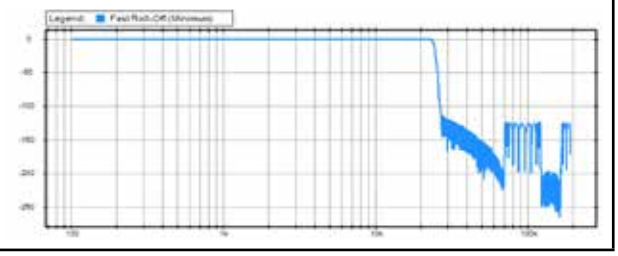
Upon entering this mode (by pressing SET , + and once more SET keys) display shows YES (or NO) blinking at end of line. If you are satisfied with this flashing option, just wait for a few seconds until display stops flashing and validation will be effective. Otherwise, press + or – keys to select opposite option which will blink. Validation is after few seconds without instructions and back to original mode screen. When volume control is activated, it will be at maximum attenuation first (zero level). Press + or – keys to select the needed volume level. When this feature is dectivated, output will go back to fixed output level.

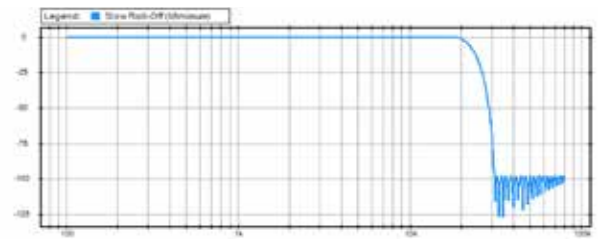
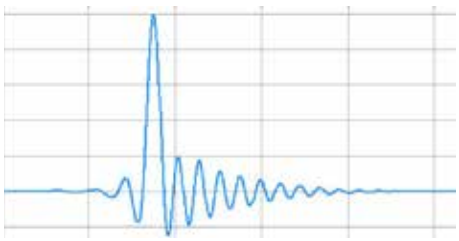
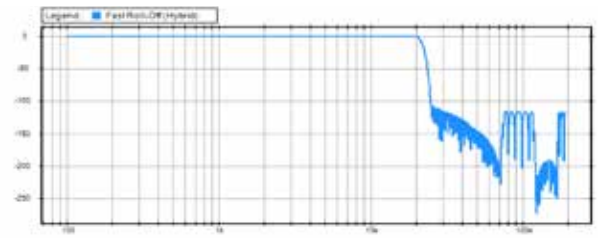
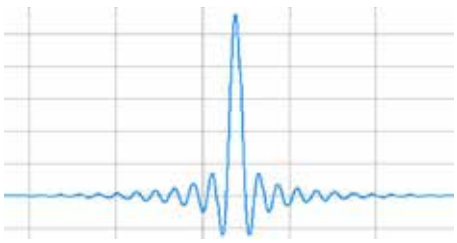
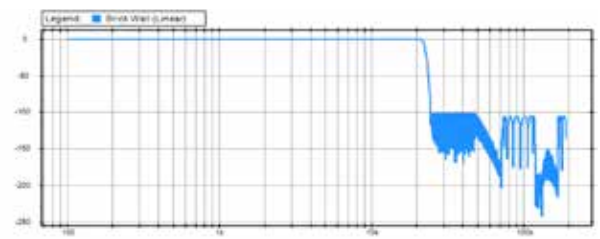
Mode SET PCM FILTER



By this function you can choose the filter which is applied to digital signal in PCM mode. Each one of the 7 filters (FILTER 1 to FILTER 7) have its roll-off frequency and slope that affect slightly the sound.

Upon entering this mode, dispaly shows one of 6 digital sources on first line and filter number in second line. By pressing SET you confirm input displayed, otherwise you can choose another input by pressing + or – keys. Number of filter will be flashing waiting to be confirmed by pressing SET key or to be changed by pressing + or – keys. Validation after few seconds without instructions, character stops flashing. By pressing + or – keys same operation can be done to another input. Otherwise, in lack of instructions display returns in original state and setting is validated and stored.
Here is a table illustrating differences among 7 PCM filters:

Filter	Name	Impulse response	Frequency response
1	Fast Roll-Off Linear Phase		
2	Slow Roll-Off Linear Phase		
3	Apodizing Fast Roll- Off Linear Phase		
4	Fast Roll-Off Minimum Phase (default)		

Filter	Name	Impulse response	Frequency response
5	Slow Roll-Off Minimum Phase		
6	Hybrid Fast Roll-Off Minimum Phase		
7	Brickwall		



For example here are displayed PCM filter options 1.

Mode SET DSD FILTER



By this function you can choose the filter applied on DSD stream of USB input (DIGIT 4). Four filters are available in the analog domain after conversion: 1 (roll-off at 47,44 kHz), 2 (roll-off 50 kHz), 3 (roll-off at 60 kHz), and 4 (roll-off at 70 kHz).



For example here are displayed DSD filter options 1.

Mode SET DITHER ACTIV



Dithering is a random digital noise that is added to incoming PCM signal to make distortion, due to quantization errors, less unpleasant after conversion. It can improve sound of the weakest signals in particular. It can be applied on each one of the 5 inputs.



This mode operates in the same way as PCM FILTER mode. Display shows on second line one of the 5 inputs. A SET action will produce the YES or NO flashing. Choice is validated after few seconds and end of flashing. Choice can be done for another input or the screen returns in the initial mode.



Mode SET HDMI POWER

As said on page 6, it is possible by software to modify the HDMI power source as EXTERNAL or INTERNAL. Default is EXTERNAL.



Mode SET LOAD DEFAULT

This mode allows you to reset all items of SET configuration to their original state and thus cancel all modifications previously made. Upon entering this mode display shows on second line CONFIRM? with YES or NO blinking. You can select choice or its opposite by pressing + or – keys. Validation after few seconds when display stops blinking.









Mode SOFTWARE

This last mode informs you about software version and by pressing SET key, about software of the DAC.

Listening tips

Even if player has already been run for fifty hours, during which operations and tests have been successfully passed, we advise you to continue for two hundreds hours, providing that running occurs in presence of signal.
During a long period of disuse, complete extinction by switch on the rear panel is recommended.

Care and maintenance

To remove dust, use a feather duster. Do not attempt to clean brushed surface with alcohol or any similar solvent. Using a simple wetted microfiber possibly to remove all stains.
Dirt and grease on connectors can make noise degradation. We recommend cleaning all signal contacts, even speakers terminals, with isopropyl alcohol.

Technical data

Frequency response:
2 Hz - 50 KHz ± 0.5dB (DSD)
2 Hz - 20 KHz ± 0.5dB (PCM)
S/N ratio: *110 dB*
THD: *0.002%*
Analogue outputs: *balanced and unbalanced*
Maximum output voltage: *2.5 Vrms*
Output impedance: *240 Ohm*
Digital inputs:
1 x I²S (PCM up to 32Bit /768kHz, DSD up to DSD512)
3 x Toslink, 1 x AES/EBU, 2 x S/PDIF (PCM16-24Bit up to 192kHz)
1 x USB (PCM up to 32Bit /768kHz, DSD up to DSD512)
Optional streamer board (up to 32Bit/384kHz PCM and DSD256)
Digital outputs: *S/PDIF*
Stand-by power consumption: *less than 1 W*
Max power consumption: *60 W*
Main voltage AC (50-60 Hz): *100, 110-115, 220-230, 240 V*
Dimensions: *450x134x364 mm (WxHxD)*
Weight: *14.5 Kg*
Shipping dimensions: *570x260x560 mm (WxHxD)*
Shipping weight: *19.5 Kg*

Notes

Warranty

Audia warrants materials, workmanship and proper functioning for a period of two years. The Italian warranty is valid from the purchase date shown on the receipt and only in Italy. Unauthorized dismantling of the product will render this warranty void. Audia reserves the right to make changes in design and improvements upon its products without necessarily assuming an obligation to retrofit such changes upon previously manufactured models. Audia shall in no event be obligated for any incidental or consequential damages as a result of any defect or any warranty claim, whether expressed or implied. Any replacement of parts not covered by the warranty will be charged to the customer. Any unit requiring repairs must be taken to the retailer in its original packaging for delivery to our offices or authorized service center with a description of the defect. If shipping is required, such costs are charged to the client. For all foreign markets, the Audia local distributor is responsible for establishing any and all rules governing warranty in accordance with the rules and regulations that apply in each country. This includes length of warranty, location where repairs may be effected, costs, if any, and conditions pertinent to fulfilling the conditions of warranty.

FLS Streaming Board
(Optional)



- **USB2** port. It is connected to internal hub and has **to be used to connect devices as wifi dongles.** Maximum current output is 1000 mA. Currently, the board supports Realtek's RTL8811AU and RTL8811CU chipset. Any WiFi module/dongle with these chipsets can be used.

- **LAN** port. To be used to connect streaming board to modem/router. Modem/router must have an internet connection active, otherwise remote control software doesn't work.

- **USB1** port. **To be used to connect USB memory devices containing music files.** This port is directly connected to internal streamer circuitry. It is not suited for external solid state hard disks, due to limitation of current output (500 mA max).



Then, using SACD input selector, select the STREAMER input 5.
The device that will be used as remote control must have installed the control app on.
The free app for remote control is "mconnect Player Lite", available on Google Play Store or Apple Store, depending on devices to be used.
Install the app on the device you wish to use as remote control. This device must be connected to same local wifi network (modem/router) as streamer board.

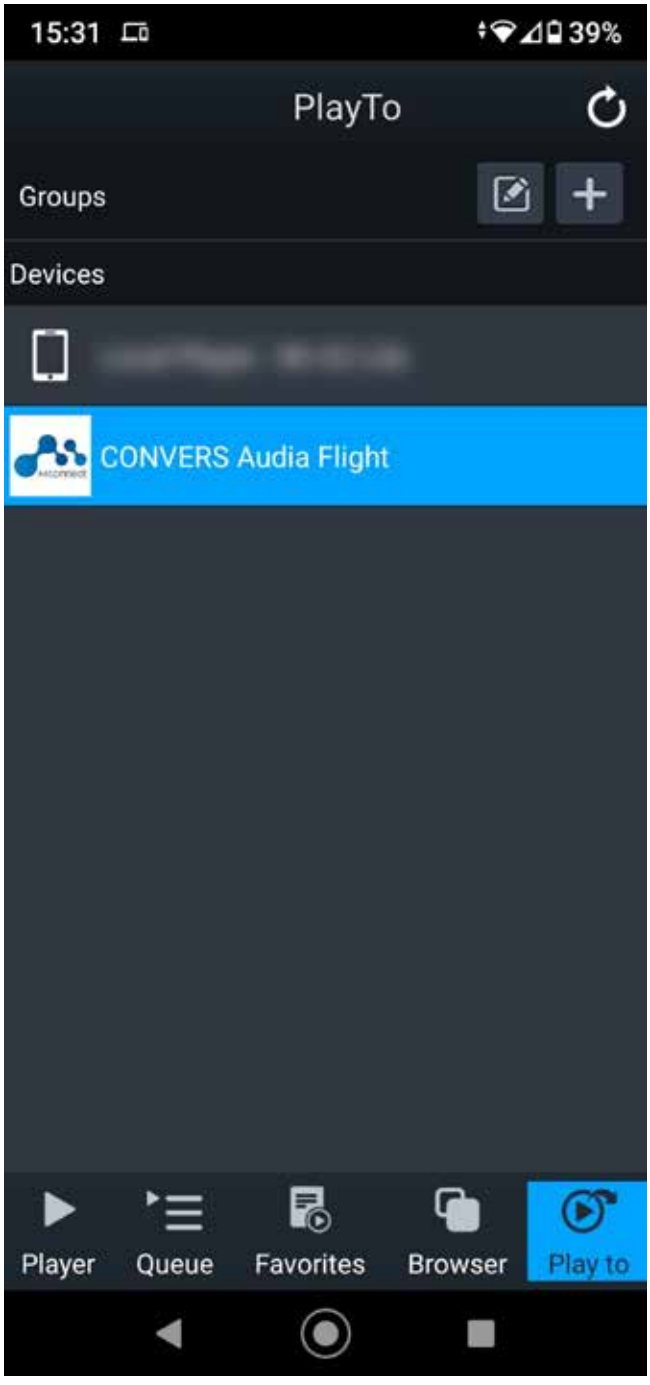
LAN connection
Connect streaming board to your router with LAN cable. No further steps are required. LAN connection is always recommended.

WiFi connection
Press WiFi button on streaming board for 10 seconds. Press WPS button on your AP router. The board will connect to your AP router.

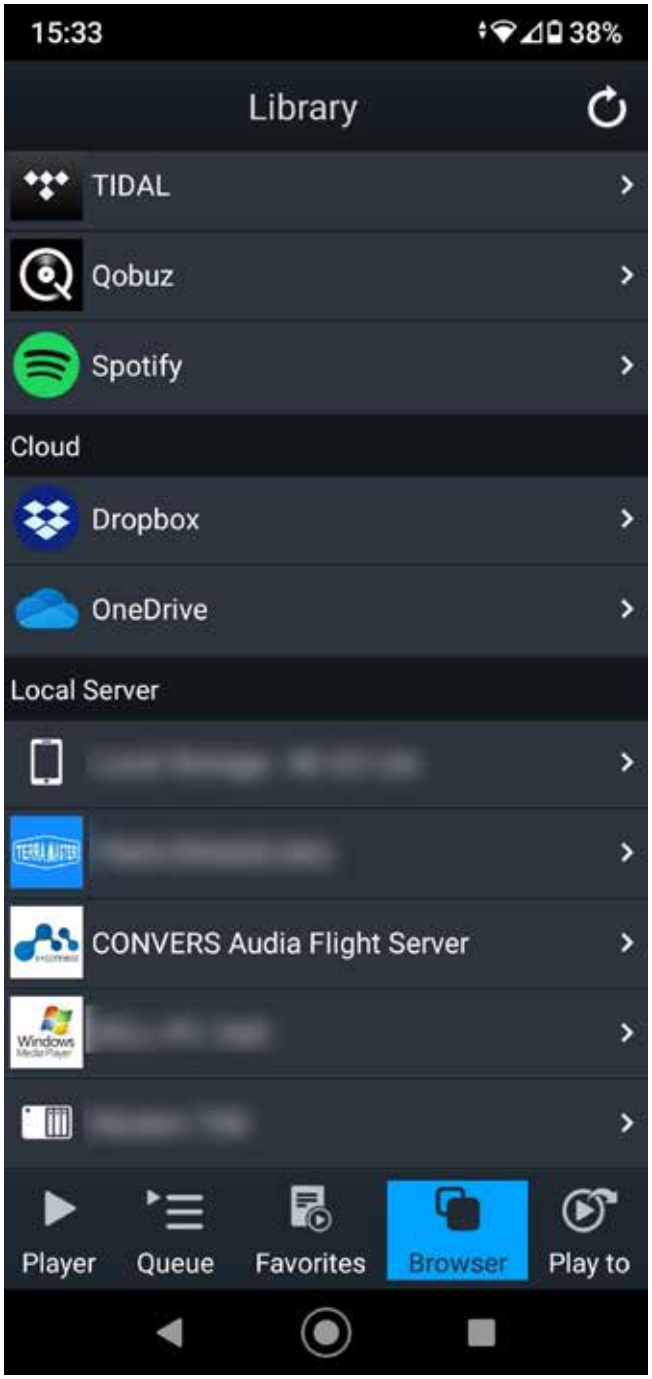
Reset button
Pressing the Reset button for 2 seconds, information set by user will be replaced with default values (Factory Reset). Any previous info about network will be deleted.



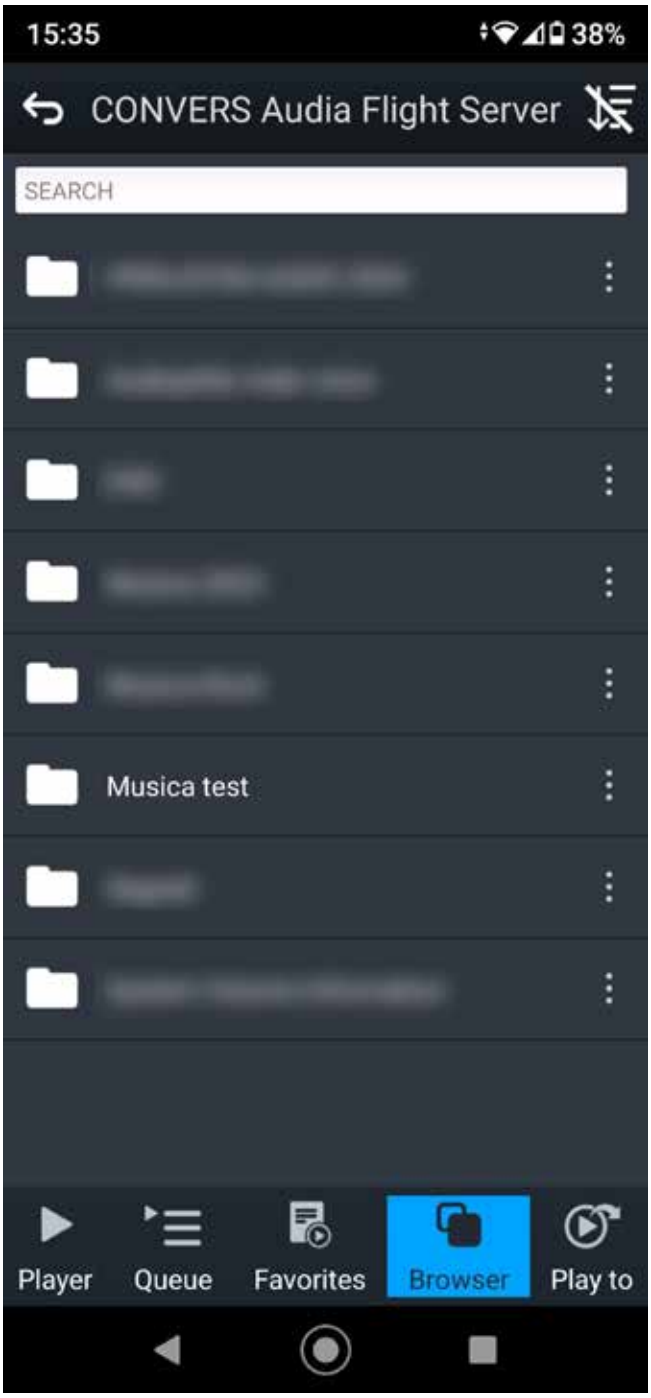
Once the application has been installed, this is what you see on the screen.



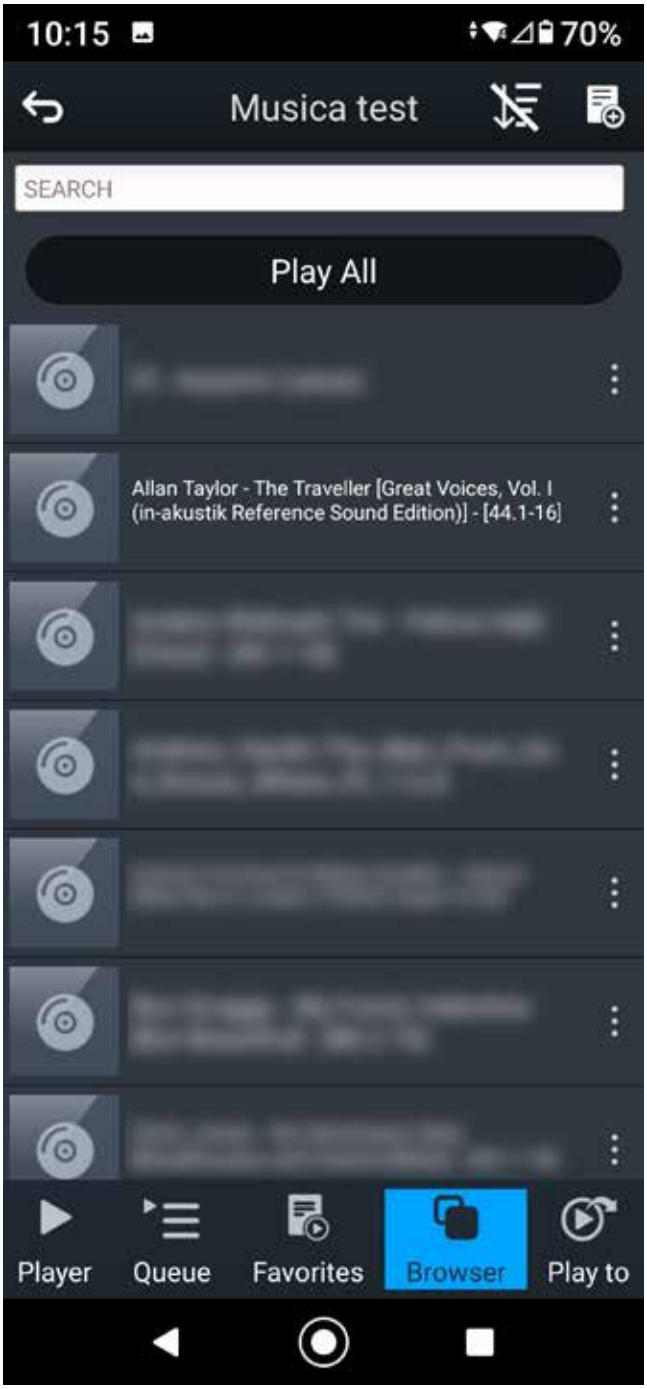
Under the “Play to” label, select the CONVERS Audia Flight option. It appears available only if both remote control and streamer are connected to same router.



Under “Browser” label, select the CONVERS Audia Flight Server option.



Now you can access the folders of memory device, if any.



Entering the folder, you can choose track.



Playing track, screen appears this way.

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