User Manual

Synergy Core FX

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DYNAMICS PROCESSORS

Impresser

Introduction

Impresser was modeled after one of the most flexible, powerful and edgy compressors known to the audio world. Its signature sound is due to a unique analog design and a very special feature set. Impresser offers the best of classic vintage compression while adding a wider range of control options. This vintage unit, now recreated by the powerful Antelope Audio Synergy Core engine, can handle it all. Impresser can add gentle and warm compression to your tracks or aggressively pump up any source audio.

The flexibility of Impresser is aided by the addition of its own harmonic distortion. This can be used for subtle, tube-quality distortion and even in place of a tape saturator. It works its magic with or without the Impresser compressing the signal. Our own contributions to the effect are the adjustable frequency settings for the High and Band Pass Sidechain Filters. This enables even deeper control when shaping the frequency range for where you need the Impresser to work. Like all Antelope Audio FPGA compressor models, you can use the Impresser either in mono, or with two channels stereo linked.

Features

- Classic sound with modern specs and cutting-edge performance.
- Three audio modes offer user-programmable, warm harmonic distortion with tube or tape-like saturation.
- Built-in sidechain EQ with high-pass and band-pass knobs for trimming excess low-end and preventing harsh spikes.
- Eight different ratios and related compression curves – from 1:1 that gently warms up audio with low-order harmonics to "Nuke", a cold-blooded brickwall limiter.
- Stereo Link mode adds additional distortion and musicality.
- Dedicated circuitry to simulate the sound of classic opto compressors.
- UK Mode lets you get the distinct sound of an 1176LN with all the buttons pushed in.
- Easy and intuitive operation.

Quick Start

1. Insert the Impresser on the desired audio channel.
2. Set the ratio to 6:1.
3. Set the Input, Attack, Release, and Output knobs to midway position.
4. Adjust the Input knob to drive the compressor harder.
5. Switch to a higher ratio if you think you need more evident compression.

Note: Cycling through the 1:1 ratio while compressing audio may result in the signal quickly reaching its peak input level and possibly becoming dangerously loud. It is best to skip past the 1:1 ratio setting as quickly as you can, or wait for pauses in the signal while switching ratios.

Layout

1. Ratio Button

Cycles between the available compression ratios. The following ratios are available: 1:1, 2:1, 3:1, 4:1, 6:1 10:1, 20:1 and Nuke. Note that 10:1 ratio automatically enables opto compression.

2. Ratio Indicator

Shows the currently selected compression ratio. For example, at a 2:1 ratio, a signal exceeding the threshold by 2 dB will be attenuated down to 1 dB above threshold.

3. Opto Indicator

Lights up when the Impressor works in Opto mode.

4. Sidechain Frequency Knobs

Sidechain Frequency Knob (High-Pass)

Unlike the hardware original and competing emulations, Impresser offers adjustable frequency settings for the high-pass and band-pass sidechain filters. This knob tweaks

the high-pass sidechain filter. Use it to remove excess low-end and prevent the compressor from being triggered by it.

Sidechain Frequency Knob (Band-Pass)

Unlike the hardware original and competing emulations, Impresser offers adjustable frequency settings for the high-pass and band-pass sidechain filters. This knob tweaks the band-pass sidechain filter. Use it to dial out problematic or harsh frequencies that may stand in the way of proper compression.

5. Bypass Button

Bypasses the Impresser.

6. Harmonics Button

Engages the Impressor's famous distortion modes. "2nd" mode emphasizes the 2nd harmonic (octave), resulting in a warm and consonant distortion sound. "3rd" mode emphasizes the third harmonic, increases VCA output level, and flattens the signal's top & bottom peaks. The resulting sound is reminiscent of analog tape saturation.

7. Gain Reduction Meter

Displays the gain reduction (in dB) resulting from compression. The more the LEDs move to the left, the more compression occurs.

8. Clip and Bypass LEDs

Clip LED

Lights up when clipping occurs as a result of excess signal level.

Bypass LED

Lights up when the Impresser is bypassed.

9. Input Gain Knob

Not your regular gain knob, this one adjusts the compression threshold in tandem with input gain. The level of threshold modification is related to the ratio setting.

10. Stereo Link Switch and LED

Turns Stereo Link on or off. Although Stereo Link is designed to enable stereo operation with the original hardware, the circuit also colors the sound by changing threshold behavior and elevating harmonic distortion. Give it a try! Likewise, when Stereo Link is switched on, the LED lights up.

11. Attack Knob

Sets the length of time (in microseconds or milliseconds) between the input signal reaching threshold and engaging compression. The Attack times vary from 50 microseconds to 30 milliseconds. Faster attack times make the compressor work more aggressively. The fastest attack time is obtained by setting the knob to 0.

12. UK Mode Switch and LED

Emulates the raucous, hyped-up sound of the famous UREI 1176LN limiter with all four ratio buttons pushed in. UK Mode works with all ratios, but you have to keep the Attack knob set below 3 to preserve the original 1176LN character. Going higher than this raises distortion.

13. Release Knob

Sets the length of time between the signal dropping below threshold and the compressor disengaging. Release times range between 50 microseconds to 3 seconds. The fastest release time is achieved by setting the control to 0.

14. Output Knob

Adjusts the signal level at the output stage of the Impresser, letting you make up lost gain.

Ratios Explained

The selectable ratios offer a variety of compression curves, letting you sculpt the sound in perfect harmony with your audio.

1:1

Saturate and warm up your audio without applying compression.

2:1 – 3:1

Gentle compression with +15 to +30dB parabolic-shaped knee.

4:1 – 6:1

This is where you can really hear the Impresser doing its work. A 6:1 ratio with all knobs set midway is the recommended starting point for compressing just about any instrument or vocal.

10:1

Puts the Impresser in Opto mode, engaging dedicated circuitry to emulate the character of classic optical compressors.

20:1 – NUKE

Warning — here be dragons! At these settings, Impresser becomes a hard limiter that's ready to crush or expand any sound – especially room mics.

Distortion Tips

The Impresser distortion modes are designed for subtle analog distortion. Engaging "2nd Harmonics" gives out "Class A" tube-like warmth, producing 2nd-order harmonics when compressing. Likewise, "3rd Harmonics" adds both 2nd and 3rd order harmonics for a sound similar to tape distortion.

To obtain analog tape saturation, set the ratio to 2:1, turn on 3rd Harmonics, and add about 3db of gain reduction. Use fast attack and release times. Try a higher ratio and more gain reduction to emulate over-saturated tape.

Note: Going over 5dB of gain reduction will sound less like tape and more like compression!

Starting Points For Different Instruments

Here are some example settings for treating different instruments with the Impresser.

Vocals – Standard

Ratio: 6:1

Attack: 5

Release: 4

Apply 3dB to 17dB gain reduction

Vocals – Classic Compression

Ratio: 10:1 (Opto mode)

Attack: 10

Release: 0

Vocals – Aggressive Compression

Ratio: 6:1

Attack: 2.5 to 3.5

Release: 0 to 2

2nd Harmonics engaged

Apply 17dB to 20dB of gain reduction, which will be felt on louder passages only.

Bass

Ratio: 4:1 to 6:1

Attack: 5

Release: 4

Use fast attack and release times to keep clacking sounds from pumping. Apply liberal gain reduction. Try Opto mode.

Electric Guitar

Start with a ratio of 6:1 and all knobs at noon. From there, apply fast attack and medium release times to smooth out the pick attack. To get rid of harshness in solos, play with the band-pass filter control to bring forth softer notes and sustain higher notes. Feel free to try Opto mode as well.

Acoustic Guitar

Ratio: 6:1

Input: 7

Attack: 2

Release: 5

Output: 7

Piano/Keys

Ratio: 6:1

Input: 5

Attack: 5

Release: 5

Output: 5

Start with these neutral settings, then lower the attack and try slightly increasing the release. Opto mode sounds good on piano, too.

Drums – Snare, Kicks, Toms

Ratio: 3:1 to 6:1

Input: 6

Attack: 5

Release: 5

Output: 6

- Short release times bring out drum decay.

- If crackling occurs, try longer attack and release times.

- Try Opto mode for kick drums, with Attack on 10 and Release on 0.

Drums – Room Mics

Ratio: 20:1 or Nuke

Input: 10

Attack: 6

Release: 2.5

Output: 6

For a John Bonham type of larger-than-life sound, try setting Attack to 5, Release to 3, and applying up to 20dB of gain reduction. Feel free to add some grit with the 2nd and 3rd harmonics distortion as well.

Emulating Classic Compressors

The versatile architecture of Impresser enables convincing emulation of nearly all classic compressor designs. Here's how to get Impresser to take on the personalities of some well-known units!

Opto (LA-2A, LA-3A, LA-4A)

Switch to 10:1 ratio and adjust the Attack to 10, Release to 0, Input and Output to taste. Attack settings above 4 keep the opto feel. Faster attack times provide a more aggressive sound. Adding 2nd and 3rd Harmonics to the concoction gives out a tube-like character.

Over E-Z Type Sound

Set ratio between 2:1 to 6:1, Attack to 9, Release to 2. Don't use distortion.

1176LN Feel

Set the ratio between 3:1, 4:1. 6:1, and 20:1 to simulate the 1176LN's original four ratios.

Set the Attack 0 to 3.5, Release 1 to 10.5, and don't use distortion. Keep the Attack below 4, as the 1176LN has extremely fast attack times.

Fairchild IGFET

Set ratio to 6:1, Attack between 3 and 5, Release between 2 to 7. Keeping Attack and Release at 4 is a good starting point.

Tubechild 670

Introduction

Modeled after a legendary 1950s compressor, Tubechild670 gives you nothing less than the sound of the golden age of rock'n'roll. An expensive collector's item, the hardware original has been sought after and used by more studios and on more hit records that you can ever imagine.

Tubechild670 is a precise peak limiter that sounds thick and natural. It gives you control over the Input and Output Gain levels, the Threshold and the Time Constant. We owe its signature sounds to a very smart and simplistic circuitry design, short attack, and long release time. The Tubechild 670 is guaranteed to help vocals and leads shine in the mix, but also works its magic on drums and sounds spectacular when applied for "gluing" groups of instruments. It's very subtle in terms of adding its own character to the overall sound, but you can't mistake a Tubechild670-treated track as it just sounds so great!

Features

- Classic valve compressor used in recording sessions by the Beatles and countless artists
- Pristine sound devoid of audible thumps, distortion and noise.
- Extremely fast attack time — Tubechild 670 can engage in compression and limiting during the first 10,000ths of a second.
- Six different timing curves make for a variable release time, allowing for severe limiting that's virtually imperceptible.
- Functions both as a compressor and limiter, or anywhere in-between.

Quick Start

1. Load Tubechild 670 on the desired audio channel.
2. Set Input Gain to 10 (that's unity gain).
3. Set Time Constant to 3. *
4. Turn the Threshold control clockwise or counterclockwise until a desired amount of limiting or output level is achieved.

This is a general purpose starting point. Positions 1 and 2 are recommended for uptempo music or speech. Position 4 is suggested for classical music. Positions 5 and 6 combine fast release with slow release and are useful for great amounts of automatic level corrections. They also make limiting the least audible as they reduce overall level.

Layout

1. VU Meter

Shows the gain reduction occurring as a result of compression or limiting.

2. Power On/Off Switch

Used to bypass the compressor. Acts the same as the BP button in the AFX Rack.

3. Input Gain Control

Adjusts input gain in 1db step increments.

4. Threshold Control

Adjusts the compressor threshold. Continuously variable (non-stepped).

5. Time Constant Switch

Has 6 positions. Controls the Tubechild 670 Attack and Release times as listed in Specifications.

6. Output Gain Control

Adjusts output gain. Used to dial back in the gain lost as a result of compression or limiting.

Interesting Facts

- The original hardware unit uses only a single push-pull stage of audio amplification and an extremely high control voltage. Thus, the Automatic Gain-Controlled Amplifier does not produce audible or observable thumps.
- The Tubechild 670 Attack time is extremely fast in order to catch short transients. Likewise, the release time is adjustable from 0.3 seconds to 25 seconds in six steps.
- The compressor can be inserted into any channel strip and set at unity gain with no limiting action. You will probably end up liking its effect on audio quality!
- Turning the Threshold control fully counterclockwise completely removes the limiting action, turning the Tubechild 670 into a Unity Gain Line Amplifier.

SMT 100A

Introduction

A 1980s classic, the SMT-100A is among the easiest compressor effects to learn. Yet, this ease of use doesn't come at the cost of effectiveness or sound! For over 30 years now, this unit has remained a top choice by the pros for its fast attack times and its ability to do a great job with vocals, drums, and bass. For its digital replica, we worked hard to painstakingly preserve both the special sound of the SMT-100A and its simplistic

design and control set. This way, you can focus on getting the sound you want quickly, without much of a learning curve.

Features

- Easy to use vintage compressor
- Soft Knee characteristic for smooth compression
- Thick and warm sound
- Attack and Release settings selectable via switches

Layout

1. Attack Switch

Switches between slow, medium or fast attack times, controlling the time it takes for the compressor to respond to the input signal.

2. Release Switch

Switches between slow, medium or fast release times. The slower the release, the more release time gets determined by the input signal.

3. Gain Knob

Determines the output level of the compressor.

4. Gain Reduction Meter

Used for monitoring the gain reduction occuring as the result of compression.

5. Gain Reduction Knob

Sets the amount of gain reduction. The higher it is, the higher the ratio becomes.

6. Power Switch & Diode

Used to bypass the compressor. The diode lights up when the SMT-100A is in Bypass mode.

7. Output Meter

Monitors output signal level.

Usage Tips

• As Gain Reduction is increased your audio will be treated with a smooth compression curve and the compression ratio will be changed. Use this knob to control the amount and type of compression, letting your ears be the judge.

• Upon detecting a large peak, the SMT-100A will automatically increase the compression ratio to keep the audio in control.

• For higher amounts of compression, adjust the Gain Reduction knob until a high amount of gain reduction is visible on the meter. Try different Attack and Release settings, depending on the sound that you are after.

• For lower amounts of compression simply adjust the Gain Reduction knob until the meter indicates a small amount of gain reduction is occurring.

Interesting Facts

- The original hardware compressor features a vacuum tube amplifier driving an electronically balanced 990 output stage. All the signal amplification in the audio path takes place in the tube circuit. The 990 is a high performance op-amp made of discrete parts and then potted for thermal stability.

- The compressor's input is electronically balanced and directly feeds the unique compression cell.

BA-6A

Introduction

BA-6A follows the original simple, beautiful, and effective design of a 1950s limiting amplifier. Although it was originally created for TV and radio broadcasting purposes, the BA-6A was quickly adopted by many recording engineers because it was easy to use and sounded so great. Even today, the BA-6A not only holds up, but is still sought after and used in various pro studio facilities across the globe.

Boasting three-stage amplification with a moderate drive, hard knee, fast attack and medium release, the BA-6A offers a balanced and vintage sound. It can help you tame

the most aggressive and peaking instruments or the wildest mixes without losing any of the music's punch.

Features

- Balanced, three-stage limiting amplifier.
- Prevents over-modulation or overloading.
- No appreciable increase in harmonic distortion.

Layout
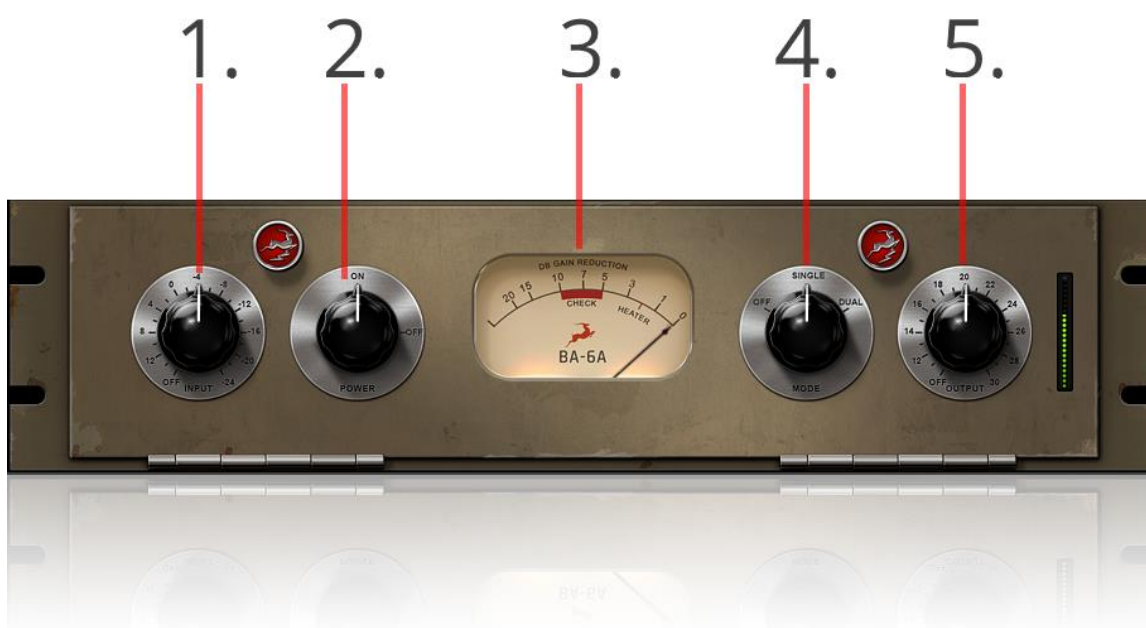
1. Input Gain Knob

Adjusts input gain between +12dB to -24dB.

2. Power On/Off Knob

Turns the original hardware On or Off. Here, it's used for bypassing the effect.

3. Gain Reduction Meter

Shows the gain reduction (in dB) occurring as the result of compression.

4. Mode Knob

Selects a filter with either a single or dial-time constant. In the "single" position, the attack time is 0.0006 seconds. In the "dual" position, the recovery time is lengthened to 2 seconds on sustained peaks.

5. Output Gain Knob

Adjusts output gain between 0 – 30dB.

Tips

The BA-6A very much sounds like itself. There's not much opportunity to shape the sound in critical detail. What it lacks in flexibility, the compressor certainly makes up for with its warm, thick sound full of vintage character. Simply run your audio through it, back off on the output a bit to avoid thumping, and experiment with the Input and Mode knobs until you like the result. Use the BA-6A on vocals, bass guitar, or on the master channel. It will also sound fantastic on acoustic guitars, drums, and anything else in need of a good fattening-up.

Grove Hill Liverpool

Introduction

Grove Hill Liverpool is a contemporary fusion of 1960s' finest American and British compression technologies. This compressor sounds rich, wide and thick. Run acoustic guitars through it and you'll hear them as clear as possible, yet with a more full-bodied sound and soul.

A great mid-range healer, Liverpool will add a desirable smoothness to guitar leads, synths and vocals. When applied to bass it will achieve a big and warm sound. Push it harder and you'll add an edge without affecting clarity. Liverpool is an amazing tool that's quite unlike other compressors! See for yourself.

Features

- All-tube feedback style compressor from the 1960s
- Based on a dual-triode, remote cut-off Mu tube for gain reduction, re-biased by a 6AL5 vacuum tube.
- Faithfully recreated solid state power supply provides low noise and stability, even at 30dB (maximum) of gain reduction.
- A wide range of input signals can be handled without introducing harmonic distortion.
- Can be used for achieving musically pleasant distortion without applying compression.

Layout

1. Input Gain Knob

Unlike many other compressors, this control here plays two roles. It is used both for adjusting input level and to specify the desired average compression as indicated by the gain reduction meter.

2. Threshold Knob

Again, there are two functions to this knob. Its primary purpose is determining the output level at which compression commences. Secondary, it adjusts the ratio.

3. Attack Knob

The Attack Knob controls how much of the signal transient is allowed through before compression starts. There are 6 different speeds, labeled 1 (Fast) to 6 (Slow), with every second selection labeled 'C' — for turning off the compression. In these positions, the effect can be used as a line amplifier.

ATTACK TIMES

Knob Position	Attack Time
1	3 milliseconds
2	19 milliseconds
3	48 milliseconds
4	77 milliseconds
5	109 milliseconds
6	138 milliseconds

4. Gain Reduction Meter

Used for measuring the gain reduction which occurs as the result of compression.

5. Recovery Knob

The recovery control determines how quickly the signal rebounds after the input signal has fallen below the threshold. There are six Recovery positions labeled 1 (Fast) to 6 (Slow), with every second selection (labeled H) turning on the Hold function.

The Hold function is a unique feature of the Liverpool. It was added as a modification of the original compressor based on feedback from recording engineers. The Hold function is explained in more detail later in this manual.

RECOVERY TIMES

Knob Position	Recovery Time
1	127 milliseconds
2	447 milliseconds
3	917 milliseconds
4	1.9 seconds
5	3.4 seconds
6	6 seconds

6. Output Gain Knob

The output attenuator of the Liverpool is controlled from a six-position rotary switch. This method of attenuation allows for constant impedance on the output transformer as well as the load. The available choices are: 0dB, 5 dB, 10dB, 15dB, 20dB, and 30dB.

7. Mains Power On/Off Switch

In the hardware original, the power switch is used to turn the compressor On or Off. Here, it is used for bypassing the effect.

Hold Function Explained

When trying to process the initial attack of an audio track, the slow attack of the compressor will cause an audible thump to be produced. In such cases, the Hold

function is used to "prime" the compressor with the required amount of gain reduction first, thus preventing the thump from occurring.

This is done by playing a track into the compressor, setting the controls as required, then moving the Recovery control to one of the Hold positions. This prevents the compressor release from taking place, maintaining the amount of gain reduction.

The track can then be stopped and played from the beginning. Once the initial attack of the first note has been processed, the compressor can be switched out of Hold and put back to the desired Recovery setting.

If the unit is compressing a track with room ambience, the ambient noise from the recording would swell up in volume at the end of the performance as the gain reduction returned from the compressed level to zero.

This can be avoided by switching the Recovery control to an adjacent Hold position after the last note has finished, which would stop the compressor release from taking place.

Interesting Facts

- The original hardware is based on a Mu tube — an all-glass, miniature VHF, dual-triode, remote cut-off tube used for gain reduction. This tube is re-biased by a 6AL5 vacuum tube-rectified, side-chain control voltage, which causes the Mu tube to smoothly change its mutual conductance.
- The benefit of utilizing a variable mutual conductance vacuum tube as the 'heart' of the compression is that a variety of input signals can be handled without introducing harmonic distortion.
- The input control on the LIVERPOOL is located before the tubes and directly after the input transformer. As you advance the input control, you are hitting the input tube at the gain reduction stage with more signal. The signal is then amplified by the second stage.

- Distortion can be creatively used by turning up the Input Gain Knob and turning down the Output Gain Knob while applying very little or no compression.

FET-A78

Introduction

If you need some punchy, classic-style compression, the FET-A78 is definitely among your top choices. Its sound can be found on a huge number of your favorite pop and rock records, as it acts great for processing both instruments and full mixes. The FET-A78 is incredibly flexible, too, so don't hesitate to treat drums, guitars, vocals, or anything else with it.

The limiter also won't disappoint while working on a group of instruments, such as backing vox, overheads, or crazy synth layers. You can use the FET-A78 in Stereo mode to treat Stereo tracks, apply it on overly dynamic bass lines to make them behave themselves in the mix, and so much more!

Features

- Classic compressor & limiter used on countless records.
- Highly versatile operation, good for various instruments, vocals, and entire mixes.
- Extremely slow to extremely fast Attack & Release times.
- Simple and intuitive operation.

Layout

1. Power On/Off Switch & LED

When it's turned on, the effect is bypassed and the LED lights up.

2. Input Knob

Adjusts input gain.

3. Output Knob

Adjusts output (make-up) gain.

4. Attack Knob

Adjusts the compressor Attack time — the length of time between the input signal reaching the compression threshold and commencing compression. Ranges between 20 microseconds to 800 microseconds.

5. Release Knob

Adjusts the compressor Release time – the length of time between the signal dropping below the compression threshold and the compressor returning to 1:1 ratio. Ranges between 50 milliseconds to 1.1 seconds.

6. Gain Reduction Meter

Monitors the gain reduction occurring as the result of compression.

7. Ratio Buttons

Select the compressor ratio. The choices are: 4:1, 8:1, 12:1, 20:1. Holding Ctrl on Windows (Command on Mac) and clicking lets you "push" all the buttons in, emulating the famous "all-buttons-in"/UK Mode sound of UREI limiters.

8. Output Gain Meter

Visualizes output gain.

Functionality Explained

Following are explanations and tips regarding the FET-A78 controls and operation.

Ratios

• With the FET-78, ratios up to 8:1 achieve a moderate form of gain reduction where the dynamic range is controlled without obvious alteration. The average signal level is increased, and the softer passages become louder.

• Ratios from 12:1 to 20:1 push the FET-78 into limiting. The dynamic range is significantly reduced, and high-level peaks are minimized. The output signal cannot exceed a preset level due to practical considerations.

Threshold

• The relationship of the average input level and the threshold determines the amount of gain reduction and how much of the signal envelope is affected by the limiter action.

• The 1178 allows raising the signal level without introducing distortion.

• Adjusting the input gain so that the average signal level is consistently above the threshold means the entire signal will be compressed.

Attack Time

• While mixing or mastering, start with the Attack knob set to noon and experiment with different settings to find the best one for your material.

• Choose a fast attack time for material with fast transients and high frequencies with large peak-to-peak amplitudes. This way, potential overshoots and overload problems are kept minimal.

• Limiting with a fast attack time will alter the musical quality of some instruments with a characteristically sharp percussive attack.

• Slow attack times let the initial transients of instruments with fast amplitude changes pass through unaffected. This maintains the punch of percussive-sounding instruments like drums, bass, piano, and guitar at the cost of some amplitude control.

Release Time

• A good starting point for both individual instruments and mixing or mastering purposes is half-rotation (setting the knob to noon).

• The best practice for adjusting Release Time is to strive for a quick response of the FET-A78 to dynamic changes of the signal while avoiding unwanted "pumping" and "breathing" effects.

• With very short release times, the FET-A78 will return the gain reduction to 0 dB every time the signal drops below the threshold. This can happen between cycles of individual notes and beats — the gain comes up each time, along with the softer passages or the background noise.

• Warning — extremely short release times may introduce harmonic distortion if the gain reduction changes between cycles.

• Very long release times maintain the initial gain reduction caused by large amplitudes, but the dynamic range of the following passages gets strongly affected. If the gain reduction continues through a soft program section, this section may be made inaudible because of the gain reduction. Furthermore, short dynamic changes will be ignored due to the continuous gain reduction.

Limiter

• When using the FET-A78 as a limiter, its effect is made most apparent on full mixes. As always, it is important to dial in the appropriate Attack and Release times for optimal results.

• For live recordings, use a slower attack time to maintain a high average level.

• For material with relatively little low frequency content, use a fast release time to increase the short interval average level. The highest apparent average level may be achieved with the shortest release time before overt "pumping" occurs.

• For material with above average low frequency content, the release time should be increased until no low frequency distortion is apparent. Another option is slightly reducing the amount of limiting in favor of slightly faster release time — obtaining a higher average level as a result.

• Adjusting the Attack time also affects the amount of sibilance. Be careful with extremely slow attack times, they may result in full gain being applied to the sibilants and reduced gain to the vowels, ending up with exaggerated sibilants as a result.

• You are encouraged to experiment until you find appropriate settings that work for your material.

ALT-436C

Introduction

Modeled after another late 1950s legend, the ALT-436C is an iconic single channel, vari-MU tube compressor with fixed attack times. Being the third revision of a compressors series, which were heavily modded by sound engineers working on pop records of the era, the ALT-436C has added Threshold and Release Time controls.

Loved by producers in the Beatles era, this initially inexpensive and now legendary unit is extremely helpful for bass guitars, vocals, string instruments, and even synths! Back in the day pop music wasn't so cold and sterile, and this unit is one of the reasons why.

Features

- Up to 30 dB of thump-free gain reduction.
- Maintains uniform level of reproduced sound.
- Preserves optimum dynamic range.
- Does not cause overmodulation.

Layout

1. Volume Control Knob

Adjust the input level to provide the desired average compression as indicated on the Compression Meter.

2. Release Time Control Knob

Controls the length of time between the signal falling below the compression threshold and the compressor returning to 1:1 ratio (effectively stopping compression). Adjustable between 0.3 seconds to 1.3 seconds.

3. Compression Meter

Displays the compression amount in dB.

4. Threshold Knob Control

Adjusts the output level at which compression commences, as well as the compression ratio. Here are some examples:

- At maximum clockwise position, compression starts at approximately 16dBm output level. Increasing the output level by 20dB at this point results in a 5dB output level increase, thus giving a 4:1 compression ratio. At this setting, maximum compression before distortion is 22dB.

- In the maximum counter-clockwise position, compression starts at zero level. An 20dB increase in input level results in an output level increase of 10dB, making for a 2:1 compression ratio.

Stay-Levin

Introduction

Simple design and controls, epic looks, massive sound. Stay-Levin is a unit that shaped the sound of the US 1960s classics. Without a doubt carrying a character and color of its own, it recreates a valve compressor legend that will add a desired analog edge to your contemporary production. Its simple front panel set of controls, featuring only two knobs and two switches, can result in a surprisingly varying compression styles, which can enhance vocals, acoustic guitars and synth leads. Treat your bass and drums with it and they'll grow bigger and meaner.

Layout

1. Input Gain Control

Adjusts the input gain.

2. Recovery Time Control

Switches between Slow to Fast recovery (release) times.

3. Mode Switch

Switches between Single and Double recovery times mode.

4. Gain Reduction Meter

Visualizes the gain reduction occurring as the result of compression.

5. Power On/Off Switch & Diode

Bypasses the compressor. The diode lights up when the compressor is On.

6. Output Gain Control

Adjusts output gain.

Usage Tips

Different types of musical content require different recovery times. That's why Stay-Levin has a switch marked "Double" and "Single" for changing the recovery time. In the Single position, the recovery time is fixed and does not change much with occasional short peaks or steady re-occurring peaks. It is best used on classical music or material requiring the most dynamic range. For speech and most popular music, it is best to use the Double recovery time position.

The Attack times in the different positions are as follows: 75 milliseconds for Single and 25 milliseconds for Double.

VCA160

Introduction

VCA160 combines classic sound, perfect metering and ease of use. Suitable for both "brick wall" limiting and subtle pushing, the hardware original has been carefully modeled to preserve its distinct character in both bad-ass hard knee or gentle low ratio compression. This fast and firm VCA-style compressor is great for controlling vocals, bass guitar or individual drums. When used with aggressive transient sounds, such as kick drums or bass, the VCA160's fast response can create a classic punch or "thwack", which has become a unique part of its famous pedigree.

Features

- Continuously variable threshold control.
- Compression control that goes from a ratio of 1:1 to infinity (approximately 120:1).
- Output control adds up to 20dB of make-up gain.
- Virtual Gain Reduction Meter for visualization.
- Easy bypass with the Power button.

Layout

1. Power On/Off Button

Turns the compressor On or bypasses the effect. Corresponds to the BP button in the AFX Rack.

2. Threshold Control

Adjusts the level above which compression or limiting occurs. When the Below indicator lights up, the compressor input level is below the threshold. When the Above indicator lights up, the input level to the compressor is above the threshold.

3. Compression Control

Adjusts the compression ration from 1:1 (unity gain) to infinity (approximately 120:1 ratio). The compressor becomes a limiter at ratios above 10:1.

4. Output Gain Control

Adjusts the gain of the compressor output stage. The signal can be raised or attenuated by up to 20dB. The control is independent of the Threshold and Compression controls.

5. Gain Reduction Meter

Visualizes the gain reduction that occurs as the result of compression.

Quick Start

1. Turn the threshold control fully clockwise.
2. Adjust Output Gain to noon (0dB).
3. Adjust Compression Ratio to an appropriate setting — between 1:1 and 4:1 for compression, from 10:1 to infinity for limiting.
4. Play the material you are compressing or limiting. Adjust the Threshold counterclockwise until the Above LED starts flickering. At this setting, compression will begin when the input level exceeds the threshold setting. Further counterclockwise rotation will cause compression to start at a lower point relative to the maximum input level.

Tube176

Introduction

The hardware original behind Tube176 owes its sound to a unique variable-mu dual triode tube which is long out of production. Now this cult studio piece is brought back to life as a powerful, fast compressor, which can be used on everything — vocals, guitar solos,

bass lines, drums, or even a full mix. Able to smooth the sound or completely flatten it when pushed really hard, Tube176 makes drum transients shine and boosts vocals through a busy mix.

Features

- Quintessential vintage tube compression and limiting.
- User-friendly controls.
- Enhances dimension, depth, and detail.
- Adjusts tone in a way equalization cannot.

Layout

1. Input Level Control

As the Tube176 has a fixed threshold, gain reduction is adjusted by the Input Level Control. The input is optimized to provide 0 to 20dB of gain reduction.

2. Compression Ratio Control

Adjusts the compression ratio in four steps, from 2:1 to 12:1. Lower ratios compress audio over a wider dynamic range. Higher compression ratios are better for limiting purposes. The ratio control also changes the threshold. At lesser amounts of gain reduction, lower ratio settings will start compression sooner than higher ratios.

3. Power On/Off Switch

Turns the compressor On or bypasses the effect.

4.Compression Meter

Displays the compression amount in dB.

5. Attack Control

Adjusts the Attack of the compressor. Slow Attack lets more initial transients through. Fast Attack tames peaks and sounds more aggressive.

6. Output Gain Control

Adjusts output gain. Match the Output gain to Input level or make-up lost volume due to gain reduction.

7. Release Control

Adjusts the compressor Release time. Slower settings retain more of the original dynamics. Faster settings add energy and density to the sound.

8. Output Gain Meter

Visualizes the output gain of the compressor.

X903

Introduction

The X903 is a cult compressor module which will add just the right amount of analog punch needed! Equipped with smart RMS detection, the X903 will treat your sound to high-end, authentic analog compression and limiting. With the X903's Negative Ratio capabilities, you can even inverse the dynamics of audio material, pulling back the transient peaks for a unique special effect. All in all, the X903 is a natural-sounding compressor capable of managing dynamics in great ways!

Features

- Natural-sounding compression even at relatively large amounts of gain reduction.
- Infinite and negative compression make unusual special effects possible.
- RMS detection interprets the signal level as the human ear does for superior compression and limiting.
- Continuously variable Compression Ratio and Threshold settings.
- LED Gain Reduction metering.

Layout

1. In Button

Activates or bypasses the compressor. If the diode above is lit, the compressor is active. If it's not, the compressor is bypassed. The In button also doubles as the BP button from the AFX Rack.

2. Threshold Control

Adjusts the sensitivity of the compressor.

3. Ratio Control

Varies the amount of compression from 1:1 (no compression) through to Infinity:1 (infinite compression). You can also go into negative compression ratios, producing inverted dynamics and a sense of "punch".

4. Output Control

Controls the output gain from –20dB to +20dB.

5. Gain Reduction Meter

The LEDs indicate the amount of compression in dB.

Functionality Explained

Threshold

The Threshold control sets the level at which the X903 starts compressing the signal you are processing. At low compression ratios, a very low threshold setting can gently reduce the overall dynamic range of your audio. Higher compression ratios coupled with low threshold settings provide levelling for instruments and vocals.

High threshold settings are generally used for limiting. Compression at low threshold settings tends to sound less natural at ratios of 10:1 or greater. The X903 uses a soft knee at the compression threshold. This means it gradually increases the compression ratio from 1:1 towards the selected ratio as the input signal rises through the threshold region.

With this compressor, the threshold is defined as the point approximately midway between fixed gain and the point at which the curve levels off to the selected compression ratio. At the Infinity:1 setting, the maximum permitted output level is 5dB above threshold with the Output gain set to 0.

Compression Ratio

A setting of Infinity:1 means the input signal must reach an infinitely high value for a 1dB increase in output level to be produced.

High compression ratios (6:1 or greater) and low threshold settings reduce dynamic range and prevent output signals from substantially exceeding the threshold setting.

Low compression ratios (4:1 or lower) affect dynamic range to a lesser degree.
High compression and low threshold are typically used to tighten up the sound of the bass guitar, snare drum, or vocal.

At the extreme clockwise Ratio Control rotation, a –1:1 Output to Input ratio is achieved. This way, the X903 reduces the output level by 1dB for every 1dB that the input signal increases above the Threshold setting. Thus, the X903 output will start rising in level with the input until it begins to approach the Threshold setting.

At this point, output level will begin decreasing with further increase in input level. At a relatively low threshold setting, the dynamics of some instruments will become inverted for an effect similar to tape being played backwards.

Gyratec X

Introduction

Gyraf Gyratec X carries the might of a true tube stereo compressor! Widely recognized for its speed, and featuring technology used in early limiters like the coveted Fairchild 670, this Vari-Mu beast from Gyraf Audio comes alive in the digital domain!

Thanks to its smooth high-pass filtering, it allows hard compression of the low end without dirtying up the sound. The Gyraf Gyratec X is perfect for using along with other types of compressors and Antelope's growing list of Vintage Effects processors. We are proud to be the first to offer a digital replica of this unit!

Features

- True tube Vari-MU compressor.
- Faster response than electro-optical compressors.
- No-feedback signal path & pure Class A topology.

- Warm, musical sound.

Layout

1. Input Level Control

Controls the input level for the first variable gain stage – the "drive" for the compressor. To obtain unity gain, set the Input and Output Level controls at their two o'clock positions.

2. Threshold & Ratio Controls

The Threshold control sets the level at which compression sets in. Turning it counter-clockwise selects a lower start point, which brings out more compression. Turned fully clockwise, the control stops compression.

The Ratio knob controls the amount of compression of the signal which exceeds the threshold value. Setting this control fully counter-clockwise deactivates compression.

3. Gain Reduction Meter

Visualizes the gain reduction occurring as the result of compression.

4. Power On/Off Switch

Activates or deactivates the compressor. The gain reduction meter lights up to indicate that the compressor is active. The switch corresponds to the BP button inside the AFX Rack.

5. Attack & Release Controls

The Attack control adjusts the time it takes the compressor to react to a rising input level.

The Release control adjusts the amount of time between the input signal falling below threshold and the compressor returning to unity gain.

6. Output Level Control

Controls the signal level to the output driver stage and the compressor output.

7. Output Level Meter

Visualizes the level of the output signal.

FET-A76

Introduction

FET-based compression has been a staple in the studio since its invention in the late '60s. The Antelope Audio FET-A76 captures all the subtleties and nuances of a vintage FET compressor. Just like its analog progenitor, it's useful not only for controlling

dynamics and sculpting tone, but also for its ability to add punch and presence to anything passing through its circuits.

Mirroring the original hardware's simplified and intuitive interface, the FET-A76 features Input & Output gain controls and a selectable 4-way ratio control with an additional "all-buttons-in" mode for an aggressive compression character.

Features

- Vintage FET (Field Effect Transistor)-based compression and limiting.
- Versatile and powerful, suitable for a wide range of instruments and vocals.
- "All-buttons-in" mode allows drastic and aggressive compression.
- Simple and intuitive interface.

Layout

1. Input Control

Controls the input level for the first variable gain stage – the "drive" for the compressor. To obtain unity gain, set the Input and Output Level controls at their two o'clock positions.

2. Output Control

The Threshold control sets the level at which compression sets in. Turning it counter-clockwise selects a lower start point, which brings out more compression. Turned fully clockwise, the control stops compression.

The Ratio knob controls the amount of compression of the signal which exceeds the threshold value. Setting this control fully counter-clockwise deactivates compression.

3. Attack & Release Controls

Visualizes the gain reduction occurring as the result of compression.

The Attack Control

It adjusts the length of time it takes the FET-A76 to respond to a signal and begin gain reduction. The Attack time can vary between 20 microseconds to 800 microseconds. It is at its fastest when the knob is in the fully clockwise position, and slowest when it's fully counterclockwise.

Turning the Attack knob all the way to the Off position disables compression altogether — although the signal still passes through the FET-A76 and gets "colored" musically. With fast attack times, gain reduction is engaged almost immediately after the signal reaches the compression threshold. Short transients are caught by the compressor and reduced in level; thus the sound becomes softened. With slower attack times, these transients will pass through unaffected before limiting or compression occurs.

The Release Control

Adjusts the length of time it takes the compressor to return to its initial level after compressing the signal. The release time is adjustable between 50 milliseconds and 1100 milliseconds (that's 1.1 seconds). The Release time is at its fastest when the knob is in its fully clockwise position, and slowest when in the fully counterclockwise position.

How to set the Release time? Consider these hints. If the Release time is too fast, "pumping" and "breathing" artifacts may occur. Set it too slow, and loud sections may cause persistent gain reduction throughout soft sections, making them hard to hear.

4. Ratio Buttons

Choose the compression ratio. The available options are 4:1, 8:1, 12:1, and 20:1. At the latter two ratios, the FET-A76 is limiting audio instead of compressing it. Higher ratio settings also set the signal threshold higher.

Hold down Ctrl (or Command on Mac) and click to press multiple ratio buttons and obtain the aggressive "all buttons pushed in" sound — great for beefing up a drum bus or ambiance and room mics with parallel processing, for example.

5. Gain Reduction Meter

Visualizes the gain reduction occurring as the result of compression.

6. Power On/Off Button

Turns the compressor On or bypasses it. The button doubles as the BP button in the AFX Rack.

7. Output Gain Meter

Visualizes the output signal level.

Quick Start

1. Start by setting the Input and Output knobs to their 12 o'clock positions (unity gain).
2. Set the Attack and Release controls to their 12 o'clock positions (at approximately "4"). Some gain reduction will occur.
3. Slowly turn the Input control clockwise until the desired amount of gain reduction is achieved.
4. Adjust the Attack & Release times until they sound suitable for your material.
5. Raise the Output level to make up for lost gain.

PowerFFC

Introduction

The Antelope Audio FeedForward Compressor is featured in all our interfaces. It comes with all the necessary controls — Threshold, Ratio, Attack, Release, and Knee. Furthermore, the Detector drop-down menu offers several Peak / RMS sense modes to choose from! The FeedForward Compressor is easy to use, but it gets the job done just right — all while sounding quite like a real hardware unit. Enjoy working with it!

Features

- Threshold, Ratio, Attack, Release, and Knee controls.
- A choice of Peak / RMS sense modes.
- Visualized gain and threshold.
- Sounds like a genuine hardware compressor.

Layout
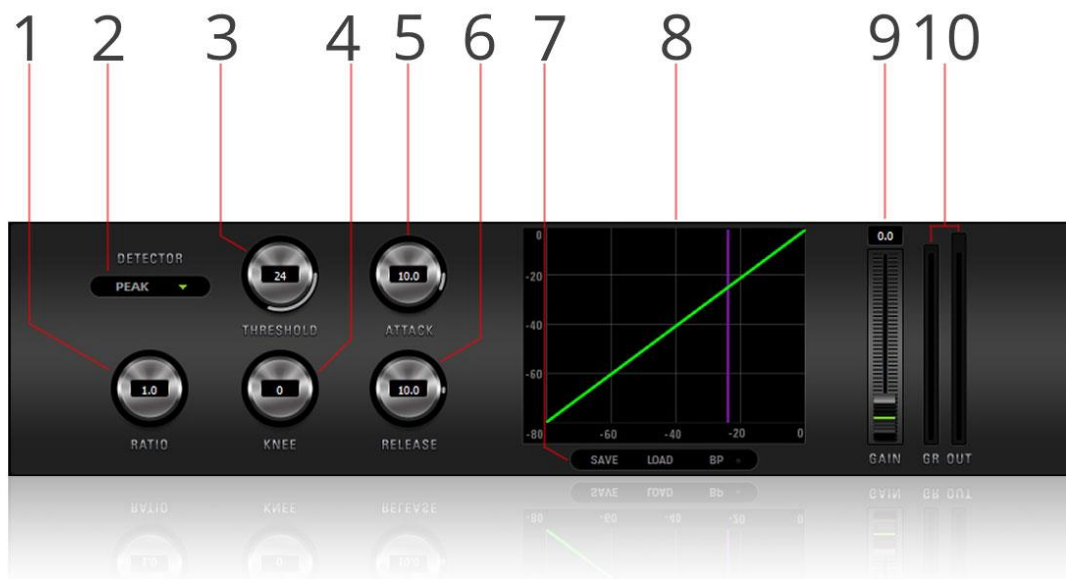
1. Ratio Control

Adjusts the compression ratio.

2. Detector Menu

Lets you choose the detector mode of operation. The available options are: Peak, RMS 20, RMS 50, RMS 100, RMS 150, RMS 200. Try how the different settings sound on your material and stick with the one you like most.

3. Threshold Control

Lets you adjust the signal threshold.

4. Knee Control

Adjusts the compressor knee.

5. Attack Control

Adjusts the compressor attack.

6. Release Control

Adjusts the compressor release.

7. Save, Load, BP Buttons

Provide the following functionality: Save Preset, Load Preset, Bypass compressor

8. Meter

Visualizes gain (green) and threshold (purple).

9. Output Gain Adjustment Fader

Lets you adjust output gain, compensating for lost or excess gain.

10. Gain Reduction and Output Level Meters

Visualize Gain Reduction and Output Level, respectively.

PowerGate

PowerGate is a noise-gate that lets you track audio from sources with unwanted background or ground noise. It will keep your sound free of artifacts, such as bad resonances, bleeds from other sources, or excessive sustain. PowerGate features a standard set of controls, such as Threshold, Attack, Hold, Decay, Range, and Gain. They let you adapt the effect to any kind of sound. The provided visualizer is non-interactive, it illustrates the noise gate's operation.

Functionality

- Threshold – this sets the level at which the gate opens to let the sound through.
- Ratio – adjusts the balance between the original and gated sound.
- Attack – sets the time it takes for the gate go from a closed state to an open state.
- Hold – allows the gate to be held open after the signal level has fallen below the threshold.
- Decay - sets the time it takes for the gate to go from fully open to fully closed.
- Range - sets the amount of attenuation to be applied to the signal when the gate is closed.
- Gain - adjusts output volume level.
- On/Off switch

PowerEX
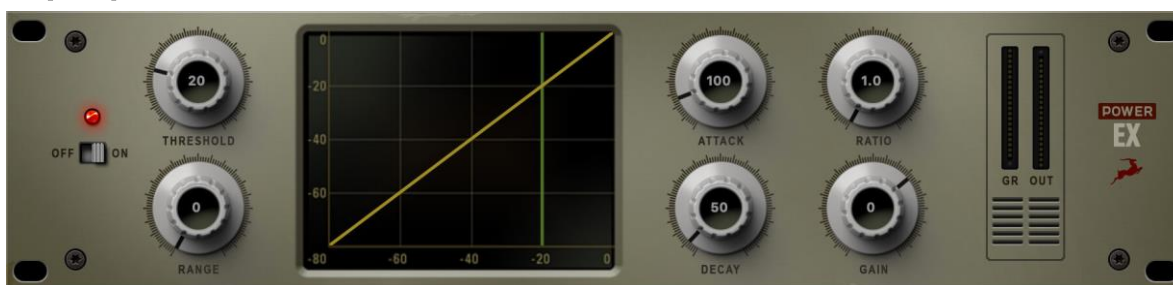
The Antelope Audio PowerEX is an expander that features a comprehensive set of controls, including Threshold, Range, Ratio, Attack and Decay knobs. An additional Gain knob allows for extra control over the final volume. PowerEX may be an unpretentious unit, but its simplicity hides a lot of potential for sound shaping.

Expanders work by increasing the difference in loudness (dynamic range) between quieter and louder sections of audio, making quiet sounds quieter and loud sounds louder. Think of the expander as the opposite of a compressor. It may be used to attenuate quiet sounds, such as artifacts, instead of cutting them off like a noise gate does.

Functionality

- Attack sets how fast the expander responds to signal levels above the threshold.
- Decay sets how fast the expander reacts when the signal level drops below the threshold.
- Ratio sets the level of volume attenuation. A higher ratio results in the volume being turned down more. A very high ratio of 12:1 or more turns the expander into a noise gate.
- Threshold sets the input level at which the expander will activate.
- Range sets the maximum amount of applied gain change.

Opto-2A

This iconic unit from the 1950s is the compressor that started it all! A broadcast and recording studio legend, the Opto-2A's continued use over half a century after its inception is a testament to its brilliance. Its exceptionally warm sound and gentle compression character make it a beloved piece of audio engineering for generations of artists and producers.

The key to its unique personality is the T4 optical attenuator, the outcome of time spent developing optical sensors for the US military. Its sonic signature is the two-stage release which greatly contributes to its smooth and musical compression. With only Gain and Peak Reduction knobs to adjust, the Opto-2A is exceedingly simple to dial in. And with a turn of the switch, the compressor becomes a limiter!

Although the Opto-2A is infinitely versatile, it's best heard on vocals due to its incredibly pleasant response to the human voice. Definitely try talking or singing through it to hear its impact on your performance.

Some specifics

- The compression ratio varies depending on the source signal.

- The average attack time is fixed at 10 milliseconds.

- The initial release time is around 60 milliseconds for 50% of the release, with the rest occurring gradually over 1 to 15 seconds before the signal goes back to 100%.

- The release timing responds to the length and strength of incoming signal. Under prolonged heavy compression or above-threshold signal level, the release time is slower. Likewise, if the signal is below-threshold, the release will be faster.

BAE 10DCF

BAE 10DCF originates from the end of the 1960s. Taking the best from a legendary line of broadcasting units, this stereo compressor has been turned into an extremely versatile processor. This official emulation of a classic vintage unit can be used as both a limiter and compressor. It features individual controls for both components - Threshold, Ratio, Bypass Filter, Attack, and Recovery for the Compressor; Threshold and Recovery controls for the Limiter.

BAE 10DCF allows you to keep compression transparent and smooth or completely transform the input signal into the signature vivid sound of the compressor. A Gain Make-up knob allows you to additionally control the signal volume. BAE 10DCF is a multi-purpose unit that can be used both during tracking or in post-production. As you can guess, it does an absolutely great job on an array of instruments like drums and percussion and is suitable for recordists, producers, and mastering engineers as well as podcasters and vloggers who want their voices sounding polished and neatly produced.

SEPARATE COMPRESSOR AND LIMITER

The 10DCF features a fully independent Compressor and a separate Limiter providing maximum flexibility and dynamic control over any source and any type of material.

Dynamic processors that offer such a variety of control are often clean and colorless. In contrast, the 10DCF offers that same versatility and control, but also character and color. We have carefully modeled the subtle harmonic distortion of the Carnhill & Jensen transformers that give BAE its iconic sound.

We also recreated that same Bypass Filter inspired by the B182 card of a 1073. That is essentially an EQ filter using a Carnhill Inductor providing smooth, transparent, and musical filtering. In the case of the 10DCF, that filter acts as part of the compressor's side-chain circuit. That feature alone expands the versatility of the 10DCF to not only recording & mixing applications, but also mastering.

Another unique feature of the 10DCF, which can be found on the Recovery switches both for the Compressor and Limiter, are the two 2 automatic release times. Modern music is quite often too variable in dynamics. That means that setting one release constant for the compression/limiting of a whole mix can often do more damage than good. Having two automatic program-dependent recovery settings means you can now tailor the response of this compressor to any style of music.

• Recovery A1 – 100mS isolated peaks, 2 Sec prolonged levels

• Recovery A2 – 50mS isolated peaks, 5 Sec prolonged levels

Those two automatic Recovery times, found on both dynamic circuits, are combined with the Bypass Filter and a variety of Ratio and Attack to make the 10DCF a true "get out of jail" card for your mix bus.

Other popular applications include vocals and guitars. The 10DCF can add urgency to highly dynamic vocals like pop & hip-hop whilst preserving clarity. In a similar way adding that same effect to rock guitars can make the whole track jump out of the speakers.

COMP-4K-STRIP

Whatever music you are into, chances are a 4K has been heavily involved into your favorite records. Still in use in major studios today, superseded by modern technology but never bested by it, the British 4K series large-format mixing consoles are iconic studio pieces that rightfully earned their respected place in recording history. The 4K is THE

mixing board of 80s rock and synthpop, and perhaps one of the most revered desks ever.

Enthusiastic as we are about great analog sound, bringing the COMP-4K STRIP to the Synergy Core FX platform is a proud moment for us at Antelope. An actual channel strip from a well-preserved desk was dismounted, painstakingly analyzed and its digital recreation rigorously tested for it to rank among the most faithful 4K reproductions out there.

Enjoy the classic punch, glue, drive and saturation of the iconic desk with no latency and zero CPU load, thanks to the DSP+FPGA processing platform built into your Antelope Audio interface. Strap the COMP-4K-STRIP across the entirety of your session and record, monitor, mix and master through the time-tested circuits. Bring back the analog magic, stay in the box.

Functionality

- On/Standby control
- Compressor section - Threshold, Ratio, Release controls; Fast Attack switch
- Expander/Gate section - Threshold, Range, Release controls; Expander/Gate switch, Fast Attack switch
- Filters section - Low-pass, Hi-pass; Routable pre- and post-dynamics processing from the PRE-DYN switch.
- DYN SC switch - inserts the filters into the detector sidechain circuit to control how compression is affected by low and high frequencies.
- Gain knob for final volume adjustment.

COMP-4K-BUS

COMP-4K-BUS is the famous "mix glue" bus compressor from the 80s. It resides on the master bus of a fondly remembered series of vintage British consoles and its job is to bring together instruments and performances from tens of audio channels into one larger-than-life, cohesive whole.

Decades later, still nothing does that quite like the COMP-4K-BUS. It's the gold standard of mix bus compression and it's now coming to life on the Antelope Synergy Core

platform. Put the COMP-4K-BUS on your Master fader and start mixing right into it. Or use it after everything else in your mix is "said and done" to turn it into a balanced, homogenous production.

Functionality

- VU meter
- IN Switch - activate or bypass the compressor.
- Controls - Threshold, Attack (milliseconds), Ratio, Make Up, Release (seconds).
- Detector Sidechain Hi-Pass filter. Use it to prevent the lowest frequencies from affecting compression in undesirable ways.
- Wet/Dry mix knob for parallel compression.
- Auto Fade switch with Rate (seconds) control knob. Auto Fade is used to apply a gradual decrease in volume after the performance you are compressing ends. Fade speed can be adjusted between 1 to 60 seconds.

EQUALIZERS

VEQ-55b

Introduction

Based on beloved hardware from the '60s and '70s, the VEQ-55b features four separate bands with up to 12 dB of boost or cut. The high and low bands offer the option of switching between a bell curve or shelving behavior. The unit's musicality owes in part to the proportional Q behavior of each band — ranging between a gently sloping Q at more subtle levels of boosting or cutting, and a more aggressive slope at higher levels.

Additionally, the adjacent EQ bands offer some overlapping frequency selections for creating complex curves and dialing in the perfect sound. The tonal characteristics of the vintage circuitry are carefully modeled to imprint its rich analog character on your audio.

Features

- Four frequency knobs and Gain knobs.

- Precise, yet musical analog sound.

- Switchable filter behavior.

Layout

1. High Band & Gain Knobs

The Gain knob performs cuts or boosts at up to +/- 12dB. The High Band knob lets you choose between the following center frequencies:

- 5kHz

- 5kHz

- 7kHz

- 10kHz

- 12.5kHz

- 15kHz

- 20kHz

2. HF Shelving/Band Switch

Switches between shelving EQ and band-pass EQ modes for the High and High-Mid frequencies.

3. High-Mid Knob & Gain knob

The Gain knob performs cuts or boosts at up to +/- 12dB at the selected frequency. The High-Mid Knob lets you choose among the following center frequencies:

- 800Hz
- 1.5kHz
- 3kHz
- 5kHz
- 8kHz
- 10kHz
- 12.5kHz

4. Low Mid & Gain Knobs

The Gain knob performs cuts or boosts at up to +/- 12dB at the selected frequency. The Low Mid Knob lets you choose among the following center frequencies:

- 75Hz
- 150Hz
- 180Hz
- 240Hz
- 500Hz
- 700Hz
- 1kHz

5. Low Frequency Shelving/Band-pass Switch

Switches between shelving EQ and band-pass EQ modes for the Low-Mid and Low frequencies.

6. Low & Gain Knobs

The Gain knob performs cuts or boosts at up to +/- 12dB at the selected frequency. The Low Knob lets you choose among the following center frequencies:
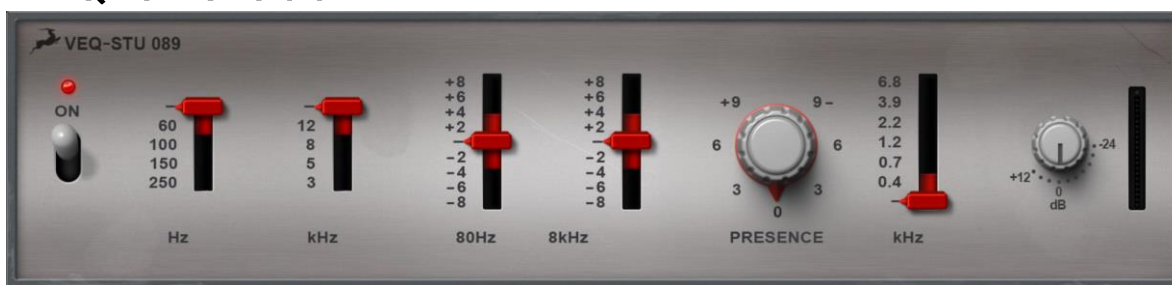
- 30Hz
- 40Hz
- 50Hz
- 100Hz
- 200Hz
- 300Hz
- 400Hz

7. Input On/Off Button

Turns the EQ On or Off. When in the Off position, the EQ is bypassed. The button doubles as the BP button in the AFX Rack.

8. Output Gain Knob

Adjusts output gain from -48dB to +12dB. Used to add or remove gain following the equalization.

VEQ-STU 089

Introduction

This EQ is a simple, but powerful tool that comes from the channel strip of a world-renowned mixing console. Dating back from the '70s, this EQ and the console it came from are still revered for their deep analog sound.

The VEQ-STU 089 is a Pultec-style semi-parametric EQ with 2 variable filters and a Presence knob with its own frequency dial. It offers quite a choice, no matter if you are going for frequency-specific equalizing or into broader tone shaping.

The VEQ-STU 089 and its minimalist, yet effective set of controls will give your sound a warm and authentic analog treatment. It is especially powerful when processing drum sounds — try it!

Features

- Variable low- and high-pass filters.
- Low- and high-frequency boost & cut sliders.
- Presence dial with adjustable center frequency.

Layout
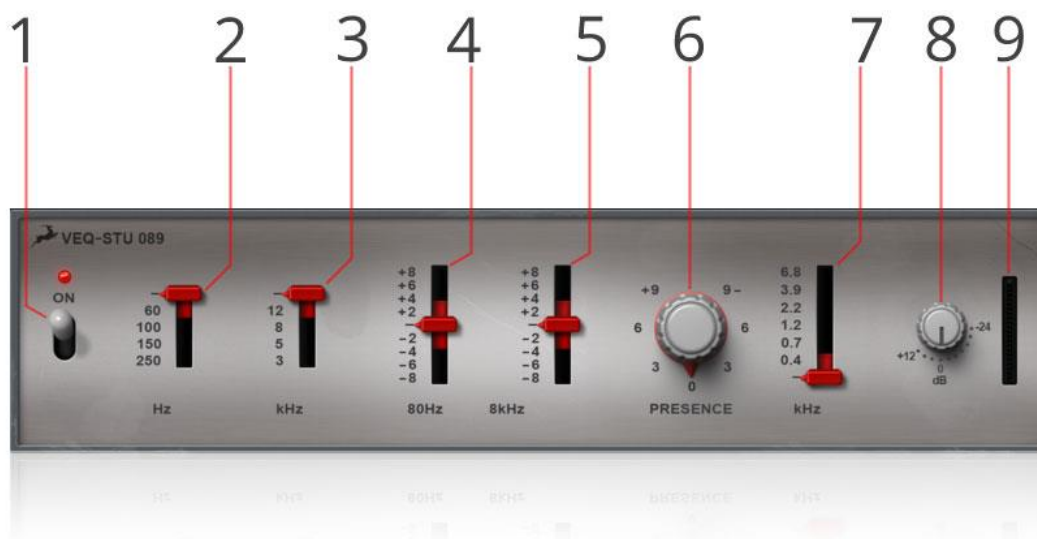
1. Power On/Off Switch

Turns the equalizer On or bypasses it. The LED above lights up in Red to indicate the equalizer works. The switch doubles as the BP button from the AFX Rack.

2. High-Pass Filter Slider

Selects the cutoff frequency for the high-pass filter. The following choices are available:

- Bypass
- 60Hz
- 100Hz
- 150Hz
- 250Hz

3. Low-Pass Filter Slider

Selects the cutoff frequency for the low-pass filter. The following choices are available:

- Bypass
- 3kHz
- 5kHz
- 8kHz
- 12kHz

4. Low Boost/Cut Slider

Boosts or cuts audio at 80Hz by up to +/- 8dB.

VEQ-STU 169

Introduction

The VEQ-STU 169 is part of a second-generation analog Western European mixing desk. Produced in the late 70s and early 80s, these desks earned their place as top music

recording devices with their transparent, yet gently colored analog sound. The simple, yet powerful 3 band inductor-based EQ carries a signature musicality owing to the combination of its high-end smoothness and headroom alongside clean and precise lows.

Designed for broad tone shaping, the VEQ-STU 169 is still used in studios ranging from vintage analog to hi-end digital. Both still take advantage of its unique coloring. With a low-pass filter and a sweepable bell mode mid band, you can surely achieve the sound many other EQs can only dream of. The low frequency band is set to shelve at 60 Hz, the mids are sweepable between 150 Hz & 7 khz, and the high frequency shelving comes at 10 kHz.

Features

- Switchable low-cut filter.
- Adjustable Low and High shelving equalizers.
- Sweepable mid-band equalizer.
- Gentle analog sound.

Layout
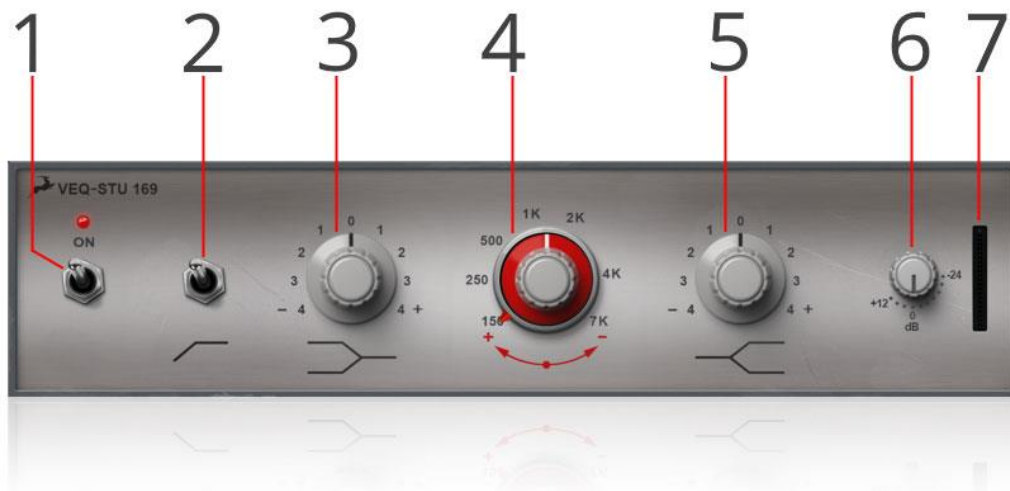
1. Power On/Off Switch

Turns On the EQ or bypasses it. The switch doubles as the BP button found in the AFX Rack.

2. Low-Cut Filter Switch

Engages or disengages the low-cut filter.

3. Low Band Shelve Knob

Shelves frequencies at 60Hz with up to +/-4dB of gain

4. Mid Band Sweep EQ

This EQ lets you dial in a boost or cut along the entire mid-frequency range with a classic bell shape. The gray knob sweeps the eq from the lowest mids (150Hz) all the way up to the highest mids (7kHz). The red knob lets you adjust the intensity of the boost or cut.

5. High Band Shelve Knob

Shelves frequencies at 10kHz with up to +/- 4dB of gain.

6. Gain Control

Adjusts output gain, letting you make up for excess or lost gain after equalization.

7. Output Level Meter

Visualizes output level.

VEQ-STU 900

Introduction

This EQ comes straight from the channel strip of one of the best-sounding analog mixing desks. What makes it special? The VEQ-STU 900 is a very flexible 4-band semi-parametric EQ with cut/boost controls and variable frequencies. Its HF and LF bands support bell and shelf modes, and its LMF and HMF bands have two options for Q. With this functionality, the VEQ-STU 900 lets you shape the sound in fairly extreme ways without deforming it. With its thick lows and gentle mids, you might like it even more than a comparable Pultec or SSL EQ.

Features

- Four-band semi-parametric EQ.
- High- and low-pass filters.
- Warm and musical analog sound.

Layout

1. Power On/Off Button

Turns the EQ On or Off. Also doubles as the BP button in the AFX Rack.

2. LF Frequency Selector

Selects the low frequency to be boosted or attenuated.

3. Gain Knob

Boosts or attenuates the signal by +/- 15dB. Use the switch below it to choose between bell or shelving curves.

4. LMF Frequency Selector

Selects the low-mid frequency to be boosted or attenuated.

5. Gain Knob

Boosts or attenuates the signal by +/- 15dB. Use the switch below it to choose between bell or shelving curves.

6. HMF Frequency Selector

Selects the high-mid frequency to be boosted or attenuated.

7. Gain Knob

Boosts or attenuates the signal by +/- 15dB. Use the switch below it to choose between bell or shelving curves.

8. HF Frequency Selector

Selects the high-mid frequency to be boosted or attenuated.

9. Gain Knob

Boosts or attenuates the signal by +/- 15dB. Use the switch below it to choose between bell or shelving curves.

10. High-Pass Filter

Engages the high-pass filter, cutting signal below the chosen frequency.

11. Low-Pass Filter

Engages the low-pass filter, cutting signal above the chosen frequency

12. Gain Knob

Boosts or attenuates the signal by +12/-24dB.

13. Output Level Meter

Visualizes output gain.

VEQ-HA32C

Introduction

The VEQ HA32C was inspired by one of the richest and most characteristic-sounding four-band channel EQ modules. Incredibly versatile, it can treat everything — including vocals, bass & electric guitars, and drums. The EQ smooths out the high-end while keeping the mids vivid and the lows thick and solid. It features four parametric bands, each of them coming with a Gain and Frequency control knob. The Low and High bands can be switched to shelving modes, and the EQ features High- and Low-Pass filters that can be switched on or off.

Features

- Switchable low-and high-pass filters.
- Switchable low and high frequency shelving.
- Four semi-parametric bands.

Layout

1. High Pass Frequency Knob

Selects the high-pass filter frequency.

2. Power On/Off Button

Turns the EQ On or Off. The button doubles as the Bypass button from the AFX Rack.

3. HP IN Button

Turns the high-pass filter On or Off.

4. Low Pass Frequency Knob

Selects the low-pass filter frequency.

5. LP IN Button

Turns the low-pass filter On or Off.

6. Low Frequency Knob

Selects the low center frequency. Use the shelving switch below to engage shelving EQ mode.

7. Low Frequency Gain Knob

Boosts or attenuates the selected low frequency from –10 to +10dB.

8. Low Mid Frequency Knob

Selects the low mid center frequency.

9. Low Mid Frequency Gain Knob

Boosts or attenuates the selected low mid frequency from –10 to +10dB.

10. High Mid Frequency Knob

Selects the high mid center frequency.

11. High Mid Frequency Gain Knob

Boosts or attenuates the selected high mid frequency from –10 to +10dB.

12. High Frequency Knob

Selects the high center frequency. Use the shelving switch below to engage shelving EQ mode.

13. High Frequency Gain Knob

Boosts or attenuates the selected high mid frequency from –10 to +10dB.

14. Output Gain Knob

Adjusts output gain from +12dB to –24dB. This lets you make up for lost gain or attenuate the excess.

BAE 1023

Introduction

Ever felt like the BAE 1073 sounded ace but didn't offer enough control? Well, BAE 1023 is here to save the day! It offers five more frequencies in the mids and four in the high range. This, however, isn't the sole change here.

The EQ offers even more tone shaping options — for example, it lets you use the mid-bell curve directly against the low & high shelving EQs where they overlap. This results in a very organic analog sound. High frequencies can be boost or cut in shelving mode, and the mids are EQ'd in peaking mode.

Below is a list with the expanded frequency controls of the 1023:

- The high pass filter works on 18dB per octave slope and is switchable between 45Hz, 70Hz, 160Hz and 360Hz.
- Lows: +/-16dB at 35Hz, 60Hz, 110Hz & 220Hz.
- Mids: +/-12dB or +/-18dB at 160Hz, 270Hz, 360Hz, 510Hz, 700Hz, 1.6k, 3.2k, 4.8k, 7.2k, 8.2k and 10kHz.
- Highs: +/-16dB at 10kHz, 12kHz, 16kHz, 20kHz and 24kHz.

Features

- Phase flip.
- Low-cut filter.
- Two shelving EQs (Low & High frequencies).
- One peak EQ (Mid frequencies).

Layout

1. Phase Flip Button

Flips the phase 180 degrees

2. EQ On/Off Button

Turns the EQ On and Off. Doubles as the BP button in the AFX Rack.

3. Low-cut Filter Knob

Engages or bypasses the low-cut filter. The following fixed frequencies are available:

- 50Hz
- 80Hz
- 160Hz
- 300Hz

4. Low Shelving EQ Knobs

Use the smaller gray knob to dial in a boost (clockwise) or cut (counter-clockwise). Use the circular knob around it to bypass the filter (in the Off position) or to select one of the following frequencies:

- 35Hz
- 60Hz
- 110Hz
- 220Hz

5. Mid Band EQ Knobs

Use the smaller gray knob to dial in a boost (clockwise) or cut (counter-clockwise). Use the circular gray knob around it to bypass the filter (in the Off position) or to select one of the following frequencies:

- 160Hz
- 270Hz
- 360Hz
- 510Hz
- 700Hz
- 1.6kHz
- 3.2kHz
- 4.8kHz
- 7.2kHz

- 8.2kHz
- 10kHz

6. High Shelving EQ Knobs

Use the smaller gray knob to dial in a boost (clockwise) or cut (counter-clockwise).
Use the circular gray knob around it to bypass the filter (in the Off position) or to select one of the following frequencies:

- 10kHz
- 12kHz
- 16kHz
- 20kHz
- 24kHz

7. Gain Knob

Compensates for lost or excess gain as a result of equalization.

8. Output Level Meter

Visualizes output gain.

BAE 1084

Introduction

An authentic model of a vintage console channel strip EQ, the BAE 1084 is one of the most precise and versatile EQs you can ever get your hands onto. The EQ is a synonym

for fat large sound with massive lows and a smooth high end. Its original analog design, which we've recreated, offers extended control over the sound spectrum.

Tone shaping is brought to a whole new level and what you've so far considered tiny tweaks now result in unprecedented all-analog sonic detail. Try boosting at 220Hz – it won't result in any mud in your sound! The BAE 1084 also offers a Hi-Q button for a narrowing of the mid-band.

Features

- Signal phase flip.
- Combined low and high-pass filter with adjustable frequencies.
- Low shelving EQ.
- Mid band EQ with optional High Q mode.
- High shelving EQ.
- Adjustable gain.

Layout
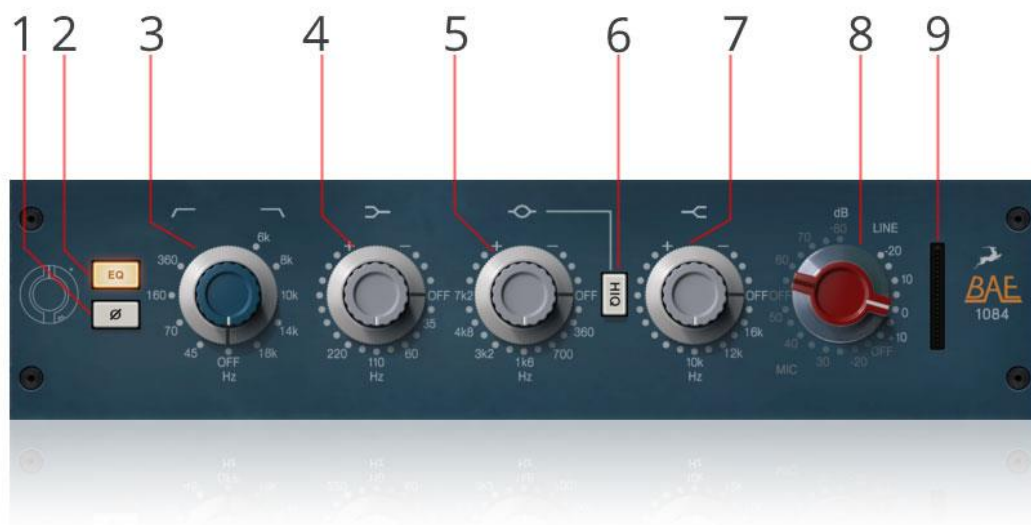
1. Phase Flip Button

Flips the signal phase 180 degrees.

2. EQ On/Off Button

Turns the EQ on or bypasses it. Doubles as the BP button in the AFX Rack.

3. Combined Low- and High-pass Filter

Use the circular knob to choose a frequency for the high-pass filter.

Use the smaller knob to choose a frequency for the low-pass filter.

4. Low Shelving EQ

Use the circular knob to choose a frequency for the low shelving EQ.

Use the smaller knob to perform a boost or cut at the selected frequency.

5. Mid Band EQ

Use the circular knob to choose a frequency for the mid band EQ.

Use the smaller knob to perform a boost or cut at the selected frequency.

6. HIQ Button

Activates or disables the high Q mode for the mid band knob.

7. High Shelving EQ

Use the circular knob to choose a frequency for the high shelving EQ.

Use the smaller knob to perform a boost or cut at the selected frequency.

8. Gain Knob

Add lost gain back or reduce excess occurring as the result of equalization.

NEU-W492

Introduction

The NEU-W492 is based on the inimitable circuitry design of the original, carrying its signature German sound. As a favorite mastering tool of generations of record producers and sound engineers, the unit features a 4-band EQ with bypass available for each band or the entire unit. Versatile and simple to use, the NEU-W492 is particularly powerful in the midrange, delivering a warm analog sound character.

Features

- Low-cut filter.
- Two shelving EQs.
- Two Peak EQs.
- Bypass for each of the four bands.

Layout
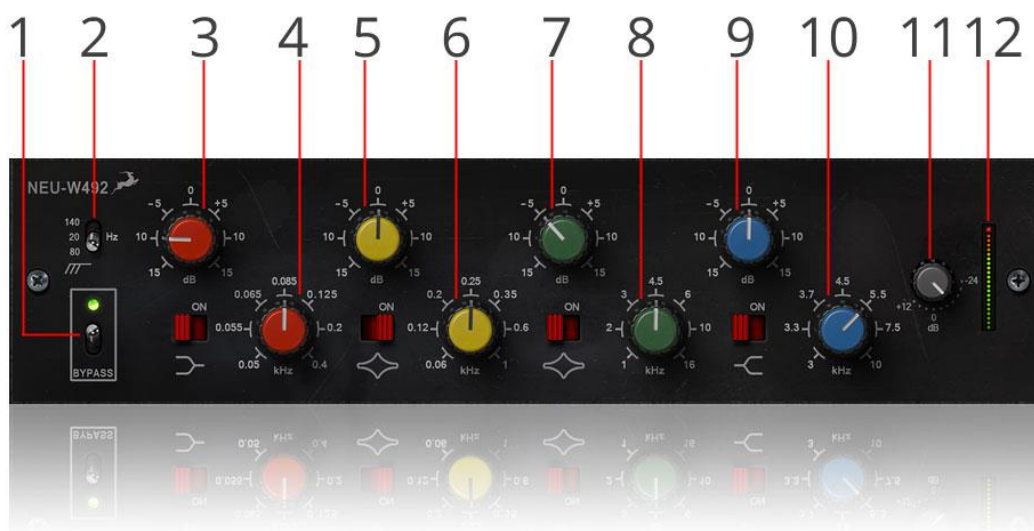
1. On/Off Switch

Turns the EQ On or bypasses it. The switch doubles as the BP button in the AFX Rack.

2. High-Pass Filter Switch

Chooses the high-pass filter frequency from 80Hz, 20Hz, and 120Hz.

3. Low Shelving EQ Gain Knob

Adds or reduces gain from -15dB to +15dB.

4. Low Shelving EQ

Chooses the center frequency for the low shelving EQ. The following choices are available:

- 0.05kHz (50Hz)
- 0.055kHz (55Hz)
- 0.065kHz (65Hz)
- 0.125kHz (125Hz)
- 0.2kHz (200Hz)
- 0.4kHz (400Hz)

Use the On and Off switch to enable or disable this EQ section.

5. Low Mid Peak EQ Gain Knob

Adds or reduces gain from -15dB to +15dB.

6. Low Mid Peak EQ Frequency Knob

Chooses the center frequency for the low mid peak EQ. The following choices are available:

- 0.06kHz (60Hz)
- 0.12kHz (120Hz)
- 0.2kHz (200Hz)
- 0.25kHz (250Hz)
- 0.35kHz (350Hz)
- 0.6kHz (600Hz)

- 1kHz (1000Hz)

Use the On and Off switch to enable or disable this EQ section.

7. Mid High Peak EQ Gain Knob

Adds or reduces gain from –15dB to +15dB.

8. Mid High Peak EQ Frequency Knob

Chooses the center frequency for the mid high peak EQ. The following choices are available:

- 1kHz
- 2kHz
- 3Khz
- 4.5kHz
- 6kHz
- 10kHz
- 16kHz

Use the On and Off switch to enable or disable this EQ section.

9. High Shelving EQ Gain Knob

Adds or reduces gain from –15dB to +15dB.

10. High Shelving EQ Frequency Knob

Chooses the center frequency for the high shelving EQ. The following choices are available:

- 3kHz
- 3.3kHz
- 3.7kHz
- 4.5kHz

- 5.5kHz

- 7.5kHz

- 10kHz

Use the On and Off switch to enable or disable this EQ section.

11. Gain Knob

Adds lost gain or reduces excess occurring as the result of compression. Ranges from -24 to +12dB.

12. Output Level Meter
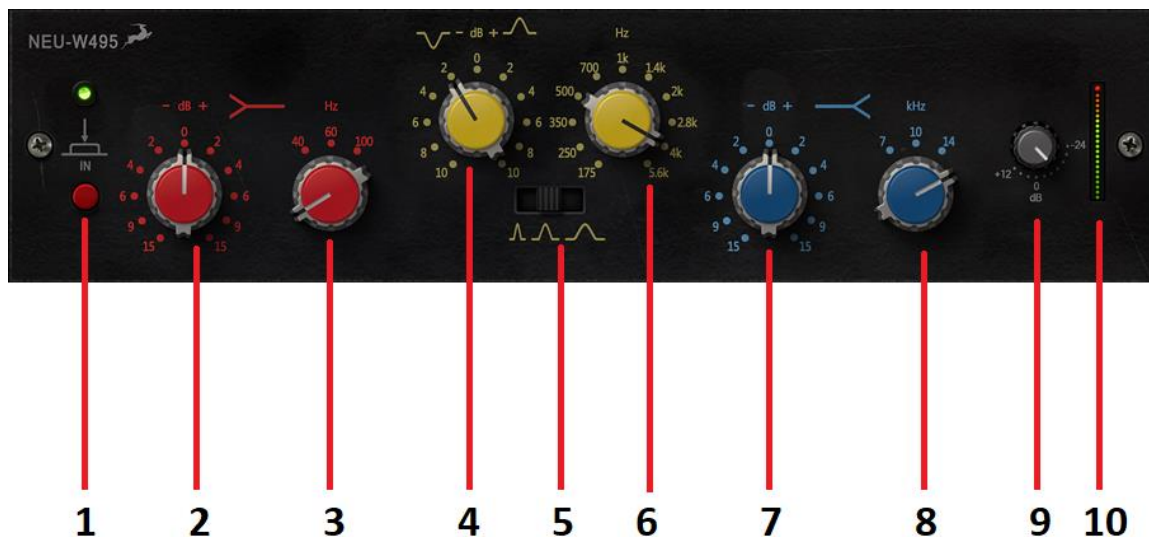
Visualizes output level.

NEU-W495

Introduction

The NEU-W495 is based on the inimitable circuitry design of the original, carrying its signature German sound. As a favorite mastering tool of generations of record producers and sound engineers, the unit features a 3-band EQ with bypass available for the entire unit.

Layout

1. On/Off Switch

Turn the EQ On or bypasses it. The switch doubles as the BP button in the AFX Rack.

2. Low Shelving EQ Gain Knob

Adds or reduces gain from –15dB to +15dB.

3. Low Shelving EQ

Chooses the center frequency for the low shelving EQ. The following choice sare available:

- 0.04kHz(40Hz)
- 0.06kHz (60Hz)
- 0.1kHz (100Hz)

4. Peak EQ Gain Knob

Adds or reduces gain from –15dB to +15dB.

5. Band Q switch

Adjusts filter bandwidth.

6. Peak EQ Frequency Knob

Chooses the center frequency for the low mid peak EQ. The following choices are available:

- 0.175kHz(175Hz)
- 0.25kHz (250Hz)
- 0.35kHz (350Hz)
- 0.5kHz (500Hz)
- 0.7kHz(700Hz)
- 1kHz(1000Hz)
- 1.4kHz(1400Hz)
- 2kHz(2000Hz)
- 2.8kHz(2800Hz)
- 4kHz(4000Hz)
- 5.6kHz(5600Hz)

7. High Shelving EQ Gain Knob

Adds or reduces gain from –15dB to +15dB.

8. High Shelving EQ Frequency Knob

Chooses the center frequency for the high shelving EQ. The following choices are available:

- 7kHz(7000Hz)
- 10kHz (10000Hz)
- 14kHz (14000Hz)

9. Gain Knob

Adjusts final volume level.

10. Output Level Meter

Visualizes output level.

NEU-PEV

Introduction

The NEU-PEV EQ is modeled on a rare German passive equalizer designed in the 60s. Its simple interface belies the complex tonal possibilities achievable with its four main knobs. A low shelving filter is fixed at 60Hz and can apply a boost or cut.

The "Presence" section offers up to 8 dB of boost for one of 7 selectable frequencies between 700 Hz and 5.6 kHz, while a 10kHz high shelf allows boost or cut at the top end of the frequency spectrum. An on-off switch and output gain control provide users with even more utility.
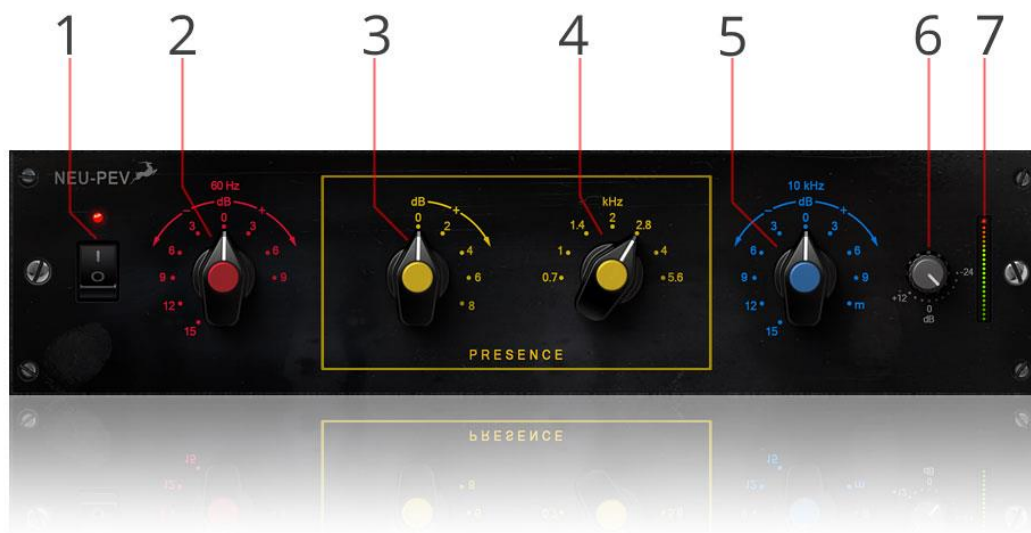
Notable for its warmth and spacious midrange, the NEU-PEV makes some of the most compelling sounds of both yesterday and today achievable without a massive rack of aging vintage gear!

Features

- 60Hz low shelving filter.
- Two shelving EQs.
- Presence filter with selectable frequencies.
- 10kHz high shelf filter.

Layout

1. On/Off Switch

Turns the EQ On or bypasses it. The switch doubles as the BP button in the AFX rack.

2. 60Hz Low Shelving EQ

Applies a cut of up to -15dB or boost of up to 9dB at 60Hz.

3. Presence Boost Knob

Applies a presence boost of up to 8dB.

4. Frequency Select Knob

Chooses a frequency for the presence boost. The following choices are available:

- 0.7kHz
- 1kHz
- 1.4kHz
- 2kHz
- 2.8kHz
- 4kHz
- 5.6kHz

5. High Shelving EQ Knob

Applies a cut of up to -15dB or boost of up to 9dB at 10kHz.

6. Output Gain Knob

Boosts or attenuates the signal by up to +12/-24dB. You can make up for lost gain or remove excess gain which occur as the result of equalization.

7. Output Level Meter

Visualizes output gain.

VEQ-4K Series

Having imparted its sound signature on generations of artists and hit recordings for more than 50 years, the VEQ-4K series are based on a rock-solid analog design — now brought to life in Antelope's FPGA FX modules.

The Antelope VEQ-4K series is complete with four different-colored hardware-original revisions, each delivering its own unique sound shaping characteristics. The revisions are **Black, Brown, Pink,** and **Orange.** This manual will deal with all four versions.

VEQ-4K Black

Likely the most popular version of the EQ module, this unit was designed following the recommendations of many of the world's top engineers. The 'original black' has a louder EQ with +-18dB cut/boost and a steeper High Pass cut off slope (18db).

Features

- Low Frequency, Low-Mid Frequency, High-Mid Frequency, High Frequency bands

- Low- and high-pass filters

- Optional bell curve for the Low Frequency band

Layout

1. Bell On/Off Button

Turns the bell curve for the Low Frequency bands On or Off

2. Low Band Gain Knob

Adjusts gain from -15 to +15dB.

3. Low Band Frequency Knob

Adjusts the low band frequency. The following choices are available:

- 30Hz

- 50Hz

- 100Hz

- 200Hz

- 300Hz

- 450Hz

Intermittent frequencies are also available as the knob is variable.

4. Low-Mid Band Q Knob

Adjusts the width of the filter (Q).

5. Low-Mid Band Frequency Knob

Adjusts the low-mid band frequency. The following choices are available:

- 200Hz
- 300Hz
- 800Hz
- 1kHz
- 1.5kHz
- 2kHz
- 2.5kHz

Intermittent frequencies are also available as the knob is variable.

6. Low-Mid Band Gain Knob

Adjusts the low-mid band filter gain. Ranges from -15dB to +15dB.

7. Power On/Off Button

Turns the EQ on or bypasses it. Doubles as the BP button in the AFX Rack.

8. High-Mid Band Q Knob

Adjusts the width of the filter (Q).

9. High-Mid Band Frequency Knob

Adjusts the high-mid band frequency. The following choices are available:

- 600Hz
- 700Hz

- 1.5kHz
- 3kHz
- 4.5kHz
- 6kHz
- 7kHz

10. High-Mid Band Gain Knob

Adjusts the high-mid band gain. Ranges between -15dB to +15dB.

11. High Band Frequency Knob

Adjusts the high band frequency. The following choices are available:

- 1.5kHz
- 2kHz
- 5kHz
- 8kHz
- 10kHz
- 14kHz
- 16kHz

Intermittent frequencies are also available as the knob is variable.

12. High Band Gain Knob

Adjusts high band filter gain. Ranges between -15dB to +15dB.

13. Bell Button

Turns the high band bell curve on and off.

14. High-Pass Filter Knob

Adjusts the high-pass filter frequency. The following choices are available:
- 20Hz
- 70Hz

- 120Hz

- 200Hz

- 300Hz

- 350Hz

Intermittent frequencies are also available as the knob is variable.

15. Low-Pass Filter Knob

Adjusts the low-pass filter frequency. The following choices are available:

- 12kHz

- 8kHz

- 5kHz

- 4kHz

- 3.5kHz

- 3kHz

Intermittent frequencies are also available as the knob is variable.

16. Gain Knob

Lets you make up for lost gain or dial out the excess occurring as the result of equalization.

17. Output Volume Knob

Visualizes output gain.

VEQ-4K Brown

The first model in this legendary line of EQ modules, it remains a classic and still in use by many engineers. It has 4 bands with a sweep able mid Q. The HF and LF can be switched to Bell/Shelf modes with a degree of boost/cut by +/- 15db.

Features

- Low, Low-Mid, High-Mid, High frequency bands
- High- and low-pass filters
- Switchable bell curves for the low and high frequency bands

Layout

1. Bell On/Off Button

Turns the bell curve for the Low Frequency bands On or Off

2. Low Band Gain Knob

Adjusts gain from –15 to +15dB.

3. Low Band Frequency Knob

Adjusts the low band frequency. The following choices are available:

- 30Hz
- 50Hz
- 100Hz
- 200Hz
- 300Hz
- 450Hz

Intermittent frequencies are also available as the knob is variable.

4. Low-Mid Band Q Knob

Adjusts the width of the filter (Q).

5. Low-Mid Band Frequency Knob

Adjusts the low-mid band frequency. The following choices are available:

- 200Hz
- 300Hz
- 800Hz
- 1kHz
- 1.5kHz
- 2kHz
- 2.5kHz

Intermittent frequencies are also available as the knob is variable.

6. Low-Mid Band Gain Knob

Adjusts the low-mid band filter gain. Ranges from -15dB to +15dB.

7. Power On/Off Button

Turns the EQ on or bypasses it. Doubles as the BP button in the AFX Rack.

8. High-Mid Band Q Knob

Adjusts the width of the filter (Q).

9. High-Mid Band Frequency Knob

Adjusts the high-mid band frequency. The following choices are available:

- 600Hz
- 700Hz
- 1.5kHz
- 3kHz
- 4.5kHz
- 6kHz
- 7kHz

10. High-Mid Band Gain Knob

Adjusts the high-mid band gain. Ranges between -15dB to +15dB.

11. High Band Frequency Knob

Adjusts the high band frequency. The following choices are available:

- 1.5kHz
- 2kHz
- 5kHz
- 8kHz
- 10kHz
- 14kHz

- 16kHz

Intermittent frequencies are also available as the knob is variable.

12. High Band Gain Knob

Adjusts high band filter gain. Ranges between –15dB to +15dB.

13. Bell Button

Turns the high band bell curve on and off.

14. High-Pass Filter Knob

Adjusts the high-pass filter frequency. The following choices are available:

- 20Hz
- 70Hz
- 120Hz
- 200Hz
- 300Hz
- 350Hz

Intermittent frequencies are also available as the knob is variable.

15. Low-Pass Filter Knob

Adjusts the low-pass filter frequency. The following choices are available:

- 12kHz
- 8kHz
- 5kHz
- 4kHz
- 3.5kHz
- 3kHz

Intermittent frequencies are also available as the knob is variable.

16. Gain Knob

Lets you make up for lost gain or dial out the excess occurring as the result of equalization.

17. Output Volume Knob

Visualizes output gain.

VEQ-4K Pink

Originally appearing in the late 80s and with proportional gain settings, the VEQ-4K features shelving HF & LF EQs with a signature combo of dip and bump right before the shelf boost and cut. The Pink module has a wider frequency range with the boost/cut and gain range above +/- 20dB.

Features

- LMF -3 and HMF x 3 buttons
- Low Frequency, Low-Mid Frequency, High-Mid Frequency, High Frequency bands
- High- and low-pass filters

Layout

1. Bell On/Off Button

Turns the bell curve for the Low Frequency bands On or Off

2. Low Band Gain Knob

Adjusts gain from -15 to +15dB.

3. Low Band Frequency Knob

Adjusts the low band frequency. The following choices are available:

- 30Hz
- 50Hz
- 100Hz
- 200Hz
- 300Hz
- 450Hz

Intermittent frequencies are also available as the knob is variable.

4. Low-Mid Band Q Knob

Adjusts the width of the filter (Q).

5. Low-Mid Band Frequency Knob

Adjusts the low-mid band frequency. The following choices are available:

- 200Hz
- 300Hz
- 800Hz
- 1kHz
- 1.5kHz
- 2kHz
- 2.5kHz

Intermittent frequencies are also available as the knob is variable.

6. Low-Mid Band Gain Knob

Adjusts the low-mid band filter gain. Ranges from -15dB to +15dB.

7. Power On/Off Button

Turns the EQ on or bypasses it. Doubles as the BP button in the AFX Rack.

8. High-Mid Band Q Knob

Adjusts the width of the filter (Q).

9. High-Mid Band Frequency Knob

Adjusts the high-mid band frequency. The following choices are available:

- 600Hz
- 700Hz
- 1.5kHz
- 3kHz
- 4.5kHz
- 6kHz
- 7kHz

10. High-Mid Band Gain Knob

Adjusts the high-mid band gain. Ranges between -15dB to +15dB.

11. High Band Frequency Knob

Adjusts the high band frequency. The following choices are available:

- 1.5kHz
- 2kHz
- 5kHz
- 8kHz
- 10kHz
- 14kHz
- 16kHz

Intermittent frequencies are also available as the knob is variable.

12. High Band Gain Knob

Adjusts high band filter gain. Ranges between -15dB to +15dB.

13. Bell Button

Turns the high band bell curve on and off.

14. High-Pass Filter Knob

Adjusts the high-pass filter frequency. The following choices are available:

- 20Hz
- 70Hz
- 120Hz
- 200Hz
- 300Hz
- 350Hz

Intermittent frequencies are also available as the knob is variable.

15. Low-Pass Filter Knob

Adjusts the low-pass filter frequency. The following choices are available:

- 12kHz
- 8kHz
- 5kHz
- 4kHz
- 3.5kHz
- 3kHz

Intermittent frequencies are also available as the knob is variable.

16. Gain Knob

Lets you make up for lost gain or dial out the excess occurring as the result of equalization.

17. Output Volume Knob

Visualizes output gain.

VEQ 4K-Orange

A variation on the VEQ-4k Brown, which's still huge in Japan. Very close to a Pultec EQ in terms of sound, and featuring controls simulating valve EQ curves. This one is not just one more module strip revision, but a hardware rarity with a sound of its own.

Features

- LMF -3 and HMF x 3 buttons
- Low Frequency, Low-Mid Frequency, High-Mid Frequency, High Frequency bands
- High- and low-pass filters

Layout

1. Bell On/Off Button

Turns the bell curve for the Low Frequency bands On or Off

2. Low Band Gain Knob

Adjusts gain from -15 to +15dB.

3. Low Band Frequency Knob

Adjusts the low band frequency. The following choices are available:

- 30Hz
- 50Hz
- 100Hz
- 200Hz
- 300Hz
- 450Hz

Intermittent frequencies are also available as the knob is variable.

4. Low-Mid Band Q Knob

Adjusts the width of the filter (Q).

5. Low-Mid Band Frequency Knob

Adjusts the low-mid band frequency. The following choices are available:

- 200Hz
- 300Hz
- 800Hz
- 1kHz
- 1.5kHz
- 2kHz
- 2.5kHz

Intermittent frequencies are also available as the knob is variable.

6. Low-Mid Band Gain Knob

Adjusts the low-mid band filter gain. Ranges from -15dB to +15dB.

7. Power On/Off Button

Turns the EQ on or bypasses it. Doubles as the BP button in the AFX Rack.

8. High-Mid Band Q Knob

Adjusts the width of the filter (Q).

9. High-Mid Band Frequency Knob

Adjusts the high-mid band frequency. The following choices are available:

- 600Hz
- 700Hz
- 1.5kHz
- 3kHz
- 4.5kHz
- 6kHz
- 7kHz

10. High-Mid Band Gain Knob

Adjusts the high-mid band gain. Ranges between -15dB to +15dB.

11. High Band Frequency Knob

Adjusts the high band frequency. The following choices are available:

- 1.5kHz
- 2kHz
- 5kHz
- 8kHz
- 10kHz
- 14kHz
- 16kHz

Intermittent frequencies are also available as the knob is variable.

12. High Band Gain Knob

Adjusts high band filter gain. Ranges between –15dB to +15dB.

13. Bell Button

Turns the high band bell curve on and off.

14. High-Pass Filter Knob

Adjusts the high-pass filter frequency. The following choices are available:

- 20Hz
- 70Hz
- 120Hz
- 200Hz
- 300Hz
- 350Hz

Intermittent frequencies are also available as the knob is variable.

15. Low-Pass Filter Knob

Adjusts the low-pass filter frequency. The following choices are available:

- 12kHz
- 8kHz
- 5kHz
- 4kHz
- 3.5kHz
- 3kHz

Intermittent frequencies are also available as the knob is variable.

16. Gain Knob

Lets you make up for lost gain or dial out the excess occurring as the result of equalization.

17. Output Volume Knob

Visualizes output gain.

BAE 1073

Introduction

Born in the '70s, this channel EQ module has been surely used on all your favorite records. The BAE 1073 can handle it all – from classical music to pop, badass hip-hop and rock. Inspired by the hardware original, we made sure this beast can give your sound that very specific analog punch, which top producers have been cashing in on for decades now!

Features

- High-pass filter (50Hz, 80Hz, 100Hz, 300Hz).
- Low-band shelving EQ (35Hz, 60Hz, 110Hz, 220Hz).
- Mid band EQ (160Hz, 270Hz, 360Hz, 510Hz, 700Hz, 1.6kHz, 3.2kHz, 4.8 kHz, 7.2kHz, 8.2kHz, 10kHz).
- High-band shelving EQ (10kHz, 12kHz, 16kHz, 20kHz, 24kHz).
- Line Output Control

Layout

1. Phase Flip Button

Flips the signal phase. Use it to correct phasing problems, such as lack of bass or things sounding like they are ran through a phaser.

2. Power On/Off Button

When lit, the equalizer is turned On. When not lit, the EQ is bypassed. The button doubles as the BP button in the AFX Rack.

3. Low Cut Switch

Low-cut filter ranging from 50Hz to 300Hz.

4. Low-Frequency Filter

+/-16dB shelving with selectable frequencies of 35Hz, 60Hz, 110Hz & 220Hz

5. Mid-Frequency Filter

+/-18dB peaking, fixed 'Q' with, selectable center frequencies of 0.36kHz, 0.7kHz, 1.6kHz, 3.2kHz, 4.8kHz & 7.2kHz

6. High-Frequency Filter

+/-16dB fixed frequency shelving at 12kHz

7. Gain Control

Ranges from 0dB to 80dB.

8. Output Monitor

Visualizes output signal.

VEQ-HLF

Introduction

Pultec's simple and effective filter features two knobs: one each for passive low-cut and high-cut filters at carefully selected frequency intervals. With 10 frequency selections available per band, it is the perfect tool for creating space in your mix by eliminating unneeded frequencies at the extremes of the audio spectrum — while ensuring a musical analog tone.
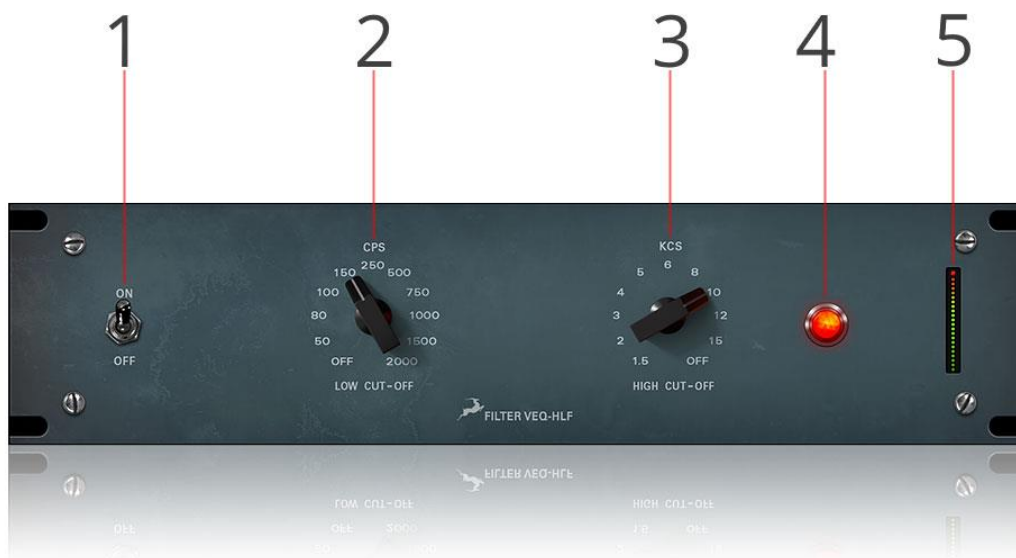
Even if you don't intend to use the cutoff filters, try inserting the VEQ-HLF in your processing chain to obtain its peculiar and highly sought-after sound coloration.

Features

- Low and high cut-off filters
- Simple and intuitive use
- Musical analog tone

Layout

1. Power On/Off Switch

Turns the filter On or Off. Doubles as the BP button in the AFX rack.

2. Low Cut-Off Filter Knob

Adjusts the low cut-off filter frequency. The following choices are available:

- Off (bypass)
- 50Hz
- 80Hz
- 100Hz
- 150Hz
- 250Hz
- 500Hz
- 750Hz
- 1000Hz
- 1500Hz
- 2000Hz

3. High Cut-Off Filter Knob

Adjusts the high cut-off filter frequency. The following choices are available:

- 1.5kHz
- 2kHz
- 3kHz
- 4kHz
- 5kHz
- 6kHz
- 8kHz
- 10kHz
- 12kHz
- 15kHz
- Off (bypass)

4. Power On/Off Light

Lights up when the filter is On.

5. Output Gain Meter

Visualizes output gain.

VEQ-1A

Introduction

You're surely into studio legends if you're reading this, so let's take you back 60 years ago when a tube legend was born to become a part of every pro studio in the world. VEQ – 1A is not only breathing a new life into a classic but sounds as thick as the real piece and it does hide quite a few tricks. For example, simultaneous cut and boost of the same frequency, which gives the sound a unique quality you can't really get with another EQ. Massive bass, gentle highs and richness – these knobs surely do some analog magic!

Features

- Simultaneous boost & cut of selected frequencies
- Attenuation selector
- Bandwidth (Q) adjustment knob

Layout

1. Power On/Off Switch

Turns the VEQ-1A On or Off. Doubles as the BP button in the AFX rack.

2. Low Band Boost Knob

Boosts the low band at the selected target frequency.

3. Low Band Frequency Select Knob

Chooses the target frequency for the low band. The following options are available:

- 20Hz
- 30Hz
- 60Hz
- 100Hz

4. Low Band Attenuate Knob

Attenuates the low band at the selected target frequency.

5. Bandwidth Knob

Adjusts the band width for both filters without altering any of the other parameters.

6. High Band Boost Knob

Attenuates the low band at the selected target frequency.

7. High Band Frequency Select Knob

Chooses the target frequency for the high band. The following options are available:

- 3kHz
- 4kHz
- 5kHz
- 8kHz
- 10kHz
- 12kHz
- 16kHz

8. High Band Attenuate Knob

Attenuates the high band at the chosen target frequency.

9. Attenuation Selector

Chooses the attenuation amount — 5dB, 10dB, or 20dB

10. Power On/Off Light

Lights up when the EQ is active.

11. Output Gain Knob

Visualizes output gain.

VMEQ-5

Introduction

What's proper low- and high-end with no guts in the mids? VMEQ-5 is mid range's best friend! Two peak bands and a dip band are all you need to give your vocals, synth, guitar leads or snare drum the analog punch they've always needed. This little beast can also clean up a murky midrange like a boss!

Features

- Two peak bands and one dip band
- Optimized for mid-range frequencies
- Punchy analog sound

Layout

1. Power On/Off Switch

Turns the EQ On or Off. Doubles as the BP button in the AFX Rack.

2. Low-Mid Peak Band Frequency Select

Chooses the low peak band frequency. The following choices are available:

- 200Hz
- 300Hz
- 500Hz
- 700Hz
- 1000Hz

3. Low Peak Band Gain Knob

Adjusts low peak band gain.

4. Mid-Range Dip Frequency Knob

Adjusts the mid-range dip frequency. The following choices are available:

- 200Hz

- 300Hz

- 500Hz

- 700Hz

- 1kHz

- 1.5kHz

- 2kHz

- 3kHz

- 4kHz

- 5kHz

- 7kHz

5. Mid-Range Dip Gain Knob

Adjusts mid-range dip gain.

6. High Mid-Band Frequency Select Knob

Chooses a frequency for the high-mid band. The following choices are available:

- 1.5kHz

- 2kHz

- 3kHz

- 4kHz

- 5kHz

7. High Mid-Band Dip Gain Knob

Adjusts high mid-band dip gain.

8. Power On/Off Indicator

Lights up when the EQ is turned On.

9. Output Gain Meter

Visualizes output gain.

VEQ-55A

Introduction

Having issues getting your bass guitar sound edgy enough? Need some meat in your drums or more body in the guitars? Problem solved, VEQ-55A will emphasize all the tiny details your mix has been missing. All that, which has been causing troubles will be gently cut.

Features

- High, mid, and low frequency bands
- Switchable low/high-pass filter
- Input On/Off switch

Layout

1. High Frequency Band

Use the purple knob to choose a target frequency. Use the gray knob to adjust gain.

The following frequencies are available:

- 5kHz
- 7kHz
- 10kHz
- 12.5kHz
- 15kHz

The gain knob ranges between -12dB to +12dB.

2. Mid Frequency Band

Use the purple knob to choose a target frequency. Use the gray knob to adjust gain.

The following frequencies are available:

- 400Hz
- 800Hz
- 1.5kHz

- 3kHz
- 5kHz

The gain knob ranges between -12dB to +12dB.

3. Low Frequency Band

Use the purple knob to choose a target frequency. Use the gray knob to adjust gain. The following frequencies are available:

- 50Hz
- 100Hz
- 200Hz
- 300Hz
- 400Hz

The gain knob ranges between -12dB to +12dB.

4. Low Cut Filter Switch

Engages the low-cut filter.

5. Filter On/Off Switch

Turns the filter On or Off.

6. High Cut Filter Switch

Engages the high cut filter.

7. Input On/Off Switch

Turns input signal On or Off. Doubles as the BP button in the AFX rack.
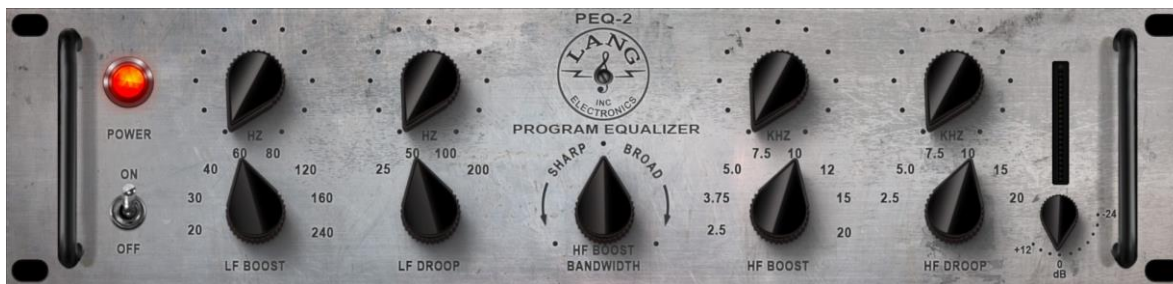
8. Output Gain Knob

Adjusts output gain. Lets you make up for lost gain or dial out the excess occuring as the result of equalization.

9. Output Gain Meter

Visualizes output gain.

LANG-PEQ2

Introduction

The LANG-PEQ2 is modeled after a vintage solid-state parametric EQ. Yes, it's actually a pumped-up 1960s Pultec. Featuring controls similar to the VEQ-1A tube EQ, the LANG-PEQ2 stands apart from the pack with its frequency control that lets users set separate LF boost and LF cut frequencies.
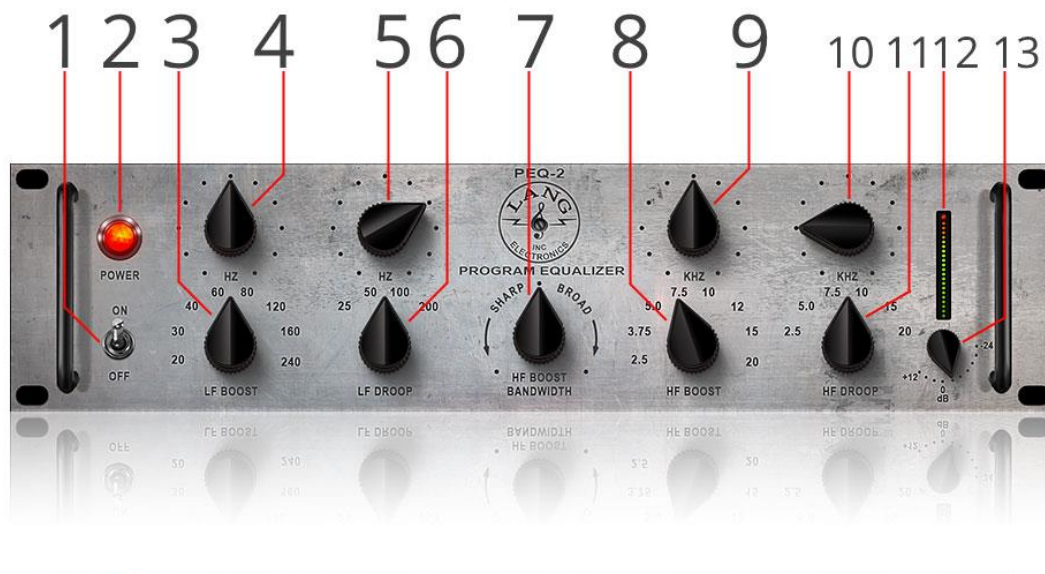
LANG-PEQ2 provides plenty of width in the mid-range while retaining tightness on the high end and low end. Its high end bands excel at giving tracks that extra shine, making it an all-star on vocals and drum overheads.

Features

- Boost & droop frequency knobs
- Frequency selectors
- HF boost bandwidth

Layout

1. Power On/Off Switch

Turns the EQ on or off. Doubles as the BP button in the AFX rack.

2. Power On/Off Indicator

Lights up when the EQ is active.

3. LF Boost Frequency Select Knob

Selects the frequency for low boost. The following choices are available:

- 20Hz
- 30Hz
- 40Hz
- 60Hz
- 80Hz
- 120Hz
- 160Hz
- 240Hz

4. LF Boost Gain Knob

Adjusts LF boost gain.

5. LF Droop Gain Knob

Adjusts LF droop gain.

6. LF Droop Frequency Select Knob

Selects the LF droop target frequency. The following choices are available:

- 25Hz
- 50Hz
- 100Hz
- 200Hz

7. High Frequency Boost Bandwidth Knob

Adjusts the high frequency boost bandwidth. Goes from 'sharp' to 'broad'.

8. High Frequency Boost Knob

Chooses the target frequency for the high frequency boost. The following choices are available:

- 2.5kHz
- 3.75kHz
- 5kHz
- 7.5kHz
- 10kHz
- 12kHz
- 15kHz
- 20kHz

9. High Frequency Boost Gain Knob

Adjusts high frequency boost gain.

10. HF Droop Gain Knob

Adjusts HF droop gain.

11. HF Droop Frequency Select Knob

Chooses the HF Droop target frequency. The following choices are available:

- 2.5kHz
- 5kHz
- 7.5kHz
- 10kHz
- 15kHz
- 20kHz

12. Output Gain Meter

Visualizes output gain.

13. Output Gain Knob

Adjusts output gain. Ranges between –24dB to +12dB.

UK-69

Introduction

Modeled on a classic British console EQ used in recordings by well-known artists like The Beatles and Led Zeppelin, the UK-69 adds astonishing detail to your audio. It allows

Antelope Audio users to achieve depth and texture formerly the sole territory of standalone hardware.

The bass band is a stepped 50 Hz shelf filter or frequency selectable peak EQ, the treble band is a fixed 10 kHz shelf EQ, and the mid-section sports a frequency-selectable peak or notch EQ with 8 frequencies available. The control panel is rounded out with a level knob and EQ bypass buttons.

This EQ is notable for its ability to preserve transparency while adding space and presence. Antelope Audio's model of this highly coveted circuit delivers unprecedented authenticity!

Features

- Bass, Mid, and Treble bands
- Selectable bass band frequencies
- Fixed 10kHz treble band

Layout

1. EQ Cut Switch On/Off

Engages or disengages the equalizer. Doubles as the BP button in the AFX rack.

2. Bass Band Frequency Select Knob

Selects the bass band frequency. The following choices are available:

- 400Hz
- 240Hz
- 120Hz
- 60Hz
- 30Hz
- 0Hz
- 3kHz
- 6kHz
- 9kHz
- 12kHz
- 15kHz

3. Bass Band Gain Knob

Adjusts bass band gain.

4. Mid Band Frequency Select Knob

Chooses the target frequency for the mid-band. The following choices are available:

- 700Hz
- 1kHz
- 1.4kHz
- 2kHz
- 2.8kHz
- 3.5kHz
- 4.5kHz

- 6kHz
- 8kHz

5. Mid Band Gain Knob

Adjusts mid band gain.

6. Peak/Through Switch

Switches the EQ between peak (PK) and notch (TR) filtering.

7. Treble Band Gain Knob

Adjusts gain at the treble band, which is fixed at 10kHz.

8. Line Level Gain Knob

Adjusts the EQ's output volume. You can compensate for lost gain or dial out the excess occurring as the result of equalization. The knob ranges between +12dB to -24dB.

9. Output Gain Meter

Visualizes output gain.

Clear Q

Introduction

Antelope Audio's integrated EQ offers 5 fully parametric bands. Two of those can work in filter or shelving mode, and the three in the middle can cut or boost selected frequency ranges. Our users have been using this simply designed, yet perfect-sounding plug-in for both tracking and mixing, as it provides all that you might need in an EQ.

Features

- Five parametric bands with selectable frequencies

- Five gain adjustment knobs

- Five Q width adjustment knobs

- Graphic display

- Output gain meter

Layout
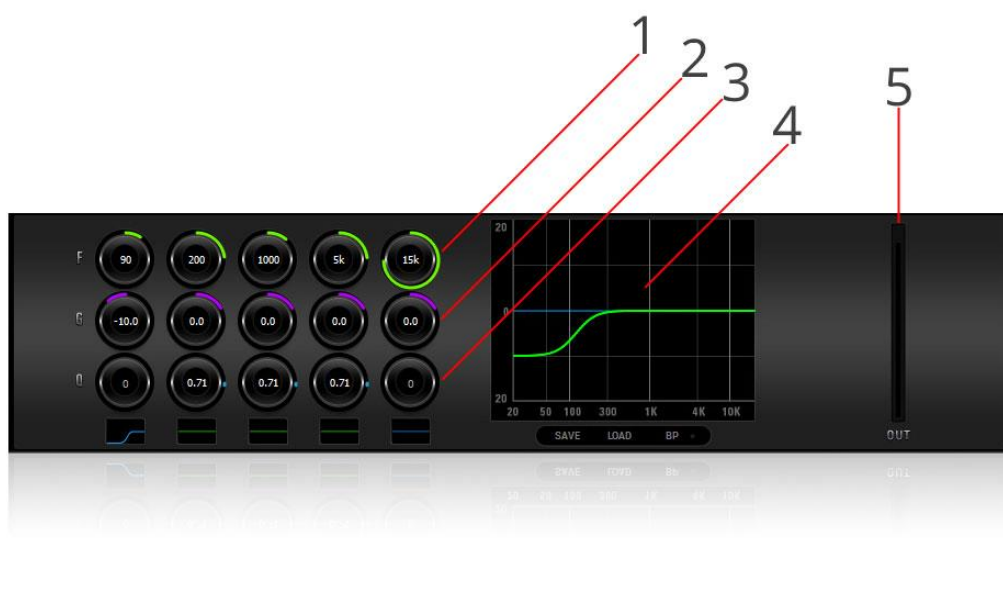
1. Frequency Adjustment Knobs

Specify up to five frequency bands for equalization.

2. Gain Adjustment Knobs

Specify the amount of gain applied to a particular band.

3. Q Width Adjustment Knobs

Specify the Q width of a particular band.

4. Graphic Display

Visualizes the equalization curves.

5. Output Gain Meter

Visualizes output gain.

GYRATEC XIV

Introduction

Inspired by the legendary Pultec passive EQP design, the Gyraf Audio Gyratec XIV uses the same parallel filter topology as its predecessor whilst extending its versatility and capability to staggering heights.

What makes the Gyratec XIV a true passive tube EQ is its unique parallel G14 filter design. That allows for a set of inductors and capacitors to switch in and out of the circuit combined with a tube-based makeup gain/output stage.

Privileged to the original schematics, we modelled every single component of the hardware unit – from the inductors & capacitors to the precise impedance of the input and output transformers.

Functionality

This modern take on the Pultec EQP offers 5 individual bands with 11 switchable frequencies per band, making for a whopping 55 individual frequency choices to boost or cut. In addition, each of the bands is equipped with variable Q filter width and a cut/bypass/boost switch.

Among the equalizer's unique qualities is the behavior of the variable Q setting. When a band is set to 'boost', the Q is rather wide. When set to 'cut', however, the filter becomes much sharper, approaching a notch in extreme settings. This makes the Gyratec XIV both a powerful mastering equalizer and a precise surgical tool.

Another side effect of Gyratecs circuit topology is the subtle widening of the stereo image when used on stereo sources. Applied to a mix bus, the equalizer carves more space in the mix without audible artifacts or phase deformation.

In addition, Gyratec XIV offers a mono mode of operation, making it an efficient mix tool for practically any source and scenario.

VEQ-56
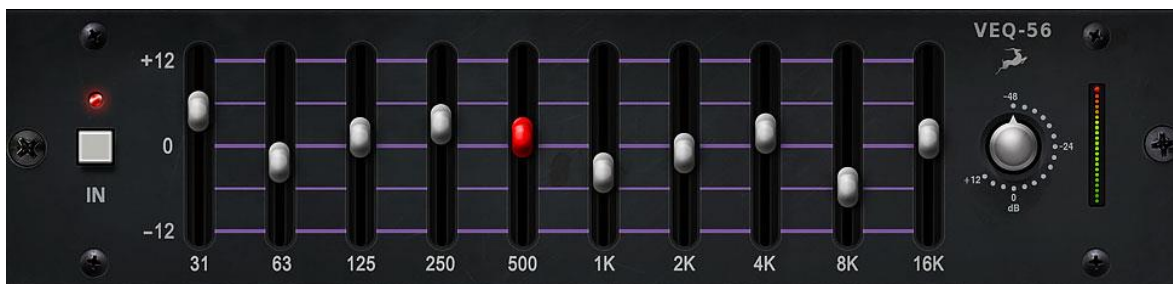
Introduction

The venerable VEQ-56 originates from a line of American mixing desks made throughout the '60s and '70s. This 10-band graphic equalizer remains sought after long since its introduction. It is known for its many favorable aspects, among them its high headroom, consistency and ease of use. But most critically, it's the trademark American sound!

Equal parts musical and corrective, each and every aspect of the original 1969 unit's feel and operation has been faithfully reproduced by Antelope Audio, exclusively for Synergy Core audio interfaces.

Functionality

- Graphic equalizer based on a vintage American unit from 1969
- 10 Graphic EQ bands (31hz, 63hz, 125hz, 250hz, 500hz, 1khz, 2khz, 4khz, 8khz, 16khz)
- 12dB boost/cut available per band
- Automatic Q adjustment in respect to fader movement. By design, the filter bandwidth is widened at lower amounts of boost or cut, and narrowed at higher ones.
- Bypass button

Blonder-Tongue Audio Baton
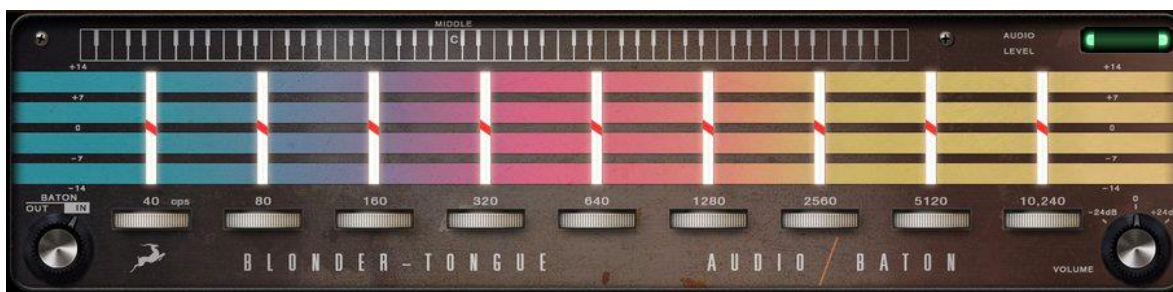
Introduction

Enter the Antelope time machine for a trip back to 1959! We present a faithful emulation of the Blonder-Tongue Laboratories Audio Baton – an all-tube graphic equalizer so rare and special, it has an actual album named after it. Time-appropriate looks aside, the Audio Baton boasted seven separate amplifiers tuned to distinct frequencies, followed by high- and low-pass filters running in parallel, with their outputs routed to separate level controls.

The frequency choices are such as to correspond to actual notes and octaves on the piano keyboard, hence its presence above the red-and-white vertical stripes. They move up and down with the turning of the rotary controls, visualizing boosts and cuts. This

way, a frequency response curve is graphically overlaid on top of the colorful stripes where each frequency region is distinctly colored.

Despite its technical proficiency, the Audio Baton was an inexpensive unit that found its way into audiophile homes and recording studios alike. Covering it in February 1959, AUDIO magazine qualified it as "indispensable to anyone interested in dubbing from old records," and "strongly recommended to anyone who does much recording." Also noted by the magazine – "Rolloff of either lows or highs due to poor microphones or narrow-range amplifiers or recorders can be corrected easily, and response peaks can be smoothed out as desired."

In terms of audio character, the Audio Baton compares favorably to other great equalizers of the era. Think a cross between the rare Altec 9073A "Motown" graphic equalizer and the famed Pultec tube-amplified make-up gain stage.

Antelope Audio's team of DSP and electrical engineers recreated the Blonder-Tongue Audio Baton EQ in its entirety, exclusively for the Synergy Core FX processing platform. The one change we added is purely cosmetic – a Magic Eye peak meter on the upper right, which we felt enhances this unique equalizer's late 50's aesthetic and provides useful visual feedback.

Features

- Exact emulation of the vintage all-tube original
- Works in real-time with zero latency
- 9 frequency bands with 28dB control range per band
- Highlights individual instruments' fundamental notes
- Corrects frequency response errors such as excessive bass or shrill high-end
- Increases clarity of instruments, vocals and speech

How to use

Simply insert the Audio Baton EQ into your FX chain. Click and turn the rotary controls to correct their specific frequencies. Use the bottom left knob to bypass or engage the EQ and the bottom right knob to adjust output volume.

FILTEK MK3

Introduction

Originally designed in the 70's, the FILTEK MK3 is a highly successful creation. That's no wonder as the unit was built to the rigorous standards demanded by the IRT (Institut für Rundfunk Technik). Initially costly to build and within reach of only the most reputable radio stations, these broadcast-ready modules eventually ended up inside the racks of recording studios around the globe.

A versatile equalizer that sounds clear and precise – unusually modern for the time, indeed – the MK3 handles broad sweeps and surgical applications with equal aplomb. The combinations of controls and switches allow for plenty of experimentation. For example, extreme settings at broad bandwidths turn the high and low bands into respectable shelving filters.

The efficient design, employing the best engineering practices and high-quality parts, proves the MK3 capable of not just correcting, but also enhancing frequency ranges – for example, boosting the high-end without introducing harshness.

For the Synergy Core FX platform, Antelope's team of engineers modeled the 3-band design with high- and low-pass filters – perhaps the most recognizable and also flexible

incarnation of FILTEK MK3's incarnations. Each band offers a choice of 12 frequencies with boosts and cuts of up to 16dB. The three-way bandwidth (Q) switches for each band let you bypass specific bands when in mid-position.

Clean and transparent, but packing plenty of punch and character when pushed, the FILTEK MK3 is an incredible addition to your frequency adjustment toolbox!

Features

- Each band offers a choice of 12 frequencies with +/-16dB of stepped gain and a 3-way Q-switch
- Q-switches in mid-position bypass the related frequency bands
- Wide low- and high-pass filters
- Bypass switch for the entire unit
- Output peak meter

How to use

Insert the FILTEK MK3 into your FX chain. Use the band adjustment knobs, cut/boost knobs, and Q switches to make the desired adjustments. Feel free to push the input signal (within reasonable limits) going into the effect to obtain transformer saturation.

MG4+

Introduction

The MG4+ emulates a legendary Series 500 EQ module that's heard on hundreds of top-charting records. The hardware original is particularly famous for the SKY BAND,

which is able to add the kind of expensive-sounding gloss and sheen typically heard on singles with top production teams and equipment behind them.

Powered by Synergy Core processing, our recreation builds on the SKY BAND by adding more options for adjustment so you can flesh out the highs of your recordings. Added is the SKY GAIN function which will give you much-needed flexibility when working your signal chain. Monitor directly with imperceptible latency so you can listen to the processed sound before you press record.

But that's hardly all this 6-band EQ has to offer. It's also notable for its highly linear phase operation – a difficult endeavor in the analog realm, but one which endows the MG4+ with the ability to preserve the audio being put through it without any phase-shifting artifacts. Purity and clarity is the name of the game when it comes to this EQ.

The MG4+ emulation is not affiliated with nor has been sponsored or endorsed by any company.

Functionality

- On/Bypass button

- Sub frequency boost/cut knob

- 40Hz boost/cut knob

- 160Hz boost/cut knob

- 650Hz boost/cut knob

- 2.5kHz boost/cut knob

- Sky band frequency select knob

- Sky band gain control knob

- Output volume knob

GUITAR AMPS & CABS

A suite of 11 guitar amps and matching cabinets lets you monitor and record the roar of your electric guitar in real-time. There's a bass rig in there too, so plug-in and get slap-pin'! If you don't play guitar, but like the sound of cooked-up tubes and speaker cabinets pushing air, route any audio into these bad boys and check what happens!

Getting Started

Guitar amps and cabs are used like almost any other Synergy Core effect. Here are the basics:

1. Connect your electric guitar or bass to one of the instrument/line inputs on the device using a standard 1/4-inch TS instrument cable.

2. Open the Control Panel application and head to the 'PREAMPS' tab. Adjust input gain as you play the instrument, careful not to run the meter into the red.

3. Enter the 'Routing' tab and drag the colored number block corresponding to your 'PREAMP' input onto a block from the row labeled 'AFX IN'.

4. Drag the 'AFX OUT' block that corresponds to your 'AFX IN' block (same number) onto the output(s) you want to monitor and record from.

5. Enter the 'Effects' tab. Click the input which corresponds to the 'AFX IN' block. Click the 'ADD NEW EFFECT' button to choose an amp first, then click again and choose a cabinet. Here's a textbook California-style heavy metal rig, for example:

While the guitar amps don't really need an explanation, the cabinet module is worth examining:

- Change the cabinet model anytime from the 'Cabinet' drop-down menu.
- Change your cabinet's mics from the 'Mic A' and 'Mic B' drop-down menus. Click the adjacent 'Phase' button if your choice of microphones results in phasing issues.
- Click and drag the virtual microphones to adjust their vertical and horizontal positioning.
- Click and turn the 'Mic A' and 'Mic B' knobs to dial-in the amount of signal you want from each microphone.
- Click and turn the 'Rear Mic' knob to mix-in signal from an additional mic behind the cabinet.
- Click and turn the '45-degree Mic' knob to mix-in signal from an additional mic positioned at a 45-degree angle from a speaker cone.

- Click the 'ReSPiRe' button to hear some cab sim mojo courtesy of our friends from Overloud. In their own words, the ReSPiRe technology lets you switch between the 'real' response of the cabinet and a processed version optimized to fit into a mix and avoid frequency overlap with the other instruments.

- Click the 'HPF' button to engage a preset high-pass filter (tames excessive low end).

- Click the 'LPF' button to engage a preset low-pass filter (tames harsh or shrill-sounding highs).

- Click the 'BP' button to bypass the cab sim.

PEDALS, DELAY & MODULATION

Instinct Synergy

An in-depth user manual for Instinct Synergy is available separately. Click here.

Memory Cat Brigade

Introduction

Released in 1980, the Electro-Harmonix Deluxe Memory Man pedal featured a unique marriage of both Analog and Tape delay by reproducing Tape-like echoes using capacitors without the need of magnetic tape. Due to its unique circuitry the unit was capable of producing lush, dark and expensive-sounding delays with vibrant chorus and haunting vibrato in a convenient small shape with plenty controls.

After being adopted by U2's The Edge and featured on "Sunday Bloody Sunday", the reputation of the pedal quickly grew and became a must for many artists including Robert Smith, Ed O'Brien, Arctic Monkeys' Jamie Cook and the late Chris Cornell. Fast-forward to nowadays, the Deluxe Memory Man has become one of the most demanded analog delays ever built.

The Antelope Way

As all of our creations, we took it upon ourselves to produce the most faithful emulation of the Deluxe Memory Man ever made. We measured and recreated every single component of the circuit and created the Memory Cat Brigade effect from the original schematic for the Deluxe Memory Man.

In addition to the accurate recreation of the behavior of all original parameters we also added a few extra features such as a maximum delay time of up to 1100ms and a Filter knob for even darker-sounding echoes.

Disclaimer

Deluxe Memory Man is a registered trademark of Electro-Harmonix.

The Memory Cat Brigade was developed by Antelope Audio based on proprietary modeling methods and technologies.

Electro-Harmonix – manufacturer of the original Deluxe Memory Man unit – has not endorsed nor sponsored the Memory Cat Brigade in any manner, nor licensed any intellectual property for use in this product.

Functionality

- On/Bypass button

- Chorus/Vibrato switch

- Delay time switch - choose between 550ms or 1100ms

- Overload LED indicator

- Level control: adjust audio level

- Delay control: adjust the delay amount

- Blend control: blend between the original and processed signal

- Depth control: adjust modulation depth

- Feedback control: adjust feedback amount

- Filter control: low-pass filter

Adaptive Vibrato

Introduction

The gentle shimmer of a good vibrato is comparable to that of a great reverb, but without the space. To create our own take on what a great vibrato should be like, we started by examining some tried-and-true circuits then incorporated our impressions into a bespoke virtual unit that gives you a whole toybox worth of vibrato to play with!

Latch and trigger modes, rate and depth knobs, five waves of modulation, delay and rise controls. Finally, dial in just the right amount of the effect with the Dry/Wet mix knob. Add Vibrato to your modulation effects rack, combine it with the Shred Guitar Amps & Cabs to play emotional solos and add movement to your synthesizers and sounds.

Functionality

- On/Standby Button

- Rate control – Slow/Fast

- Depth control – Min/Max

- Wave selector – sine, triangle, square, sawtooth right, sawtooth left

- Mode control – Latch/Trigger

- Delay control – Min to Max

- Rise control – Slow to Fast

- Threshold – Min to Max

- Endfreq – x0.5 to x2

Marble White Autowah

For the times when you are unable to stomp on a real wah pedal, get a reliable AutoWah to do that for you. Marble White replicates a boutique autowah pedal from Finland whose circuit is originally based upon a vintage rackmount wah and further refined to sound like a real wah pedal. The Marble White is simply in a league of its own with its fast tracking, uncanny accuracy and responsive controls. It works equally well on guitar and bass.

Particularly noteworthy is the bespoke decay control which lets you adjust the filter frequency fall speed. This way, Marble White can drench every one of your notes in wah or behave itself as you'd expect from a more traditional autowah pedal.

Powered by the Antelope Audio Synergy Core FX platform, Marble White works in real-time with no perceived latency. Feel free to combine it with the Shred Guitar Amps & Cabs and obtain a formidable guitar and effects rig inside your audio interface that works without any CPU load.

Controls

- Sensitivity: Controls the filter trigger level. Note that you can further adjust the sensitivity from your guitar volume knob.

- Bias: Controls the filter resonance frequency. With Sensitivity turned fully off, the Bias control can be used as a sweepable filter.

- Resonance: Controls the filter sharpness (also known as Q-factor).

- Decay: Controls how quickly the filter frequency falls back to resting point (set with the Bias control). It can be set fast to get the wah effect on every note or slow for a more traditional auto wah sound.

Vari-Speed Tremolo

Tremolo – the modulation effect that started it all! Before the first tremolo units came built into vintage amplifiers, nobody knew what guitar effects are. A simple concept it may be, but the tremolo went on to define the iconic sound of surf guitar and spurred a wave of innovation among musical equipment builders.

Our Synergy Core-powered Vari-Speed Tremolo presents a fresh and versatile take on vintage tremolos with its 5-position Wave Selector and the addition of a Vari-Speed Rate knob. By adjusting how quickly the frequency of the modulator wave varies, you can spice up your tremolo effects with a welcome touch of unpredictability.

Controls

- Bypass Button: Toggle the effect On and Off

- Wave Selector: Choose between Sine, Triangular, Square, Sawtooth, and Inverted Sawtooth modulation waves

- Rate: Adjust the modulation speed

- Vari-Speed Rate: Adjust how quickly the frequency of the modulator wave varies

- Depth: Adjust the amount of volume (amplitude) modulation

- Mix: Blend the Dry (unaffected) and Wet (processed) signals

Space Flanger

It has been a long while since seminal band The Beatles and recording pioneer Les Paul first experimented with flanging in the 1950s. Throughout the years, the effect itself hasn't changed much, but clever minds have come up with dozens of different approaches to it. Ours is a distinctly modern one.

Taking advantage of the Synergy Core platform's unparalleled computational capabilities, Space Flanger is capable of producing phases, sweeps and swooshes that sound truly extraterrestrial. Your voice and instruments are now ready for take-off!

Controls

- Bypass button: Toggle the effect On or Off

- Gain: Adjust input volume (–12dB to +12dB)

- Wave: Choose between Triangle and Sine wave modulation

- Feedback: Adjust the amount of output signal being fed back into the input (produces resonance)

- Delay: Adjust the offset between the source and delayed signal (in milliseconds)

- Rate: Adjust the frequency of the modulating wave (perceived as a change in modulation speed)

- Depth: Adjust the amplitude of the modulating wave (perceived as volume change)

- Mix: Blend between the Dry (unaffected) and Wet (processed) signal

PREAMPS & CHANNEL STRIPS

BAE 1073MP
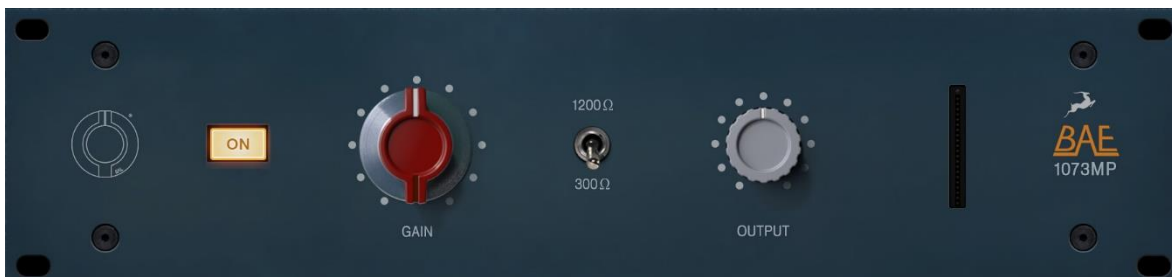
This effect is modeled after a 'gold–standard' British analog preamp known for its warmth and musicality. Its sonic signature is ubiquitous to the point of needing no further introduction, and it's borderline impossible to make it sound bad.

Functionality

- On/bypass button

- Gain adjustment knob: note that microphone input gain must be initially adjusted from your audio interface. In the case of recorded material, this knob is used to push the preamp's input stage into overdrive.

- Ohm switch: choose between 300ohm - 1200ohm for a subtle change in character.

- Output volume adjustment knob

- Peak meter

RD47

RD47 is an authentic recreation of one of Abbey Road Studios' most iconic valve line amps which defined the beautiful sound of the 1960s. It was used to amplify every single

stage of the audio signal path, meaning microphones, line outs, hardware sends and monitor outs were all treated with the RD47's signature analog punch. If you love your preamps carrying the aggressive touch of vintage analog gear, RD47 is going to be your new best friend.

Features

- On/Bypass switch

- Voltage gain knob (dB): note that microphone input gain must be initially adjusted from your audio interface. In the case of recorded material, this knob is used to push the preamp's input stage into overdrive.

- Output trim knob: adjust output level

- Release screw: turn it and see how it goes!

- Peak meter

VPA-76

Based on a vintage German microphone preamp hailed as the "Rolls-Royce" of tube mic preamps. The technical and engineering standards the V76 was built to were exceedingly high at the time.

Features

- On/Standby switch

- 'Warmth' adjustment - adds tube warmth

- 3kHz low-pass filter

- Adjustable hi-pass filter

- Output volume adjustment

BA-31

Modeled after a super rare and, of course, super sought after classic, BA-31 has managed to preserve the original sound of the Germanium transistors of its hardware inspiration. Packed to the top with real analog power, this mic preamp model will add an old-school touch of your recordings while making the best of flexible and easy-to-use modern plugin design.

Features

- On/Bypass switch

- Gain adjustment knob: note that microphone input gain must be initially adjusted from your audio inter-face. In the case of recorded material, this knob is used to push the preamp's input stage into overdrive.

- Trim knob: adjust output volume

- Peak meter

Gyraf Gyratec IX

We love the simple and massive analog powerful of all things Gyraf Audio and the dual tube microphone preamp G9 is not an exception. It's simple and easy to control, but still extremely versatile. This variable-gain input tube with a SRPP output stage features a comprehensible set of controls including input and output level switches allowing you to balance both the input and output signals. The preamp also features a high pass filter and a phase reverse switch. Easy to master and sounding massive G9 is the synonym for flawless analog amplification.

Features

- On/Bypass switch

- Gain adjustment knob: note that microphone input gain must be initially adjusted from your audio interface. In the case of recorded material, this knob is used to push the preamp's input stage into overdrive.

- Phase flip switch

- Output level adjustment knob

- Low-cut switch

SPECIAL PROCESSING

Auto-Tune Synergy

An in-depth user manual for Auto-Tune Synergy is available separately. Click here.

Reel-To-Reel

Introduction

In modern production, adding tape saturation has become like adding reverb – you need it everywhere because nobody likes the sterile perfection of digital sound. With all the love and knowledge Antelope Audio founder Igor Levin has gathered about tape machines since the 70s, he set our team on a mission not to revive the classics, but to build the ideal tape machine of today.

Reel-To-Reel combines the best tape formulas, the best tape heads and the finest electronics. The combinations between all those components will create endless

scenarios. You can experiment with bias settings, tape hiss amounts, switch between four types of tape and adjust wow & flutter amounts. Mastering these parameters will allow you to achieve the warmth and color you crave in the desired amounts.

Reel-To-Reel functions with no latency. The Antelope Audio tape machine lets producers and recording artists record and monitor with tape saturation in real-time, and not only during post-production.

Features

- Input and Output signal adjustment controls
- Hiss adjustment knob
- Tape speed switch – 15/30 IPS
- NAB / IEC switch
- Assignable VU meter – monitor input or output level via switch
- 4 tape types
- Tape machine bias switch with Over, Normal, Under options
- Wow & Flutter adjustment knob

Usage Tips

- Crank the Input knob to obtain tape overdrive.
- Use the Hiss and Wow & Flutter knobs to blend tape hiss, wow and flutter to taste.
- Explore the difference in sound between 15 and 30 IPS recording speeds, NAB / IEC standards, tape machine types, and tape machine bias.

Master De-esser

Introduction

The Master De-esser will help you clean up any unwanted sibilance from over-compression, improper micing or individual voice specifics. The Antelope Audio Master De-esser is easy to use and effective. The control set is reduced to the very basics, allowing you to pick the desired frequency, set a filtering type, and adjust the Attack, Ratio, Knee and Release controls of the de-esser.

Features

- Bypass button
- Controls: Threshold, Frequency, Q width, Attack, Release, Ratio, Soft Knee, Dry/Wet
- Gain reduction and output metering
- Dual visualizers for de-essing frequency and operation

Functionality

- Threshold: Adjusts the signal level above which de-essing starts. Adjust the knob until the 'esses' are sufficiently reduced. Note that an extremely high threshold may result in muffled audio and artifacts.

- Frequency and Q: Sweep the knob until you home-in on the most sibilant frequency in your audio track. Adjust Q filter width accordingly.

- Attack: Set how long it takes for the de-esser to activate after the signal has exceeded the threshold.

- Release: Set how long it takes for the de-esser to disengage after the signal level falls below the threshold.

- Ratio: Adjust the ratio between the original and de-essed signal.

- Soft Knee: Applying soft knee results in more gradual attenuation, making the transition between the original and altered signal less abrupt.

- Dry/Wet: Blend between the original and processed signal at the output stage.

A-Tuner

If you like your instruments to be in perfect tune, the tuner is an essential, indispensable tool in your audio arsenal. The Antelope Tuner is a classic example of a no-frills, immediately usable tuner for your guitar, bass, and other instruments you may be using.

Reaching all the way down to 30Hz (B0) all the way up to 1400Hz (F6), the Antelope Tuner is a trusty partner in your musical endeavors. It's also one to respond immediately, thanks to your Antelope interface's zero-latency FX processing! So do not fear using this one both live and in the studio.

How to use
Simply insert A-Tuner at the top of your FX chain and tune your instrument according to the visual meter. Use the On/Bypass button at will to enable or exclude the tuner from your virtual rig.

REVERBS

AuraVerb

AuraVerb provides richness and color using a special new approach and a unique algorithm. The reverb features eight different controls, including a 'Color' parameter to create everything between darkened textures to bright, sizzling presence. In addition, there are 24 presets done by award-winning audio engineer & producer Brian Vibberts.

AuraVerb is available on all Synergy Core interfaces as a Send effect inside Mixer 1 within the Control Panel's 'Mixer' tab. Turn up the 'Send' controls to hear the effect.

Controls

Color
The Color control lets you adjust the overall tone of the reverb. On "0" the space created is darker, like a lushly carpeted area. At "100" the reverb is at its brightest, which can add some 'sizzle' to a lead vocal, for example.

PreDelay
Common for most reverbs, the predelay allows you to create a bit of space between the source and the onset of reverb. This happens by controlling the amount of delay time that precedes the initial sound from the reverb. This parameter is used to place the reverberated signal later in time with respect to the unprocessed signal.

Natural settings for this are based on the size of the environment and range from 0 to 32 milliseconds. Fine adjustment of this parameter with respect to the tempo of the song or dramatic timing of the piece can help set the feel of the reverb within the mix.

Early Reflection Gain

This is the linear gain value for all early reflections. These reflections are perceptually grouped with the direct sound when set at lower levels and can nicely thicken a track when increased.

Late Reflection Delay

Among other things, AuraVerb calculates reflected energy from the side walls and ceiling of the virtual space. Late Reflection Delay controls the delay of these bursts of reflections, either creating echoes or supporting the spatial impression of the simulated acoustic space.

Richness

Richness controls the complexity of the reverb envelopment and dampening nuances. At "0" there is less dampening and a brighter decay. This sound is light or airy, but by increasing the Richness, you can add a sense of spaciousness to the sound and smoothly increase reverb time for lower frequencies.

Reverb Time & Room Size

Reverb Time controls the length of decay, while Room Size increases the virtual space dimensions. The perceived decay time will also be affected by Richness and Color on sources with a lot of high frequency content.

Generally, as the size of the space increases, the Reverb Time will also increase.

Setting Reverb Time to 50% gives a natural sounding tail for all room sizes. Interesting big spaces or subtle ambience reverbs can be created by setting Reverb Time unusually high or low with respect to the Room Size parameter.

Output Level

This is the output level control of the reverb. Since inputs for AuraVerb are assigned to Send knobs on Mixer 1's channels, we recommend balancing the channel volume levels from the Send controls and using Output Level to adjust the amount of reverb in the Master bus.

REVERB FX ON/OFF Switch

Use it to enable and disable AuraVerb.

Preset Manager

The Preset Manager lets you save and load presets. Use the drop-down menu to choose a preset. Use the 'S' button to save a preset. Use the 'L' button to load a preset.