EQ-573

Vintage Style Equalizer for the 500 Series rack format

INTRODUCTION

Congratulations on choosing the Golden Age Project EQ-573 equalizer!

The class-A circuit used in the EQ-573 is similar to the eq section in the classical 1073 module. Additional frequencies have been added to the mid and high frequency sections. The signal path uses only discrete components like resistors, capacitors, inductors and transistors.

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 EQ-573 has stepped frequency controls that offers a wide selection of frequencies from 33 Hz to 20 kHz. Each section can be switched off individually. There is also a master bypass switch for easy comparisons.

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.

The high pass filter is of the inductor type with a slope of 18 dB / octave.

The EQ-573 cannot be used as a standalone EQ. It is designed to be used together with the Golden Age Project PRE-573 that has an insert connector.

Combining the PRE-573 and the EQ-573 in a 500 Series rack, one will get a 1073-style unit at a low cost and with a great sound!

Features:

- Vintage Style electronics. No integrated circuits in the signal path
- 3-band with a dual inductor based mid frequency band
- Inductor based high pass filter
- Stepped frequency selection
- Control range up to +/- 18 dB
- A wide selection of frequencies from 33 Hz to 20 kHz
- Each section has can be switched off individually
- Master Bypass switch
- Tantalum capacitors in the signal path
- Circuit board star grounding scheme
- Great sound that suits most sound sources and genres
- A solid build quality that will last many years of normal use
- Designed to be used together with the Golden Age Project PRE-573

CIRCUIT DESCRIPTION

The main signal path in the EQ-573 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 and then feeds the high pass filter.

The MF band and the high pass filter uses inductors and capacitors for a classic LC-style eq circuit. Both inductors has a several taps to achieve suitable Q-values (ie, the shape of the curve) for the different frequencies.

By designing the EQ-573 to be used with a Golden Age Project PRE-573 that has an insert connector, the unit does not have to be fitted with an input and output stage, saving cost and space.

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-573 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.

And doesn´t it feel good to use audio components built according to the old, minimalistic approach where one can follow the signal from one discrete component to another?

USING THE EQ-573

Using an equalizer is not rocket science. Here are some points though to help you getting the maximum out of the EQ-573:

- As a start, you need to mount the module in a 500 series rack unit. There are several alternatives available from different manufacturers, the EQ-573 should work fine with most of them. Please make sure that the rack unit power supply is always turned off when you mount or remove the EQ-573.

- Before mounting the unit in the rack, connect the supplied cable to the insert connector at the back of the unit. Connect the other end of the cable to the corresponding connector at the back of the PRE-573 module that the EQ-573 will work together with.

- When mounting the EQ-573 and the corresponding PRE-573 modules in the rack, please be careful with the insert cable and see to it that it finds an empty space in the rack and that it is not damaged by any module.

- Please note that the INSERT jumper in the PRE-573 must be removed in order to activate the insert connection. It is located at the back of the module on the circuit board, close to the insert connector.

- The side plate of the units can be removed in order to access the connectors and jumpers more easily, just remowe four screws that holds the side plate.

- The best way to learn how to set the controls of the EQ-573 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 setting the frequency selection switches to "off", the eq action of the corresponding band is removed but the signal still passes the circuitry.
Engaging the BYPASS switch removes the unit completely from the signal chain with the exception of one level matching resistor, making quick comparions between eq and no eq easy to make.

- The High Pass filter is of the inductor type and it has a slope of 18 dB / octave, ie providing a quite sharp cut off. It can preferably be used together with a LF shelving boost, which can provide some useful responses.

PLEASE NOTE:

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

- Inserting the EQ-573 in the PRE-573 will result in a small change in gain and tone.

- 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 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 and mount the module as far away from the rack power supply as possible.
One situation where this problem is most likely to show up is if the 500 rack with the EQ-573 is mounted above or close to a unit that contain a power supply with a mains transformer.

WARRANTY

The EQ-573 is built to last. But as in any electronic device, components can break down. If the unit has a 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:
www.goldenageproject.com

I would like to thank you for chosing the EQ-573!
I hope it will serve you well and that it will help you in making many great sounding recordings.
Yours, Bo Medin

Create music
– Be happy!