B67 ZEN EditorLib Manual

Editor and librarian for Roland Fantom 6-7-8, Fantom 06-07-08, Ax-Edge, Jupiter-X and Jupiter-XM

(updated versions of the manual, videos, sound banks and user guides are available at the following Link)

Operating requirements

- Install the latest available firmware on the synth
- Install the MIDI USB drivers for the Computer-Synth dialog
- Turn on and connect the synth to the computer via USB before starting the software (connection via the MIDI Din 5 pin connectors is not fast enough for using the editor)

Fantom 6   https://www.roland.com/global/support/by_product/fantom_6/updates_drivers/
Fantom 7   https://www.roland.com/global/support/by_product/fantom_7/updates_drivers/
Fantom 8   https://www.roland.com/global/support/by_product/fantom_8/updates_drivers/
Fantom-06   https://www.roland.com/global/support/by_product/fantom-06/updates_drivers/
Fantom-07   https://www.roland.com/global/support/by_product/fantom-07/updates_drivers/
Fantom-08   https://www.roland.com/global/support/by_product/fantom-08/updates_drivers/
AX-Edge   https://www.roland.com/global/support/by_product/ax-edge/updates_drivers/
Jupiter-X   https://www.roland.com/global/support/by_product/jupiter-x/updates_drivers/
Jupiter-Xm   https://www.roland.com/global/support/by_product/jupiter-xm/updates_drivers/

Installation

PC Version

The software is portable: therefore, just copy the **ZENCore_Editor_XX.exe** file (ZENCore_Editor_FA - ZENCore_Editor_AX or ZENCore_Editor_JX depending on the version you have) in a folder of your choice and execute it by double clicking. **The software opens after 10-20 seconds depending on the speed of your PC**

PC version: on the first run, and every time you change the USB port where the synth is connected, you must select the connections between the computer and the synth using the **MIDI menu**: the devices must be activated in **Controller** ed **Output** as indicated in the image. The software remembers the last configuration used.
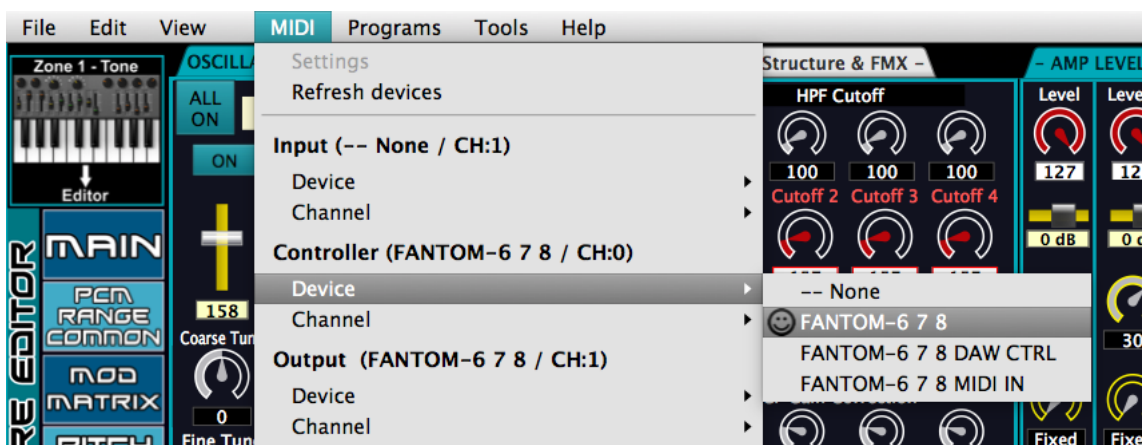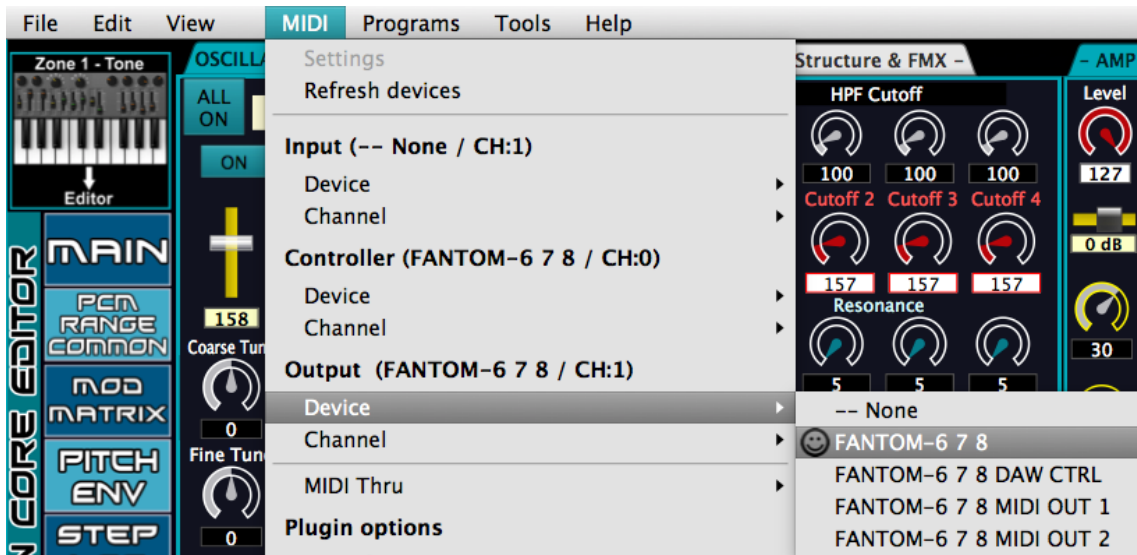
- If in various sessions of using the program the synth is connected to different USB ports, it is important to verify that the name of the driver is the correct one. Depending on the USB port to which the synth is connected, a progressive number may appear in front of the name (1- FANTOM - 6 7 8 , 2- FANTOM - 6 7 8 , 3- FANTOM - 6 7 8 , etc).
- The MIDI channel setting (Channel: CH:0, CH:1, etc) is irrelevant as synth and software communicate via MIDI Sysex messages

- If the synth is not connected or the wrong devices are set, the icon appears ☹ : in this case it is necessary to exit the software, restore the USB connection between the computer and the Synth, and re-run the software correctly selecting the active device.

IMPORTANT:
DO NOT Select any synth in Device-Input (you must leave the checkmark on - - None) to avoid double MIDI messages which would make the software unusable
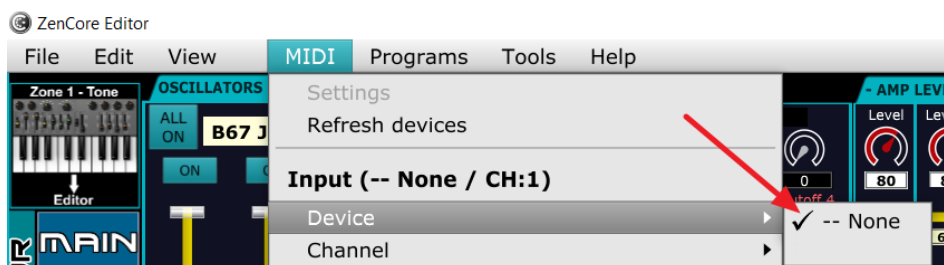
Also you must NOT select the option **MIDI Thru - Input device->Output device**, leaving it unchecked by default.

In summary: the MIDI screen should therefore appear like this, with the synth selected in Controller and Output, no input device (None) and Midi Thru deselected.

The Fantom and Jupiter-X/Xm Midi drivers allow you to use the synths simultaneously in multiple software: it is therefore possible to run the editor-librarian in parallel with a DAW or any other software that uses the MIDI of these synths.

The similars screens relative to AX-Edge and Jupiter-Xm follow

Screen 1 (AX-Edge):

MIDI | Programs | Tools | Help

- Settings
- Refresh devices
- **Input (-- None / CH:1)**
  - Device
  - Channel
- **Controller (AX-Edge / CH:0)**
  - Device
  - Channel
- **Output (AX-Edge / CH:1)**
  - Device
  - Channel
- MIDI Thru
- **Plugin options**
  - Input from plugin host
  - Input from host to comparator
  - Output to plugin host
  - Input channel
  - Output channel

Input device -> Output device
Change channel: Input device -> Output device
Input device -> Plugin host
Change channel: Input device -> Plugin host
Plugin host -> Output device
Change channel: Plugin host -> Output device
Plugin host -> Plugin host
Change channel: Plugin host -> Plugin host

Screen 2 (Jupiter-X):

MIDI | Programs | Tools | Help

- Settings
- Refresh devices
- **Input (-- None / CH:1)**
  - Device
  - Channel
- **Controller (4- JUPITER-X / CH:0)**
  - Device
  - Channel
- **Output (4- JUPITER-X / CH:1)**
  - Device
  - Channel
- MIDI Thru
- **Plugin options**
  - Input from plugin host
  - Input from host to comparator
  - Output to plugin host
  - Input channel
  - Output channel

Input device -> Output device
Change channel: Input device -> Output device
Input device -> Plugin host
Change channel: Input device -> Plugin host
Plugin host -> Output device
Change channel: Plugin host -> Output device
Plugin host -> Plugin host
Change channel: Plugin host -> Plugin host

MAC version

Unlike the PC version which is portable and executable without any type of pre-installation, **the version of the editor-librarian for MacOS requires pre installation before being used**.
Let's see the steps.

1) As a first operation, just copy the ZENCore_Editor_XX file to any folder on the MAC (for example the desktop) and run it (double click).

In more recent operating systems, the error message "Cannot open ZENCore_Editor_XX - developer not verified" may appear.
Let's see how to bypass the problem in the case of a more recent operating system (Ventura - MacOS 13.x) and an older one (High Sierra - MacOS 10.13).

With Ventura - MacOS 13.x the error message is
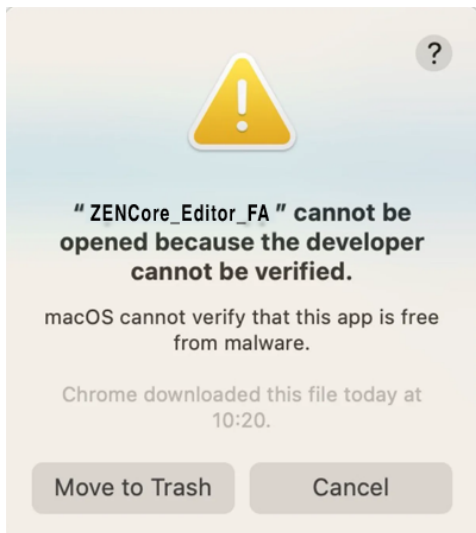
In this case you must
- click on Cancel

- go to the Apple menu > System Settings
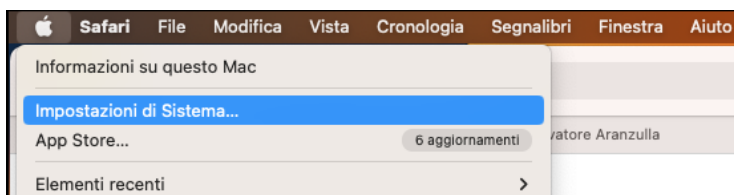
scroll down and click on **"Privacy and Security"**. .

On the right in the **Security** section click on "**allow apps downloaded from - APP Store and identified developers**" and click on **Open anyway**

A window will then appear where you can authorize the operation via Password or Touch ID
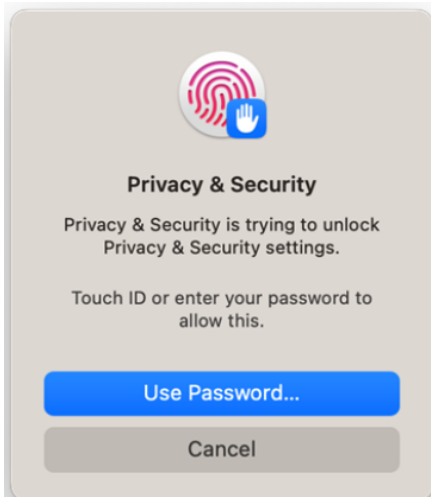
and as a last operation click on Open
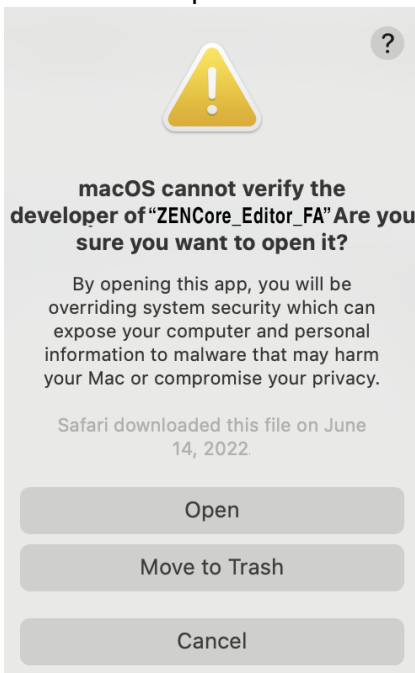
With High Sierra - MacOS 10.13 the error message is

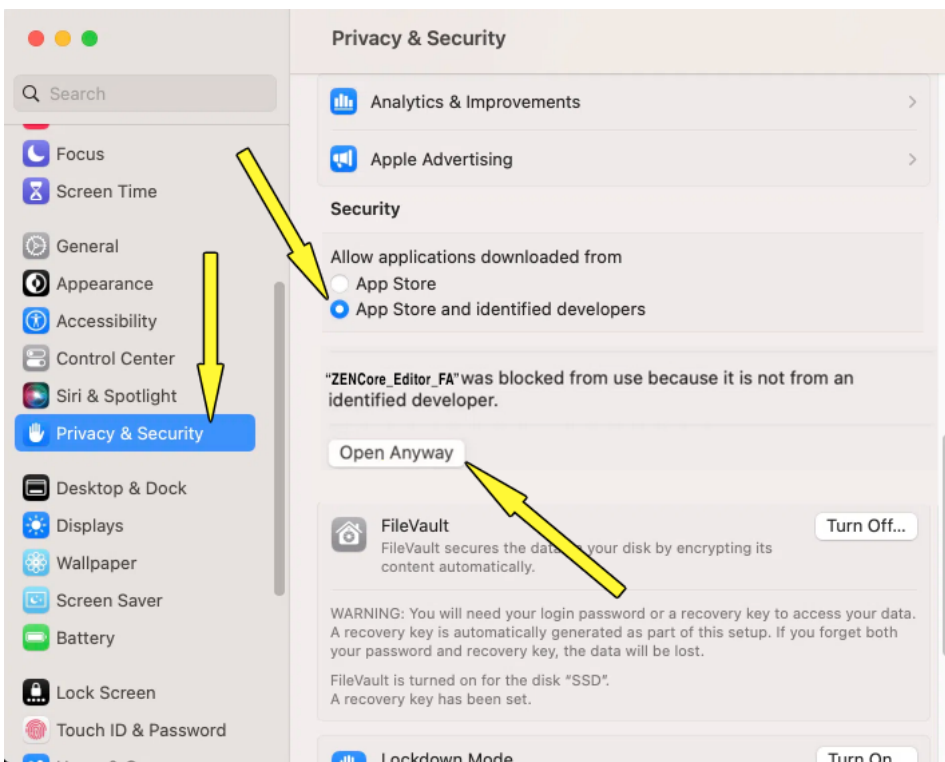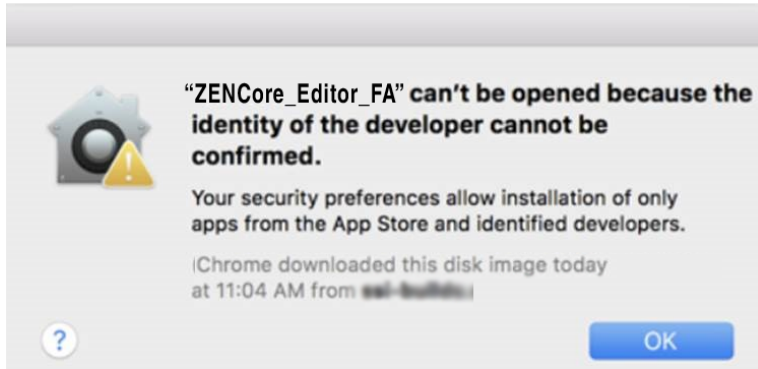After clicking OK, you need to go to the **Apple menu** > **System Preference: "Security & Privacy"** and **"General"** tab

in "General" tab click on "**Click the lock to make changes**"
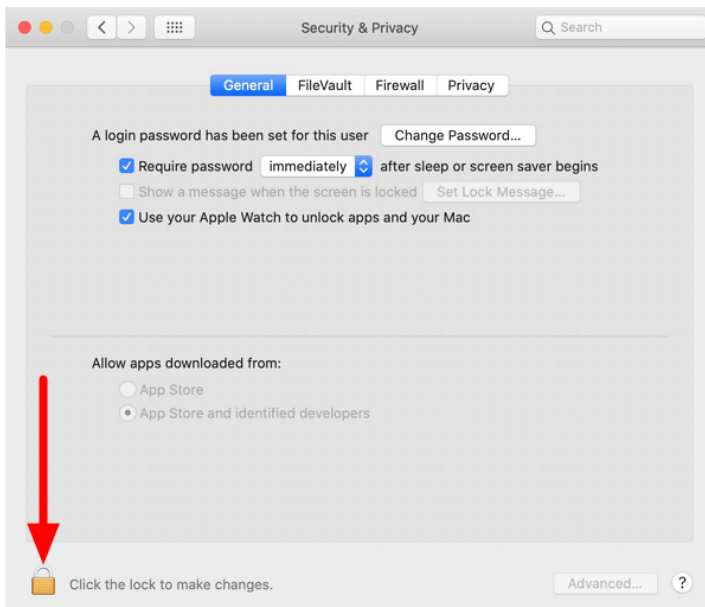
Unlock with your username and password
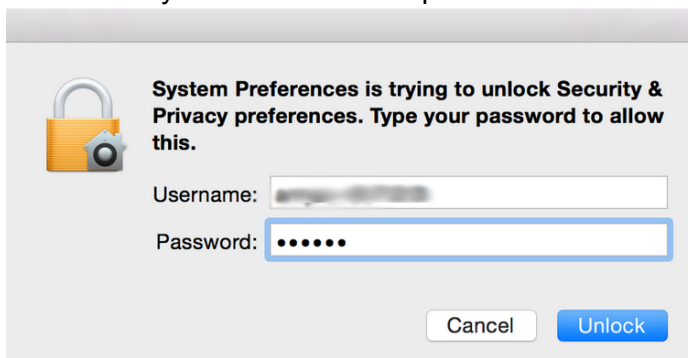
Click on "**Open Anyway**"
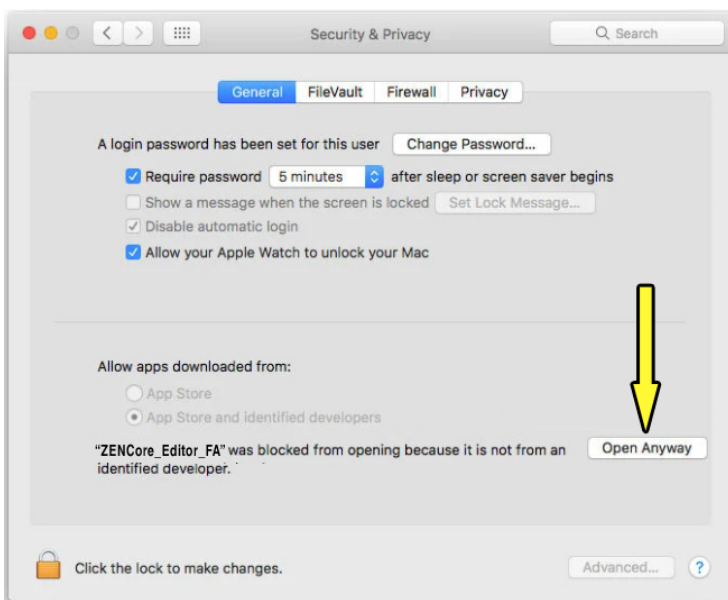
Click on "**Open**"
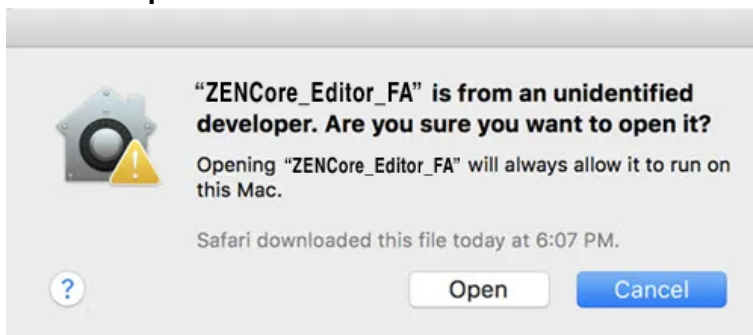
2) The software on Apple Chip (M1/M2 family) uses **Rosetta**, which if not present will be automatically installed on Mac. In this case you need to click on Install
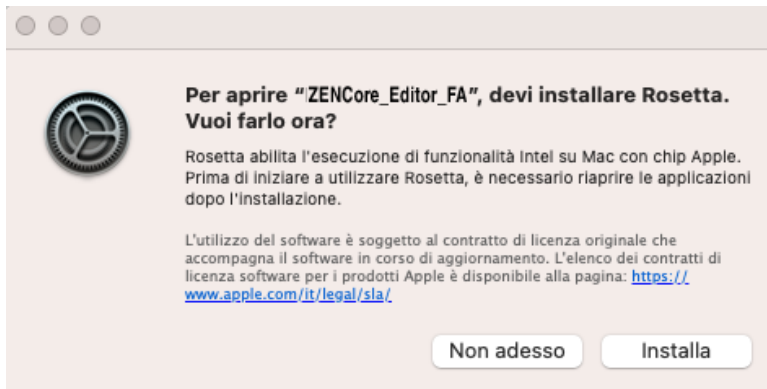
3) **When you run the software for the first time** (double click on the app icon in the example on the desktop) you need to wait 15-20 seconds depending on the speed of your computer and,
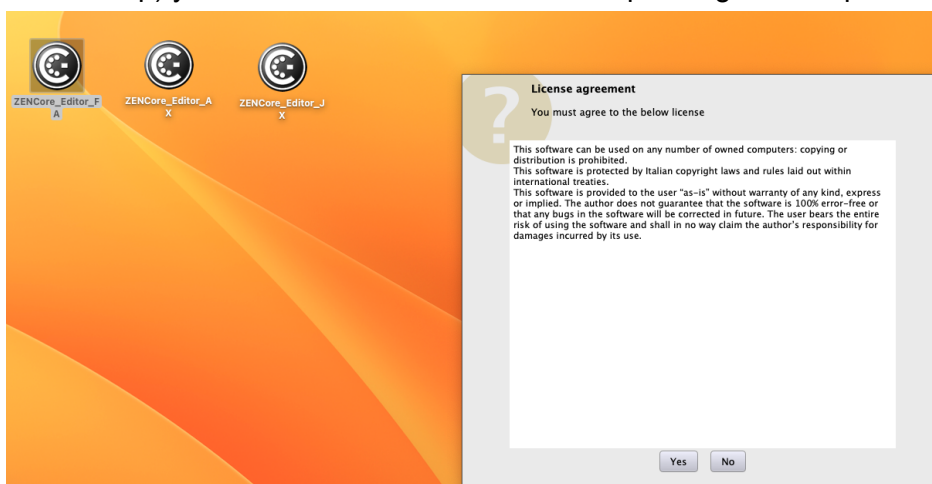
after accepting the "license agreement", there is a refresh of some screens,

at the end of which you must simply close the application. (Red icon or File/Quit)
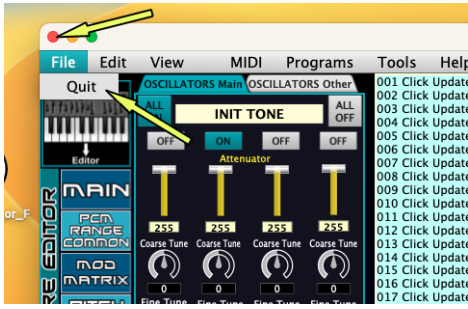
With this operation, the software is ready to be used at the next startup.

Obviously this double start only occurs the first time the program is run on MAC.

4) **To run the software again you need to wait 20 seconds after it is closed**: this limit is linked to the MAC MIDI-USB drivers which must have time to deactivate in order to be allocated again.
This applies every time you want to re-run the software after just closing it, perhaps by mistake.

5) Re-run (double click) the software which, after an automatic refresh of some pages, is ready to be used: **for the computer-synth dialogue it is necessary to set the MIDI ports** with the same settings described in manual chapter **Installation: PC Version.** (the first chapter of the manual). The MIDI ports will then be remembered in subsequent runs of the software.

In Fantom, for example, the parameters will be those in the figure.

Input: no device
Controller: Fantom 6-7-8
Output: Fantom 6-7-8
MIDI Thru: input->Output Unchecked

Basic functionality

The software features can be divided into 3 blocks:

- **ZEN-Core tone editing**: except for very small differences in the effects section (for example Phonograph, Exciter and JD Multi are not available for AX-Edge) and for the presence of the VA Init Phase parameter recognized only by Jupiter-X/XM, this section is common to the three editor (Fantom, AX-Edge e Jupiter-X/Xm)
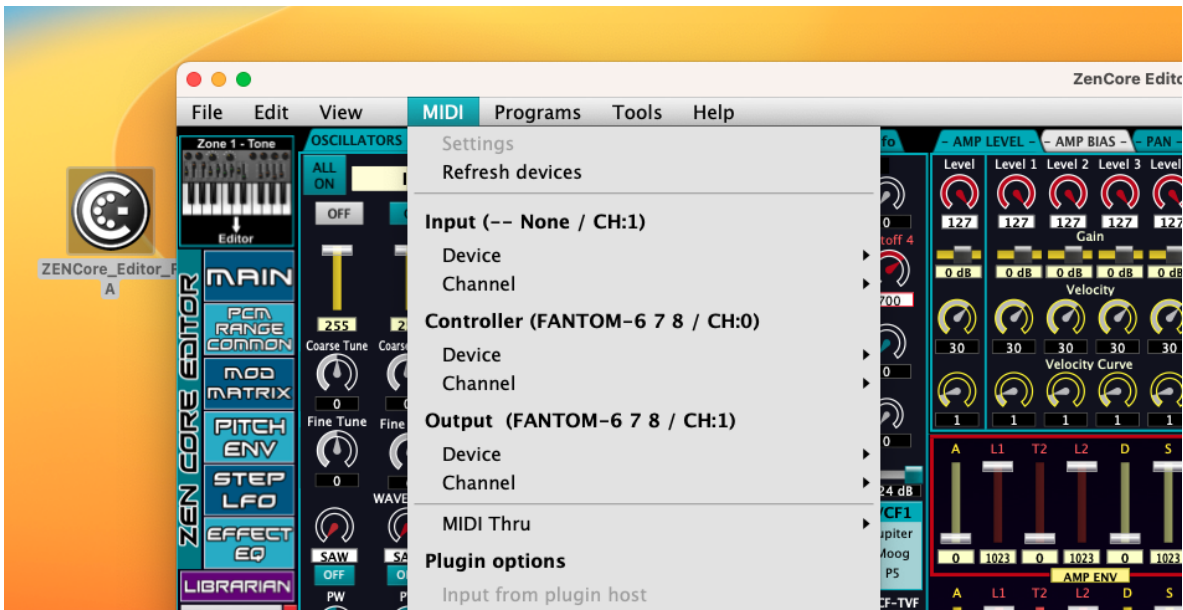 The editor displays and controls all the ZEN-Core parameters required by the standard.
  It is also possible, thanks to the implementation of the MIDI SysEx messages, to modify, use and store **ZEN-Core synthesis parameters that are not directly accessible.**
  Zen-Core and virtual compatible synths (Zenology and ZC-1) use them for sound generation, but are not capable of modifying themselves.
  These are: VCF Gain Correction - Partial LFO Phase Lock - Pitch Down Depth - Pitch Drift - Pitch Drift Cycle Number - Condition and VA Init Phase (the latter can only be used with Jupiter-X/Xm)

- **ZEN-Core Tone Librarian:** the software manages and uses a database of **16384 Toni ZEN-Core** (all resident in memory) which is structured in **N.8 libraries (Lib1-Lib2,..Lib8)** each composed of **2048 Toni**. Each of the 8 libraries is divided into **16 banks (A-B-C….P)** of **128 toni** each.
  The possible operations within the Tones database are as follows:
    - Load and Save to file the various data structures: entire database (16384 Tones), single library (2048 Tones), single bank (128 Tones) and single Tone.
    - Store the Tones transferred from the synth and modified with the editor.
    - insert and delete Tones
    - move individual banks (128 Tones) with a "Bank Clipboard" with copy and paste functionality
    - copying groups of Tones, from/to the library, via a clipboard of variable size (1-48 Tones), always visible

  The dialogue between Librarian and Synth is in real time and it is possible to transfer each tone to the synth in a fraction of a second thanks to the Synth - Computer communication speed and the ability of the software and its graphical interface to quickly manage MIDI SysEx messages.

- **Scene Editor:** within this section, in the software version for AX-Edge and Jupiter-X/Xm, it is possible to edit with the graphical interface the **main scene parameters** (Volume, Pan, selection of sounds, offset of the synthesis parameters, keyboard range and speed..) and of **all the parameters relating to the scene effects (Reverb, Chorus, Delay,..)**. The version of the software for Fantom contains complete editing of scene effects and editing of the main parameters of parts 1-4.

User Tone per AX-Edge: through a dedicated section, available only in the software version for AX-Edge, it is possible to store the tones modified or loaded from the library, **directly on the synth's "User Tones" memory.**
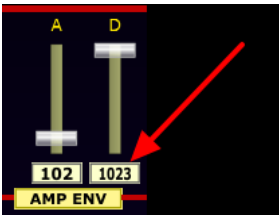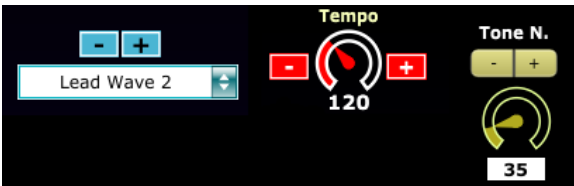
Graphic interface

The interface of the software uses vector graphics which are resizable through the control **Zoom**.

Available controls: slider, +, -, preset Zoom=20 (square left) and Zoom=45 (square right)

All numeric controls also allow **the value to be entered via the keyboard** (type the value + ENTER): the **reset to the default value is obtained by double clicking.**

With the scroll wheel of the mouse (scroller), if available, it is possible **to increase and decrease the parameter by unit**. For some controls, where present, it is possible to obtain the same result by clicking on + and -

The group of TABs related to the MACRO AMP ENV, Filter ENV,....Graph) **automatically activates the 4 corresponding TABs relating to partials 1, 2, 3 and 4**.

Numerous windows can be activated by clicking on the **Corresponding TAB** (some examples in the picture)
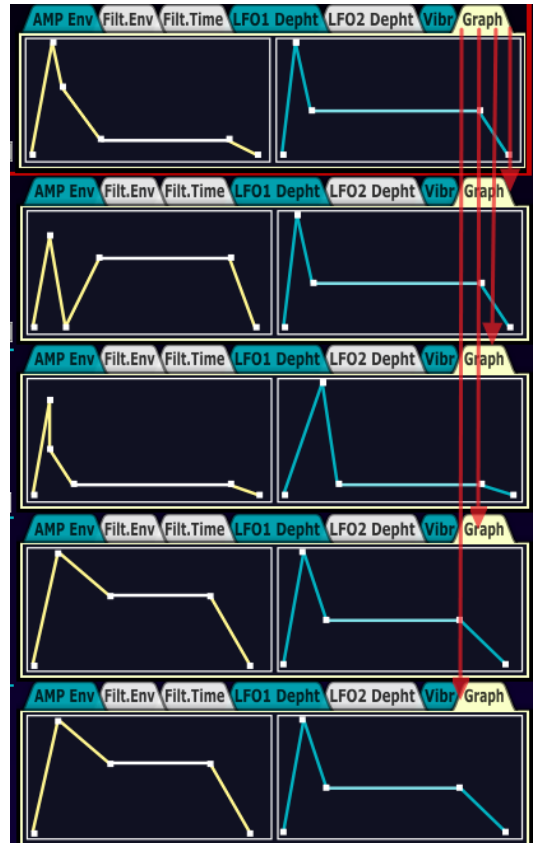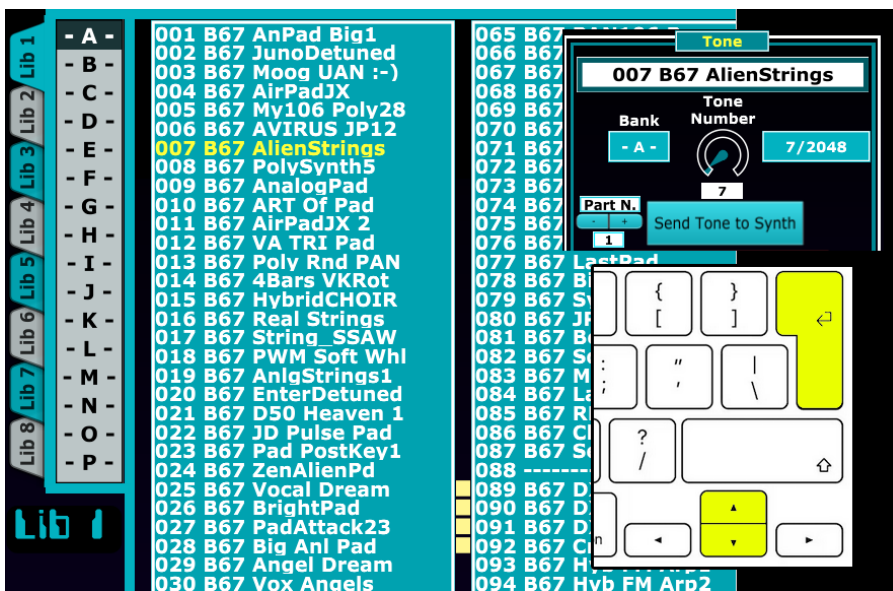
In the lists of sounds present in the librarian section, to speed up their use, it is possible to obtain the same behavior, by operating in different ways.

- **Selection**: single click - "Tone Number" rotary control - Up-Down arrow keys.

- **Sending the tone to the synth**: double click - click on "Send Tone to Synth" - Return button
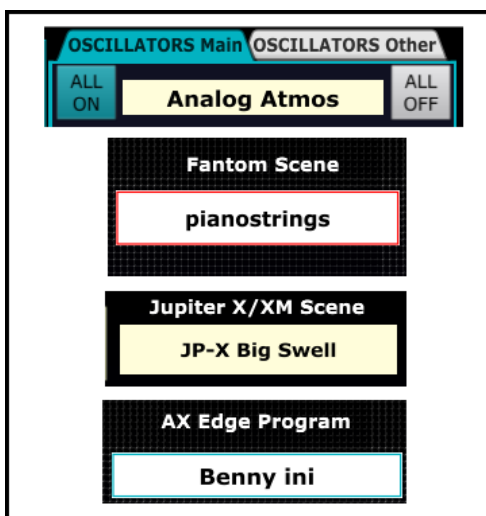
Tone and scene name editing (16 characters).

- **single click**: the 16 characters including any spaces at the end of the name are highlighted in blue
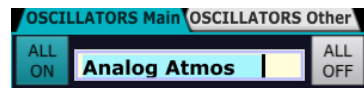
- **text input + Enter**: change the name and send it to the synth

To enter characters and have up to 16 available (maximum length of the name), it is important to **delete any empty spaces at the end of the name** which are part of the name itself.

ZEN-Core tone editing and MACRO

<u>Real-time ZEN-Core tone editing takes place exclusively on PART1 of a scene</u>: on the contrary **the real-time transfer of library tones from the software to the synth can be done on any part** (1-16 per Fantom - 1-4 per AX Edge e Jupiter X/XM).

For editing ZEN-Core sounds and/or the Computer->Synth transfer of a ZEN-Core tone it is essential that any ZEN-Core tone is already present, in the 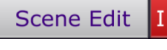synth, on part 1: if there is a sound that uses another synthesis (Model Expansion, V-Piano, SuperNatural,...) the transfer does not produce any effect.

To prepare a ZEN-Core tone on the parts of interest it is obviously possible to operate directly on the synth:

alternatively it can be done on SCENE EDIT section ![Scene Edit I] of the software, where it is possible to select any of the ZEN-Core sounds resident in the synth (in the example the PRESET A-Juno Poly Stack preset on part 1).

The last possibility is to **recall the SCENE INIT preset with the software**, **where the ZEN-Core Tones are already selected on all parts.**

To do this, you can click **on the small icon in red (I)** in the main menu or alternatively in the SCENE EDIT section (**click su SCENE INIT**)
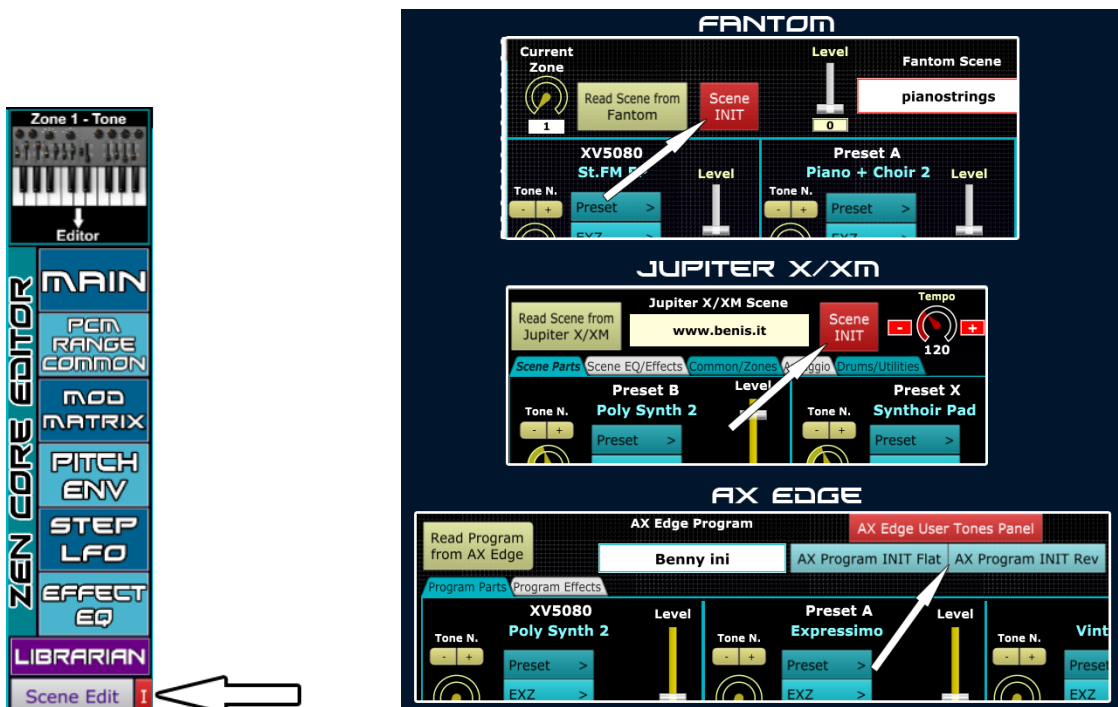
To start the editing of ZEN-Core sound present on Part1 of the scene, click on the Zone 1 - Tone→Editor icon at the top right: the various ZEN-Core parameters will be transferred from synth to the editor, updating in real time all the controls and graphics .

Subsequently, any modification of the parameters in the editor will be automatically transferred in real-time to the synth.

It is always possible to continue editing the ZEN-Core tone inside the synth: to resynchronize the parameters and graphics, and continue editing on the editor, just click again on the Zone 1 - Tone→Editor icon

At the end of sound editing, the ZEN-Core tone can be stored in the synth through its interface: with the software it is possible to store this tone in a library location, operating in the appropriate LIBRARIAN section (click on

) .

It is possible to save the **ZEN-Core tone present on Part 1 to a file** by clicking on **One Tone - Save file**: the tone will be stored in the MIDI SysEx format (*.syx). If there is a sound with a different synthesis on that part, the file is not stored.


To load a single tone from a file (*.syx), click on the green icon **One Tone - Load file:** the ZEN-CORE tone is loaded from the file, transferred to the synth on PART 1 and the parameters and tone graphics are updated in the editor (a sound with ZEN-Core synthesis must already be present on Part1).

Presets

On the main screen, 24 presets are available, divided into 3 tabs.
The transfer of the **ZEN-Core tone → Part 1 of the synth** is done, after selection, by **double clicking or using the Return** key on the computer keyboard. It is always possible, as for the library, to scroll through the presets using the Up-Down arrow keys. In the three TABs there are different types of Zen-Core timbres.

- **INI**: Simple sounds, to be used as a basis for editing.
- **PR1**: some of the sounds from the optional library (sold separately): among these also 3 FM tones with a double pair of operators (2 x carrier-modulator).
- **PR2**: sounds that using the STEP LFO functions and the related template (see below) perform melodic and rhythmic sequences. In the name there is the BPM for which it was designed, a value that must be inserted in the **time** parameter of the scene.
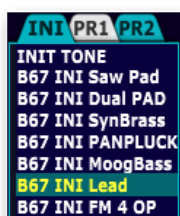
The various parameters of the ZEN-Core tone are divided into 6 screens, which can be activated by clicking on the relative icon:

- **Main**: Filter, Amp, PAN, LFO1, LFO2, Filter ENV e Amp ENV
- **PCM - Range - Common**: PCM Waves, Keyboard e Velocity Range, Parametri Common
- **Mod Matrix**: the modulation matrix
- **Pitch ENV**
- **STEP LFO**: the Step LFO section with activation of the "Note Sequence" template
- **Effect - EQ**: selection and editing of the 93 "Tone MFX" effects and EQ section

On the left, the section relating to the oscillators (the two Main and Other TABs) and the **Tone Name** are always active.

In the OSCILLATORS Main TAB, among the various parameters, it is also possible **activate and deactivate all partials at the same time** by clicking on the icons above **ALL ON** It is **ALL OFF**
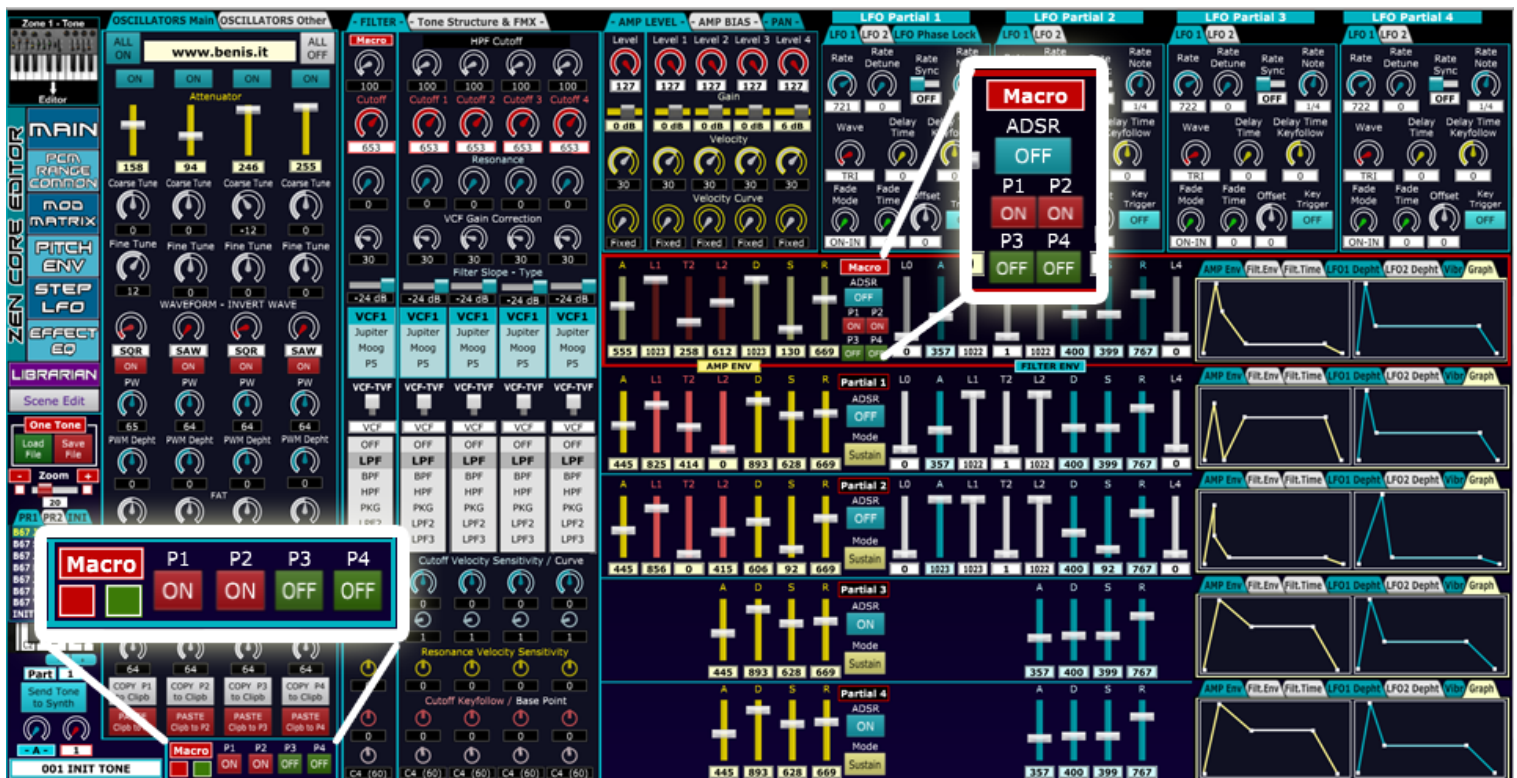

Macro

In order to simplify and speed up the tone editing, for some parameters it is possible to use the **MACRO controls** which allow **the corresponding parameter of any combination of the 4 partials to be controlled in parallel** .
For example, if the Cutoff MACRO parameter is modified, the corresponding Cutoff parameters of the partials 1-2-3-4, for which the MACRO parameter is active, will be modified in parallel.
Real-time graphics make every thing intuitive and visible.

To activate parameter operation **MACRO** it is necessary **to select the combination of partials that you wish to control** simultaneously.

This can be done indifferently in the two sections highlighted in the following image, **by clicking on ON-OFF of the 4 partials P1,P2,P3 and P4**: the first of the two sections is always visible and the second is present inside the macro section of the AMP and FILTER ENV. Image follows.

The two sections are synchronized with each other: the one at the bottom left also allows you to activate and deactivate the MACRO functionality on all 4 partials with a single click: to do this, just click on the Red and Green squares

- **Red**: the macro parameters drive all 4 partials
- **Green**: the macro parameters do not drive any partial

The **MACRO parameters with which, as seen, the selected combination of partials are simultaneously driven**, are those in Red: when a sound for editing is loaded from the synth, their values are set to coincide with those of Partial N. 1.

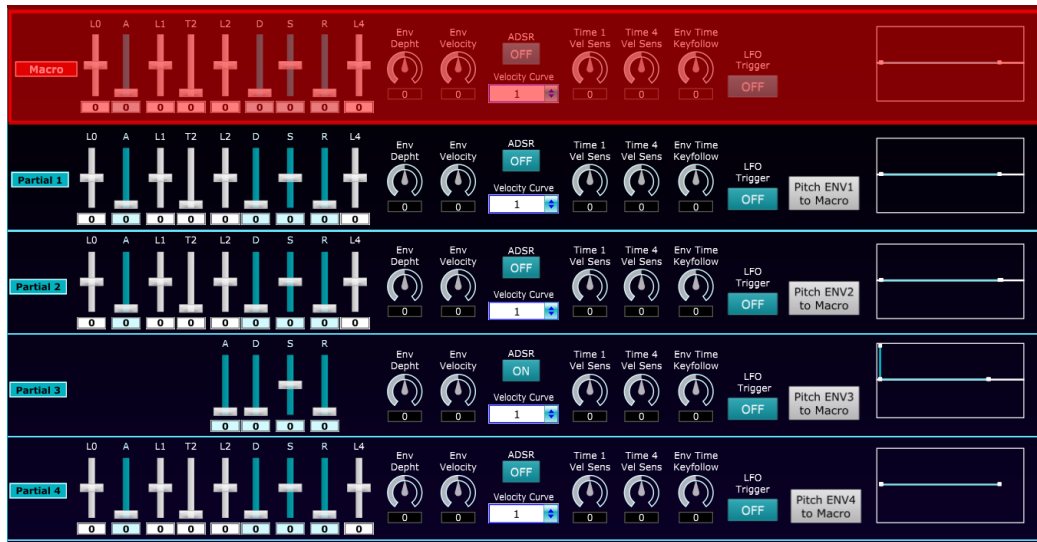### Macros in the Filter, Amp and Env section
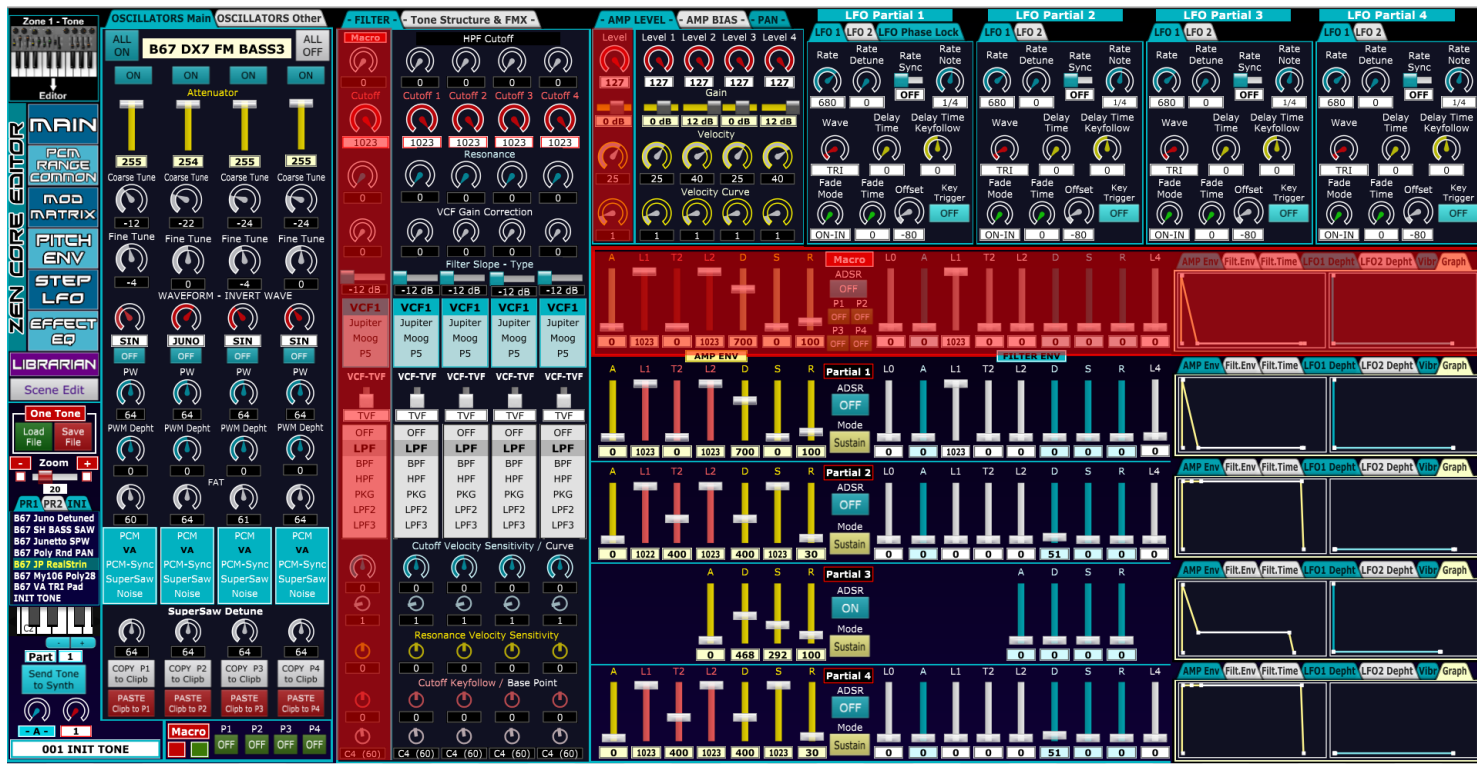
Macro with 3 TAB Amp Level, Bias and Pan
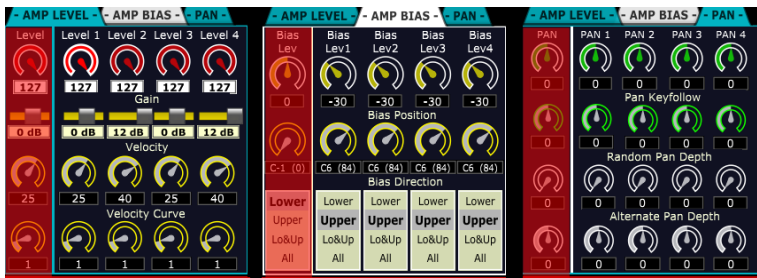
Macro nei 7 TAB: Amp Env, Filter Env, Filter time, LFO1 Depth, LFO 2 Depth, Vibrato e Env Graph
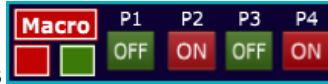
Macros in the Pitch Env section

Through the MACROS it is also possible to **copy the AMP, Filter or Pitch envelope to a combination of partials of your choice**.

To do this you need:
- **Select (ON) the destination partial(s).** which will be driven by

macros (P2 and P4 in the example)

- Click on the icon **xxx ENVx to Macro of the source envelope** that you want to copy

In the example (macro ON on P2 and P4) if you click on **AMP ENV1 to Macro** copy the envelope **AMP of partial 1** on the respective AMP envelopes of partials 2 and 4;

if you click on **FILTER ENV3 to Macro** copy the envelope of the **Partial FILTER 3** on the respective FILTER envelopes of partials 2 and 4

Copy and paste operations for partials and effects
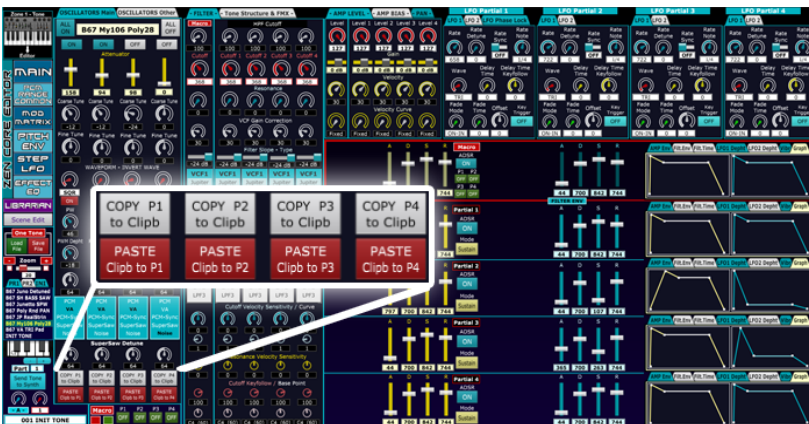
At the bottom left is the section relating to **copy and paste ZEN-Core tone partials** using a clipboard.

The clipboard remains active even after loading a new sound, so as to allow for example the COPY of any partial from a previously edited Tone, and the PASTE in the current one.

The copy and paste operations do not affect the "Common" parameters of the tone (Name, Category, Mono/Poly, Unison, Tone Structure 1-2 / 3-4, Ring, X-Mod 1/2, ..) as they are not related to the single partial.

On top right in the Effect-EQ section section is available **copy and paste ZEN-Core tone MFX effect.**

The clipboard remains active even after loading a new sound, so as to allow the COPY of the effect parameters from a previously edited Tone, and the PASTE to the current one.

PCM Section - Range - Common

In this section of the editor you can edit the samples for the PCM and PCM Sync Partials, the Keyboard and Velocity Range and the various common parameters.

To choose the PCM samples it is possible to operate by selecting Wave Group (INT A, INT B, INT C, INT D, EXZ001... EXZ 015) and then the sample No.Wave Number L (Mono) and Right which, as for all controls, can also be entered numerically.
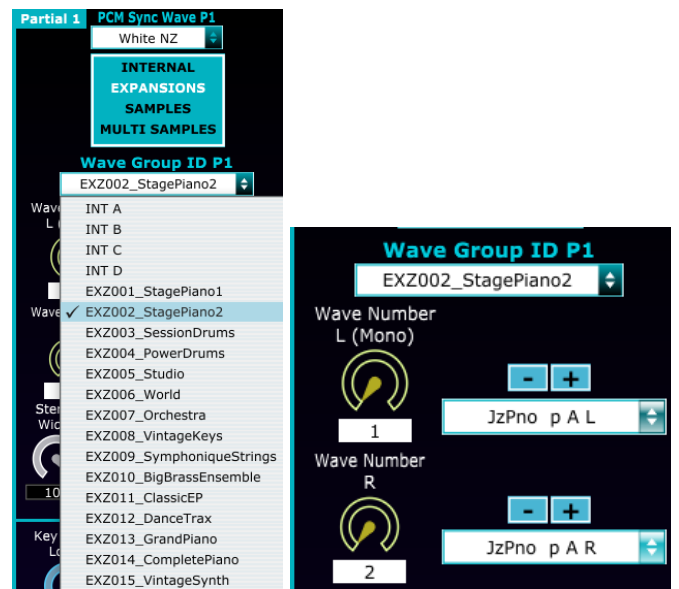
Alternatively, by clicking on the name of the sample, it is possible to scroll through those available continuously, even moving from one group to the next (in the image the last ones of the INT A bank and the first ones of INT B).
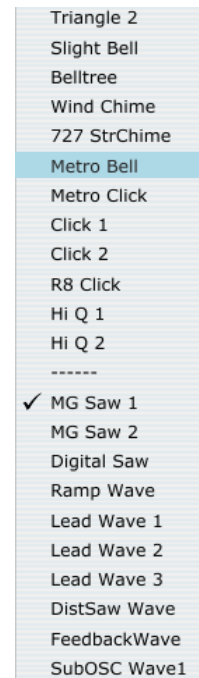
Mod Matrix and Pitch Env sections

Below are the images relating to these sections: in Pitch Env section the 4 Pitch Env has Macro controls as for the Amplifier and Filter envelopes.

Column 1

Source 1: SYS-CTRL3
- Sens 1: 10 — Destination 1: PIT-LFO1
- Sens 3: 23 — Destination 3: OFF
- Sens 2: 0 — Destination 2: OFF
- Sens 4: 13 — Destination 4: OFF

Source 2: SYS-CTRL2
- Sens 1: 17 — Destination 1: CUT
- Sens 3: -56 — Destination 3: OFF
- Sens 2: 9 — Destination 2: LEV
- Sens 4: 26 — Destination 4: OFF

Source 3: SYS-CTRL4
- Sens 1: 15 — Destination 1: PIT-LFO1
- Sens 3: -38 — Destination 3: OFF
- Sens 2: 10 — Destination 2: LFO1-RATE
- Sens 4: 0 — Destination 4: OFF

Source 4: SYS-CTRL1
- Sens 1: -20 — Destination 1: CUT
- Sens 3: 44 — Destination 3: OFF
- Sens 2: 10 — Destination 2: RES
- Sens 4: 0 — Destination 4: OFF

Column 2

Source 1: SYS-CTRL3
- Sens 1: 10 — Destination 1: PIT-LFO1
- Sens 3: 21 — Destination 3: OFF
- Sens 2: 0 — Destination 2: OFF
- Sens 4: 42 — Destination 4: OFF

Source 2: SYS-CTRL2
- Sens 1: 17 — Destination 1: PAN
- Sens 3: -25 — Destination 3: OFF
- Sens 2: 9 — Destination 2: LEV
- Sens 4: -11 — Destination 4: OFF

Source 3: SYS-CTRL4
- Sens 1: 15 — Destination 1: PIT-LFO1
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 10 — Destination 2: LFO1-RATE
- Sens 4: 0 — Destination 4: OFF

Source 4: SYS-CTRL1
- Sens 1: -20 — Destination 1: CUT
- Sens 3: 32 — Destination 3: OFF
- Sens 2: 10 — Destination 2: RES
- Sens 4: 0 — Destination 4: OFF

Column 3

Source 1: SYS-CTRL3
- Sens 1: 10 — Destination 1: PIT-LFO1
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 0 — Destination 2: OFF
- Sens 4: 0 — Destination 4: OFF

Source 2: SYS-CTRL2
- Sens 1: 17 — Destination 1: CHO
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 9 — Destination 2: LEV
- Sens 4: 0 — Destination 4: OFF

Source 3: SYS-CTRL4
- Sens 1: 15 — Destination 1: PIT-LFO1
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 10 — Destination 2: LFO1-RATE
- Sens 4: 0 — Destination 4: OFF

Source 4: SYS-CTRL1
- Sens 1: 0 — Destination 1: CUT
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 10 — Destination 2: RES
- Sens 4: 0 — Destination 4: OFF

Column 4

Source 1: SYS-CTRL3
- Sens 1: 10 — Destination 1: PIT-LFO1
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 0 — Destination 2: OFF
- Sens 4: 0 — Destination 4: OFF

Source 2: SYS-CTRL2
- Sens 1: 17 — Destination 1: CUT
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 9 — Destination 2: LEV
- Sens 4: 0 — Destination 4: OFF

Source 3: SYS-CTRL4
- Sens 1: 15 — Destination 1: PIT-LFO1
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 10 — Destination 2: LFO1-RATE
- Sens 4: 0 — Destination 4: OFF

Source 4: SYS-CTRL1
- Sens 1: -20 — Destination 1: CUT
- Sens 3: 0 — Destination 3: OFF
- Sens 2: 10 — Destination 2: RES
- Sens 4: 0 — Destination 4: OFF

Pitch Env section

Macro: L0 0, A 253, L1 -243, T2 644, L2 243, D 253, S 0, R 0, L4 0; Env Depht 0, Env Velocity 0, ADSR OFF, Velocity Curve 1, Time 1 Vel Sens 0, Time 4 Vel Sens 0, Env Time Keyfollow 0, LFO Trigger OFF

Partial 1: L0 0, A 253, L1 -243, T2 644, L2 243, D 253, S 0, R 0, L4 0; Env Depht 0, Env Velocity 0, ADSR OFF, Velocity Curve 1, Time 1 Vel Sens 0, Time 4 Vel Sens 0, Env Time Keyfollow 0, LFO Trigger OFF — Pitch ENV1 to Macro

Partial 2: L0 0, A 253, L1 -243, T2 644, L2 243, D 253, S 0, R 0, L4 0; Env Depht 0, Env Velocity 0, ADSR OFF, Velocity Curve 1, Time 1 Vel Sens 0, Time 4 Vel Sens 0, Env Time Keyfollow 0, LFO Trigger OFF — Pitch ENV2 to Macro

Partial 3: A 253, D 253, S 0, R 0; Env Depht 0, Env Velocity 0, ADSR ON, Velocity Curve 1, Time 1 Vel Sens 0, Time 4 Vel Sens 0, Env Time Keyfollow 0, LFO Trigger OFF — Pitch ENV3 to Macro

Partial 4: L0 0, A 253, L1 -243, T2 644, L2 243, D 253, S 0, R 0, L4 0; Env Depht 0, Env Velocity 0, ADSR OFF, Velocity Curve 1, Time 1 Vel Sens 0, Time 4 Vel Sens 0, Env Time Keyfollow 0, LFO Trigger OFF — Pitch ENV4 to Macro

Effect- EQ section

In this section it is possible to select and modify the MFX Effects of Zen-Core tone, the EQ of the 4 partials and the modulation matrix of the effect parameters.

On the right there are some presets, divided into types, which can be recalled by double clicking on the name.

At the top right, as seen, there is the section for **copy and paste the effect.**
The clipboard remains active even after loading a new sound, so as to possibly allow the COPY of the effect parameters from a previously edited Tone, and the PASTE in the current one.

STEP LFO and TEMPLATE section for use as a STEP Sequencer

The editing section allows complete editing of the 8 STEP LFOs (LFO1 and LFO2 for each of the 4 partials) in a single screen.

The 16 steps are adjustable with the depht faders (-72 +72) and with a graphic control to select, for that step, the curve (0-36) which is represented graphically: to modify it, click on the icon and move the mouse. Alternatively you can use the mouse scroller or enter the value numerically with the computer keyboard**:** by inserting the values in succession with the keyboard, it is possible to proceed quickly as it is not necessary to press Return for confirmation.

Double clicking on each of the 16 steps resets the step depth values (default=0) and/or the step curve (default=1)

Thanks to the flexibility of the 8 STEP LFOs, it is possible to create, with a single Zen-Core tone, melodic tone and/or rhythmic sequences synchronized with the scene BPM, using a series of parameters of the ZEN-Core standard: any of these sound-sequences are available in the library that can be purchased optionally.
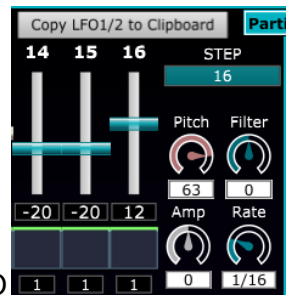
To simplify the programming of these sounds, there is a **template** that can be activated by clicking on **"Note sequence Template"** at the top left .
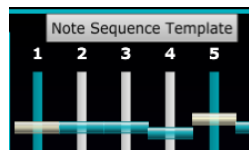
To be able to operate faster by working in a single window, the parameters controls of the modulation intensity

(Pitch, Filter and AMP) and the rate of the STEPS, are present for each LFO (these controls are duplicates of those present in the Main-LFO1-2 Depth and RATE Note section)

The Template sets the parameters that allow the sound to be trigged for each step: among these, on all 8 LFOs, **Wave=STE**P and **LFO Trigger=ON** are set for the Filter and AMP ENVs .

It is important to note that, **if using sampled sounds (PCM partials), the sample is NOT trigged at each step, but only at the beginning of the note**. For this reason, the dynamics of the sound that repeats itself at each step can be obtained using the Amp and Filter ENVs, using the LFO itself (see below) or with both methods in parallel.

The idea behind the template is to use **the STEP LFO1 of the 4 partials (column on the left) to program the notes of the 4 sequences** (one for partial); through **STEP LFO2 of the 4 partials (column on the right), the dynamics and, possibly, the envelopes of each step are programmed**.
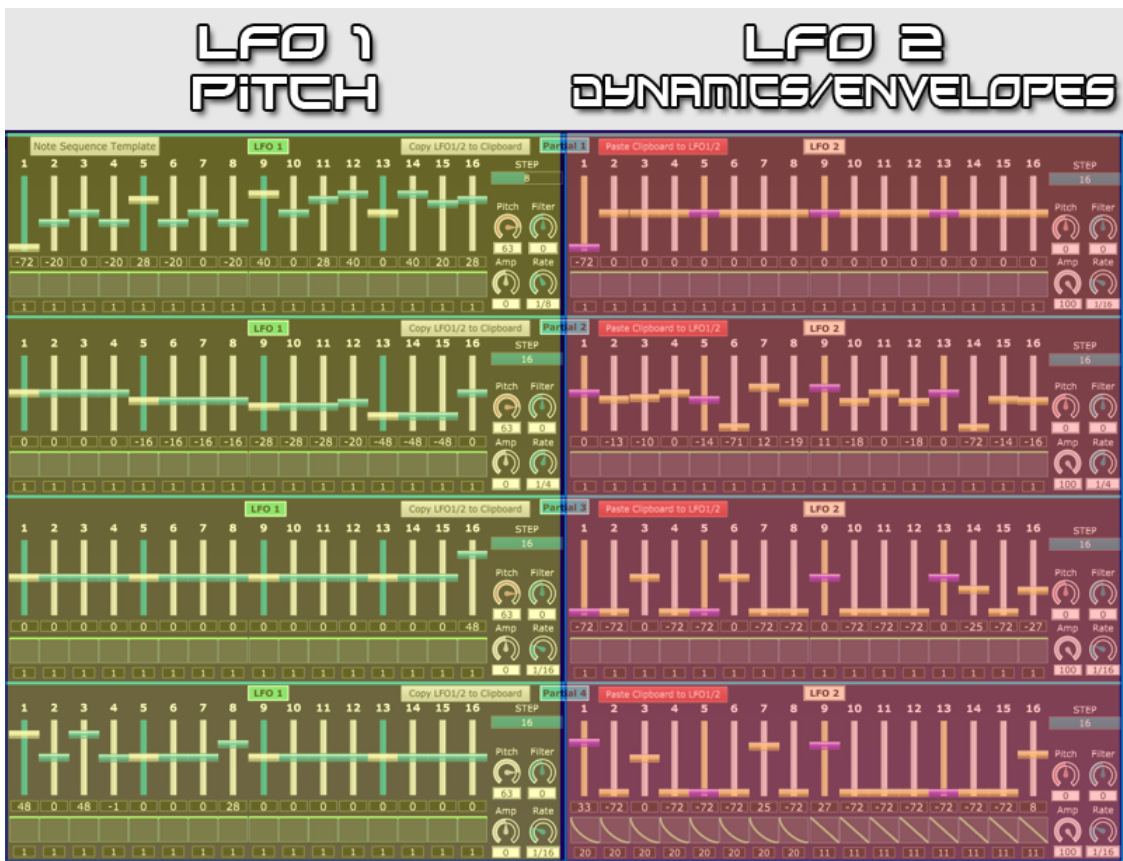

For each of the 8 LFOs, the speed and duration of the loops can be managed by setting the two values:
- **Rate** (range 1/64T - 4)**:** the speed at which the notes repeat is adjusted, in sync with the tempo of the scene (performance in AX-Edge). With multiple ranges (e.g. 1 - ½ - ¼ - ⅛ - 1/16 -1/32) it is possible to sequence, for example, a 8 bars long bass lines (Rate= ½), together with arpeggios of duration equal to one or two beats (Rate=1/32 and 1/16)
- **Step (1-16): the number of steps from which the sequence loop is composed**

To set the intonation (maximum 16 steps for each partial), use the left column: the template places a **Pitch Depth=63** on LFO1 of the 4 partials.

With the value set by the template (Pitch Depth=63) **each increase - decrease of a value equal to 4 in step**
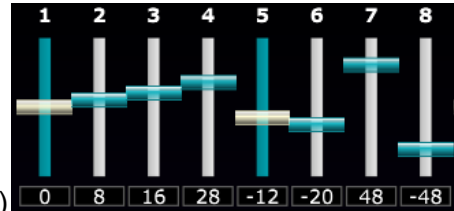
For example, the sequence in the image (0 8 16 28 -12 -20 48 -48) corresponds to the note sequence C4 - D4 - E4 - G4 - A3 - G3 - C5 - C3

The combination of notes, rates and steps, all for 4 partials, allows the creation of even very complex sequences: No. of steps that are not multiple of each other (e.g. 6-8-12-16) guarantee interweaving of notes, even particularly complex.

On the right column, as seen, the STEPS of LFO2 are adjusted for the 4 partials: the template activates the modulation depths of the amplification equal to the maximum value **(LFO2 AMP Depht=100)**. In this way it is possible to drive the dynamics of the sequence (accents on the single notes): in particular, to silence the note for that step, it is necessary to set the fader that controls the amplitude to a value = -72.
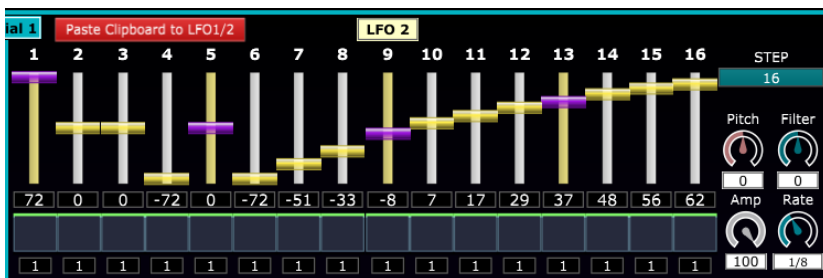
In the example the first note of the loop will be accented; No.4 and No.6 will be silent. From No.7 to No.16 there will be an increase in volume.

For rhythmic sequences with percussive sounds obtained in VA synthesis, the alternation of + - 72 simulates the alternation between Note ON and Note OFF.

To have a variation of filter and amplitude of the sound at each step, (it is not possible for this purpose to use the dynamics of PCM sounds that are triggered only once), there are mainly two methods.

- **The first method,** the simplest, is to **shape sounds with ZEN-CORE synthesis amplitude and filter envelopes** (here for example the synthesis parameters of a plucked VA sound - with a VA oscillator with SAW waveform)
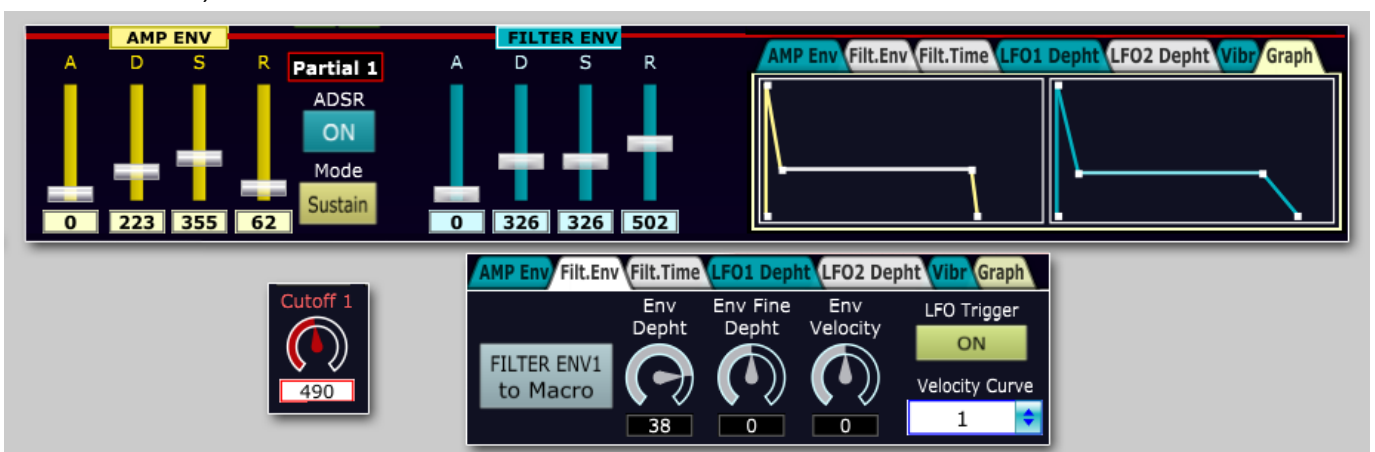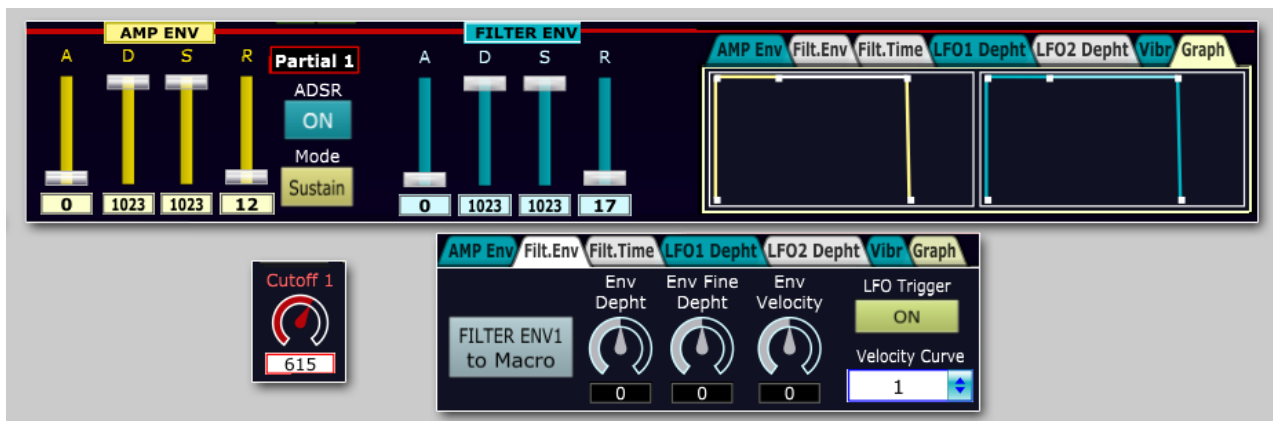
Then, by setting the faders in the 16 steps of LFO2 (with AMP Depht=100) you adjust the volumes of the

sequence

- **The second method** is to use **VA sounds with FLAT AMP and FILTER envelopes (sustain=MAX=1023) and shape the filter and/or AMP at each step using the LFO2 curves.**

To shape the envelopes, at each step, and relative volumes, **the most suitable curves for this purpose**

are those with values of 11-20 and 15 [11] [20] [15] (progressively more percussive curves).

Here is an example (with N. of STEP equal to 12) where the following have been set:
- step 1-4: percussive ENV
- step 5-8: more percussive ENV
- step 9-12: almost impulsive ENV.

The fader values adjust the intensity with which the ENV shapes change the filter cutoff (in the example = 53)
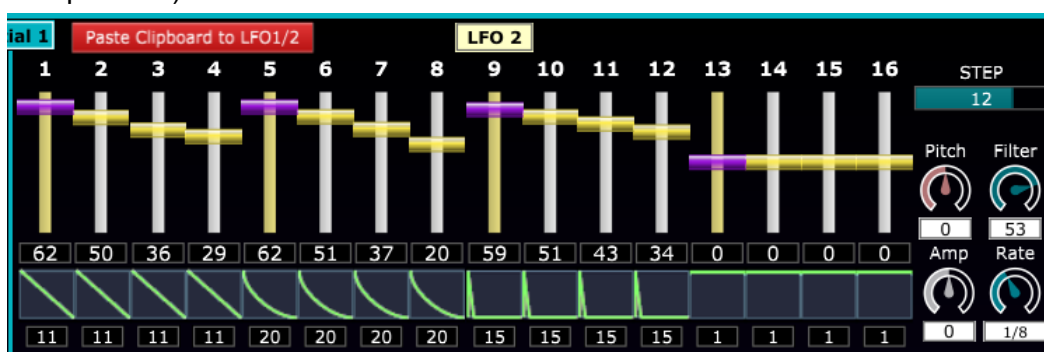
Obviously it is possible to start from the template to obtain more complex modulation sequences and steps, moving away from the distinction set by the template (left column for pitch and right column for dynamics and ENV).

IMPORTANT: due to the structure of the ZEN-Core synthesis, if partials with **sampled sounds (PCM)** are modulated by the STEP LFO, as already seen, the note will NOT be re-triggered at each step, but only the first time. For this reason i**t is not possible to use PCM samples of drums to simulate rhythmic patterns**: it is possible to do so, like in the optional bank and in two presets, synthesizing them with **VA oscillators, noise, filters and env.**

By using multiple Zen-Core Tones with sequences and rhythms in splits or layers (up to 16 parts in Fantom and 4 for Jupiter-X/Xm, Ax-Edge,...), numerous synthesis and performance possibilities can be obtained.

Unless there are particular sequences, **it is advisable to set the tone in monophonic mode.**

It should be noted that the sequence thus obtained, **with sustain pedal=ON, remains active even when the note is released**. (useful for example for improvising, in analogy to a loop station)

Hidden ZEN-Core synthesis parameters

The ZEN-Core synthesis engine uses some hidden synthesis parameters internally: both the ZEN-Core compatible synths and the virtual Zenology do not leave the user the possibility of seeing or modifying them, even if they are used in the same way as all the others.

These parameters are indicated in the various documentation relating to the MIDI Implementation of Fantom, Fantom-0, AX-Edge, Juno-X and Jupiter-X/XM.

Through MIDI System Exclusive messages, the software is able to read them, modify them and make synths use them like all the others.

Here is the list of those available:

VCF Gain Correction (also available as a Macro for the 4 partials): when VCF Resonance >0, the gain reduction is compensated.
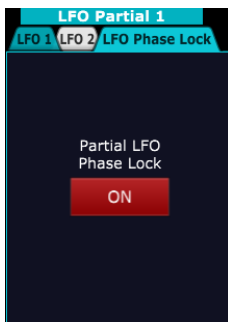
Partial LFO Phase Lock (control present in TAB inside LFO Partial 1): all the parameters of LFO1 and LFO2 of partials 2-3 and 4 (Rate, Waveform, Delay Time, Fade,...) are synchronized with those of LFO1 and LFO2 of Partial 1.

The synthesis engine, with **Partial LFO Phase Lock=ON**, corresponds to that of a 4-partial synth where LFOs 1 and 2 operate identically on all partials.
It is the method used for the emulations in Model Expansions.

Pitch Down Depth (control in the PCM-RANGE-COMMON section): reduces the oscillator frequency up to fractions of Hz.

The main use is to activate it together with the Structure 1-2 (3-4) Sync, Ring, X-Mod and X-Mod2 modes using the intermodulations between the oscillators

Pitch Drift - Pitch Drift Cycle Number - Condition (control in the PCM-RANGE-COMMON section): emulates the imperfections of analog synths.
- **Pitch Drift (0-255):** amount of pseudo-random pitch oscillations
- **Pitch Drift Cycle Number (Free, 1,2…8):** cyclicity with which the voices alternate. Ex. 6= emulation of a 6-voice synth.
- **Condition Drift:** quantity of pseudo-random pitch oscillations, Cutoff and Volume

VA Init Phase (only for Jupiter X/Xm - control in Tone Structure and FMX TAB)**:** initial phase of VA oscillators (1-355°)

Librarian

The software manages and uses a **database of 16384 ZEN-Core Tones** (all resident in the software memory) which is made in **N.8 bookshops (Lib1-Lib2,..Lib8)** each of **2048 Toni**.
Each of the 8 libraries is divided into **16 banks (A-B-C….P) of 128 tones** each.

You can access to library management by clicking on the icon **LIBRARIAN**
The entire sound database is volatile: at the end of the session it must be stored in a file, so as not to lose the changes.

The 8 libraries (Lib1, Lib2,..Lib 8) and the 16 Banks of each library (Bank A, B, C….P) are selected by clicking on the **Lib X** TABs (libraries) and on **letters A-P** (banks).

It is possible to load and save to file the entire database (16384 ZEN-core tones), a single library (2048 ZEN-core tones) or a single bank (128 ZEN-core tones). To do this, just click on the relative icons, indicated below.
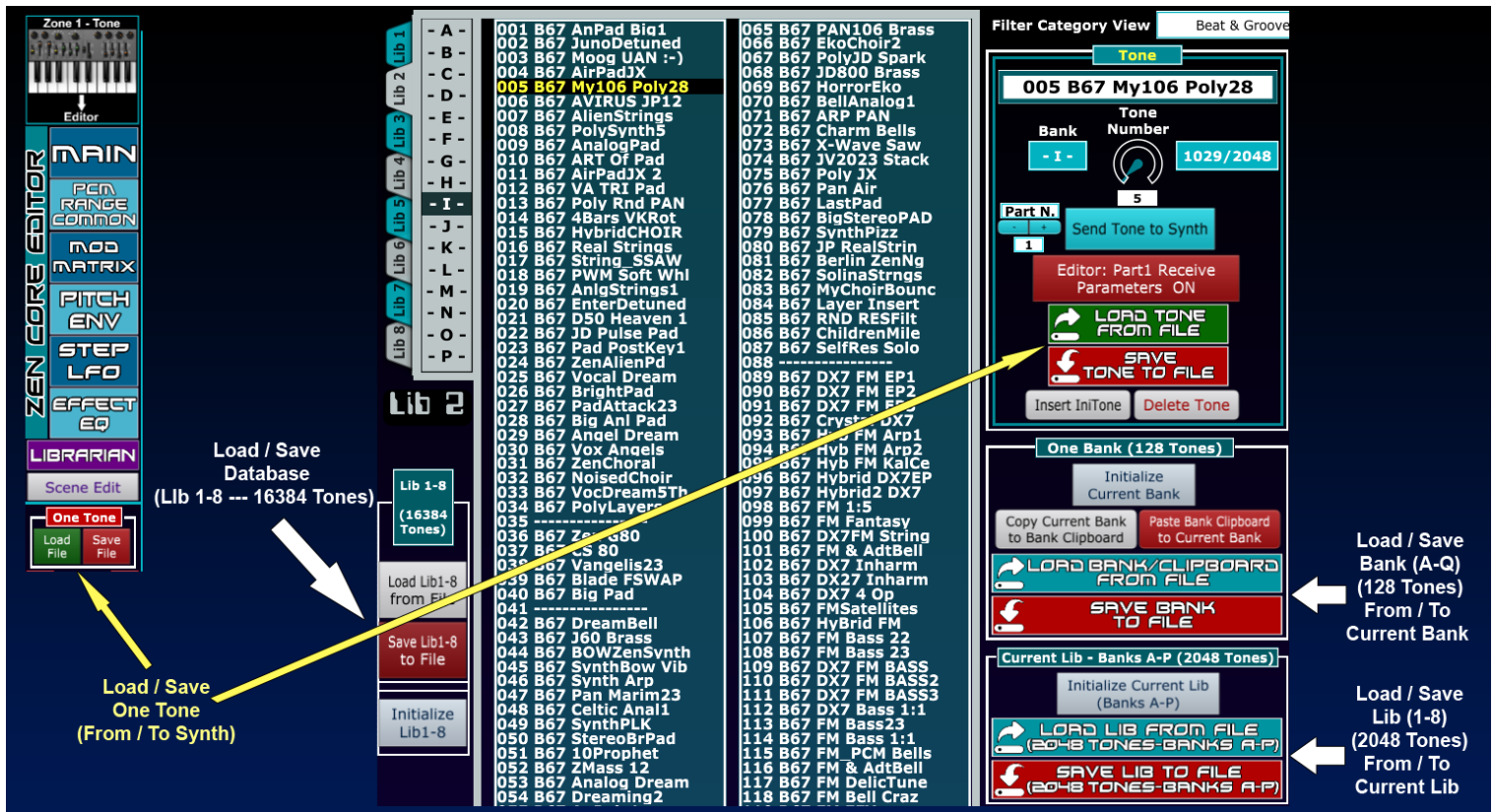
- **Save Lib1-8 to File**: save to file the entire database containing the 8 libraries (16384 ZEN-Core Tones) - File extension .L67 - file size 42.19 MByte
- **Load Lib1-8 from File**: load from file (*.L67) the entire database containing the 8 libraries (16384 ZEN-Core tones) **replacing the one present in memory.**

- **Save Lib to File (2048 Tones-Banks A-P)**: save to file the currently selected library (Lib1 or Lib2, … , or Lib8) containing 2048 ZEN-Core Tones - File extension .b67 - file size 5.3 MByte
- **Load Lib from File (2048 Tones-Banks A-P)**: load from file (*.b67) the library containing 2048 ZEN-Core tones **replacing the one (Lib1, or Lib2, ... or Lib8) currently selected.**

- **Save Bank to File**: save on file the single bank (A, or B, …, or P) currently selected, containing 256 ZEN-Core Tones - File extension .syx - file size 337 KByte
- **Load Bank/Clipboard from File**: load from file a single bank containing 256 ZEN-Core Tones **replacing the one (A, or B, ... or P) currently selected.**
  It is also possible to load a file containing clipboard data (No. of Tones variable from 1 to 48): in this case the first Tones (from 1 to 48 max) of the currently selected bank (A-P) will be replaced

It is also possible to save on file (or load from file) a **single tone ZEN-Core**: <u>**it is important to note that in this case the behavior of the operation is different as the library is NOT involved but the zen-core tone currently present on the synth on Part 1.**</u>

To save (eventually) the sound in the library, proceed as in the other cases by clicking on "Write Actual Tone To Selected Tone/Bank" (see below)

- **Save Tone to File:** the ZEN-CORE tone present on PART1 is saved to file (if a sound with a different synthesis is present on this part, the file is not saved). The sound is saved in MIDI SysEx format. (*.syx) - Size 2 KByte.
- **Load Tone from File**: the ZEN-CORE tone (*.syx) is loaded from file, transferred to the synth on PART 1 and the ZEN-Core parameters of the tone are updated in the editor. (a sound with ZEN-Core synthesis must already be present on Part1)
  The Load and Save of a single Tone can be done in the same way from the menu on the right (main screen)

 or through the menus in the Librarian section.

Editing a ZEN-Core Tone and storing it in the library

To edit a ZEN-Core sound and store it in the library, proceed as follows:

- load in the editor the **ZEN-Core tone present on Part1** of the synth by **clicking** on
- possible tone editing

- inside **LIBRARIAN** **select the library location where to store the sound** by single click on the tone or the possible alternative methods (see below): in the example Tone N.3 - Lib1 - Bank C)
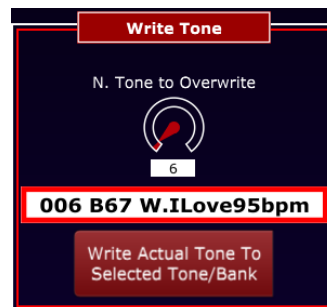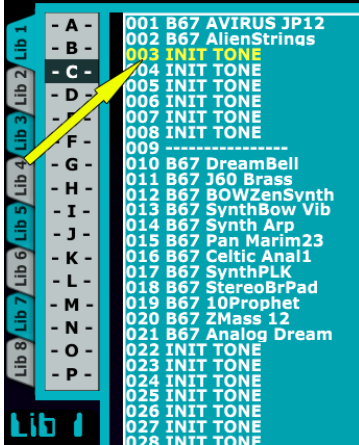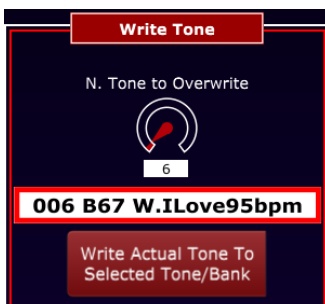

- Click your "**Write Actual Tone To Selected Tone/Bank**" (the operation lasts a fraction of a second, during which, obviously, you must not modify the sound inside the synth)
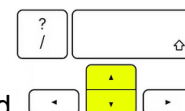
Please note that to select the location where to store the sound, as an alternative to single clicking on the desired
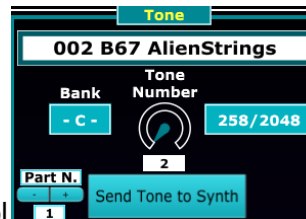
tone, it is possible to operate on the "Tone Number" control , on the "N.Tone to Overwrite"

control , or use the Up-Down arrow keys on the keyboard

Transferring a ZEN-Core Tone from the library to Synth

It is possible to transfer a ZEN-core sound from the library to any part of the synth (part 1-4 per Jupiter X/Xm e AX Edge - Part 1-16 per Fantom): **if you want to edit the sound, as already mentioned, Part1 must be used instead.**

As seen previously, to transfer the sounds (librarian->synth), it is necessary to set a sounds with ZEN-Core synthesis on the desired parts, possibly activating the SCENE INIT (click on the red letter I [Scene Edit | I])

To transfer the ZEN-Core tone, you can operate both in the main screen that is always visible (bottom left) and in the Librarian section (click on [LIBRARIAN]) as shown in the following image.
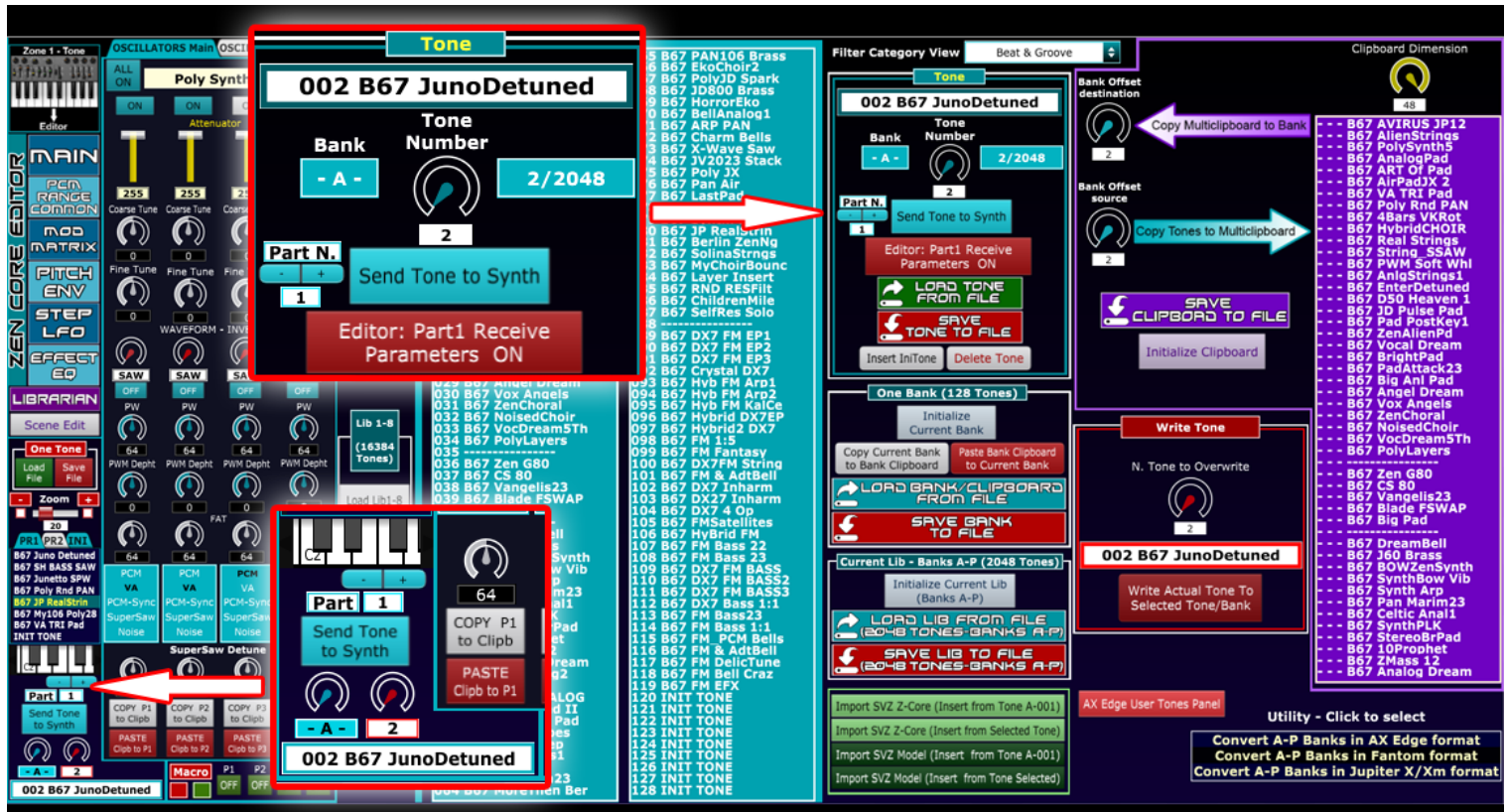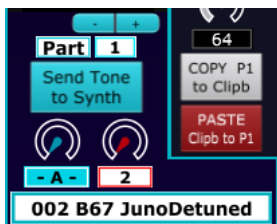

Method 1. Send tone to synth using the controller in the lower left section: proceed with the following steps

- Part selection with + and - (1-4 Ax-Edge and Jupiter-X/Xm - 1-16 Fantom)
- Selection of Bank (A-P) and Tone No. (1-128)
- Click su Send Tone to Synth

If Part 1 is selected, the ZEN-core sound will be transferred from the librarian to the synth and all the editor parameters will be automatically and immediately updated: if **parts 2-16** are selected, only the sound from the library is transferred to the synth. In this case, the higher data transfer speed ensures that you can quickly try out the sounds (**"Zapping"** of the sounds in the library).

It is possible to disable the updating of the editor's Zen-Core parameters and graphics also for Part1 using the appropriate option in the Librarian section (see later): obviously at any time it is possible to update them by clicking on the


Zone 1 - Tone→Editor

From this section, which is always in view, it is not possible to set the n. of library (1-8) and the current one selected in the Librarian section will be used.

<u>**Method 2.**</u> **Send tone to synth using the controller in the Librarian** (click your **LIBRARIAN**): **proceed with the following steps**

- Part selection with + and - (1-4 Ax-Edge and Jupiter-X/Xm - 1-16 Fantom)
- Library (Lib1-8) and Bank (A-P) selection
- **Double click on the tone to transfer**

Alternatively, it is possible to select the tone using the "Tone Number" controller, or using the Up-Down arrow keys
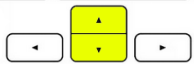
 : to send the tone to the synth you **can click on the "Send Tone to Synth" icon** **or use the Enter key on your keyboard.**

If Part 1 is selected, the ZEN-core sound will be transferred from the librarian to the synth and all the editor parameters will be automatically and immediately updated: if **parts 2-16** are selected, only the sound from the library is transferred to the synth. In this case, the higher data transfer speed ensures that you can quickly try out the sounds (**"Zapping"** of the sounds in the library).

It's possible **disable/enable the automatic updating** of the editor parameters and graphics **also for Part1** by

clicking on the relative icon : obviously you can

update these parameters at any time by clicking on the Zone 1 - Tone→Editor icon

In this way (<u>Receive Parameters OFF - Green</u>) it is also possible for Part1 to speed up the sound transfer (a fraction of a second) for immediate playing of the Zen-Core tone.

MultiClipboard e Bank Clipboard

To organize the tones in the library two types of Clipboard can be used: a **Clipboard with variable size** capable of containing up to 48 tones and a **BANK clipboard** having the size of a Bank (128 Tones)

MultiClipboard

The size is adjustable using the "Clipboard Dimension" control: the names of the tones it contains will be visible accordingly.
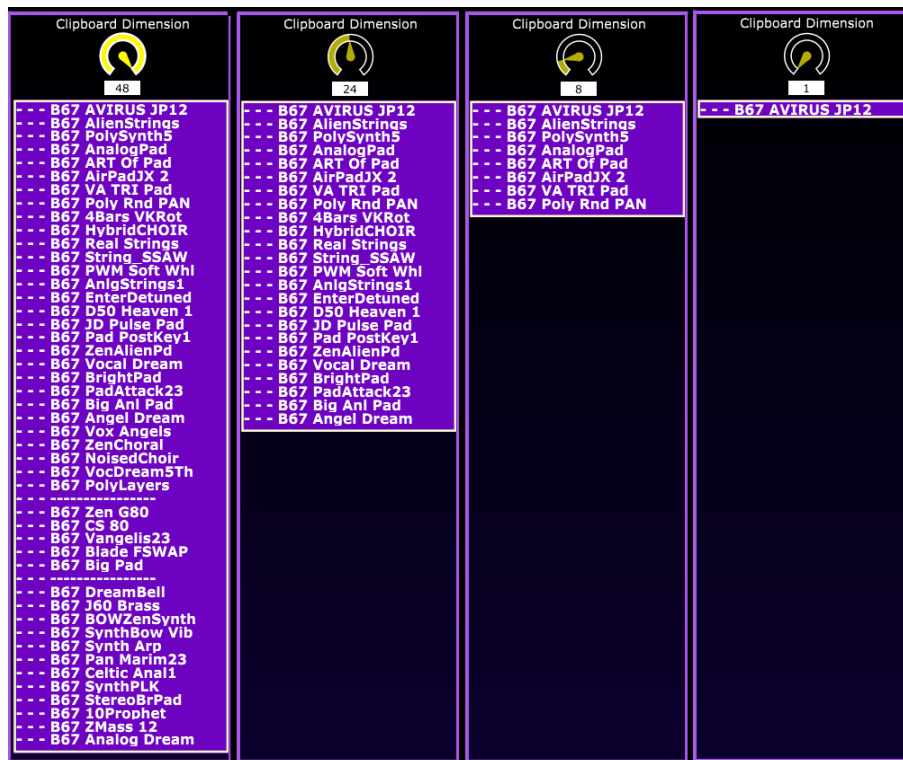
The adjustments and operations possible with the Multiclipboard are:

- **Clipboard Dimension**: you adjust the size of the clipboard which can contain from 1 to 48 Tones (in case of resizing any copied tones remain in the clipboard to be used if necessary)

- Click are ⟵ **Copy Multiclipboard to Bank**: the tones of the Clipboard are copied to the library starting from the "**Bank Offset destination**" tone. This tffset can be set using the relative control or simply by clicking on the tone in the library.
  Care should be taken as **the entire contents of the clipboard are copied to the library** overwriting the sounds of the selected bank and possibly the subsequent ones present in the following bank. For example, if you copy 8 tones starting from tone 125 of BANK A they will be overwritten in tones 125-128 of that bank and tones 1-4 of BANK B

- Click on ⟶ **Copy Tones to Multiclipboard**: the tones of the library are copied to the Clipboard starting from the "**Bank Offset source**" tone. This offset can be set using the relative control or simply by clicking on the tone of the chosen library.

- **Save Clipboard to File**: the contents of the Clipboard (1-48 ZEN-core Tones depending on the size set) are saved on file (*.syx). This file can then be loaded into any
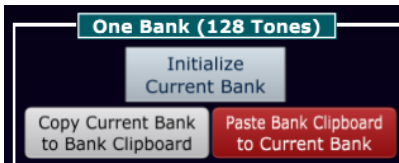
bank by clicking on :
the content of the file (1-48 max ZEN-Core tones), as in
the case of a BANK (128 Tones), will be copied starting
from location 001 of the active bank.
- **Initialize clipboard**: the clipboard is restored with the
default content of 48 INIT TONE

BANK CLIPBOARD

To facilitate the rapid movement of **complete banks** (128 ZEN-Core tones) as an alternative to using the files, it is possible to use the **BANK CLIPBOARD** which, unlike the **MultiClipboard** , does not show the name of the tones and has a fixed size equal to 128 tones (one bank).

Moving operations are performed by copying and pasting from/to the clipboard.

Tone Insert and Delete

For each individual library it is possible to insert and delete tones by clicking on the relative icons.

- **Insert IniTone**: A ZEN-Core INIT tone is inserted starting with the selected tone.
  The operation increases the numbering of all the tones in the library by 1 starting from the insertion point (therefore the list of tones is scrolled downwards): therefore with each insertion the last tone of this library, the N.2048, is lost.
- **Delete Tone:** the selected tone is deleted.
  The operation decreases by 1 the numbering of all the tones in the library starting from the deletion point (therefore there is a scrolling upwards of the list of tones): an INIT tone is therefore added to each delete operation in the last location, N. 2048, of this library.

Filter category

To better identify the sounds in the library, it is possible to select one of the various categories of sounds provided by the ZEN-Core standard through the "Filter Category View" control: a small yellow square will appear next to the sounds belonging to this category.

Library compatibility and conversion

The sound database uses the native MIDI Sysex format: Fantom, Jupiter-X/Xm and AX-Edge handle ZEN-core tone data with a syntax that makes the data incompatible with each other.
To ensure the compatibility of the libraries generated by the 3 software versions (ZENCore_Editor_FA - ZENCore_Editor_AX or ZENCore_Editor_JX) it is possible to load libraries, banks and tones created with one of the three software and convert them into the format recognized by your synth: **in this case after this conversion it will be possible to load and edit these sounds**.
It is also possible to convert your library (e.g. Fantom) into another format (e.g. Jupiter-X/Xm or AX-Edge) and then export it and share the sounds with other users of the software.

To carry out the conversion, just click on one of the three possibilities: operation is guaranteed even in the presence of tones obtained with a Mix of the three synths:
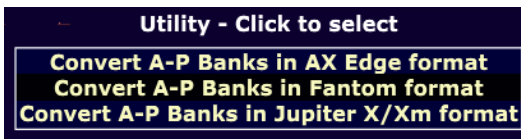
- **Convert A-P Banks in AX-Edge format**: the entire current library is converted into the format compatible with the AX-Edge synth for internal use and/or export to file.
- **Convert A-P Banks in Fantom format**: the entire current library is converted to the format compatible with the Fantom synth (Fantom 0) for internal use and/or export to file.
- **Convert A-P Banks in Jupiter-X/Xm format**: the entire current library is converted to the format compatible with the Jupiter-X/Xm synth for internal use and/or export to file.

Importing ZEN-Core tones and conversion of Model Expansions sounds

All synths compatible with the ZEN-Core standard, Roland Zenology Pro software and ZenBeat's ZC1 player, are able to export the **ZEN-Core User Tone** and the **User Tones obtained with the various Model Expansions:** the export of these collections produces files that use the .SVZ format.

Through a proprietary conversion algorithm it is possible to load and convert the user tones (*.svz files) into the format used by the software which is based on SysEx so as to load entire collections of sounds exported from the synths into the library.
This is possible thanks to a series of **ZEN-Core→MIDI SysEx** Tone conversion routines

For conversion of Model Expansions User Tone→Tone ZEN-Core equivalent, the USER TONES of the following Model Expansions are supported**:**
- **JUNO-106**
- **JX-8P**
- **JUPITER-8**
- **SH-101**
- **Juno-60**
- **JUNO-X engine**
- **JUPITER-X/XM engine**

.svz files containing **collections of up to 2048 tones** can be converted: even files that contain a single tone or a mix of sounds with synthesis are converted without problems **ZEN-Core e Model Expansions.**

<u>**IMPORTANT: *.SDZ sound banks (those that can be purchased via Roland Cloud Manager) are NOT supported as they are encrypted and protected by license.**</u>

Import ZEN-Core User Tone:

- **Import SVZ Z-Core (Insert from Tone A-001):** the *.svz file containing the ZEN-Core sound bank is loaded and inserted into the current Bank starting from location A001 (the first slot of the bank)
- **Import SVZ Z-Core (Insert from Selected Tone):** the *.svz file containing the ZEN-Core sound bank is loaded and inserted into the current Bank starting from the selected location (Tone Number control or click on the list)
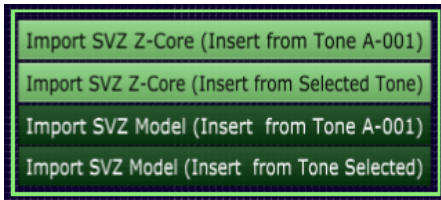
Import User Tones of supported Model Expansions:

- **Import SVZ Model (Insert from Tone A-001):** the *.svz file containing the bank of sounds with Model Expansions synthesis is loaded, converted and inserted in the current Bank starting from location A001 (the first slot of the bank)
- **Import SVZ Model (Insert from Selected Tone):** the *.svz file containing the bank of sounds with Model Expansions synthesis is loaded, converted and inserted in the current Bank starting from the selected location (Tone Number control or click on the list)

Using **"Import SVZ Model"** with banks that contain a mix between the two types of tones, **will simultaneously convert ZEN-Core user tones and user tones with Model Expansion sounds .**

Initialization of the Database and its components

It is possible to initialize the entire database (16384 ZEN-core tones), the single library (2048 ZEN-core tones) and the single bank (128 ZEN-core tones) by clicking on the relative icons. Its contents are restored with INIT TONE

Scene editing

The software, designed mainly as a ZEN-CORE editor and librarian, also has a section dedicated to scene editing.
Unlike the ZEN-CORE tone editing sections, which are identical across all three versions of the software, the scene editing section is customized for the corresponding synth family: Jupiter-X/Xm, AX-Edge, and Fantom/Fantom 0.
This depends on the many differences in the implementation of the scenes in the supported synths.

The premise is that, **unlike ZEN-Core tone editing**, where all the parameters of the standard are implemented, **in scene editing only a part of the available parameters have been inserted for editing.**
<u>There is no librarian functionality available for scenes.</u>

For all supported synths and for the various parts, is available the selection of sounds (divided by presets, EXZ, USER and Models)**, all the offset parameters (**Cutoff, Resonance, ADSR, ...) **and the complete editing of the Chorus, Rev and Delay effects, with the related parameters**.

To be observed as:
- **AX-Edge** has an additional page where user **tones can be stored on the synth**;
- **Jupiter X/Xm,** due to the many parameters available, it has a **section organized on several TAB** which includes, among other things, **i-Arp editing;**
- **Fantom** instead has a **limitation in scene editing that is only available for parts 1-4**

Obviously all scene parameters not available in the editor can be programmed in parallel on the synth.

Scene Editor - Fantom

The following section is present only in **ZENCore_Editor_FA software that is available for Fantom 6-7-8 and Fantom 06-07-08 synths**

To enter the scene editor section, click on the section on the left [Scene Edit] [I]

The current scene of synth can be recalled by clicking on at the top [Read Scene from Fantom] :this will recall and update the on-screen parameters of parts 1-4 and the general scene parameters. These include the scene Volume (Level), the "Current Zone" active on Fantom, the send of the 4 parts to the effects and all the parameters of the Chorus and Reverb effects of the scene.

It is possible to switch the scene editing between software and Synth: every time you work on the synth, you need to click on **"Read Scene from Fantom"** to update the editor parameters

As for the Zen-Core section, it is also possible to edit the name (16 characters) of the scene.
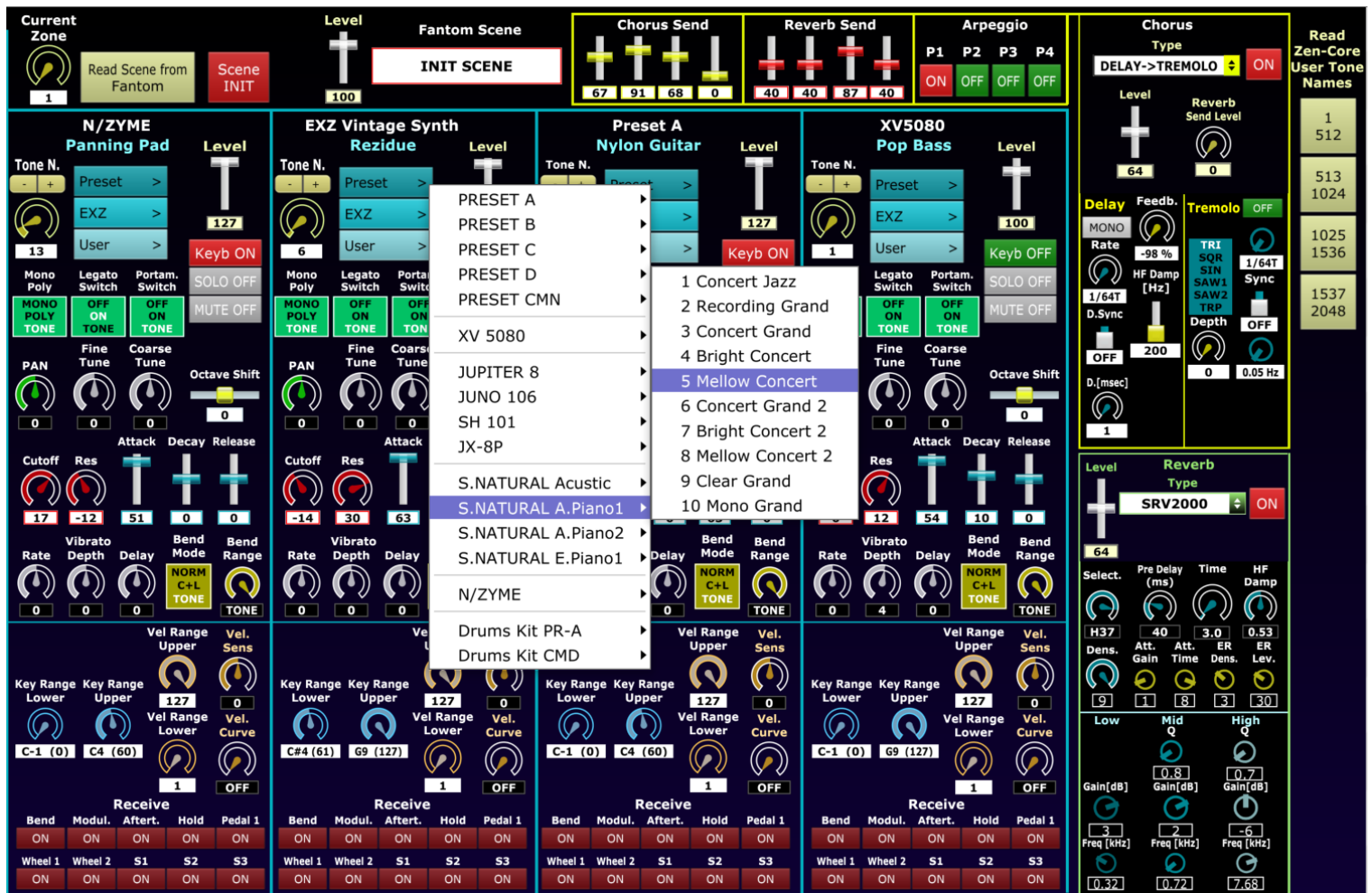
As seen previously by clicking on [Scene INIT] you recall an INIT scene where tones with ZEN-Core synthesis are active on all parts, useful for editing sounds and using the library.

To select the tones of the parts, by clicking on Presets - EXZ or User, you access the list of sounds that can be used in the synth with a menu.
The software does not check the presence or not of the optional expansions (EXZ, N/Zyme,..) which are always accessible. If they are not present on the synth, obviously no sound is produced.
Below is a screen showing the hierarchy in which the sounds are divided, starting from Presets, EXZ and User.

For 2048 ZEN-Core User Tones, the software uses the generic name XXXX Z-Core User Tone at startup

to update with the names of the user tones present in Fantom, just click on the 4 yellow icons on the right of the screen: the transfer of the names from the Fantom→ Editor takes about 12 seconds for each of the 4 groups of 512 tones.

At the end of the update, the names of the 2048 ZEN-Core User Tones on the synth will be indicated.

It is not possible to obtain the names of the 1024 Model user tones, as, in the current state of the firmware, these names are not accessible via MIDI Sysex.
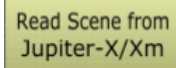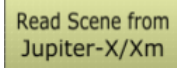
Scene Editor - Jupiter X-Xm

The following section is present only in **ZENCore_Editor_JX software that is available for Jupiter-X and Jupiter-Xm synths**

To enter the scene editor section, click on the section on the left **Scene Edit** I

**The current scene can be recalled by clicking on at the top** **Read Scene from Jupiter-X/Xm** : the on-screen parameters of parts 1-5, and the general scene parameters will be recalled and updated. Among these there are scene Volume (Level), Tempo, Send of the 5 parts to the effects and all the Chorus, Delay, Reverb and Drive parameters of the scene.

It is possible to switch the scene editing between software and Synth: every time you work on the synth, you need to click on **"Read Scene from Jupiter X/Xm"**.

As for the Zen-Core section, it is also possible to edit the name (16 characters) of the scene.
Below is an image of the main section (TAB Scene Parts)
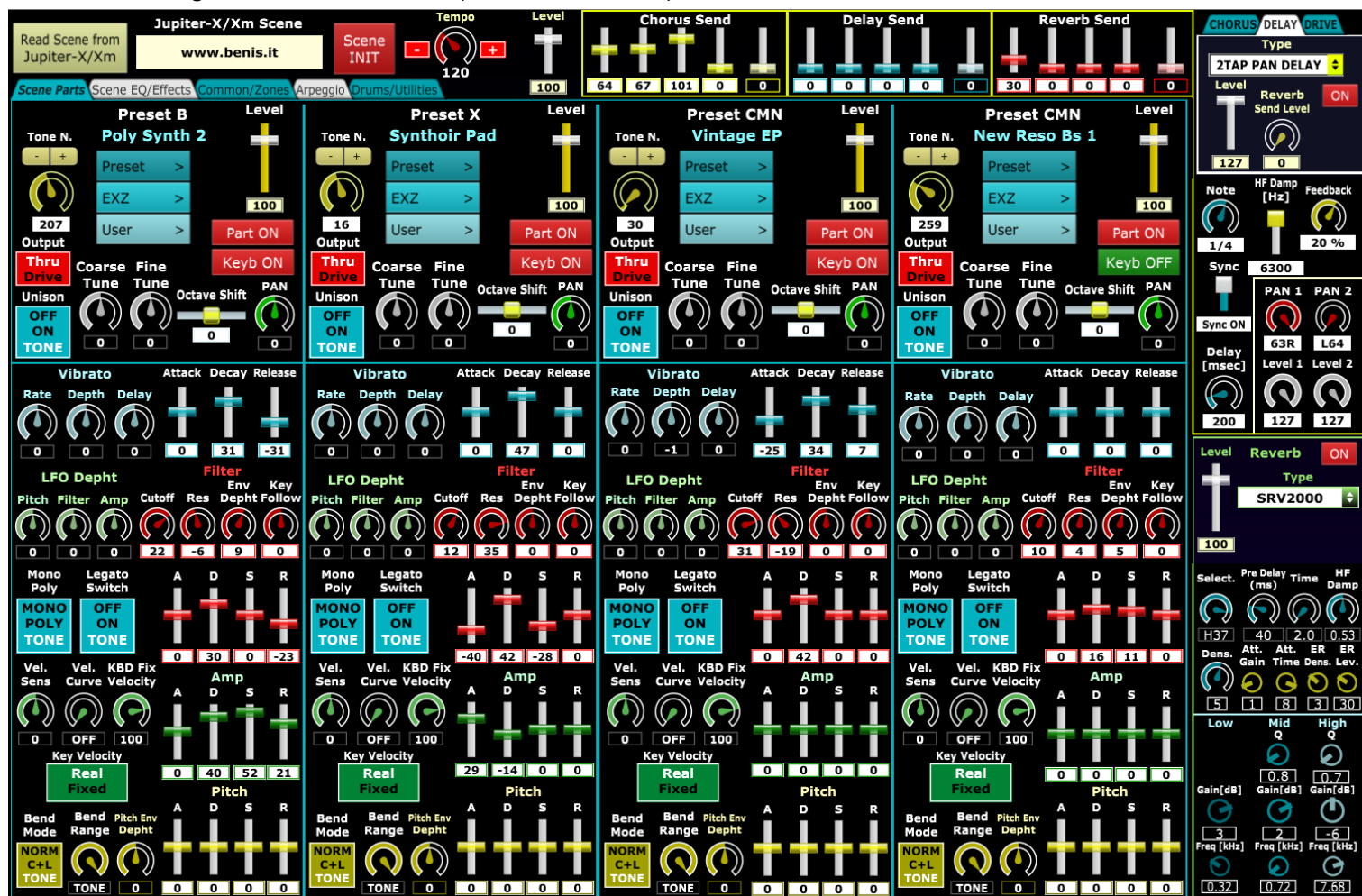
As seen previously by clicking on **Scene INIT** you recall an INIT scene where tones with ZEN-Core synthesis are active on all parts, useful for editing sounds and using the library.

For tempo selection, given the possibility of using non-integer BPM values **Tempo 101.91** there are two icons in red (+ and -) to set the time to the lower or higher integer value (101 and 102 in the example)

To select the tones of the parts, by clicking on Presets - EXZ or User, you access the list of sounds that can be used in the synth with a menu (see the images of the manual section of the analogous section for Fantom).

The software does not check the presence or otherwise of the free or paid optional libraries (EXZ, JD-800,..) which are always accessible. If they are not present on the synth, obviously no sound is produced.
For 512 ZEN-Core User Tones, the software used at startup the generic name XXXX Click Update Names
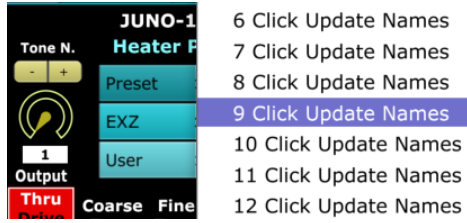
to update with the names of the User Tones of the synth just click in the Drums/Utilities TAB on the relative red icon:

Below are the images relating to the other 4 sections that can be activated via the TABs: Scene EQ/Effects, Common/Zones, Arpeggio, Drums/Utilities

128

| 100 | | 64 | 67 | 101 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | | 30 | 0 | 0 | 0 | | 0 |

Scene EQ/Effects

	PART 1		PART 2		PART 3		PART 4		DRUMS
EQ	**ON**	EQ	**ON**	EQ	OFF	EQ	**ON**	EQ	**ON**

Input Gain [dB]

PART 1: 3 | PART 2: 2 | PART 3: 0 | PART 4: 0 | DRUMS: 0

Mid Q

PART 1: 2.0 | PART 2: 1.0 | PART 3: 1.0 | PART 4: 1.0 | DRUMS: 1.0

Low Gain [dB] / Mid Gain [dB] / High Gain [dB]

	Low	Mid	High
PART 1	-4	2	7
PART 2	0	0	3
PART 3	0	0	2
PART 4	-4	-4	0
DRUMS	0	0	0

Low Freq. [Hz] / Mid Freq. [Hz] / High Freq. [Hz]

	Low	Mid	High
PART 1	200	2500	8000
PART 2	200	2500	4000
PART 3	200	1600	10000
PART 4	400	200	4000
DRUMS	200	1000	2000

Follow Tone MFX

PART 1: OFF / **ON** | PART 2: OFF / **ON** | PART 3: OFF / **ON** | PART 4: OFF / **ON** | DRUMS: OFF / **ON**

MFX

		MFX
PART 1	ON	72 CE-1
PART 2	ON	00 Thru
PART 3	ON	17 Ring Modulator
PART 4	OFF	00 Thru
DRUMS	ON	00 Thru

Chorus Send / Reverb Send

	Chorus	Reverb
PART 1	127	127
PART 2	127	127
PART 3	87	91
PART 4	127	127
DRUMS	0	0

128

| 100 | | 64 | 67 | 101 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | | 30 | 0 | 0 | 0 | | 0 |

COMMON

SLIDER 1 FUNCTION	SLIDER 2 FUNCTION
ATTAK:CC73	RELES:CC72

Control Source 1: MOD:CC01
Control Source 2: AFT
Control Source 3: BRETH:CC02
Control Source 4: FOOT:CC04

Current Part: P1 / P2 / P3 / P4 / R

S1 BUTTON FUNCTION	S2 BUTTON FUNCTION	S3 BUTTON FUNCTION
DLY SW	REV SW	HOLD1:CC64
MODE	MODE	MODE
LATCH / MOMENTARY	LATCH / MOMENTARY	LATCH / MOMENTARY

HOLD PEDAL FUNCTION: HOLD1:CC64
CTRL PEDAL FUNCTION: VOL:CC07

POLARITY: STANDARD / REVERSE

Part Crossfade Position: C-1 (0)

Part Receive

	PART 1	PART 2	PART 3	PART 4	DRUMS
S1 Button	ON	ON	ON	ON	ON
S2 Button	ON	ON	ON	OFF	ON
S3 Button	ON	ON	ON	ON	ON

		PART 1	PART 2	PART 3	PART 4	DRUMS
Slider 1		OFF	ON	ON	ON	OFF
Hold Pedal		ON	ON	ON	ON	ON
Mod		ON	OFF	ON	OFF	ON
Slider 2		ON	ON	ON	ON	ON
Ctrl Pedal		OFF	OFF	OFF	OFF	OFF
P.Bend		OFF	OFF	OFF	ON	ON

Voice Assign: PART 1–4: SINGLE / LIMIT / FULL

Portamento (Switch / Time): PART 1–4: OFF / ON, TONE

Voice Reserve: PART 1: 0 | PART 2: 0 | PART 3: 0 | PART 4: 0 | DRUMS: 0

Key Range Lower / Key Range Upper / Key Fade Upper / Key Fade Lower

	Lower	Upper	Fade Upper	Fade Lower
PART 1	C-1 (0)	G9 (127)	0	0
PART 2	A#2 (46)	C5 (72)	0	0
PART 3	C-1 (0)	G9 (127)	0	0
PART 4	C-1 (0)	G9 (127)	0	0
DRUMS	C-1 (0)	G9 (127)	0	0

Vel Range Lower / Vel Range Upper / Vel Fade Upper / Vel Fade Lower

	Lower	Upper	Fade Upper	Fade Lower
PART 1	1	127	0	0
PART 2	1	127	0	0
PART 3	1	127	0	0
PART 4	1	127	0	0
DRUMS	1	127	0	0

Arpeggio Common

Arpeggio ON/OFF
ON

Hold
OFF

Keys Detect ON | **Beat Detect** ON

I-Arpeggio Type
1 UP 16th

Rhythm Type
9 I-BEAT [0+3]

Beat Detect Sensibility
5

G-Shuffle Rate
50

Duration (%)
0

PART 1
Switch ON
Mode I-ARP / ARP / STEP
Key Sync ON
Hold ON

I-ARP Style Part PART 1 | **Style Type** Current
ARP Style 001:SIMPLE | **Variation** 4

Motif: UP / DOWN / UP&DOWN / RAMDOM / NOTE ORDER / RHYMT / PHRASE / AUTO
Grid Note: 4 TH / 8 TH / 8 TH_3 / 16 TH / 16 TH_3 / 32 ND

Durat.% 65 | **Transpose** 0 | **Oct. Range** 1
Velocity REAL | **Offset Velocity** 0
Shuffle Resolution 16TH / 8TH | **Shuffle Rate %** 50
Grid Lenght 16 | **Grid Sync** ON | **Grid Offset** 0
Probability Style 00:OFF | **Manual Auto** | **Amount** 50
Key Range Lower C-1 (0) | **Key Range Upper** G9 (127)

PART 2
Switch ON
Mode I-ARP / ARP / STEP
Key Sync ON
Hold ON

I-ARP Style Part PART 2 | **Style Type** Current
ARP Style 001:SIMPLE | **Variation** 4

Motif: UP / DOWN / UP&DOWN / RAMDOM / NOTE ORDER / RHYMT / PHRASE / AUTO
Grid Note: 4 TH / 8 TH / 8 TH_3 / 16 TH / 16 TH_3 / 32 ND

Durat.% 65 | **Transpose** 0 | **Oct. Range** 1
Velocity REAL | **Offset Velocity** 0
Shuffle Resolution 16TH / 8TH | **Shuffle Rate %** 50
Grid Lenght 16 | **Grid Sync** ON | **Grid Offset** 0
Probability Style 00:OFF | **Manual Auto** | **Amount** 50
Key Range Lower C-1 (0) | **Key Range Octave** OFF

PART 3
Switch ON
Mode I-ARP / ARP / STEP
Key Sync ON
Hold ON

I-ARP Style Part PART 3 | **Style Type** Current
ARP Style 001:SIMPLE | **Variation** 4

Motif: UP / DOWN / UP&DOWN / RAMDOM / NOTE ORDER / RHYMT / PHRASE / AUTO
Grid Note: 4 TH / 8 TH / 8 TH_3 / 16 TH / 16 TH_3 / 32 ND

Durat.% 65 | **Transpose** 0 | **Oct. Range** 1
Velocity REAL | **Offset Velocity** 0
Shuffle Resolution 16TH / 8TH | **Shuffle Rate %** 50
Grid Lenght 16 | **Grid Sync** ON | **Grid Offset** 0
Probability Style 00:OFF | **Manual Auto** | **Amount** 50
Key Range Lower C-1 (0) | **Key Range Octave** OFF

PART 4
Switch ON
Mode I-ARP / ARP / STEP
Key Sync ON
Hold ON

I-ARP Style Part PART 4 | **Style Type** Current
ARP Style 001:SIMPLE | **Variation** 4

Motif: UP / DOWN / UP&DOWN / RAMDOM / NOTE ORDER / RHYMT / PHRASE / AUTO
Grid Note: 4 TH / 8 TH / 8 TH_3 / 16 TH / 16 TH_3 / 32 ND

Durat.% 65 | **Transpose** 0 | **Oct. Range** 1
Velocity REAL | **Offset Velocity** 0
Shuffle Resolution 16TH / 8TH | **Shuffle Rate %** 50
Grid Lenght 16 | **Grid Sync** ON | **Grid Offset** 0
Probability Style 00:OFF | **Manual Auto** | **Amount** 50
Key Range Lower C-1 (0) | **Key Range Octave** OFF

DRUMS
Switch ON
Mode I-ARP / ARP / STEP
Key Sync OFF
Hold ON

I-ARP Style Part PART R | **Rhythm Type** Current
ARP Style 001:SIMPLE | **Variation** 1

Motif: UP / DOWN / UP&DOWN / RAMDOM / NOTE ORDER / RHYMT / PHRASE / AUTO
Grid Note: 4 TH / 8 TH / 8 TH_3 / 16 TH / 16 TH_3 / 32 ND

Durat.% 100 | **Transpose** 0 | **Oct. Range** 0
Velocity 100 | **Offset Velocity** 0
Shuffle Resolution 16TH / 8TH | **Shuffle Rate %** 50
Grid Lenght 64 | **Grid Sync** ON | **Grid Offset** 0
Probability Style 00:OFF | **Manual Auto** | **Amount** 50
Key Range Lower C-1 (0) | **Key Range Octave** OFF

Tone N. - + 54

CMN DRUM
CR-78
Rhythm Kit >

Level 100

Update Jupiter-X/XM User Tone Names

Output Thru / Drive

Part ON
Keyb OFF

Coarse Tune 0 | **Fine Tune** 0 | **Octave Shift** 0 | **PAN** 0

Cutoff 0 | **Res** 0 | **Attack** 0 | **Decay** 0 | **Release** 0

Key Velocity Real / Fixed | **Vel. Sens** 0 | **KBD Fix Velocity** 100 | **Vel. Curve** OFF

Program Editor - AX-Edge

The following section is present only in **ZENCore_Editor_AX software that is available for AX-Edge synth**

To enter in the performance editor section, click on the left [Scene Edit I] (the name SCENE is kept in analogy to the editors of the other synths)

The current performance can be recalled by clicking on at the top left [Read Program from AX Edge]: the on-screen parameters of parts 1-5, and the general program parameters will be recalled and updated. Among these there are Program Volume (Level), Tempo, Send of the 4 parts to the effects and all the Chorus and Reverb parameters of the program.

It is possible to alternate the editing of the performances between the software and the Synth: every time you work on the synth, you need to click on to update the editor parameters **"Read Program from AX-Edge"**.

As for the Zen-Core section, it is also possible to edit the name (16 characters) of the scene.
Below is an image of the main section (TAB Program Parts)
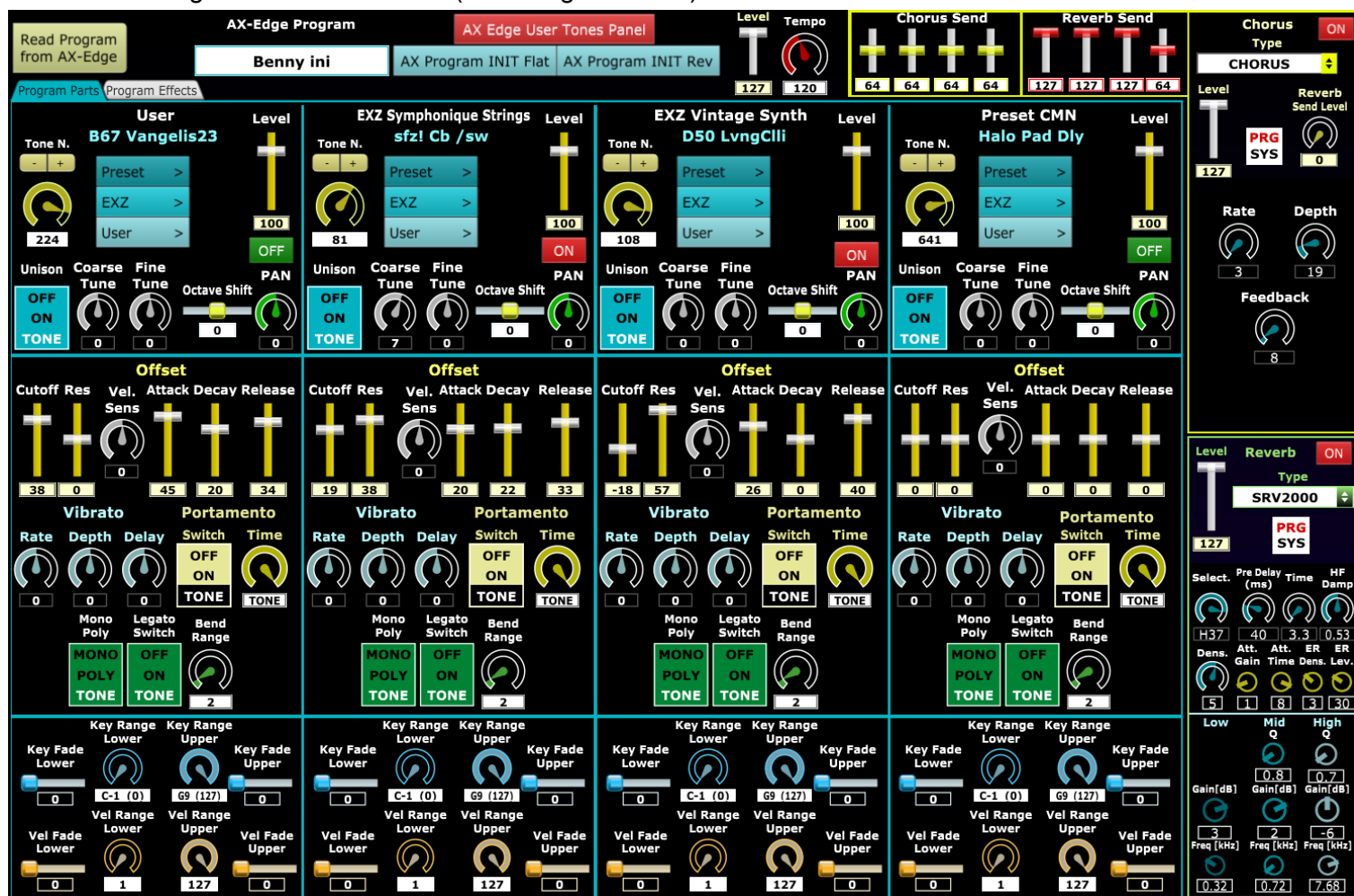
As seen previously by clicking on the icons [AX Program INIT Flat | AX Program INIT Rev] an INIT scene is recalled in the version with and without reverb, where only PART1 is active: this makes editing the sounds and using the library easier.

To select the tones of the parts, by clicking on Presets - EXZ or User, you access the list of sounds that can be used in the synth with a menu (see the images of the manual section of the analogous section for Fantom).

The software does not check the presence or otherwise of the EXZ optional libraries which are always accessible. If they are not present on the synth, which can load a maximum of 2, obviously no sound is produced.

For 256 ZEN-Core User Tones, the software uses the generic name XXXX Click Update Names at startup
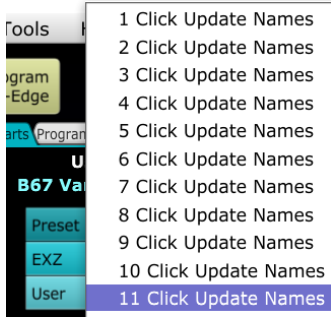
to update with the names of the User Tones present on the synth, just click on the icon AX Edge User Tones Panel which will open the Zen-Core User Presets section.

In this screen, just click on the top right

The performance editing section is divided, as seen, into 2 TAB: in the second tab it is possible to program the EQ of the 4 Parts, select the IFX Program and modify the parameters of Arpeggio.
The image of this TAB follows
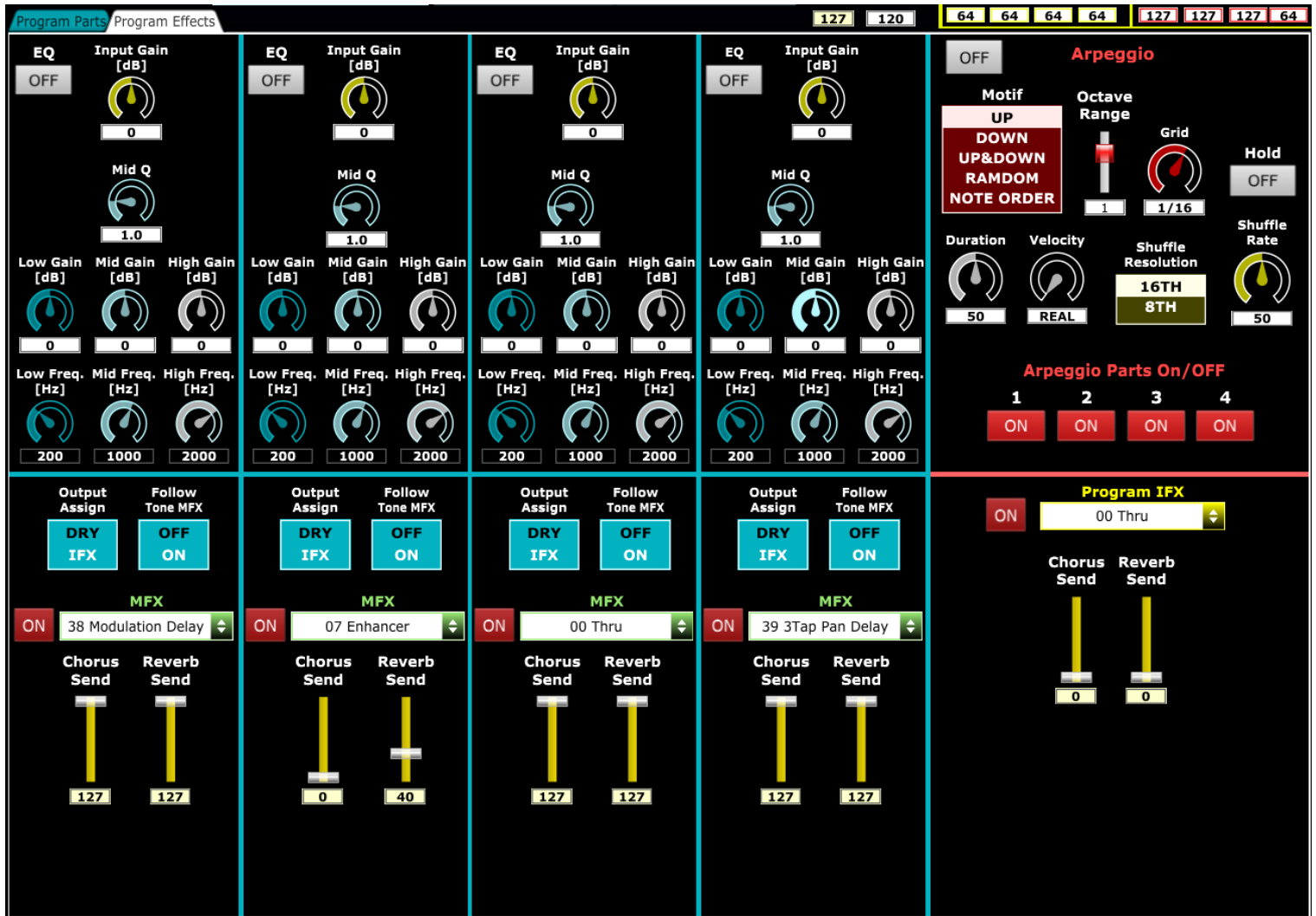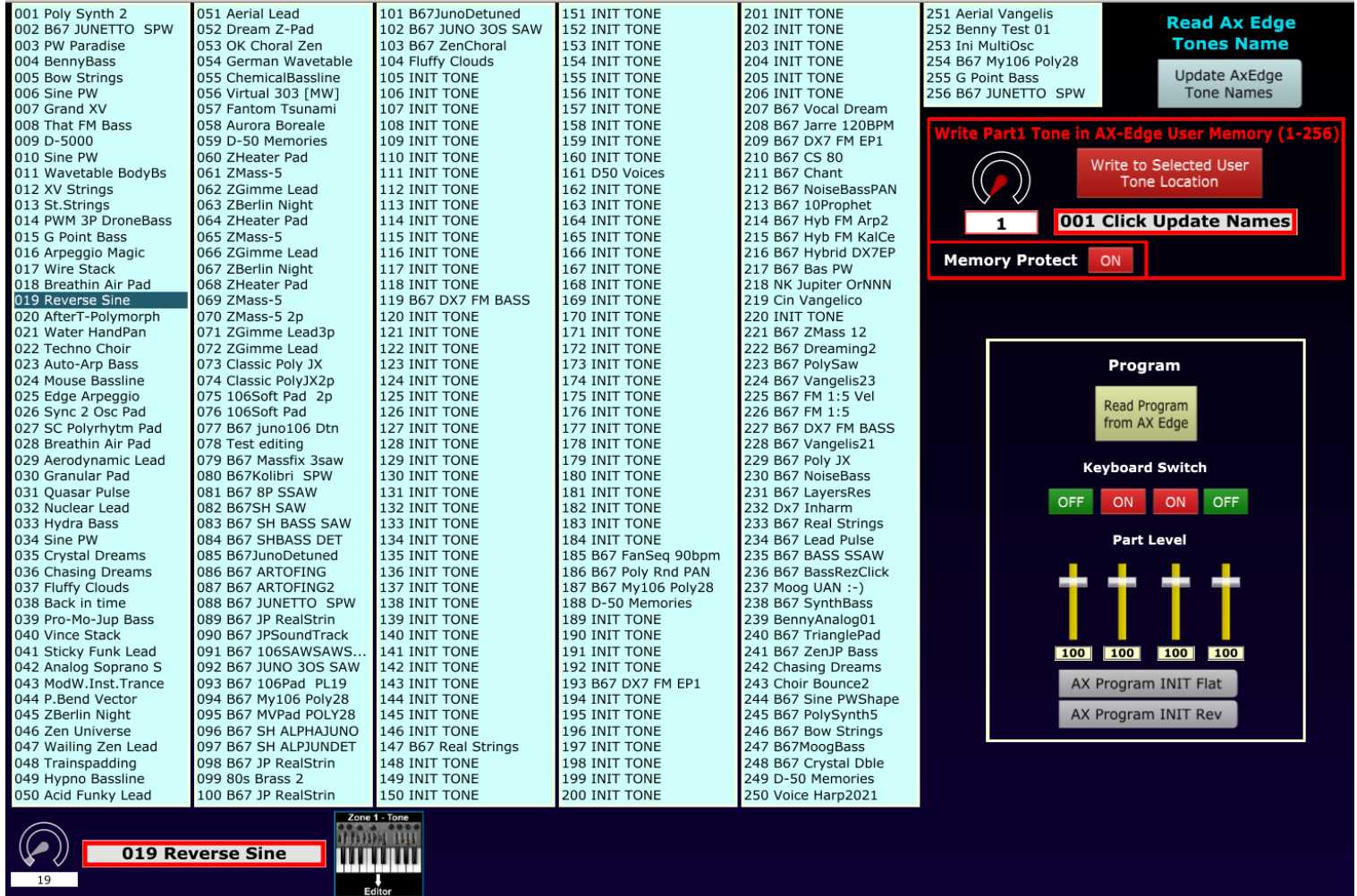
AX-Edge: User Tones Section

Ax-Edge editor **has a section dedicated to the 256 User Tones** in which, in addition to displaying their names, it is possible to store the tones modified or loaded from the library **directly on the AX-Edge**.

To do this, always starting from the performance editing section (click on the left menu on [Scene Edit **I**]), click on

[AX Edge User Tones Panel]

This takes you to the following screen.

The names of the 256 user tones are visible in the 6 columns (to update them, as seen, just click on [Read Ax Edge Tones Name / Update AxEdge Tone Names])

By clicking on these names, or scrolling with the Up-Down arrow keys [arrow keys] **the chosen sound**, via program Change, i**s selected on Part1**
<u>**Be careful when using this "single click" option**</u>: by selecting a user sound in this way, any unsave tone editing will be lost.

To store a sound (modified or loaded via the library) on one of the 256 memory locations of the AX-Edge you need to:
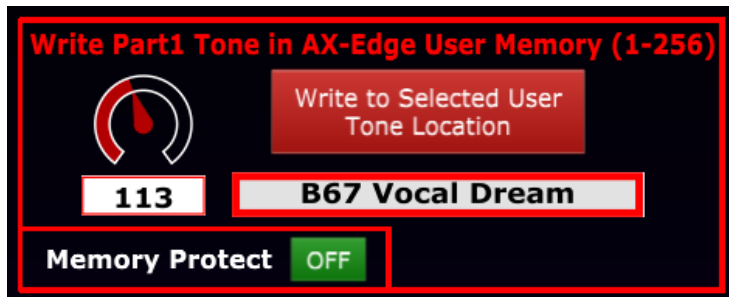
- Set **Memory Protect=OFF**
- **Select the memory location using the numerical control** (1-256) where to store the Zen-Core tone
- Click on "**Write to Selected User Tone Location**" icon

It is important NOT to select the memory location by clicking on the list name, since, as seen, this operation replaces the tone present with the selected user tone.
The selection of the synth memory location number to write must be done using the numerical control.
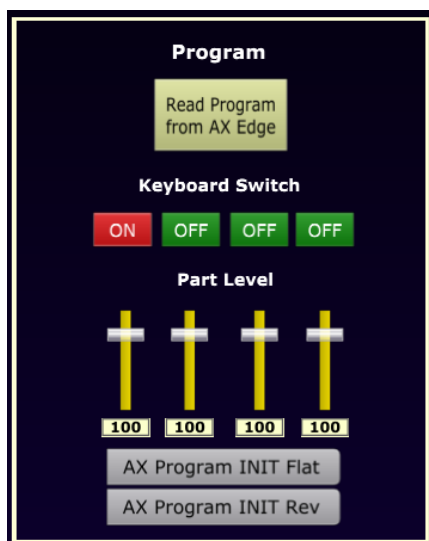
The section dedicated to AX-Edge User Tones has some controls on the right with which to activate and deactivate the various parts, adjust levels, read the current program and load INI presets.

These controls are duplicates of those present in the program editing section and are inserted to allow rapid editing operations also in the User Tone section.

Software reset

The software, as seen, is portable: it can therefore be copied and run (double click) from any folder.
The program always remembers the settings of the previous session and for this feature stores some data in a hidden folder.
If you want to reset the software by deleting the temporary data from the last session, proceed by following the following steps.

PC Version

The file to be deleted are present in **C:\Users\XX_User_XX\AppData\Roaming\ZenCore Editor** folder
Proceed with the following steps

- Click on File Explorer
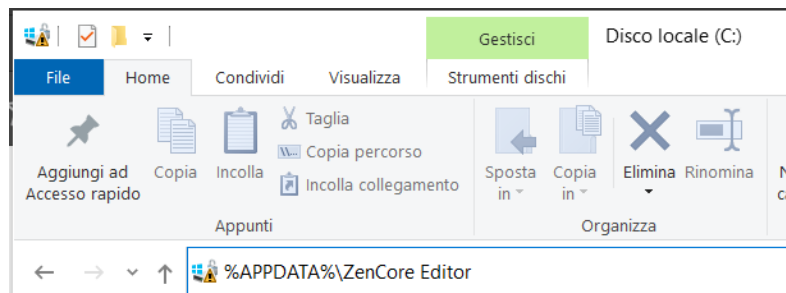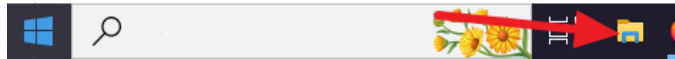
- Enter **%APPDATA%\ZenCore Editor**
- delete all files and the **8.pMIkU.ZDULF** Folder (or delete the entire folder ZenCore Editor)
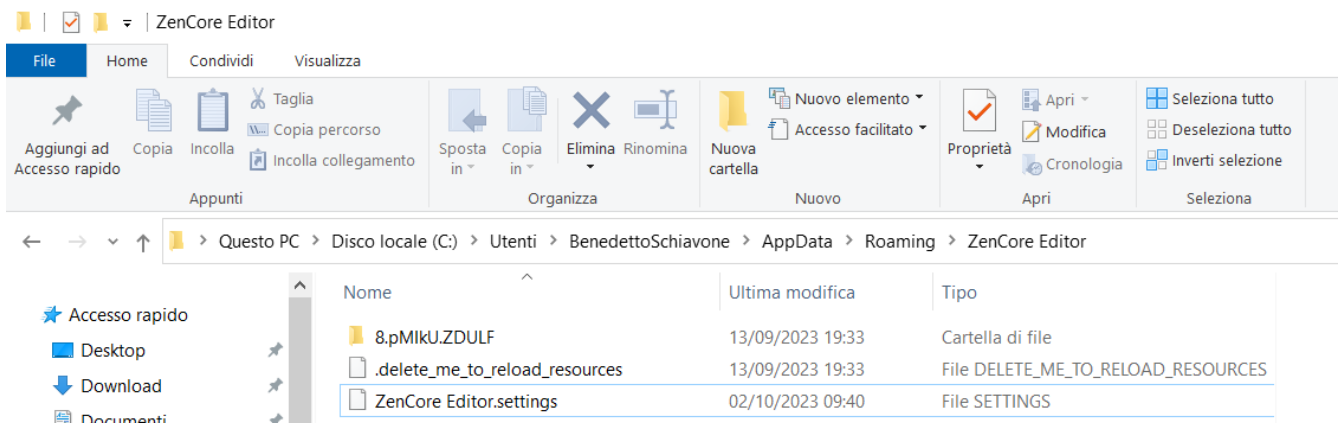
MAC Version

The files to be deleted are present in the **disk:\users\YOUR_USERNAME\Library\Preferences\ZenCore Editor** folder
Proceed with the following steps.

- Turn on hidden files: Open the Finder Finder and press the keys
  Command + Shift + . (the period key)

- reach the **disk:\users\YOUR_USERNAME\Libreria\Preferences** folder

- Delete **ZenCore Editor** folder (right click - move to trash)