

AMEK EQ 250

Plugin Manual



Developed by Brainworx Audio and distributed by Plugin Alliance





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About the AMEK EQ 250

A digital reimaging of the legendary parametric EQ.

The monumental mastering grade EQ

The original unit this plugin was based on, the Sontec MEP 250 EQ, was among the first parametric EQs available and legendary for their flexibility and sound quality.

It is still considered among the best EQs ever made, and is fiercely sought after even today by the best studios in the world. It is an EQ that has been heard on countless hit records, renowned for its sweet-sounding top end and tight, focused bottom.

Just like the AMEK EQ 200 plugin, the AMEK EQ 250 is inspired by the sound of Dirk Ulrich's personal studio gear and perfectly captures the sound of these legendary hardware units in a state-of-the-art emulation.

High end analog audio history in your DAW

The original hardware is a direct descendant of the original parametric EQs created by pioneers of this technology, made without inductors or switches for an uncompromising signal path. Closely related to the SONTEC MES 430B EQs found in high end mastering studios, the MEP 250 style of EQ features fully variable controls to provide the freedom and control mixing engineers demand.

Made even more powerful with plugin-only features

Brainworx' familiar "Extra Unit" adds features to this "holy grail" EQ that cannot be found on the original analog units. This retractable module includes Tolerance Modeling Technology (US Patent No. 10,725,727), M/S Processing, Mono-Maker, Stereo Width, THD, Auto Listen for all five bands and more, providing everything you need in the modern digital domain.





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Controls

Five EQ Bands

Fully parametric design with additional high-pass and low-pass filters. Each of the five EQ bands have similar controls. The Band Gain is controlled by the top row of knobs, the Band Q-Factor is controlled by the middle row and the Band Center Frequency is controlled by the bottom row.

1 EQ Band Bypass

Each EQ band can be activated or bypassed individually by clicking the red button or the white label.

2 EQ Band Gain

Each of the five EQ Bands has a 12 dB range for boosting or attenuating frequency settings.

Please Note; The Gain parameter is affected by the Gain Scale setting. Please see on Page 4 „Gain Scale”.

3 EQ Band Gain Range

For finer control of complex programme material, the Gain range can be reduced to +/- 6dB using the related switch.

4 EQ Band Q- Factor

All five bands feature a Quality range of between 0.4 (widest Q) and 4.0 (sharpest Q). Low Band and High Band have a shelving mode at the Counter – Clockwise position. Just move the knob Counter – Clockwise, release the mouse, click again and drag down. You will note the Shelving mode in the Text Call Out box.

5 EQ Band Frequency

Sets the center frequency which is continuously variable for each individual band.

6 Low Pass Filter

The Low Pass filter operates over a frequency range of 20Hz to 30kHz with a slope of 12dB/octave. The Filter can be activated or bypassed individually by clicking the red button or the white label.

7 High Pass Filter

The High Pass filter operates over a frequency range of 20Hz to 20kHz with a slope of 12dB/octave. The Filter can be activated or bypassed individually by clicking the red button or the white label.



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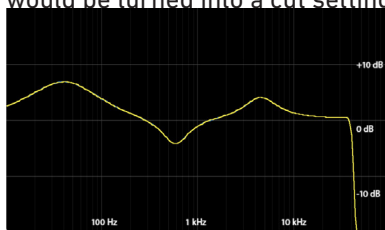
1 Gain Scale

The Gain Scale parameter gives you control over the factor by which all 5 EQ Bands are adjusted. Think of it like a global More / Less setting for all the EQ bands, like a Master Gain knob for all EQ bands. There is a visual feedback when the Gain Scale has been adjusted. All EQ Gain Values are shown in Blue or Red when the knob is adjusted.

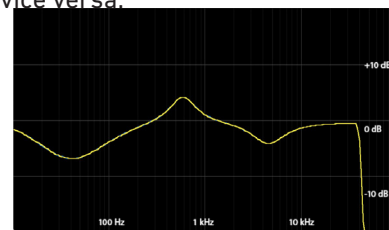
100% is the default amount at which the EQ will adjust every band according to its actual Gain knob setting; 200% is twice the gain boost or cut, and 50% is half the effect.

2 Invert

All 5 Bands can be inverted using this parameter, e.g. a boost setting would be turned into a cut setting and vice versa.



EQ Setting



EQ Setting Inverted



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3 EQ In

The two, centrally located, red switches activate or deactivate the corresponding left and right channels.

4 Auto Listen

When Auto Listen is engaged: As long as the frequency- or q-control of a specific eq-band is clicked, everything outside of the filter's bandwidth is muted. This let's you listen to the effect of a single eq-band depending on It's frequency and q. While listening, the gain is normalized.

Please check page 10 Modifier Keys.

BX Module

1 Input Meter

The Input Meter indicates the level going into the plugin and includes a clip indicator for overdriven signals. Click on the peak indicators in order to reset them. Range is -60 dBFS to 0 dBFS.

2 Input Gain

The Input Gain control sets the level at the input of the plugin. The range is from -12 dB to +12 dB.



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TMT

The AMEK EQ 250 offers 20 different eq channels, made possible by TMT. TMT is Brainworx's (TMT, US Patent No. 10,725,727) "Tolerance Modeling Technology", originally found in the bx_console line of plugins. It takes the real-world tolerances of audio components found in audio circuits into account, and offers various channels of analog audio which have realistic variances in frequency response, time constants in dynamic sections, etc. The result is digital audio that sounds as analog as possible, whereas even the L/R channels of a stereo instance will react slightly differently. For more information please check www.brainworx.audio

3 Stereo Mode

Toggles between using the same TMT channel for both units (Digital) and using two adjacent TMT channels (Analog).

4 Channels

TMT, switches between 20 different channels. In a Stereo instance, two adjacent channel numbers will be displayed. Each channel has its own, individual character!

1 Random Channel

Whenever you instantiate a AMEK EQ 250 plugin on a channel, it will start with the Default setup, which is Channel 1 in a flat setting. You can now randomize a channel by clicking the Random Channel button. Only the plugin instance you click on will switch to any unused channel number in that session randomly. The plugin will remember which channel numbers are already used in a session and activate an unused channel number, unless you engage more than 20 channels. At that point the plugin obviously would have to use a channel number that has already been used.

2 Mono Maker

This tool is a critical component for several Brainworx processors, and it is an invaluable tool when mastering or tightening up a mix. Sweepable from 20 Hz to 2 kHz, this parameter folds the processed sound to mono at and below the frequency set. The most common setting is between 100-200 Hz, below which bass frequencies reside, where common practice deems that most sound should be mono. Other uses include folding an entire mix in order to check mono compatibility and avoid phase incoherency. It can be activated or bypassed individually by clicking the red button.



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3 Correlation and Balance Meter

The Correlation Meter is a standard correlation meter tool that monitors the phases of your stereo signal. It can be handy to check phases when doing bigger changes in M/S. If the correlation meter should register from 0 to 1 it is considered in-phase, and the closer to 1 it gets, the more in phase it is. If the meter fall between -1 and 0 then it will become more and more out of phase.

The Stereo Balance Meter will indicate if your signal is well balanced. It will show how the energy of the signal is shared between L and R channels.

1 Stereo Width

Make your mix wider than it originally was by increasing the Stereo Width without losing the center of your recordings! You will not lose bass drum power or vocals by making your mix wider this way... and it will not sound different played back in mono at all. If you notice your Correlation Meter showing less than 90°, dial up the Mono Maker a bit to tighten up the low-end until acceptable levels are shown. It can be activated or bypassed individually by clicking the red button.

2 M/S

Engages Mid/Side processing. When this is set to On, the Left Channel processes the Mid (Sum) of both channels and the Right Channel processes the Side (difference) of both channels.

3 Paramter Link

This enables or disables linking of parameters for Dual Mono and Stereo operations. When both parameters have different values and link is engaged, both parameter values remain unless one of them is touched and any control offsets between channels are lost.





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Top Toolbar

1 Undo / Redo

You can undo and redo changes you made to the controls of the AMEK EQ 250 plugin at any time. The Undo / Redo will work for as many as 32 steps. This makes experimenting and tweaking knobs easy. If you don't like what you did... just undo it.

2 Settings (A/B/C/D)

The Plugin offers four internal settings (A/B/C/D) which will be stored with every preset. So, one preset can contain up to four settings. You may use similar settings with more or less compression in one setup / preset. Now, the SETTINGS can be automated in your DAW! This way it's possible to use different sounds for your lead vocals or drums in various sections of the song. Automate the A/B/C/D settings, and you can still tweak knobs of the individual settings without overriding multiple parameters in your DAW, which would be time-consuming.

3 Copy / Paste

To set up variations of similar sounds you don't have to dial in the settings several times. Let's say you like your setting A and want to use the same sound, just with less compression, as setting B.

- Simply press Copy while you are in setting A.
- Switch to setting B by pressing 'B' in the settings section.
- Press PASTE, now setting B is identical to setting A.
- Reduce the compression on the B setting.

Now you can switch between A & B and decide which one sounds best or automate different settings for various sections of your session.

4 V-Gain

The V-Gain simulates the noise typically present in analog circuits.

5 M/S Monitoring (for Stereo Channels only)

Solo M: Solos the Mid (Sum) signal being processed by the plugin.

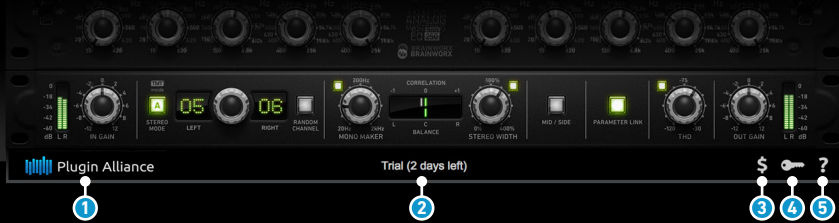
Solo S: Solos the Side (Difference) signal processed by the plugin.

6 Icon

The icon closes and opens the bottom panel containing the Brainworx's plugin only features.

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Bottom Toolbar

1 PA Logo

Clicking the Plugin Alliance logo takes you to the Plugin Alliance website via your web browser, that's if your computer is online.

2 License Type

The toolbar displays information about the type of license you're running: Trial licenses will be displayed along with the number of days until expiration; there is no note for full licenses as these are unlimited.

3 \$ (Icon)

If you are using a demo / trial version of our products, you can always click this icon to open a browser that redirects you to the respective product page in the Plugin Alliance store. This is where you can easily purchase a product without having to look it up on our website.

4 Key (Icon)

Clicking on the key icon brings up the activation dialog, allowing you to manually reauthorize a device in the event of a license upgrade or addition. You can also use this feature to activate additional computers or USB Flash drives.

5 ? (Icon)

Clicking the ? icon opens up a context menu that links to the product manual PDF, as well as other helpful links, e.g. to check for product updates online. You must have a PDF reader installed on your computer to be able to read the manual.

System Requirements & FAQ (Links)

For latest System Requirements & Supported Platforms

<https://www.plugin-alliance.com/en/systemrequirements.html>

Particular details for your product

<https://www.plugin-alliance.com/en/products.html>

Installation, Activation, Authorisation and FAQ's

<https://www.plugin-alliance.com/en/support.html>



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Modifier Keys

Tested with Logic Pro X, Protools, Cubase, and Presonus Studio One Mac/Win.

Plugin Format	Jump between Default / Last Setting	Fine Control	Auto Listen
Modifier Keys Assignment			
AU	Option	Shift	Command
AAX	Option (Mac), Alt (Win)	Command (Mac), Ctrl (Win)	Shift
VST + VST3	Command (Mac), Ctrl (Win)	Shift	Option (Mac) / Alt (Win)



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