EQ-73 MKII

Vintage Style Equalizer



INTRODUCTION

Congratulations on choosing the Golden Age Project EQ-73 MKII equalizer!

The class-A circuit used in the EQ-73 MKII is similar to the eq section in the classical 1073 module, without the high pass filter. Additional frequencies have been added and the mid frequency band uses two inductors, the higher value of the second one is used for the two lowest frequencies, 160 Hz and 240 Hz, to achieve an optimal response.

The sound character is warm, punchy, sweet and musical. These classic characteristics have been heard on countless recordings through the years and it is a versatile sound that works very well on most sound sources and in most genres. The essence of this sound is now available at a surprisingly low cost, making it available to nearly everyone.

The EQ-73 MKII has stepped frequency controls that offers a wide selection of frequencies from 20 Hz to 24 kHz.

The low and high frequency bands are shelving and the mid frequency band is of the bell type.

The control range is +/-15 dB for the two lower bands and +/- 18dB for the high frequency band.

There are separate bypass switches for all three bands.

The EQ-73 MKII can be used either as a standalone EQ or connected to the insert jack of one of the Golden Age Project preamps. Combining one of our PRE-73 preamp´s and an EQ-73 MKII and using a UNITE rack kit to mount them together, one will get a 19-inch 1073-style unit at a low cost and with a great sound!

FEATURES

- Vintage Style electronics. No intergrated circuits in the main signal path
- 3-band with a dual inductor based mid frequency band
- Stepped frequency selection
- A wide selection of frequencies from 20 Hz to 24 kHz
- Control range up to +/- 18 dB
- Separate bypass switches for each band
- Tantalum capacitors in the main signal path
- Can be used together with one of our preamp´s with an insert jack or as a standalone unit
- TRS jack for the INSERT mode in- and output connection, the nominal working level is around -18 dBu
- IC-based in- and output stage for the LINE IN mode with balanced TRS and XLR connectors
- Selectable ground lift jumper
- External power supply to avoid interaction with the audio circuits
- Great sound that suits most sound sources and genres
- A solid build quality that will last many years of normal use

CIRCUIT DESCRIPTION

The main signal path in the EQ-73 MKII consists of two gain stages that uses three transitors each and a few resistors and capacitors. So, all in all, the complete signal chain only contains six active elements. Compare that to the big number of transistors that are usually used in one single integrated circuit!
The filter circuits uses additional passive components.

The first gain stage handles the LF and HF bands and the second gain stage handles the MF band.

The MF band uses two inductors and capacitors for a classic LC-style eq circuit. The first inductor has a several taps to achieve suitable Q-values (ie, the shape of the curve) for the different mid frequencies from 350 Hz to 10 kHz. The second inductor has a higher value and are used for the two lowest mid frequencies, 160 Hz and 240 Hz.

The EQ-73 MKI was designed to be used in combination with a unit with low level, unbalanced connections, saving the cost for the classic transformer based in- and output stage. The MKII retains the insert jack connection but an IC-based IO with balanced connections and the standard + 4dBu operating level has been added as an option. This makes it possible for the EQ-73 MKII to operate as a standalone unit.

MODERN VERSUS OLD

It is true that there are some great IC´s available today that achieves very low levels of static and dynamic distortion.The simple circuits that the EQ-73 MKII uses, cannot match the low distortion specifications of modern IC´s.
It is the distortion components that imparts a sound character to the audio signal and, if the distortion components are of the right sort, this is a good thing since it makes the recorded voice or instrument sound “better”, more musical, more pleasing to the ear. This is one reason why vintage style units are so popular today.
This is not to suggest that modern, transparent sounding audio circuits is a bad thing, sometimes they are prefered over colored ones. It´s all about taste and it depends on the genre. For most modern music styles, color and character is definitely a good thing.

USING THE EQ-73 MKII

Using an equalizer is not rocket science. Here are some points though to help you getting the maximum out of the EQ-73 MKII:

- Connect the cable from the power supply to the AC 24V connector at the back of the EQ-73 MKII. Power on the unit with the front panel POWER switch.

- Select the operating mode with the LINE IN/INSERT switch on the back panel, pressing the switch engages LINE IN mode. Connect the signal source to the LINE IN Combo jack and one of the OUT jacks to the next unit in the signal chain.

- INSERT mode is activated with the switch in its outer position. Connect the supplied stereo TRS cable between the back panel TRS jack and the insert jack of one of our PRE-73 models or any other suitable unit that the EQ-73 MKII will to be used together with. “Tip” of the TRS is the input and “Ring” is the output.
The two OUT jacks will output the signal also in this mode and can then be used as an alternative output with a different sound character.
The EQ-73 MKII in INSERT mode will now be inserted in the signal path of the PRE-73. If you are using the EQ-73 MKII together with one of the PRE-73 DLX models, you must engage the INSERT switch to activate the EQ-73 MKII.

- The best way to learn how to set the controls of the EQ-73 MKII is to experiment with different settings on different sound sources. There are a number of frequencies added to the original design, expanding the possibilities for soundshaping.

- The LF and HF bands are of the shelving type, ie, it affects all frequencies below (LF) and above (HF) the selected frequency. The eq action starts gradually above (LF) or below (HF) the selected frequency and increases up to the maximum boost or cut. The MF has a bell curve, ie, a cut or boost centered around the resonance frequency.

- By engaging the OUT switches, the eq action of each band can be easily removed for quick comparions between eq and no eq. Using the INSERT switch in the PRE-73 DLX, one can instantly bypass the complete EQ-73 MKII from the signal path.

- There is a Ground Lift jumper inside the unit close to the input jack. The jumper should normally be in place. If the EQ-73 MKII is mounted in a UNITE rack kit together a PRE-73 and / or mounted in a rack where other units are also mounted, ground loops can give rise to problems. You can then try removing the Ground Lift jumper which will lift the circuit board ground from the cabinet of the EQ-73 MKII.

PLEASE NOTE:

- The maximum boost and cut varies somewhat with the selected frequency.

- Inserting the EQ-73 MKII in a PRE-73 will result in a small gain change.

- Clicks can arise when the controls are operated, especially on the HF band. This is normal and a consequence of the used circuit design.

- The inductors and the filter circuits in the EQ-73 MKII are sensitive to electromagnetic fields. If you have a problem with hum or noise, try moving the unit to another physical location in your studio.
One situation where this problem is most likely to show up is if the EQ-73 MKII is mounted above or close to a unit that contain a power supply with a mains transformer.

WARRANTY

The EQ-73 MKII is built to last. But as in any electronic device, components can break down.

There is a fast blow fuse located inside the unit. If the unit dies, please check this fues. If it has blown, replace it with a new one. You can also try with another 24V AC adaptor if you have one available.
If this doesn´t help, or if the unit has another problem, it will need repair and you should then contact the reseller where you bought the unit.
The warranty period is decided by the Distributor for your country. The Distributor will support Golden Age Project resellers and end users with repairs and spare parts.

REGISTRATION

You are welcome to register your unit at our website:
www.goldenageproject.com

I would like to thank you for chosing the EQ-73 MKII!
I hope it will serve you well and that it will help you in making many great sounding recordings.

Bo Medin

Vintage character for modern ideas