

# ART PYRITE

## Atmospheric Synthesizer for Windows



This synthesizer has been developed to provide a wide variety of sounds for Atmospheres, Soundscapes, Pads, Textures, Ambient, Sound Effects & Rhythmic and Melodic Sequences at a rather CPU-friendly performance.

## **Basic features:**

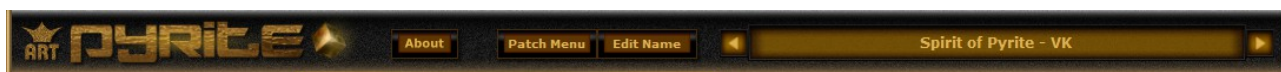
- Two analog-style oscillators featuring 22 waveforms.
- Two digital-PCM oscillators powered by 256 different waveforms in two internal source banks.
- Two filters - 24db Lowpass and 12db Low/Highpass selectable.
- Two amplitude ADSR-style envelope generators.
- Two filter ADSR-style envelope generators.
- One 16-step polyphonic sequencer with Random button of Volume level (BPM syncable or manually).
- Two LFO with three amounts routed to nine different destinations (BPM syncable or manually).
- One Sample & Hold with three amounts routed to nine different destinations (BPM syncable or manually).
- One vLFO for very low frequency modulations (BPM syncable or manually).
- One specially modulated droning chorus for the digital-PCM oscillators (9 modes).
- One synced Cross-Stereo-Delay with feedback modulated by vLFO, LFO1, S&H or manually.
- One Reverb unit.
- One Random button to randomize different sets of waveforms and most parameters.
- The possibility to load external SF2 files into digital-PCM oscillators.
- MIDI Learn/CC Edit for most control elements.
- Inbuilt MIDI CC/Value displays and Bank/Preset Manager.
- 12 voices polyphony.
- Low CPU usage.
- Straightforward and readable UI - all control elements are on a single screen. Suitable for monitors with higher resolutions.
- Three full preset banks sorted to sound categories:
  - 1) Atmosphere-Pad (the internal default bank)
  - 2) Atmosphere-Ambient-FX
  - 3) Atmosphere-Melody-RhythmEach sound category contains 127 presets & some additional presets by Daniel Kemp (dnekm).
- All presets with melodic and rhythmic sequences have the setting to synchronisation of host tempo. These were made at default tempo 120 BPM.
- The separated SF2 file for the possibility to use it also in another software applications with SF2 support.

## **Installation:**

Extract the folder ART-Pyrite from the archive into your VSTplugins directory and your VSTi-Host will have access to the VSTi. This program does not modify the registry.

Uninstall simply by deleting the folder ART-Pyrite.

## The features of the ART-Pyrite Synthesizer in detail:



The top panel includes the button **[About]** with info about plugin, the complex manager for loading and saving of sound banks & presets and editing of preset name.

## The sound-sources & Filters



Two analog-style oscillators (1 & 2) are featuring 22 waveforms.  
Two digital-PCM oscillators (3 & 4) are featuring 256 waveforms.

With the non syncable knob **[Pulse Rate]** you can set the rate of modulation, includes the shape wave Sine or Triangle of modulation for analog-style oscillators. Knobs **[Pulse Level]** determine the level of mixing modulation. These knobs are important mainly for all waves marked "Pulse" and "Noise". If these knobs are set to zero value, oscillators do not produce any sound. With knobs **[Harmonics]** you can add other harmonic frequencies from rich choruslike to metallic sounds.

**Note about waveform Noise:** The features Harmonics, Detune and Octave/Semi have not any influence to this special waveform.

There is a fine detuning **[Detune]** between oscillator 1 and 2 for a more vivid sound.

Each oscillator is tunable at different octave-settings and semitones **[Octave]** & **[Semi]**. Suitable mainly for complex chords and adjusting pitch for custom SF2 samples.  
The boxes **[Waveform]** allow the choosing from internal sound types. The small box **[Bank]** allows to select more of internal banks if loaded SF2 file includes more than 128 waveforms.  
**Two round buttons** on left side in display allow to load any external SF2 files (available only in full version).

Each oscillator also has its own MUTE button **[m]** for better control of individual sound. The position of this button (on-off) is saved into preset.

Two **[A][D][S][R]** amplitude envelope generators for shaping the overall signal with Attack, Decay, Sustain and Release.

The **[Mix / OSC 1&2]** knob serves to adjust the level between both oscillators while the **[Level]** knob determines the overall volume of both oscillators. Now the signal is routed to the 24db LowPass filter with adjustable Cutoff frequency **[Cut 1]** and Resonance **[Q 1]**.

**Please keep in mind the Q - resonance of this filter might sound a bit sharp when a lot modulation-amount is sent to it.**



The signal of digital oscillators is routed to a 12dB filter with High-Pass and Low-Pass characteristic. You can shift between the HP and LP mode by knob **[HP:LP]**. Cutoff frequency **[Cut 2]** and Resonance **[Q 2]** are adjustable.

The **[Mix / OSC 3&4]** knob serves to adjust the level between both oscillators, while the **[Level]** knob serves to set the overall volume and the **[By:Flt]** knob the signal to the filter or directly to the output-section.

With the Filter **[A][D][S][R]** envelope generator you can adjust the way the filter works on the incoming signal with Attack, Decay, Sustain and Release providing the shape on filtering. With the **[EnvAmt]** knob you can adjust the amount of this modulation on the filter.

**Please keep in mind that this envelope amount interacts with the other modulations routed to this filter. So if you notice there is hardly any modulation from other sources please check the setting of this [EnvAmt] knob.**

The signal of the digital-PCM oscillators can be enriched by a special DRONE-Chorus effect. Activate with **[Drone]** switch and there are 9 types (s1-s4 are very slow!) available by the **[Type]** box. Also adjustable are **[Depth]**, **[Delay]** and **[Feedback]**. High values of these settings produce an special drone effect.

## The 16-step polyphonic sequencer



The box **[OSC]** allows to choose between sound sources for sequencing. The knob **[Rate-Man]** is usable only if you choose non syncable rate. The box **[Sync]** allows to set the syncable rate of BPM synchronized to tempo of host application. Each step has the option to set the level of volume and to adjust the pitch at octave **[Oct]** and semitone **[Semi]** boxes. The button **[R]** allows to random setting of volume levels.

### Rates of sequencer at BPM tempo - synced to host tempo:

- 1/4 = all 16 steps play the rate of 1/4 beat (very speedy)
- 1/2 = all 16 steps play the rate of 1/2 beat
- 1b = all 16 steps play the rate of 1 beat
- 2b = all 16 steps play the rate of 2 beats
- 4b = all 16 steps play the rate of 4 beats
- 8b = all 16 steps play the rate of 8 beats (very slow)

**Note:** this special sequencer does not play the sound at start of sample always at each step but continues at whole length of sample. Very useful if you use any variable samples or loops without long gaps.

## The modulation sources

### LFO 1 & LFO 2 modulation



LFO 1 and LFO 2 are basically the same with only slight differences.

The LFO Rate can be adjusted manually (Man) with the knob **[Rate-Man]** or synced to host-clock at different division settings in the box **[Sync]**. Each LFO provides selectable waveforms in the **[Wave]** box.

There are three knobs **[Amt1]**, **[Amt2]**, **[Amt3]** available to set an amount of modulation to go to three destinations at the same time each. All the knobs in section of modulation work in positive and negative direction, eg. from -10 to +10.

LFO1 can be adjusted a bit slower than LFO2. The modulation destinations differ in way to have the best possible combinations. So there was no need to build a more complex modmatrix consuming more CPU-resources. Instead of the switch-buttons there could have been amount knobs to each destination, but with an adjustable knob you could never be really sure to switch off a mod completely. So this was ensured by using switches.

### Sample & Hold modulation



The Sample & Hold generator is quite similar to an LFO. The main distinction is that it provides a random modulation signal like pulses at varying levels instead of a continuous / foreseeable mod from an LFO. With the **[Seed-Src]** button you can change the characteristics of the sampled pulses: Less (peaks), More (peaks) and Up & Dn types for ascending or descending motion preferably at lower rates.

All **LEDs** show the rate of modulation.

**Remark:** the modulation to Mix3:4 modulates the level Mix between the two digital oscillators, while Byp:Fit shifts the amount of level between filtered and unfiltered signal of the digital oscillators - very useful for interesting textures and atmos. Also the Rate can be set to be synced to the LFO.

## vLFO modulation



The vLFO is there for very low frequency modulation and it controls the amount of the modulation of the destinations unless Pan, Mix3:4 or HP:LP is selected. Sent to LFO or S&H will lead to have an continuous increasing and decreasing amount of modulation at the target. So for example an LFO1-modulation will fade in and fade out continually. With subtle settings your sound will be vivid as never before.

## The Effect unit and Main output section



The red buttons turn the effect to ON. The Reverb is an classical effect stereo unit. The knob **[Level]** mixes the incoming signal with wet effect.

The **[Pan]** knob in Main section serves to place the signal in stereo-panorama in a very special way as it will send the signal of the analog-style and digital-PCM oscillators into opposite direction automatically. So to say it spreads the signal: the more you have the analog-style oscillators on the left the more the digital-PCM oscillators are on the right and vice versa. As panorama can be modulated by vLFO, S&H or LFO1 this provides motion to the stereo-position.

In addition to this the cross stereo delay puts the corresponding delay-signal to the opposite side. This delay is synced to host clock with five selectable division-settings. Use the **[Mix-Vol]** knob to adjust the amount of delayed signal to the normal signal.

The feedback amount can be set manually with setting for synchronisation to host tempo in the box

**[Sync]** or be modulated dynamically by the vLFO, S&H or LFO1 in the box **[Mode]**. This is a quite unique feature which serves to provide a subtle motion to the delayed signal how many times the incoming signal is repeated so it is varying from quite long to rather short repetitions depending on the amount of the modulations source's current value.

With the volume **[Vol]** knob you can adjust the overall output of the ART-Pyrite synthesizer.

The yellow button **[R]** allows to create random presets (available only in full version).

The box **[PB-Range]** allows to set the Pitchbend range of pitch in semitones up and down.

Two boxes **[Midi CC]** and **[Value]** show all assigned Midi controllers and adjustable values at all knobs and sliders.

**By clicking of the right button on mouse at control you can choose the option for live automation with your external Midi controller. The window Edit offers all numbers of standard Midi controllers.**

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### **Info about sound source for PCM oscillators:**

The full version contains the separate SF2 file which you can use also in other application with support of SF2 format.

The separate SF2 file is included in the subfolder ART Pyrite. Do not remove this SF2 file otherwise you will not be able to run the plugin with all sound sources.

If you will want to use also another SF2 files for internal digital PCM oscillators, just copy your SF2 file into this same folder.

The original included SF2 file contains waveforms in 16-bit mono format and their length is around 8-10 seconds.

Each waveform is looped and assigned to pitch C on root key 60.

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### **Compatibility of presets made with the free version:**

All presets made with free version are not compatible with the full version.

Both VSTi plugins (free and full version) have the different ID.

If you created any own presets with the free version and you will need to use them still in your music creations, just keep the free version in your vst folder.



## **Credits and further info**

ART-Pyrite synthesizer has been created by **Vera Kinter** aka **Artvera** (<http://www.artvera-music.com>) with SynthEdit by **Jeff McClintock**.

This VSTi uses further modules by **David Haupt**, **Chris Kerry** and **Kelly D. Lynch**.

The core of synthesizer was made by **H.G. Fortune**.

Polyphonic step sequencer was made by **Fretted Synth Audio**.

Expert adviser and testing - **Max Brezhestovski**.

Additional presets and testing - **Daniel Kemp** (dnekm).

SaviHost - **Hermann Seib**.

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