Gemini 2.0 VSTi Synthesizer

User Guide

Version 2.0
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Contents

Introduction

Gemini VSTi 2.0 is a virtual analogue software synthesizer that offers an outstanding audio quality combined with a number of unique features. Its character is best described by thick/fat analogue sounding.
It excels in Ultra Fat Dubstep/Drum 'n Bass sounds, Beautiful Trance leads, Screaming Hardstyle/Hardcore/Rave Synths, Shimmering pads, Psy/Goa FX and much more.

Its main features are:

- High quality oscillators with massive detuning algorithm. (supersaw unison)
- NEW in V2.0: waveforms sampled from high-end hardware dance synthesizers.
- Dual Analogue modeled filters with radical resonance and overdrive/distortion behavior.
- NEW in V2.0: pre-amplifier drive unit for even more extreme sound.
- Dual step sequencers for stunning rhythms, melodies and soundscapes.
- High quality stereo reverb and stereo sync delay.
- NEW in V2.0: Intelligent BPM synced limiter
- Stereo Field pan mix knob which mixes the two oscillator banks in stereo space.
- NEW in V2.0: folder based preset manager with 880 presets sorted by genre/type.
- NEW in V2.0: easy-to-use midi-learn function.
- NEW in V2.0: Preset Generator
- NEW in V2.0: Skin-able
- NEW in V2.0: Extra skins & presets downloadable from the member section.

Detailed

- Dual Oscillator bank with waveforms: Saw, Pulse, Sine, Triangle, White Noise.
- NEW in V2.0: added 125 waveforms: spectral, formant (vocal), noise and physical instruments.
- Oscillators detune and spread controls for custom fat detuning/unison behavior.
- Pitch modulation by sync-able LFO and Dual step sequencers.
- Dual Filters supporting parallel/serial mode + convenient cutoff knob link mode.
- Filter modulation by: sync-able LFO, ADSR Envelope, Step sequencer.
- NEW in V2.0: filter cutoff modulated by key pressure.
- Filter modes: Low Pass/ High Pass/Band Pass/Band Reject/ Peaking.
- Dual overdrive unit which can act in parallel and series!
- Dual step sequencers support glide, gating, and 8 sync modes.
- Step sequencers can interact with each other via 2 algorithms. (add/multiply)
- Step sequencer perfect host beat sync. (will keep in sync with played beats, even when playing live)

- Stereo sync Delay and all LFO's have 8 sync modes and free running mode.
- Very short delay effect timing possible to create acoustic metallic effects.
- Portamento sliding + glide supported.
- 32 Notes Polyphonic.
- Synthesizer sections can be enabled/disabled for optimal CPU efficiency.
- NEW in V2.0: CPU usage reduced up to 50% (by extensive code optimization)
- NEW in V2.0: fully updated and compatible with Windows 8
- NEW in V2.0: much improved stability

With your purchase you also get:

- 880 High quality presets.
- 2.x Updates and support.
- NEW in V2.0: Skins, Bonus presets and other goodies from the member section.
  + you support our company to start exciting new projects!

SYSTEM REQUIREMENTS

- Windows XP/Vista/Windows 7/Windows 8
- VSTi compatible Music Production software
- Multi-Core CPU's supported. (also tested on newest Core i3/i5/i7/AMD FX)

DEMO LIMITATIONS

- Less Presets (144 instead of 880)
- Runs 30 minutes per session. After that you need to reload Gemini or your song.

Note: presets created and saved in the demo version will automatically be loaded into the full version.

PURCHASING

Getting the full version of Gemini VSTi 2.0 is very easy:
1. Go to http://www.audioxygen.com (or click on the link in Gemini)
2. Click: "Buy Now" button or go to "Shop"
3. Add to cart, check out and pay with PayPal.
4. Directly download with link in your email and enjoy the full version of Gemini2.0!
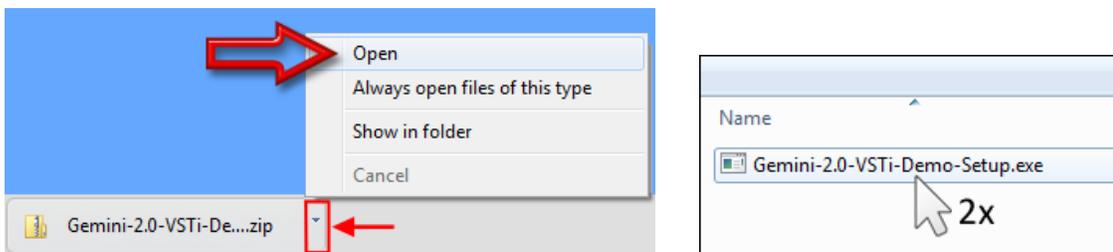
Installation

The full version and demo of Gemini VSTi 2.0 are both provided as an Installer executable (.exe) file inside a .zip file.

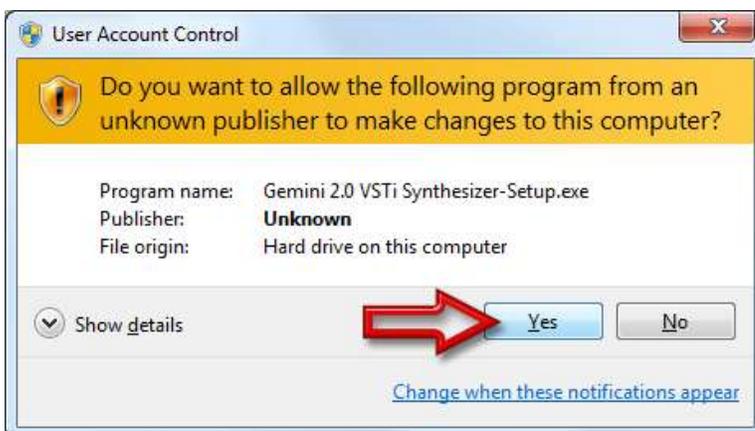To install Gemini:
1. Download Gemini to your computer.
   Override any browser warnings. ("keep")
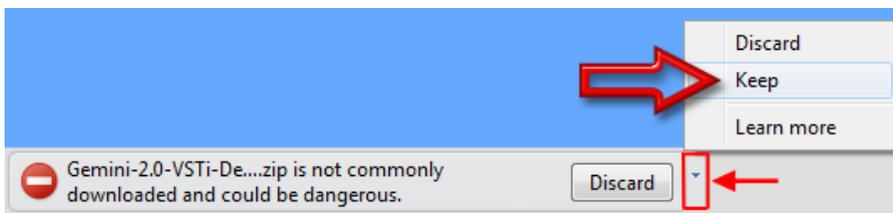
2. After the download has finished, open the file and click 2x on Gemini-2.0-VSTi Setup.exe

3. Answer "yes" to the User account control message.

4. Click "Next"

5. Select your VST plug-in folder and click "next" (will be different from below example image)
   Note: normally, the VST folder will be detected correctly by the Gemini installer, so you only
   need to click "next" here.

   If you are unsure, check the configuration/settings/preferences of your Music Production
   software. Look for a setting like "VST paths" or "VST Plugin folders"
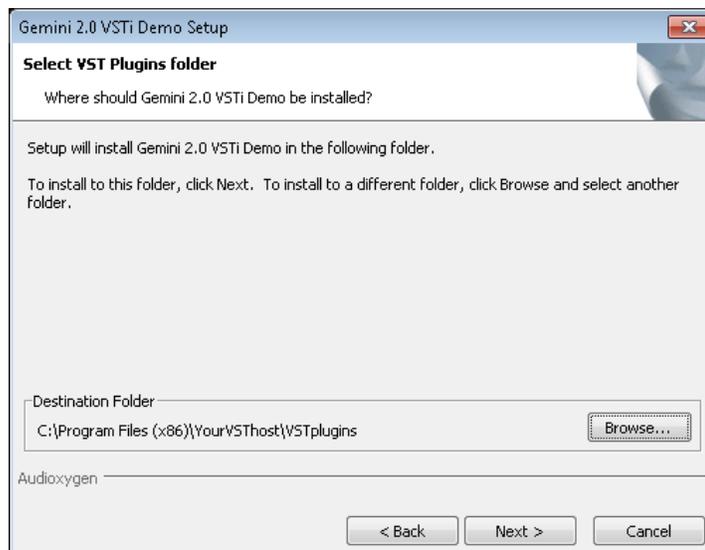
6. After installation is complete, click "finish" , start your Music Production software and
   Gemini 2.0 should appear in the list of available VST Instruments.

Overview

Gemini's user interface is divided into 5 main sections.

Before the sections are explained it is important to know the audio path of Gemini.
The **black** lines indicate the audio path and the blue lines indicate the special modulation/link paths.
The red arrow indicates the alternative signal path when the filters are in serial mode.
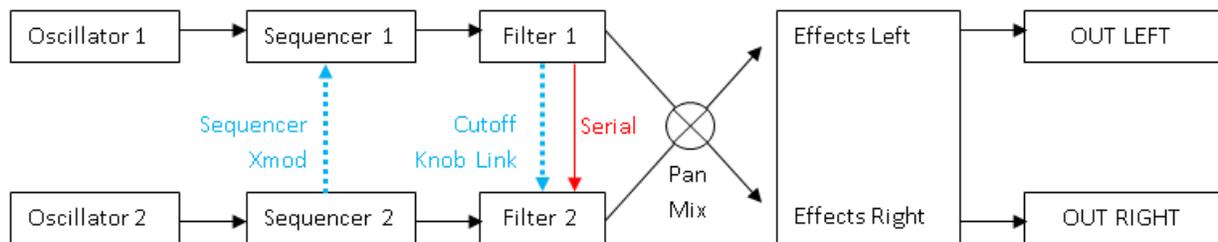
Sections

ON/OFF CONTROLS

Different sections of Gemini can turned on/off for maximum CPU efficiency. Do this by clicking on the section LED:

NEW: in Gemini VSTi 2.0, sections are turned off automatically when they do not produce any sound or have no effect.

OSCILLATOR SECTION

The main feature of the Oscillator section is its unique 14 Oscillator detuning algorithm. Detuning creates many 'copies' of the sound waveform at a slightly different pitch, ending up in a much fuller, fatter sound. It is comparable with a choir in which many voices of different pitches add up to form a' wall of sound'.

Spread: Modifies the way the detuning algorithm behaves. The more spread, the 'wider' the sound.

Detune: Controls the amount of detuning. The higher this knob is turned, the bigger the difference in pitch of the added sound waves, the fatter the sound.

Waveform [1]: Use this to select different wave forms. Saw will give you an aggressive screaming sound, while sine, tri and square give a more 'hollow' sound. Noise will give you white noise.

NEW: Gemini VSTi 2.0 has a wavetable with 125 waveforms: spectral, formant (vocal), noise and physical instruments. Increasing the sonic abilities significantly, varying from vocal Dubstep sounds to characteristic Oldschool, Rave and Hardcore sounds. See user tips!
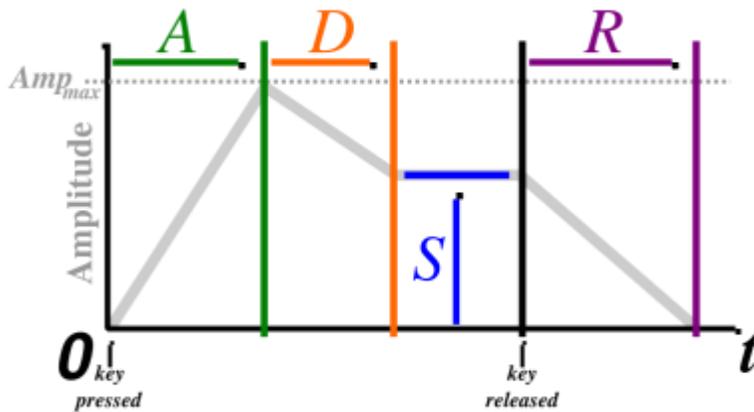**NEW** in Gemini VSTi 2.0: the ability to browse through the waveforms by right-clicking on the waveform display.

Octave [2]: Use this to set the base octave. +1 is one octave up. -1 is one down.

Note [3]: Use this to set the base note. 1 is one note up etc.

ADSR
These 4 knobs control the volume of the sound over time.

A – Attack: Controls how fast the volume of the sound rises after playing a note. When turned totally left, the sound start instantly. When turned right, the sound slowly starts to increase in volume.
D – Decay: Controls how fast the sound will 'die out' after the highest volume has been reached.
S – Sustain: Control the sound level that keeps playing after the sound had 'died out'
R – Release: Sets the time the sound keep playing after keyboard key has been released.

LFO
The LFO can be used to create from fast aggressive vibrating effects to slowly evolving effects for strings and pads. It changes the pitch of the sound following a certain waveform.

Waveform [4]: Select LFO waveform here.

Rate: Changes the speed of the LFO effect.

Effect: Changes the amount of LFO effect.

LFO Sync ON/OFF [5]: When enabled, the LFO synchronizes to the tempo in your host application.

LFO Sync Rate [6]: Choose here if the LFO wave will be cycled once every beat, twice per beat etc.

Portamento control:

This knob controls how different notes will 'slide' towards each other in pitch. Turn the knob to the right to get a slowly evolving pitch instead of clearly separated notes with their own pitch.
This control is in the OSC2 section, but applies to both oscillators. Note that polyphony will change to 1 note if the knob is turned open.

HANDS-ON TIPS:
- Noise waveform can be used to add an extra layer to a certain patch, resulting in an 'aura' of higher sound. This can be very useful the beef up pad and string sounds.
- Noise waveform is perfect for creating high-hat like percussion sounds. (Check preset: 'Techno Track')
- Sine and tri can sound a bit dull. Try adding a decent amount of resonance and drive in the filter section to turn it into aggressive but beautiful sound.
- By setting the note of one of the OSC sections to 5 or 7, nice 5th/7th chords can be created.
- Setting one of the OSC sections 1-2 octaves lower, can create a much more powerful sound.
- When you experience clicking sounds, it can help to set the attack and decay a little higher.
- Use long attack and release times for pads/strings.
- LFO Sync: use saw LFO waveform synched to the beat to create kick-like sounds. (Use sine with high resonance as oscillator.
- Select "voc…" waveform for both oscillators and experiment with detune, spread and drive to create Dubstep-like twisted vocals. Enable to sequencers with a lot of glide for instant Dubstep sequences.
- Select Instr3 waveform on both oscillators and experiment with detune, spread and octave to create an Alien sounding Piano sound.
- Select a simple dual saw init patch and set the spread and detune almost wide open. Browse through the spectral waveforms to create typical hardstyle/hardcore synths.

SEQUENCER SECTION

Gemini's sequencers can be programmed simply by clicking on the notes in the sequencer grid **[1].** Alternatively preprogrammed waveforms from **ROM** can be loaded **[2]**. Make sure that the sequencer has been enabled. (Click LED on)

Sync Rate [3]: Choose here if the sequence will be cycled once every beat, twice per beat etc.

Glide: This knob controls how different notes will 'slide' towards each other in pitch.

Sequencer XMOD:
Gemini's sequencers are very special because the can interact with each other using 2 algorithms. This can be used to create very dynamic and' living' sequences.

Add: Note values of sequencer 2 will be added to the note values of sequencer 1. Resulting sequence will be played in sequencer 1.

Multiply: Note values of sequencer 2 will be multiplied be note values in sequencer 1. Resulting sequence will be played in sequencer 1.

HANDS-ON TIPS
- Very nice melodies can be created when setting SEQ2 to a slow sync speed, playing a simple sequence with only a few long notes. After that, program a much faster sequence in SEQ1 and **add/multiply** using Xmod.
- The sequencers can also be used as a gate. To see how this works, load the ROM sequence "gate".

FILTER SECTION

Gemini sports 2 high quality analogue modeled filters. They can be used for each oscillator section separately to create true stereo effects (parallel mode) or they can be used in serial mode.

Filter Type [1]: Select different filter types here. The peaking filter can be used to give a nice high edge to a sound, while the low pass filter is perfect for creating nice deep, fat sounds. Band Pass only lets through a narrow frequency band of sound, while band reject does the opposite.

Cutoff: This controls the cutoff frequency of the filter. The lower it is set, de lower the sound frequency and the 'deeper' the sound.
NEW: filter cutoff in Gemini VSTi 2.0 is automatically modulated by midi key pressure. Increased key pressure will increase the cutoff frequency in a linear way. This results in much more dynamic, organic feel to Gemini.

Resonance: This control the amount of self-oscillation in the filter. In other words: the higher this is set, the more squelching / aggressive noise the filter will produce. Combine high resonance setting with low cutoff values to hear the effect. WARNING: always gradually increase the resonance to prevent damaging your ears.

Track: This knob determines how much the cutoff frequency is controlled by the played note. A high setting here makes high notes have a high cutoff frequency and low notes a low cutoff. This creates a much more dynamic sound.

Drive: This is the daddy. Turning this knob open (especially combined with high resonance and low cutoff) will 'destroy' any sound. This drive unit has been modeled based on the unit that was often used on the legendary TB-303 baseline synthesizer.

LFO[2]/ADSR[3]: The filter cutoff frequency can be modulated by the included LFO/ADSR. They function the same as the ones described in the oscillator section. A small difference is the included **'effect'** knob for the ADSR. This knob defines how much the filter is influenced by the ADSR.

Seq Retrig: By enabling this setting, the LFO will be retriggered when the there is a note value change in the sequencer.

Cutoff Link : This is a very convenient function. When enabled, the cutoff knob of filter 2 will follow the movement of the Cutoff knob of filter 1.

Serial mode:
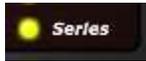
When this function is enabled, the filters will be routed in serial mode. This means the audio of both oscillator sections will first enter filter 1 and then go through filter 2. This gives many options to shape the sound. For example: filter 1 can be a peaking filter modulated by LFO and filter 2 can be a low pass filter modulated by ADSR. This would result is a very bright dynamic sound that ends up in a low fat bass.

Check the 'overview' chapter to see the associated audio routing.

HANDS-ON TIPS
- For total annihilation: set the filters in serial mode and crank up the drive and resonance of both filters!
- For ultimate annihilation in Gemini VSTi 2.0: open up the pre(amp) knob!

EFFECTS SECTION

Gemini has a high quality Stereo effects section containing sync delay and a smooth reverb.

DELAY
The flexible delay unit can be used to create anything from ping-pong reflection sounds to metallic effects.

Time: Defines the time of the echo reflections. Set to a high value for an effect like in a stadium and very low for metallic/bathroom-like acoustics.

Feedback: The more this knob is opened, the more delayed signal output is feed backed into the delay unit. In practice: the higher value, the more delay echo's you will hear.

Mix: Determines how much delay effect is added.

Sync [1] functions the same as the sync function described in the Oscillator – LFO section.

REVERB
The smooth reverb included in Gemini VSTi is perfect for creating acoustic effects. But be careful not to add too much reverb if it is not needed, as reverb can put the 'sound further' away in the mix.

Room: Determines the size of the acoustic space simulated by the reverb Set to a high value for an effect like in a stadium and very low for metallic/bathroom-like acoustics.

Damp: This knob controls the filtering of the reverb. When turned open, the high sounds of the rebred are filtered out. This can be useful to prevent a reverb for making the mix sound messy and unclear.

Width: Determines the stereo width of the reverb. Set higher for a wider effect.

Mix: Determines how much reverb effect is added to Gemini's output.

GLOBAL CONTROL SECTION

This section contains very important controls for the global sound, looks and presets of Gemini.

NEW PRESET MANAGER: Gemini VSTi 2.0 has a completely redesigned preset management system. Presets are now sorted by genre and type. Making it much easier to find and store your favorite presets.

Click on the preset name [1] to browse the preset folder list and load presets.
Cycle through the presets with , using the left/right cursor keys on your keyboard or even with midi program change.
Patches can be saved in Gemini's native format using the "**Save in**" or "**Save**" button. "**Recall**" button is for resetting the patch currently opened.

Note: factory presets are read only, so please use the "save in" button to save modified factory preset under another name and/or directory.

NEW Preset Generator: Gemini VSTi 2.0 has a very cool new feature, called the Preset Generator. This function uses a genetic algorithm to create new presets. These generated preset are a very good starting points for sound textures and effects.
Press the "**Generate**" button to hear the function in action and use "save in" to store the preset in the desired folder.

Advanced users only:
Click the "**Open dir**" button to open the folder with Gemini's preset structure.
Folders can manually be added to fit your own needs or you can make a backup copy of the presets.

Note: make sure at least one .txt preset file is inside the newly added folder, for Gemini to see it. After adding the folder click the "**Scan dir**" button to make Gemini see the changes. Alternatively restart Gemini.

OUTPUT CONTROLS

Pan Mix: Use this knob to mix the different oscillator sections in stereo space. In the neutral setting (12o clock) the oscillator banks will both be heard equally much on the left and the right channels.
Turning the knob completely closed or opened will result in the oscillator 1 coming from the left channel and oscillator 2 coming from the right channel and vice versa.
Note: when using the filters in serial mode, to effect of this knob is limited.

Mix: Mixes between the 2 oscillator sections. Turned to the left will only play OSC1 and vice versa.

NEW Pre: This little knob is a wolf in sheep's clothes. Turn it clockwise to *pre*-amplify the oscillators and send this high volume through the entire audio path of Gemini VSTi 2.0, causing unheard mayhem and certain destruction.

Master-V: Master Volume control.

STATUS AND CONTROL BAR

Beat Sync indicator: When Gemini is in perfect sync with your host software, this indicator will light.

NEW Limiter indicator: To prevent damage to your speakers/headphone by the new pre-amp and dual drive, Gemini VSTi 2.0 now has an intelligent beat synced limiter on board.
This limiter automatically kicks in when needed and shows this by blinking the Limiter LED.
Because the limiter is BMP synced, it can add an interesting pumping effect to Gemini's output.

Tip: To prevent the limiter from kicking in, reduce the Master Volume.

Panel button: Select different skins using this buttons. Note: after installing downloaded skins form the member section, restart Gemini to see them.

NEW Learn button: Opens the easy midi learn panel of Gemini.

Link hardware midi controller knobs with Gemini controls:

1. Click the learn button.
2. Position your mouse arrow above a control of Gemini without clicking.
3. Move a knob on your hardware controller and Gemini's control is linked instantly with this hardware knob.
4. Click "done" when ready to end the midi learn mode.

Un-Link hardware midi controller knobs with Gemini controls:

1. Click the learn button.
2. Click control of Gemini to un-link.
3. Click "done" when ready.

Advanced users only:
Click the "**Open dir**" button to open the folder with Gemini's configuration files.
The midi controller bindings are saved in the file called: ccbindings.ini.
You can make a backup copy of this file or save different versions for various controller hardware.

NEW Help button: Links to the Audioxygen support section: www.audioxygen.com/support
Here you can find the (Gemini) FAQ, Contact form and information about Audioxygen.

NEW Extra button: Links to the Audioxygen member section: www.audioygen.com/members
From there, bonus presets, extra skins and other goodies can be downloaded by registered customers.

Software License Agreement

This Software License Agreement ("Agreement") is made and is effective after purchase of Gemini VSTi 2.0 from Audioxygen ("Developer") by the customer ("Licensee").

Developer has developed and licensed to Licensee its software program marketed under the name Gemini VSTi 2.0 (the "Software").

Licensee desires to utilize a copy of the Software.

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7. Severability.
If any term of this Agreement is held by a court of competent jurisdiction to be invalid or

unenforceable, then this Agreement, including all of the remaining terms, will remain in full force and effect as if such invalid or unenforceable term had never been included.

8. Headings.
Headings used in this Agreement are provided for convenience only and shall not be used to construe meaning or intent.