



EQ-81 MKII

Vintage Style 4-band Equalizer



INTRODUCTION

Congratulations on choosing the Golden Age Project EQ-81 MKII Equalizer!

The class-AB equalizer circuit used in the EQ-81 MKII is similar to the eq section in the classic 1081 module, without the high and low pass filters.

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-81 MKII has stepped frequency controls that offers a wide selection of frequencies from 33 Hz to 15 kHz. The BASS and TREBLE frequency bands are switchable between shelving and bell and the MID frequency bands is of the bell type with a switchable Hi Q setting. The control range is +/- 18dB. All four bands can be set in an off mode.

The EQ-81 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-81 MKII and using a UNITE rack kit to mount them together, one will get a 19-inch 1081-style unit at a low cost and with a great sound!

FEATURES

- Vintage Style electronics. No integrated circuits in the signal path when the Insert connector is used
- 4-band with inductor based mid frequency bands
- Stepped frequency selection
- A wide selection of frequencies from 33 Hz to 15 kHz
- Control range up to +/- 18 dB
- Each band has an off mode
- Tantalum capacitors in the EQ 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-81 MKII consists of four gain stages, one for each frequency band. Each gain stage uses five transistors and a few resistors and capacitors. The complete eq signal chain contains only a small number of 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 mid bands uses inductors and capacitors for a classic LC-style eq circuit.

The EQ-81 MKI was designed to be used in combination with a unit with a low level insert jack, 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-81 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 EQ-circuit that the EQ-81 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 preferred 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-81 MKII

Using an equalizer is not rocket science. Here are some points though to help you getting the maximum out of the EQ-81 MKII:

- Connect the cable from the power supply to the AC 24V connector at the back of the EQ-81 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-81 MKII will 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-81 MKII in INSERT mode will now be inserted in the signal path of the PRE-73. If you are using the EQ-81 MKII together with a PRE-73 DLX, you must engage the INSERT switch to activate the EQ-81 MKII.

- The best way to learn how to set the controls of the EQ-81 MKII is to experiment with different settings on different sound sources. The four bands and the different frequency selections will give you

many possibilities for shaping the sound.

- The BASS and TREBLE bands are of the bell type but can be switched to a shelving type, ie, it will affect all frequencies below (Bass) and above (Treble) the selected frequency. The eq action gradually starts above (Bass) or below (Treble) the selected frequency and increases up to the maximum boost or cut. The MID bands has bell curves, ie, a cut or boost centered around the resonance frequency. They can be switched to Hi Q mode meaning that the eq action will be more narrow around the center frequency and the maximum boost/cut will be higher.

- By setting the frequency switches to OFF, the eq action of each band is removed for comparisons between eq and no eq. Using the INSERT switch in the PRE-73 DLX, one can instantly bypass the complete EQ-81 from the signal path.

- There is a Ground Lift jumper inside the unit, close to the input combo jack. The jumper should normally be in place. If the EQ-81 MKII is mounted in a UNITE rack kit together with a PRE-73 and / or mounted in a rack where other units are also mounted, ground loops can give rise to problems. Then try removing the jumper which will lift the circuit board ground from the cabinet of the EQ-81 MKII.

PLEASE NOTE:

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

- Inserting the EQ-81 MKII in a PRE-73 will result in a small gain change.

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

- The inductors and the filter circuits in the EQ-81 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-81 MKII is mounted above or close to a unit that contain a power supply with a mains transformer.

WARRANTY

The EQ-81 MKII is built to last. But as in any electronic device, components can break down.

There is a slow blow fuse located inside the unit. If the unit dies, please check this fuses. If it has blown, replace it with a new one with a rating of 1A, 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.

You are welcome to register your unit, go to our website: www.goldenageproject.com and send us your contact info.

I would like to thank you for choosing the EQ-81 MKII! I hope it will serve you well and that it will help you in making many great sounding recordings.

Yours,
Bo Medin

**Vintage character
for modern ideas**