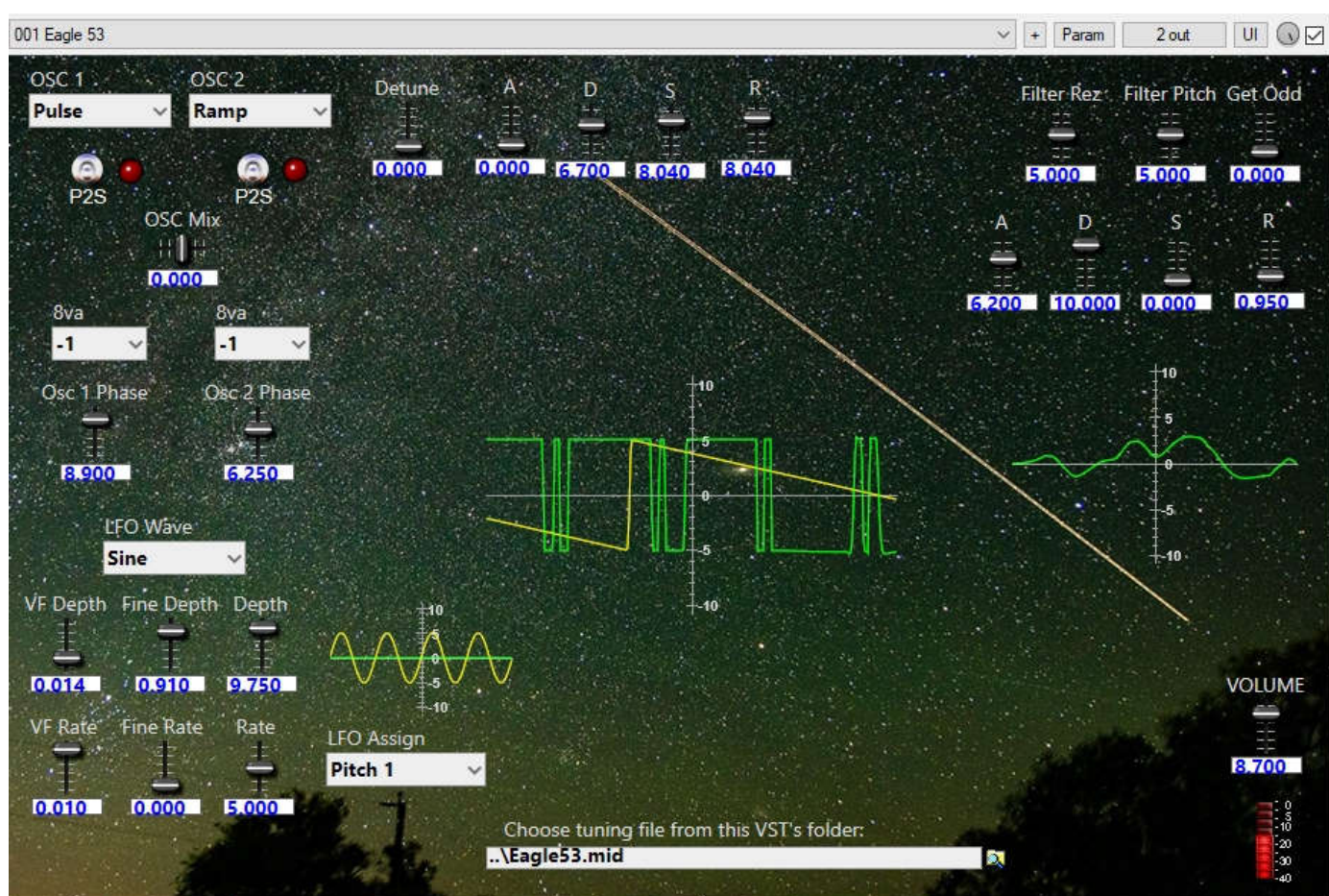


# Microtone 5000

Free microtonal VST Synth from [BipTunia Synths](http://BipTuniaSynths.com).



Windows 64-bit, VST 2, also as VST3



This is the easiest microtonal synth to use.  
Yet it is robust, and will give you *power*

## PDF Manual of Info and Controls.

Street Date: April 2, 2023. Initial release version: 0.9

VST ID: MT5T. Mfg ID: BIPT. Website: [biptunia.com](http://biptunia.com)

MICROTONE 5000 is the best free microtonal VST synth in the world.

Ready to step outside the constraints of the 12-tone Equal Temperament Western Scale? That's been used for everything from the Baroque era to the Ramones, all good music, but narrowly constrained. It's also used for everything on popular radio.

But always why divide the octave into 12 equal parts? We have divisions in this synth by all numbers, from 4 EDO (4 equal divisions of octave) to 313 per octave. Many of these tunings don't even use octaves.

We also included ancient Greek and current folk scales from Scotland, Japan, Indonesia, Iran, Lithuania, Germany, and dozens of other countries. You can use Bach's Just Intonation (and many other Just Intonations, all file names start with **ji**.) And hey, if you want to play in 12-Tone Equal Temperament (12 TET) to jam along with some Pink Floyd or Ramones or (whatever's on the charts this week), pick the 12 TET tuning, or use the second preset (002), "Western 12 TET."

Microtonal / Xen (xenharmonic) music is explained, along with tutorials on music in general, in the PDF documents in the included folder, written by [microtonal / xenharmonic star Sevish](#) and used with permission. He also made some of the included tunings.

Microtonal music may seem "out of tune" at first, but after not much listening, it will start to make sense. You'll even find your favorite tunings/ scales/ tonalities. I'd recommend if you're new to this that you spend some time listening [to this Microtonal Playlist on Spotify](#) on Shuffle. It has almost 1500 microtonal songs by many artists in many microtonal tunings, and in many genres.

**MICROTONE 5000** is a Windows 64, VST Polyphonic analog-style synth with 5000 microtonal tunings (also has western 12-TET setting), 128 presets, 2 oscillators, 2 filters, 1 LFO, 7 LFO assigns, and 6 voices. It has very low CPU usage.

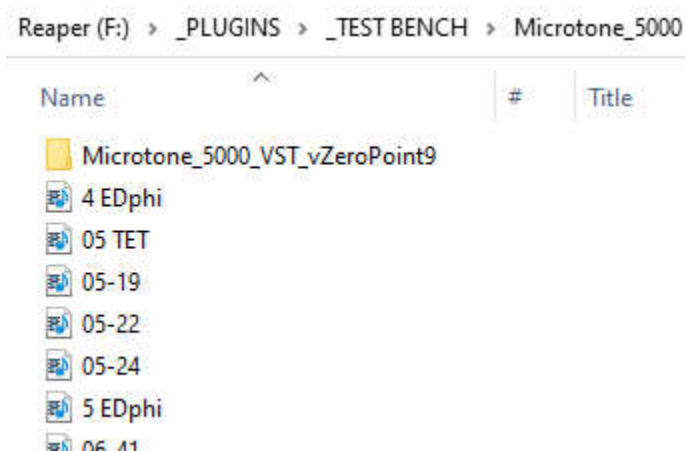
It has 3 onboard oscilloscopes that are useful, look trippy, plus they're educational to learn about how synthesizers work: 3 built-in scopes, 1 each for audio wave forms on deck, LFO wave form on deck, and entire synth output.

**MICROTONE 5000** is the successor and a vast improvement on previous offerings from BipTunia, including *Simple Microtonal Synth*, *Microtonal Polyphonic Shiny Dirt*, and *Microtonal Poly Worms*. BipTunia's *Simple Microtonal Sampler*, however, [was recently re-released](#) and is better than ever.

**MICROTONE 5000** was created by Michael W. Dean of [the music project BipTunia](#). [Michael Berendes](#) did some hands-on help near finalizing this.

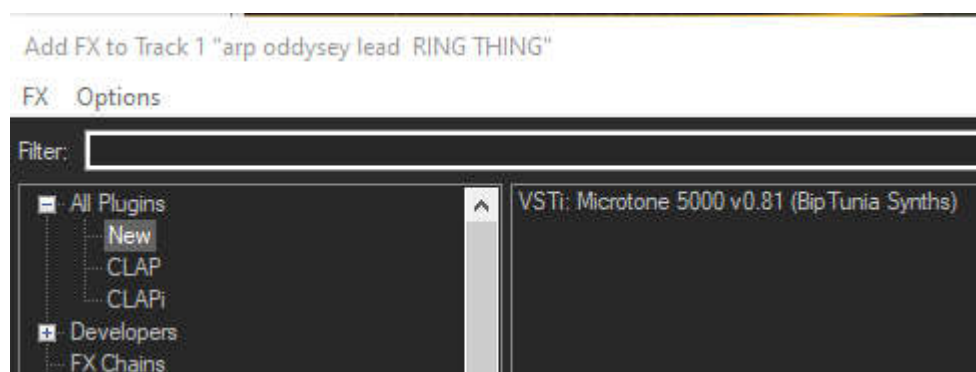
## QUICK-START WITH THE Microtone 5000

You can start using this synth immediately to make microtonal music without even reading the whole manual. Plug your MIDI keyboard into your computer. Unzip the Microtone 5000 VST and drop the VST folder as is into your VST folder on your hard drive. Leave the file structure as is: with the VST itself INSIDE the tuning files folder. Like this (although everything with TEST BENCH and before will likely be different on your computer):



(So it's a folder called **\Microtone\_5000\_VST\_vZeroPoint9** inside a folder of tuning files, that folder is called **\Microtone\_5000**. It comes correct. Leave it as is, but if you decided to move things around for some reason, this is how to get it back.)

Then open your DAW, add Microtone 5000 (in Reaper, it's under NEW):

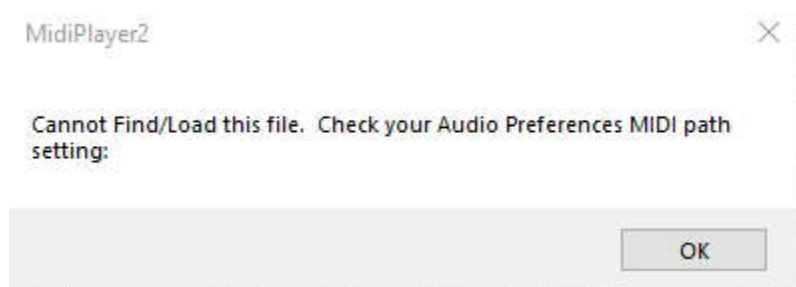


into a project and open this VST's so you can see the controls. Pick from any of the 128 (!) presets and start playing wild new sounds that are outside the scope of Western music. The synth sounds themselves and presets are inspired by vintage Moog and Korg analog synths, plus some new sounds.

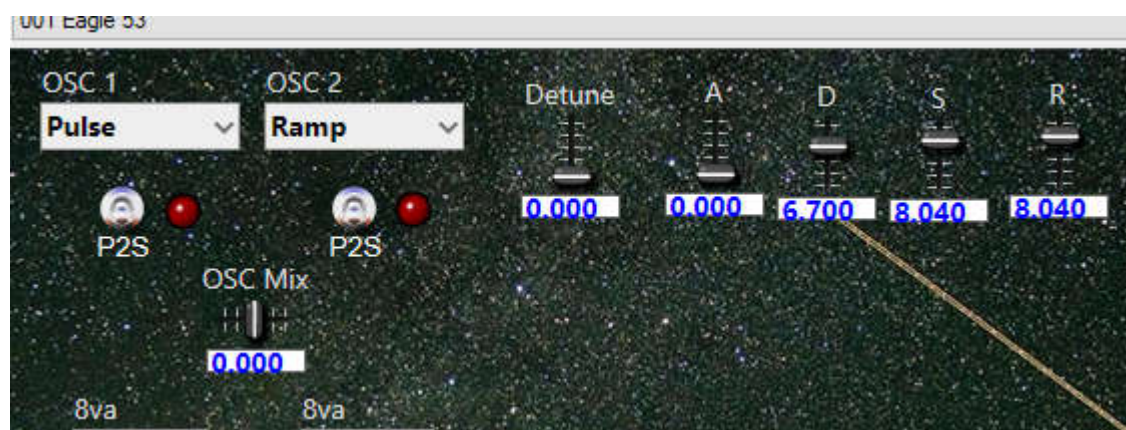
In each preset there's a different one of the 5000 microtonal tuning files with each preset, though you can change every setting on the synth, can pick a new tuning from the file picker at the bottom, and can save your new settings in your DAW (directions vary by DAW. Google it for your DAW if you don't know).

You'll have to use the picker to find the tunings file inside the VST file on your hard drive. **IF YOU EVER GET AN ERROR** where you can't close and/or use

anything on the synth, it has not crashed, it is just looking in the wrong folder. This happens usually if you rename a file path that includes the VST. If this happens just look for the "MidiPlayer2" error message in your system tray, click on OK, and close it.



## CONTROLS ON THE Microtone 5000



Top left you have the two oscillator pickers. You can choose from Sine wave, Saw, Ramp, Triangle, Pulse, White Noise, and Pink Noise. If you want Square wave, pick Pulse, and hit the "P2S" (Pulse to Square) switch below that drop down menu. A red LED will come on to show you've got Square waves. Those switches don't do anything on any other waveforms.

To the right of these drop-down menus is a Detune slider. Try moving it very slightly from the bottom to get a thicker sound. Or to the top for a crazy harmony.

To the left of Detune is the ADSR sliders, which affect the Attack, Decay, Sustain, and Release of the sound.

Back over on the left, below the P2S switches is OSC Mix, a horizontal slider that can move between the two oscillator's waveforms, combining in any amount. If you notice the oscilloscope in the bottom middle of the synth interface (the largest oscilloscope), it shows the waves on deck.

If you move the OSC Mix all the way to one side, it will still show both. It shows the waveforms on deck, available, not the ones being used. It also shows them combining with any filter. The smaller oscilloscope on the far right shows the output, all waves in the mix, plus all filtering on top of them.



Below the OSC Mix are two 8va (octave) pickers, one for each oscillator. Since we aren't always dealing with octaves in microtonal music, and if we are, they are not your typical octave, consider them range pickers, going from very low (-2) to very high (3).

There was a draft of this synth with built-in effects, but we rethought it. Everyone will be using this in a DAW that has their favorite effects, we don't want to imply what's best for the end user. We do recommend using a little reverb and/or delay after the synth, and some light compression at the end of the chain. Some people like to toss in some flange or phase shifter. All sound good with this synth. Some occasional distortion or fuzz, especially fuzz, can make the deeper notes sound great. Here's how I run Microtone 5000:



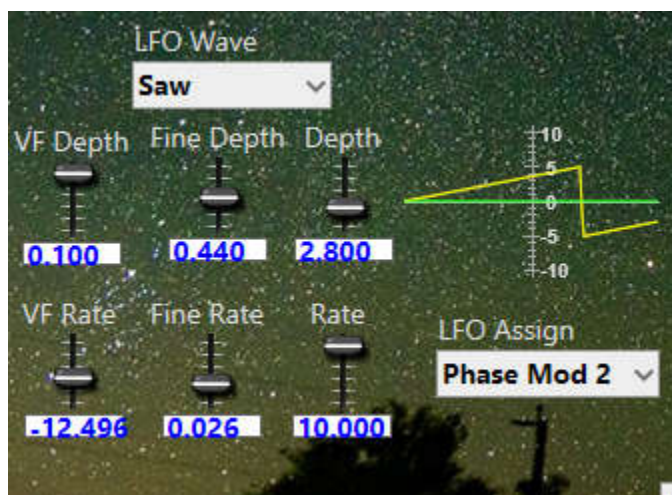
If you use EQ, remember: EQ before compressor gets a warmer tone, EQ after compressor gets a clearer sound. Most DAWs come with some effects. Reaper has some great ones and that's one of [many reasons I love Reaper](#).

If you really want to get way out-there, otherworldly sounds, try this synth with [Orion Ring Mod](#), also free, and also from BipTunia Synths.

However, with all the oscillators and filters in synths, combined with external effects that effect phase (flange, phase, delay, reverb, distortion, ring mod, etc), can sometimes end up with waves out of phase, canceling each other out, and getting quieter (or doubling and becoming too loud and distorting).



If you hear either of these happening, use either of the two "OSC PHASE" sliders (OSC Phase 1 and OSC Phase 2) to move it to a good sound. Sometimes when the volume is fine, adjusting one or both of those sliders can subtly improve the sound in a very noticeable way. It's almost like tuning something. Slide it up and down slowly until it sounds "right."



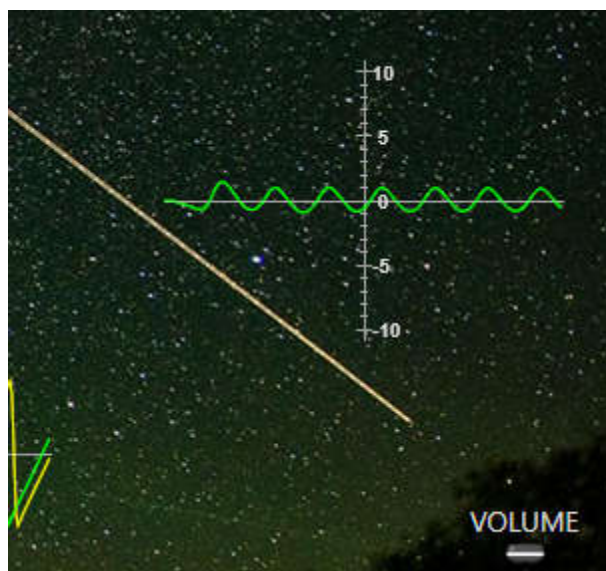
Below the OSC PHASE sliders is the LFO (low frequency oscillator) waveform dropdown menu. Here you pick a wave that is used to change the sound oscillators. Below that are the controls, top is depth, bottom is rate (frequency) and left to right is mildest to most extreme. Hint: a lot of the real magic happens with mostly using the VF (very fine) Rate and any depths. This gives the real Low Frequencies. Though interesting things can be done with higher frequencies also.

To the right of those controls is the LFO Assign, a drop-down menu for assigning the LFO to another part of the synth. There's also a option there for "OFF."



On the top right of the synth are some filter options to experiment with. Below that is another ADSR, this time for the filter. A good place to start is just turning the A almost all the way up.

Do know that some sliders will have wildly different results depending on what other things are set at in the synth.



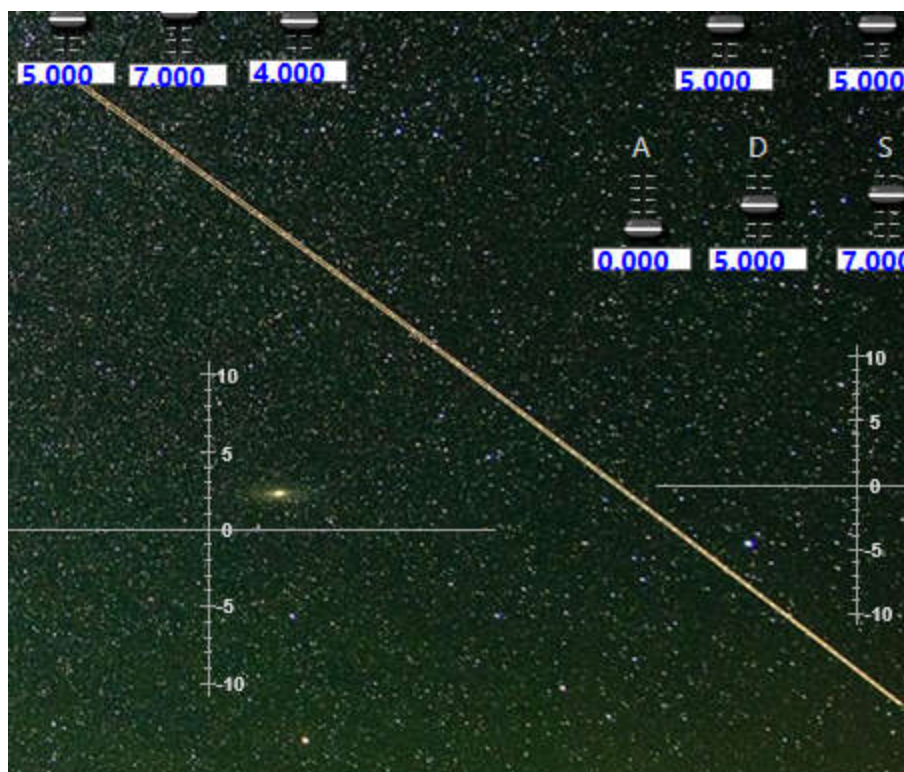
Below those ADSR sliders is the output oscilloscope.



Below that is a volume slider. Below that volume slider is an output level meter.

I always find it good to have those on everything. A synth can make some wildly unpredictably loud piercing sounds, it's good to be able to turn it off immediately without fumbling for controls elsewhere.

Also, some sounds will be so room shakingly mighty that you'll want to turn them down to 8 or 7 while other sounds you'll want to keep at 10. Note that in the presets, many but not all have the volume set at 10.

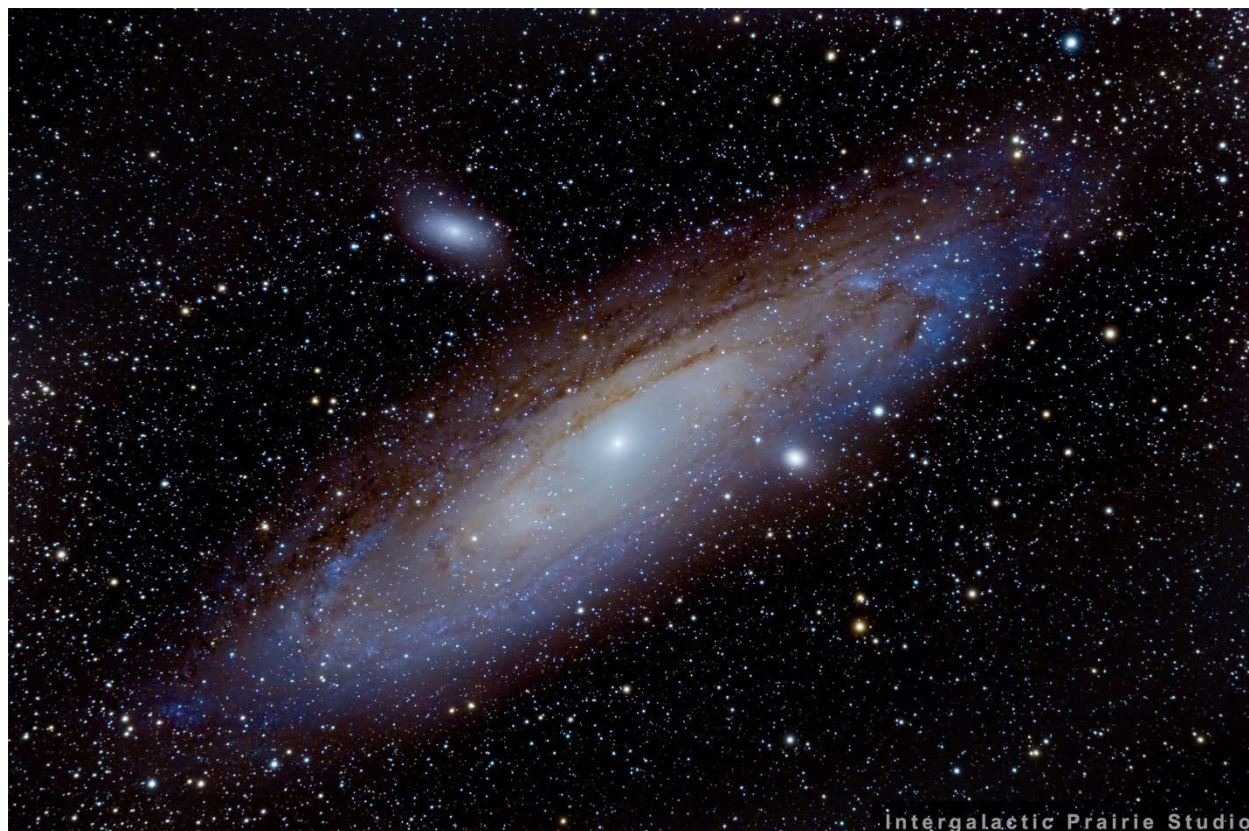


The horizontal line on the middle left of the synth is an airplane. The background photo is an astro photo taken by this synth's author, Michael W. Dean. His love of Deep Space was a big inspiration in this synthesizer.

It's a guided 1-minute shot in a dark rural sky. The bright stars on the left side are the north end of the visible Milky Way.



The small bright oval near the middle, in the upper right quadrant of the big oscilloscope is the Andromeda Galaxy. More of Michael's astro photos are on [Astrobin, here](#). Below is a close-up photo he took of Andromeda.



## YOU CAN GO YOUR OWN WAY

If 5000 tunings isn't enough for you, or you just love math and want to get into making your own microtonal / xenharmonic tunings, you can add them by converting them to .MID (midi) format and dropping into the tunings folder, then picking them in the picker at the bottom of the synth. You can learn a lot about doing that from this article I wrote called [\*Making Microtonal Music is Easier Than You'd Think\*](#) on the Produce Like a Pro site.

You'll need the complex, deep, and [free program Scala](#) to make them and export them, they can also be used to convert other formats to .MID

## SPECIAL THANKS:

Jef McClintock of SynthEdit, and these SynthEdit users who helped me learn this stuff: Chris Roberson, Peter Buick, H Spook John, Gijs de Mik, Sigi Asta, Davidson Carpenter, YUGEN, Davidson Carpenter, and [Michael Berendes](#).

If you enjoy this VST, and please tell two friends.

## ABOUT THE NAME

I considered both "Microtonal 5000" and "Microtone 5000." I did polls online on several groups. Was nearly split down the middle everywhere. Tie breaker was Google's Bard AI, which preferred "Microtone 5000":



I would go with Microtone 5000.

Microtonal 5000 sounds more like a computer program, while Microtone 5000 sounds more like a musical instrument. Microtone 5000 is also more unique and memorable than Microtonal 5000.

## LEGAL:

Made with [SynthEdit](#).

All BipTunia synths are free and BipCot NoGov license, v1.2

This allows use and re-use by anyone except governments and government agents.

<https://bipcot.org>

"VST" is a trademark of Steinberg Media Technologies GmbH.

BipTunia Synths has been licensed for VST SDK use by Steinberg. Agreement countersigned by Steinberg on August 23, 2018.



---

If you want to help out, you can listen to or buy one of my albums for you or a friend, on [BandCamp](#), or any of these services:

- [Amazon](#)
- [Amazon Music](#)
- [Anghami](#)
- [Apple Music](#)
- [BandCamp](#)
- [Bugs!](#)
- [CD Baby](#)
- [Deezer](#)
- [Google Play Music](#)
- [iHeartRadio](#)
- [iTunes](#)
- [KKBox](#)
- [Napster](#)
- [Spotify](#)
- [YouTube Music](#)
- [Tidal](#)