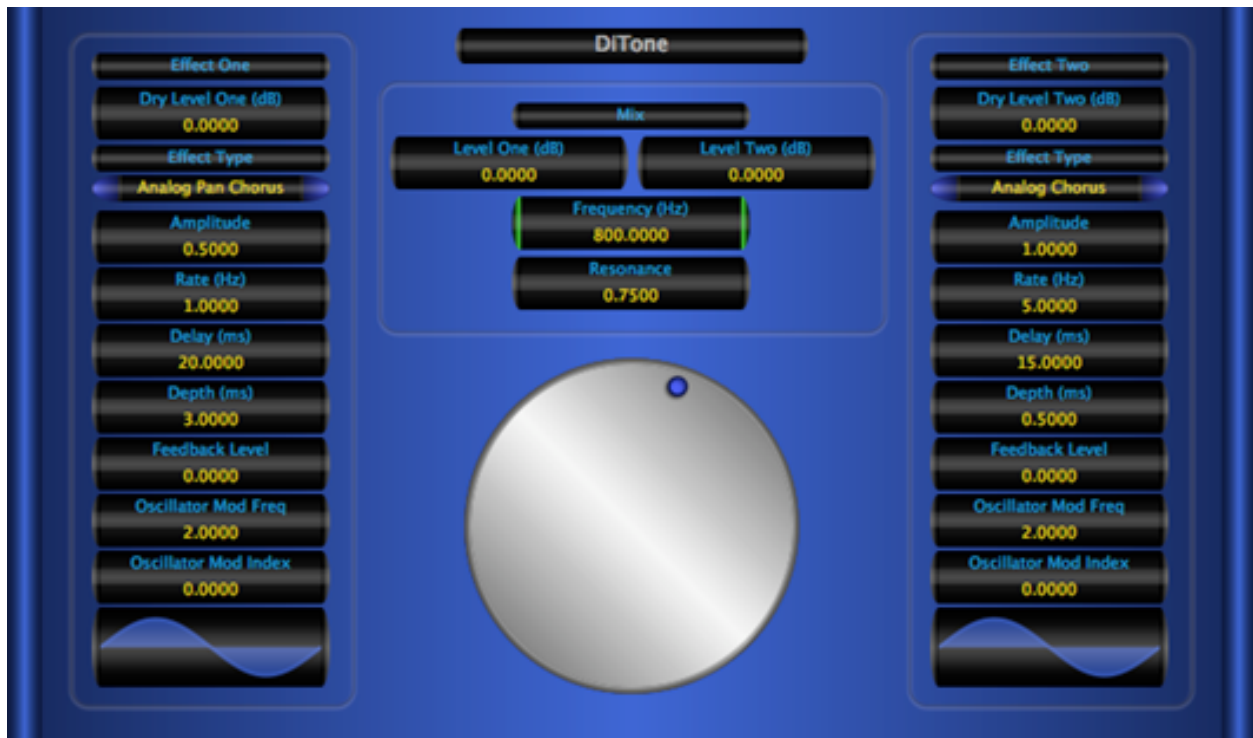


# Music Unfolding DiTone Audio Unit

## User Guide



## **Requirements:**

OS X 10.6 or higher is required. DiTone requires an Audio Unit (AU) capable host. A host that supports Cocoa user interfaces (UI) for AU's is needed. Please check DiTone's operation in your host of choice for suitability before purchasing.

## **Installation:**

DiTone can be installed in any of the standard Audio Unit component locations. These are commonly /Library/Audio/Plug-Ins/Components and ~/Library/Audio/Plug-Ins/Components (where "~" stands for the user's home directory). Drag DiTone.component into the Components directory and relaunch your AU host software. The included presets also need to be installed into one of the standard locations (/Library/Audio/Presets/MusicUnfolding/DiTone and ~/Library/Audio/Presets/MusicUnfolding/DiTone). If you already have a MusicUnfolding directory in your "Presets" directory, then drag the DiTone directory into this location. If not, drag the MusicUnfolding directory that contains the DiTone presets directory into the "Presets" directory.

## Introduction:

First, a quick introduction to the editing controls for DiTone. All controls are set using the same knob. Click the desired control readout to select and then move the knob to control. The active (selected) control is indicated by the green end caps. The knob works with a circular control motion. The closer to the center you are dragging the knob, the rougher the increments. Moving farther out makes the increments finer. You can even click the surface of the knob and drag out of the surface of the knob and then move in a circular motion if you want finer control. To set a parameter to an exact value, double click the parameter readout. This brings up a text box where the parameter value can be set exactly. Double-clicking the knob sets the selected parameter to its default value. The knob will act with a linear, logarithmic, or power response depending on the parameter that is selected.

The controls also support click-and-drag directly on the surface of the readout. Clicking-and-dragging in a vertical direction changes the parameter values. Dragging in a horizontal manner causes the value to change ten times slower. The control behavior (linear, log or power) is the same as it is while using the knob for parameter control. In addition, hovering the mouse over the control and using the scroll wheel also changes the control value. If you have a mouse with an horizontal scroll wheel motion, scrolling horizontally changes the parameter value with 10 times finer control.

The colors of the parameter displays can be changed in the preferences/registration panel. To bring up the panel, click on the name tag/badge for the AU. Select the colors of your choice and then to see the new colors in effect, you must close and reopen the AU. The preference is applied in all hosts for a given user. Note that these color preferences apply to all of the Twister series AU's. Setting your color preference in one will apply this preference to all of the Twister AU's.

DiTone splits the input signal into two separate streams. It then applies an independent effect to each stream. Then the dry input signal can be mixed into each stream independently. Then one stream is lowpass filtered and the other is highpass filtered. The two filters are designed to overlap in a nice musical fashion. The cutoff frequency and resonance level of the two filters can be set. The two streams are then mixed back together with independent volume controls.

DiTone has a variety of effects available including tremolo, vibrato, panning, chorus, and flanger. Altogether, DiTone has twelve different types of effects available for each stream. The effect is chosen independently for each stream. The parameters that control the effects are then independently set for each stream. This leads to a huge array of possible sounds. Some incredibly interesting and unique modulation effects can be created.

## The Sections:

**Mix:** The mix section has two settings for the Levels of the two effects "Level One" and "Level Two". The settings are in dB. These levels set the volumes of the effects as they are mixed for final output. The "Frequency" and "Resonance" parameters set the cutoff frequency and resonance/bandwidth of the splitter filters.

**Effect One and Effect Two:** These two sections are identical. Let's just go through the parameters one-by-one and describe what they do. Some parameters only apply to certain type of effects. We'll list the applicable effects in parentheses before each description. A value of "All" means that a parameter applies to every type of effect.

**Dry Level:** (All) Dry Level sets the amount of dry signal that is mixed into the effect. Note that the dry signal is mixed in before the splitter filters are applied.

**Effect Type:** (All) Selects the type of effect. The possible type are Tremolo, Vibrato, Pan, Pan Vibrato, Chorus, Analog Chorus, Pan Chorus, Analog Pan Chorus, Flanger, Analog Flanger, Pan Flanger, and Analog Pan Flanger.

**Amplitude:** (All) Sets either the depth of tremolo or the extent of the pan.

**Rate:** (All) Sets the rate of the effect. For effects that are pitch and volume (pan or tremolo) based, the rate of both pitch and volume variations are synced.

**Delay:** (Chorus and Flanger Effects) The delay of the effect before the pitch variation. Typical values are 20 to 30 ms for a chorus. Flangers can use a wide range of values. The value effects the voicing of the flange sweep.

**Depth:** (Vibrato, Chorus, and Flanger Effects) Depth sets the degree of pitch variation.

**Feedback Level:** (Flanger Effects) The "regen" level. The parameter value ranges from -1.0 to 1.0. 0.0 means no feedback. Negative values simply cause a negative feedback to be used and change the voicing of the flanger. Take care with large values. Values near -1.0 or 1.0 can lead to high volumes. There is a hard limiter set to a linear level of 1.2 after the effect for protection. If you hear ugly clipping, this is an indication that the feedback is set too high.

**Oscillator Mod Freq:** (All) The oscillator are FM LFO's. The Mod Freq is the usually best set to a small integer value. More extreme values have some extreme effects.

**Oscillator Mod Index:** (All) The oscillator are FM LFO's. The Mod Index is the usually best set to a value less than one.

That completes the parameter descriptions. We'll follow up with some notes on the individual effects.

Tremolo: Rate sets the Tremolo rate and Amplitude sets the depth. Delay and Depth have no effect.

Vibrato: Rate sets the Vibrato rate and Depth sets the extent of the pitch change. Vibrato is actually a Vibrato/Tremolo and a non-zero Amplitude sets the Tremolo depth. The Vibrato and Tremolo will be synced. Delay has no effect.

Pan: Pan is a straight forward auto panning effect. Rate sets the rate and Amplitude sets the extent. An Amplitude of one causes the pan to sweep from full left to full right.

Pan Vibrato: Pan Vibrato is a combined and synced panner vibrato. Depth sets the extent of the vibrato pitch change. Rate sets the rate of both the vibrato and the pan. Amplitude sets the pan extent.

Chorus: Depth sets the extent of the pitch variation. Rate sets the rate. The Amplitude does have an effect. It is somewhat like a tremolo. But, since the chorus is multi-voice, it isn't as dramatic as a straight tremolo. The net effect of the Amplitude is a variation in the presence of the chorus. An interesting effect can be obtained by turning the delay and frequency sweep off and just using the Amplitude sweep.

Analog Chorus: The parameters for Analog Chorus are identical to Chorus. The difference is that Analog Chorus is voiced to be closer in sound to a bucket brigade-based chorus effect. It's a darker and more mellow sound.

Pan Chorus: Pan Chorus works much the same as Chorus except that Amplitude works on the panning and there is no tremolo. This works as a nice stereo chorus.

Analog Pan Chorus: A more mellow voiced panning chorus with a sound that is more like a bucket brigade based chorus.

Flangers: The different flangers are much the same as the related chorus effects.

## **Hints:**

The "Pan" effects only work in stereo. If a panning effect is selected when the DiTone is used in a mono context, the non-panning version of the effect will actually be used. This includes the "Pan" effect. It will default back to a mono tremolo.