

noveltech **VOCAL ENHANCER™**
adaptive vocal processing solution



About NOVELTECH from Finland

Noveltech Solutions Ltd was founded to commercialize novel technologies resulting from scientific research. For more information about Noveltech please visit www.noveltechaudio.com.

Introduction

Thank you for purchasing our VOCAL ENHANCER Plug-In, we'd like to welcome you again to a new era of audio processing: Like the CHARACTER™ Plug-In this virtual processor employs a fundamentally different and new approach to audio processing.

Most conventional tools simply modify the frequency intensity or dynamic structure of the source material without analyzing its contents prior to processing. Consequently, the user has to have this kind of expertise – and this often turns audio processing with such conventional tools into a specialist's job, requiring lots of engineering knowledge to get to the desired results.

VOCAL ENHANCER and CHARACTER change this now: Their processing is based on the latest scientific research in digital signal processing and psychoacoustics, finally overcoming this significant limitation with its truly intuitive approach and instant gratification.

The algorithms are based on Noveltech's patent-pending Intelligent Adaptive Filtering (IAF) technology. The processing affects both, the frequency response and dynamic properties of the input material in a highly time-varying sense. They intelligently identify and enhance the characteristics in audio material that are pleasing to the human ear, increasing its perceived definition and depth.

One example of such characteristics is the time related attack and decay properties of the signal's transients. The processing is non-linear and highly dependent on the source material's original content, aiming to enhance the perceivably favored characteristics of the original musical instrument or voice.

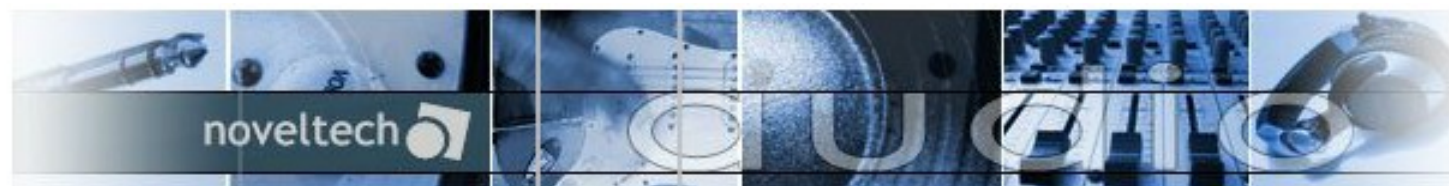
Conventional audio processing tools such as EQs and compressors involve a large number of technical parameters, which have to be set to the correct values in order to get the desired result. Not so with IAF: It intelligently enhances the source's relevant characteristics, automatically adjusting complex sets of parameters – rather than only performing a static boost or cut in one or several specific frequency regions.

This revolutionary approach allows you to get to the desired results much faster – with almost instant gratification, and without the feared ear-fatigue conventional psychoacoustic enhancement technologies have a reputation for.

Keep in mind however, that – even if it might seem so at times – IAF doesn't perform magic or miracles. It doesn't "create" content that's not already there; it only sculpts and emphasizes characteristics that are present in the source material.

Enjoy! The Noveltech Audio Team

www.plugin-alliance.com



Processing Section

In the left section, you will find the most critical parameters to set up VOCAL ENHANCER's processing. FOCUS FREQUENCY and ENHANCEMENT are best to start playing with in order to get a feel for this tool's capabilities.

TIP: Please keep in mind, that the High and Low filter settings in the filter section also have an effect on the sound.

STRONG – Toggles between standard (off) and strong (on) processing modes. Standard setting should be off.

FOCUS FREQUENCY – Sets the processing focus within the high and low filter settings. As Vocal Enhancer influences multiple frequencies, it is hard to label this with exact frequencies – have a look at the display for feedback on the ranges affected.

ENHANCEMENT – This sets the amount of the processing. Let your ears be the judge on how much is too much. Unlike with conventional methods, there won't be any ear-fatigue so if it sounds good, it is good.

Display Section

ENHANCEMENT – Meter displaying the amount of overall enhancement in realtime.

DISPLAY – FFT display, showing the amount of processing over the frequency range from 1 kHz to 20 kHz in realtime.

LOW / HIGH FILTER BORDERS – These lines may be moved to narrow or widen the frequency range of the processed part of the signal. The dry signal will not be cut or affected by setting them. Moving these lines will update the filter settings below the display. The left line affects the low frequency setting and the right line the high frequency setting.

RESONANCE TRIANGLE – These triangles may be moved vertically to increase or decrease the resonance Q-value of the resonant high pass and low pass filters. Moving the triangles will update the low and high filters' resonance setting below the display.

TIP: The filter frequencies may be tracked with a constant width when clicking at the filter lines while holding SHIFT. Alternatively, you can also click and hold the right mouse button instead. This is a great way to find the best processing area with a fixed filter bandwidth.

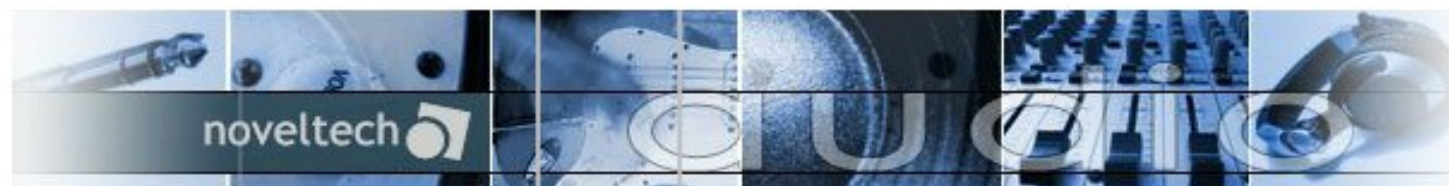
Filter Section

The Filters affect only the enhanced portion of the signal; you will not cut or affect the dry part of it. An unusual feature for filters in an application like this is the RESONANCE – play with it and you will know why we added it. The filter type used are resonant high pass and low pass filters.

LO/HI – Displays the set frequency from 1.0 kHz to 20 kHz. Double-clicking will open a value input field.

RES – Displays the set resonance Q-value from 0 to 99. Double-clicking will open a value input field.

12/24 dB/Oct – Toggles the steepness of the filters between 12 and 24 dB per octave.



Metering Section

INPUT METERS – Indicates input levels with peak hold, the vertical triangle allows level adjustments.

OUTPUT METERS – Indicates output levels with peak hold, the vertical triangle allows level adjustments.

REDUCTION METER – Displays amount of level reduction from top to bottom.

GAIN COMP – Engages automatic gain compensation. This function automatically adjusts the output level in order to keep the input and output peak levels in the same range.

Preset Section

There are several presets built into the main window. You can select them but not alter them. They are reference presets to get you started fast and easy. To store your own settings please use the standard preset system of your DAW system. You will find all the info you need in the manual of your audio host program.

A / B and STORE

You can compare two different Character settings with the A/B switches. Any changes you make will be stored automatically in the Setting you are using.

If you press STORE the current setting will be stored in B. Now you can switch back to A and alter settings to your taste, afterwards you can toggle between A and B easily. You can automate A and B to recall 2 different settings for certain parts of your song / audio project.

GETTING THE BEST RESULTS – WITH VOCAL ENHANCER

The VOCAL ENHANCER's processing has been designed for unprocessed audio material.

Heavily compressed or processed material may overdrive the algorithm and result in unnatural sounding results.

This is especially true when using the STRONG mode – you should only use this mode if you have very weak, unprocessed material.

VOCAL ENHANCER is optimized for human voices, but it can also deliver great results on other material such as complete mixes. Try using it to ever so subtly adding "air" to your mix for instance.

TIP: Due to the Auto-Level feature, the VOCAL ENHANCER's processing doesn't boost peak levels, but it doesn't spare you to run a Limiter if you want a safe-guard against clipping.