User Manual

EN





PEQ 3000 NATIVE / PEQ 3000-DT

Midas powered 12 Band Parametric Equalizer Plug-In with
Optional Hardware Desktop Controller

TC ICON
SERIES

Rev. 1

tc electronic

Table of Contents

Important Safety Instructions **3**

Legal Disclaimer **3**

Limited warranty **3**

1. Introduction **4**

2. Plug-in Installation **4**

2.1 Installation on a PC 4

2.2 Installation on a Mac 5

3. Activate your PEQ 3000 iLok license **5**

3.1 Activation when you have purchased the NATIVE version 5

3.2 Get a Free Demo License 5

4. Connection and Setup **6**

4.1 Connecting the PEQ 3000-DT Desktop Controller (optional) 6

4.2 Operating the PEQ 3000 6

4.3 Insert vs Aux Effect 6

4.4 Mono/Stereo Operation 6

4.5 Plug-in and Hardware Controls 7

4.6 Connection Status to the Hardware Unit 7

5. User Interface **8**

5.1 Key Commands, for fast workflow 9

5.2 EQ In/Bypass and Band In/Bypass 9

5.3 Meters 10

5.4 EQ filters 10

5.5 Global Section 13

5.6 Phase (All Pass Filter) 14

5.7 Real-Time Analyzer (RTA) 15

6. Navigating the PEQ 3000 Desktop Controller (optional) **16**

7. Presets **18**

7.1 Factory Presets 18

7.2 User Presets 18

7.3 Presets and the optional hardware unit 19

7.4 Favorite Presets 19

7.5 Make Current Preset Default 20

7.6 Reveal User Preset Folder in Explorer 20

8. Software Updates **20**

8.1 Hardware Unit Software Updates (optional) 20

9. Specifications **21**

EN Important Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK!
DO NOT OPEN!
ATTENTION
RISQUE D'ÉLECTROCUTION !
NE PAS OUVRIR !

Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

Caution
To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.

Caution
To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution
These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Use only attachments/accessories specified by the manufacturer.



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.

18. Do not install in a confined space, such as a book case or similar unit.

19. Do not place naked flame sources, such as lighted candles, on the apparatus.

20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed-of at a battery collection point.

21. This apparatus may be used in tropical and moderate climates up to 45°C.

LEGAL DISCLAIMER

Music Tribe accepts no liability for any loss which may be suffered by any person who relies either wholly or in part upon any description, photograph, or statement contained herein. Technical specifications, appearances and other information are subject to change without notice. All trademarks are the property of their respective owners. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Auratone and Coolaudio are trademarks or registered trademarks of Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2020 All rights reserved.

LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding Music Tribe's Limited Warranty, please see complete details online at musictribe.com/warranty.

1. Introduction

Congratulations on the purchase of your TC Electronic PEQ 3000.

The Minimum Phase IIR PEQ 3000 Equalizer plug-in is part of the Icon Series of plug-ins. In combination with an optional but dedicated Desktop Controller, it takes mixing audio to a new level.

The PEQ 3000 is a Midas-powered 12 (+12) Band, Channel, Bus and Master Parametric Equalizer. It features:

- Mono, Stereo, Mid/Side and Left/Right operation
- Phase EQ'ing
- An all-new Hi-Resolution, Constant-Q, Real-Time Analyzer for In-Depth signal investigation

Midas

The PEQ 3000 builds upon the long heritage and experience of Midas live sound mixing consoles. It is designed for the modern-day studio sound engineer without compromise.

For decades, Midas has been a driving force in the world of pro audio. Building on the incredible success of the analog flagship Heritage 3000, the ground-breaking digital XL8 and PRO Series with their exemplary audio performance and proven technology, the Midas PRO Series became the gold standard in concert touring and installed live sound. Offering the same outstanding sample-synchronized and phase-coherent audio performance, interpolated control functions and intuitive navigation, the PRO1, PRO2, PRO3, PRO6, PRO9 and later the PRO-X Live Audio Systems have become one of the industry's main choices for live sound mixing.

The introduction of the PEQ 3000 Equalizer plug-in is aligned with the introduction of the next generation Midas live mixing console: the HD96-24. For the first time, the Midas sound is available for the modern computer based studios and live sound setups.

The PEQ 3000 has impressive 64-bit floating point processing, and up to 192 kHz sampling frequency, providing exemplary quality audio processing. The combination of the True Analog feel of the user controls, the informative EQ view, and High-Resolution Real-time Analyzer in the Plug-in or on the Desktop Controller, all result in the smooth continuous response and immediacy of working on an analog console.

The PEQ 3000 was designed with the main focus on speeding up your work flow and letting you concentrate on the mix. It allows simultaneous display and control of all the critical information required to craft an unprecedented mix experience.

About this manual

Read this manual to learn how to install and use your TC Electronic PEQ 3000 Parametric Equalizer. This manual is only available in PDF format from the TC Electronic website.

To get the most from this manual, please read it from start to finish, or you may miss important information.

To download the most current version of this manual, visit the web page:

www.tcelectronic.com/Categories/c/Tcelectronic/Downloads

If you still have questions about your TC Electronic product after reading its manual, please get in touch with TC Support:

www.tcelectronic.com/brand/tcelectronic/support

2. Plug-in Installation

The combined PEQ 3000 plug-in installer for both the NATIVE and DT Desktop Controller products can be downloaded from the following page:

www.tcelectronic.com/peq3000-dt/support

The PEQ 3000 plug-in requires an active PACE iLok license to work. See Chapter 3.

Using the Desktop Controller is optional, and all parameters are available in the plug-in.

Save the installer file (.pkg or .msi file) in a convenient location on your hard drive.

2.1 Installation on a PC

Double click the installer (.msi file). If you get a security warning, click 'Run'.



Accept the license agreement and click 'Next'.



Select which VST and/or AAX components you want to install. Pro Tools uses AAX and most other DAW programs use VST. The installer will offer a default location to save the file, but you can choose another location by clicking the 'Browse' button.



Click 'Next' to begin the installation. When installation is complete, click 'Finish'.

Note: If your DAW fails to detect the newly installed plugin, this can often be fixed by adding the following paths to the Plug-in Manager (or similar) of the DAW. The default paths on a PC are "C:\Program Files\Common Files\VST2" and "C:\Program Files\Common Files\VST3" for VST2 and VST3, respectively.

2.2 Installation on a Mac

Double click the installer (.pkg) file.



Proceed through the prompts to begin installation.



Click 'Continue.'



A default location will be selected for installation, or you can select another folder manually. If you have administrator authorization in place, you will need to enter your password before beginning installation.

Click 'Close' when done.



3. Activate your PEQ 3000 iLok license

3.1 Activation when you have purchased the NATIVE version

Step 1: Install iLok

The first step is to create an iLok user account at www.iLok.com and install the PACE iLok License Manager on your computer if it's your first time using iLok.

Step 2: Activation

In the received mail (when buying the NATIVE version) or on the rear cover of the printed quick start guide (when you have bought the DT Desktop Controller version) you will find your personal Activation Code. To activate your software, please use the "Redeem an Activation Code" feature in the PACE iLok License Manager.



3.2 Get a Free Demo License

Make use of this hassle-free offer to try out our plug-ins before you buy.

- 14-Day Trial Period
- Fully Functional
- No Feature Limitations
- No Physical iLok Key Needed

Step 1: Install iLok

The first step is to create a free iLok user account at www.iLok.com and install the PACE iLok License Manager on your computer if it is your first time using iLok.

Step 2: Get your free license

Go to:

www.tcelectronic.com/brand/tcelectronic/free-trial-peq3000-native

and enter your iLok User ID.

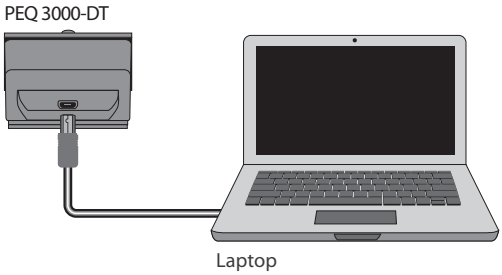
Step 3: Activation

Activate your software in the PACE iLok License Manager.

4. Connection and Setup

4.1 Connecting the PEQ 3000-DT Desktop Controller (optional)

Getting the Desktop Controller up and running couldn't get any easier. Plug the supplied USB cable into the unit's rear micro-USB port, and connect the other end to a free USB port on your computer. The Desktop Controller is bus powered, so no other power cables are necessary, and no additional drivers need to be manually installed.



The Desktop Controller will light up upon successful connection. You can now apply the plug-in to a channel in your DAW to begin using the effect. This process may vary slightly depending on your software, but generally should require these steps:

- Select a channel or bus in your DAW to which you would like to add the effect. Access the mixer page where you should see a section dedicated to effect slots
- Open the menu where you can select from a list of effect types, which probably includes many stock plugins that are included with the DAW. There should be submenu to view general VST/AU/AAX options.
- The plug-in will likely be found in a dedicated TC Electronic folder. Select the PEQ 3000 and it will now be added to the signal chain.

Double click on the effect slot that contains the PEQ 3000 to view the plug-in UI. There should be a green link icon at the bottom, and text that indicates successful connection between the plug-in and the Desktop Controller.

4.2 Operating the PEQ 3000

After you have installed the plug-in, activated the iLok license, and optionally connected the PEQ 3000-DT Desktop Controller via USB, you can begin inserting the plug-in to your tracks.

Adjustments to the effect are done in two ways. Either by using the plug-in user interface or by using the physical Desktop Controller.



4.3 Insert vs Aux Effect

The PEQ 3000 is intended for insertion directly into an effect slot on a single channel, sub mix bus or master bus, which passes the entire signal through the effect.

Be careful if using PEQ 3000 on an auxiliary bus, as mixing the output of the PEQ 3000 with the original track sound will potentially create a phasing issue depending on your DAW's ability to correctly compensate for latency in plug-ins.

4.4 Mono/Stereo Operation

The PEQ 3000 is intended for Mono, Stereo, Mid/Side or Left/Right use.

For a Mono channel, the output signal is made by outputting the left plug-in channel only.

For a Stereo channel, either Stereo, Mid/Side or Left/Right operation can be selected in one plug-in instance.

Two plug-in instances in series are needed to make EQ adjustments in, for example, both Stereo and Mid/Side.

EN

4.5 Plug-in and Hardware Controls

After you have installed the plug-in, activated the iLok license, and optionally connected the PEQ 3000-DT desktop controller hardware unit via USB, you can begin using it.

The controls of the plug-in and desktop controller are described in more detail later in this manual.

Plug-in User Interface:



Optional Desktop Controller Hardware Unit:



4.6 Connection Status to the Hardware Unit

The TC Icon family all use the same method to show the connection status between the plug-in and the hardware unit.

Connection status is indicated on the lower left side of the plug-in window. Successful connection is indicated with a green chain icon. The Tooltips area will show the plug-in instance name that the hardware unit is currently connected to. This is often the DAW channel name. If your DAW does not support this, you may enter a name for the instance. This may be especially convenient when using DAW project templates.



When using the NATIVE version only, this chain icon will remain grey:



If another instance of the plug-in already exists on another track, the chain icon will appear yellow, and the text box will notify you where the plug-in is currently active. Click the chain icon to connect the hardware unit to the new plug-in location.



To summarize the connection status possibilities:



Most DAWs offer the ability to move or drag plug-ins from one track/bus to another, and PEQ 3000 supports this as well.

Most DAWs also feature an on/off switch for plug-ins, accessible inside the plug-in window and/or the track itself. Muting the plug-in will make the effect inaudible, but will not shut down the connection to the hardware unit.

5. User Interface

The PEQ 3000 is controlled using the plug-in, or by using the optional hardware unit (when you have purchased the DT version).

Overview

The PEQ 3000 includes the following features:

- 12 fully-flexible parametric EQ bands for mono or stereo operation
- 12 + 12 fully flexible parametric EQ bands for Mid/Side or Left/Right operation
- Bell: Variable width from 0.1 to 5.3 octave
- Lo and Hi Cut: Selectable Slope from 6, 12, or 24 dB/octave
- Lo Shelf: Warm, Classic, Deep
- Hi Shelf: Soft, Classic, Bright
- Phase: Hi/Lo Frequency, continuous Phase control
- Master gain
- Real-Time Analyzer, with Peak and RMS displays, Constant-Q, and Low Latency or High Resolution option

Main View

The display consists of three main elements; the input/output PPM meters at the right, the controls section at the bottom, and the EQ and RTA graphs in the main display. The features are as follows:

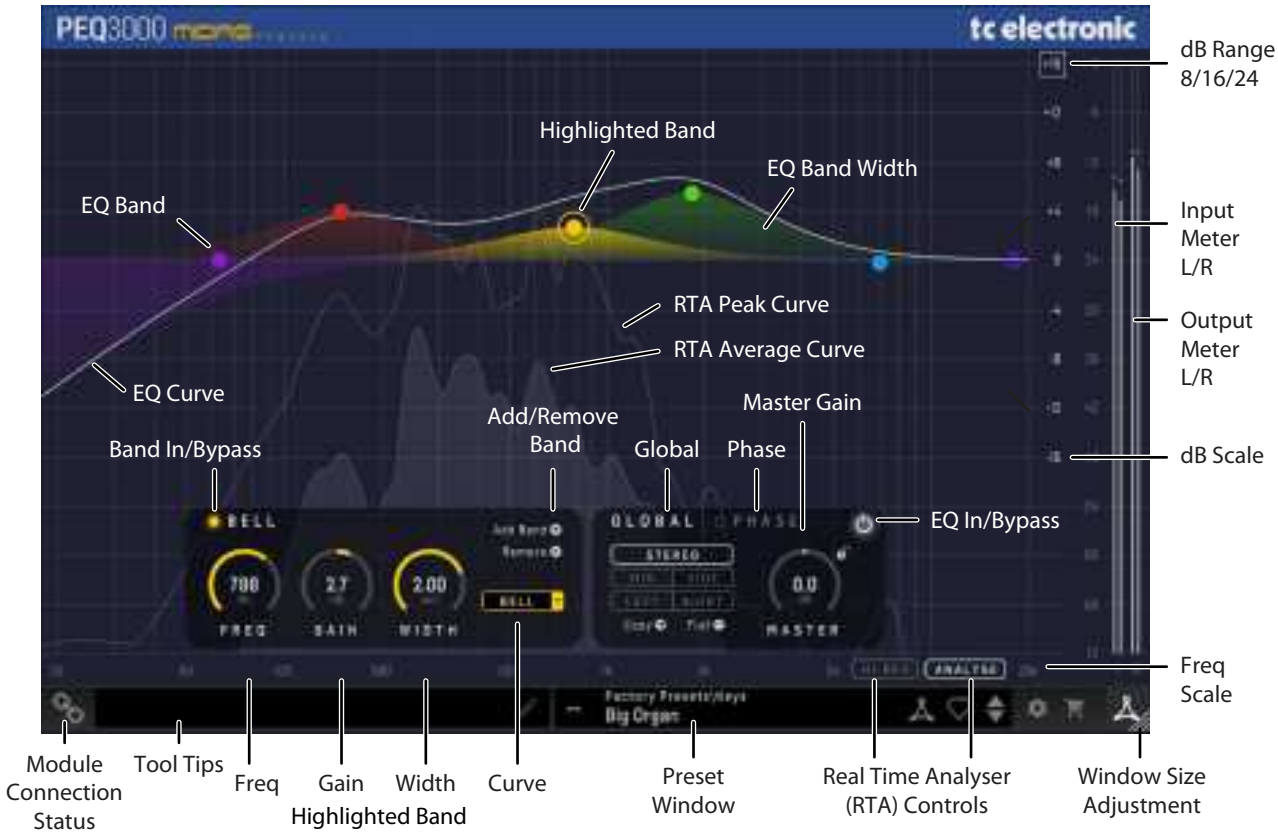
- Input/output PPM meters, 0 to -72 dB dBFS, with +0 dBFS indication in red at the top. The RTA graphs also refer to this scale
- The +/- vertical scale refers to the dB level of the EQ bands. You may zoom in/out by toggling the top button between 8, 16 and 24 dB
- The horizontal scale is the frequency from 20 Hz to 20 kHz
- The 12 EQ bands are color coded for easy navigation and overview. The respective colors are reflected in the controls section at the bottom
- The currently selected band is highlighted in the view:
  - Full color band handle and EQ curve overlay if the band is enabled
  - Colored ring band handle and grey curve overlay if the band is disabled
- The white curve is the total EQ curve combining all active bands. When working in Mid/Side, or Left/Right, the unselected channel is shown as a grey curve
- Enable or disable bands by double clicking on the band handle
- Adjust gain and frequency by dragging the band handle, or by using the dials in the controls section
- To adjust the width or slope, use Command + drag (Mac), or use Ctrl + drag (Win), or by using the dials or buttons in the controls section

Note: All details are greyed out in the display when the EQ is switched off.

Controls section

The controls section is where all the relevant band parameters are located. They can be adjusted here, or you may adjust directly on the main view band handles. See Key-commands for convenient navigation.

- Any of the circular controls can be adjusted either by dragging on the dials, or by double-clicking and entering a numeric value in the box
- FREQ sets the frequency of the selected band
- GAIN sets the gain of the selected band
- WIDTH (if using Bell curve) sets the width of the selected band
- SLOPE (if Lo Cut or Hi Cut) sets the filter slope of the selected band
- TYPE (if Lo Shelf or Hi Shelf) sets the shelf type of the selected band



- "Add Band" will add an extra band to the view until a maximum of 12 bands are shown. Bands can also be added by double clicking in the main view, at the frequency and gain that you want to affect. The default added band is a Bell curve with 1.5 octave width
- "Remove Band" will remove the selected band from the view

Global Section

- Mono, Stereo, Mid/Side or Left/Right: On a Stereo channel either Stereo, Mid/Side, or Left/Right operation can be selected in the Global section of one plug-in instance. Two plug-in instances in series are needed to make EQ adjustments, for example, in both Stereo and Mid/Side. In the case of a mono instance, the output signal is made by outputting the left plug-in channel only
- Master is the output gain of the EQ. Range: +/- 16 dB
- COPY will copy all band settings from Mid to Side or Left to Right
- FLAT will set all currently-shown bands to 0 dB
- BYPASS will engage/disengage the PEQ 3000

Phase Section

- The Phase pane holds the parameters for the Phase EQ. See Phase (All Pass Filter) for details on how to use it

At the right hand edge:

- Input meters and Output meters

At the bottom left:

- Connection status "Chain" icon
- Connection status message and Tool Tips

At the bottom middle/right:

- Preset number, preset name, factory or user, favorite, preset up/down
- Setup
- Shopping cart

At the bottom right corner:

- User Interface size adjustment

The controls and features are described in more detail below.

5.1 Key Commands, for fast workflow

- Enable/disable band: Double-click handle (Mac/Win)
- Add band: Double-click view (Mac/Win)
- Reset band (gain = 0): Option + click (Mac) / Alt + click (Win)
- Move freq + gain: Mouse drag (no modifier key) (Mac/Win)
- Move gain only (lock freq): Shift + mouse drag (Mac/Win)
- Move freq only (lock gain): Option + drag (Mac) / Alt + drag (Win)
- Change width/slope: Command + drag (Mac) / Ctrl + drag (Win)

5.2 EQ In/Bypass and Band In/Bypass

Press this button to bypass or engage the PEQ 3000. This makes it easy for you to listen and compare the overall effect of your work.

Alternatively, individual bands may be turned on and off using the Band In/ Bypass button, after selecting the band. This is useful to audition the effect of each band and its settings.

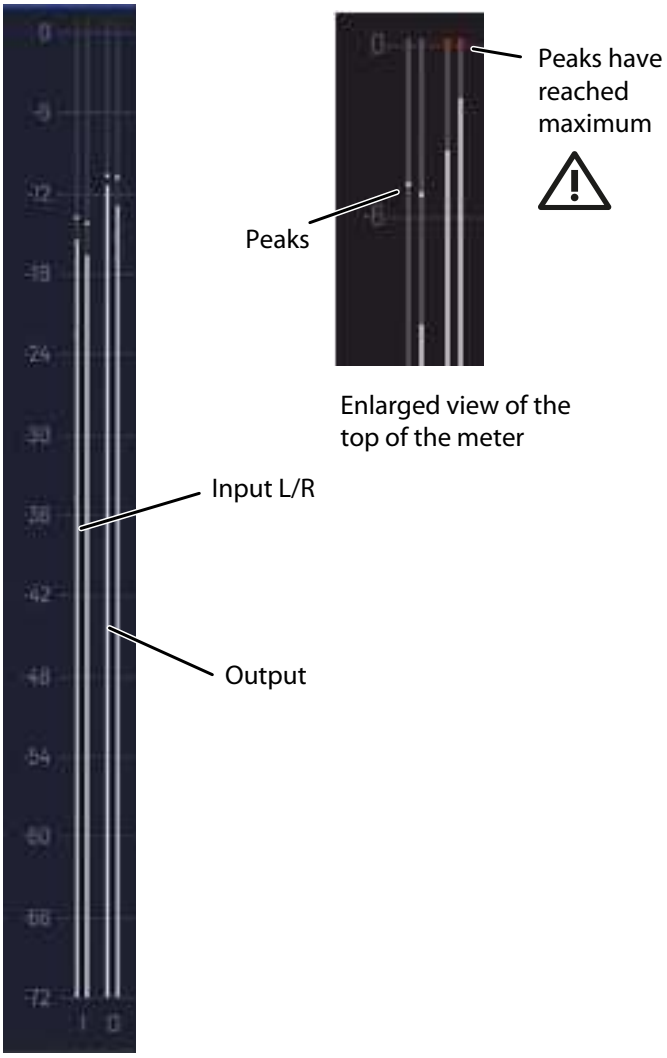


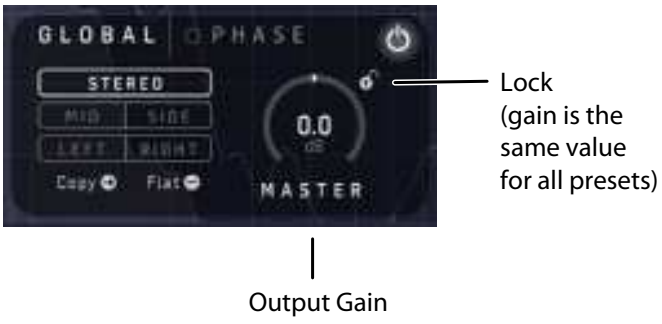
5.3 Meters

The PPM meters (Peak Program Meters) at the far right include a very accurate Peak-Hold function.

CAUTION: You must ensure that no peaks exceed 0dBFS. These peaks will be shown in red for a short time, before decaying. Keep an eye on them, and do something about it if you see them.

- Use the MASTER output gain control to adjust the levels if required





5.4 EQ filters

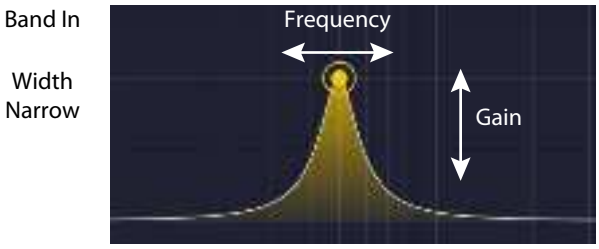
In the PEQ 3000, all 12 (+12) bands are equally flexible, and each can be selected from: Lo Cut, Lo Shelf, Bell, Hi Shelf, and Hi Cut. This way you do not need to remember which band types are already in use, you can just go ahead adjusting.

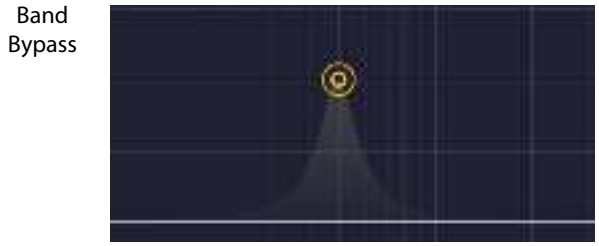
Common features are:

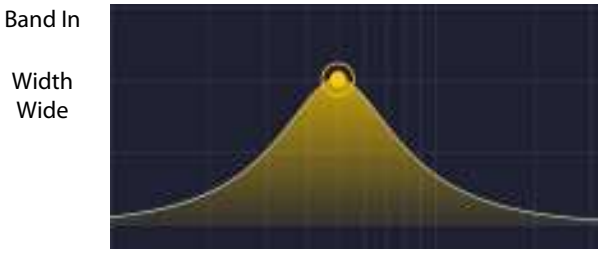
- FREQ: The Frequency range goes from 2 Hz to 22 kHz. Note that although the graphical horizontal axis limits the setting from 18 Hz to 20 kHz, settings outside this range can be set with the FREQ control
- GAIN (Bells and Shelves): There is continuous adjustment of boost and cut from + 16 dB to - 16 dB, with a 0 dB center
- All bands can be individually switched on or off, or removed

5.4.1 Bell









- FREQ: The circular frequency control dial adjusts the EQ band frequency from 2 Hz to 22 kHz
- GAIN: There is continuous adjustment of boost and cut from + 16 dB to - 16 dB, with a 0 dB center
- WIDTH: Adjusts the EQ band bandwidth in the range 0.1 to 5.3 Octave. This allows for very wide or narrow range adjustments and problem solving. The default width for an added band is 1.5 Octave.

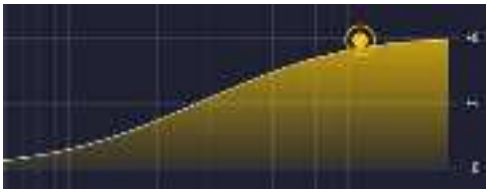
EN

5.4.2 Hi Shelf

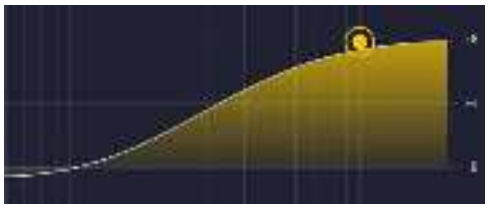


The difference between the shelf filters is subtle and, if you do not have time to experiment, it is probably best to use CLASSIC because this is the best all round filter. However, when you do have time to experiment you will find that each of the types have their uses. The minimum harmonic types (DEEP and BRIGHT), and in particular the bass (DEEP), can sound very natural, even with very aggressive EQ, but the psycho-acoustic principles that they operate on do not always work as well on sensitive multiple source or full mix material.

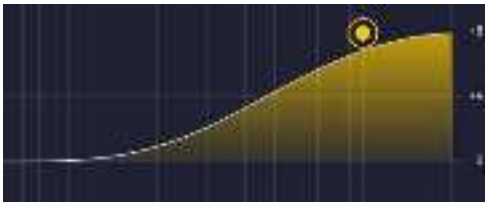
SOFT



CLASSIC



BRIGHT

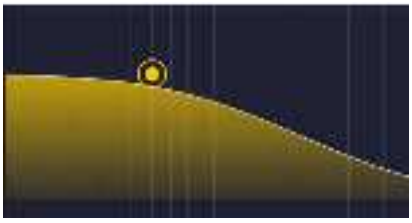


- FREQ: The circular frequency control dial adjusts the EQ band frequency from 2 Hz to 22 kHz
- GAIN: There is continuous adjustment of boost and cut from + 16 dB to - 16 dB ,with a 0 dB center
- SOFT: The soft treble response provides a very gentle gradient between EQ'd and non-EQ'd frequency areas. This produces the absolute minimum of phase shift, but does not provide much differentiation, thus frequencies outside the area of interest are often unintentionally EQ'd. This is best used to provide gentle shaping of sensitive or full mix material.
- CLASSIC: The classic treble response provides a much steeper gradient between EQ'd and non-EQ'd frequency areas, as made famous by Midas consoles like the XL4. This provides better differentiation and minimal phase shift, but there is some undershoot error, that is, when boosting the treble, the midrange is slightly cut, and vice versa. This is the best all round EQ and is especially effective when microphones are covering multiple sources.
- BRIGHT: The bright treble response provides a slightly steeper gradient than the classic and it is uniquely shaped to provide minimum harmonic disruption to the EQ'd material. As for the classic EQ, this provides better differentiation and minimal phase shift, but now the mid-range is not changed as much. This filter is best used on single source material and is especially good for acoustic performances.

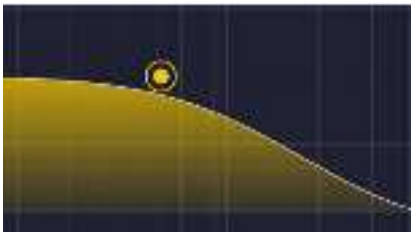
5.4.3 Lo Shelf



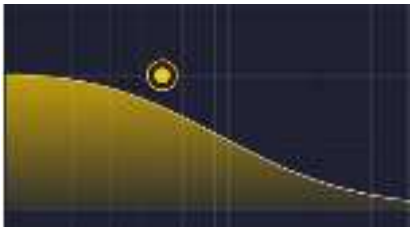
WARM



CLASSIC



DEEP



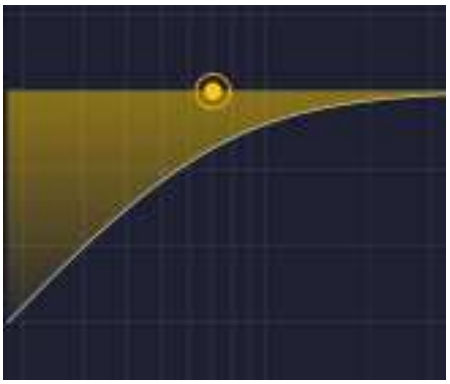
- FREQ: The circular frequency control dial adjusts the EQ band frequency from 2 Hz to 22 kHz
- GAIN: There is continuous adjustment of boost and cut from + 16 dB to - 16 dB, with a 0 dB center
- WARM: The warm bass response provides a very gentle gradient between EQ'd and non-EQ'd frequency areas. This produces the absolute minimum of phase shift, but does not provide much differentiation, thus frequencies outside the area of interest are often unintentionally EQ'd. This is best used to provide gentle shaping of sensitive or full mix material.
- CLASSIC: The classic bass response provides a much steeper gradient between EQ'd and non-EQ'd frequency areas and is modelled on the Midas XL4. This provides better differentiation and minimal phase shift, but there is some undershoot error, that is, when boosting the bass, the mids are slightly cut, and vice versa. This is often desirable on bass EQ and it is the best all round, general purpose EQ curvature.

- DEEP: The deep bass response provides a slightly steeper gradient than the classic, and it is uniquely shaped to provide minimum harmonic disruption to the equalised source. As for the classic EQ, this provides better differentiation and minimal phase shift, but there is no undershoot error. Powerful boost/cut can be used that still sounds very natural and does not alter the mid-range. This is best used on single source material.

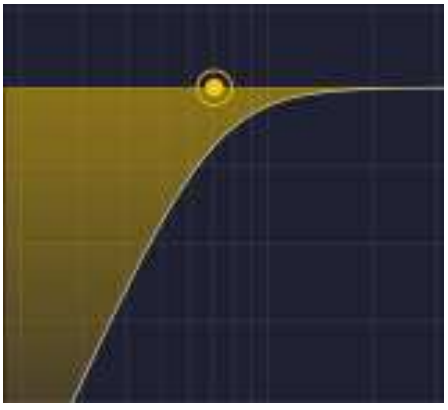
5.4.4 Lo and Hi Cut



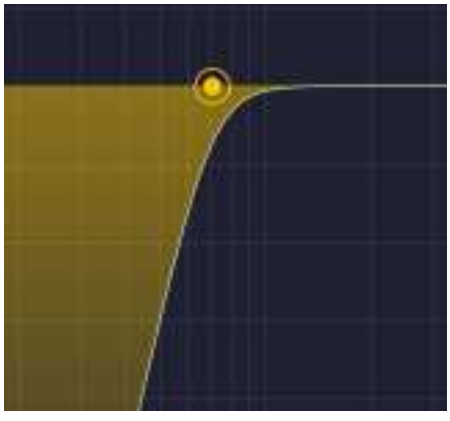
6 dB/Octave



12 dB/Octave



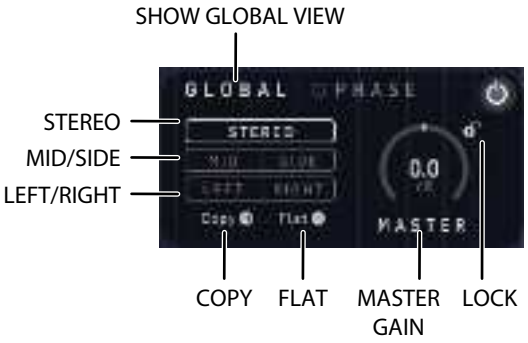
24 dB/Octave



- FREQ: The circular frequency control dial adjusts the EQ band frequency from 2 Hz to 22 kHz
- LO CUT or High Pass Filter (HPF): The Lo Cut attenuates all frequencies below a certain level (cut-off frequency) while allowing all those above it to pass through. The harshness or smoothness with which the sound is removed beyond this point is determined by the dB/octave slope selection, with 6 dB being the most common, and 12 and 24 dB are also available. The Lo Cut is generally used to take rumble or hum out of any sound source, but may also be equally-well used to produce a sound effect by manipulation of the controls
- HI CUT or Low Pass filter (LPF): The Hi Cut attenuates all frequencies above a certain level (cut-off frequency) while allowing all those below it to pass through. The harshness or smoothness with which the sound is removed beyond this point is determined by the dB/octave slope selection, with 6 dB being the most common, and 12 and 24 dB are also available. The Hi Cut is generally used to reduce noise in quiet passages with excessively high frequencies, but may also be used to produce a sound effect, like a filtered drum roll, by manipulation of the controls

EN

5.5 Global Section

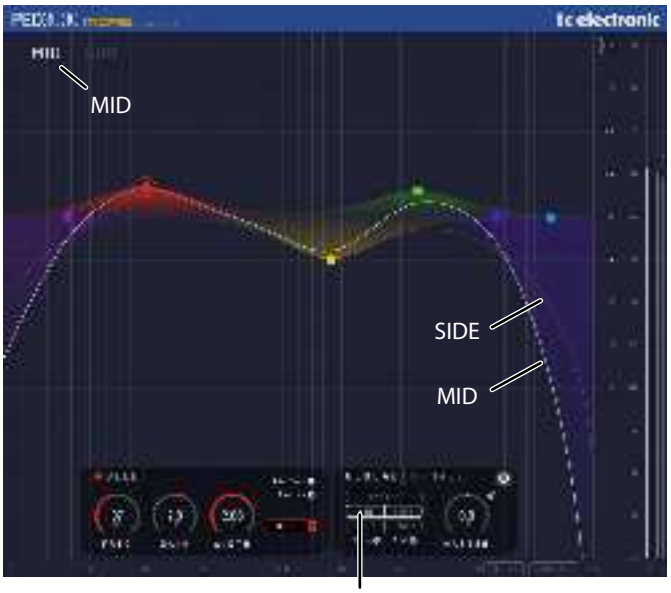


- Mono, Stereo, Mid/Side or Left/Right: On a Stereo channel either Stereo, Mid/Side, or Left/Right operation can be selected in the Global section of one plug-in instance. Two plug-in instances in series are needed to make EQ adjustments, for example, in both Stereo and Mid/Side. In the case of a mono instance, the output signal is made by outputting the left plug-in channel only



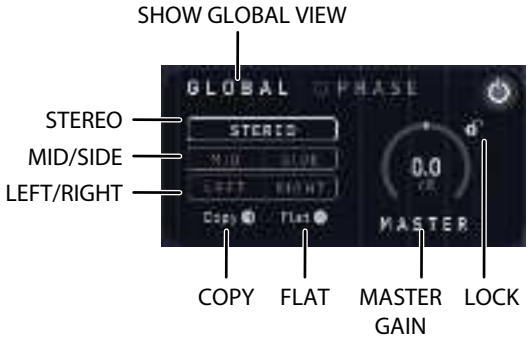






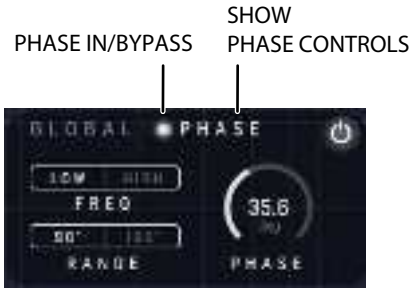


Global Section continued



- MASTER: The output gain of the EQ. It can be used to compensate for the overall level added or reduced by using the EQ bands. Range: +/- 16 dB
- LOCK: Click this lock, and the Master Gain setting is locked, and will not change when you change to a different preset
- COPY: This will copy all band settings from Mid to Side or Left to Right. This may be convenient as a good starting point, if adjustments have been made in Stereo and you suddenly realise that you need to continue in Mid/Side or Left/Right mode. Note: The PEQ 3000 has two sets of 12 EQ bands. The first set are shared between Stereo, Mid and Left. The second set are shared between the Side and Right
- FLAT: This will set all currently-shown bands to 0 dB. Note: The PEQ 3000 has two sets of 12 EQ bands and you only see one of the sets at a time. The first set is shared between Stereo, Mid and Left. The second set is shared between the Side and Right

5.6 Phase (All Pass Filter)



The variable Phase feature in the Global section allows you to alter the phase of a signal by a variable amount. This adjustment can be used to control the phase alignments to inputs for multi-microphone setups, such as a drum kit for example, or multiple microphones on the same guitar cabinet. For example, phase adjustment will be able to bring out more of the original instrument energy that may have been colored due to the multiple signal paths from instrument to mix.

The effect works by using two all-pass filters in series and controlling the center frequency of the filters to change the phase shift. The all-pass structure allows for a flat level frequency response; however, the filters delay different frequencies by different amounts, resulting in a frequency-dependent phase shift.

Additional features have been added to this fundamental design by allowing control over the frequency range of the center frequencies via the High and Low settings:

- HIGH: This can be used on instruments and vocals with a frequency range in the upper audio spectrum
- LOW: This is best used on instruments with a greater low-frequency content, such as a bass guitar or kick drum

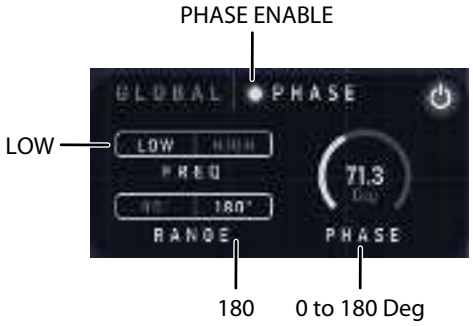
The Phase Frequency Range allows a greater range of frequencies to be covered by the control. You can switch between a 0 to 90° or 0 to 180° phase shift range by using the 180/Deg or 90/Deg Phase Adjust Range buttons.

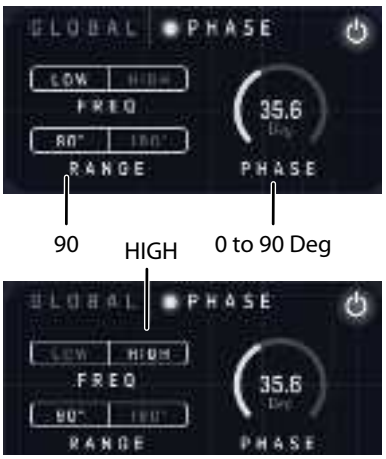
5.6.1 How to use the Phase feature

1. When used on a multi-microphone setup on a drum kit or guitar cab, it is important to remember that PHASE has to be enabled in all the plug-in instances involved
2. Select either LOW or HIGH in all the instances (tracks) depending on what frequency range you will adjust
3. The phase difference between the channels will come from adjusting the Phase parameter differently across the instances (tracks). You may need to iterate a few times across all the involved instances to find the optimal settings

Note: Enabling the phase on just one channel will not have much effect on the sound, and may not be audible.

5.6.2 Phase Controls





- PHASE Enable button: Enable this on all instances (tracks) that are involved in the multi-mic setup, such as a drum kit, for example
- PHASE: The degree of phase change can be adjusted with this control
- RANGE: The phase adjustment range can either be 180°or 90°
- HIGH: Phase adjustment frequency range. This can be set to HIGH for vocals, keyboards or guitars etc.
- LOW: Phase adjustment frequency range. This can be set to LOW for bass guitar or bass drums etc.

EN

5.7 Real-Time Analyzer (RTA)

The Real-Time Analyzer in the PEQ 3000 is a highly detailed and informative version of well-known and popular spectrum analyzers. This does not mean that we present more information than you need, which is often seen with popular analyzers on the market where the spectrum in especially the high frequencies nearly looks like 'grass'. In the same analyzers, there is often nearly no useful information of benefit in the low frequencies.

In the PEQ 3000, and based on our Finalizer application that was launched in the fall of 2019 at www.finalizer.com, we have gone a great step further to find the right and useful information for the delicate and sometimes difficult task of EQ'ing an instrument channel, a sub mix bus, or a full master track.

The PEQ 3000 features a High-Resolution, Constant-Q Real-Time Analyzer with both Peak and RMS spectrum displays. The Peak curve will help you when the signal is percussive and includes many transients, while the slower-moving RMS curve will constantly keep you up to date on the average spectrum.

The frequency resolution is based on a constant-Q analysis. This makes it easier to equally see details across the whole frequency spectrum, as opposed to having too little information in the bass range and too much information in the treble range ('grass'). A constant-Q representation is also much closer to the "frequency analysis" known from psychoacoustics to be performed by the cochlea in the inner ear. This way, you will have just the right amount of information to perform the EQ'ing task.

Note: to begin using the RTA, set the track to play in your DAW, and then press "ANALYSE." The RTA will then begin its spectral analysis of the incoming audio. Initially, the default setting is for low latency. If a higher resolution is required, then also press the "HI-RES" button. You will notice that the RTA graphs have more detail.

Parameters

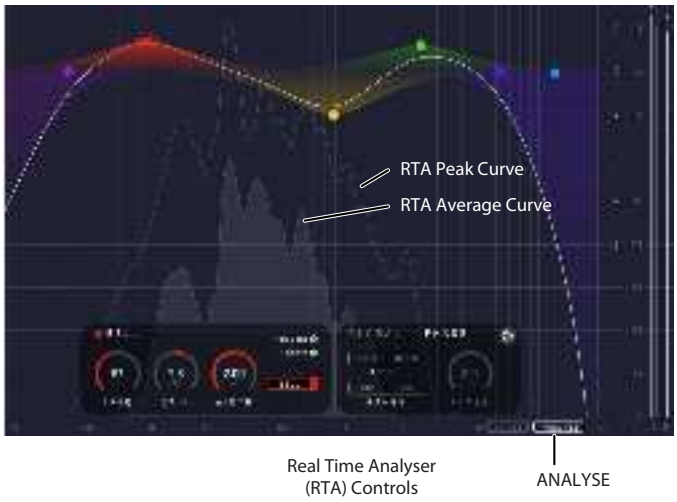
- ANALYSE on/off (the default is on)
- HI-RES on/off (the default is off). Note there is increased latency when HI-RES is enabled, and there are finer details in the RTA display

RTA level, Mono vs Stereo

- The PEQ 3000 RTA analyzer shows a summed Left + Right measurement in Stereo operation
- Mono: A mono (or single-channel) test tone has the same dB level on the RTA as on the PPM meters, as expected
- Stereo: The consequence of summing the left and right in stereo, is that in-phase stereo signals are up to 6 dB higher on the RTA than the individual left or right PPM levels

Default RTA (Low Latency)

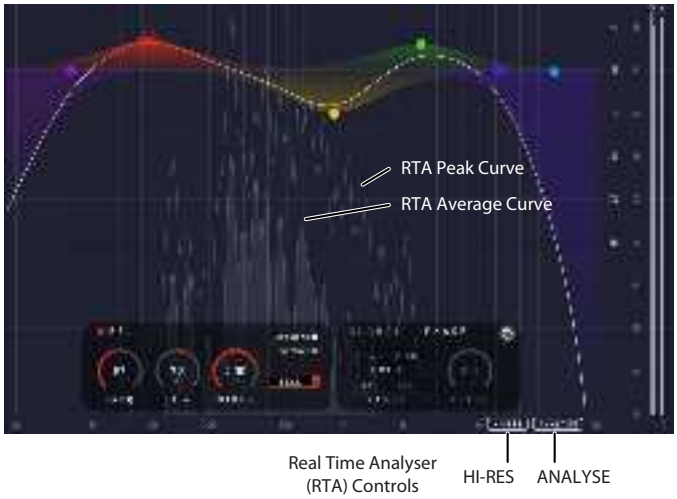
In the default setting, the Real-Time spectrum is running with low audio latency, which is expected of a minimum-phase EQ plug-in.



- The upper curve line is a real-time peak analysis of the incoming audio
- The lower "filled" curve is a moving-average real-time RMS analysis

HI-RES RTA (High Resolution)

When HI-RES is enabled, the RTA will continue its Constant-Q Equal Resolution per octave, all the way to 20 Hz, making it possible to analyze bass frequencies to the same precision as the high frequencies.



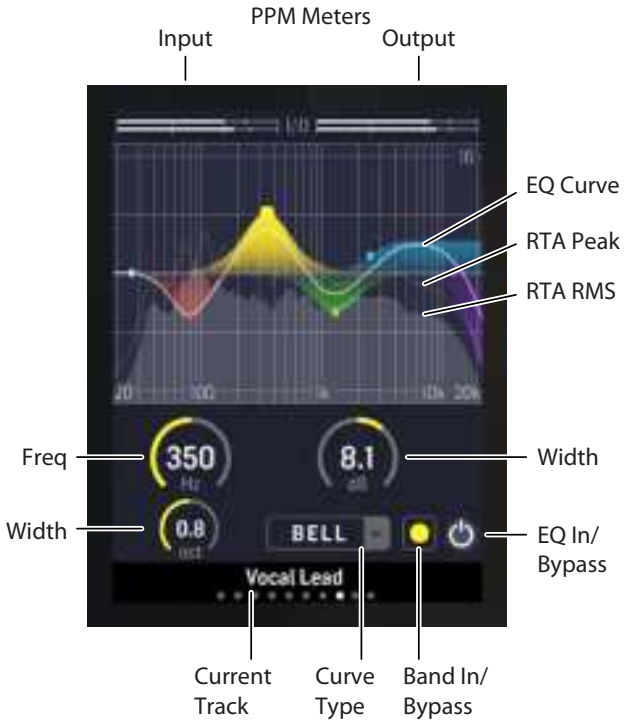
Note: When enabling Hi-RES, the PEQ 3000 inserts a delay to compensate for the calculation time. Depending on your DAW, you may, or may not, experience this delay between when play is pressed to audio appearing. You will in this case, in all DAWs, have this delay from input to output. For latency-sensitive applications you should disable HI-RES.

Mid/Side or Left/Right operation

The PEQ 3000 features two Real-Time Analyzer engines when in Mid/Side or Left/Right operation. This ensures that the analysis is constantly updated and instantly ready when you switch from Mid to Side, for example.

6. Navigating the PEQ 3000 Desktop Controller (optional)





The PEQ 3000 Equalizer plug-in takes mixing audio to a new level, especially when used in combination with the optional but highly dedicated Desktop Controller. It adds intuitive and true-analog-feel user controls, informative EQ views and a high-resolution real-time analyzer right on your desk, without the need for opening plug-in instances all the time. The PEQ 3000 Desktop Controller is designed with a focus on speeding up your work flow, giving you inspirational hands-on experience, and letting you concentrate on the mix. It allows simultaneous display and control of all the critical information required to craft an unprecedented mix.

Display

- Input PPM, dBFS, 0 to -60 dBFS
- Output PPM, dBFS, 0 to -60 dBFS
- Main EQ view with different dB-axis zoom, +/- 8, 16 or 24 dB
- Real-Time Analyze
- Controls section: Shows the selected EQ band controls, the Phase EQ controls or two Global settings pages
- Page order: Band 1 though 12 (only showing the added bands), Phase page, Settings page 1 and 2

Dials and Buttons

Note: The dials and buttons have different actions depending on which is selected: An EQ band, the Phase EQ, or either of two Global settings pages.

- Frequency dial
- Gain dial
- Width dial (Width, Type, Slope)
- Arrow left/right buttons - selects the previous/next band on the frequency axis. The Phase EQ and Global settings pages 1 and 2 are located at the far right. See page order below
- Hold the right arrow button to go straight to settings page 1
- Hold the left arrow button to return to the last selected band (from Phase, S1 or S2), or to the left-most band (from another band page)
- Shape button (selects band type Lo Cut, Lo Shelf, Bell. . .)
- IN button (overall EQ In/Bypass toggle). Same behavior on all bands/pages. All bands are greyed out in the display when the EQ is off
- Band IN (hold Shape and IN) (selected Band In/Bypass toggle). For easy A/B'ing of the selected band, you may hold Shape and press IN multiple times to enable/disable that band.
- Hold Shape and turn the Width to select other plugin instances (tracks), without the need for opening the plugins

Page Order

- Band 1 though 12 (only showing the added bands). The band order is automatically set, depending on the frequency from low to high
- Phase EQ page
- Settings page 1
- Settings page 2

Page Order

1	2	3	4	5	6	7	8	9	10	11	12	Phase EQ	Settings 1	Settings 2

EN

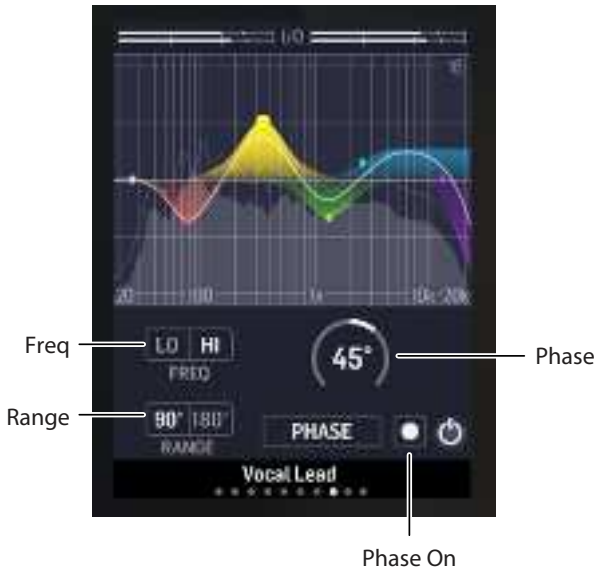
More details of the dials for the EQ bands

- FREQ: Ranges from 2 Hz to 22 kHz. Note that although the view limits the setting from 18 Hz to 20 kHz, settings outside this range can be set in with the FREQ control
- GAIN (Bell and Shelf): Adjusts the gain of each band in the range -16dB to +16dB
- WIDTH: The width knob has different functions, depending on the type of EQ selected:
  - BELL: The width knob adjusts the signal bandwidth in the range from 0.1 Octave to 5.3 Octave
  - HI SHELF: The width knob selects the Type from Soft, Classic, Bright
  - LO SHELF: The width knob selects the Type from Warm, Classic, Deep
  - LO and HI CUT: The width knob selects the Slope from 6, 12, or 24 dB/Octave
- Band IN (hold SHAPE and IN): Selected Band IN/Bypass toggle

Phase page

Note: Phase EQ needs to be enabled, and have identical FREQ LO or HI settings on all instances/tracks involved in a multi-mic setup. Adjust the Phase differently and itteratively on the involved instances/tracks, in order to optimize the tone and energy from the instrument.

- Phase EQ page



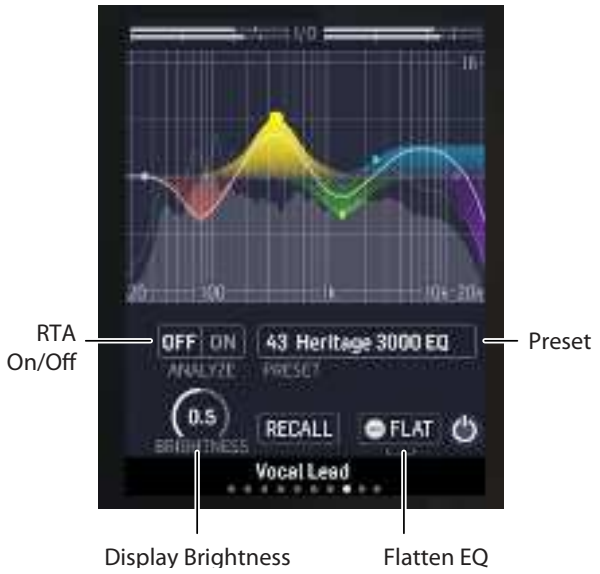
- FREQ: Selects the LO or HI frequency band for the phase EQ to address
- GAIN: Sets the Phase amount 90 or 180 degrees to be applied to the selected frequency band
- WIDTH: Selects the maximum phase amount to be set by the Phase amount parameter
- SHAPE button: N/A
- Band IN (Shape + IN): Enables/disables the Phase EQ

Settings Page 1



- FREQ: EQ view dB axis Scale zoom, 8, 16, or 24 dB
- GAIN: Master Gain +/- 16 dB
- WIDTH: Select which track (plug-in instance) to connect the Desktop Controller to. You may also hold Shape and turn Width to select other plugin instances (tracks) on any page, without having to open the plug-ins
- SHAPE button: Selects between Mid or Side, Left or Right channel when not in Mono or Stereo operation
- Band IN (Shape + IN): Adds new EQ band

Settings Page 2



- FREQ: Real-Time Analyzer on/off toggle
- GAIN: Browse through the plug-in Presets
- WIDTH: Set the brightness of the Desktop Controller display
- SHAPE button: Recall and load the selected preset
- Band IN (Shape + IN): FLAT - sets all EQ bands to 0 dB gain (Cuts = disabled) in the current channel view

7. Presets

The PEQ 3000 offers a collection of factory presets, as well as the option to create and save your own custom settings as user presets and favourites.

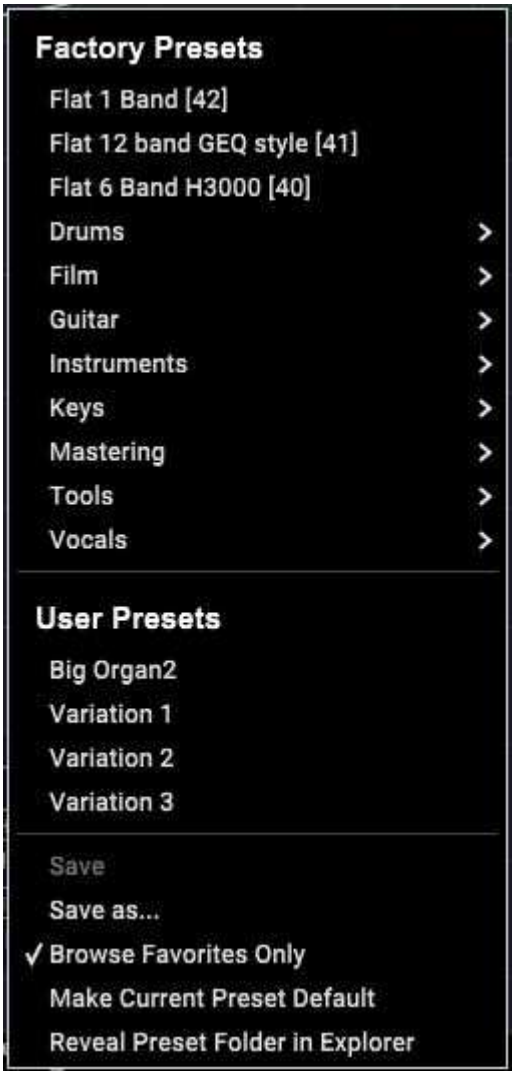
Note that most DAWs have a built-in preset function that appears on every plug-in, which is often found at the top of the plug-in window.



It is not recommended to use this as your primary method of saving presets, as it has limited functionality, and does not allow the saved presets to be transferred easily to other DAWs. Instead, we suggest using the Preset section at the bottom right area of the user interface window:



A single click on this PRESET window brings up a menu with several preset-related options. You can recall a factory or user preset from the libraries, save the current preset, or create a new user preset with the 'Save as' option.



The presets menu is divided into Factory Presets and User Presets:

7.1 Factory Presets

Factory presets are built into the plug-in and cannot be overwritten, so if a factory preset is modified and you want to keep the changes, you need to save it as a User preset. User presets can be edited and organized as you like.

When recalling a Factory preset or saved User preset, the name will appear in plain text as shown below.



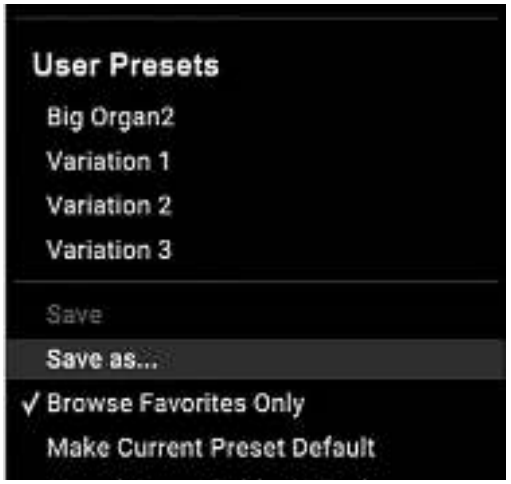
7.2 User Presets

If you make an alteration to any of the parameters in the current preset, the preset name changes to *italics* as a reminder that something has changed from the original factory preset.



To save this new setting as a User preset, click in the PRESET window, then select the Save As option. Save it with an appropriate name.

To discard the changes without saving, simply navigate away from that preset.



The altered preset will be saved as a user preset, with your new name for it, and its name will appear in the presets window.



If you modify a saved user preset, you have the option to "Save" (rewriting over the existing user preset) or "Save As" (save as a new user preset).

If you modify a factory preset, then only "Save As" is available (to save as a new user preset). Factory presets cannot be overwritten.

User presets are not given a number unless you first assign them as favourites. (See Favourite Presets below.)

You can use your computer's keyboard to enter a specific preset number, followed by the ENTER button.

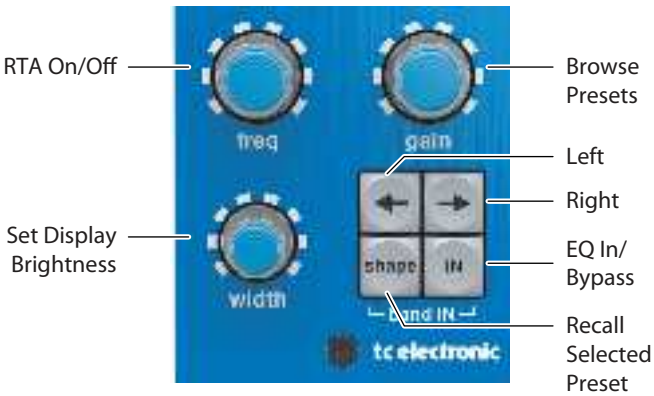
EN

7.3 Presets and the optional hardware unit

Presets can also be recalled from the hardware unit by navigating to the Settings Page 2.

- Use the Gain control to browse through the available presets
- Press the Shape button to recall and load that preset



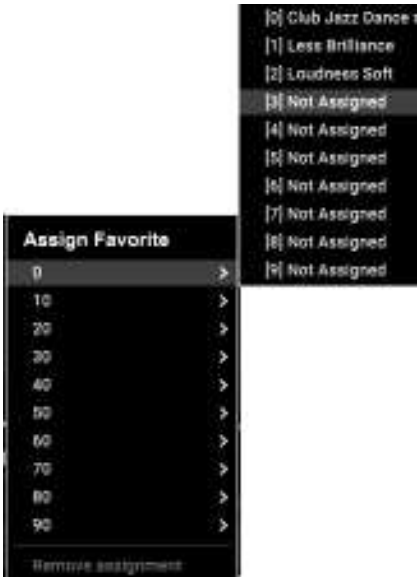


7.4 Favorite Presets

Creating your own presets will make them accessible from the Preset menu, but they will only appear in the list of 100 presets in the plug-in or hardware unit if you set them as a favorite. This is done by assigning a favorite slot number to the preset using the Favorite menu.

Click the FAVORITE (heart-shaped) button in the preset window, then select one of the 10 banks. Assign one of your custom presets to a favorite slot, then save the preset.





When a preset is assigned a favorite slot number:

- The preset is part of the 100 presets that can be recalled on the hardware unit
- The favorite number will be displayed on the hardware unit when recalled
- The favorite number will be locked so that two presets cannot be assigned to the same favorite slot number. This is shown in the Favorite menu by graying out the number in question.
- The favorite number will be displayed in brackets when you browse the presets menu

You can remove the favorite assignment by selecting the “Remove Assignment” feature in the Favorite menu, then saving the preset.

Browse Favorites Only

The 'Browse Favorites Only' option in the preset menu allows the UP/DOWN arrows in the bottom bar of the plug-in, or via the hardware unit, to scroll only through the favorites list. Otherwise, scrolling goes through all presets.



7.5 Make Current Preset Default

Selecting 'Make current preset default' will cause this preset to appear every time a new instance of the plug-in is created.

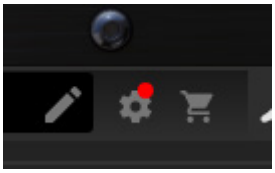
7.6 Reveal User Preset Folder in Explorer

To change the name of a preset, select 'Reveal User Preset Folder in Explorer' and modify the file name. This will open a Finder (Mac) or Explorer (PC) window where the user presets are stored. You can rename as well as delete, copy and paste presets. This allows you to share presets with other users online, simply pasting the new ones in this folder.

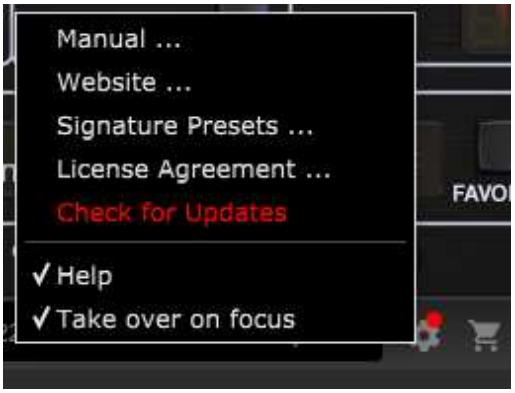
8. Software Updates

New versions of the software may be released to add new features and improve performance. Updates can be detected from the plug-in directly and can be installed after download from the website. See Chapter 2 for plug-in installation.

If the 'Automatically check for updates' option is checked inside the update menu, the red dot will appear on the settings icon when a new plug-in is available.



Click the gear icon and select "Check for Updates" to perform a scan.



8.1 Hardware Unit Software Updates (optional)

The hardware unit firmware will be included in each plug-in update.

After you have installed a new plug-in, the system will detect mismatched firmware and indicate a need for update via a small red dot on the gear icon.

Click the "Upgrade to x.x.xx" field to start the update. Progress will be indicated in the plug-in, and the Feedback LED on the hardware unit will flash.
(This example shows a TC2290 plug-in.)



EN

9. Specifications

Sound	
Processing	12 (+12) band fully parametric minimum phase IIR equalizer with phase EQ
Operation	Mono, stereo, mid/side, and left/right
Analysis	Hi-res, constant-Q real time analyzer
Sample rates	44.1, 48, 88.2, 96, 176.4, 192 kHz

Software Support	
Operating systems	Mac OS X 10.13 Sierra or above, Windows 7 or above
Drivers	No additional drivers required, uses standard USB HID drivers
Plugin formats	AAX-native, Audio Units, VST2.4, VST3. 64 bit

USB Connection (DT version)	
Type	USB 2.0, type micro-B

Power (DT version)	
Power supply	USB bus powered
Power consumption	Max. 2.5 W

Physical (DT version)	
Display	2.4 Inch, 240x320 pixel, color TFT
Controls	High-resolution, true-analog feel, endless potentiometers, and dedicated buttons
Dimensions (HxWxD)	42 x 54 x 135 mm (1.7 x 2.1 x 5.3")
Weight	0.2 kg (0.44 lbs)

Other important information

EN Important information

1. Register online. Please register your new Music Tribe equipment right after you purchase it by visiting musictribe.com. Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.

2. Malfunction. Should your Music Tribe Authorized Reseller not be located in your vicinity, you may contact the Music Tribe Authorized Fulfiller for your country listed under "Support" at musictribe.com. Should your country not be listed, please check if your problem can be dealt with by our "Online Support" which may also be found under "Support" at musictribe.com. Alternatively, please submit an online warranty claim at musictribe.com BEFORE returning the product.

3. Power Connections. Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

TC Electronic

PEQ 3000-DT

Responsible Party Name:	**Music Tribe Commercial NV Inc.**
Address:	**901 Grier Drive Las Vegas, NV 89118 USA**
Phone Number:	**+1 702 800 8290**

PEQ 3000-DT

complies with the FCC rules as mentioned in the following paragraph:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Important information:

Changes or modifications to the equipment not expressly approved by Music Tribe can void the user's authority to use the equipment.



TC ICON SERIES

tc electronic