



User Manual

EQ2231

GRAPHIC EQUALISER



1.Warning	1
2.Feature	2
3.Technical specification	
3.1Parameter index	3
3.2Graphic	4
4.Panel introduction	6
5.Back panel introduction	7
6.Power condition	8

I. ATTENTION

Instruction:



The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying this appliance.

Do not open the cover:



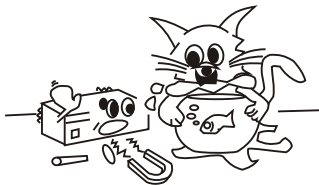
Do not open the cover to avoid the risk of electric shock caused by high voltage parts in the product. Any problems caused by user's wrong actions are out of warranty.

Do not damage the cord:



the cord Please hold the plug when pulling out or plug in the cord. Do not pull out or touch the cord with wet hand, or it will cause the risk of electric shock. Power supply cords should be routed so that they are not likely to be walked upon or pinched by items placed on or against them. When removing the cord from a power outlet be sure to remove it by holding the plug attachment and not by pulling on the cord.

Avoid object and liquid entry:



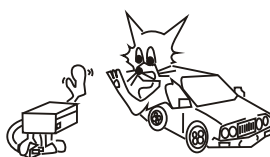
Take care that objects do not fall into and that liquids are not spilled into the inside of the product. If the object or liquid enter the product, please ask qualified personnel to check it.

Abnormal status:



In the event of abnormal noise and smell, please put off the power supply and pull out the cord, please ask qualified personnel to check it.

Nonuse for a long time:



When nonuse it for a long time, please put off the power supply and pull out the cord to avoid the unexpected dangers.

2. Feature

Honorable users:

When you use our company's product EQ2231, please read this manual carefully and operate seriously as per this manual. If you have any questions, please ask the local dealer or visit our website www.elderaudio.com for help.

EQ2231 is a general graphic equalization with excellent function which is suitable for many kinds of sound adjustment in the audio projects. Below is the function character:

1. The EQ2231 is a two channel graphic equalizer that provides a generous +/-15dB of control range on each of 30 constant Q frequency bands.
2. Centre bypass. When any eq fader is in its centre detent position, the filter is automatically bypassed, for optimum performance.
3. Sweepable high pass filter, frequency adjustable from OUT (flat) up to 250Hz.
4. LF Contour Smooth shelving filter, +/-6dB of gain at 50Hz.
5. HF Contour Smooth shelving filter, +/-6dB of gain at 14 kHz.
6. GAIN Used for overall unity gain adjustment. Adjustable from - infinity to +10dB.
7. Triple-point clip detector that indicates red when the internal signal is clipping at any one of EQ filter, HF/LF contour and Gain.
8. Precise LED indication. When EQ switch is off, the LED indicates the input signal level. When EQ switch is on, the LED indicates output signal level.
9. Relay bypass. When switched out, or power fails, a high-quality relay switches the input signal directly to the output connectors.
10. The high-quality relay drive incorporates a power on delay and AC power loss, ensuring that there is no possibility of on/off thumps being generated by the unit.
11. The standard 3U structure, To make installation easier, we've provided different interface connectors.

3. Technical specification

1.The capability's parameter index

Model:EQ2231

Input impedance: 10k Ω balances or unbalanced

Overload voltage: 8.5V

Frequency response: 5Hz-45Hz +/- 1db

Distortion: <0.008% THD 20---20kHz 0 dBu

Max output voltage: 9.5V

Input impedance: 10k Ω balances or unbalanced

S/N Rate: >92dB

Dynamic range : >115dB

Cross talk: >85dB@1kHz

Voltage gain: >10dB

Frequency point control: +/-15dB on ISO centres and the Q is 4

Others

AC Power: ~115V/~230V 50Hz/60Hz 30VA

Dimension: 483 x 134 x 180mm

N.W: 3 kg

G.W: 4.5kg

Accessories

Power cable: 1 Pcs

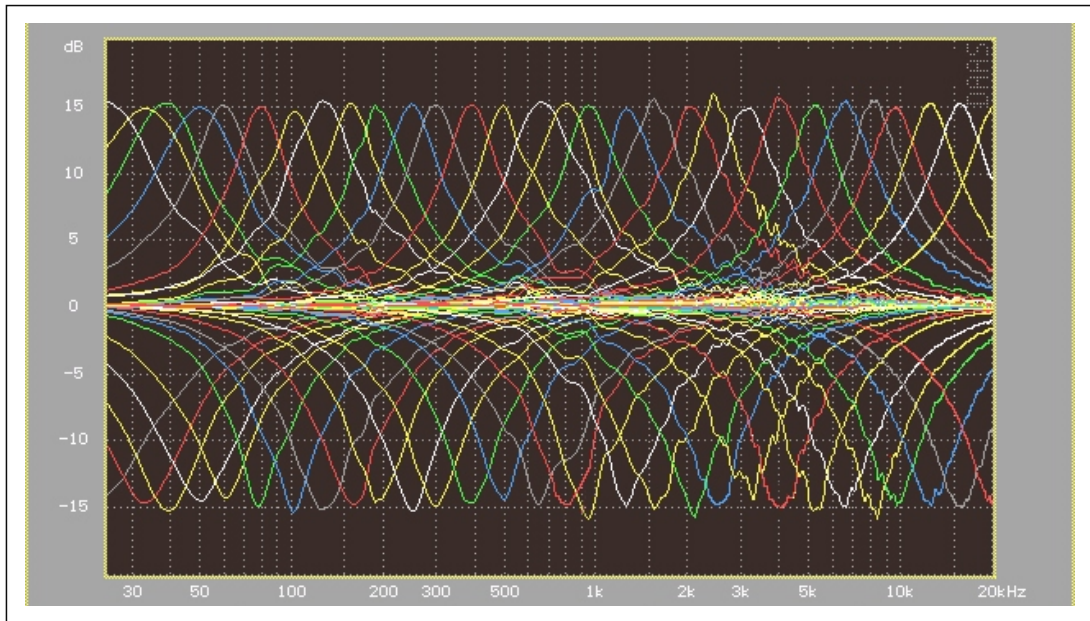
Manual: 1 Pcs

Exterior design and specifications are subject to change without notice

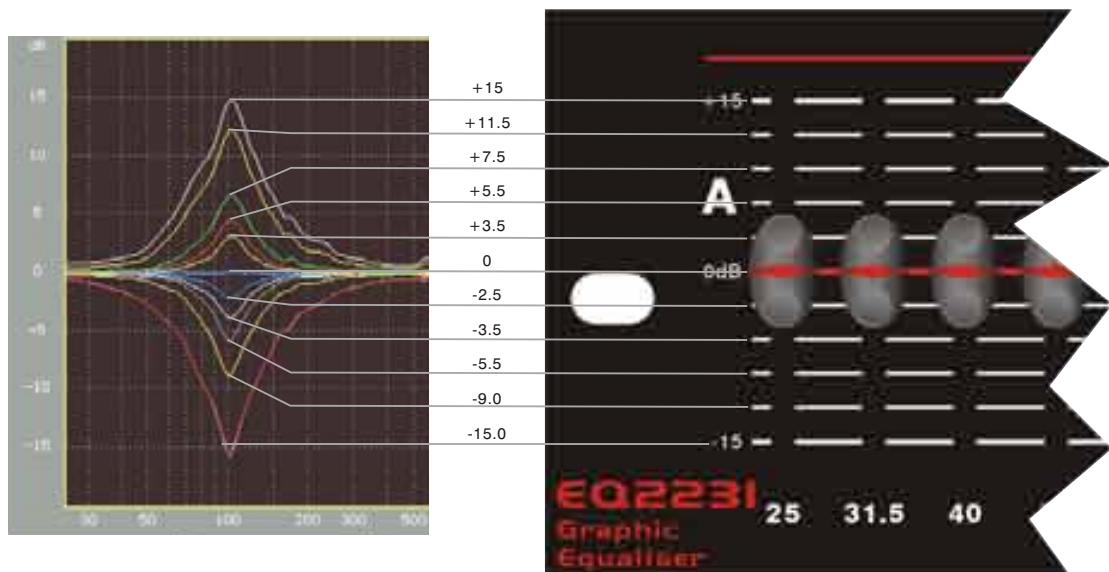
3. Technical specification

2. Curve picture:

2.1 EQ adjustment curve

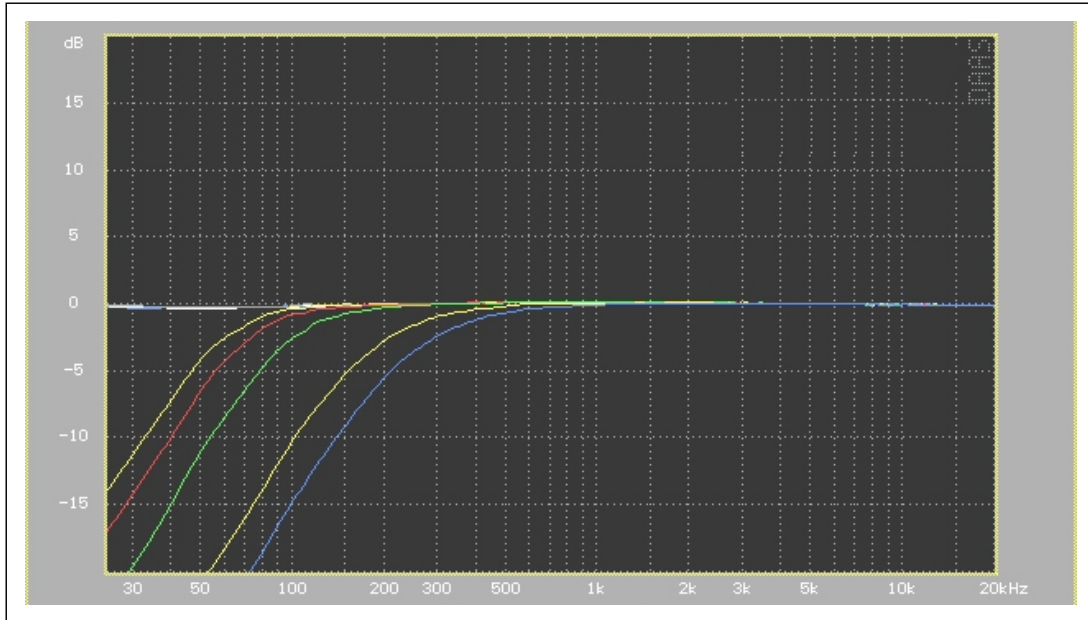


2.2 EQ adjustment and the relationship with the slider.

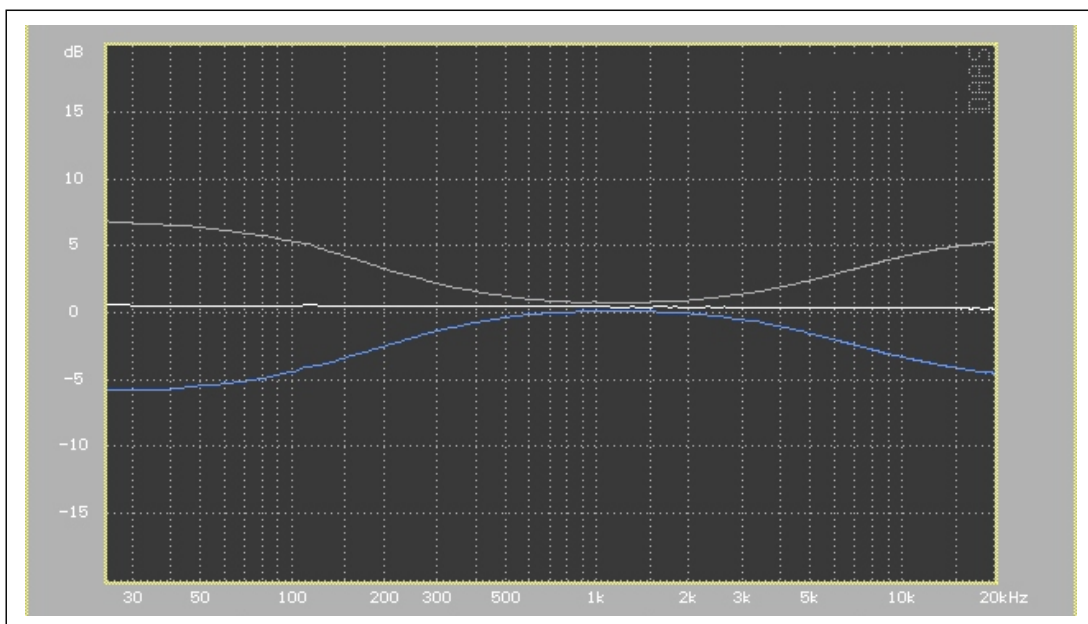


3. Technical specification

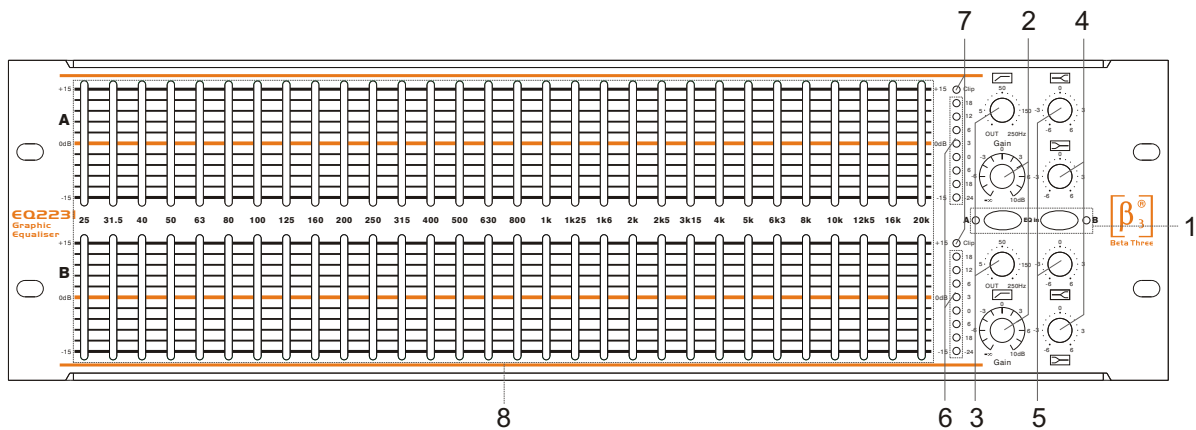
2.3 The adjustment curve for the high pass filter



2.4 The adjustment curve for the HF & LF

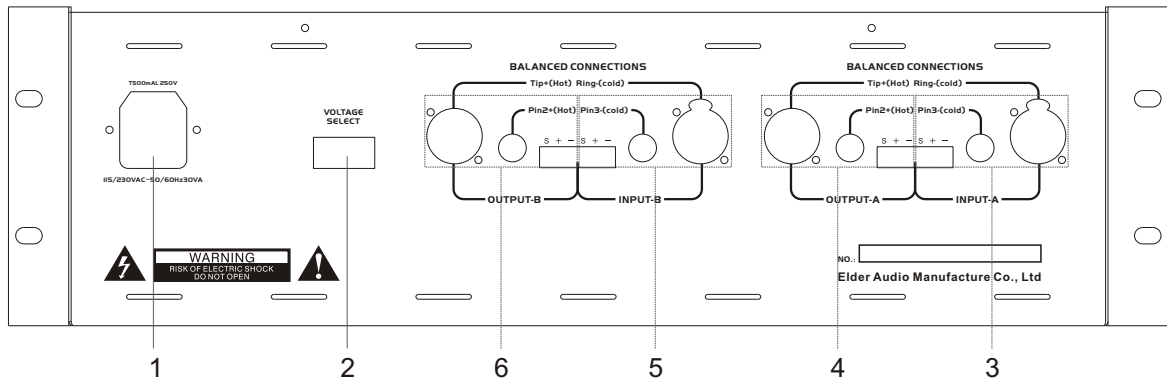


4. Panel introduction



1. When the eq in switch is in the out, non illuminated position, all EQ2231 functions are bypassed and the input is connected directly to the output with a high quality relay. This condition also occurs when the power is off, and ensures that the signal is passed through the unit in the case of a power or fuse failure. When the switch is pressed, the processed signal is present on the output.
2. Gain control : +10dB to -infinity
3. High Pass filter: from OUT (flat) up to 250Hz./octave. Please see the picture 2 in the Tech Specification.
4. LF CONTOU control: The smooth shelving filter in the low frequency band can make fast adjustment for the LF CONTOU. At the frequency point of 50Hz the adjust range can be ± 6 dB. And please see the high frequency part of the picture 3 in the Tech Specification.
5. HF CONTOU control: The smooth shelving filter in the high frequency band can make fast adjustment for the HF CONTOU. At the frequency point of 14Hz the adjust range can be ± 6 dB. And please see the high frequency part of the picture 3 in the Tech Specification.
6. Output meter: This is a peak reading RMS calibrated meter. Normally when the eq in buttons are depressed, it measures the signal being sent to the output connector. If the channel is bypassed (eq in button out), the meter reads the input signal.
7. Overload indicator. It will be on when the signal is overloaded.
8. EQ Frequencyband sliders. Each band may be amplified (boosted) or attenuated (cut) by up to 15dB while with a constant Q, allowing great control over the program for either corrective or creative purposes.

5. Back panel introduction



1.Power input socket

2.Voltage select switch. there is a option for 115V and 230V.please select according to local voltage.

3.Channel A signal input connector. we've provided three different interface connectors: XLR-type, 1/4" TRS jack and Phoenix/Combicon screw terminals. All the inputs are electronically balanced and parallel connected.

4. Channel A signal output connector. we've provided three different interface connectors: XLR-type, 1/4" TRS jack and Phoenix/Combicon screw terminals. All the outputs are electronically balanced and parallel connected.

5.Channel B signal input connector. we've provided three different interface connectors: XLR-type, 1/4" TRS jack and Phoenix/Combicon screw terminals. All the inputs are electronically balanced and parallel connected.

6. Channel B signal output connector. we've provided three different interface connectors: XLR-type, 1/4" TRS jack and Phoenix/Combicon screw terminals. All the outputs are electronically balanced and parallel connected.

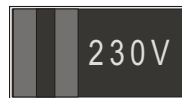
6. Power requirement

Please make sure the local power voltage is same as the back panel indicates before connect the power socket.

There is a power voltage choose switch can suitable for lots of power net.

Please check whether the local power voltage is same as the voltage choose switch 115V/230V indicates or not ,and if same it can be connected .If not, please adjust the voltage choose switch to the voltage same as local voltage. Please note: To change the selection switch must be under the condition of power off.

The power voltage choose switch are as the below picture:



work under 220V



work under 110V

Please confirm the socket and the power cable are in good condition before connect the machine to the power socket. Please pull out the plug after turn off the machine.

The machine's normal working power is about 30VA.

Please change the suitable fuse if change the voltage setting.



EQ223I