HA-609A QUICK START GUIDE



This is a quick start guide on using the HA-609A dual compressor/limiter unit. For more info on it or more tips on how to use the unit, please check www.heritageaudio.net often, and make sure to follow Heritage Audio on Facebook, Instagram and You Tube.

Dec 2nd, 2019

Rev. 1.0.

INSTALLING THE HA-609A

Thanks for purchasing the HA-609A stereo dual mono compressor/limiter. Please make sure the following items are in the box when you open it.

- This manual.
- HA-609A main unit.
- 48v Power Supply**.**
- IEC Cable.

Depending on your system requirements, you will need four XLR cables to hook up your system. Please check your input sources and output destinations and purchase the correct cables.

The power supply is of the auto switching type so it works worldwide without adjusting anything. In case your country uses a different mains cable other than the one provided in the box, just get the correct one and you are done.

Basic audio connections are just balanced left and right input and output connections by means of XLR connectors. Should you require to connect the unit to unbalanced equipment, please do so by connecting pin 3 to ground.

The HA-609A is able to accept input levels in excess of those that any interface can provide, so the chance that its input is overloaded is rare.

However, it is able to provide output levels in excess of those that most interfaces can accept, so please keep this in mind.

GENERAL DESCRIPTION

The Heritage Audio HA-609A DUAL MONO STEREO COMPRESSOR/LIMITER is a professional diode bridge-based dynamics processor in a convenient 2RU format. It features Carnhill/St Ives transformer balanced inputs and outputs, and the outputs are driven by means of ´73 type Class A amplifiers. It also features St. Ives interstage transformers to isolate the diode bridges in a fully floating configuration. Therefore, there is a total of no less than 6 Carnhill/St Ives transformers per unit, 3 per channel and tone for days.

Unlike vintage diode bridge designs, the HA-609A has dual attack times both in the compressor and limiter sections and expanded threshold and limit level ranges that easily accommodate the hotter modern input signals. Gone is the classic problem of the unit always compressing even at the highest limit level and compression threshold that used to drive crazy to the mixing and mastering engineers.

Finally, the all discrete class A construction departs from other vintage and current diode bridge units, (which still rely on class A/B amps), and reacts so much better to compression, in a much more musical way.

CONNECTION FEATURES

The HA-609A has the following connections:

- **INPUT L**: Transformer balanced, accessible on an XLR connector.
- **INPUT R**: Exactly as Input L.
- **OUPUT L**: Transformer balanced, ´73 type class A amp driven, accessible on an XLR connector.
- **OUTPUT R**: Exactly as Output L
- **POWER:** Connects the external power supply by means of a barrel type pin.

GETTING STARTED WITH THE UNIT

Once you have made the right connections for your application, please POWER ON your unit and PRESS BOTH BYPASS buttons to make sure the compressor is not activated. They are of the true bypass type, so audio should pass directly from input connectors to output connectors and meter lights should remain off. To start with, the slow attack and an AUTO release setting are good options for both compression and limiting. Turn Threshold to maximum and press COMPRESS IN. Set RATIO to 2:1. Fun begins.

The meter´s light should turn ON to advise that dynamics are working. Turn Threshold control counter clock wise until you get the desired amount of compression. Recover lost gain with the gain makeup control and you´re done!

For the limiting section, a similar approach should be made. Please keep in mind that both compression and limiting sections actuate so the one making the highest gain reduction at a given instant takes over. Please also keep in mind that gain makeup is PRE-limiting section, therefore increasing gain makeup with limiter ON will make the unit limit earlier and levels over the limit one will not be possible.

AN APPROACH TO USING THE HA-609A

Using the HA-609A in the manner explained above will give you instant gratification, however the unit is far more powerful.

Playing around with ATTACK and RELEASE settings will change the sound by A LOT. Fast attack and releases will eat up transients more and may make your sounds less punchy but thicker and more detailed at the same time, with ambience and sustained passages being more noticeable. The best way to learn is experiment!

LIST OF CONTROLS

The list of controls, from left to right, is as follows:

- **LIMIT LEVEL**: Sets the output level at which limiting occurs. Range is from 0 to +20dBu on a high quality stepped potentiometer.
- **LIMIT RELEASE TIME**: On a 6-position rotary switch. From fast 50 milliseconds to 0.8 seconds and 2 automatic release times (fast on peaks, slow on sustained program).
- **LIMIT ATTACK TIME**: 2 different times on a push button. Fast is with button pressed.

- **LIMIT IN**: Activates the limiting section. If audio level is below the set limit level, it does not actuate. If it exceeds the limit level, it is limited at the limit level.
- **COMPRESSION THRESHOLD**: With an extended range from +20dBu (all clockwise) to -20dBu (all counterclockwise) on a stepped precision potentiometer.
- **RATIO**: From a very gentle 1.5:1 to a hard 6:1. On a 5-position rotary switch.
- **COMPRESSION RELEASE**: On a 6-position rotary switch. From medium-fast 100 milliseconds to pretty slow 1.5 seconds and 2 automatic release times (fast on peaks, slow on sustained program).
- **GAIN MAKEUP**: Allows for restoring the gain loss up to 2dB steps, on a 41-step precision potentiometer.
- **COMPRESSION ATTACK TIME**: 2 different times on a push button. Fast is with button pressed.
- **COMPRESS IN**: Activates the compression section. If audio level is below threshold level, it does not actuate. If it exceeds the threshold level, it is attenuated as per the ratio law.
- **BYPASS 1 and 2**: Of the true bypass, relay-based type, they effectively bypass the whole unit.
- **GAIN REDUCTION METER 1 and 2**: Measures gain reduction in dB. They are respectively illuminated when their BYPASS buttons are disengaged.
- **LINK**: Engages the stereo mode. When both channels are linked, the same control signal drives both channels. You need to manually
- **POWER:** Turns power ON.

TECHNICAL SPECIFICATIONS

- Maximum input level: Over +22 dBu.
- Maximum output level: Over +26.5 dBu into 600 ohms.
- Self-Noise: Less than -75dBu 20Hz-20Khz. -80dBu A-weighted.
- THD+N (50Hz- 20Khz): not engaged, less than 0.07% at +20dBu.
- Frequency response, COMPRESS and LIMIT OUT, +- 0.5dB, 15Hz-30Khz.
- Input impedance: 10Kohms, transformer balanced and floating.
- Output impedance: Less than 75 ohms, transformer balanced and floating, Class A driven.
- Compressor characteristics: Threshold from –20 to +20 dBu on a 41-step precision potentiometer. Ratio selectable on a rotary switch, 1.5:1, 2:1, 3:1, 4:1, 6:1. Release selectable on a rotary switch, 100, 400, 800, 1500 mS, A1 and A2 auto release times. A1 corresponds to 50mS on peaks and around 500mS on sustained program. A2 to 50mS on peaks and 1.5 seconds on sustained program.
- Limiter characteristics: Limit level selectable from 0 to +20 dBu on a 41-step precision potentiometer. Release selectable on a rotary switch, 50, 100, 200, 800 mS, A1 and A2 auto release times. A1 corresponds to 50mS on peaks and around 800mS on sustained program. A2 to 50mS on peaks and 1.5 seconds on sustained program.



LIMITED 2 YEAR WARRANTY

Heritage Audio HA-609A is warranted by Heritage Audio SL to be free from defects in materials and workmanship for the period of 2 years to the original purchaser. In the event of such defects, the product will be repaired without charge or, at our option, replaced with a new one if delivered to Heritage Audio prepaid, together with a copy of the sales slip or other proof of purchase date. The warranty excludes problems due to normal wear, abuse, shipping damage or failure to use the product in accordance with the specifications.

Heritage Audio shall not be liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation or commercial loss or any other damages, whether incidental, consequential or otherwise.

This warranty is not transferable.

Heritage Audio and the Heritage Audio “H” logos are registered Trademarks owned and/or licensed by Heritage Audio.

www.heritageaudio.net

ALFONSO GOMEZ 38. 3C

28037 Madrid

Spain

info@heritageaudio.net