


Thank you for your purchase of the MCAudioLab EQ1ch Tube Equalizer.



⊖ VOLTAGE ⊖

MODEL

SERIAL #

IMPORTANT

Fill in the boxes above with voltage, model and your serial number to personalize your unit . The informations and serial number can be found on the back of the product.

The serial number must be quoted in all communication in order to obtain technical support and spare parts.

Please register your new MCAudioLab product on “product registration” section in www.mcaudiolab.com web site

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INTRODUCTION

This single-channel equalizer is a passive eq with RC - LRC circuitry and class-A triode vacuum tube stage for the output. Input balanced signal is driven by solid state circuitry.

The RC passive shelving equalization circuitry (low freq. and High cut freq.) is based on the classic design that is still the best-sounding way to achieve high quality tonal control. An active vacuum tube output section has fixed gain (make-up gain) to compensate "dB" lost by passive stage and to accomodate input signal to balanced line. The mid-high frequency (parametric) section with boost and "Q" control is based on LRC circuitry. The EQ1ch is a highly musical equalizer for a variety of program material from individual tracks to voices and instruments.

The output stage utilizes the same Lundahl transformer used on the TP1ch mic preamps.

Each unit is built for a great and to last. All power supplies are solid state and fully regulated for long hum-free operation and highly filtered to avoid disturbances from the electricity mains.. Each passive eq is hand-built and meticulously tested and listened before shipment to the customer.

WARNING!

Before you start your new MCA Tube EQ, please read the following:

Any tube product is sensitive to a high sound pressure level environment. This may cause microphonics in a recording situation. Make sure you are able to fit shock mount and place the unit in isolation if necessary. Direct light will also effect tubes as well.

PLEASE be sure to have enough space between any stuff; this will ensure your tube unit will not be over heat. Over heating will cause damage to the tubes and shorten their life span.

Included in the box:

- The EQ1ch Tube Equalizer
- Power cord
- This instruction manual



FEATURES

Hibrid vacuum-tube and solid state design
Out level volume control
Bypass switch
True led signal level
XLR Input connector
XLR Output connector
Lundahl Output transformer
One 6DJ8 Tube
Ground lift switch (output only)
Earth lift with 4mm external plug earth connector
19"/2U-rack space

UNIT SIZE:

Width: Standard 19 inches for rack mount installation.
Height: Standard 3.50 inches or 2U rack space.
Depth: 30 cm - 12.2 inches
Weight: 5 kg - 13.2 lbs.

TECHNICAL DATA - EQ1ch specifications

Input line Impedance >10k Ohm
Balanced XLR Output (line level);
Recommended minimum load output Impedance 600 Ohm
Maximum Level +22 dBu
Output Low-Z, transformer-balanced
Power Requirements: 230 Vac - 160 Watts
Dimensions (W x H x D) 19" x 3.5" x 12.2"

Power Requirements:
230 Vac - 160 Watts
Dimensions (W x H x D) 19" x 3.5" x 12.2"
Weight 6 kg (Shipping weight 8,2 Kg.)

EQ1ch filter characteristics:

Low Boost/Cut at 20, 30, 60, 90, 120, 150Hz;
Shelving; 0 to 14dB Boost; 0 to 12dB Cut

High Cut at 4, 6, 8, 10, 12, 16, 20KHz
Shelving; 0 to 10dB

High Boost at 0.6, 1, 1.5, 2, 3, 4, 5, 8, 10, 12, 14, 16KHz;
0 to 24dB (sharp Q)
0 to 16dB (broad Q)

High Bandwidth "Q"
Sharp: 0.8 to 4 dep. on frequencies
Broad 0.2 to 1.2 dep. on frequencies

Adjustable output from - to 0 (atten. control)

In line with our company policy of continuous development, the above specifications are subject to change without notice

FUNCTIONS

OUTPUT

The output knob is master volume control (attenuation control potentiometer).

It determine the amount of signal sent to the output stage. The rang is from - (knob hard left) to the maximum amount of gain stage (hard right).

INPUT

The rear panel XLR (balanced) input connector is optimized for low impedance audio line signal (tip. 600 Ohm).

BYPASS switch

This toggle switch connects directly the input XLR socket to the output XLR one (pin to pin connection). The bypass switch act only if EQ1ch is powered on.

When the bypass switch is on, the LED meter is on standby mode.

LED METER

Three led indicates the amount of signal present at the XLR output according to +4dB standard:

The "sgn" green led indicates that a signal of (at least) -15dB is on XLR out.

The "0dB" orange led indicates that a signal of +4dB is on XLR out.

The "ovr" red led indicates that a signal of +15dB or more is on XLR out.

Values of amount signal are given by IC comparator

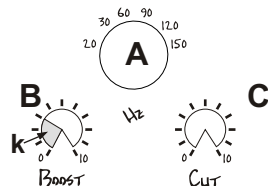
EQ CONTROLS

LOW FREQ.

Rotary switch selector **(A)**(20, 30, 60, 90, 120, 150Hz). Use it to select low frequencies

Low Boost **(B)** knob controls the amount of gain on selected freq. The Low Boost is a shelf filter with 14dB max of gain.

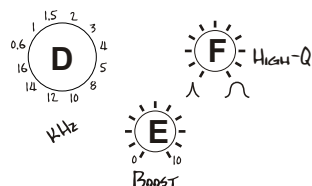
Low Cut **(C)** knob controls the amount of attenuation on selected freq. The Low Cut is a shelf filter with 12dB max of attenuation. Boost and Cut controls may be used at the same time; the cut filter action is reduced if used with boost control trim exceeding the first quarter **(K)**.



MID./HIGH FREQ.

Rotary switch **(D)** (12 steps) selector for Mid-/High freq. (600Hz; 1, 1.5, 2, 3, 4, 5, 8, 10, 12, 14, 16KHz)

Boost pot. knob **(E)** controls the amount of gain on selected freq. by stepped rotary switch. The Boost is a peak parametric filter with 20dB max of gain. The maximum gain depends on the parametric "Q" knob control position.



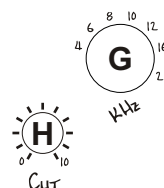
"Q" control knob on mid./high freq. **(F)**

The "Q" pot. knob control can be used to vary the "Q" factor in mid./high filter section. It acts on boost of mid./high section control only. The "Q" control knob makes peak filter broad or sharp

HIGH FREQ.

Rotary switch selector **(G)** (4, 6, 8, 10, 12, 16, 20KHz). Use it to select high frequencies

Low Cut **(H)** knob controls the amount of attenuation on selected freq. The Low Cut is a shelf filter with 10dB max of attenuation.



Power

Use this switch to turn the unit on and off.

Controls primary AC power to the unit. The primary power is applied to the EQ1ch circuits when the Power switch is in the up position. The power toggle switch connect or disconnect the phase wire of main AC power supply (IEC connector on the rear). When off, the apparatus is not completely disconnected from AC power source. Detach IEC power cord if EQ is unutilized for a long period.

GROUND LIFT

When it is activated unlinks pin 1 from signal ground (GND) to avoid hum. Ground lift acts on XLR out connector only.

EARTH LIFT

This switch will lift the main earth connection of the chassis from signal ground (GND) so you can avoid hum noise. Chassis is permanently earth connected via central pin of IEC socket. The earth is always connected with a standard plug on the rear of each unit.

AC Plug

TP1ch uses a standard, detachable IEC power cord. Insert the AC power cord firmly into this socket.

caution: please check to see what voltage your EQ1ch is set to. The voltage setting is marked on the serial badge on the rear panel. Make sure the voltage is properly set for your area before applying AC power to the unit. Check that this complies with your local supply; if not, please notify MCAudioLab before powering up. Your EQ1ch has been factory set to the correct mains voltage for your country. If you plan to take the unit to countries with a different mains voltage you will need to send the EQ1ch to the MCAudioLab Service Center for the correct transformer primaries wiring conversion and fuse changing.

Do not attempt to defeat the safety ground connection!

Fuse

This unit employs an external AC line fuse (easy access to change your fuse, as necessary) to help protect it from damages due to overload conditions. If the fuse fails, replace it. If the fuse fails repeatedly, discontinue use of the unit and contact MCAudioLab for service information.

Remove the power cord before checking or changing the fuse.

To avoid any permanent damage replace fuse with the same rate and type only:

a 2A (5 x 20mm type) fuse is required for operation at 230V;

a 4A (5 x 20mm type) fuse is required for operation at 115V.

Survival Tips For Tube Equipment:

To prolong tube life, observe these simple recommendations:

After using the equipment, allow sufficient time for it to properly cool down prior to moving it. A properly cooled gear prolongs tube life due to the internal components being less susceptible to the damage caused by vibration.

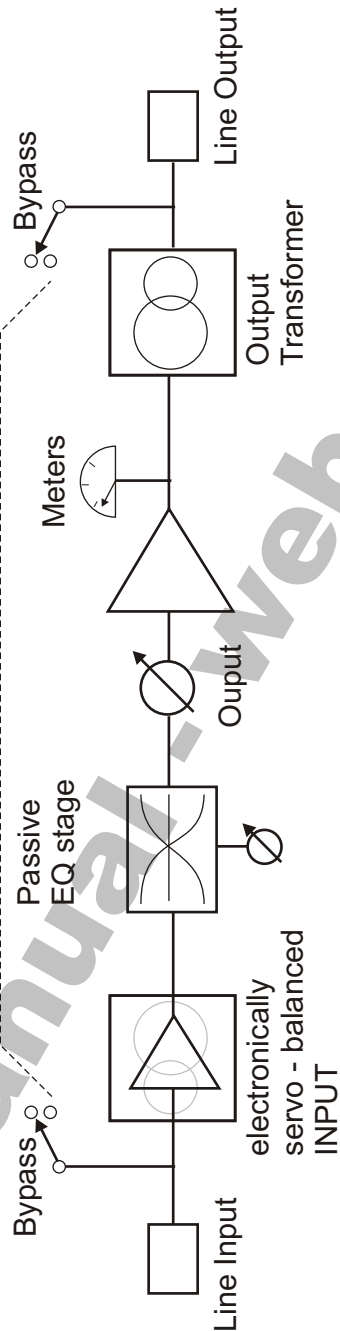
Allow the tube to warm up to room temperature before turning it on. The heat generated by the tube elements can crack a cold glass housing.

Protect the gear from dust and moisture. If liquid gets into, or if the gear is dropped or otherwise mechanically abused, it must be checked out in an authorized service center before using it.

Proper maintenance and cleaning in combination with routine checkups by your authorized service center or dealer, will ensure the best performance and longest life for your tube audio gear.

CAUTION: Tube replacement should be performed only by qualified service personnel who are familiar with the dangers of hazardous voltages that are present in tube circuitry.

EQ1ch signal flow schematic



All XLR connectors are wired according to AES standard: pin 1 is ground (GND), pin 2 is "high" or "+," and pin 3 is "low" or "-." A positive voltage on pin 2 of the input will result in a positive voltage on pin 2 of the output (with the Phase Reverse switch set to Normal).

Grounding and Shields

The Input XLR connector pin 1 (GND) is directly connected to equipment ground. The GND is connected to pin 1 of the output connector and to earth depending on earth-lift switch position.

Limited 1 year Warranty

During the warranty period, MCAudioLab will repair or replace defective parts with new ones, at no additional charge.

This warranty does not extend to any equipment that has been damaged or rendered defective as a result of accident, misuse, or abuse; by the use of parts not manufactured or supplied by MCAudioLab or by unauthorized modification of the equipment. Vacuum tubes are excepted from the warranty, but are warranted for 90 days from date of purchase. Except as expressly set forth in this Warranty, MCAudioLab makes no other warranties, express or implied, including any implied warranty of merchantability and fitness for a particular purpose

Warranty Repair

If the EQ1ch should develop a problem during the warranty period, contact the factory to return shipping instructions. We will repair and return your MCAudioLab equipment quickly.

Note that the warranty does not cover vacuum tubes, which must be periodically replaced.

How to contact us

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