

USER MANUAL

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Introduction

Enieqma is a multipurpose equalizer that packs a 5-band full parametric EQ, a 'simple EQ class' featuring 7 classic tone stacks, and a 3-band midrange equalizer that emulates the Pultec Midrange EQ processor. Enieqma offers unprecedented equalization capabilities in a pedal format.

Versatility

Enieqma's EQ engine can be harnessed not only for general purpose tone shaping, but also for realizing specific tonal effects such as guitar/bass speaker frequency responses, telephone, old radios, wah pedals, etc. To help users get up to speed and quickly tap into the power of Enieqma, we have provided an on-board extensive library of *ready-to-use* prototype EQs that covers everything from simple lowpass/highpass filters to elaborate cabsim filters.

Ease of use

Equalization, specially with a parametric EQ, can at times be a daunting task. All those power and capabilities would go to waste without an effective and user friendly interface. With Enieqma we've gone all out to provide intuitive interfaces and make sure that everything that the pedal offers can be quickly accessed, with no deep menus or dependency to computer apps!

1. Overview

This diagram below shows a simplified overall structure of the processing blocks inside the Enieqma.



Stereo Expander and **Limiters** are optional and can be disabled (default). These two processing elements can be configured in the Options menu.

The EQ, the Limiter, and the Booster have 2 channels: channel L and channel R. The two channels can be configured as *Linked* (their parameter settings are identical) or as *Independent* (they can have different parameter settings). Very flexible routing configurations allow Enieqma to be used as a true stereo EQ or as a mono EQ in a pre-post equalization setup (see chapter 11 - Routing Configurations).

Booster provides up to +15dB of clean boost. The booster is independent of the EQ, i.e it can be activated even when the EQ is off. The state of the booster is also saved as part of a preset. Therefore you can use the booster as a stand alone booster effect, or as part of the preset system.



OVERVIEW



• Use the diagram above as your reference when ordering or making your own cable.

• Consult the "Midi Implementation Chart" document for PC/CC implementation details.



2. Preset System

Up to 64 presets can be saved and recalled using the onboard footswitches, an external switchbox, or MIDI. The presets are arranged as a simple linear list: preset 1 to preset 64. The pedal ships with the first twelve preset locations programmed with factory presets. Users can overwrite these with their own presets if so they wish.

Saving a preset

- 1. Press and hold knob MODE/TYPE and knob GAIN, Release when the screen displays the preset save menu.
- HOLD OPTIONS IGLOBALS3) CONY/SWAP ISAVEJ MODE /TYPE WOLUME USAVEJ USAVE USAVEJ USAVE USAVEJ USAVEJ USAVEJ USAVEJ USAVE USAVE USAVE USAVEJ USAVE USAVE

:Preset Title

Preset 01/64

-cancel

Preset limit

✓ save ▶

Preset location #

- 2. Turn the MODE/TYPE knob to choose the desired preset location.
 - Push the VOLUME/BOOST knob to cancel, orPush the MODE/TYPE knob to confim the save.

After saving the preset, you can edit the preset title from the Options menu: **Options**

└─○ Preset Title editor

Caling a preset

- 1. Press and hold the EQ footswitch.
- 2. When the LEDs start blinking:
 - Tap the EQ switch to scroll down the preset list.
 - Tap the Boost switch to scroll up the preset list.
- 3. When you/ve reached the desired preset location:- Hold down the EQ footswitch to call the preset.

Tips: You can scroll up or down very quickly by turning the MODE/TYPE knob. Then tap the knob's button to call the preset.



Copying a preset to another location

- 1. Call the preset that you want to copy to another location.
- 2. Execute the save preset procedure described above, remember to choose the desired destination location first before commiting the save!





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Caling a preset

- 1. Press and hold the EQ (left-side) footswitch.
- 2. When the LEDs start blinking:
 - Tap the EQ switch to scroll down the preset list.
 - Tap the Boost switch to scroll up the preset list.
- 3. When you/ve reached the desired preset location:
 - Hold down the EQ (left-side) footswitch to call the preset.
 - **Tips:** You can scroll up or down very quickly by turning the MODE/TYPE knob. Then tap the knob's button to call the preset.



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<save ►

Preset location #

HOLD

3. Parametric EQ Mode

The Parametric EQ mode is a 5-band full-parametric EQ. Each band has adjustable Gain, Q, Frequency, and Filter Type.



Working with the EQ bands.

Double tap on the touch button to active or deactivate a particular band. The LED on the touch button indicates the state of the band. At any given time, the Gain, Q, and Frequency knobs control a single band. The band that 'owns' the control is the 'focus band'. The breathing white LED tells you which band is currently the focus band.

To switch focus to another band: tap once on the touch button that belongs to the target band. A band must already be active to be able to get the focus.

Parametric EQ Types.

Each band can be configured to be one of 5 filter types:

• **Lowpass** : cuts the high frequency band, while passing the low frequencies intact.



Low Q values gives a more 'relaxed' EQ curve, as Q is increased the curve becomes 'tighter', and as it's increased further resonance starts to appear near the center frequency.

For this particular filter type the GAIN parameter is not used, the passband of the filter will stay at OdB.



• Low Shelving : cuts or boost the low frequency band. Center frequency, Q, and Gain are adjustable.



• High Shelving : cuts or boost the high frequency band. Center frequency, Q, and Gain are adjustable.





Parametric EQ Types.

PARAEQ

SIMPLEQ

• **Bell** : cuts or boost a specific frequency band. Center frequency, Q, and Gain are adjustable.



4. Simple EQ Mode

The Simple EQ mode consists of a class of EQs that are simpler and more straightforward than the Parametric EQ. For this EQ class we have selected 7 types that we think are representative and can cover wide ranging use cases. In general, the Simple EQ mode is great for *broad strokes* tone shaping that doesn't require precision.



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● Wah	 Recreation of a typical wah pedal frequency response. <u>Controls</u>: - LOWS : turn this up for more low frequency energy (body). - Q : turn this up for sharper resonance (more squeaky). - FREQ : sets the resonance center frequency (400 Hz to 2200 Hz).
	<u>Tips</u> : - This filter type can be used as it is to get the half-cocked wah pedal tone, but even better, you can use an expression pedal + midi controller to swe the center frequency and turn Enieqma into a wah pedal.
• Tilt	 Tilt EQ ~ bass is increased/decreased when treble is decreased/increased. <u>Controls</u>: - <i>TILT</i> : sets the low/high tilt. - <i>FREQ</i> : sets the center frequency where the tilt happens.
• Scooped Tilt	 Similar to the Tilt filter type, with an added mid-scoop. <u>Controls</u>: - <i>TILT</i> : sets the low/high tilt. - <i>SCOOP</i> : sets the amount of mid scoop. - <i>FREQ</i> : sets the center frequency where the tilt (and scoop) happens

5. Pulteq EQ Mode

SIMPLEQ

PULTEQ

The Pulteq EQ mode is an emulation of the classic Pultec* MEQ-5 Midrange EQ processor. In essence, it is a 3-band parametric EQ, with frequency ranges restricted to the midrange (200 Hz to 7 KHz) area. The Pulteq EQ mode consists of 3 bands:

~ 0dB to +10dB (boost only) GAIN LOW PEAK FREQ (Hz) ~ 200, 300, 500, 700, 1K. ~ Odb to -10dB (cut only) GAIN MID DIP FREQ (Hz) ~ 200, 300, 500, 700, 1K, 1.5K, 2K, 3K, 4K, 5K, 7K. ~ 0dB to +10dB (boost only) GAIN **HIGH PEAK FREQ** (Hz) ~ 1.5K, 2K, 3K, 4K, 5K. PEAK-LO Turn : sets the Gain DIP Twist: sets the Frequency PEAK-HI TIONS OBALS MASTER VOLUME -9 dB to +9dB MODE VOLUM \bigcirc -

Since the frequency is adjusted in steps and Q is fixed, you don't get the full flexibility of a parametric EQ, however this can be a good thing, the frequencies seem to have been selected carefully and you can quickly obtain great tones with few knobs twiddling!

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6. Combo (dual EQ) Modes

In addition to the three primary modes, we take the liberty to throw in two extra modes which are combinations of the primary modes. These two dual-EQ modes are:

• **SIMPLEQ + PARAEQ** - Simple EQ and Parametric EQ run together in series configuration.



• **PULTEQ + PARAEQ** - Pulteq EQ and Parametric EQ run together in series configuration.



Combining two different EQ modes is a powerful concept that allows users to construct more elaborate tone shapers while benefitting from the best aspects of the individual modes.

Simple EQ + Parametric EQ

In this mode, the Simple EQ (with filter types of your choice) and the Parametric EQ are both active. This configuration adds a layer of simplicity to the Parametric EQ mode. Assuming a time where a desired settings with Parametric EQ is achieved, layering it with Simple EQ would provide a way to make small or broad adjustments to the existing EQ, with the Simple EQ parameters, rather than directly tweaking the set Parametric EQ which contains more "moving parts". Looking at it inversely, at the time where a desired settings with Simple EQ is achieved, a Parametric EQ on top of it would provide an ability to fine-tune the Simple EQ, if the user so desires.

Pultec EQ + Parametric EQ

In this mode, the Pulteq EQ and the Parametric EQ are both active. With the understanding that the Pulteq EQ works like a 3-band parametric EQ (with some constraints), this combo can then be seen as an 8-band Parametric EQ with 3 bands concentrated in the midrange frequencies. You can do A LOT with this! Here's a practical example highlighting the usefulness of such a combo: at the time where the desired settings with Pulteq EQ is achieved, except perhaps some roll off on either side of the bands, for example, an added layer of Parametric EQ could provide extra filters to further fine-tune the desired sounds.

Dual EQ modes display

When a dual-EQ mode is active, the EQ curve displayed on the screen is the composite curve of the two active EQs.



If you feel the need to check the EQ curve of each mode in isolation you can do so by temporarily switching the EQ mode to the mode in question.

Dual EQ modes controls

At any given time when using the dual-EQ modes, one of the two modes has possession of the parameter knobs control. We provide a simple way to allow users to go back and forth editing the individual EQ mode. For example, when the [SIMPLEQ + PARAEQ] mode is active...



7. Prototypes



"Prototypes" is a library of pre-made EQ settings that you can quickly use as it is, or modify as you see fit and save the change as user presets.

How are Prototypes different from Factory Presets?

Prototypes and Factory-programmed presets both provides *ready-to-use* sound settings. The differences between the two are:

1. Scope

Factory presets are 'system-wide' settings, which include EQ, booster, limiter, stereo expander, channel mode settings, etc. Prototypes only concerns strictly on the EQ settings.

2. Permanence

Factory presets may be rewritten with user presets. Prototypes are *locked* and not user-editable (however, once loaded into the EQ engines users can freely modify it).

At the time this user manual is written, the prototypes library consists of 44 settings for ParaEQ mode, 12 settings for SimplEQ mode, and 12 settings for PultEQ mode. The library may be expanded in the future through firmware updates.



- Turn to scroll though the list.
- Tap to confirm the selection.





The EQ settings can be auditioned in real time as you scroll through the list.

Tap the button to cancel and exit the Options menu.

Is it possible to load different prototypes to different channel?

MODE

If the EQ channel-mode is set to LINKED then the prototype will be loaded to both channels. If channel mode is set to INDEPENDENT, and the current focus is on channel L then the prototype will be loaded to channel L, similiarly if the current focus is on channel R then the prototype will be loaded to channel R. So, the answer is yes!





The stereo expander is useful only with **Mono-In/Stereo-Out** or **Dual-Mono (Stereo-In/Stereo-Out)** routing configuration. It should not be used when **Stereo-In/Mono-Out** routing mode is used.

Another occasion where the use of stereo expander would be inappropriate is when routing is set to Dual-Mono, and the two EQ channels are used in a pre-post equalization setup (see chapter 11, page 16).

Changes made to the Limiter and Stereo Expander settings are automatically saved to the current preset.

9. Channel Modes Options → EQ-L Limiter-L Boost-L Options → EQ-L Limiter-L Boost-L Ochannel Mode (Boost) → EQ-R Limiter-R Boost-R

The two channels of EQ, limiter, and booster can be configured as *Linked* (their parameter settings are identical) or as *Independent* (they can have different parameter settings).

'L and R highlighted' indicates that the two EQ channels are linked.



'L is highlighted, and R is dimmed' indicates that the two EQ channels are independent, and channel-L currently owns the *channel focus*.



Navigating two EQ channels configured as Independent

When the channels are configured as Independent, at any given time, one of the channels has the 'channel focus', that is, parameter changes are applied only to that particular channel. The [L-R] icon at the upper left corner of the screen tells which channel currently owns the channel focus. The EQ curve of both channels are displayed together, the curve belonging to the channel with the focus is highlighted, while the other is slightly dimmed.

To switch the channel focus to channel-L: hold the **left most** touch button for about 2 seconds. To switch the channel focus to channel-R: hold the **right most** touch button for about 2 seconds.



Hold for about 2 seconds to switch channel focus to the Right channel.

Hold for about 2 seconds to switch channel focus to the Left channel.

Copy and Swap

When working with two independent EQ channels, there may be times you want to copy the parameter settings of the EQ in one channel to the EQ in other channel, or maybe swap the settings between the two channels. We've provided a mechanism to do this quick and easy.

- 1. Push the MODE/TYPE knob and the GAIN knob together to enter the copy/swap menu.
- 2. Turn the MODE/TYPE knob to choose the desired operation, choose < exit > if you want to cancel.



3. Push the MODE/TYPE knob to execute

10. Master Volume and Input Level Trim

Master volume control (-9dB to +9dB) is useful to set the overall output volume, to compensate for changes in volume level due to EQ processing. Each EQ mode has its own volume control, this makes it easy to maintain consistent volume level across different modes.

The master volume control is an integral part of the EQ engines, therefore it also comprises 2 channels: Volume-L and Volume-R.

Input Level Trim (0dB to -15dB) is also provided to allow users to dial down the input signal level to prevent output signal clipping which could occur with extreme EQ gain settings. The input level trim is configured in the Options menu:



It is recommended to leave Input Level trim setting at OdB, and only set it to lower values if you are getting clipping in the output signals.

Changes made to the Input Level Trim settings are automatically saved to the current preset.



12. Doing A/B Comparisons

There are two types of A/B comparisons in Enieqma.

Full A/B Comparison

This is the usual kind of A/B comparison most people are familiar with. Suppose you'd like to compare two different EQ settings by quickly toggling between the two, here's what you do:

- 1. Set the EQ channel mode to Independent (see chapter 9).
- 2. Put one EQ settings on channel-L, and the other on the channel-R.
- 3. Enter the L/R Comparison scene by holding down the VOLUME / BOOST knob for about 2 seconds.



4. You can now tap on the BOOST footswitch to toggle between the EQ-L settings, and EQ-R settings. The sound that you hear on both output channels are either the EQ-L sound or the EQ-R sound. The screen will highlight which EQ channel is currently being solo-ed.



L/R Comparison

EQ channel-R is being solo-ed

When you're done, you can exit the L/R comparison scene by pressing the VOLUME/BOOST knob button.

Partial A/B Comparison

In this type of A/B comparison, you're looking at the change in sound as a single parameter is toggled between two distinct values. Here's an example:

- 1. Choose an EQ mode, say the Simple EQ: Bass & Treble type.
- 2. Set one parameter, say the *Bass*, to a certain value, say 25.
- 3. Hold down the Bass knob for about 2 seconds, release the hold when "VALUE LATCHED!" appears on the screen.
- 4. Now adjust the *Bass* to some other values, say 75.
- 5. At this point, you can toggle the *Bass* parameter between 25 and 75 by tapping on the Bass knob button.

13. Globals Settings

Press and hold the MODE/TYPE knob button for about 2 seconds to enter the Global Setting menu.



If at any moment you wish to exit the menu <u>without</u> saving any changes you can do so by holding down the MODE/TYPE knon button again for about 2 seconds.

Globals





- * Bypass/Engage (global) Toggle bypass / engage (global).
- * Bypass/Engage (EQ-L) Toggle bypass / engage (EQ channel L only).
- * Bypass/Engage (EQ-R) Toggle bypass / engage (EQ channel R only).
- * **Boost On/Off** Toggle booster on and off.

14. Resetting the Pedal

Resetting the pedal will revert the parameters or configurations to factory default settings. There are 2 types of resets which can be performed independently: *Factory Reset* and *Global Settings Reset*.

Factory Reset

Factory Reset reverts all the presets back to factory settings. This operation will overwrite all user presets, but will not affect the saved global settings.

- **Step 1:** Begin with the pedal powered down.
- **Step 2:** Power up the pedal. While the lights are still blinking, press and hold down the EQ footswitch. Release when the display reads "FACTORY RESET".
- **Step 3:** Press the EQ footswitch to confirm, or the BOOST footswitch to cancel.

Global Settings Reset

Global Settings Reset reverts the global configurations back to factory settings. This operation will *not* affect the saved presets.

- **Step 1:** Begin with the pedal powered down.
- **Step 2:** Power up the pedal. While the lights are still blinking, press and hold down the BOOST foot switch. Release when the display reads "GLOBALS RESET".
- **Step 3:** Press the EQ footswitch to confirm, or the BOOST footswitch to cancel.

16. Firmware Update

Firmware updates may be made available for bug fixes and/or feature additions/modifications. You will need to connect your pedal to your computer via USB to perform a firmware update.

Before you begin the update, make sure you have the **latest version** of the EnieqLab editor software installed in your computer, and download the latest firmware for the Enieqma pedal on our website.

Tips: It's recommended to first back up your presets before starting the update. The EnieqLab software has the functionality to create a backup: *Menu > Backup*.

Update Procedure:

Step 1: Begin with the pedal powered down.

Step 2: Power up the pedal. While the lights are still blinking, press and hold down both footswitches Release when the display reads "FIRMWARE UPDATE".

Step 3: Connect the pedal to your computer via USB and start the EnieqLab software.

Step 4: Click the '**Load Firmware File**' button, browse to the location where you placed the downloaded firmware file, and select it.

Step 5: Click the 'Run Update' button.

When the update is complete the pedal will automatically restart and will be ready for use.

FIRMWAER UPDATE

Specifications :

- Input impedance : 1 Meg Ohm.
- Output impedance : 500 Ohm.
- Max input level : +7.23 dBV = 9.45 dBu = 2.3 V RMS = 6.5 Vpp.
 - (EQ set to 'flat' curve, input level is set to 0dB, and Boost is OFF)
- Max Boost level : +15dB.
- SNR : 114 dB typical.
- Frequency Response: 20 Hz to 20 KHz.
- AD/DA : 24-bit, 48 KHz .
 Bypass : Buffered.
- Input jack : 1/4" TRS (Tip: Left channel, Ring: Right channel).
- Output jack : 1/4" TS.
- MIDI In/Thru jacks : 1/8" TRS (Type A).
- Power source : 9VDC (negative center, 2.1 mm inner diameter)
 Current draw : 280 mA.
- Dimension : 12 x 12 cm (4.7 x 4.7 inch)

Key Features :

- 2 channel EQ + Boost.
- The two processing channels can be linked or configured/run independently.
- 3 EQ engines (Parametric EQ, Simple EQ, and Pultec Midrange EQ emulation) with the ability to stack and run two engines simultaneously.
- 64 presets.
- Master Volume and Input Level trim.
- Built-in libraries of ready-to-use 'Prototype EQs' for quick tone-shaping workflow.
- Optional Limiter and Stereo Expansion processings.
- 3 routing configurations : Mono to Stereo, Dual Mono, and Stereo to Mono.
- True EQ response curve display provides excellent visualization of the frequency response.
- Aux switches control input.
- MIDI Input and Thru.

Visit the product page at our website for more demo videos, sound clips, FAQs, and updates.

This product is designed and manufactured by :



Email : info@gfisystem.com Web : www.gfisystem.com **GFI System** Jakarta, Indonesia.

Specifications