SuonopuЯo FlügelHoЯn

Virtual Flugelhorn

for electronic wind instruments, keyboards and MIDI

Created by **Gino Chimenti**

Manual

Virtual Instrument for **KONTAKT**

Introduction

The **flugelhorn** is a **brass instrument** that resembles the trumpet but with a more **mellow and dark tone,** due to its more conical bore. It is a type of valved bugle, developed in Germany in the early 19th century from a traditional English valveless bugle. The valved bugle provided **Adolphe Sax** (creator of the saxophone) with the inspiration for his B♭ soprano saxhorns, on which the modern-day flugelhorn is modeled.

Some modern flugelhorns feature **a fourth valve** that lowers the pitch a perfect fourth. This adds a useful low range that, coupled with the flugelhorn's dark sound, **extends the instrument's abilities**, allowing you to play pieces written for other instruments, such as the horn or cello. The flugelhorn is a standard member of the British-style **brass band,** and it is also used frequently in **jazz**. It also appears occasionally in **orchestral** and **concert band** music.

The **Suonopuro FlügelHorn** is a **highly innovative virtual instrument**. It combines the **realism** of instruments entirely based on **sampled sounds,** with the **versatility** and **playability** of virtual instruments based mainly on **algorithms**.

In Suonopuro FlügelHorn everything starts from **a myriad of sampled materials,** which make its timbre highly convincing, but managed through **complex algorithms**, which allow you to play in a fluid, expressive and intuitive way. It allows you to start a note with a wide range of nuances, **from portato to accented,** or with different types of **bending,** also controlling its duration. You can perform both **legato** phrases and **glissato** passages, up to twelfth intervals (19 semitones of distance), with great realism. It also has **a wide dynamic and tonal range,** adjustable and controllable in many ways, and **an incredible five and a half octave range**. The **crescendo** and **diminuendo** are very natural, without earing overlapping notes.

The Suonopuro FlügelHorn also has a **wide range of effects,** which transform the flugelhorn sound into something more modern: **wha-wha filter,** **chorus, distortion,** adjustable **breath noise,** automatic **vibrato, flutter,** stereophonic effect, **5 fantastic mute effects** and much more.

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

- **Electronic Wind Instruments** (Akai EWI, Roland Aerophone, Yamaha YDS, Berglund NuEVI, 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.).

a flugelhorn with a modern design

Features

- **5** fantastic **mute effects: Cup, Harmon, Wha-Wha, Bucket** and **Straight.**
- **Perfect Crossfade:** transition from piano to forte and vice versa on **four 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 mode** and **real time controlled glissando**.
- Playing **staccato, each new note is slightly different** from the previous one, with multiple and gradual gradients from soft to marcato.
- **Two parallel voices** at configurable intervals, **as used by Michael Brecker.**
- **Polyphonic mode** for polyphonic instruments and **sustain** or **hold 1st note** modes for monophonic instruments.
- **Bending technique,** which consists in starting a note with an ascending glissando, based on 4 levels and live controllable in duration.
- Release of notes with a descending (**Fall**) or ascending (**Squeeze**) glissando that can be controlled in duration.
- **Automatic vibrato** and **flutter-tonguing** both configurable and controllable live.
- Easy to use **Chorus, Stereo, Compressor, Three-band equalizer, Convolution reverb, Distortion** and **Delay** effects.
- Adjustable and live controllable **breath noise** for a "fluffy" sound.
- **Low Pass Filter** for **wha-wha** effect, with adjustable **resonance.**
- **Keyswitches** that can be also disabled and a **live options activator** to instantly switch from one configuration to another.
- **5 and a half octaves of range**.
- **Splitter by Suonopuro,** to split and layer many sounds across your keyboard or your MIDI instrument.

System requirements

- **A COMPUTER**: Windows or Mac or Maschine+ by Native Instruments.
- **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 Suonopuro FlügelHorn 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.
- **A MIDI CONTROLLER**: an Electronic Wind Instrument or a Keyboard or any kind of MIDI instrument.

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Installation

- **Download and unzip** (unrar) the S_FlugelHorn.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 Suonopuro FlugelHorn and **double click on the file you want to load**.
- **Select the desired channel and options, and play**.
- You can also install it from the **Libraries** Menu, with standard procedure.
- If you are experiencing latency issues or unexpected glitches, please adjust the buffer size from the driver configuration menu of your sound card.

The Suonopuro FlügelHorn folder contains:

- **2 preconfigured files** (.nki) **for Electronic Wind Instruments** that work with the MIDI-CC2 whose name starts with **EWI** or **EVI** (Electronic Valve Instrument);
- **A preconfigured file for the Yamaha Digital Sax** (**YDS**) or other instruments that work with the MIDI-CC11.
- **2 preconfigured files for keyboard:** 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;
- **An empty multi file** (.nkm) containing the **Suonopuro Splitter,** to split and layer many sounds across your MIDI instrument.

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

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The **Dynamic Range Slider** defines the difference in volume between pp and ff, from 0 = minimal, 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. It also controls the legato / staccato in "by dyn c." mode.

The **Shine button** activates dynamic control of the flugelhorn's high-mid frequencies. The louder you play, the brighter the sound. The **Shine knob** adjusts the mid gain on the high frequencies. Higher values make the sound clearer.

Attack=Velocity button allows you to control how to start a note, from soft to marcato: or totally by the speed of the key-press (velocity) or partially by the MIDIcc selected in the dynamics controller menu.

The **Vibrato Button** puts on a pitch and volume modulation controlled via the sensor selected on the **Modulation Controller Menu** below.
The **Flutter Button** enables a flutter-tonguing style mode, also regulated via the sensor selected on the **Modulation Controller Menu** above.
The **Vibrato Frequency Knob** on the right, adjusts the base frequency of the modulation.

The **Chorus Button** generates a detuned and modulated copy of the audio signal.
The **Chorus Depth Knob**, to the right of the button, adjusts the range of modulated detuning.

The **Stereo Button** activates a stereophonic effect. The **Knob** changes the **Stereo Spread**.

This button activates a **Low Pass Filter (wha wha)**. It attenuates signals with frequencies higher than the cutoff frequency modulated via a **Controller** selected on the **Menu** below.
The knob next to LFP adjusts its **Resonance** percentage.

The **BNoise knob** adjusts the average volume of the breath noise, which is activated by the **BNoise Button** and controlled by the sensor selected in the **BNoise menu** below.

The **Fall Button** allows you to release a note with a glissando, by playing a note out of the Flugelhorn range. On the EWI just detach your left thumb from the octave rollers, continuing to blow. The velocity determines the type of glissando: p = down a little, f = very down and ff = up. The r button moves the yellow notes from low to high register, for EVI (Valve Instr.) or for the EWI Er fingering (EVI reverse). The Fall function reduces the range but it can be replaced by the note A0 when Keyswitches are on.

Each of these two buttons activates a **Monophonic Mode**, which allows you to play in a more expressive way.
Turn off both buttons to enter **Polyphonic Mode**.
The monophonic modes differ in the way of **controlling the legato and the staccato**:
1) by dynamic controller: while the selected dynamic controller sends values greater than 0, then notes will be legato, otherwise the note will break off and the next one will be staccato. 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 before releasing the key of the previous note. This mode is typical of keyboard instruments but also works with an EWI. When you release the key of the last note played, if there are other keys pressed, the software will play the penultimate note among those whose key is still pressed (**Play on release mode**).

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 an initial glissando. It is activated via the controller selected in the **Menu** below. Playing p, the bending is 2 semitones; on mf it is 3; on f is 5 and on ff it is 12.

Legato XFade Time (XF) is the duration in ms of the crossfade between a note and a legato sample. Higher values result in a smoother transition.
Sample Start (SS) determines the playback position of a legato sample. Higher values make the legato faster but less realistic. The **a Button** randomly changes this value, making the legato more varied.
Legato Tolerance (LT) is the time in ms within which the system still considers two consecutive notes as legato. After recording a MIDI track, it may be necessary to increase this value for proper playback.

With the **Glide Controller Menu** you can choose how to activate a glissando effect (a pitch sliding from a note to the next) and control its duration.

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).

Distortion Button causes a 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 a delay effect with 3 adjustable parameters:
Level (in dB), **Time** (in ms) and **Feedback** (in %).

The **mute button** activates one of the 5 mutes that can be selected via the adjacent menu or via MIDIcc: cc21>0 → Cup; cc22>0 → Harmon; cc23>0 → WhaWha; cc24=0 → Bucket; cc25=0 → Straight.

With the **Reverb Button** you can activate a convolution reverb choosing beetwen **short**, **dark**, **medium** or **long**. The **Reverb Knob** adjusts the reverb level.

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 a controller to activate each function marked with this yellow led: When this 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 Mute and the Shine FX will be disabled.
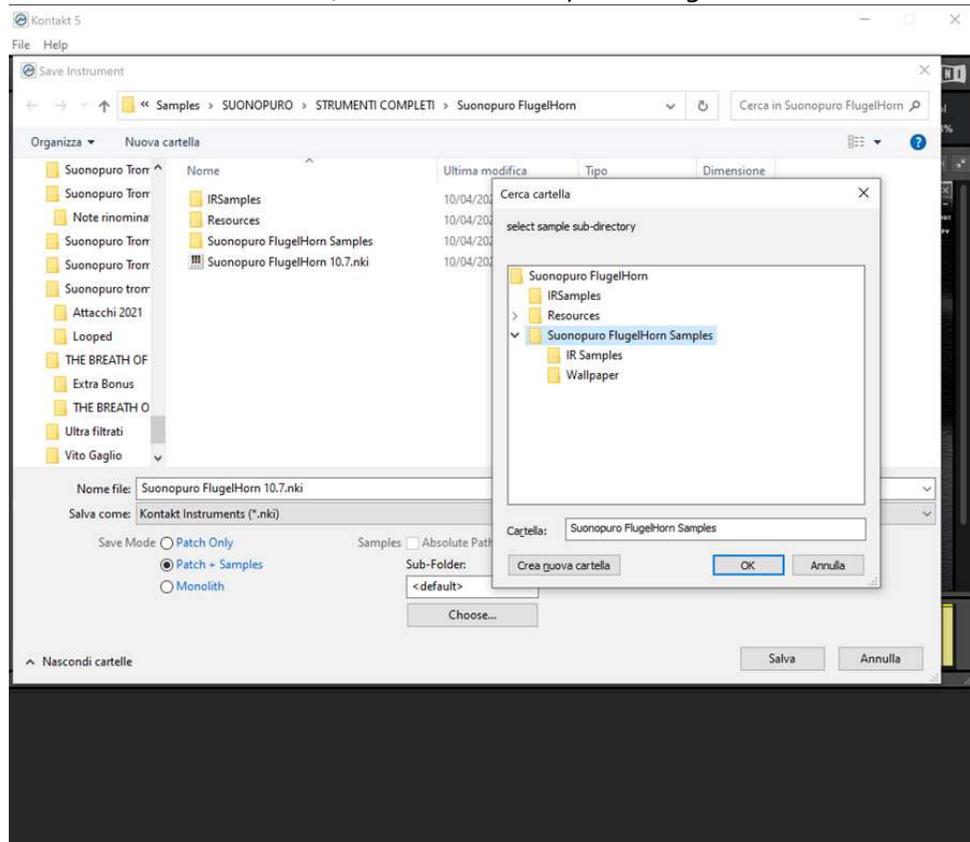
This **button** activates a **compressor** efx and the **knob** to its right adjusts the **compression ratio**.

Keyswitches activator

Fall A
Glissando G#
Bending G
H. Mute F#
3rd voice F
2nd voice E
Distortion D#
Chorus D
Flutter C#
Vibrato C
Breath Noise B
LP Filter A#
Equalizer A
Sustain G#
Hold 1st note G

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 FlugelHorn**" folder. <u>Do not change this folder, to avoid problems with convolution reverb files</u>;
4. In the "**Save Mode**" box, select "patch + samples;
5. Select the "**sample sub directory**" by clicking the button "**…**" and selecting the folder "**Suonopuro FlugelHorn 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 FlügelHorn'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.

Alternatively:

1. In Kontakt's left **browser**, select "**Automation**" and then "**MIDI Automation**".

2. **Select a source** from the list **and drag it onto a knob** whose parameter you want to automate.

3. With "**From %**" and "**To %**", at the bottom of the pane, you can alter the scaling of the assignment so that the automation values are mapped to a limited range of the assigned parameter. For reverse operation, enter a value greater than To% on From%.
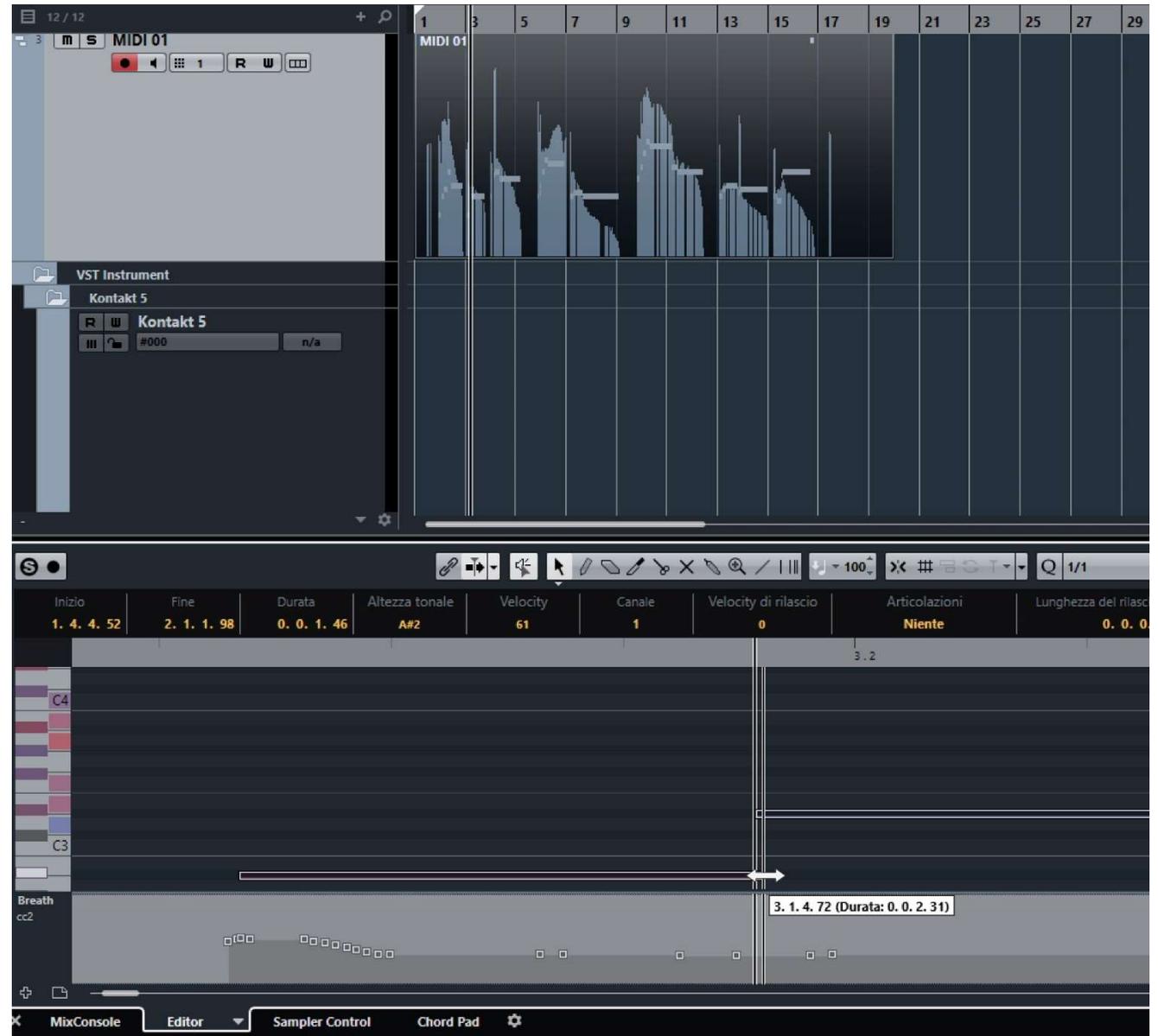
You can add additional MIDI controllers (CC#s) to the same KONTAKT knob. You can also assign multiple knobs or sliders to the same MIDI controller.

How to play a MIDI track correctly

If, after recording a part in MIDI, the ties are not reproduced correctly, proceed as follows:

1. Select the part and open it in the MIDI editor.

2. Select all (Ctrl A) and zoom in on the point where two tied notes meet.

3. Extend all the notes by dragging the end of the first tied note so that it slightly overlaps the second tied note.

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 Super Duduk in the bottom half of the keyboard, and a Suonopuro FlügelHorn 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).