



# Clearmountain's Phases

## User's Guide

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# Overview

## Introduction

Clearmountain's Phases brings you the sounds of classic flanger and phaser processors used in mixing engineer Bob Clearmountain's studio, meticulously modeling his rare, vintage flanger and phaser rack modules from the mid-seventies. The plugin adds Expanded settings modules, so you can replicate Bob's advanced workflow, easily dialing in the distinct, engaging modulation effects heard on songs from the world's most influential artists.

## Highlights

- Authentic emulations of Bob Clearmountain's vintage Flanger and Phaser Rack Modules
- Phases Presets offers access to Clearmountain's personal settings for iconic songs and applications
- Use Module Config to combine the flanger and phaser for complex, evolving soundscapes
- Expanded Settings Modules offer a universe of possibilities beyond the original units
- Dial in the distortion, aliasing and component aging of the hardware units, or maintain a pristine signal path.

## About Bob Clearmountain

For decades, engineers, producers, and musicians have marveled at Bob Clearmountain's mixes. Recordings by iconic artists like David Bowie, Chic, Roxy Music, The Rolling Stones, Bruce Springsteen, Bryan Adams, INXS, and so many more are prime examples of how Bob's work elevated the role of "the mixer" to that of an essential creative partner in the process of making records. Bob's ability to build a soundscape and atmosphere, where voices and instruments effortlessly live in an intimate space but seamlessly blend together, set new standards for mixing. His passion to reveal the true character of the song, highlighting the emotion of the music, gets to the heart of what inspired the song to begin with.

## System Requirements

- Validated on macOS 10.14.6 and above, operational on Mac OS 10.11 El Capitan and above
- Validated on Windows 10 20H2 and above, operational on any Windows 10 version.
- PACE iLok Account
- AAX Native, AU (Mac only), VST or VST 3 Compatible Host Application

# Getting Started

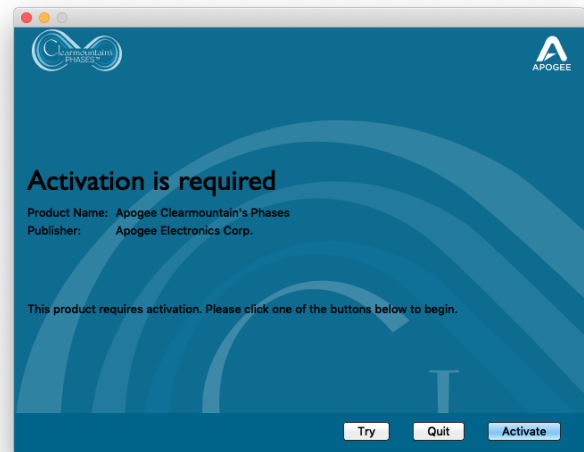
To authorize the Clearmountain's Phases plugin, you need a Pace iLok account and the Pace Activation Code that comes with the purchase of the plugin. If you don't have an iLok account, you'll have the opportunity to create one during the activation process.

The Activation Code deposits an iLok license into your choice of three valid license locations - a physical iLok 2 or greater, your computer's hard drive or the iLok Cloud.

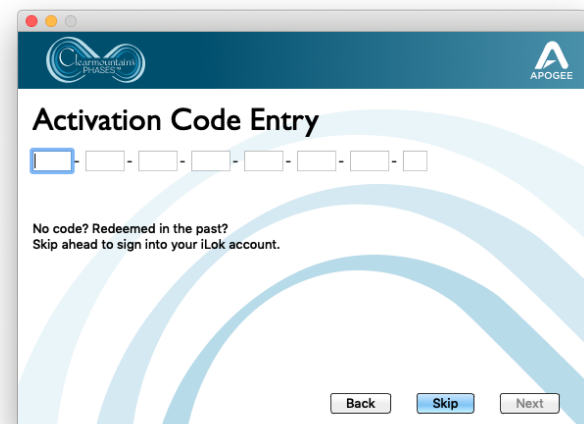
To get started, double-click on the downloaded file and follow the installation instructions. Once completed, open your DAW. When the "Activation is required" dialog appears. follow on-screen directions as shown below.

At the "Activation is required" page, click Activate if you have an Activation Code.

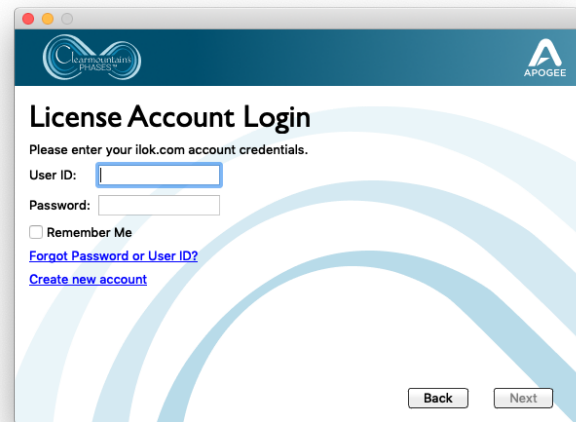
If you don't have a code, click Try to activate with a 15-day Trial license.



If you clicked Activate, enter the Activation Code on this page:



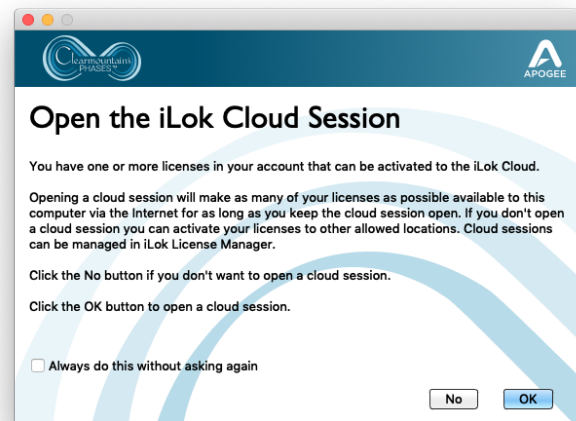
Sign into (or create) your iLok account on this page:



Clearmountain's Phases supports activation to the iLok Cloud. If this is your preference, you can open an iLok Cloud Session from this page.

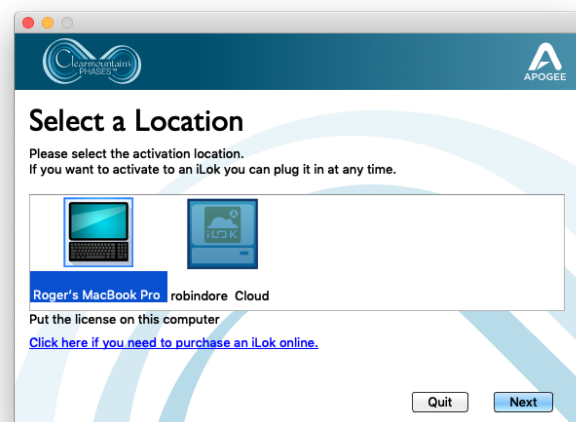
When activating to the iLok Cloud, you don't need a physical iLok but your computer will need a consistent connection to the internet.

It's always possible to change the license location in the iLok License Manager app.



If you haven't opened a Cloud session, choose a valid license location on this page. If you want to activate to your iLok 2 (or greater), connect it now:

It's also possible to activate your license from the iLok License Manager app - open the app and choose Licenses > Redeem Activation Code.

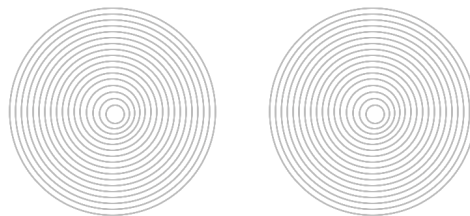


# What is Flanging & Phasing?

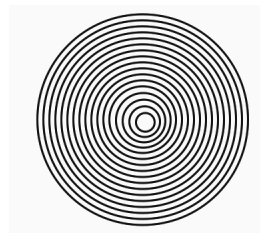
If you're into the sounds and songs of the 1960s and 70s, you know the trippy, undulating sound of flanging and phasing. From Led Zeppelin's "Kashmir" to Small Faces "Itchygoon Park", Hendrix's "Bold as Love" to The Doobie Brothers "Listen to the Music", phasing and flanging are inextricably linked to that heady and wildly creative period of popular music.

While leather fringe jackets and tied-dyed t-shirts have lost their popularity, flanging and phasing has remained a go-to sonic texture for artists throughout the decades - Bowie in "China Girl", Eddie Van Halen, Incubus, Daft Punk and countless others use flanging and phasing.

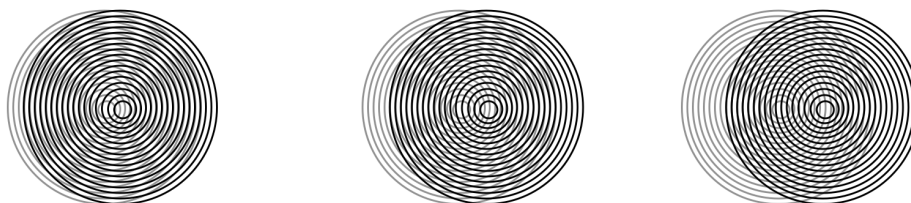
But what IS flanging and phasing? To better understand, here's a visual example showing how identical images can combine to create complex, moving patterns in much the same way that a flanger/phaser creates patterns of audio waveforms. To start, observe the two sets of semi-transparent concentric circles below.



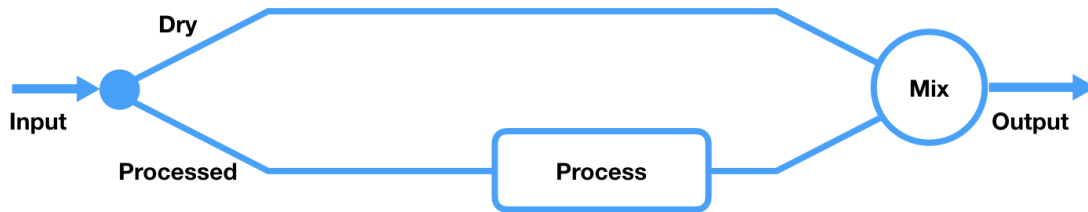
If the two images are statically superimposed, they reinforce each other to create stronger lines, as shown below. This is analogous to how two identical audio signals, when combined in phase, reinforce each other resulting in a louder sound.



If, on the other hand, one image is moved across the other, complex patterns are created as the images overlap. This visual phenomenon is known as the Moiré effect.



This is precisely how a flanger or phaser works - an audio input is split into two signal paths, Dry and Processed, the Processed signal path is dynamically modified, and finally the two signal paths are mixed back together. As the processed signal varies in relation to the unprocessed signal, the swooshes and sweeps associated with flanging and phasing are created.

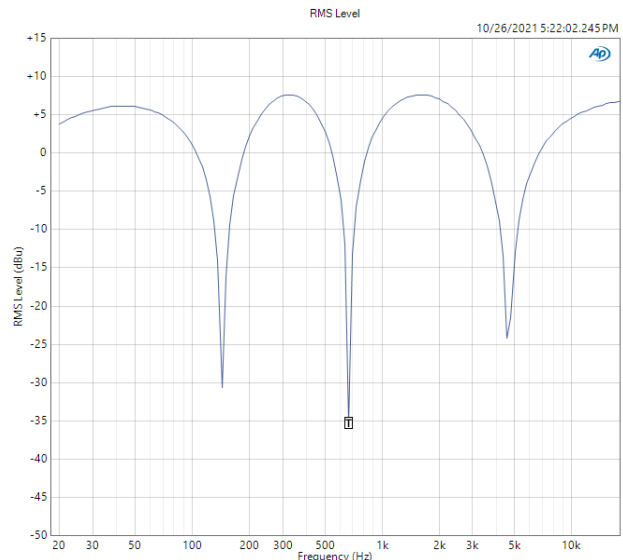


What, exactly, is causing the flanging and phasing effect? Varying phase differences between the two signal paths create a series of notches called *comb filtering* that sweep across the frequency range.

For example, here's the frequency response of the Phaser at a static Manual setting, i.e. with the Sweep Rate set to 0%.

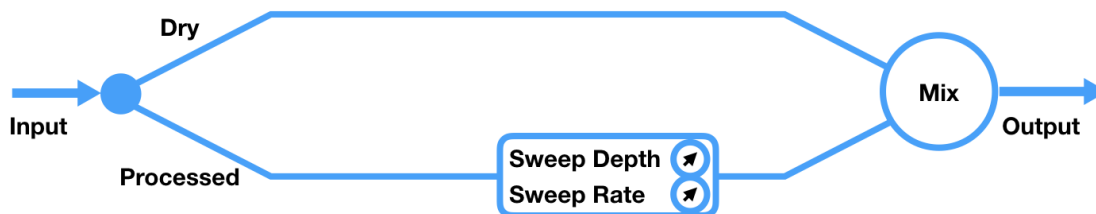
With Stages set to 6, you'll get 3 deep notches as shown at right.

Imagine setting an EQ to create these notches, then simultaneously sweeping the frequency knobs of all the bands across their range - you'd have something close to phasing.



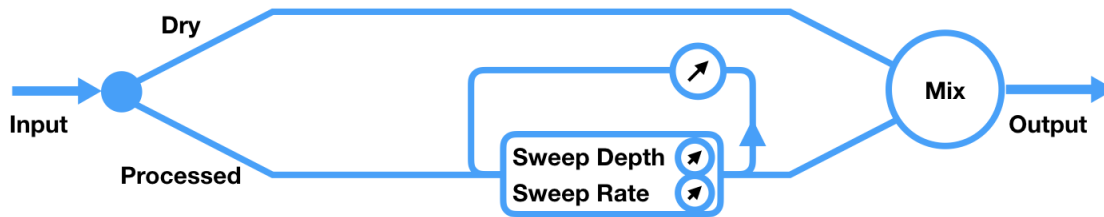
If comb filtering is the first characteristic of flanging/phasing, the rhythmic sweeping of the comb filter across the frequency spectrum is the second, adding movement and drama to your sound.

There are two ways to create the sweep: 1) use the Manual knob to sweep, uh, manually 2) use the Sweep Depth and Rate knobs to create a periodic (or rhythmic) sweep.





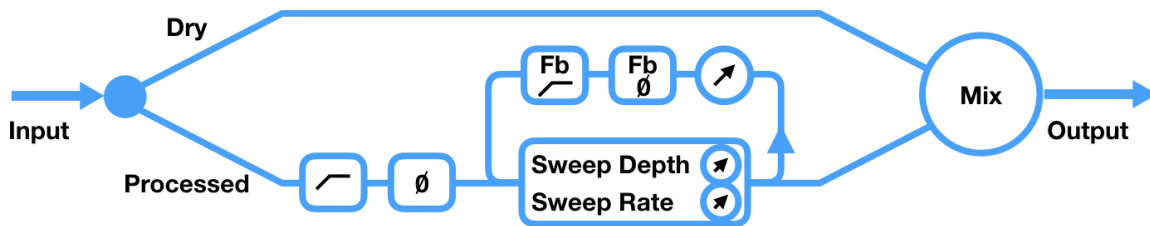
While the simple signal diagram above depicts basic flanging and phasing, there's quite a bit of sonic variety that becomes available with additional signal flow options. Adding a Feedback loop to route the Processed output back into the input intensifies the flanging/phasing effect, becoming more and more resonant as the Feedback level is increased.



As you've learned, flanging/phasing is created by the interaction of two signal paths. Adding a hi-pass filter to the Processed path *removes* the low end from that path, so that low frequencies aren't flanged/phased. Try a Hi-pass filter when flanging/phasing drums to preserve the low end power.

A polarity reverse function radically alters the interaction, so waveforms that reinforce at one polarity setting attenuate when polarity is reversed, thus adding a whole new palette of sounds.

Clearmountain's Phases includes a Hi-pass filter and a Polarity reverse on both the Processed signal path and the Feedback path.

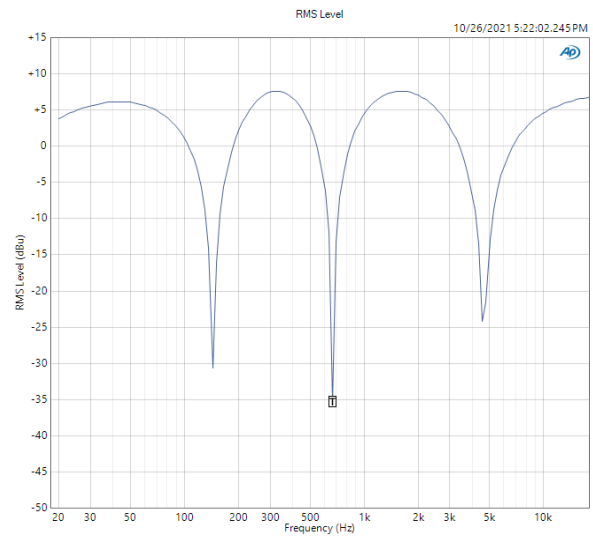


Note that with increased Feedback, the Processed branch develops its own spectral coloration, so mixing the Dry path becomes less important.



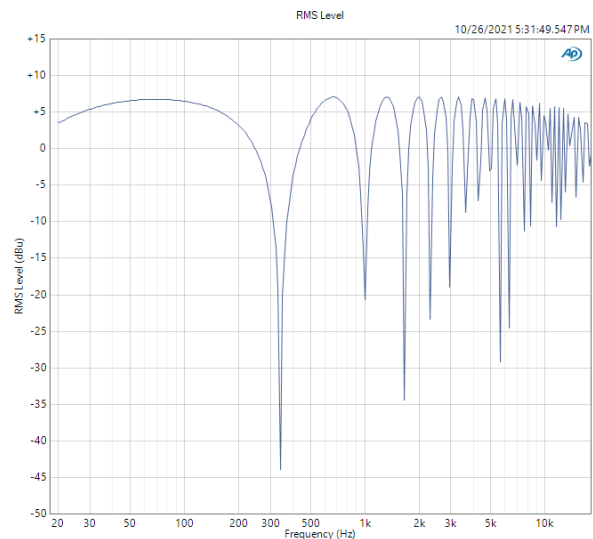
So, what's the difference between flanging and phasing? It all comes down to the actual process applied to the Processed signal path.

With phasing, the processed signal is routed through 4 to 12 all-pass filters (or Stages), resulting in 2 to 6 non-harmonically related notch filters, as shown at right.



With flanging, the processed signal is *delayed* from 0.13 to 55 milliseconds, resulting in many harmonically-related notch filters.

Here's the frequency response of the flanger at a static Manual setting. There are significantly more notches, and they clearly follow the harmonic sequence.



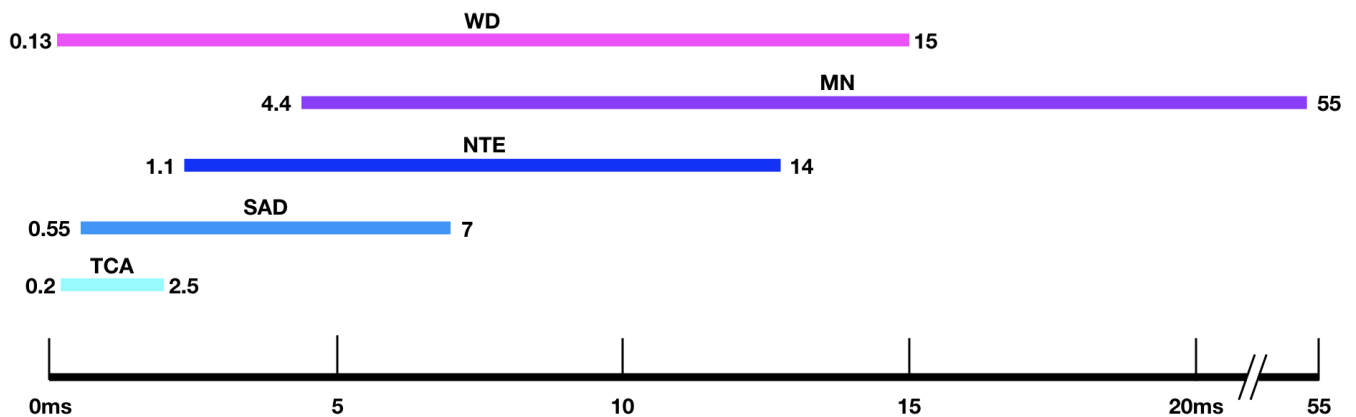
Armed with a basic understanding of flanger/phaser technology, let's take a closer look at specific features you'll find in the Clearmountain's Phases plugin.

**BBD (Flanger only)** - To achieve the delay required for the flanging process, vintage analog flangers employed a bucket brigade device (BBD), an integrated circuit chip in which analog signals are transported stepwise from input to output. By controlling the rate of the process with a variable clock signal, variable delay times are achieved.

Clearmountain's Phases painstakingly recreates the characteristics of the TCA350 bucket brigade device in the original hardware, including the characteristic distortion and aliasing. To greatly expand the flanger's sweep range, the plugin offers the ability to virtually "swap out" the TCA350 with other popular BBD chips, offering a greater number of stages and thus longer delay times.

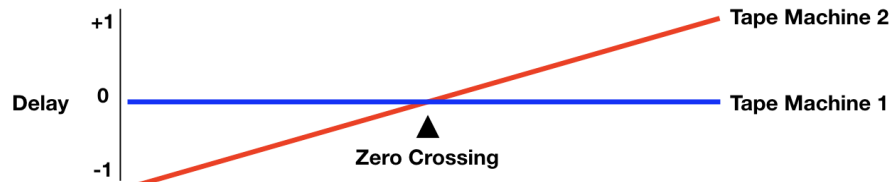
BBD Knob Setting	BBD Chip Model	Stages
TCA	TCA350	185
SAD	SAD512	512
NTE	NTE1641	1024
MN	MN3005	4096
WD		512, increased clock rate range

The delay range of each setting in milliseconds is shown in the chart below. Generally, the shorter the delay the higher the perceived resonance of the flange. Choose the WD (Wide) setting for an extra wide sweep.



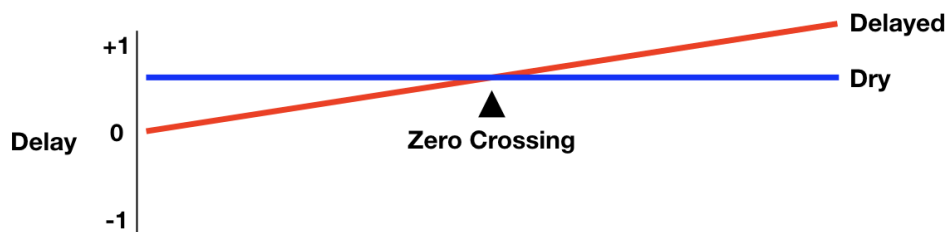
**Tape Flange (Flanger only)** - Before the advent of electronic versions, flanging was created by mixing two tape machines playing back identical audio, then introducing a miniscule delay on one machine by applying pressure to the tape reel flange using your hand.

Under the right conditions, the delay of the manipulated machine varied from a negative value (i.e. in advance) through 0 delay to a positive value.



This created a flanging effect where, as the delay went from negative to positive, the sound was turned “inside out” - it was a groovy effect that sounded like a 60s acid trip! This type of effect is sometimes called a “zero crossing” flanger.

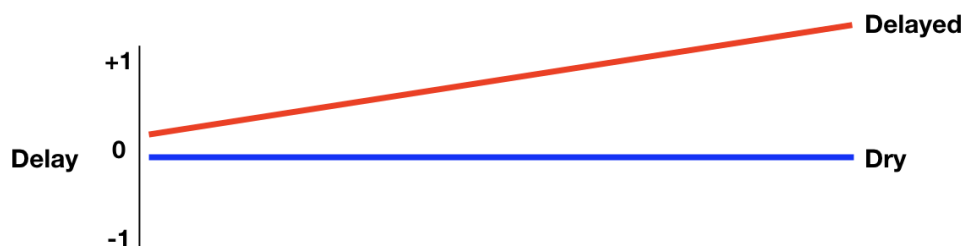
The Tape Flange button re-creates this timing relationship by delaying the Dry signal several milliseconds. As a result, the Delayed signal sweeps between a negative and positive value. To compensate for the Dry delay, the plugin's Delay Compensation value transmitted to your DAW is increased accordingly.



The delay introduced by the Tape Flange button should be taken into consideration when instantiating the plugin on a “live” DAW track (i.e Input mode) on which delay compensation is necessarily bypassed. Depending on the BBD setting, the delay may be up to 25 milliseconds.

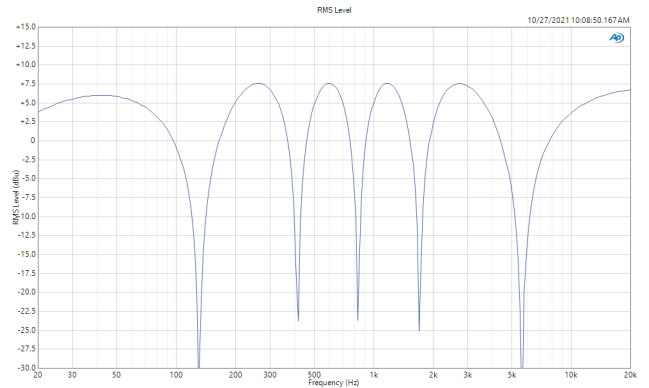
If Tape Flange is instantiated on a DAW track in Playback mode, make sure that your DAW's Plugin Delay Compensation is engaged.

When the Tape Flange button is not engaged, the Dry signal has no delay, and the Delayed signal is always a positive value. This still produces a great, but different, flanging effect.



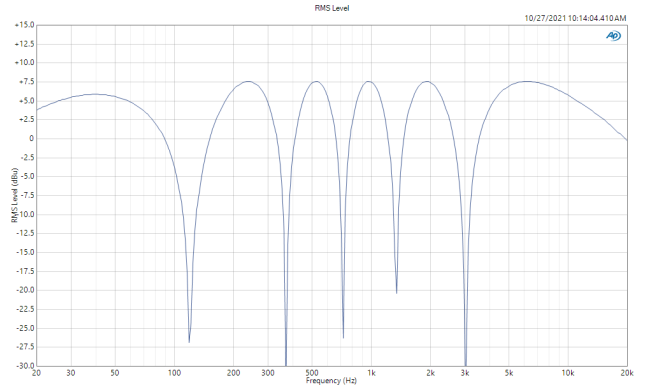
**Stages (Phaser only)** - Set the number of all-pass filters used by the Phaser with the Stages knob. The number of stages determines the number of notch filters in the Phaser output, where each pair of stages results in 1 notch filter. In the case of an odd number of stages, the unpaired stage creates a low pass filter.

A 10 stage phaser has 5 notch filters across the frequency spectrum.



An 11 stage phaser has 5 notch filters plus a low pass filter at the high frequency end of the spectrum.

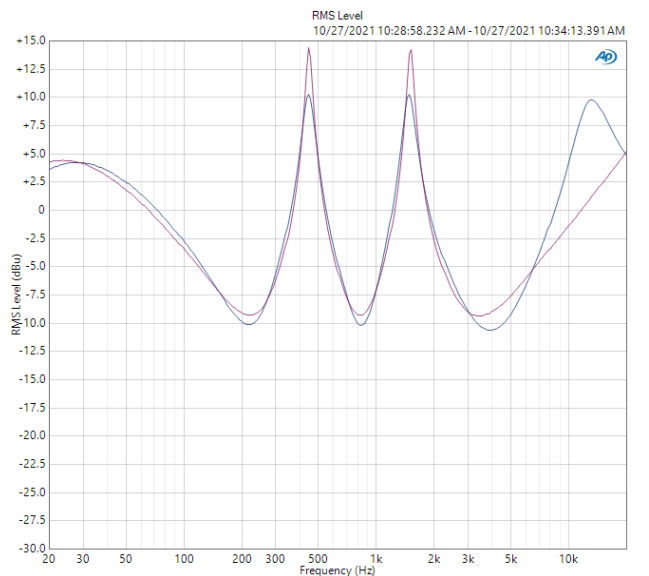
In general, guitar pedal phasers use a lower number of stages, vintage rack units use between 6-8 stages, and modern phaser plugins use up to 12 stages. More stages isn't better, just different!



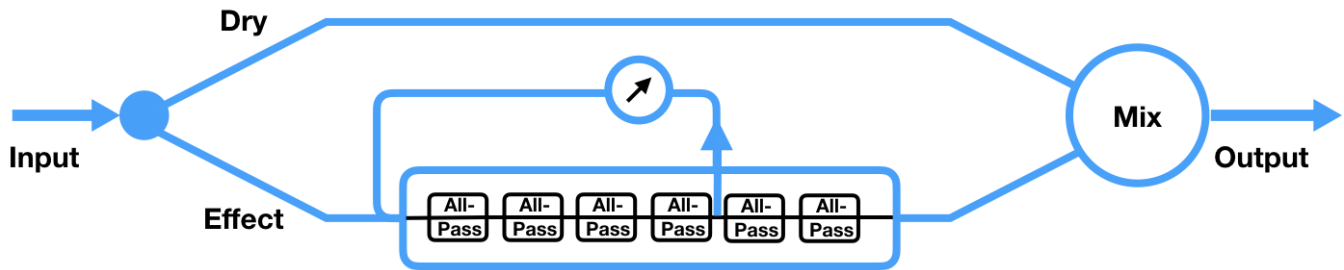
**Analog (Phaser only)** - The Analog model button affects the nature of the Phaser's feedback path.

When Analog model is engaged, the plugin's feedback path more accurately models the feedback control of a hardware phaser, with relatively attenuated higher frequency elements.

In the frequency sweep at right, note the spikes that occur with a high feedback setting and the difference in the high frequencies between Analog in (red) and Analog out (blue).

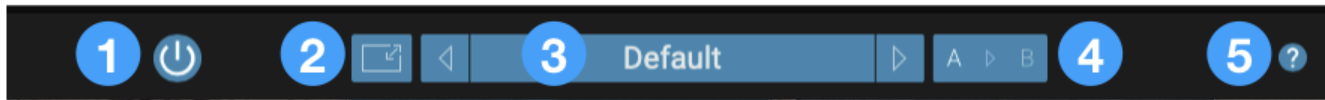


**Feedback Tap (Phaser only)** - Set the point in the all-pass filter chain from where the Feedback signal is tapped. For example, it's possible to set a 6 stage phaser where the Feedback signal is tapped after the fourth all-pass filter. This dramatically changes the effect of Feedback, especially at higher Feedback settings. Dial in a Feedback setting of 6 or above, then toggle through the Feedback Tap setting to hear the difference.



# Plugin Tour

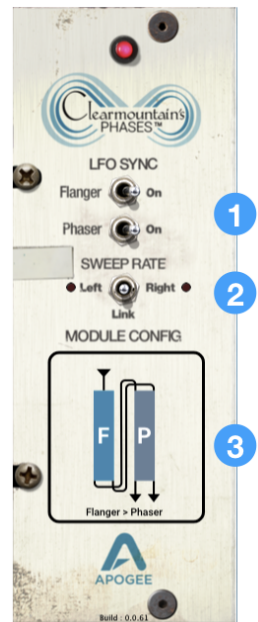
## Top Toolbar



1. On/Off - Toggle On/Off all flanging and phasing processing. The red Power LED toggles on and off with this control.
2. Window Size - Set the plugin Window Size from 50% to 150%.
3. Preset Manager - Factory and User presets may be opened, saved and managed from the top toolbar.
  - To open Factory and User presets, click the preset title, then select the desired preset from the drop down menu. To audition presets quickly, click the Previous or Next chevron.
  - The following Factory Presets are installed with the plugin. Note that Factory Presets can't be overwritten - use Save As to store your Factory Preset customizations as your own User Presets.
  - To create your own User presets, first find a Factory preset that's close to your desired effect, or start from scratch with the Default Factory preset. To save your changes, click the preset title then choose Save As at the bottom of the drop down menu.
  - To save changes to your User presets, choose either Save or Save As.
  - User presets are stored by default in the the following folders:
    - Mac: Users > Yourhome > Library > Audio > Presets > Apogee > Clearmountain's Phases.
    - Windows: This PC > Documents > Apogee > Clearmountain's Phases > Presets.
  - To store User presets in another location (for example, your DAW session folder), choose Save As and navigate to the desired folder. To open User presets from another folder, choose Open and navigate to the preset file, then click Open.
  - Note that User presets that aren't stored in the default location won't appear permanently in the plugin's preset drop down menu. When opened from another location, they appear temporarily until the DAW session is closed. To ensure that a User preset always appears in the preset drop down menu, save it to the Default Factory folder, indicated above.
4. A > B Snapshot Selector - Use the A > B buttons to create two independent snapshots. Toggle between snapshots by clicking the A or B button, transfer the A snapshot to B by clicking A, then clicking the arrow; transfer from B to A by clicking B, then clicking the arrow.
5. Help - click the icon to access the following options:
  - Show Help Text - click to check; when checked, Help text is displayed when the mouse cursor is positioned over settings.
  - User's Guide - Click this link to open the on-line User's Guide.
  - Apogee Website - Click this link to navigate to Apogee's website.
  - About - Choose About to open the About Clearmountain's Phases window with version info.

## Global Controls

1. LFO Sync - Sync the LFO (low frequency oscillator) of the flanger or the phaser to the DAW session's tempo. Once LFO Sync is on for a module, use the Sweep (Rate) knob to choose a musical interval from 4 bars to a sixteenth note.
2. Sweep Rate Select - Set the functionality of the Flanger and Phaser Sweep Rate knobs.
  - When Sweep Rate Select is set to Left, the Sweep (Rate) knob sets the rate for the left side of the stereo output.
  - When Sweep Rate Select is set to Right, the Sweep (Rate) knob sets the right rate.
  - When Sweep Rate Select is set to Link, the Sweep (Rate) knob sets the same rate for both sides.
  - The Sweep Rate Select switch doesn't appear when the plugin is instantiated in mono.
3. Module Config - Click on the icon, then select which modules are in use as well as their audio routing (in series or in parallel).



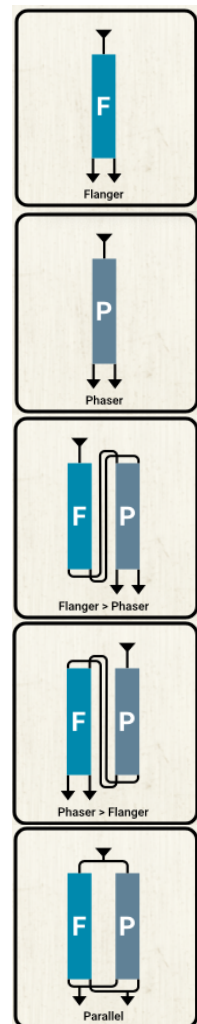
Select **Flanger** to use the flanger only.

Select **Phaser** to use the phaser only.

Select **Flanger > Phaser** to route audio through the flanger first, then the phaser.

Select **Phaser > Flanger** to route audio through the phaser first, then the flanger.

Select **Parallel** to route audio through both the flanger and the phaser in parallel. Two mix parameters, Flanger Mix Trim and Phaser Mix Trim, appear in the bottom toolbar to trim the level between the flanger path and the phaser path.





## Flanger Modules

1. Analog Aliasing & THD (Dirt) trimpot - Add analog distortion and aliasing as found in the original hardware units. Set to -12 (fully counter-clockwise) for no aliasing and THD to obtain the cleanest flanging possible.
2. Show/Hide Expanded View - Show the Flanger Expanded view module to gain access to additional parameters not found on the original hardware.
3. Manual (Delay Time) - The Manual, Sweep (Depth) and BBD knobs work interdependently to set the range and center frequency of the flanging effect. When Sweep (Depth) is set to 0%, you can manually sweep or automate the flanger effect using this control. See [here](#) for a detailed description of how these settings work together.
4. Sweep (Depth) - The Sweep (Depth), Manual and BBD knobs work interdependently to set the range and center frequency of the flanging effect. When Sweep (Depth) is set to 100%, the flanging effect sweeps through the entire available range; the Manual knob is effectively bypassed.
5. Sweep (Rate) - Set the rate of the Sweep.
  - a. To set the Sweep Rate to a time value, set [LFO Sync](#) to Off; to set the Sweep Rate to a musical value based on your session's tempo, set LFO Sync to On.
  - b. When the plugin output is stereo (i.e. a mono > stereo or stereo instantiation), the Sweep Rate may be set independently for the Left and Right sides by setting [Sweep Rate Select](#) to Left or Right.
  - c. To set the Left and Right sides to the same rate, set Sweep Rate Select to Linked.
6. Mix - Set the mix between the dry and Delayed audio. For the maximum flanging effect, set to 50%. To get a “modulation only” effect, set Mix fully clockwise to 100%.
7. Module In/Out - Toggle the module In/Out



## Flanger Expanded View

1. BBD - Choose the Delay Range in milliseconds, based on available delay times of classic analog bucket brigade chips. Set to WD (Wide) for an extra wide sweep!
2. Engage Tape Flange mode, also known as Zero Crossing flange. When engaged, a fixed delay is applied to the Dry signal, resulting in the Delayed signal oscillating from a pre-delay (or negative delay) to zero delay through to a positive delay, in relation to the Dry signal. The resulting effect is extra deep and intense. Note that the overall plugin delay compensation is altered to accommodate the Dry delay.
3. Feedback - set the level of audio signal in the Feedback loop from the Flanger output back into the Flanger input.
4. Feedback Hi Pass Filter - cut low frequencies from the Feedback loop
5. Feedback Polarity - invert the polarity of the Feedback loop
6. LFO Phase - set a difference in LFO phase between the left and right sides of the flanger output. Create sounds that sweep across the stereo spectrum.
7. Delayed Hi Pass Filter - cut low frequencies from the Delayed signal.
8. Delayed Polarity - invert the polarity of the Delayed signal.



## Phaser Modules

1. Age - Change the response of the all-pass filters to simulate the effects of aging of the Vactrol components found in the original hardware. The effect is heard primarily in the upper part of the Sweep range.
2. Show/Hide Expanded View - Show the Phaser Advanced view module to gain access to additional parameters not found on the original hardware.
3. Manual (Frequency) - The Manual and Sweep (Depth) knobs work interdependently to set the range and center frequency of the phasing effect. Set Sweep (Depth) to 0% to manually control the phasing sweep. See [here](#) for a detailed description of how these settings work together.
4. Sweep (Depth) - The Sweep (Depth) and Manual knobs work interdependently to set the range and center frequency of the phasing effect. When Sweep (Depth) is set to 100%, the Manual knob is effectively bypassed.
5. Sweep (Rate) - Set the rate of the Sweep.
  - a. To set the Sweep Rate to a time value, set [LFO Sync](#) to Off; to set the Sweep Rate to a musical value based on your session's tempo, set LFO Sync to On.
  - b. When the plugin output is stereo (i.e. a mono > stereo or stereo instantiation), the Sweep Rate may be set independently for the Left and Right sides by setting [Sweep Rate Select](#) to Left or Right.
  - c. To set the Left and Right sides to the same rate, set Sweep Rate Select to Linked.
6. Mix - Set the mix between the dry and Phased audio. For the maximum phasing effect, set to 50%
7. Module In/Out - Toggle the module In/Out

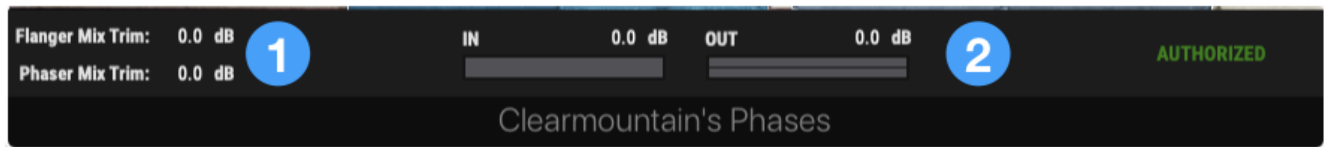


## Phased Expanded View

1. Stages - select the number of all-pass filters (or Stages). An even number of stages results in half as many notch filters, while an odd number of stages results in half as many notch filters plus a low pass filter.
2. Analog - Push to engage Analog model - the plugin's feedback path more accurately models the feedback control of a hardware phaser, with relatively attenuated higher frequency elements.
3. Feedback - set the level of audio signal in the Feedback loop from the Phaser output back into the Phaser input.
4. Tap - select the point in the all-pass signal path from where the Feedback signal is tapped. Set Feedback to a higher setting, then try different Feedback Tap settings to hear the difference.
5. Feedback Polarity - invert the polarity of the Feedback loop
6. LFO Phase - set a difference in LFO phase between the left and right sides of the flanger output. Create sounds that sweep across the stereo spectrum.
7. Delayed Hi Pass Filter - cut low frequencies from the Phased signal.
8. Delayed Polarity - invert the polarity of the Phased signal.



## Bottom Toolbar



1. Flanger, Phaser Mix Trim - Click on the dB numerical value and drag the cursor up or down to trim the individual levels of the Flanger and Phaser output by plus or minus 12 dB. These settings only appear when Module Config is set to Parallel.
2. In Trim - Click on the dB numerical value and drag the cursor up or down to trim the input by plus or minus 12 dB.  
Out Trim - Click on the dB numerical value and drag the cursor up or down to trim the output by plus or minus 12 dB.



# Creating Your Own Sounds

Scrolling through the plugin presets lets you experience the vast possibilities of Clearmountain's Phases, from subtle to outrageous. In this section, you'll gain the understanding to make your *own* personalized presets.

Let's start by describing the controls that are common to both the Flanger and Phaser - they operate in a very similar fashion. Here's a tip to really understand how each control works and sounds - send pink noise from your DAW's signal generator through Clearmountain's Phases, then to a spectrum analyzer and your speakers and/or headphones. You'll see and hear the modulation, frequency response and polarity effects of the plugin quite distinctly!

Step 1: Open Clearmountain's Phases on a stereo audio track. Before diving into multi-layer effects, set the Module Config to Flanger or Phaser, so you can focus on each effect individually.



Step 2: Set Mix to 50% - As explained above, flanging and phasing effects occur when the audio input is first split into two signal paths, one path is processed, and then the paths are mixed back together. Thus, to get started, set Mix to 50% for the most pronounced effect.

If the effect is too pronounced, try setting Mix to either side of 50% to reduce the effect. Note that the Delayed (flanger) or Phased (phaser) signal has additional processing such as high-pass filtering, Dirt (flanger) and Age (phaser).



Step 3: Set the basic characteristics of the flanger or phaser - To hear the basic characteristic of the flanger or phaser, set Sweep (Depth) to 0% - this effectively bypasses the control and allows you to sweep manually through the flanger or phaser range.

To manually sweep while experimenting with the different settings described below, play audio through the plugin, click on the Manual knob, then rotate it through the entire range from 7 o'clock to 5 o'clock and back.

At any point in these steps you can jump to Step 7 to set up automatic sweeping based on your session's tempo or a defined time period.





On the flanger - the BBD knob determines the sweep range in milliseconds, as shown [here](#). These values are based on classic analog bucket brigade chips. Generally, the shorter the delay the higher the perceived resonance of the flange. Choose the WD (Wide) setting for an extra wide sweep.



On the phaser, the Stages knob sets the number of all-pass filters in the Phased signal path, and thus the number of notches in the comb filter. An even number of stages results in half as many notch filters, while an odd number of stages results in half as many notch filters plus a low pass filter. More stages isn't better, just different.



Step 4: Apply Low Cut - Because flanging and phasing rely on phase cancellation, you may hear an undesirable side effect on your audio's bass frequencies - as you sweep through the flanger or phaser's range, bass frequencies can become uneven or attenuated in level. For example, when you apply phasing to a full drumkit (see Zeppelin's Kashmir), you may lose the low end power of the kit.

The solution is to *remove* low end from the Delayed (flanger) or Phased (Phaser) signal path using the Low Cut knob. If bass frequencies aren't present in both signal paths, they can't be cancelled, and pass un-attenuated to the plugin's output.



Step 5: Increase the Intensity - Maybe the flanging/phasing effect is a bit tame, so let's try a few things to spice it up! First, try the feedback knob - by feeding back some of the flanged or phased audio back into the input, you add complexity and intensity to the comb filtering that creates the flanging/phasing effect. Reverse the polarity of the feedback for a hollow or "tubular" sound.

On the flanger, you can cut low end on the feedback signal for even more variations.

On the phaser, you can set the point in the all-pass chain from where the feedback signal is tapped. You can even have a 4 stage phaser (with 2 notch filters) with a feedback signal tapped from the 12th stage (with 6 notch filters), again with the idea to create complexity and texture in the phasing effect.



Step 6: F#\*k it up! - Each module offers a setting that introduces some of the non-linearities found in the analog circuits of the original modules.

On the flanger, you can add harmonic distortion and aliasing as found on the original Autoflanger using the Dirt trimpot.



On the phaser, you can change the response of the all-pass filters to simulate the effects of aging of the Vactrol components found in the original hardware using the Age trimpot. The effect is heard primarily in the upper part of the Sweep range.

The phaser also offers an Analog model that, when engaged, attenuates higher frequency elements created by feedback similar to the original hardware.

Step 7: Modulate - Now that you've configured your flanging and/or phasing with the Manual sweep, modulate it with the Sweep (Depth) and Sweep (Rate) knobs. These knobs control the Low Frequency Oscillator (LFO), the internal signal that controls the rate and depth of the flanging/phasing sweep. Conceptually, think of the LFO as turning the Manual knob back and forth between two settings at a steady rate - though of course the knob doesn't actually move!

The Sweep (Depth) and Manual knobs work together to determine the width and midpoint of the sweep. For example, when Sweep (Depth) is set to 50% and Manual is set to 12 o'clock (as shown at right), the LFO "virtually" sweeps the Manual knob across 50% of the available range, centered around the Manual knob setting.



When Sweep (Depth) is set to 100%, the flanger/phaser sweeps across the full range available, so it doesn't matter where the Manual knob is set.

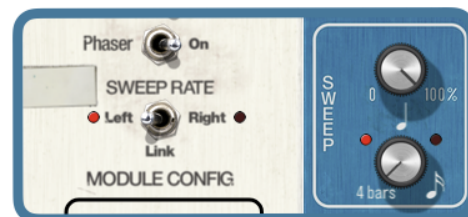
The Sweep (Rate) knob determines the rate at which the LFO "turns" the knob. The rate can be set for a frequency (LFO Sync off) or a musical value based on the tempo of your DAW session (LFO Sync on).



When the plugin output is running in stereo, you can set the left and right sides to different rates.

Set Sweep Rate Select to Left, then set the Left Sweep Rate on the flanger and/or Phaser module.

Set Sweep Rate Select to Right, then set the Right Sweep Rate. If Sweep Rate Select is set to Link, the Sweep Rate knob sets the left and right rate to the same setting.

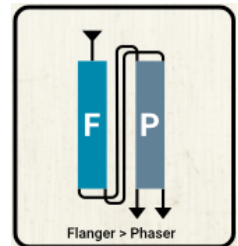


Step 8: Start the Swirling! - When the plugin's output is in stereo, you can add width to your sound with the LFO Phase knob. This knob alters the phase of LFO signal sent to the right side only, so you can create phase differences between the left and right sides. At 0 degrees, there's no difference; at a low setting (5 degrees), the stereo spectrum seems to widen with subtle movement; at 180 degrees, the sound swirls back and forth between your speakers!

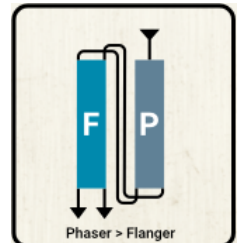


Step 9: More is Moar! - Now that you've created your own cool flanger and phaser settings, let's layer them for exhilarating and perhaps sickening results! There are 3 options for layering the flanger and phaser:

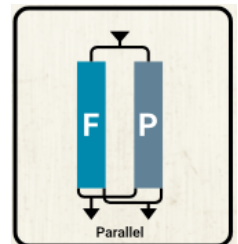
**Flanger into Phaser** - audio is routed into the flanger, then the flanger output is routed into the phaser.



**Phaser into Flanger** - audio is routed into the phaser, then the phaser output is routed into the flanger.



**Parallel** - audio is routed into the flanger and phaser, then the outputs of both modules are mixed. Output mix may be trimmed.

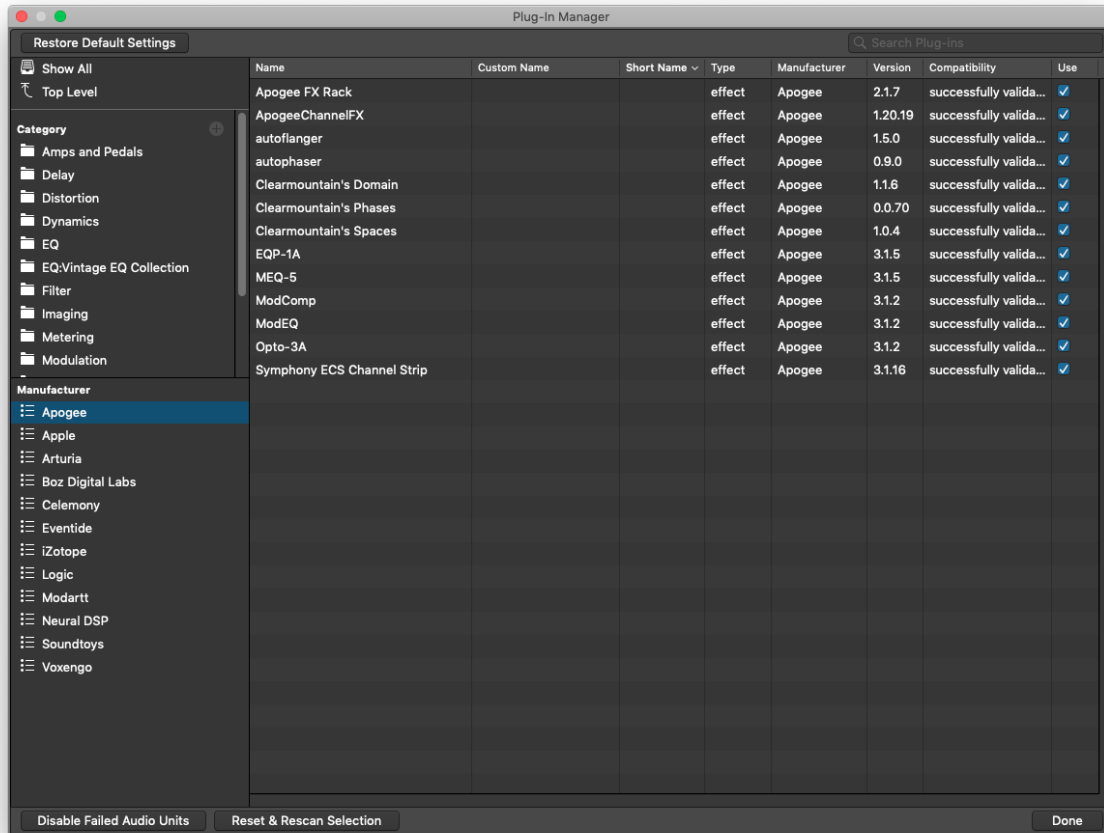


Check out the "Trippy Flaser" or "Stones 'Heaven' Vocal" presets for some ideas when layering the flanger and phaser.

# Troubleshooting

*I've installed the plugin, but I don't see it in the Logic Pro plugin list.*

For any plugin issues that you experience with Apple Logic Pro, there's a very useful tool called Plugin Manager, accessed by clicking Logic Pro > Preferences > Plug-in Manager.



In the Plug-in Manager, click Apogee in the lefthand Manufacturer column, then verify that Clearmountain's Phases is listed under Name, and "successfully validated" is shown in the Compatibility column. If another message is shown, select Clearmountain's Phases, then click Reset and & Rescan Selection.

*The Analog Phaser button doesn't seem to have an effect on the sound.*

The Phaser's Analog button affects the nature of the Phaser's feedback loop, as described [here](#).

*When I engage Tape Flange, my DAW hiccups, or I hear an extra delay on the throughput.*

As described [here](#), the Tape Flange button modifies the delay compensation number reported by the plugin to your DAW. Some DAWs handle the change of this parameter better than others.

# Additional Information

## For more information

- Apogee KnowledgeBase and FAQs
- Informational Videos
- Apogee Product Registration
- How to contact Apogee Technical Support

Please visit:

[www.apogeedigital.com/support](http://www.apogeedigital.com/support)