# M9 & M13 v2.0

DELAY | MOD | DISTORTION | FILTER | VERB

# FX Parameters

An in-depth guide to the FX Parameters of the
M9 & M13 Stompbox Modelers

Electrophonic Limited Edition

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# M9 & M13 v2.0 FX Parameters


# Table of Contents

# Delay Models

This chapter contains details on the M13 Delay models, which include all the Delay models from the Line 6 DL4. We've also added Echo Platter from Echo Pro and 4 new DryThru models for Tube Echo, Tape Echo, Sweep Echo and Echo Platter.

## Parameter Details

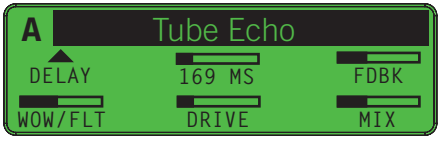
Below is a Reference Table listing all the Controls and Parameters for the Delay models. Knobs 1, 2 and 5 are basically the same for all models, adjusting Delay Time, Feedback and Mix respectively. Knobs 3 and 4 control various parameters depending on the Delay model loaded. We'll detail them all in the following pages.

### Delay Models Reference Table : Controls & Parameters

| Model | Knob 1 | Knob 2 | Knob 3 | Knob 4 | Knob 5 |
|---|---|---|---|---|---|
| Tube Echo & DryThru | Time | Fdbk | Wow/Flutter | Drive | Mix |
| Tape Echo & DryThru | Time | Fdbk | Bass | Treble | Mix |
| Multi-Head | Time | Fdbk | Heads 1-2 | Heads 3-4 | Mix |
| Analog Echo | Time | Fdbk | Bass | Treble | Mix |
| Analog w/Mod | Time | Fdbk | Mod Speed | Mod Depth | Mix |
| Sweep Echo & DryThru | Time | Fdbk | Sweep Speed | Sweep Depth | Mix |
| Lo Res Delay | Time | Fdbk | Tone | Resolution | Mix |
| Digital Delay | Time | Fdbk | Bass | Treble | Mix |
| Digital Delay w/ Mod | Time | Fdbk | Mod Speed | Mod Depth | Mix |
| Stereo Delay | Left Time | Left Fdbk | Right Time | Right Fdbk | Mix |
| Ping Pong | Time | Fdbk | Time Offset | Stereo Spread | Mix |
| Reverse | Time | Fdbk | Mod Speed | Mod Depth | Mix |
| Dynamic Delay | Time | Fdbk | Threshold | Ducking | Mix |
| Auto Volume Echo | Time | Fdbk | Mod Depth | Swell Time | Mix |
| Echo Platter & DryThru | Time | Fdbk | Wow/Flutter | Drive | Mix |

## Tube Echo & Tube Echo DryThru

Based on the classic '63 Maestro® EP-1, the first of a series of "Echoplex" designs featuring a cartridge of looped 1/4" tape that passed over separate record and playback heads. In the M13, we've also included a new DryThru model, with a flat, dry signal path when Mix is set to 0%. For more info on DryThru models, see Chapter 2, Model Details.





- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Wow / Flutter. Controls the tape emulation wow and flutter effect.
- Knob 4: Drive. Adjusts the emulated tube distortion and tape saturation.
- Knob 5: Mix.



## Tape Echo & Tape Echo DryThru

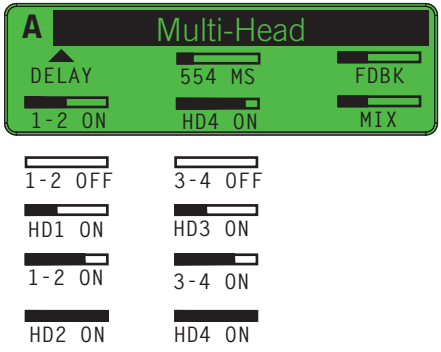
Based on the solid state EP-3, with transistors instead of tubes for the sound electronics. The EP-3 used the same basic mechanical design as the original Echoplex, including the looped 1/4" tape. Unlike the Tube Echo Model, which gives you control of wow, flutter and distortion, our EP-3 emulation is designed to give you a less distorted tape emulation with adjustable tone controls. We've also included a Tape Echo DryThru model.



- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Bass EQ.
- Knob 4: Treble EQ.
- Knob 5: Mix.

## Multi Head

Based on the Roland® RE-101 Space Echo, which had multiple stationary heads. You change delay times by switching amongst these heads, and you can play back on multiple heads at the same time to get multi-tap delay effects.




- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Turns heads 1 & 2 on and off.
- Knob 4: Turns heads 3 & 4 on and off.
- Knob 5: Mix.



When using the Multi Head Delay model, you'll find there are many possible combinations of delay effects, depending on your selection of Head On/Off parameters. It's best to set a Delay Time first by adjusting Knob 1.

To set a Delay Time to a precise millisecond value, dial in a delay time that's close to what you want, then fine tune it by pressing and holding Tap while continuing to turn Knob 1. As an option you can set Delay Time to a note value by turning Knob 1 clockwise until the 1/4 note symbol is displayed, then Tap in the tempo of your song.

Once your main tempo is set, experiment with different delay repeats by selecting different combinations of the Head On/Off settings, using Knobs 3 and 4. When you have the effect you want, adjust the Delay Feedback amount using Knob 2.

## Analog Echo

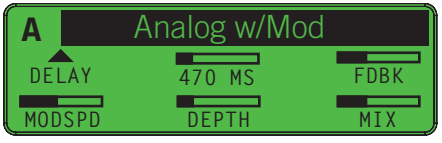
Based on the Boss® DM-2, an analog echo unit treasured for the warm, distorted tones it produced. This model is great for creating more experimental delay sounds.


- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback. Higher levels result in more repeats.
- Knob 3: Bass EQ.
- Knob 4: Treble EQ.
- Knob 5: Mix. At 100% you will hear the delay only.



## Analog With Modulation

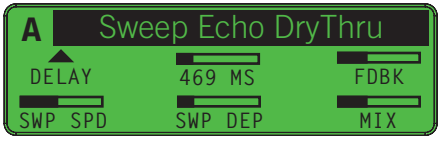
This model is based on the Electro-Harmonix® Deluxe Memory Man. This pedal uses the "bucket brigade" electronics of other analog echoes and adds an adjustable chorus circuit, which is applied to the echoes only, leaving the direct sound unaffected.




- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Modulation Speed. Higher levels result in faster modulation.
- Knob 4: Modulation Depth.
- Knob 5: Mix.

## Sweep Echo & Sweep Echo DryThru

For this model we started with the tone of our EP-1 delay emulation, then added a sweeping filter effect to the delay repeats. By design, our original Sweep Echo model did not have a flat EQ response in the dry signal path, so the character of the original was retained. In the M13 we've added a DryThru version, with flat EQ when Mix is at 0%.


- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Speed of the sweep effect.
- Knob 4: Depth of the sweep effect.
- Knob 5: Mix between dry guitar and wet. At 100% you will hear the delay only.



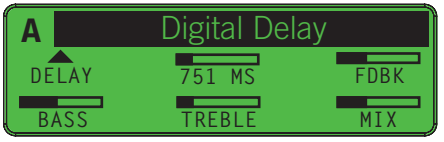
## Lo Res Delay

Low bit resolution can create a unique sort of grunge and noise that is sometimes just the sound you're looking for, and that's what the Lo Res Delay model provides.


- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Tone of the delays only.
- Knob 4: Resolution, adjustable from 6 to 24 bits.
- Knob 5: Mix.

## Digital Delay

This model is a Line 6 original. With 32 bit floating point processing and a true stereo audio path, it's one of the best digital delays you'll find in a pedal unit. Use it when you want a clean delay effect.

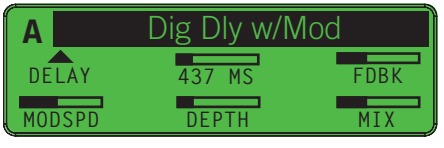



- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback. Higher levels result in more repeats.
- Knob 3: Bass EQ.
- Knob 4: Treble EQ.
- Knob 5: Mix. At 0% you will hear dry guitar; at 100% you will hear the delay only.



## Digital Delay With Modulation

Use this model to add a chorus effect to your digital delays. Like the chorus in the Analog Delay w/ Mod model, the modulation is applied to the delay repeats only, leaving your direct sound unaffected.




- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Modulation Speed. Higher levels result in faster modulation.
- Knob 4: Modulation Depth.
- Knob 5: Mix.

## Stereo Delay

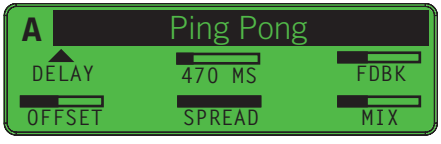
This is another Line 6 high resolution digital delay, with separate delay times available for L and R channels. Some players set one side as a fast echo with many repeats, and the other slow with just a few repeats. Set it to taste for a rhythmic stereo delay effect.


- Knob 1: Delay Time for the left channel only.
- Knob 2: Feedback amount for the left channel.
- Knob 3: Delay Time for the right channel only.
- Knob 4: Feedback amount for the right channel.
- Knob 5: Mix.



## Ping Pong

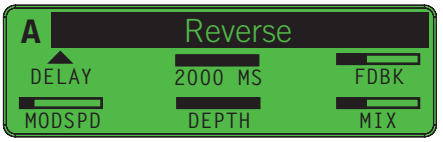
The ever-popular Ping Pong Delay has two separate channels of delay panned left and right, with the output of each channel flowing into the other, usually used with a moderate level of feedback.




- Knob 1: Delay Time for the left channel, displayed in milliseconds or note value.
- Knob 2: Delay Feedback. Higher levels result in more repeats.
- Knob 3: Offset. This sets the right channel delay time as a percentage of the left channel delay time. Half of the value in the screenshot above would equal 235 ms.
- Knob 4: Spread. The minimum position is mono, while max would be wide stereo.
- Knob 5: Mix.

## Reverse

As the name implies, whatever you play on guitar is played back in reverse, delayed by the time you set with Knob 1.

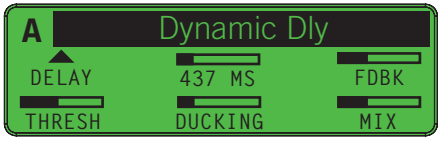



- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Modulation Speed. Higher levels result in faster modulation.
- Knob 4: Modulation Depth.
- Knob 5: Mix. 100% means you'll hear the reverse delay only.



## Dynamic Delay

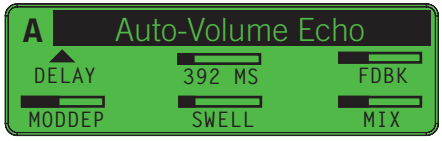
This effect was made popular by the TC Electronic® 2290 Dynamic Digital Delay. It features a "smart" volume control for your delay effect's echoes, which sets the loudness of the delays based on how hard you play. When you stop playing in between phrases, the delay level increases for a dynamic effect.




- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Threshold. The breakpoint where the automatic volume control stops working and lets the echoes through at full volume.
- Knob 4: Ducking. Adjusts the level of the "ducked" repeats; higher settings will duck the delay level down more.
- Knob 5: Mix.

## Auto Volume Echo

This model gives you two effects in one. The first is an auto-volume fade-in, like the attack time on a synthesizer's envelope generator. Higher Swell settings will give you a longer swell time, so that the sound slowly fades in. The second is an echo, complete with tape-style wow & flutter modulation.

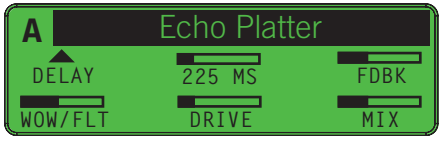



- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Modulation Depth.
- Knob 4: Swell. Sets the ramp time for the auto-volume swell.
- Knob 5: Mix.



## Echo Platter & Echo Platter DryThru

The Echo Platter model was orginally inspired by the Binson Echorec. The dry signal path had such a cool tone that we decided to include it in our original model. Echo Platter DryThru is the same model, but it gives you the option of a flat signal path when the Mix is set to 0%.





- Knob 1: Delay Time. Displayed in milliseconds or note value.
- Knob 2: Delay Feedback.
- Knob 3: Wow / Flutter. Adjusts the emulated tape's wow and flutter amount.
- Knob 4: Drive. Adjusts the amount of distortion created by the tube electronics and tape saturation.
- Knob 5: Mix.

# Modulation Models

There are 22 Modulation Models in the M13. 16 are from the Line 6 MM4 Modulation Modeler Stompbox, based on a dream collection of classic effects, stomp boxes and rack units. 6 new Mod models have been added with the v2.0 firmware update.

In this chapter we'll describe the various parameters of the Modulation Models in detail. Below is a chart of all the Controls and Parameters you can adjust using Knobs 1 thru 5.

## Modulation Models Reference Table : Controls & Parameters

| Model | Knob 1 | Knob 2 | Knob 3 | Knob 4 | Knob 5 |
|---|---|---|---|---|---|
| Opto Tremolo | Speed | Depth | Shape | Vol Sensing | Mix |
| Bias Tremolo | Speed | Depth | Shape | Vol Sensing | Mix |
| Pattern Tremolo | Speed | Pattern | Pattern | Pattern | Pattern |
| Phaser | Speed | Depth | Feedback | Phase Stage | Mix |
| Dual Phaser | Speed | Depth | Feedback | LFO Shape | Mix |
| Panned Phaser | Speed | Depth | Output | Pan Speed | Mix |
| Barberpole Phaser | Speed | Fdbk | | Up/Dwn/St | Mix |
| Script Phase | Speed | | | | |
| U-Vibe | Speed | Depth | Feedback | Vol Sensing | Mix |
| Analog Flanger | Speed | Depth | Feedback | Manual | Mix |
| Jet Flanger | Speed | Depth | Feedback | Manual | Mix |
| AC Flanger | Speed | Width | | Regen | Manual |
| 80A Flanger | Speed | Range | Enhance | Manual | Even/Odd |
| Analog Chorus | Speed | Depth | Chrs/Vibrato | Tone | Mix |
| Tri Chorus | Speed | Depth 1 | Depth 2 | Depth 3 | Mix |
| Pitch Vibrato | Speed | Depth | Rise Time | Vol Sensing | Mix |
| Panner | Speed | Depth | Shape | Vol Sensing | Mix |
| Rotary Drum | Speed | Depth | Tone | Drive | Mix |
| Rotary Drm/Hrn | Speed | Depth | Horn Depth | Drive | Mix |
| Dimension | Swtch 1 | Swtch 2 | Switch 3 | Switch 4 | Mix |
| Ring Modulator | Speed | Depth | Shape | AM/FM Select | Mix |
| Frequency Shifter | Freq | Up/Dwn/St | | | Mix |

## Opto Tremolo

Based on the tremolo circuitry of the 1965 Fender® Deluxe Reverb® amplifier, which features a pulsing light source directed at a photo resistor.


- Knob 1: Tremolo Speed.
- Knob 2: Tremolo Depth.
- Knob 3: Shape, from classic smooth tremolo to dramatic sci-fi throb.
- Knob 4: Volume Sensitivity. Louder input signals speed up the tremolo and lower input slows it down.
- Knob 5: Mix. Tremolo usually sounds best from 90-100% wet.



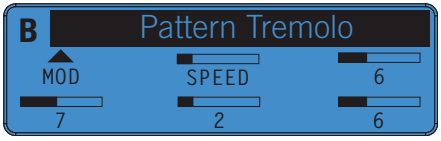
## Bias Tremolo

This Model emulates a classic Vox® tremolo circuit design. Bias tremolo produces a deep, 3-dimensional tremolo with a wide stereo spread.


- Knob 1: Tremolo Speed.
- Knob 2: Tremolo Depth.
- Knob 3: Shape. The minimuim setting is a sign wave and max is a square wave.
- Knob 4: Volme Sensitivity. Louder input signals speed up the tremolo and lower volume inputs slow it down.
- Knob 5: Mix. As with Opto, BiasTremolo usually sounds best from 90-100% wet.

## Pattern Tremolo

A 4-step sequenced tremolo. Inspired by the fantastic GoatKeeper pedal by Lightfoot Labs. Select 1 through 16 tremolo pulses per step; or you can MUTE the step, SKIP the step, or pass FULL audio.

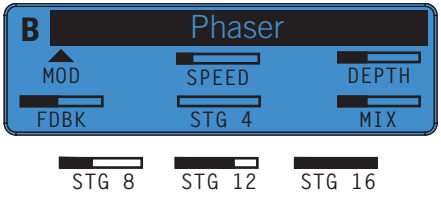



- Knob 1: Speed or Note value.
- Knob 2: Pattern step 1.
- Knob 3: Pattern step 2.
- Knob 4: Pattern step 3.
- Knob 5: Pattern step 4.



## Phaser

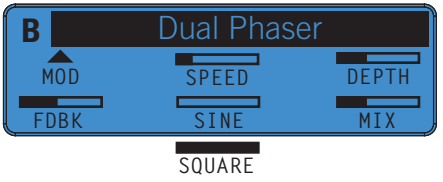
Based on the MXR® Phase 90, a four-stage phaser that has a relatively subtle sound compared to other phasers, but it has a lush, organic quality to it.




- Knob 1: Phaser Speed.
- Knob 2: Phaser Depth. Keep at maximum for classic phase sounds.
- Knob 3: Feedback. Keep at minimum for classic, subtle phasing.
- Knob 4: Selects phase Stage, which determines the degree of out-of-phase-ness.
- Knob 5: Mix, from 0% (dry) to 100% (wet).

## Dual Phaser

Based on the Mu-Tron® Bi-Phase, a multi-stage phaser known for its big jet sound. Our Dual Phaser gives you the lush, offset phasing that made the Bi-Phase a classic.

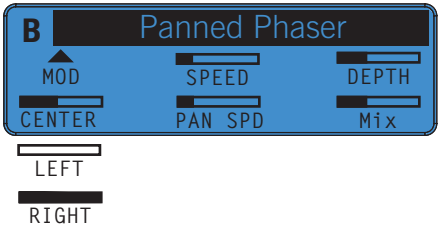



- Knob 1:Phaser Speed.
- Knob 2: Phaser Depth. Sounds best at maximum.
- Knob 3: Variable feedback control.
- Knob 4: LFO Shape. Minimum is a Sine wave and maximum is a Square wave.
- Knob 5: Mix. From 0% to 100%.



## Panned Phaser

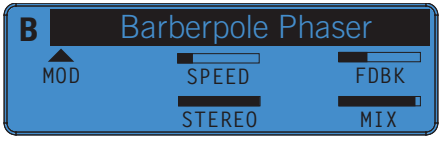
Modeled from the Ibanez® Flying Pan, a 4-stage phase shifter with panner built in. The original featured a 3-position switch to assign phasing to the left, right, or center.




- Knob 1: Phaser Speed.
- Knob 2: Phaser Depth.
- Knob 3: Assigns the Phaser output to the Left, Center or Right channels.
- Knob 4: Pan Speed. Higher values result in faster panning.
- Knob 5: Mix.

## Barberpole Phaser

A classic effect from the world of modular synths. Instead of being driven by a classic LFO, this phaser always sounds like it is rising in the UP mode, and always sounds like it is falling in the DOWN mode. Stereo mode gives you both up and down.




- Knob 1: Speed. Select a Speed or Note value.
- Knob 2: Feedback. Sets the amount of feedback.
- Knob 4: Select Up, Down or Stereo.
- Knob 5: Mix.

## Script Phase

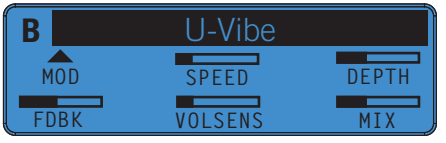


A new model based on a hand wired '74 MXR® Phase 90. We've kept this one simple, offering just a Speed control like the original.


- Knob 1: Speed. Adjust your Speed. That's all you need.

## U-Vibe

Essentially a four-stage phase shifter, the legendary Uni-Vibe® is best known for its watery texture and sultry tones. Made famous by the late, great Jimi Hendrix.




- Knob 1: Speed.
- Knob 2: Depth.
- Knob 3: Feedback amount.
- Knob 4: Volume Sensitivity. Play harder and the U-Vibe effect speeds up, play softer and it slows down.
- Knob 5: Mix. Setting Mix at 100% switches on a vibrato effect, like the original.



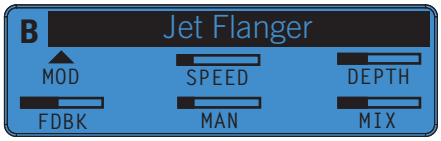
## Analog Flanger

This is our model of the classic MXR® Flanger. It's known for a very warm-sounding flange, featuring a bucket brigade analog circuit design and a uniquely shaped waveform.


- Knob 1: Speed.
- Knob 2: Depth.
- Knob 3: Flanger Feedback.
- Knob 4: Manual control, to adjust the delay time for the flanging effect.
- Knob 5: Mix. From 0% to 100%.

## Jet Flanger

This is our model of the A/DA "studio quiet" Flanger. Introduced in 1977, this stomp box has a sweep range of 35-to-1 and a built-in compressor that work together with the tone circuitry to give the A/DA its signature jet-like sweep. It's a bit more dramatic than the MXR®, and has a different wave shape.

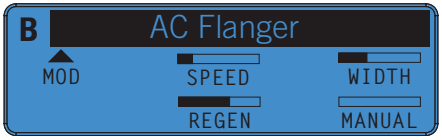



- Knob 1: Speed.
- Knob 2: Depth.
- Knob 3: Feedback amount.
- Knob 4: Manual. This controls the delay time for the flanging effect.
- Knob 5: Mix.



## AC Flanger

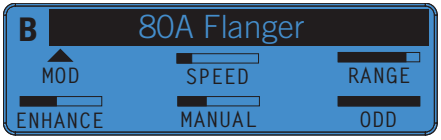
A Line 6 killer killer MXR® Flanger model. Based on a new Reticon bucket brigade chip recreation.




- Knob 1: Speed. Select a Speed or Note value.
- Knob 2: Width. Sets the width of the flange.
- Knob 4: Regen. Regeneration amount.
- Knob 5: Manual. Adjust the flange setting manually.

## 80A Flanger

A new Line 6 killer A/DA Flanger model. Also based on a Reticon bucket brigade chip recreation..




- Knob 1: Speed. Select between two speeds, Fast or Slow.
- Knob 2: Range.
- Knob 3: Enhance.
- Knob 4: Manual. Adjust the flange setting manually.
- Knob 5: Mix.

## Analog Chorus

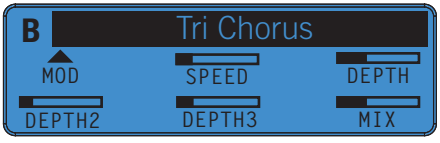


Based on the classic stomp box chorus, the Boss® CE-1. The CE-1 came onto the music scene in 1977 and made waves with its big, warm chorus tones.


- Knob 1: Chorus Speed.
- Knob 2: Choru Depth.
- Knob 3: Selects Chorus or Vibrato.
- Knob 4: Adjusts overall Tone of the Chorus effect.
- Knob 5: Mix. Usually sounds best with higher Mix levels.

## Tri Chorus

This model is based on the Songbird/DyTronics Tri-Stereo Chorus. This analog chorus featured 3 chorus circuits working off of 12 low frequency oscillators and 3 delay lines.




- Knob 1: Chorus Speed.
- Knob 2: Depth of Circuit 1.
- Knob 3: Depth of Circuit 2.
- Knob 4: Depth of Circuit 3.
- Knob 5: Mix from 0% (dry) to 100% (wet).

## Pitch Vibrato

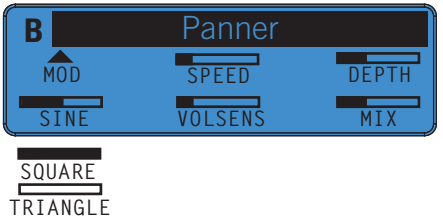


Based on the Boss® VB-2 vibrato, which featured a bucket brigade analog circuit that produced a lively vibrato. Its big claim to fame was the "Rise Time" control. Thanks to this clever circuit, each time you kicked it on, it sped up to where you last had it set.


- Knob 1: Vibrato Speed.
- Knob 2: Vibrato Depth.
- Knob 3: Rise Time control. Lower levels mean a longer Rise Time.
- Knob 4: Volume Sensitivity. A louder input speeds up the vibrato, and a lower input slows it down.
- Knob 5: Mix.

## Panner

The Panner model makes your sound constantly pan back and forth between the left and right stereo channels. If you decide to run it in mono, you'll basically hear tremolo.

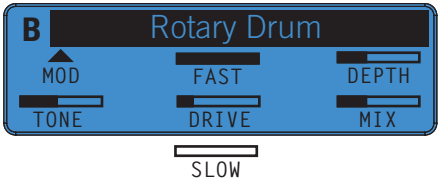



- Knob 1: Speed.
- Knob 2: Depth.
- Knob 3: Wave Shape. Minimum for Triangle, 50% for Sine, maximum for Square.
- Knob 4: Volume Sensitivity. Input level speeds up or slows down the panning rate.
- Knob 5: Mix. For wide stereo panning, set Mix to 100%.



## Rotary Drum

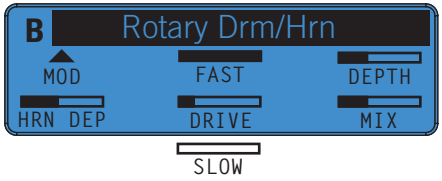
Based on a Fender® Vibratone, which features a rotating drum surrounding a 10" speaker. The Styrofoam drum has two slots, and the cabinet has three (left, right and top). The drum rotates with a vertical motion, sending sound spinning in all directions.




- Knob 1: Speed. Select between two speeds, Fast or Slow.
- Knob 2: Depth.
- Knob 3: Overall Tone of the Rotary effect.
- Knob 4: Drive. Higher levels add an overdriven effect.
- Knob 5: Mix. For best results, set Mix at or near maximum.

## Rotary Drum/Horn

Based on a Leslie® 145, originally designed for the Hammond® B3. The 145 features two sound sources: the lower part of the cabinet, which has a 12" speaker surrounded by a motorized rotary drum, and the upper enclosure, which houses a spinning horn.

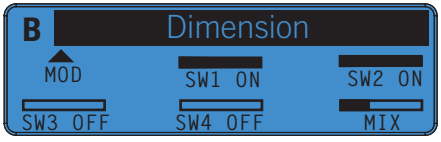



- Knob 1: Speed. Select between two speeds, Fast or Slow.
- Knob 2: Depth of the lower part of the cabinet.
- Knob 3: Horn Depth. This adjusts the depth of the horn sound.
- Knob 4: Drive. Higher levels add an overdriven effect.
- Knob 5: Mix. For best results, set Mix at or near maximum.

## Dimension



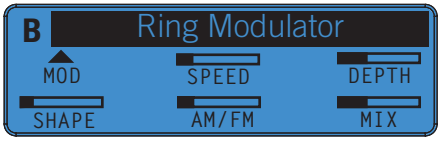
Based on the Roland® Dimension D, one of the first true stereo chorus units that featured two separate delay lines working off the same oscillator. These independent chorus effects were then panned between the stereo outputs, resulting in a wide stereo image. Various combinations of the on/off switches provide a rich, smooth chorus.




- Knob 1: Selects Switch 1 On or Off.
- Knob 2: Selects Switch 2 On or Off.
- Knob 3: Selects Switch 3 On or Off.
- Knob 4: Selects Switch 4 On or Off.
- Knob 5: Mix. Keep it set near max for the best chorus sound.

## Ring Modulator

Ring modulators are for those special times when you want different, distinctive, weird, strange and otherwise non-traditional guitar sounds. With Mix set under 100%, some of your dry guitar sound will be heard. At 100%, there are no rules.

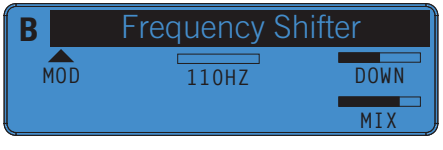



- Knob 1: Speed.
- Knob 2: Depth.
- Knob 3: Adjusts your Wave Shape from Sine to Square.
- Knob 4: Select AM (amplitude modulation) or FM (frequency modulation). Set to minimum for AM, maximum for FM, or anywhere in-between to blend the two.
- Knob 5: Mix. Experiment with different Mix levels for different effects.



## Frequency Shifter

Another classic effect from the world of modular synths. Similar to a ring modulator, but a ring modulator gives you both up and down shifted frequencies. Here you can select just the up or down shifted frequencies, or set it to stereo.




- Knob 1: Frequency.
- Knob 2: Up, Down or Stereo shift.
- Knob 5: Mix. Experiment with different Mix levels for different effects.

# Distortion Models

This chapter provides parameter details on the 16 Distortion models from the Line 6 DM4 plus the new Bass Octaver. Also included are a Volume model, 6 Compressors, Noise Gate and 5 EQs. Most Distortions have the same parameters, controlled by Knobs 1 thru 5:

- Knob 1: Drive control.
- Knob 2: Bass EQ.
- Knob 3: Mid EQ.
- Knob 4: Treble EQ.
- Knob 5: Output level.

## Distortion Models Reference Table : Controls & Parameters

| Model | Knob 1 | Knob 2 | Knob 3 | Knob 4 | Knob 5 |
|---|---|---|---|---|---|
| Tube Drive | Drive | Bass | Mid | Treble | Output |
| Screamer | Drive | Bass | Mid | Treble | Output |
| Overdrive | Drive | Bass | Mid | Treble | Output |
| Classic Dist | Drive | Bass | Filter | Treble | Output |
| Heavy Dist | Drive | Bass | Mid | Treble | Output |
| Colordrive | Drive | Bass | Mid | Treble | Output |
| Buzz Saw | Drive | Bass | Mid | Treble | Output |
| Facial Fuzz | Drive | Bass | Mid | Treble | Output |
| Jumbo Fuzz | Drive | Bass | Mid | Treble | Output |
| Fuzz Pi | Drive | Bass | Mid | Treble | Output |
| Jet Fuzz | Drive | Fdbk | Tone | Speed | Output |
| Line 6 Drive | Drive | Bass | Mid | Treble | Output |
| Line 6 Distortion | Drive | Bass | Mid | Treble | Output |
| Sub Octave Fuzz | Drive | Bass | Sub | Treble | Output |
| Bass Octaver | Drive | Bass | Mid | Treble | Output |
| Octave Fuzz | Drive | Bass | Mid | Treble | Output |
| Boost Comp | Drive | Bass | Comp | Treble | Output |

## Tube Drive

Based on the Chandler Tube Driver®. The original was designed by keyboardist Brent Butler to add grind and girth to his Farfisa. Utilizing a single 12AX7 preamp tube, the Tube Driver delivers the sweet singing sustain craved by guitarists worldwide.


## Screamer

Based on the Ibanez® TS-808 Tube Screamer®. This medium-gain pedal was introduced in the early '80s. From Stevie Ray Vaughan to Michael Landau, the simple Tube Screamer is the overdrive heard 'round the world.


- Knob 3 controls Tone, true to the original Tube Screamer's Tone knob.



## Overdrive

Based on the DOD® Overdrive/Preamp 250, which was designed to slam the input of a tube guitar amp as well as add distortion. The original had only gain and level controls, but the M13 adds Bass, Mid and Treble EQ.


- You can set Knob 1 at a minimum level on this and other Distortion models to get a boost in level without distorting your tone too much.

## Classic Distortion

Based on the ProCo Rat from the late '70s. The Rat was the beginning of a new generation of distortion boxes, with a sound that was angrier and more aggressive than a conventional fuzz tone.


- Knob 3 functions like the original Rat's Filter control, which gives you a brighter tone at lower settings, and a darker tone at higher settings.

## Heavy Distortion

Based on the Boss® MT-2 Metal Zone, which was introduced at the height of the big-hair metal craze of the late '80s/early '90s. Heavy and scooped, the tones of this model beg to be chunked upon.




## Colordrive

Based on the Colorsound® Overdriver, which originated from London's Macari's Music Exchange in 1965. With a high demand for Tone Benders at that time, brothers Larry and Joe Macari started building their own unique pedals under the name Sola/Colorsound.


- Knob 3 at 50% has no effect on the Mids; below 50% is a cut, above 50% a boost.

## Buzz Saw

Based on the Maestro® Fuzz Tone. Legend has it that the sound of this pedal was inspired by a broken and buzzing mixer channel heard in Nashville in 1961.


## Facial Fuzz

Based on the Arbiter® Fuzz Face, the infamous circular stompbox that hit the London music scene in 1966. It's best known for its association with guitar legend Jimi Hendrix.


## Jumbo Fuzz

Based on the Vox® Tone Bender. The classic Tone Bender sound can be heard all over the early Led Zeppelin albums, and is especially apparent on "Communication Breakdown."




## Fuzz Pi

Based on the Electro-Harmonix® Big Muff®. America's answer to the British fuzz pedals, the Big Muff® was known more for its sweet sustain than for its buzz.

## Jet Fuzz

Based on the Roland® Jet Phaser/AP-7. As Roland states in their catalog from the '70s: "... the Jet Phaser is a phase shifter producing dynamic jet sounds for rock guitar."


- Knob 2 controls the amount Feedback.
- Knob 3 controls the Tone of the fuzz.
- Knob 4 controls the Speed of the phasing.

## Line 6 Drive

A Line 6 original, this model makes special use of Knob 3, labeled Mid. At minimum, you'll get the sound of a '70s-style fuzz box clone. As you adjust it towards 50%, you'll get a more modern, high gain sound like the Rat or the Boss® Super Distortion. Turning it up to maximum, you'll get the gritty bite typical of a Sola Sound Tone Bender.




## Line 6 Distortion

Another Line 6 original, this model is out of control. Sure, it's massive. Yes, it's over the top. But it's a great distortion model.

## Sub Octave Fuzz

Inspired by the PAiA Roctave Divider, which combined a double octave shift with a fuzz effect, resulting in deep fat square wave distortion.


- Knob 3 controls the amount of Sub octave content.

## Bass Octaver

The Bass Octaver was inspired by the EBS® OctaBass. It provides a clean octave down signal. Although this effect is great for bass, it's also popular with guitarists such as the legendary Jeff Beck.


## Octave Fuzz

Based on the Tycobrahe® Octavia, another example of a fuzz plus octave effect. The Octavia used an audio output transformer and two germanium diodes to rectify the guitar signal, creating the high octave type sound. Jimi Hendrix used one on "Purple Haze".




## Boost Comp

Based on the MXR® Micro Amp. This effect was used to "push" the front-end of non-master volume tube amps in order to achieve a cranked sound at less than stadium levels.


- Knob 3 adds Compression similar to that of an MXR® Dyna Comp.

## Volume Pedal

Use the Volume Pedal model in any of the 4 FX Units to control Volume using an expression pedal. Set your minimum Volume by adjusting Knob 1.


## Red Comp

Based on the MXR® Dyna Comp.


## Blue Comp

Based on the Boss® CS1 Compression Sustainer with the Treble switch off.




## Blue Comp Treb

Based on the Boss® CS1 Compression Sustainer with the Treble switch on.

## Vetta Comp

From the Line 6 Vetta. Adjust the threshold with Knob 1, the Sensitivity control.


## Vetta Juice

Another Vetta original. Knob 1 adjusts Amount, a variable Compression ratio control. Knob 2 adjusts Level, with 30dB of available gain.

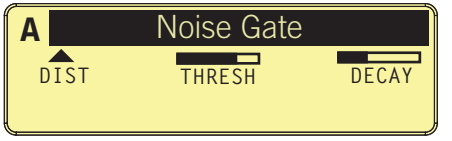

## Tube Comp

This is a Compressor model from the POD X3 family, based on a vintage Teletronix LA-2A® optical compressor. Adjust Threshold with Knob 1 and Level with Knob 2.



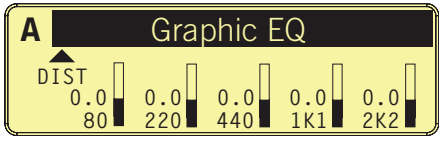

## Noise Gate

If you're not using the M13's Global Noise Gate, you can use this model in any or the 4 FX Units. Knob 1 controls the Threshold, and Knob 2 controls Decay.



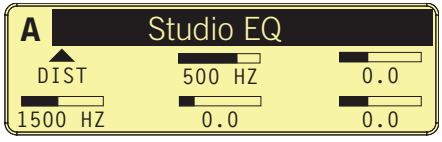
## Graphic EQ

Here's a 5 band graphic EQ with + or - 12dB at 80Hz, 220Hz, 440Hz, 1.1kHz and 2.2kHz.



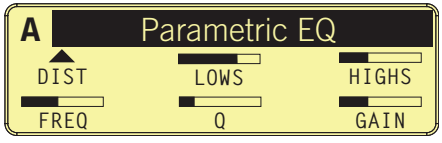

## Studio EQ

This is an API®-style EQ with constant Q and Soft Clipping output with Level control.



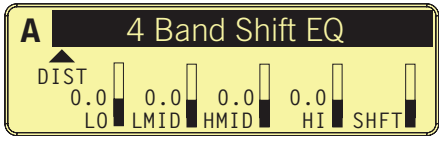

## Parametric EQ

This EQ features Hi shelf, Low shelf and a fully parametric band with Gain control.



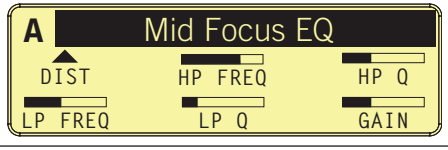

## 4 Band Shift EQ

Four band graphic but the shifter moves the lower band even lower and the higher bands even higher. With Shifter above 50% it's probably great for guitar - below 50%, probably great for bass.




## Mid Focus EQ

This is essentially a Hi Pass and a Low Pass both with frequency and gain control used together to create a Band-Pass.



# Filter Models

These pages provide details on the M13's Filter Models, 16 of which are from the Line 6 FM4 Filter Modeler Stompbox. We've also included a new Pitch Glide, Smart Harmony intelligent harmonizer, 8 Wah models from the POD X3 family and a few Line 6 originals.

## Parameter Details

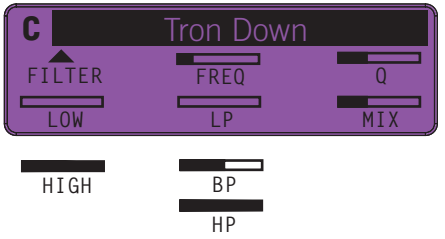
Below is a chart of all the Controls and Parameters you can adjust using Knobs 1 thru 5, located just below the LCD display. See the individual graphic illustrations for more info.

### Filter Models Reference Table : Controls & Parameters

| Model | Knob 1 | Knob 2 | Knob 3 | Knob 4 | Knob 5 |
|---|---|---|---|---|---|
| Tron Down | Freq | Q (Width) | Range | Filter LP/BP/HP | Mix |
| Tron Up | Freq | Q (Width) | Range | Filter LP/BP/HP | Mix |
| Seeker | Freq | Q (Width) | Speed | Steps 2-9 | Mix |
| Obi-Wah | Freq | Q (Width) | Speed | Filter LP/BP/HP | Mix |
| Voice Box | Strt Vowel | End Vowel | Speed | Auto 1-4 | Mix |
| V Tron | Strt Vowel | End Vowel | Speed (Attack) | Up/Down | Mix |
| Throbber | Freq | Q (Width) | Speed | Shape | Mix |
| Spin Cycle | Freq | Q (Width) | Speed | Vol Sensing | Mix |
| Comet Trails | Freq | Q (Width) | Speed | Gain | Mix |
| Slow Filter | Freq | Q (Width) | Speed (Attack) | Up/Down | Mix |
| Octisynth | Freq | Q (Width) | Speed (Vibrato) | Depth (Vibrato) | Mix |
| Synth O Matic | Freq | Q (Width) | Waveform | Pitch | Mix |
| Attack Synth | Freq | Ramp | Speed (Attack) | Pitch | Mix |
| Synth String | Freq | Attack | Speed (Modulation) | Pitch | Mix |
| Growler | Freq | Q (Width) | Speed | Pitch | Mix |
| Q Filter | Freq | Q (Width) | Gain | Filter LP/BP/HP | Mix |
| Wah (8 models) | - | - | - | Position | Mix |
| Smart Harmony | Scale | - | Key | Shift | Mix |
| Pitch Glide | - | - | - | Pitch | Mix |

## Tron Down

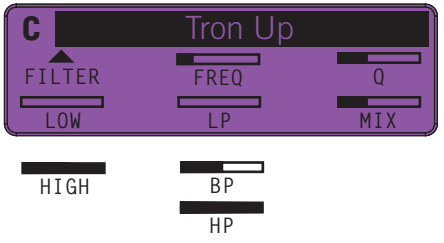
Inspired by the Mu-Tron® III envelope follower, part auto-wah, part triggered filter. The original Mu-Tron® had an up/down switch. This model is the Tron Down version.




- Knob 1: Frequency. Determines the high and low settings of the filter sweep.
- Knob 2: Q. Sets the width of the filter.
- Knob 3: Range. Selects High or Low frequency focus of the filter effect.
- Knob 4: Filter. Selects Low Pass, Band Pass, or High Pass filter.
- Knob 5: Mix.

## Tron Up

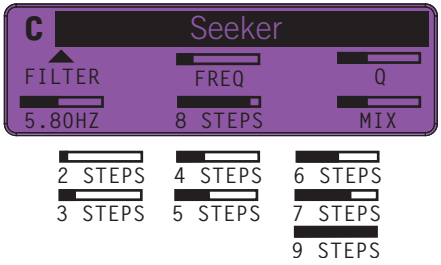
This model emulates the Mutron® III with its switch in the up position.




- Knob 1: Frequency. Determines the high and low settings of the filter sweep.
- Knob 2: Q. This sets the width of the filter.
- Knob 3: Range. Selects High or Low frequency focus of the filter effect.
- Knob 4: Filter. Selects Low Pass, Band Pass, or High Pass filter.
- Knob 5: Mix.

## Seeker

Inspired by the Z-Vex Seek Wah, a box that contains 8 parked wah filters that can be set at varying positions and then sequenced through, creating a pulsating hypnotic effect.




- Knob 1: Frequency. Select from a range of sequenced patterns of wah filter settings.
- Knob 2: Q. Sets the width of the filters.
- Knob 3: Speed. Controls the time it takes to cycle through the filters.
- Knob 4: Steps. Sets the number of filter steps in the sequence, from 2 to 9.
- Knob 5: Mix.

## Obi-Wah

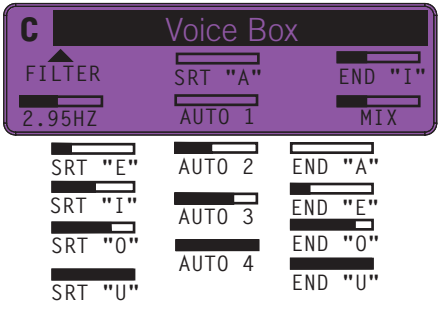
Based on the Oberheim® Voltage Controlled Filter, a classic Sample and Hold filter, which creates changes in tone by randomly emphasizing certain frequencies.


- Knob 1: Frequency. Sets the frequency where the filter will change your tone.
- Knob 2: Q. Controls the width of the filter.
- Knob 3: Speed. Sets the rate of the random filter changes.
- Knob 4: Filter. Selects the type of filter used (Low Pass, Band Pass or High Pass).
- Knob 5: Mix.

## Voice Box

Inspired by Vocoders, this model gives your guitar a sound that's typical of a classic "talk box". It shifts between a starting and ending vowel sound as you play, automatically. Knob 1 selects a Start vowel and Knob 2 selects an End vowel.

Auto lets you choose one of four settings for shifting back and forth between the Start vowel and End vowel, automatically shifting at the Speed you set with Knob 2. You can also use an expression pedal to control the shift.

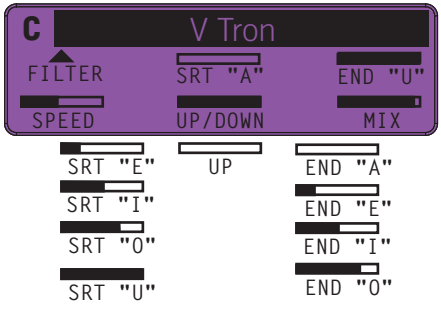



- Knob 1: Sets the starting vowel sound (A, E, I, O or U).
- Knob 2: Sets the ending vowel sound (A, E, I, O or U).
- Knob 3: Speed. Set how long it takes to "speak" from Start to End vowel.
- Knob 4: Auto. Select among 4 different start-to-stop vocal transition settings.
- Knob 5: Mix.

# V Tron

This model is based on the combination of a Mu-Tron III® envelope filter and a Voice Box effect. With the V Tron, your guitar "speaks" with an almost human voice in response to your playing.

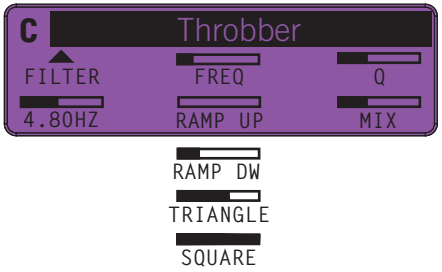
Each time you strike a new note or chord, the vowel sequence will be "spoken." You can choose whether to go from Start vowel to End vowel only (Up), or have it turn around and come back again (Up/Down).




- Knob 1: Sets the starting vowel sound (A, E, I, O or U).
- Knob 2: Sets the ending vowel sound (A, E, I, O or U).
- Knob 3: Speed. Set how long it takes to "speak" from Start to End vowel.
- Knob 4: Mode. Selects either Up or Up/Down.
- Knob 5: Mix.

## Throbber

Inspired by the versatile Electrix® Filter Factory. Like the LFO section of the Filter Factory, the Throbber alters the brightness of your tone with an emphasis on a specific frequency that you can select. Throbber is perfect for those Electronica sounds.




- Knob 1: Frequency: Selects a specific frequency range for the filter.
- Knob 2: Q. Controls the width of the filter.
- Knob 3: Speed. Sets the rate of the low frequency oscillator.
- Knob 4: Mode. Selects between four different wave shapes.
- Knob 5: Mix.

## Spin Cycle

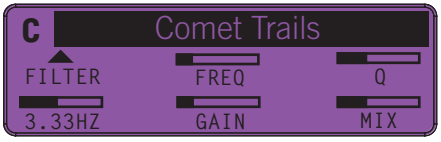
Inspired by Craig Anderton's Wah/Anti-Wah, this effect takes full advantage of the M13's stereo capabilities. It's essentially two wah pedals panned L & R that wah in the opposite direction from each other. One goes up while the other goes down. Additionally, the wahs are sweeping from min to max automatically, and they react to playing volume.




- Knob 1: Frequency. Controls the range of the filter emphasis in the wah tone.
- Knob 2: Q. Controls the width of the filter.
- Knob 3: Speed. Sets the speed at which the wah effects sweep.
- Knob 4: Volume Sensitivity. Sets the way volume will affect the speed of the effect.
- Knob 5: Mix.

## Comet Trails

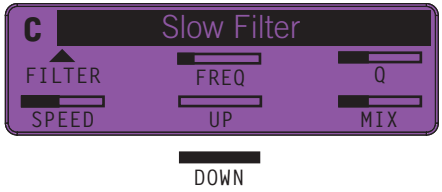
After several days spent crafting the code that makes up our digital secret sauce, one of our DSP developers came up with an inspired model that features 7 filters, all chasing each other around and looping back and forth across sonic space. We call it Comet Trails.




- Knob 1: Frequency. Controls the range of the filters.
- Knob 2: Q. Controls the width of the filters.
- Knob 3: Speed. Sets the rate of the filter movement.
- Knob 4: Gain. Controls the overall Gain.
- Knob 5: Mix.

## Slow Filter

This triggered filter rolls off the high end of your tone, with adjustable speed. You get a choice of having your tone sweep from dark to bright (Up mode), or bright to dark (Down mode). The Q lets you further shape your tone by creating a sharp boost at the point of the high end roll off.

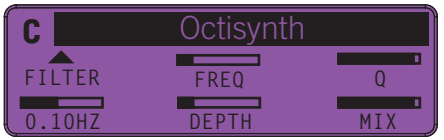





- Knob 1: Frequency. Sets where the filter begins its tone shaping roll-off.
- Knob 2: Q. Controls the width of the filter.
- Knob 3: Speed. Sets the speed of the filter sweep.
- Knob 4: Mode. Selects between two modes: Up or Down.
- Knob 5: Mix.

## Octisynth

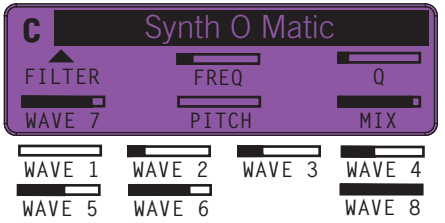
This model is a velocity sensitive combination of Ring Modulator, Synthesizer VCO and Vibrato pedal. As an added bonus, your guitar's volume knob can control the frequency of the oscillator. Set it low for a mellow, muted response, or turn it up all the way for a radical, aggressive sound.




- Knob 1: Frequency. Controls filter content, adding second order harmonics.
- Knob 2: Q. Controls the width of the filters.
- Knob 3: Speed. Sets the rate of the Vibrato.
- Knob 4: Depth. Controls the Depth of the Vibrato.
- Knob 5: Mix.

## Synth O Matic

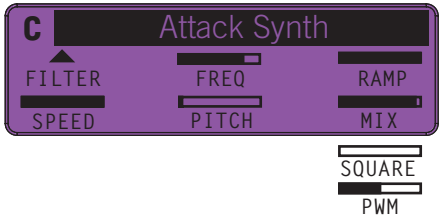
This model features waveforms captured from a collection of vintage analog synths, including a Moog® Modular and an Oberhiem® Synthesizer Expander Module.




- Knob 1: Frequency. Determines how bright your sound will be.
- Knob 2: Q. Sets filter width to add more or less emphasis on the selected frequency.
- Knob 3: Speed. Selects one of the eight synth waveforms.
- Knob 4: Pitch. Controls the Pitch of the synth sound.
- Knob 5: Mix.

## Attack Synth

Inspired by a Korg® X911 Guitar Synth. The Attack Synth model features one of the waveforms used in the original X911, along with a few of the unique wave shaping functions we found on the unit we modeled.




- Knob 1: Frequency. Controls the stop frequency of the filter (VCF on the X911).
- Knob 2: Q. Selects Square, Pulse Width Modulation or Ramp for the waveform.
- Knob 3: Speed. Controls Attack (the time it takes to get to the stop frequency).
- Knob 4: Pitch. Controls Pitch over a two octave range.
- Knob 5: Mix.

## Synth String

Based on the Roland® GR700 Guitar Synth, which has some of the coolest analog synth sounds designed for guitar. The Synth String model is based on one of the signature sounds of the GR700.




- Knob 1: Frequency. Controls a low pass filter tone control.
- Knob 2: Q. Controls the attack time.
- Knob 3: Speed. Sets the speed of the vibrato-y pulse width modulation.
- Knob 4: Pitch. Controls the Pitch of the effect over a two octave range.
- Knob 5: Mix.

## Growler

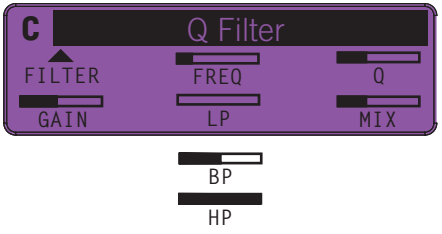
For the Growler, we modeled yet another great-sounding GR700 tone and fused it with the characteristics of the Mu-tron III®, resulting in a model that gives you user-controllable pitch and pulse width modulation, and a unique sound.


- Knob 1: Frequency. Controls the frequency of the filter.
- Knob 2: Q. Sets the width of the filter.
- Knob 3: Speed. Dials in the speed of the vibrato-y pulse width modulation.
- Knob 4: Pitch. Controls the Pitch of the synth over a two octave range.
- Knob 5: Mix.

## Q Filter

This is essentially a parked wah model – a wah "parked" in one position that creates a unique, notched kind of sound. With the Q Filter, this effect is programmable and repeatable. You can even use it as a wah pedal if you connect an expression pedal to the M13 and set it to sweep Frequency from low to high.



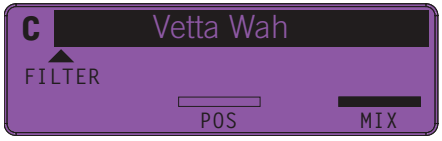



- Knob 1: Frequency. Controls filter frequency (like the position of a wah pedal).
- Knob 2: Q. Controls the width of the filter.
- Knob 3: Speed. Sets the gain (the amount of boost the effect gives to your guitar).
- Knob 4: Filter. selects the type of filter effect (Low Pass, Band Pass, or High Pass).
- Knob 5: Mix.

Included in the Distortion group are 8 exclusive Wah models from the POD X3.

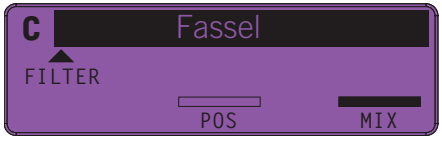
## Vetta Wah

An original Line 6 wah that made its debut in the Line 6 Vetta amplifier.



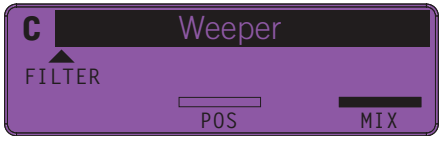

## Fassel

A model of the Jen Electronics Super Cry Baby, manufactured in Italy using the famed Fasel Inductor.



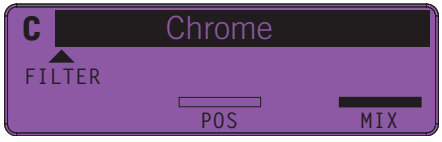

## Weeper

Modeled after the Dunlop Model GCB-95 Cry Baby.



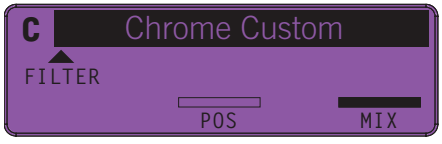

## Chrome

Modeled after the Vox® Model 847 wah pedal.




## Chrome Custom

Modeled after a custom modified Vox® 847 wah.

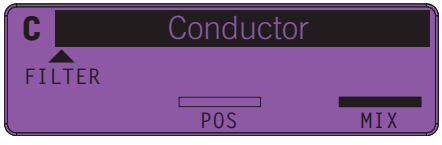



## Throaty

Modeled after the RMC Real McCoy Custom wah.

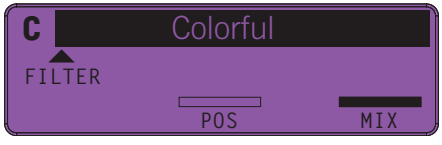

## Conductor

Modeled after the Maestro® Boomerang Wah.



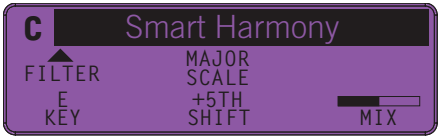

## Colorful

Modeled after the Colorsound® Wah-Fuzz-Swell.



## Smart Harmony

Inspired by the Eventide® H3000™. Select a Scale, Key and Shift value and our DSP algorithms will do the rest, producing a perfect harmony note along with your guitar riffs.




- Knob 1: Scale. Select the Scale you'd like to use.
- Knob 3: Key. Select the Key you'll be playing in.
- Knob 4: Shift. Determines the Shift value for the desired harmony note.
- Knob 5: Mix. Sets the balance or your dry + harmony notes.

## Pitch Glide

Inspired by the Digitech Whammy®, the Line 6 Pitch Glide is designed to be used with an expression pedal. Set your heel and toe values in the usual way, then glide between them.


- Knob 4: Manually lets you select the Pitch.
- Knob 5: Mix.

# Reverb Models

This chapter describes the 11 Reverb models we ported from the Line 6 Verbzilla pedal, one of our most popular stomps in the ToneCore family, plus the new Particle Verb. All Reverbs are stereo, and they sound best routed towards the end of your FX chain.

## Parameter Details

As indicated in the Reference Table below, all M9 & M13 Reverb models are set up the same way with the exception of Particle Verb. Mix is persistent for all Reverbs (your Mix level will stay the same when you load a different Reverb model). Knobs 1 thru 5 control the following for all Reverb models:

- Knob 1: Decay time.
- Knob 2: Pre-delay time, adjustable from 20 to 200 milliseconds.
- Knob 3: No assignment for the Reverb models.
- Knob 4: Overall Tone of the wet reverb signal.
- Knob 5: Mix from 0% (dry) to 100% (at 100% you'll hear wet reverb signal only)

### Reverb Models Reference Table : Controls & Parameters

| Model | Knob 1 | Knob 2 | Knob 3 | Knob 4 | Knob 5 |
|---|---|---|---|---|---|
| '63 Spring | Decay | Pre-Delay | - | Tone | Mix |
| Spring | Decay | Pre-Delay | - | Tone | Mix |
| Plate | Decay | Pre-Delay | - | Tone | Mix |
| Room | Decay | Pre-Delay | - | Tone | Mix |
| Chamber | Decay | Pre-Delay | - | Tone | Mix |
| Hall | Decay | Pre-Delay | - | Tone | Mix |
| Ducking | Decay | Pre-Delay | - | Tone | Mix |
| Octo | Decay | Pre-Delay | - | Tone | Mix |
| Cave | Decay | Pre-Delay | - | Tone | Mix |
| Tile | Decay | Pre-Delay | - | Tone | Mix |
| Echo | Decay | Pre-Delay | - | Tone | Mix |
| Particle Verb | Dwell | Gain | - | Hazard/Stable | Mix |

## ‘63 Spring

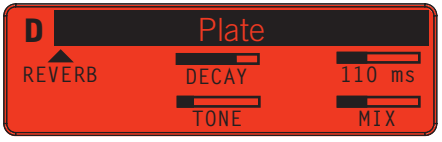
Based on a 1963 brown self-contained spring reverb head unit. Best known for great surf guitar tone.


## Spring

Based on a studio spring reverb. The spring reverb’s characteristic resonant sound was created by springs suspended inside a metal box.


## Plate

Plate reverbs consisted of a thin metal sheet suspended inside a box. Dampening the metal plate was a method for adjusting the reverberant effect.




## Room

Simulates the acoustic properties of a classic echo chamber, which was a room used in early recording studios for reverb effects. Room reverbs consist mainly of early reflections.

## Chamber

An elongated ambient space such as a hallway, stairwell or elevator shaft creates this reverb type. Lots of decay on tap here.


## Hall

This model simulates the sound of a concert hall or large open space with a strong reverb tail. Imagine a gymnasium, performance hall, or cathedral.


## Ducking

Built using a 'Hall' model but with a ducking effect. The volume of your reverb is "ducked" (reduced) while you're playing, and increases when you pause between phrases.


## Octo

Creates a lush, ambient space. Its dense, harmonic decay is controlled by Knob 1 (Decay Time). Octo is very effective when using volume swells.

## Cave

A Line 6 original. Cave is a surreal, cavernous echo chamber. Definitely deep.


## Tile

This model Emulates the acoustic reflections of a tiled room, such as a bathroom or shower, with clearer/brighter discreet early reflections.

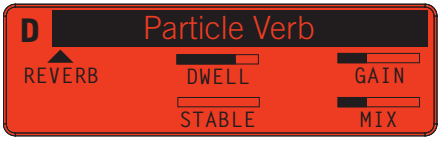

## Echo

Another Line 6 original. This is a lush echo with reverb, and distinct repeats as it decays.




## Particle Verb

A new kind of reverb effect which turns your chords into a lush modulated pad in STABLE mode. CRITICAL mode is similar, but with a slight rise in pitch. In HAZARD mode, all stops are removed.




M9
STOMPBOX
MODELER
DELAY | MOD | DISTORTION | FILTER | VERB
LINE 6
FX 1 UNIT
FX 2 UNIT
FX 3 UNIT
B
UNDO/
REDO
HALF
SPEED
REV
SETUP
TUNER
A
REC/
ODUB
PLAY/
STOP
PLAY
ONCE
TAP
HOLD FOR
LOOPER
SCENES


LINE 6
M13
STOMPBOX
MODELER
DELAY | MOD | DISTORTION | FILTER | VERB
FX 1 UNIT
FX 2 UNIT
FX 3 UNIT
FX 4 UNIT
C
SCENES
HOLD FOR
SCENE SETUP
B
LOOPER CONTROLS
UNDO
PLAY
ONCE
PRE/
POST
HOLD FOR
SETUP
A
RECORD/
OVERDUB
PLAY/
STOP
HALF
SPEED
REVERSE
TAP
HOLD FOR
TUNER