

# EDAX

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# AUDIO LABS

## OPERATION MANUAL

# EQP2-E

DUAL MODE STEREO  
PROGRAM EQUALIZER

## SAFETY AND OPERATING PRECAUTION

### Important Information:



This symbol indicates the presence of dangerous voltage within the product enclosure that presents the risk of electric shock injury. When this symbol appears next to an operation discussed in this manual, only qualified technical personnel should perform that operation



This symbol indicates important operating or maintenance instructions that should be read carefully. Failure to observe these instructions could result in damage to the product or other property.

### WARNINGS:



**To reduce the risk of electric shock injury, do not remove the top cover or rear panel. Uninsulated dangerous voltage exists within the product's enclosure. Refer servicing to qualified personnel**

Do not defeat the earth ground connection in the AC power cable.

Do not operate this unit in the presence of rain, liquids or condensing moisture. Liquid entering the product enclosure presents the risk of electric shock injury. Do not touch the AC plug or enclosure with wet hands.

Do not defeat intended AC power connection polarization.

Do not use a damaged or excessively worn cord to connect this unit to AC power.

### CHECK LINE VOLTAGE SETTING

The VTP-100 has been set from the factory to operate at the voltage required for your part of the world. However, it's important to double-check this in order to ensure no damage will come to the unit if power is applied while the setting is incorrect.

### CAUTIONS:

**Severe damage may be caused to your unit if it is connected to an 230VAC/50Hz AC power if the voltage switch is setting in 115VAC position.**

**Important:** Failure caused by improper voltage application will not be covered under warranty.

This product is designed to operate in an ambient temperature environment not to exceed 50°C (122°F). Please ensure that this unit is mounted in such a way that vents are not blocked and ambient temperature does not exceed 50°C.

## INTRODUCTION

The EQP2-E is an stereo equalizer manufactured in accordance with the topology and specification of the original filters of the Pultec , but with notables improvements on the original circuit designed by Western Electric. The EQP2-E it possesses more frequencies seleccionables that their original, superior quality components, and an Class A vacuum tube low noise and Discrete amplifier without the use of interstage audio transformers. The original PULTEC circuit possesses 3 transformers in the step of the audio sign which harm in great measure the quality of audio, Our version doesn't possess transformers in the audio signal , obtaining this way a sound more pure and with less distortion.

Thanks to its transformerless input and output design technology, the EQP2-E offers pristine sound, ultra low noise, minimum hiss even with hi frequency boost, super low distortion, excellent signal to noise ratio and a perfectly linear frequency response.

The EQP2-E it has been designed to obtain the but high equalization flexibility, the circuits of the used filters have been recreated for a minimum distortion, next to the 0 absolute and minimum phase rotation preserving the intact signal. The EQP2-E it conserves the whole escencia of the warm sound of an original PULTEC, unless this, sounds better, this is due to the quality of the components used at this moment , which didn't exist or they were exotic in the moment in that the first PULTECS entered in production. The use of modern capacitors, inductors of drop lost and high permeability, metal film resistors added to a high quality power supply with toroidal transformer of low dispersion and new mensuration techniques and control, make of the EQP2-E one of the best versions in Pultecs of the market.

All the commutation functions are carried out through sealed internal relays, any type of FET, VCA or CMOS are employed, this allows it to maintain, at any given moment, a surprising dynamic range.

The topology of the passive filters provides a result of non attainable equalization in the systems of active equalization. The characteristic of this of passive network used in the EQP2-E, based fundamentally on basic components as in resistors, capacitors and inductors, it is the one of changing the contour of the ecualizacion free of distortion, The active type equalizers like parametric types, feedback filters or girators and others is that they generate phase problems and associate dynamic distortion, which disguises, in the moment to produce the equalization. The EQP2-E it produces an equalization contour, warmth and sound cleaning, which is not achieved with the employment of active equalizers or of simulation for computer (Plug.ins).

## FEATURES

\*Tube and Discrete- Dual Mode- Class A amplifier.

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\*Fully balanced transformerless mic input and outputs.

\*100% Passive filters Pultec Type

\*Plastic conductive potentiometers.

\*Minimal internal signal wiring.

\*Sealed Hi quality rotary switches.

\*Active and Inactive filter switch.

\*All signal routing with sealed relays.

\*Hardwire relay bypass.

\*Full regulated power supply

\*Hi headroom +29 dB.

\*Very low noise.

\*Aluminium machined knobs.

\*3/8" Solid aluminium cnc machined front panel.

\*Custom toroidal transformer.

\*Gold-plated Neutrik XLR I/Oconnectors.

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## INSTALLATION

### 5.1 Unpacking and Inspection

We recommend that you inspect your EQP2-E upon unpacking it from the factory shipping carton. In the unlikely event that the unit exhibits any physical damage, DO NOT connect it to the AC mains power, but contact your dealer immediately.

The shipping carton should contain the following items: the EQP2-E Equalizer, an IEC 3 Prong power cord, and this operating manual.

We recommend that you keep the shipping carton and supports in the event that the unit must be shipped at some time in the future.

**DO NOT package the unit in packing peanuts” or similar material** as it will settle during Shipping and damage will likely occur.

If original packing materials cannot be located, wrap the unit with a liberal amount of Plastic “bubble wrap” material extending at least 2” beyond the extremities of the EQP2-E enclosure.

### 5.2 Mounting

The EQP2-E can be mounted in any standard 19 inch (483mm).

If the EQP2-E is mounted in a mobile rack or road case, it is important that the rear of the chassis is supported to prevent possible damage from mechanical shock and vibration. Excessive shock and vibration can cause damage or premature failure of the vacuum tubes, or cause them to be shaken loose from their sockets.

Please avoid rough handling.

### 5.3 Ventilation

For proper operation, it is **very** important that adequate ventilation is provided. Vacuum tubes produce a significant amount of heat that must be removed from inside the chassis. The top panel vents should never be blocked in any way. We recommend that you provide adequate ventilation so that the air temperature surrounding the unit does not exceed 55°C (122°F). If multiple units are to be mounted in a poorly ventilated rack or travel case, a 1 3/4” blank space should be located after every two units (two units mounted together, blank space, two more units, etc.).

### 5.4 Power Requirements

The EQP2-E is equipped with a 3-prong IEC power connector and detachable cord.

Never operate the EQP2-E with the ground on the power cord defeated.

This unit operates from 115V/60 Hz and 230V/50Hz.

The ac fuse and the voltage switch are accessible from the rear panel.

To check or replace the fuse, make sure the unit is unplugged.

### 5.5 Servicing

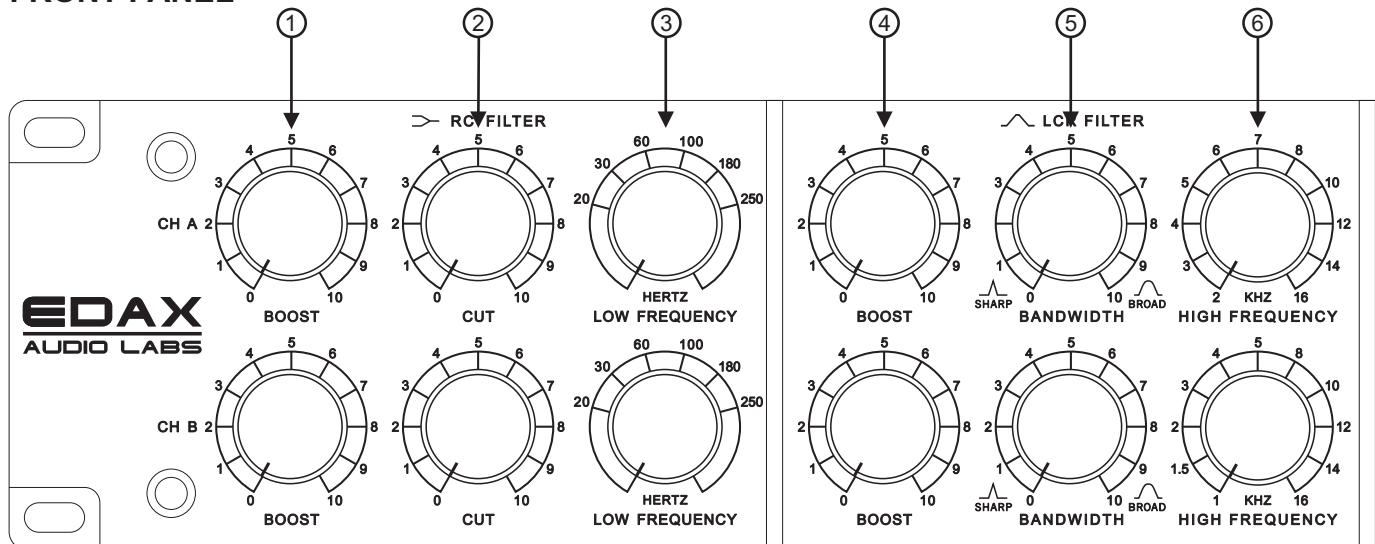
Other than changing the tubes, the user should not attempt to service the EQP2-E beyond that described in this manual. Never remove the covers or attempt to replace the tubes until the unit has been disconnected from the ac power source, and all circuits inside have been allowed to discharge for a period of at least 30 minutes.

Since potentially lethal voltages are present inside the unit, it should only be opened by Qualified service personnel. Refer all servicing, or any questions about servicing, to Edax Audio Labs.

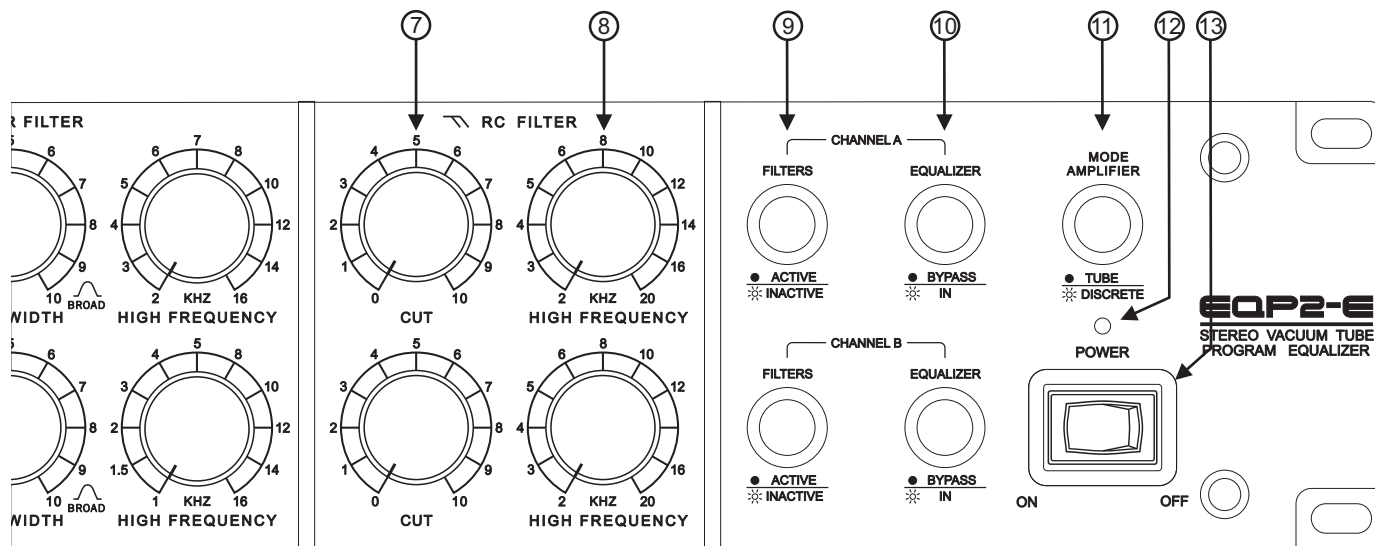
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# FRONT PANEL

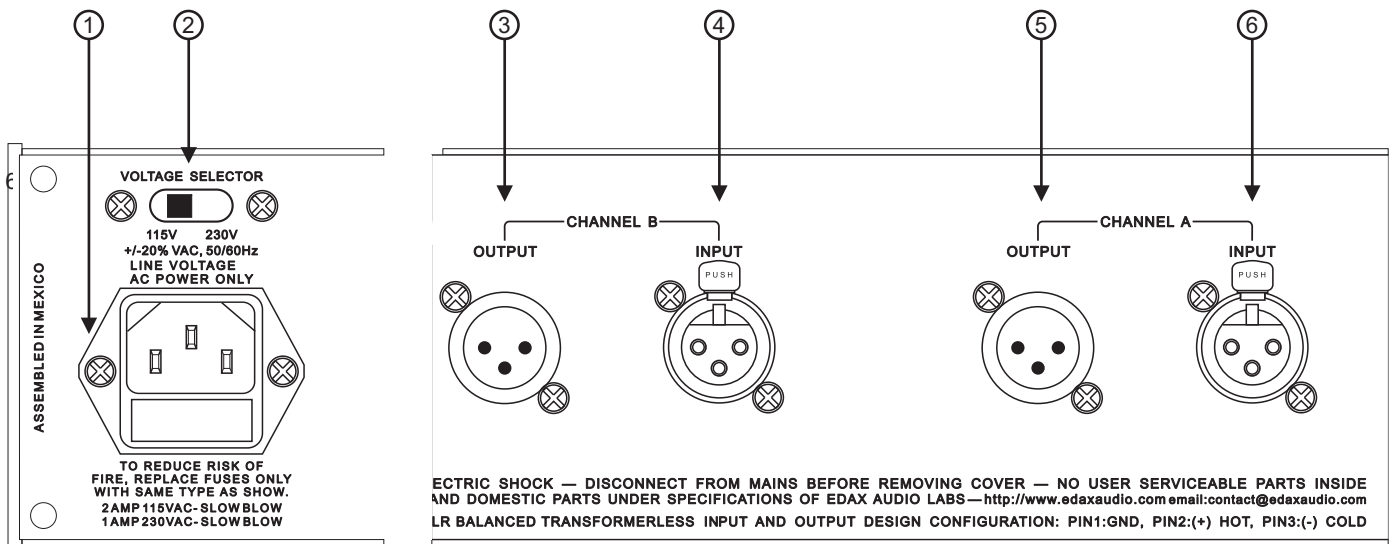


- 1) Shelf Boost Low control.
- 2) Shelf attenuate Low control.
- 3) Low frequency selector.
- 4) Peak Hi frequency boost control
- 5) Bandwidth control.
- 6) Peak Hi frequency selector.



- 7) Hi frequency attenuate control.
- 8) Hi frequency attenuate selector .
- 9) Active and inactive filter bank switch.
- 10) Bypass switch.
- 11) Mode amplifier, Tube or discrete amplification.
- 12) Power Led indicator.
- 13) Power Switch.

## REAR PANEL CONTROL



- 1) Main connector & fuse
- 2) AC line voltage selector.
- 3) Balanced XLR output connector channel B.
- 4) Balanced XLR input connector channel B. ®
- 5) Balanced XLR output connector channel A.
- 6) Balanced XLR input connector channel A.

## REPLACING THE TUBES

The vacuum tubes become very hot once the unit has been turned on, and they should not be touched until they have cooled to room temperature.

When you need to replace the vacuum tubes use always original EDAX tubes.

All vacuum tubes have a limited life due to reduced electron emission from the oxide coating on the cathode and/or a buildup of impurity gases in the bulb. Due to the high quality of the tubes in the EQP2-E the life is estimated to be several years.

**If you notice the sound quality deteriorating - higher distortion, muddiness, or microphonic behavior - it's time to change the tubes.**

**Always** we recommend changing the 2 tubes at once. If you are uncomfortable with replacing the tubes yourself, please have it done by qualified service personnel.

- 1) Unplug the EQP2-E and wait at least 30 minutes for the high voltage in the unit to discharge and for the tubes to cool to room temperature.
- 2) Only remove the top cover by removing the two #8-32 Allen-head screws.
- 3) Note the position of the two tubes (V1-V2) in the porcelain sockets
- 4) Remove each tube and replace with the new one.
- 5) Reinstall the top cover and screws.

## SPECIFICATIONS

Input Impedance: 10k ohm,nominal.

Maximum input level:+29dBu into 10Kohms.

Maximum output level:+29dBu into 10Kohms.

Output impedance:47ohms x 2.

Frequency Response: 20Hz and 20kHz with 10Kohm load.

HIGH FREQUENCY ATTENUATE: 2, 3, 4, 5, 8,1 0, 16 y 20 kHz; 0 to -17 dB

MID HIGH FREQUENCY BOOST: 2, 3, 4, 5,6,7, 8, 10, 12, 14 y16 kHz; 0 to 20 dB

LOW FREQUENCY BOOST: 20, 30, 60, 100, 180 Hz;250Hz 0 to 16 dB

LOW FREQUENCY ATTENUATE: 20, 30, 60, 100, 180 Hz;250Hz 0 to -20 dB

Single-sided audio pc boards to minimize capacitive interaction

Power: 100VAC to 240VAC, 50/60Hz, selectable.

Power consumption:60 watts maximum.

Dimensions: 2U enclosure, (48.3 x 8.9 x 29.5 cm).

Weight: 6Kg.

Net Weight: 7,3Kg.

Notes: 0 dBu = 0.775 Vrms.

All noise measurements are unweighted, 20 - 20,000 Hz bandwidth.

All specifications are subject to change without notice.

## WARRANTY

Edax Audio Labs warrants to the first purchaser of a new EQP2-E Dual mode Stereo Program Equalizer that the unit is free of manufacturing defects in materials and workmanship

for a period of one (1) year from the date of purchase. Edax Audio Labs sole obligation under this warranty shall be to provide, without charge, parts and labor necessary to remedy defects, if any, which appear within one (1) year from the date of purchase. All warranties expressed or implied made by Edax Audio Labs, including warranties of merchantability and fitness, are limited to the period of this warranty. Edax Audio Labs is not responsible for indirect, incidental or consequential damages arising from the use or failure of this product, including injury to persons or property.

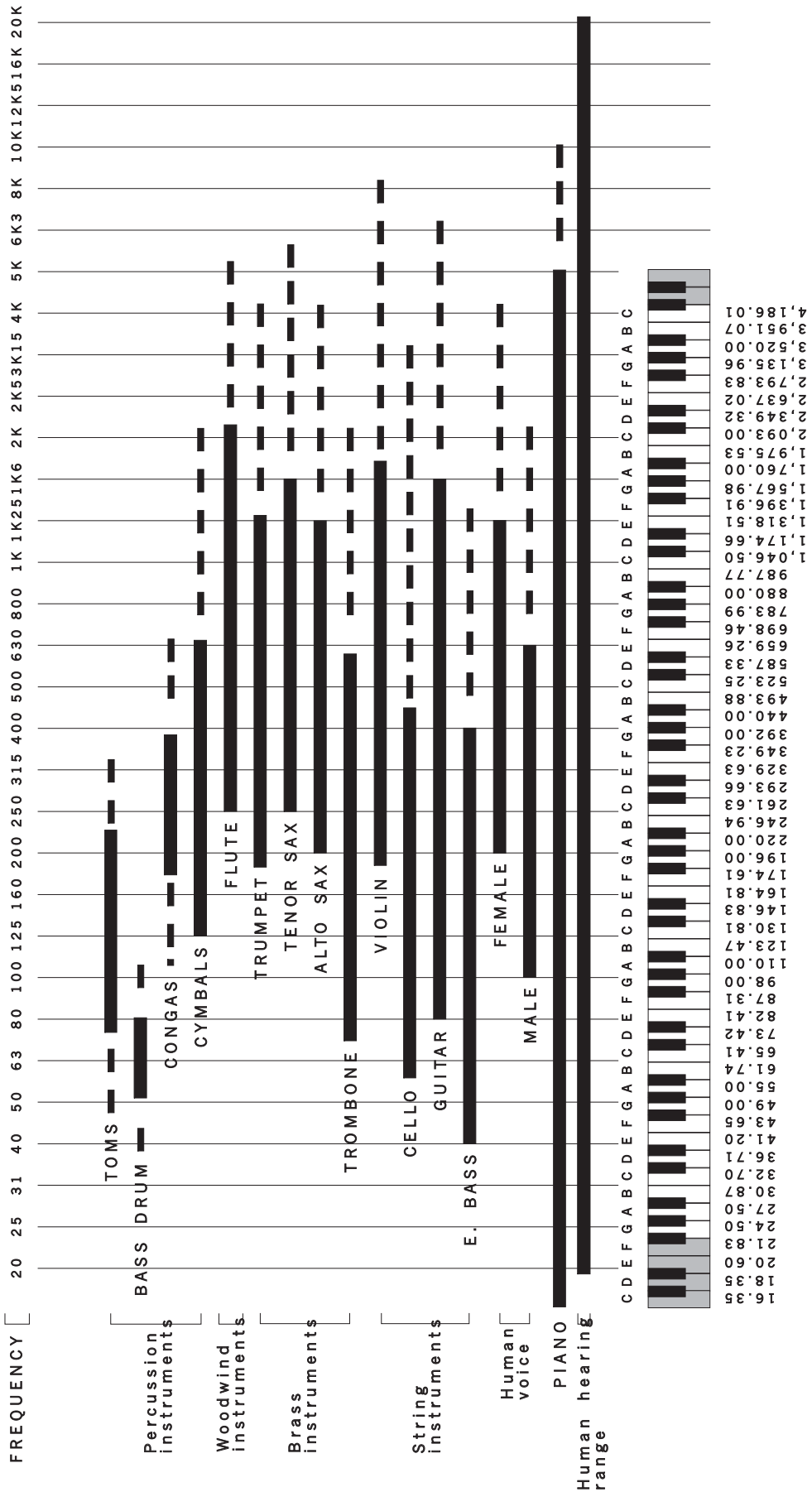
This warranty does not cover damage due to: misuse, abuse, modification, accident or negligence. The warranty does not apply if the unit is repaired or altered by persons unauthorized by Edax Audio Labs in such a manner as to injure, in Edax Audio Labs sole judgment, the performance, stability or reliability of the unit. The warranty does not apply if the unit is connected, installed or used otherwise than in accordance with the instructions furnished by Edax Audio Labs. There is no warranty on vacuum tubes.

If the equipment requires warranty repair, return authorization must be obtained from Edax Audio Labs prior to shipment. Equipment should not be shipped to Edax Audio Labs until return authorization and the proper shipping address is obtained from us.

The equipment (with all its components parts and connecting cables) must be suitably packaged, including a note with the owner's name, address, telephone number and a description of the reason for return. The owner pays two-way shipping, and we suggest that the shipment be insured for its full value.

This limited warranty is in lieu of all other warranties, expressed or implied, and no representative or person is authorized to represent or assume for us any liability in connection with the sale of our products than set forth herein.

## FREQUENCY RANGE CHART





CH A 2

CH B 2

**EDAX**  
AUDIO LABS

RC FILTER: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, CUT

LCR FILTER: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, BROAD, SHARP

BOOST: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

HIGH FREQUENCY: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 20, 250 HERTZ

**EDAX**  
STEREO VACUUM TUBE  
PROGRAM EQUALIZER

CHANNEL A FILTERS: ● ACTIVE, ☼ INACTIVE

CHANNEL B FILTERS: ● ACTIVE, ☼ INACTIVE

CHANNEL A EQUALIZER: ● BYPASS, ☼ IN

CHANNEL B EQUALIZER: ● BYPASS, ☼ IN

MODE AMPLIFIER: ● TUBE, ☼ DISCRETE

POWER: ON, OFF

HIGH FREQUENCY: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 20, 250 HERTZ

HIGH FREQUENCY: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 20, 250 HERTZ

STUDIO..... ARTIST..... ENGINEER..... DATE.....

NOTES.....