



NOS Differential DAC "*Adagio*"

User manual



Introduction

Our Adagio pre amplifier is a continuation of the theme which began with the Adagio dac . The Adagio is using eight 24 bit Transient DAC TWO dac chips. Two fully balanced mono dac boards are used having their own separate power supplies. The digital part is quite complex and will control the whole system. Incoming digital audio data is split up in two data streams and feeds both dac boards. The analog output level is controlled by the setting of the reference voltage. This approach avoids any gain stage and connects the dac modules directly to the output. As standard it has 1 x BNC, 1 x RCA, 1 x optical, USB and AES digital inputs and 2 sets of outputs, 1 pair of RCA (single-ended) and 1 pair of XLR (balanced).

Remark

The Adagio will reach its maximum performance after a three to four weeks of intensive use!



IMPORTANT SAFETY INSTRUCTIONS

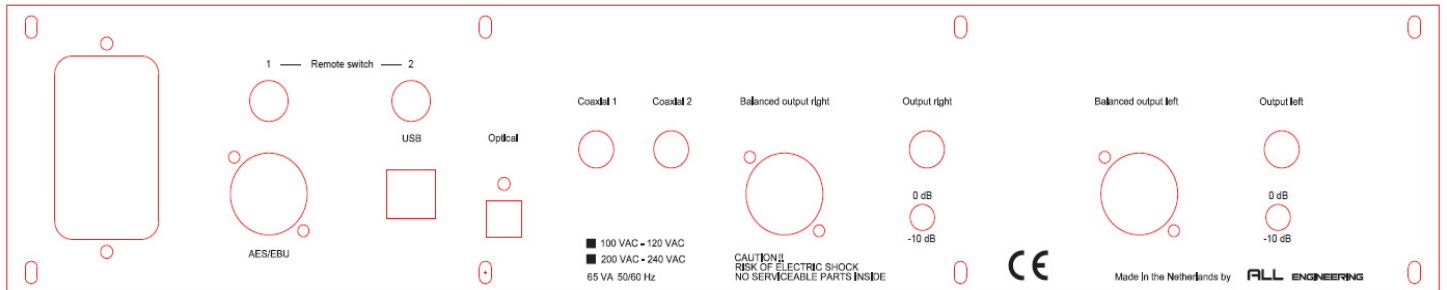
- 1.** Read Instructions.
- 2.** Keep these Instructions.
- 3.** Heed all Warnings.
- 4.** Follow all Instructions.
- 5.** Do not use this apparatus near water.
- 6.** Clean only with a dry cloth.
- 7.** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 8.** Unplug this apparatus during lightning storms or when unused for long periods of time.
- 9.** Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a 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.
- 10.** The Adagio pre amplifier must be placed on a firm, level surface where it is not exposed to dripping or splashing.
- 11.** Before making connections to the dac, ensure that the power is off and other components are in mute or stand-by mode. Make sure all cable terminations are of the highest quality, free from frayed ends, short circuits, or cold solder joints.
- 12.** THERE ARE NO USER SERVICEABLE PARTS INSIDE THE "Adagio" pre amplifier. Please contact All Engineering if you have any questions not addressed in this guide.
- 13.** All Engineering cannot be held accountable and/or responsible for any form of damage or health issues inflicted to you, other people, pets, companies and non-living objects, that are caused by any form of usage of the product which is not described in this manual.
- 14.** By actually using this product and turning it on for the first time, you agree to these terms



What is in the Box

- The Adagio dac
- Power cord (only Euro or USA based power cords)
- USB cable
- USB stick (user manual and USB drivers)
- BNC to RCA adapter

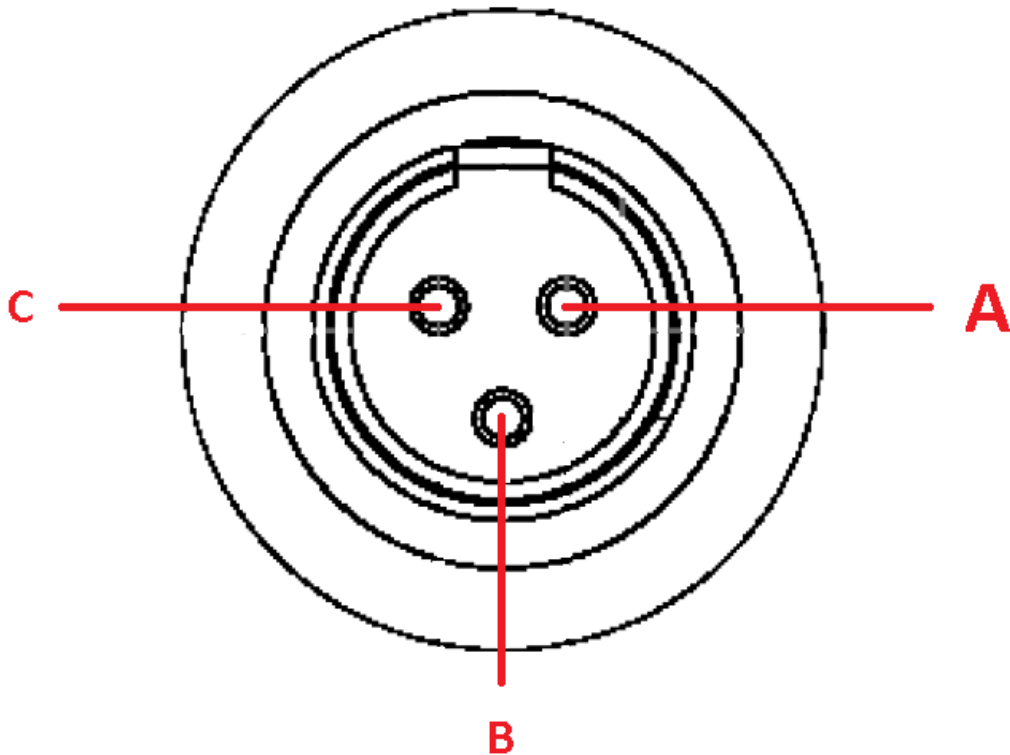
Connections



Caution! Please connect your interconnects first before connecting the mains power cable!

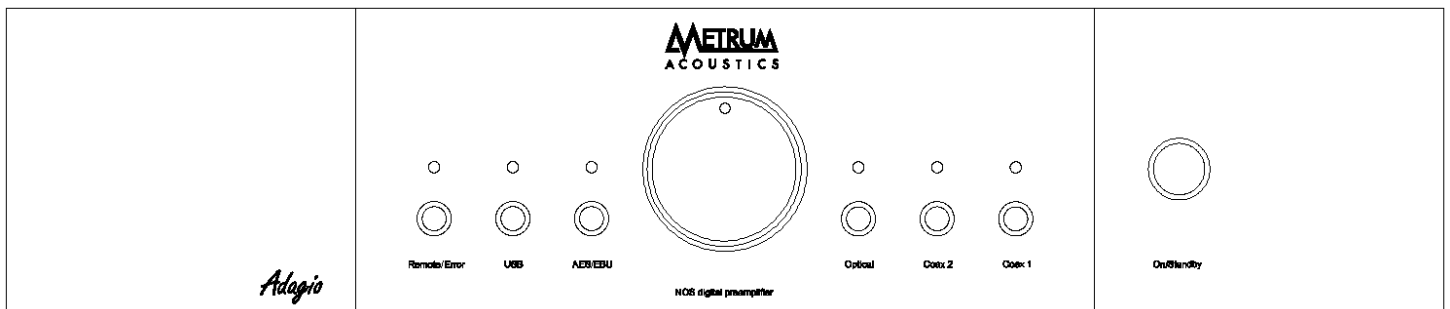
- Power requirements:** Check if the product is made conform the power requirements of your area. On the back side the product is marked for the specific mains voltage.
- Optical input:** Use an optical (Toslink) cable to use the optical input. The optical input can be used for sampling rates up to 96 kHz.
- Coaxial inputs:** A 75 Ohm coaxial cable should be used to connect the dac to other digital equipment. To avoid ground loops both inputs has a galvanic isolation and can handle a maximum sample rate of 192 kHz. Coaxial 1 is a BNC connector. When using RCA type connectors please use the BNC to RCA adapter.
- AES/EBU digital input:** When using the AES /EBU digital input a special 110 Ohms XLR cable should be used. The AES/EBU interface has a galvanic isolation and can handle a maximum sampling rate of 192 kHz.
- USB input:** Use an USB cable to connect the dac to your computer. Only when using a Windows operating system you should install special drivers. In case of Linux or MAC no drivers are required. The USB input can handle sampling rates up to 384 kHz. (For installing drivers for PC, we refer to the user manual of the USB interface)
- Attenuation switches:** Depending the input sensivity of the used power amplifier the output of the Adagio can be reduced with -10dB.
- RCA outputs:** Standard interlinks can be used to connect the dac to your amplifier. The "Adagio" is designed conform the "Red book standard" so the maximum output will be 2 Volts RMS or 700 mV RMS in case of using the -10dB setting . Your (pre)amplifier should handle this output levels.

- **XLR outputs:** Standard XLR line cables should be used to connect the dac to your (pre) amplifier. The "Adagio" is designed conform the "Red book standard" so the maximum output for the XLR output will be 4 Volts RMS or 1.4Volts RMS in case of using the -10dB setting. Your (pre)amplifier should handle this output levels.
- **Mains inlet:** Use a power cable to a grounded power outlet.
- **Remote switch:** Depending the type of power amplifier it is possible to switch it "On" or "Off" by using one or both of the remote switches. For connection a 3 pole XLR mini connector can be used and depending the way your power amplifier should be powered, it can be wired accordingly. The following connections are available:
 - A) Common
 - B) Normally closed when Adagio is switched off.
 - C) Normally open when Adagio is switched off.



Operation

Remark: When the Adagio is fully connected and switched to "on" the volume knob will turn anti clockwise to the lowest position. Also the mute function will be activated the very first time. To release the mute function one of the remote control buttons should be used. In case of disconnecting the Adagio from the mains power, this procedure should be repeated!



- **On/Standby switch :** To reduce power the Dac boards will be switched off in stand-by mode. Just the front panel is activated to control the system and power consumption will be reduced to 1.5 Watts.
- **Mute function:** By switching to "On" the mute function will be activated for five seconds. When switching the Adagio to standby mode muting will be active again.
- **Source selection:** The digital inputs can be selected by using five small buttons on the front . When switching the Adagio to "On", by default the last selected source will be active.
- **Error indication:** When no digital data is coming in, the orange Remote /Error led above the remote sensor will burn.
- **Remote indication:** When using the remote control the Remote/ Error led will flash rapidly.

Remote control



The remote control is made to control the available digital inputs, volume and muting. As opposed to the front panel buttons where you can select one of the digital sources directly, the remote will toggle through the entire range of available digital sources.

When the Adagio is set into the stand-by mode, it will remember the last input selection and is available again when the Adagio is switched on.

Replacing the batteries

If one of the buttons is not activated there is no power consumption at all which leads to a very long battery life cycle. The two batteries used has the following type: CR1632 3 Volts. Batteries can be replaced on the following way:

Use a middle sized Philips screw driver to remove the screws from the back of the remote.



By removing the back cover the printed circuit board will be visible.



By turning the housing upside down the printed circuit board will fall out and the component side will be visible now. Remark: In case that the pcb is stocked in the housing you can push one of the buttons to help this procedure.

As shown above push the battery out of its holder by using the back side of a swab. Take the new battery and push it in the battery holder with the “+” mark on top.



When the new battery is placed, lay back this part of the board where the blue led is situated. The led will be positioned in front of the recess. Next you can lay down the whole board in the housing. Next you can replace the cover and tighten the screw.



Technical specs :

Working principle:	Non oversampling digital pre amplifier. Dual mono, four dacs per channel in differential mode.
Power supply:	75 VA devided over three single toroidal transformers
Power consumption:	Standby < 1.5 Watts Full operation 25 Watts
Power requirement:	110/115V AC or 220/230 V AC 60/50Hz
Inputs:	1x optical Toslink, 2x coaxial like 1x BNC , 1x RCA. AES/EBU and USB module.
Outputs:	2x RCA gold plated Neutrik © connectors . 2x XLR 3 balanced outputs.
Output voltage:	RCA : 2 Volts RMS max output. -10dB setting 700mV RMS XLR: 4 Volts RMS max output -10dB setting 1.4 Volts RMS
Frequency response:	1Hz -0.8dB, 20 kHz -1.2 dB 44.1kHz sampling. 1Hz -0.8dB, 65 kHz -3dB 192-384 kHz sampling.
Distortion:	0,01 % THD
Noise:	-145 dB related to 2 Volt RMS
Output impedance:	RCA 100 Ohms , XLR 200 Ohms
Sampling frequency:	Optical : 44.1 - 96 kHz sampling , 16 or 24 bits. Coaxial: 44.1 - 192 kHz sampling, 16 or 24 bits. USB: 44.1- 384 kHz sampling , 16 or 24 bits
Dimensions hxwxhd:	85 x 440 x 320 mm.
Weight:	11kg.

Subject to change without notice.

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