



## JAZZ – Tube Preamplifier



## User manual

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## Safety warning

- Read this manual carefully before operating the JAZZ;
- Should you have any questions on how to setup or use your JAZZ, please contact your Nagra dealer;
- Audio Technology Switzerland SA declines any responsibility in the event of an accident caused by the non-observance of these instructions or any other form of user negligence;
- There are no user adjustments inside the JAZZ or the power supply, do not attempt to open them.

## Warranty

Audio Technology Switzerland SA, certifies that this device has been inspected and tested before leaving the factory.

Every Nagra unit goes through our test laboratory. The result of the measurements is recorded in the "Protocol" documentation that comes with your device.

We guarantee our products against all manufacturing defects, for a period of three years for the JAZZ and six months for the tubes, running from the date of delivery to the customer (validated by the serial number on the device casing and the invoice from an official Nagra dealer). This warranty is only valid for the original purchaser of new equipment.

This limited warranty covers the repair and replacement of defective parts, excluding any other remedy.

The absence of a serial number invalidates the warranty.

We decline any responsibility for damages resulting directly or indirectly from the use of our products.

As we constantly strive to improve our products, we reserve the right to modify them or change their specifications without notice.



Disposal of old electrical & electronic equipment (Applicable in the European Union and other European countries with separate collection systems).

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local authority, your household waste disposal service or the shop where you purchased the product.  
Applicable to the following devices: JAZZ tube preamplifier.

# Congratulations

Congratulations! You have just acquired one of the best ever preamplifiers.

The JAZZ was created by an engineering team with more than 60 years' experience designing world-class products for the professional audio, national security and military businesses.

Ever since its creation in 1951, Nagra build devices that offer exceptional sonic performance. The company has received many awards for its technical innovations and the excellence of its products. Among the most prestigious, Nagra has been awarded three Oscars® and one Emmy®.

The professional and Hi-Fi ranges are designed by the same Research and Development department. Nagra has launched a Hi-Fi range to allow the wider public to benefit from technical advances that are often the privilege of the professionals.

This technology exists in the service of music, your music. This is why we already wish you some great moments of listening pleasure with your JAZZ.

Thank you for your trust.

## Package contents

Besides the manual and the JAZZ itself, the box contains:

- Mains cable\*;
- ACPS II power supply\*\*;
- Record of measurements, response curve characteristics for your device, measured by the Nagra laboratory;
- Remote control with 2 AAA dry cells;
- Pair of "Haute Horlogerie" grade microfiber gloves.

Please contact your Nagra dealer if anything should be missing.

\* Depending on the country of purchase, the cable supplied by Nagra will feature a European, Swiss or US plug.

\*\* Depending on the country of purchase, the JAZZ is supplied with a 110 V or 230 V ACPS II power supply.

# Installation

## Positioning

In order to protect against the risks of fire and electric shock, please keep this device away from rain and humidity, use exclusively indoors.

The positioning of the JAZZ must allow free access to the ventilation slots located under the device.

The Nagra JAZZ must rest on a stable support. We recommend that you use the anti-vibration support, Nagra VFS, Vibration Free Support, developed by Nagra consisting of isolated massive aluminum plates using the same silicon base damping material as the Nagra CD mechanics.

## Connecting the ACPS II power supply

Place the front panel selector in the **OFF** position. Insert the LEMO plug from the ACPS II power supply into the DC connector of the Nagra JAZZ.



The LEMO plug features a red dot that must be facing upwards for correct insertion into the power input connector.

You will hear a click, indicating that the plug is securely locked in.

After connection of the LEMO plug, connect the ACPS II to the mains via the IEC cable.

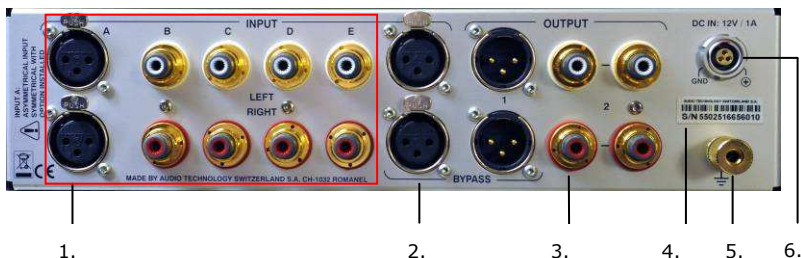
Illumination of the ACPS II's red LED (Light-Emitting Diode) indicates the output of direct current. If the LED is off, check the connection of the IEC mains cable and the delivery of current to the mains plug.



To disconnect the LEMO plug.

Hold the fluted section of the plug as shown in the picture and pull backwards.

## Connection block



1. Input block (**A** is only symmetrical with the transformer option\*), others are asymmetrical on WBT nextgen RCA connectors
2. BYPASS input on XLR, this is a special input that will be routed to the XLR output when the JAZZ is OFF, see **BYPASS** on page 8)
3. Output **1** is on XLR (symmetrical on Nagra balancing transformers) and RCA outputs on Output **2**, the RCA can be used in parallel
4. Serial number identifier
5. Ground connector
6. DC input on Lemo plug

\*The XLR inputs, input **A** are asymmetrical. If you need symmetrical inputs, you should purchase the optional input transformers. Just like the output transformers, they are custom designed for the JAZZ and hand wound by Nagra in Romanel-sur-Lausanne, Switzerland. This option will be available shortly.

In order to obtain optimal performance from the Nagra JAZZ, it is preferable to leave the device switched on for about 15 minutes before use, so that the internal components can reach their optimum operating temperature.

Like all tube electronic devices, the Nagra JAZZ needs a running-in period. It will reach peak performance after a few hundred hours operation.

### Note about the Ground connector

This feature is seldom used but often handy to solve specific setup issues. Your Nagra dealer will assist you on when and how to use this connector.

## Front panel



1. LED and Modulometer intensity switch, pushed up will increase the intensity, down will reduce it, there are 7 levels of intensity
2. Nagra Modulometer indicates the output level in dB, reference 0 dB = 1 V
3. STEREO / MONO selector, in **MONO** position, the LED will light up
4. MUTE, when muted the LED will light up, push down to cancel the mute, you can also MUTE using the remote control
5. Volume adjustment potentiometer
6. Balance fine adjustment potentiometer
7. Gain selection, standard position 0 dB, upward position +12 dB
8. Line out selection, position **1** XLR, **2** RCA
9. Motorized Main selector, **OFF** is standby\* position, input selection **A** to **E**
10. IR window and remote LED

\*In standby mode the power consumption is less than 10 mW.

Please note that when turned **ON**, the JAZZ will go through a 2 minute pre-heating phase. This is in order to optimize the warming-up of tubes and critical components. This will allow your JAZZ to offer excellent performance for a longer period, the components being taken care of gently.

**Note:** In case of an accidental return to the **OFF** position for less than 2 seconds, the pre-heating is not reapplied.

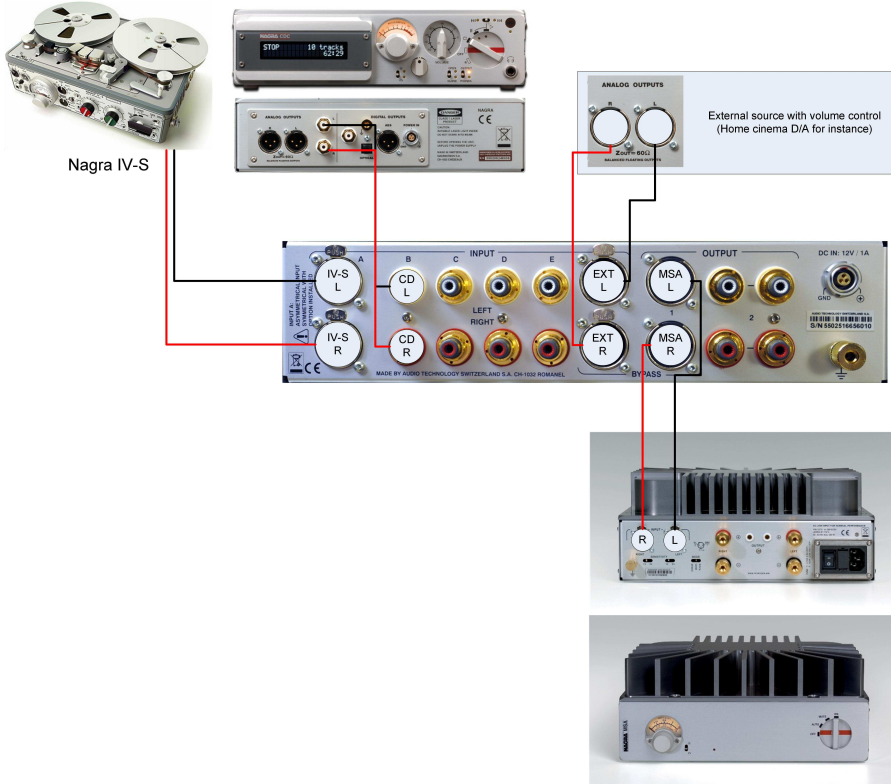
**Note 2:** When moving between the **A** and **E** inputs, a 3 second switching delay is applied to avoid any unwanted noise, this is perfectly normal.

## BYPASS

The BYPASS input is a nice feature that allows a second system, home cinema for instance, to be linked to the main amplifiers connected to your JAZZ.

The BYPASS is active when the JAZZ is turned **OFF**, whether it is actually connected to the DC power supply or not. The BYPASS input will directly connect to the XLR output (output **1**) without going through the output transformers. Each BYPASS XLR input contact is connected to the output XLR, so if the source is balanced, the connection will be balanced all the way through.

Here is an example of a setup using the BYPASS input.



### Warning

Please note that the JAZZ volume control will also be bypassed. The signal is directly routed to the XLR output. Be careful to use a source with volume control. To avoid any damage on the speakers, adjust the volume to the minimum on the source, before turning the JAZZ **OFF**.



## Nagra Modulometer



Nagra Modulometer is inherited from the second recorder developed by Nagra back in 1952, the Nagra II. The Modulometer is a typical Nagra precision instrument that displays the necessary information to perform the best possible recording.

In the case of the JAZZ, the Modulometer displays the output level. The 0 dB corresponds to a 1 V rms signal on the output.

Left channel - red needle

Right channel - green needle

The Modulometer allows you to make sure you adjust the volume in a consistent manner with the source and the amplifier you are using.

## Gain selection

In order to accommodate a wide range of amplifier/speaker combinations, the JAZZ's internal gain can be adjusted by a toggle switch on the front panel.



The gain can be changed while the unit is **ON** and playing. 12 dB amplification is a 4x multiplication, so be aware of the sound level when you change gain.

This switch changes the internal gain of the unit; this is not an additional stage. So the sound quality is not affected by the gain you select. This switch is placed on the front panel, as we consider you can change it from one source to another, or depending on the music style you are playing, at any time. So we do not recommend any particular position for a given set-up. Feel free to experiment.

## LED and Modulometer intensity adjustment



This two-way toggle switch allows you to adjust the LED and Modulometer backlight intensity. Pushing the toggle UP will increase the intensity, pushing it down will lower the intensity all the way to complete extinction. In total there are 7 different levels.

## Balance fine adjustment



The balance is often regarded as not mandatory by many manufacturers. At Nagra, we believe it is useful to adjust some minor left/right impairments, typical of LP cutting.

This is the reason the JAZZ Balance setting is intended for fine adjustments that will affect Left/Right balance by just 6 dB. So this is perfectly normal that the volume does not go completely to the left or right channel.

# Remote control

The JAZZ comes with a new remote control.



You may also use Nagra RCU or RCU II remote control. As they use a different communication protocol, please contact your Nagra dealer to make the necessary adjustments inside your JAZZ.

## Using a “universal remote” with the JAZZ

The JAZZ responds to IR (Infra Red) signals coded in Philips RC-5 format. The JAZZ is allocated a system number 16 for preamplifiers.

Should you wish to program your universal remote control, please use the following table:

Code	Function
1 to 5	Input <b>A</b> to <b>E</b> (code 6 or input <b>F</b> is not active on the JAZZ)
32 & 33	Input change step-up or step-down
16	Volume Up
17	Volume Down
26	Balance Right
27	Balance Left
13	Mute
12	Standby

## Tube ageing

The JAZZ tubes are selected by Nagra according to exacting criteria. Their theoretical minimum useful life is 5000 hours. Actually, some tubes operate consistently for more than 10 000 hours.

Thus, the useful life of the tubes is somewhat unpredictable. Rather than replacing the tubes arbitrarily after 5000 hours, we suggest that you identify the signs of ageing:

- The distortion gently increases to an audible level;
- Presence of clicks (dry and short noise, like breaking dead wood);
- Presence of pops, short noise in the low frequencies;
- Presence of hiss, higher background noise.

As soon as one of these signs appears, please contact your Nagra dealer to order a JAZZ replacement tube kit, reference 7055764000.

## Case cleaning

Clean the JAZZ casing using a soft, non-fluffy, slightly damp cloth. Do not use any cleaning products which could have a corrosive effect.

## Technical specifications

Input impedance	> 75 K Ohms	
Output impedance	50 Ohms	
Frequency response	10 Hz - 50 kHz	(+0 /-0.5 dB)
Signal to noise ratio	Typically 105 dB (ASA A)	Ref 1 V
Dynamic range	> 112 dB	Gain at +12 dB
Minimum input level to reach 0 dB (meter)	0.25 V rms	Gain at + 12 dB
Maximum input level to reach 0 dB (meter)	> 25 V rms	Gain at 0 dB
Total harmonic distortion (THD)	<0.02 %	@ 1 kHz, 1 V out, no load
Crosstalk	> 78 dB	
Vacuum tubes	2x 12AX7 / ECC83 1x 12AT7 / ECC81	Selected by Nagra Laboratory
JAZZ consumption	12 V 900 mA	Standby <10 mW
Power supply	115 V or 230 V AC input	ACPS II power supply
Dimensions	310 x 254 x 76 mm	12.2 x 10 x 3 inches
Weight	3.3 Kg – 7.27 pounds	JAZZ unit alone

## Déclaration de conformité

### Declaration of conformity

**FABRICANT:** AUDIO TECHNOLOGY SWITZERLAND SA, 1032 Romanel, SUISSE  
**MANUFACTURER:** AUDIO TECHNOLOGY SWITZERLAND SA, 1032 Romanel, SWITZERLAND

**APPAREIL:** Nagra Jazz

**MODEL:** Nagra Jazz

NORMES APPLICABLES:

APPLICABLE NORMS:

Champ électromagnétique rayonné Radiated electromagnetic field	EN 55022 Cl. B EN 55022 Cl. B
Perturbations conduites sur secteur Disturbance voltage on mains terminal	EN 55022 Cl. B EN 55022 Cl. B
Immunité aux champs électromagnétiques Immunity to electromagnetic fields	EN 61000-4-3 EN 61000-4-3
Immunité aux décharges électrostatiques Immunity to electrostatic discharges	EN 61000-4-2 EN 61000-4-2
Immunité aux transitoires électriques rapides en sèves sur câble d'alimentation Immunity to burst on mains line	EN 61000-4-4 level 2 (1000V) EN 61000-4-4 level 2 (1000V)
Immunité aux transitoires électriques rapides en sèves sur câbles d'entrées/sorties Immunity to burst on input/output signal line	EN 61000-4-4 level 1 (500V) EN 61000-4-4 level 1 (500V)
Immunité aux ondes de choc Immunity to surge	EN 61000-4-5 level 2 (1000V) EN 61000-4-5 level 2 (1000V)

Cheseaux 2ème trimestre 2012  
Cheseaux 2nd quarter 2012

Nagra R&D team