

# Alchemy Quick-tips

Warm Pad	Wide Feedback	Space Darkness	Crystal Transformation
Noise Transitions	Peaceful Drone	Space Transmission	Mass Noise Movement

## Introduction

Opening Alchemy for the first time can be a daunting experience, not unlike skydiving into an active volcano or trying to spend a week without oxygen. Don't panic! We're here to help. We've created a full masterclass on every feature in Alchemy, which you can get right [here](#). If you're just here to get a quick start, read on!

- *Soundfreqs*

## VA Synthesis

### Increasing Unison Voices

*Increase the "num-uni-" parameter to about 7 and dial in some detune for wide and rich sounds.*

Unison in any synthesizer copies the signal the specified amount of times.

Detuning these signal "copies" creates a dense sounding signal, similar to how a reverb creates a dense/thick sound by layering a lot of delays. To exaggerate this effect even more, Alchemy automatically pans these new signals to a different position in the stereo-field.



### Modulate the Sync Parameter

*Modulate the sync parameter with a step sequencer to get an "arpeggiator-like" feel without actually arpeggiating the melody.*

Oscillator sync is a fairly complex technique involving two oscillators.

With the Sync control you set the pitch (speed) of the internal *slave* oscillator,

The waveform of this *slave* oscillator is being reset every time the *master* oscillator make a complete cycle (that happens a lot!)

This way you get a harmonically rich sound without sounding (too much) out of tune.

You can save the Value Snap to 1/12 which will make sure every new value snaps to a perfect semitone.

To make things even more interesting try modulating the Sync control of two separate sources, to create complex, harmonically rich, "fake" melodies. (See next page for examples)



Example with one source

Notice the *snap* value in the sequencer, and the *Modulation Depth* (12 St.)

Once you have set up the first source try modulating Oscillator Sync on a second source, with a negative modulation depth (-12 St.)

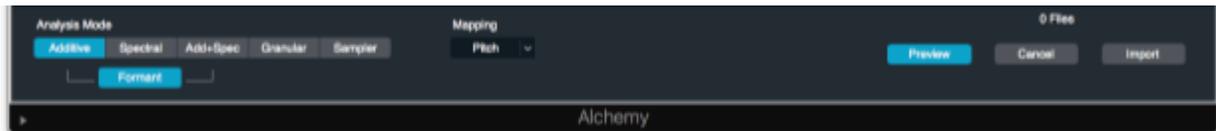
In this example I am using a new *Sequencer* for source two, which runs at half the rate (1/8)



## Additive Synthesis

Modulate either the *Pulse/Saw* parameter or one of the *Harmonic* controls.

When you import a sound into Additive mode Alchemy will keep track of all the different kinds of harmonics.



The *Edit* page gives you full access over all these harmonics but in most cases the Additive Panel Controls are all you need.

Modulating a specific set of harmonics can yield really interesting results, especially on imported sounds. For example, if you modulate the "Fundamental" control you can go from a very complex rich sound to a powerful single fundamental.

Alternatively you can try:

- **Modulating the Fifths**  
In the key of C the fifth harmonic is a G, having more presence of this frequency sounds especially great in build-ups as it has a strong pull



The Edit Page

to the tonic (fundamental) of your song.

- **Modulating Octaves**

Stacking octaves creates a very bright sound, great for stabs and leads.

- **Modulating Odd/Even**

Modulate between Odd Harmonics (1, 3, 5, 7, etc.) and Even Harmonics (2, 4, 6, 8, etc.)

This is just a nice timbre change, Odd Harmonics tend to sound thin and hollow, even harmonics often



sound more stable and rich.

## Granular Synthesis

### Freezing the Source Parameter

“Freezing” the signal essentially, means setting the speed knob to 0%, by doing so the imported file will be frozen at the position set by the accurately named Position control.

Notice the *Playhead* in the image on the right, it’s the thin white line just before the 2 in the Waveform Display.

Because the Speed is set to 0% this *Playhead* will not automatically move anymore, instead it will only play back a single cycle of audio, which will sound like regular waveform synthesis.



You can now modulate the position knob to scan through your “wavetable”.

If you modulate the position with a synced *ramp-up* shape LFO you can play back any audio source in sync with your host tempo. This works for Additive and Spectrum synthesis as well. It’s a great starting point for creative rhythmic patterns, for both percussive and tonal sounds.

Depending on the audio file and the position of the position control you might want to adjust the tuning of the file to match the pitch of inputted MIDI notes.

You can use Logic’s Tuner for this, just hold down a C on your keyboard and offset the tuning inside the Edit window so that the file plays back in C.



*The Tune Control on the Edit Page*

## Spectral Synthesis

### Drawing in Mask Mode

In most applications, such as iZotope's Iris, Spectral Processing techniques are being used to filter an existing signal/source.

Alchemy takes this a step further and allows you to draw new content using the default sine waves or noise, labeled Pitch and Noise in the Spectral Panel.

This technique is great for effects and percussion but it can be tricky to create new content from scratch.

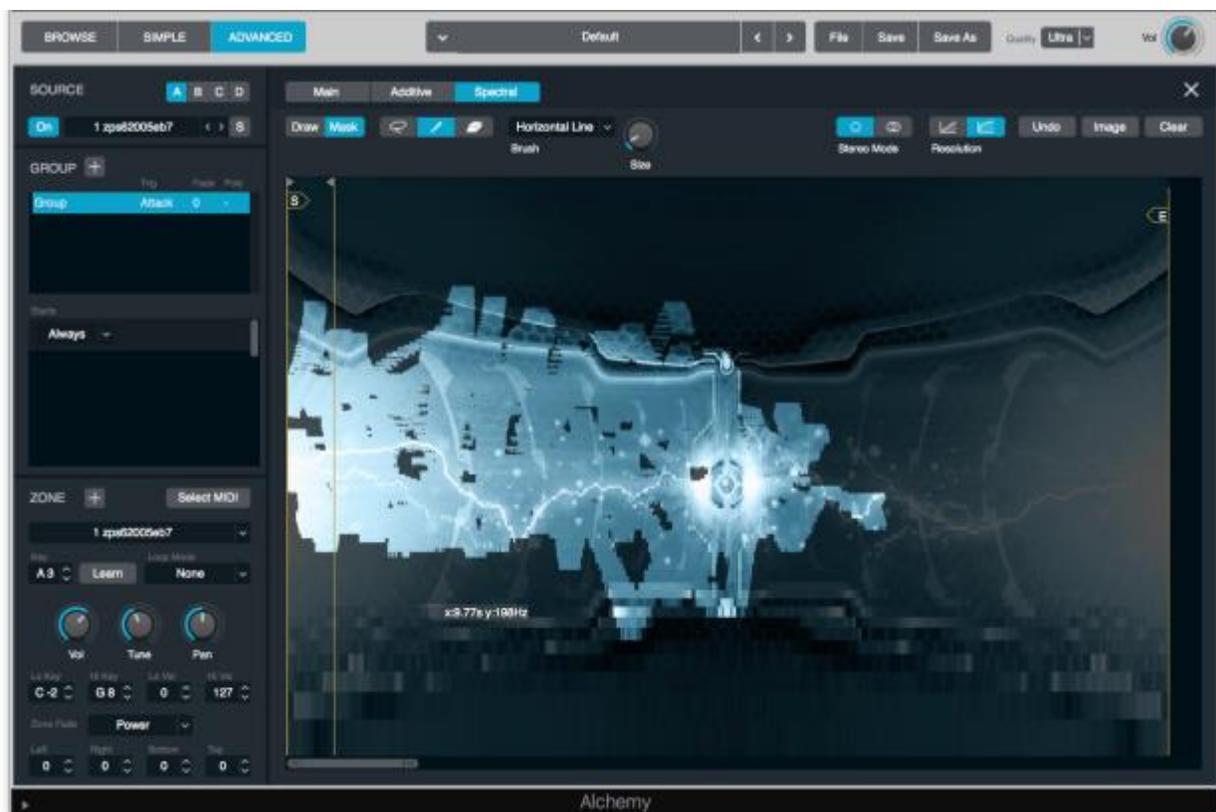
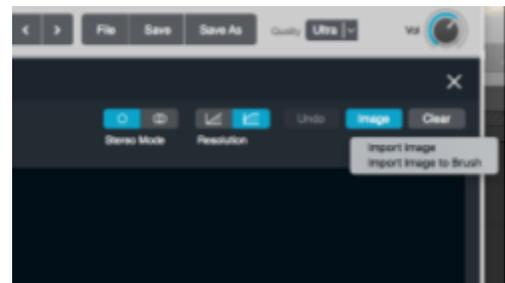
To get a flying start I often import an image and then "Unmask" areas of the imported images to only allow sound through in a specific frequency range.

First load an image using the "Image" button in the Editor.

After that switch to *Masking Mode* to un-filter the part of the sound that you want to hear, you will hear everything on the canvas with a bright color.

All the darker colored regions are being filtered or *Masked*.

It's a nice and fast approach to creating new and unique sounds, try it!



## Effects

### Convolution Reverb

#### Decreasing the Size parameter

Convolution reverbs use an audio file (Impulse Response) as source, the size parameter changes the length of this audio file, which in turn will change the pitch of the sound.

This allows you to create incredibly rich, dark and ambient sounding patches, especially when you dial the dry signal back to 0%.



### Multimode Filter

Choose the Comb filter and set the feedback to about 95% (Negative or Positive)

Modulate the cutoff with either Keyfollow or Keyfollow Fixed (Fixed ignores Pitch Bend).

The comb filter delays the signal and feeds it back into the input of the filter, creating a tone.

Using keyfollow will make sure that this pitch (controlled by the delay time/cutoff) will listen to our keyboard/midi notes.



## Bandpass Filter & Band Reject

The Bandpass Filter in the Alchemy effects section is a bit different from what you would expect. Besides acting as a normal bandpass filter, such as the ones you will find in the multimode filter, it actually works together with the Band Reject module.

The idea is that you can affect only a specific frequency range of the signal. The order to set this up is: Bandpass filter -> Any effects -> Band Reject.



The band reject filter will add back all the frequencies that you lost with the bandpass filter, in other words: anything outside the range of your BP filter.

A great effect to try this on is the *Waveshaper*.

The Waveshaper effect already has a built in filter, but it lacks resonance and has a limited amount of filter types. With the bandpass/bandreject combination you can really tweak the signal going into the Waveshaper.

Experiment with different effect combinations but definitely try using the *Phaser*, the *ModFX* and the *Reverb* after the bandpass filter but before the Waveshaper and Band Reject.

### Three Band EQ

Using two different Three Band EQ modules allows you to boost specific frequencies *only for the effect/module in between the two EQ's*.

In the image you can see that the *Freq2* knob of EQ1 is being modulated by an LFO, on EQ2 the *Freq2* knob is being modulated with the same LFO but with a negative modulation amount. Because of this negative modulation on the second EQ the resulting signal will sound exactly the same as without any EQ's. In other words, *the two assignments cancel each other out*. However, the Waveshaper in between these two effects will "hear" the boosted signal, which can create really unique new timbres.

Essentially you now have a more flexible input filter to the Waveshaper (input filters play a big part in the sound of any wave-shaping effect).

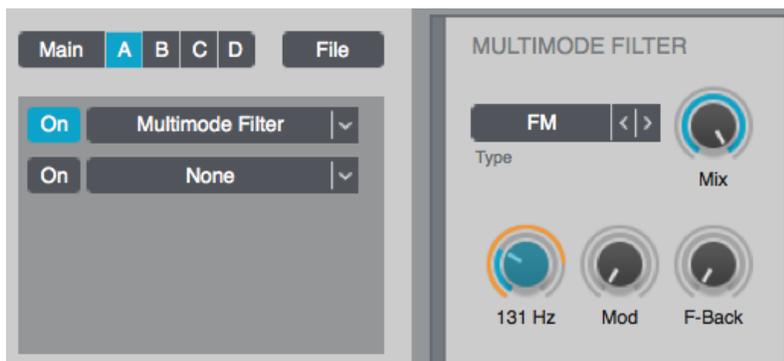


### FM & RingMod

The Multi Mode Filter also features FM and RingMod, two techniques that both require a new internal oscillator to modulate some aspect of the original signal (Frequency and Amplitude mainly). Both these modes can greatly benefit from the Keyfollow modulator, which will ensure the internal oscillator plays in tune with your keyboard. You also want to double click the frequency control to map it to the right pitch. It should jump to 523Hz.

To raise or lower the pitch by an octave you can divide or multiply this 523Hz, for example setting the frequency to 131Hz will lower the pitch two octaves. (Technically that would be 130.75Hz but 131Hz proves to be close enough in most cases).

Generally you want to keep the Keyfollow Modulation Depth at 100%.



## Modulation Sources Using Note Property

The Note Property modulation sources in Alchemy are great for creative unexpected results, they all have something to do with the MIDI input.

Polyphony for example will track the amount of notes you are playing at the same time, if you play a higher number of notes (For example a F/BbmAdd9#13 chord!) it will send a higher value.

You can use this to modulate the volume with a *negative* modulation depth and thereby compensate for the increased volume when playing more notes.

Or, for something more creative, you can modulate the reverb and have a “Bigger” sound for chords and a closer, more intimate sound for melodies, all within one patch!

Other great sources for experimentation are the FlipFlop Modulators which will “Flip” the modulation value for every new note (or every third note).

If you use this modulator to control the panning and your melody is A B C D, then the notes A and C will Pan one way and B and D will pan the other way.

Most “normal” modulators will reset for every new note, but these Flip Flop modulators can work on ever other note or every 2 notes (FlipFlop2).

