

Gyraf Audio G14:



Gyraf Audio Gyratec XIV Parallel-passive stereo tube equalizer.

Preliminary user manual, 29. March 2005.

The Gyratec 14 is a true tube passive stereo equalizer, based on paralleling multiple tuned inductor/capacitor pairs - followed by a linear tube makeup gain amplifier.

In use:

First of all, when turning on the equalizer, allow five to ten minutes to heat up the tubes. The sound and levels will change slightly within this period.

The controls on the Gyratec 14 are as follows:

The inputs are transformer balanced, 5K Ohm "bridging" type, in order not to load the output of the previous stage too much. The input connectors are standard XLR jacks, pin 2 hot.

The "bypass" function switch (6) bypasses the unit completely for reference. The hard way. A relay simply takes out the active

electronics and shortens the input to the output XLR's. The power indicator light will dim a bit to show that the unit is bypassed. If you wish to use the unit for straight line gain, but with bypassed equalisation, all eq is fully turned off when the mode select switches (2) are in their centre position.

The G14 consists of five bands with selectable frequencies, "Q", and boost/cut. Frequency is selected by the upper row of switches (1), and boost, bypass, or cut is selected for each individual band by the mode switch (2). The sharpness, "Q", of each filter is selected by the Q-knob (4) - "sharp" or "high Q" is at the clockwise direction. The "Level" control (3) controls the amount of applied boost or cut - depending on what function is selected by the mode switch.

The Output trim pot (5) controls the signal level from the filters to the output driver stage and the output. There is some 6dB of spare gain obtainable - unity gain is around 1 O'clock at the output trim pot. The output impedance of this unit is around 1K Ohm, and is - like the input - floating transformer balanced.

Note that the way we implement the passive filtering has a couple of side effects that should be considered in use:

First of all, the range of maximum boost and cut is limited to some 10-12dB at each band - depending on "Q" setting.

Second, there is no "adding up" of adjacent bands - if you boost two bands at the same (or close) frequency, you won't end up with double the boost/cut range. This is true for all passive equalizer topologies.

Third, because of the parallel-passive architecture, the maximum available "Q" is higher at the upper frequencies of each band than at the lower frequencies of the band, and is sharper in cut mode than in boost mode. This distribution of filter bandwidth gives a very intuitive control of the equalizer, but also somewhat limits the maximum available sharpness of the individual filters.

Technical:

This EQ is based on a parallel-passive equalizer circuit directly following the input transformers. This circuit in turn feeds two 6DJ8/E88CC linear gain output stages, driving the output transformers. No feedback is used in the signal path, and the topology is pure class-A all the way through the unit. Transformers are used for both in- and output interfacing, giving a true floating input impedance of about 5KOhm, and an output impedance of around 1KOhm.

Our audio path consists of ONLY transformers, tubes, and passive components.

Although semiconductors and opamps are used in this unit, they're confined to power supply functions. At no time will your audio pass through anything but transformers, tubes and passives. So - as with the rest of our product range - we're talking REAL tube audio here..

Important notice:

Do not open this unit, as there are really high - potentially lethal - voltages present inside. Refer servicing to qualified personnel.

You can safely remove the four rubber feet if you wish to mount this unit in a tight rack - please save the feet for future use. NOTE: The feet are the ONLY part that can safely be removed. Do not loosen any other screws!

For long tube life, switch off unit when not in use. Don't leave it on all the time - it won't suffer from being turned on and off regularly.

This unit operates from 220-230V AC, consumes about 35W, and the mains fuse is a 630mA slow-blow type.

For further questions, comments and wishes, please contact Gyraf Audio:

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Jakob Erland
Gyraf Audio
29. March 2005.



EU-overensstemmelseserklæring

Undertegnede erklærer herved, at følgende apparat overholder beskyttelseskravene i Rådets direktiv 89/336/EØF om elektromagnetisk kompatibilitet (EMC) samt Lavspændingsdirektivet LVD.

Identifikation af apparat

Kategori: Audio Equalizer
Fabrikat: Gyraf Audio
Model/type: Gyratec 14 Parallel-Passive stereo equalizer.

Navn og adresse på underskriveren:

Jakob Erland
Gyraf Audio
Feedback Recording
Haraldsgade 27
DK8260 Viby J.

Standarder anvendt til grundlag for erklæringen:

EN 55013, EN 55020, EN 61000-3-2, EN 61000-4-2 og EN 60065.

Bemærkninger:

CE-mærket angiver kun overensstemmelse med EMC-direktiv 89/336/EØS samt Lavspændingsdirektivet LVD.

Århus, Juni 2002



Declaration of EU-accordance

I, the undersigned, hereby declare that the following device observes the protectional demands stated in the Council's directive 89/336/EEC about electromagnetic compatibility (EMC) and the Low Voltage Directive (LVD).

Identification of device

Category: Audio Equalizer
Make: Gyraf Audio
Model/type: Gyratec 14 Parallel-Passive stereo equalizer.

Name and address of the undersigned:

Jakob Erland
Gyraf Audio
Feedback Recording
Haraldsgade 27
DK8260 Viby J.

Standards founding this declaration:

EN 55013, EN 55020, EN 61000-3-2, EN 61000-4-2 and EN 60065.

Remarks:

The CE-mark only states accordance with the EMC-directive 89/336/EEC and the Low Voltage Directive, LVD.

Aarhus, June 2002

A handwritten signature in black ink, appearing to read 'Jakob Erland', is located below the date.