

NAGRA



HD AMP

OWNER MANUAL

RELEASE ©2019

/// Dear music lover

Congratulations! You have just acquired one of the best amplifiers ever built. The HD AMP was created by an engineering team with more than 60 years' experience designing world-class products for the professional audio, national security and military markets. The professional and Hi-Fi product ranges are designed by the same Research and Development department. Nagra launched its Hi-Fi range to allow the wider public to benefit from technical advances that are often the privilege of professionals. In so doing, the ultimate sonic excellence has been shared throughout the Hi-Fi range. Ever since its creation in 1951, Nagra has been building devices that offer unparalleled performance, and the company has received many awards for its technical innovations and the excellence of its products over the years. Among the most prestigious, Nagra has been awarded three Oscars® and an Emmy®. Our experience, precision and dedication to detail has been implemented in the service of music, your music. We wish you many hours of listening pleasure and memorable moments enjoying your HD AMP.

Thank you for being our customer.

We hope you enjoy your new Nagra HD AMP amplifier!

Pascal Mauroux
CEO



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Safety warnings

- Before operating the HD AMP, please read this manual carefully.
- Should you have any questions on how to set-up or use your HD AMP, please contact your Nagra dealer.
- Do not attempt to open the amplifier under any circumstances. Refer any service / repair work to Nagra qualified personnel. There are no user serviceable parts inside the amplifier.
- Audio Technology Switzerland SA declines all responsibility in the event of an accident caused by the non-observance of these instructions or any other form of user negligence.
- To work correctly in your country, the HD AMP has a specific power supply for 100, 115, 120, 230 and 240V. The power supply voltage can only be changed at the factory. Make sure you have the correct operating voltage before switching your amplifier on.
- The HD AMP is CLASS I equipment. It is essential that it is connected to a MAINS socket outlet with a protective earthing connection.
- The HD AMP must not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, should be placed on the machine.

Warranty

Audio Technology Switzerland SA, designer and manufacturer of Nagra products, certifies that this instrument was thoroughly inspected and tested prior to leaving its factory and is in accordance with the data given in the accompanying measurement protocol and test sheet. We guarantee the products of our own manufacture against any defect arising from faulty manufacture for a period of three years from the date of delivery to the user.

Warranty will be void if the serial number has been removed from the unit.

This limited warranty covers the repair of confirmed defects or, if necessary, the replacement of the faulty parts, excluding all other indemnities. All freight costs, as well as customs duty and other possible charges, are at the customer's expense.

We decline any responsibility for damages resulting directly or indirectly from the use of our products and from the use of any components or spare parts other than those designated as original/approved parts by Audio Technology Switzerland SA. As we constantly strive to improve our products, we reserve the right to modify them or change their specifications without notice.

Package contents

In addition to the pair of HD AMP monoblock units and manual, each box should contain the following:

Two ② pair of microfiber gloves « Haute Horlogerie »

Two ② AC power cables*

Two ② spare fuses (for 100 - 120 or 230 - 240 V, depending on your country).

Please contact your Nagra dealer should anything be missing.

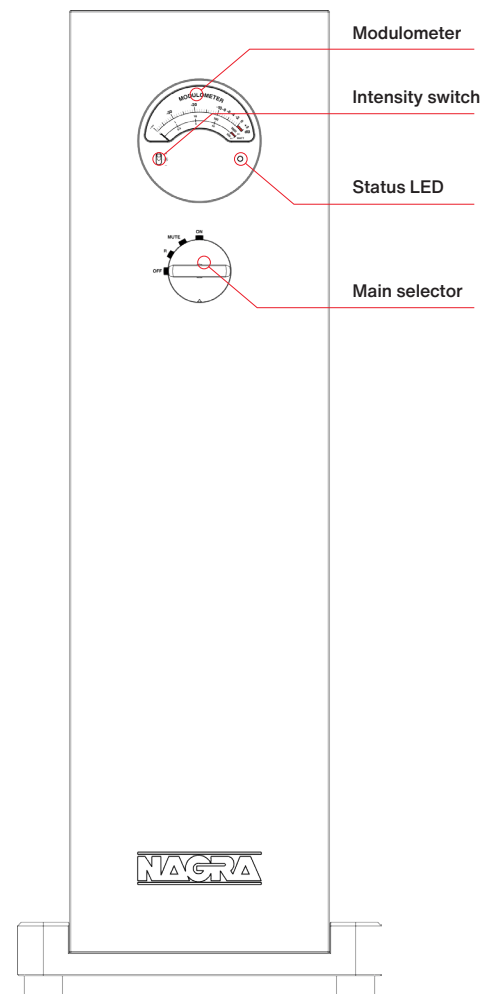
* Depending on your country, the AC mains cable features either a US, European or Swiss plug.

Positioning the HD AMPs

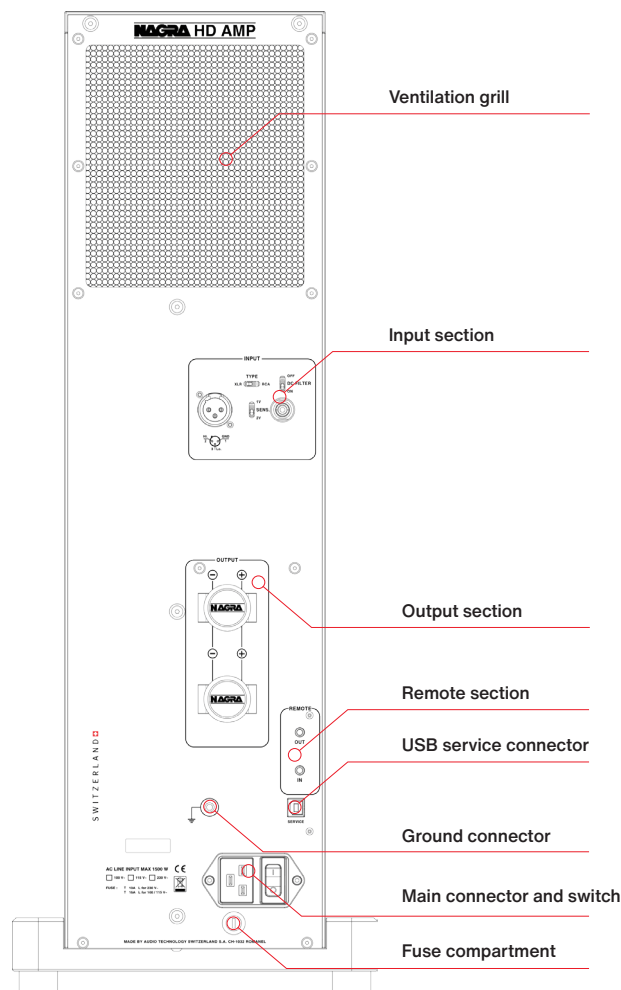
The HD AMP has no fan inside and relies on a unique air-flow system where the warm air is naturally conducted through a “chimney” from beneath the amplifier to its rear panel. DO NOT block the intake or outlet ventilation holes; make sure to leave space behind the amplifier for the warm air to evacuate properly. If you have a thick carpet, it is essential to place the HD AMP on a stand to allow an uninterrupted air intake and optimal thermal dissipation. The HD AMP is designed to be used exclusively indoors in a moderate climate. Do not place it near a heat-sensitive surface (such as curtains for instance). The HD AMP must be positioned in the VERTICAL orientation. The cooling system will not operate correctly in the horizontal position.

Moving the HD AMPs around

The HD AMP mono-blocks are extremely heavy and should be moved by a minimum of two people.

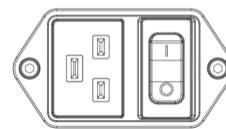
Presentation of your HD AMP**Front panel**

Rear panel



Connection to the Mains

Make sure the switch is in the OFF position prior to connecting the Mains cable. This is the Mains switch. When set to the off O position, the amplifier is totally isolated and does not draw any current from the Mains. If you wish to use a third-party cable, be sure to use an IEC C19 cable.

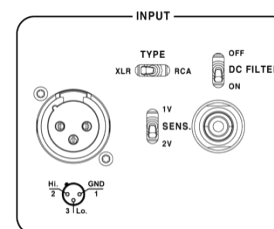


Fuse type

Replacement fuses are provided with your HD AMP. If additional fuses are needed be sure to use 16 A (6.3 x 32 mm) for 100 – 120 V models and 10 A (5 x 20 mm) for 230 – 240 V Mains versions.

Should the fuse blow twice for no apparent reason, please contact your Nagra dealer for advice.

Input panel



TYPE for Input type RCA or XLR

The HD AMP is a fully balanced amplifier. The inputs are provided on either RCA (unbalanced) or XLR connectors (balanced). Connect your source either to the RCA or the XLR input and then switch the TYPE switch to correspond to either the XLR or RCA connector. Please note that this is not an input selector to connect different sources, it is to connect one component, either RCA or XLR.

SENS. for Sensitivity

You can adjust the HD AMP's input sensitivity to the source's output level. This will guarantee a perfect match with your preamplifier. You can change the input sensitivity at any time by moving the SENS. switch up or down, make sure to adjust both left and right channels.

DC FILTER

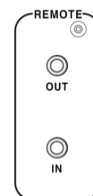
The HD AMP can amplify signals from 0 Hz. Consequently, should a DC be present at the input, it will be amplified! If your source has any DC component, make sure to place the filter in the **ON** position. If you use a Nagra source, you can leave it **OFF**. When changing this setting, it is necessary to power OFF - ON the amplifier (Mains switch on the back panel) to activate the change.



Ground connector

In some specific situations the ground connector can be used to connect different pieces of equipment to avoid unwanted earth-loop hum problems. Your Nagra dealer will advise you during set-up whether this connector needs to be used.

Remote connection

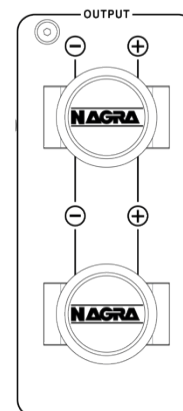


The HD AMP has 1x 3.5mm ($\frac{1}{8}$ ") stereo jack socket IN (to connect a master device) and 1x 3.5mm ($\frac{1}{8}$ ") stereo jack socket OUT (to connect a slave device). It allows you to switch a complete configuration of Nagra devices ON/OFF by simply switching the master device ON/OFF, either manually or with an IR Remote Control Unit if available.

USB connector

This connector is for Nagra service use. The HD AMP's processor monitors key parameters that Nagra can access for settings and servicing.

Output section



The HD AMP features two speaker terminals in parallel, to allow bi-wiring. Connect your speaker cables and tighten the rotary knob. The connectors are in parallel, so you can use either connector.

03

HD AMP

OPERATING THE HD AMP //

Proceed only once you have completed the installation steps described in the previous chapter **Installation**.

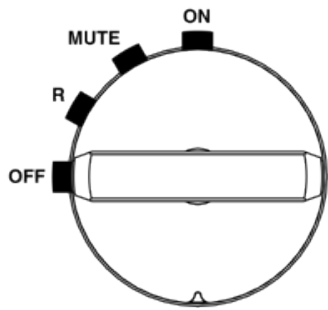
Switching ON

The Mains switch is located on the rear panel (see above section).

To use your amplifier, you must first, put the **Mains switch** in the **ON (I)** position.

Then you can use the **Front Selector** on the front panel.

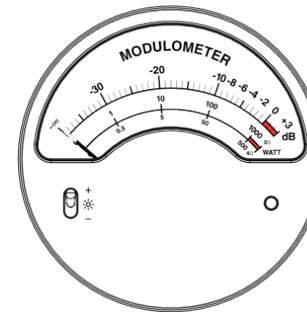
In Nagra tradition, we call this selector the “péclette”.



This table sums-up the different positions

Mains Switch	Front Selector	Actions
0	Any	The HD AMP is shut down
I	OFF	This is the Standby position in which the HD AMP will use less than 1 W
I	R	ON and OFF will be activated through the remote connectors
I	MUTE	The HD AMP is ON but the input is muted, use this position for warming-up
I	ON	The HD AMP is ON, enjoy your music!

Modulometer



The modulometer is a measuring tool that Nagra invented for its early recorders in the 1950s. In the case of the HD AMP, the modulometer indicates the output level in dB relative to the maximum output level (upper scale). The lower scale indicates the output rms power into 4 Ohms.

Note that rms is the continuous power; the instantaneous power can be much higher, like, for instance, on a snare drum impact.

Adjusting the modulometer brightness

The toggle switch located on the left-hand side of the modulometer allows you to adjust the backlight intensity. From full intensity to complete extinction, it provides seven levels of brightness. This setting is automatically memorized by the HD AMP when you turn the amplifier **OFF**.

Security

The HD AMP is equipped with different protection systems to allow for smooth and secure operation for both the amplifier itself and your loudspeakers. In some instances, the HD AMP might turn off to protect itself, or your loudspeakers. In this case, turn the **Mains switch** to **OFF (O)** on the back of the unit, wait for 2 minutes and turn it **ON (I)** again.

Troubleshooting

The following table will help you to solve any problems concerning set-up and operation.

Symptom	LED status	Cause	What to do
The amplifier does not start up	Red blinks slowly	Wrong Mains voltage	Contact your Nagra dealer
The amplifier shuts down or won't start up	Red on	Transistor failure	Contact your Nagra dealer
Slight distortion is heard	Orange light	Light clipping	Not serious. Consider reducing the listening volume
The amplifier shuts down	Orange blinks fast	Heavy clipping	You should restart the amplifier and reduce the volume
The amplifier shuts down	Orange blinks fast	Short-circuit	Check the speaker connectors on the amplifier and on the speakers, then restart the amplifiers
The amplifier shuts down	Orange blinks slowly	Overheating	The amp is overheating. It will restart when the temperature falls below 60°C (140° F)
The amplifier shuts down	Red blinks fast	DC problem	Put the DC filter ON (see page 11) and restart the amplifier, if this does not solve the issue, contact your Nagra dealer

More details on what is being monitored

Wrong voltage

The HD AMP power supply is designed to work for a specific Mains voltage, either 100-120V or 230-240V. To avoid potential component destruction, it will not turn on if it is connected to the wrong voltage. The front red LED will light, and the unit will not start. If this is the case, please contact your Nagra dealer.

Output transistor problem

In the event of an output transistor failure (because it has been damaged or has an internal weakness not detected during production) the amplifier will shut down to avoid any damage to your speakers.

Clipping protection

Clipping will occur when you push the amplifier to its limit. The front LED will start to blink orange. While a short “clip” will not even be heard, a long clip can damage the amplifier or the loudspeakers. That is why, after one second of continuous clipping, the LED will blink fast and the amplifier will shut down.

Short-circuit protection

In the event of a short-circuit on the speaker connectors, the LED will blink fast in orange and the amplifier will shut down.

Before turning the unit ON again, you should check the speaker connections.

DC protection

A DC (direct current) component generated from the amplifier could damage your loudspeakers. If a DC component of more than $\pm 2.5V$ appears on the output of the HD AMP, the front LED will blink fast in red and the amplifier will shut down.

Thermal problem

If the amplifier runs too hot, it will shut down automatically. In this case, there is no need to do anything; it will turn on again when the temperature has fallen. Make sure the amplifier is positioned on a solid platform and that fresh air can circulate inside the unit.

NB: If the room temperature is high, the amplifier's operating range will be smaller and the risk of the amplifier over-heating higher. Make sure the room is at a comfortable temperature, preferably below 30°C.



Class	AB	A > 30 W rms into 8Ω
Power	250 W rms into 8Ω	Up to 1000 W into low impedance
Sensitivity	1V or 2V rms	
Bandwidth	0 Hz to 120 KHz	+ 0 / -0.5 dB
Signal-to-noise ratio	Typically 110 dB	Measured in ASA A
THD+N	< 0.03 %	@ Full power
Input impedance	44 kΩ 88 kΩ	Unbalanced Balanced
Output impedance	< 90 mΩ	
Input connectors	XLR RCA	Balanced Unbalanced
External Remote IN and OUT	Stereo 1/8" 3.5mm jack	
Monitoring	Nagra modulometer	
Protection	Clipping indication Overheating DC detection	Red / Orange LED Above 70°C (158°F) Above +/- 2.5 V DC
Output connectors	Cardas CPBP	Rhodium terminals
Consumption	1200 W max Less than 1W in Standby	Sine wave current draw complies with EN61000-3-2 regulation
Operating range	90-110V or 110-132V or 207-264V	50 - 60 Hz
Weight	56 kg (123.4 lbs) Net weight	
Size	23.8 x 64.4 x 54.2 cm	Width 9.3 Height 25.3" Depth 21.3"

MADE IN SWITZERLAND

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