QuikQuak
Audio plug-ins

Fusion Field

User guide v. 3.1

Fusion Field is a smooth diffusion reverb that sits beautifully in a mix. A clean, unobtrusive sound with a natural falloff that floats behind, and complements the source material perfectly. Fusion Field is very easy to use, and the main display shows the effects of the dampening and EQ in a plain natural way. The reverberation can be dampened in the upper and lower frequencies, allowing soft sibilance and a graceful, lifting air to the sound.

Having very few controls does not hinder Fusion Field's usefulness. The dial ranges have been sloped to give the best sensitivity in useful regions, and the whole unit can create short snappy rooms, or vast time-suspended spaces, and anything in between.

Removing the character of uneven early reflections and various room shapes leaves the sound pure, so it's able to hold the sound in time. Simply enhancing the sound image without obtrusive additional tones allows for more space in the mix.

Fusion Field gathers reflections immediately, smoothing out initial transients, then realistically diffuses the sound to the specified decay time. The interface has a logical layout, prompting fast editing with expected results.

Getting started

Fusion Field is a stereo output reverb plug-in, but it can also be used in a mono configuration. Once installed your host software may need to re-boot, or manually made to re-scan the plug-in list for it to show.

The best place to start when using Fusion Field is the presets. Preset names are a guide to their usage, and of course everything can be quickly altered to suit your needs. The presets can be accessed though the menu, or clicked through one at a time with the arrow buttons in the bottom left of the plug-in.

Simply spend some time going through the presets, changing as many dials as you like to see what happens, it's the only way to get a feel of it, so dive straight in!

Controls

Preset and menu items:

Load Preset:
 Allows you to load a previously saved preset. This uses the VST standard '.fxp' file format.

Save Preset:
 Saves a preset. This uses the VST standard '.fxp' file format.

Reset Current:
 Resets the selected program back to its 'factory preset,' or basically its preset setting when the plug-in was first loaded into a project.

Preset sub-menus:
 Simply contains all the presets available in different categories.

Left and Right buttons:
 This scrolls you through the presets.

Preset name:
 Clicking on the name panel enables you to change its name.

Main display panel:

The main display shows an animation with frequency as the vertical axis, and time drifting to the right. Any black areas show the frequencies that have been cut in that range. It also displays the attack and decay curves when they are edited.

This non-linear display gives natural and useful feedback for editing the reverb tail. You will be surprised how often you refer to this visual model when editing the plug-in.

The four dials on the left of the plug-in control the frequency response of the reverb. The effect they have on the sound is shown in this panel. Changing the low/high cut parameters will display a horizontal black bar that sweeps from the top or bottom of the panel. The black area is showing you the frequency area that has been removed from the reverb. With the damping dials you can see a black wedge shape that swings in from the right corners, the black areas show you the frequencies that removed over time.

Decay is modelled by the length of the trail, with Spread and Distance shown with appropriate fade in and start position.

The panel also displays the help pages (text taken from this document), which is accessible from the menu.

* NOTE: With some of the controls, the effect only changes when you've finished editing them.

Decay:
This controls the length of the reverb. Use this to create the illusion of different size spaces. Typical rooms are in the lower third, the next third range from halls to large concert like venues, and then on to impossible places useful for frozen ambiences and spatial effects. Time decaying from the attack phase, up to 12 seconds.

Attack:
This controls the attack phase and tightness of the diffusion. Low values are useful for percussion and simulating small areas like rooms. High values loosen up the reverb, useful for simulating large areas and creating more space for the inputs signal to breath. Up to a maximum of 2 seconds.

Delay:
This simulates moving the sound source to different distances from the listener. Higher dial settings create longer delays, up to a maximum of 0.5 seconds.

High Cut:
This dial does a straight cut of high frequencies. This creates a darker and moodier reverb, and is also useful for reducing sibilance from vocals.
This effect is shown in the upper part of the main display as a flat dark band.

Low Cut:
This dial does a straight cut of low frequencies. Use this to lighten the reverb and prevent boominess in lower registers.
This effect is shown in the lower part of the main display as a flat dark band.

High Damp:
This controls the high frequency damping of the signal over time. Simulating the effects of furniture and curtains etc. For example, use this for keeping a vocal bright, but removing sibilance in the reverb tail. Used in conjunction with 'low damp' can create a beautiful floating ambience.
This effect is shown in the main display as dark sloped band lowering from the top to show the frequencies cut over time.

Low Damp:
This dial controls how low frequencies are dampened over time. Use this to free up the sound from unwanted boom or rumble. Can be used to give a nice lifting air to a solo. This effect is shown in the main display as dark sloped band rising from the bottom to show the frequencies cut over time.

Decay Curve:
This sets the drop off curve of the diffusion. When adjusted you'll briefly see the curve shape displayed on the main panel, along with the corresponding decay in the cloud background. The curve can be quite extreme allowing special reverbs like having a sudden cut off.

Attack Curve:
This is the same as the Decay Curve, but it controls the attach phase. Long attacks can give the impression of backwards effects, or ghostly washes.

Echo:
Echo is a simple delay effect that gives the impression of reflective spaces. Useful for simulating large areas, and adding subtle ethereal effects. This dial sets the echo delay time, up to 1 second.

Echo Gain:
This sets the feedback gain for the echo delay, set to 0 for no effect. Note that the maximum is just less than 1 to prevent infinite looping.

Dry and Wet:
These dials control standard output gains. Full on 'dry' returns the original signal. The effected 'wet' signal has a higher gain capacity that may be needed for highly filtered or dampened diffusion.

Dry On button:
This button simply switches the dry signal off and on. This applies to all the preset programs after setting. Useful for auditioning Fusion Field as a side-chained effect.

Cross Feed:
This dial feeds the left and right channels into to each other. Setting it towards Mono brings the stereo image gradually together, useful for central vocals and stopping percussive instruments from cluttering up the mix. The normal setting is a straight through mix with no feedback. Any settings after that introduce negative input cross feed between the channels up to 50%, this helps create a more realistic space in with panned taudio.

Output mete and clipping LED:
The stereo meters on the left display the total output gain of the plug-in.
The LED lights up whenever the return signal goes over the standard plug-in limits. Clipping will cause distortion to the output, and should usually be avoided.

Hints and tips

* Don't think about presets, go straight in and edit the decay and filters - it's good practice and you will get the sound you want quicker.
* The Delay dial can clear the beginning of sharp attack sounds like percussion, or piano.
* Use longer attacks to allow voices/solos to breathe, and create nice ethereal backwashes.
* It's sometimes easier to judge the size of the spaces you're creating by using short percussive sounds, like wood blocks or claps.
* Take the reverb off occasionally to check that you haven't over washed the sound, which is an easy mistake to make, especially if you have been listening to the track for quite a while.
* Above all - experiment!

Have fun.

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QuikQuak audio plug-ins.