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SUONOPURO BAWU-BAWU



# Free reed ethnic instrument

for electronic wind instruments, keyboards and MIDI

Created by *Gino Chimenti*

# Manual

Virtual Instrument for  **KONTAKT**

# INTRODUCTION

The **Bawu-Bawu by Suonopuro** is a very **expressive** and **realistic** virtual instrument emulating a **traditional Chinese wind instrument** called Bawu. It has a **clarinet-like timbre** and its playing technique incorporates the use of much ornamentation. Its sound is emitted thanks to a **single free reed of bronze or copper**.

The bawu likely originated in the Yunnan province of southwest **China**, it has become a standard instrument throughout China, used in modern Chinese compositions for traditional instrument ensembles. It is typically used as a **solo instrument**, and is **often featured in film scores**.

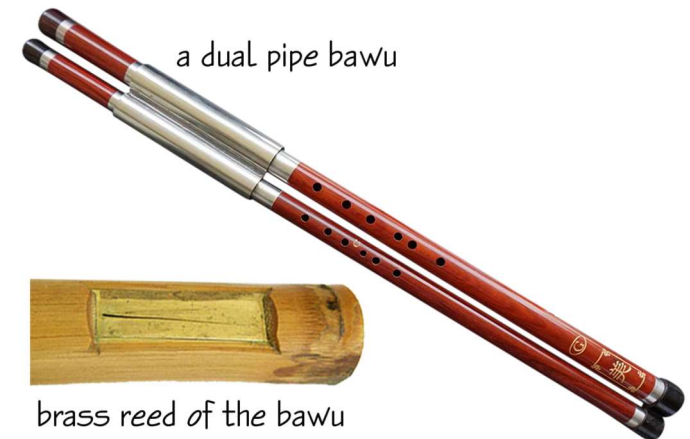
The **Bawu-Bawu** by Suonopuro, using the most **advanced technological solutions**, allows **emulating the sounds of this kind of instruments**, even in **legato, staccato** and in the **tonal variations** that are obtained at different dynamic.

The **Bawu-Bawu** also has a **wide range of effects**, which transform its sound: **distortion, chorus, wha-wha**, etc. Moreover, its **numerous functions** make it very **versatile** and **playable live**. It can be used both in **monophonic mode**, for greater realism, and in **polyphonic mode**. It can also perform up to **two parallel secondary voices** simultaneously, in the style of the great EWI player Michael Brecker.

It does not require complicated settings or intricate ways of playing: **just play normally on your MIDI instrument** to get legato and staccato, crescendo and diminuendo, piano and forte, vibrato, glissando, etc.

The Bawu-Bawu is **designed to get the best**, in terms of expression and control, from **any kind of MIDI instrument**:

- **Electronic Wind Instruments** (Akai EWI, Yamaha WX5, Casio Zanzithophone, Roland Ae10g, Morrison Digital Trumpet, etc.);
- **MIDI strings** (Cantini MIDI violin, Zeta MIDI violin, etc.);
- **MIDI converters**, like the Sonuus i2M;
- **MIDI keyboards** (NI Komplete control, M-Audio Oxygen, etc.);
- **MIDI controllers** (TEC breath controller, MIDI expression pedal, Yamaha BC3, etc.).



# FEATURES

- **Perfect Crossfade:** transition from piano to forte and vice versa on **2 levels** without hear overlapping notes.
- **Editable Dynamic Controller and Range.**
- **Two monophonic modes with real time automatic recognizing of legato and staccato:** by dynamic controller and by keys.
- **Play on release mode:** when you release a note, the software plays the previous note still pressed.
- **Configurable legato time and start, also automatic, and real time controlled portamento.**
- **Four round robin staccato attacks** with multiple and gradual gradients from soft to marcato.
- **Two parallel voices** at configurable intervals.
- **Polyphonic mode** for polyphonic instruments and **sustain or hold 1<sup>st</sup> note** modes for monophonic instruments.
- **Bending** technique.
- **Musette** fx, an additional level of samples, slightly out of tune, that changes the bawu timbre.
- Simulation of the internal **resonance of the Bawu tube.**
- **Automatic vibrato** and **flutter-tonguing** both configurable and controllable live.
- **Chorus, Stereo, Compressor, Three-band equalizer, Convolution reverb,** easy to use **Distortion** and **Delay** effects.
- **Keyswitches** that can be disabled; **live options activator.**
- **4 octaves of range** obtained **by sampling 3 different bawus** tuned to 3 different keys.
- **Splitter by Suonopuro,** to split and layer many sounds across your keyboard or your MIDI instrument.

# SYSTEM REQUIREMENTS

**NI Kontakt 5.8.1 or higher FULL retail version. It is NOT compatible with Kontakt Player.** You can open and run any patch of Bawu-Bawu in Kontakt player just for 15 minutes. After that, the demo period of the player times out and you have to re-start and reload the library.

**PC:** Windows 7 or higher, Intel i3 or AMD Ryzen 3, 4 GB RAM, **low latency audio driver.**

**Mac:** OS X 10.7 or 10.8 or higher, Intel Core i3, 4 GB RAM.

Any kind of **MIDI controller.**

# LICENSE AGREEMENT

Thank you for purchasing the Bawu-Bawu by Suonopuro. By using this product, **you must accept this license agreement:**

1. Suonopuro Bawu-Bawu is copyright ©2021 Gioacchino Chimenti, via Don Mazzolari, 1 Partinico (PA) Italy.

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# INSTALLATION

- **Download and unzip** (unrar) the S\_Bawu-Bawu.rar file into a folder of your hard-drive, using the password that was notified.
- **Keep all data within said folder.** Do not move the audio files to another folder, otherwise Kontakt will search for files.
- **Launch Kontakt 5.8.1 or a higher version.**
- From the files tab of the Kontakt browser, find the folder where you unzipped the collection and **double click on the file you want to load.**
- **Select the desired channel and options, and play.**
- If you are experiencing latency issues or unexpected glitches, please adjust the buffer size from the driver configuration menu of your sound card.

## The Bawu-Bawu folder contains:

- A preconfigured file (.nki) for **Electronic Wind Instruments** that work with the MIDI-CC2 (whose name starts with **WIND**);
- 2 preconfigured files for keyboard or other MIDI instruments: the first, whose name starts with **KEY**, whose dynamics are controlled by the force with which the keys are pressed, and the second, named **KEY+WHEEL**, whose dynamics are controlled by the modulation wheel;
- A copy of the instrument recorded with a **close-up microphone**.
- An empty multi file (.nkm) containing the **Suonopuro Splitter**, to split and layer many sounds across your MIDI instrument.

All files are the same, share the same code and can be adapted to work with any MIDI instrument.





The **Dynamic Range Slider** defines the difference between pp and ff, from 0 = very compressed to 24 = very wide.

The **Dynamic Controller Menu** allows you to select how to control the dynamic, from pp to ff. You can choose any kind of MIDI controller, like the Breath Controller CC2, the Expression Pedal CC11, the Velocity (the speed of the key-press) or a fixed value.

**Att=Vel** button allows you to control the attack of the notes, from soft to marcato, by the speed of the key-press regardless of the dynamics controller.

The **Vibrato Button** puts on a pitch and volume modulation controlled via the sensor selected in the **Modulation Controller Menu**.

The **Flutter Button** enables a flutter-tonguing style mode, also regulated via the sensor selected in the **Modulation Controller Menu**.

The **Vibrato Frequency Knob** adjusts the base frequency of the modulation.

The **Chorus Button** generates a detuned and modulated copy of the audio signal.

The **Chorus Depth Knob** adjusts the range of modulated detuning.

The **Pitch Bend Knob** sets the pitch wheel range, from 0 to  $\pm 24$  semitones.

This button activates a **Low Pass Filter (wha wha)**. It attenuates signals with frequencies higher than the selected **Cutoff Frequency** adjustable with its **knob**. It can be modulated with the **Controller** selected in the **Menu** below.

The **Musette Button** activates a level of samples slightly out of tune that changes the timbre.

The **Stereo Button** activates a stereophonic effect. It can also be activated playing the note A in the octave 0, if the Keyswitches function is on.

Each of these two buttons activates the **Monophonic Mode**, which allows you to play in a more expressive way.

You can choose between **two ways to control the Legato/Staccato**:

**1) by dynamic controller**: if the selected dynamic controller sends a value greater than 0 then you will play legato, otherwise the sound stops and the next note will be detached. This mode is most suitable for wind or string MIDI instruments.

**2) by keys**: to play legato you must press the key of the next note in the sequence before the key of the previous note is released. This mode is the most suitable for keyboard instruments. If you release a note, the software will play the previous note that you are still pressing (**Play on release**).

The **Legato Time** defines the glide time between 2 legato notes. A value greater than 30 generates a true portamento that makes the sound similar to a synthesizer.

The **a.l.t. Knob** activates an automatic legato time.

With the **Glide Controller Menu** you can choose how to activate and control the portamento, a pitch sliding from one note to another.

The **Glide Time knob** sets the portamento time.

**2nd V. and 3rd V. Buttons** activate, respectively, the second and the third parallel voice.

The **Interval Sliders** indicate, respectively, the intervals in semitones between the note you are playing and the notes of the second and the third voices. You can set them from -24 (2 octaves lower) to 24 (2 octaves upper).

The **Distortion Button** causes distortion by clipping high sample values.

**Tone Knob** controls the brightness of the dist. sound. **Drive Knob** adjusts the amount of distortion.

The **Delay Button** enables the delay effect with 3 adjustable parameters:

**Level** (in dB), **Time** (in ms) and **Feedback** (in %).

With the **Reverb Button** you can activate and select a convolution reverb between **short**, **medium** or **long**. The **Reverb Knob** adjusts the reverb level.

The **Resonance button** simulates the internal resonance of the Shawm tube. The **knob** below regulates its intensity.



**Hold 1st Note** sustains the first note you play with a single breath.

The **Sustain Button** "sustains" all the notes you play with a single breath.

Warning: these two functions work only in Legato by dyn. c. mode with any controller other than the velocity.

The **Bending Button** enables an effect that starts the notes with a light initial glissando. This effect is activated via the controller selected in the **Bending Controller Menu** below.

This button enables a **three-band Equalizer system**, which divides the frequency bands into **L** (low range), **M** (middle range), and **H** (high range).

The **Activator Controller Menu** allows you to select which controller to use to activate the functions marked with . When the controller sends a value of 0, the marked functions are activated or deactivated. In this example, double clicking on the EWI HOLD button you will activate the Musette and the Stereo FX will be disabled.

This button activates the **compressor** and the knob adjusts the **compression ratio**.

Keyswitches activator

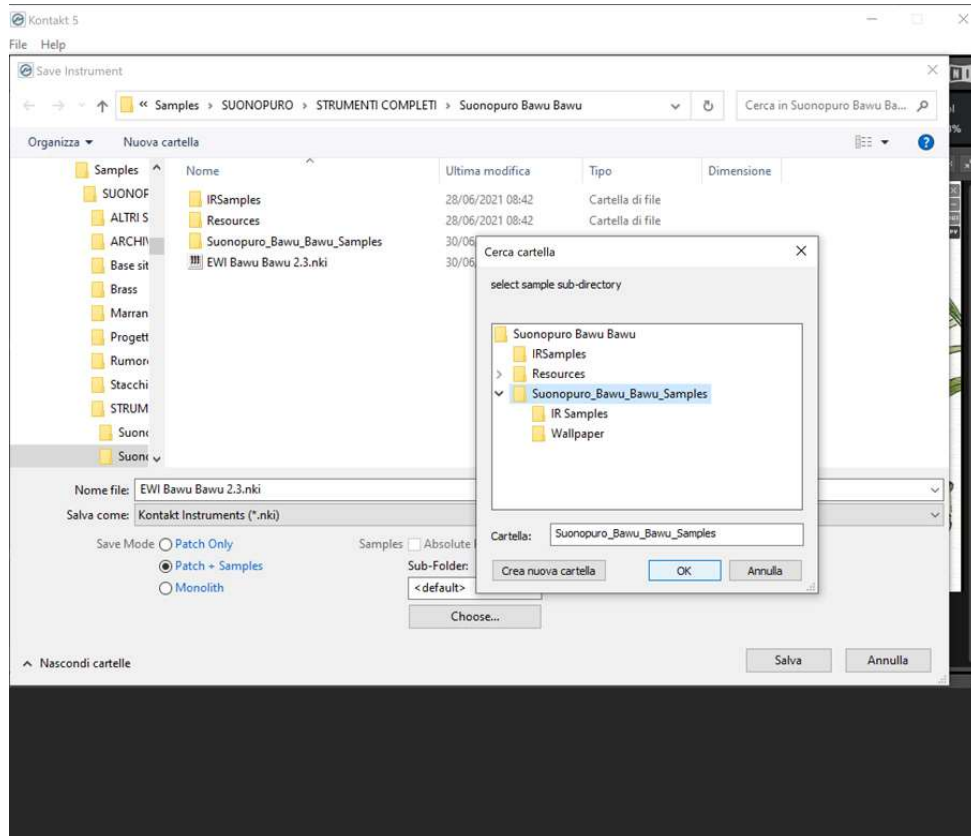
Octave 0	Hold 1st n.#	Stereo A
	Sustain G#	Glide G
	Bending F#	3rd voice E
	Distortion D#	2nd voice E
	Musette C#	Flutter D
	Vibrato C	



# HOW TO SAVE A CONFIGURATION

To save a customized file, please follow the instructions below:

1. Open the "Files" menu;
2. From "Save as..." select the file you want to save;
3. From the "Save in:" menu, select the "Suonopuro Bawu-Bawu" folder. Do not change this folder, to avoid problems with convolution reverb files;
4. In the "Save Mode" box, select "patch + samples";
5. Select the "sample sub directory" by clicking the button "... " and selecting the folder "Suonopuro\_ Bawu\_Bawu \_Samples", then click OK.
6. In "File Name", insert a name of your liking and save.



# HOW TO SETTING-UP ADDITIONAL CONTROLLERS

To assign any of Suonopuro Bawu-Bawu's sliders or knobs to a certain MIDI controller:

1. Click the knob or slider you want to assign a MIDI controller to.
2. Select **Learn MIDI CC# Automation**.
3. Turn the knob or move the slider on your **MIDI hardware controller**. The control should pick up the movement instantly.

You can add additional MIDI controllers (CC#s) to the same KONTAKT knob. You can also assign multiple knobs or sliders to the same MIDI controller.





# SUONOPURO SPLITTER

The Splitter by Suonopuro is a **multiscript** for Kontakt that allows you to **split and layer many sounds** across your keyboard or your MIDI instrument.

For instance, you could put a Bawu-Bawu in the bottom half of the keyboard, and a Super Duduk in the right.



Instruction:

1. Load the first sound you want to use, and set it to channel 1;
2. Now choose the lowest and the highest notes of the range you want to use to play the instruments assigned to channel 1. You can do this in 2 ways:
  - a. By typing the lower and the upper note (from C-2 to G8) in the "CH1 Low:" and "CH1 Up:" text fields.
  - b. By clicking on the "Learn CH1 range" button and playing on your instrument first the lowest note and then the highest one of the desired range.
3. Transpose the instruments assigned to channel 1 with the appropriate knobs:
  - a. CH1 OCT changes the octaves, from -4 to +4
  - b. CH1 ST transposes by semitones, from -12 to +12
4. Do the same with the other sounds, up to channel 6; (leave or set your keyboard, or the MIDI instrument you use, to MIDI channel 1).