

User Manual

Lab4Music

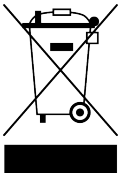
Rev. 1
firmware 2.09

Thank you for purchasing SIPARIOX.
With a wish that can accompany you in the music and in time.
Lab4Music Staff



SAFETY INFORMATION

Do not open the instrument.
Any unauthorized opening will void the warranty.
Use only standard USB power supplies or a common USB socket for PC. Do not wet the device, do not immerse in water.



WEEE DISPOSAL

This product should be disposed of in an appropriate collection point.
Do not dispose of with household waste.

CE

DECLARATION OF CONFORMITY

the undersigned eng. Christian Pasin

DECLARES

that the product SIPARIOX is in conformity with the provisions of the following harmonized reference rules and european directives:

EN 61000-6-1	2007_01
EN 61000-6-3	2007_01+A1:2013
2014/30/UE	electromagnetic compatibility
2011/65/UE	RoHS 2

Peschiera del Garda, 21/12/2020

ing. Christian Pasin



FCC INFORMATION (U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

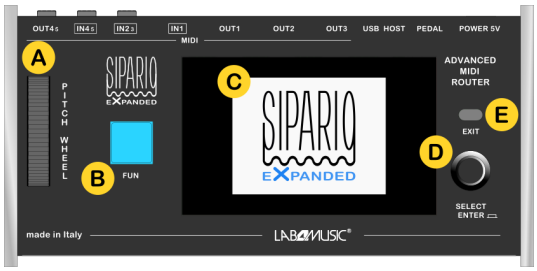
Unauthorized changes or modification to this system can void the userfis authority to operate this equipment.

DECLARATION OF CONFORMITY
Compliance Information Statement

Unique Identifier:	SIPARIOX
Responsible Party:	eng. Christian Pasin (Lab4Music) via Madonnina, 2 37019, Peschiera del Garda Verona Italy
Contact informations:	sipario@lab4music.it

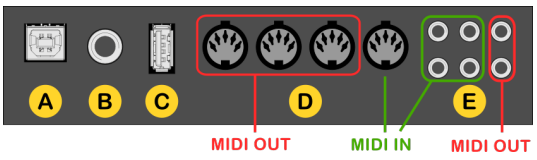
Front panel

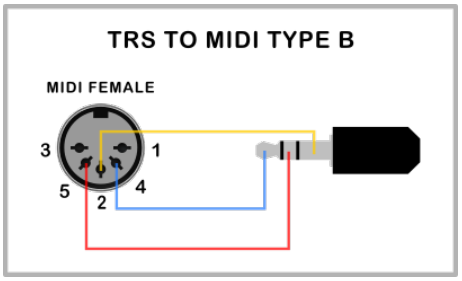
A: *pitch wheel* by which send MIDI PITCH to devices (typically used to play solo parts like lead sounds).
B: programmable FUN backlit button, the default use is to move through the performances within a scene.
C: display touch 320 x 240.
D: rotary encoder for selection by rotation and confirmation by pressure.
E: exit button used to return from a screen or deny an operation.



Rear panel

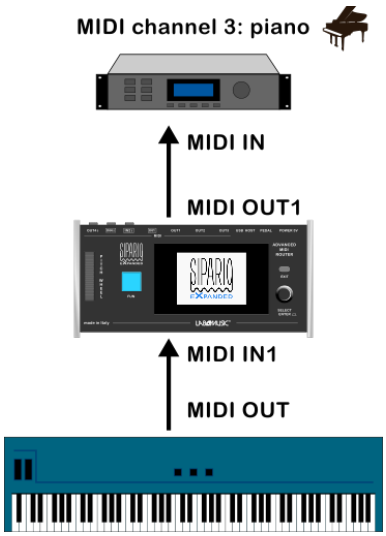
A: USB port used for POWER ONLY +5V. Connect the device to a USB PC port type A or an alternative to a standard USB power adapter.
B: Input jack for pedal on/off type.
C: USB port used for updating firmware, for saving / restoring the scenes, and for send and receive MIDI data, HUB 2.0 support up to 4 ports.
D: MIDI IN/OUT on ports classic DIN format.
E: MIDI IN/OUT on TRS mini jack TYPE-B connectors, see below the PIN-OUT of the electrical connection.



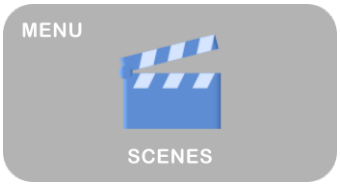


Let's start

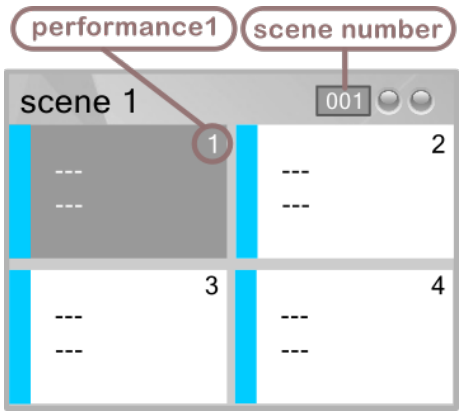
Connect the MIDI OUT port of a master keyboard to the input MIDI IN1 of SIPARIOX. Connect the output MIDI OUT1 of SIPARIOX to the input MIDI IN of a sound source like expander or keyboard.



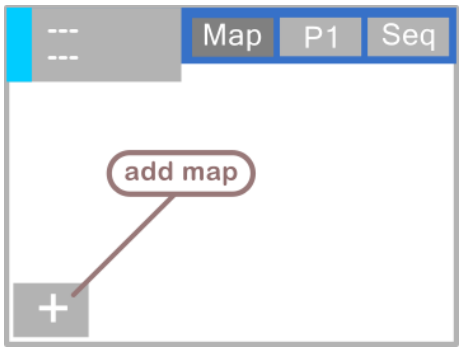
Set a sound to the sound source, for example a piano, so that it responds to MIDI channel 3. Select, using the encoder, the menu SCENES.



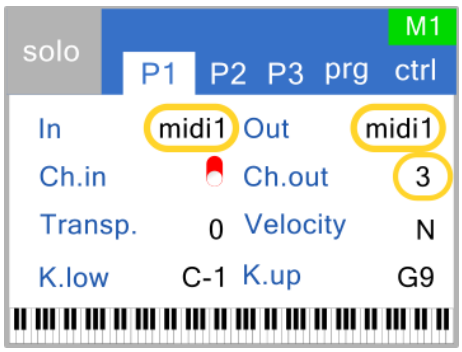
Select from the list *Scene1* and confirm by pressing the encoder. Standing on the first empty PERFORMANCE1 edit it by pushing the encoder.



Push "+" button to add the first map M1.



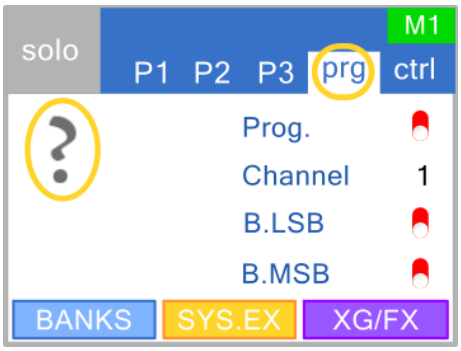
Inside the menu of the map M1:



- leave parameter *In* set to MIDI1 (the port where is connected the master keyboard).
- leave parameter *Out* set to MIDI1 (the port where is connected the expander).

- select the parameter *Ch.out* and set it to 3 (the receive MIDI channel of the piano sound of the expander).

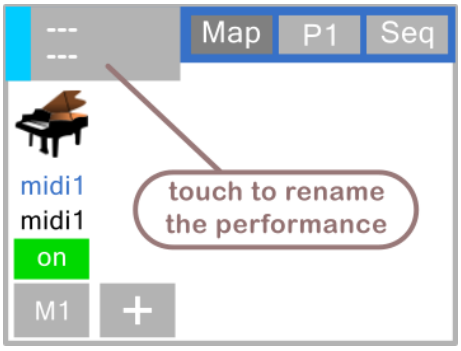
Try playing ... you will hear the piano sound!



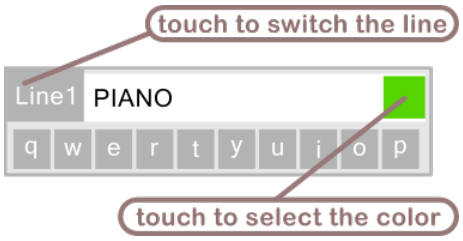
To change the icon representing the MAP, select the page *prg* and touch on the question mark icon



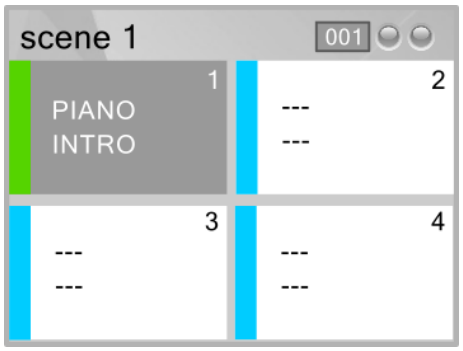
and select ”the piano” from the list (turn the encoders to scroll the icons).



Return to the edit map M1 (exit button), rename the performance in ”Piano Intro” and change the color.

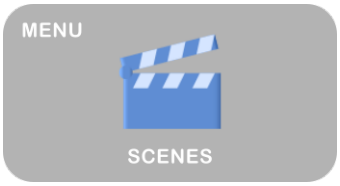


Exit the *Performance* and save it.

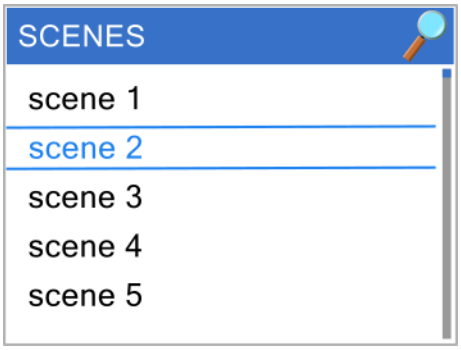


The Scenes

SIPARIOX has preinstalled 150 SCENES initialized and numbered from 1 to 150 (*Scene 1*, *Scene 2*, ...). Every single SCENE is thinked as a song.



To select the list of SCENES go to the menu SCENES and confirm by pressing the encoder. Press the *search* button to input the SCENE name to research into the list and confirm pressing the encoder.

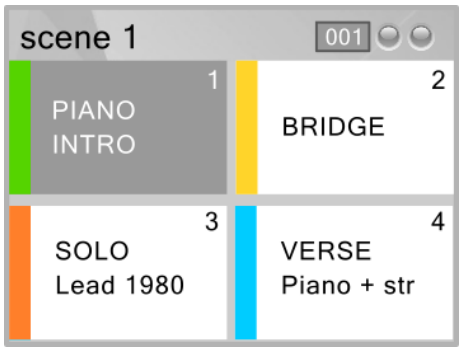


Tap and hold the screen at one entry in the list of SCENES until the appearance of the context menu:

- *Edit*: rename the SCENE.
- *Copy*: copies the SCENE in memory.
- *Paste*: overrides the SCENE previously copied to the selected location.
- *Delete*: initialize the scene and restore the *default* name.

The Scene

The single SCENE is organized in 10 pages of 4 PERFORMANCES for a total of 40 PERFORMANCES.



Each PERFORMANCE is rappresented by a cell with customizable text. You can move from a PERFORMANCE to another in several ways:

- Touching the display.
- Pressing the button FUN (default settings).
- By a foot pedal connected to SIPARIOX input PEDAL.

You can point directly to a PERFORMANCE sending a *program change* to SIPARIOX in this way:

- PROGRAM CHANGE [0 $\Longleftrightarrow$ 39] to select the PERFORMANCE (PC=0 $\rightarrow$ PERF1, PC=1 $\rightarrow$ PERF2, ...).
- BANKS [MSB=0, LSB [0 $\Longleftrightarrow$ 127] to select SCENE from SCENE1 to SCENE128.
- BANKS [MSB=1, LSB [0 $\Longleftrightarrow$ 21] to select SCENE from SCENE129 to SCENE150.

You can send just PROGRAM CHANGES without BANKS informations to move inside the SCENE. SIPARIOX can receive these messages from all MIDI ports, USB included.

Touching and holding the PERFORMANCE a menu will appear with useful functions for organizing the sequences:

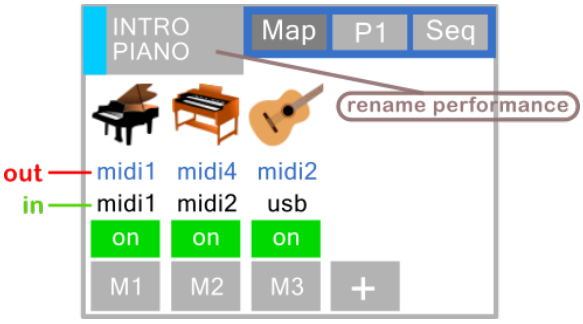
- *Copy*: copies the PERFORMANCE in memory.
- *Paste*: overrides the PERFORMANCE previously copied to the selected location.
- *Insert*: inserts the PERFORMANCE previously copied to the selected location and moves the others PERFORMANCES by one position.
- *Cut*: deletes the PERFORMANCE selected shifting the others PERFORMANCES by one position.
- *Delete*: initializes the PERFORMANCE selected.

Holding the PEDAL connected to SIPARIOX for more then 3 seconds you can pass through the next SCENE present in the list.

To enter the programming confirm with the encoder.

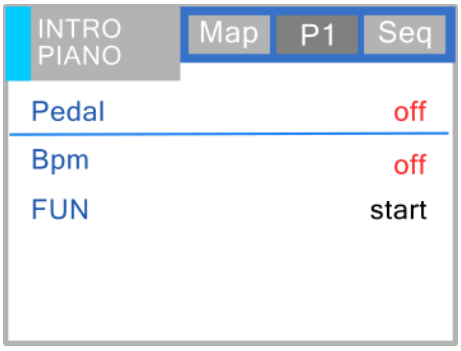
The Performance

The PERFORMANCE is organized in 20 MAPS: each MAP connect input to output, you can think at a MAP as a sound taken from a devices connected to SIPARIOX.



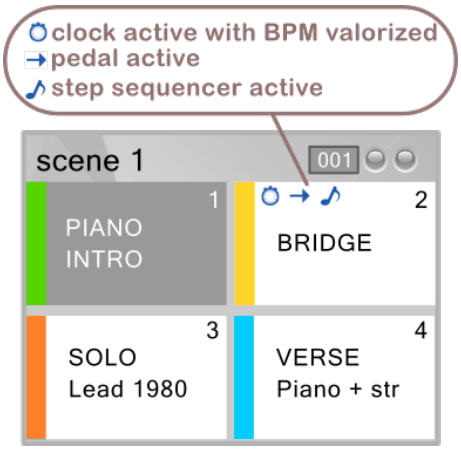
To *add* a MAP touch "+" button, to *edit* it touch the buttons labeled with M1, M2, ... If you create more then 5 MAPS scroll the pages turning the encoder.
Touching and holding the icon, a menu will appear with functions:

- *Copy*: copies the MAP in memory.
- *Paste*: overrides the MAP previously copied to the selected location.
- *Delete*: removes the MAP selected.



Associated with tab P1 there is a parameters list of the PERFORMANCE:

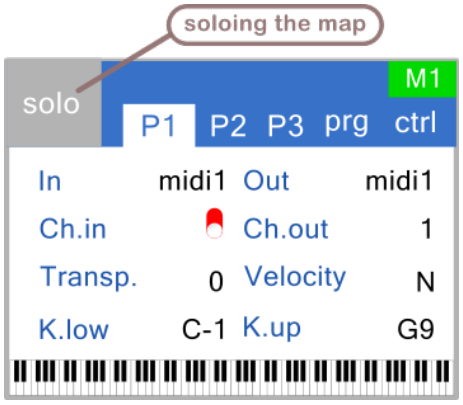
- **Pedal** [off, 1 ⟺ 40]: when valorized, different from *off*, you can jump, inside the SCENE, to the PERFORMANCE selected by pressing the pedal.
- **BPM** [off, stop, 40 ⟺ 300]: when valorized SIPARIOX generates MIDI CLOCK at BPM rate. All the devices connected will be syncronized. The *stop* value is used to interrupt the clock.
- **FUN** [next, start, stop, cont, back]: by default the FUN button is programmed to move to next PERFORMANCE when pressed. With *start, stop, cont* you can send RTM MIDI messages to all the outputs to syncronize external sequencer. With *back* you can move backwards through the PERFORMANCES.



Tab *Seq* is relative to the step sequencer of the PERFORMANCE, see paragraph *Step Sequencer* for details.

The Map

Each MAP has 5 pages of parameters: P1, P2, P3, PRG and CTRL.

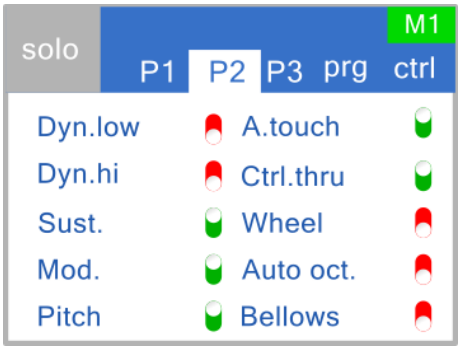


In: selects MIDI ports and USB devices for the input.
Out: selects MIDI ports and USB devices for the output.
Ch.in: [Off, 1 ⟺ 16] Sets the input MIDI channel, if *off* all channels are accepted. For the compatibility with MPE polyphonic controllers set the parameter to *off*.
Ch.out: [Off, 1 ⟺ 16] Sets the output MIDI channel, if *off* the MIDI messages are routed without alterations of the channel. For the compatibility with MPE polyphonic controllers set the parameter to *off*.
Transp.: [-60 ⟺ +60] manages the transposition of the sound in terms of semitones.
Velocity: [L2, L1, N, H1, H2] value of the velocity from the lightest to the hardest.

- L: *Light*, button light.
- N: *Normal*, velocity of the master keyboard.
- H: *Hard*, button hard.

Key L.: [C-1 ⟺ G9] lower note that limits the action of the keyboard.

Key H.: [C-1 ⟺ G9] higher note that limits the action of the keyboard.



Dyn.low: [Off, 1 ⟺ 127] threshold of *velocity* beyond which the map is active.
Dyn.hi: [Off, 1 ⟺ 127] threshold of *velocity* below which the map is active.

Sust. [Off, On, C0 ⟺ C127]: disable/enable the sustain, if valorized with control changes *C*, the sustain acts such a switch with memory. A typical use is to activate / deactivate the *rotary* organ effect (the value specified is the *control change* that control the effect).

Mod. [Off, On]: disable/enable input modulation.

Pitch [Off, On]: disable/enable input pitch bending.

A.touch [Off, On]: disable/enable input after touch.

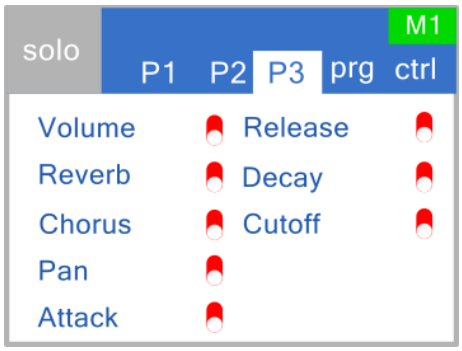
Ctrl.thru [Off, On]: disable/enable all input control changes.

Wheel [Off, On]: disable/enable the on board *pitch wheel*.

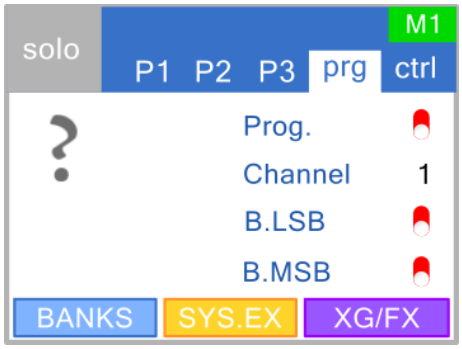
Auto oct. [Off, On]: If active all out of range notes (KeyL ⟺ KeyH) are returned to the zone. This feature is useful for accordion type bass MIDI controls.

Bellows [Off, On]: If active it's possible to control the velocity of the note by acting on the expression CC11. Parameters *Dyn.low* and *Dyn.hi* control the dynamic range.

In page P3 there are some of classic *control change* that are sent on the selection of the PERFORMANCE.

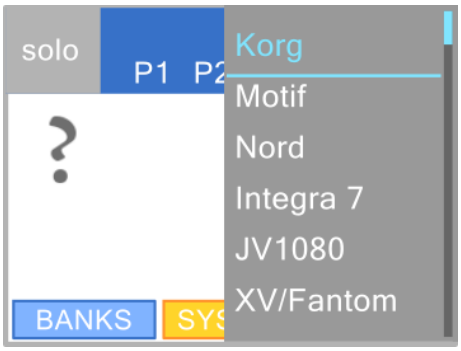


Volume: [Off, 1 ⟺ 127] volume (CC7).
Reverb.: [Off, 1 ⟺ 127] reverberation (CC91).
Chorus.: [Off, 1 ⟺ 127] chorus (CC93).
Pan.: [Off, 1 ⟺ 127] panorama (CC10).
Attack: [Off, 1 ⟺ 127] filter attack (CC73).
Decay: [Off, 1 ⟺ 127] filter decay (CC75).
Release: [Off, 1 ⟺ 127] filter release (CC72).
Cutoff: [Off, 1 ⟺ 127] filter cutoff (CC74).

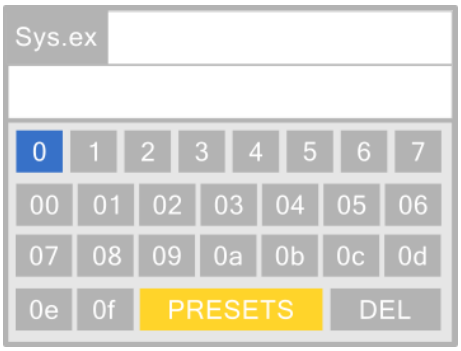


Tab *prg* is the page where specify the sound that the MAP controls. To change the image that represent the sound touch on the icon.
Prog.: [Off, 0 ⟺ 127] disable/enable *program change* sending on the selection of the PERFORMANCE.
Channel: [1 ⟺ 16] *program change* channel.
B.MSB: [Off, 0 ⟺ 127] parameter MIDI BANK MSB, sent only if the program change is active.
B.LSB: [Off, 0 ⟺ 127] parameter MIDI BANK LSB, sent only if the program change is active.

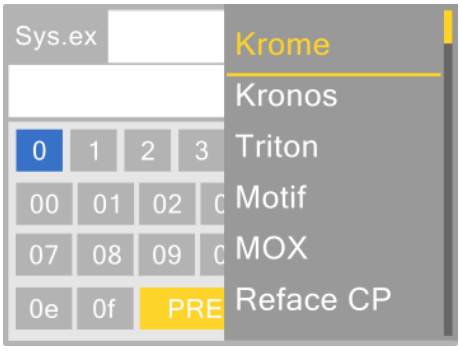
SiparioX has pre-installed BANKS list that help the user to fill banks parameters.



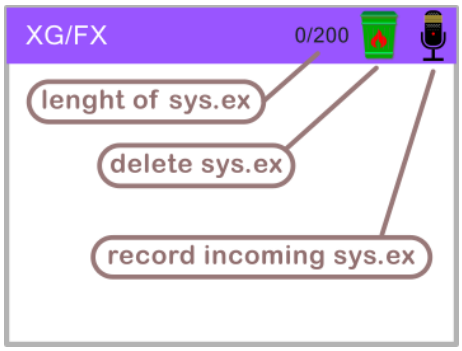
Touch BANKS button to show the list and navigate it with the encoder.



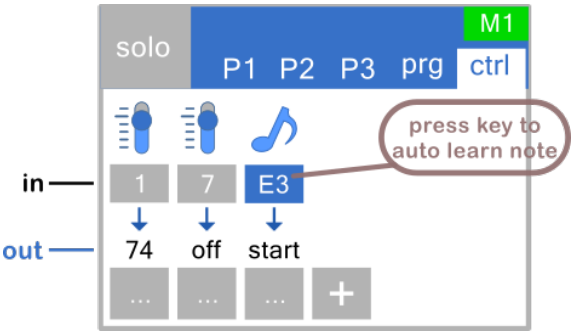
If you need to send *system exclusive* string, touch SYS.EX button and enter the edit menu. Here you can write the *system exclusive* message that will be sended over the output port of the MAP on the PERFORMANCE selection.



SiparioX has pre-installed SYSTEM EXCLUSIVE list. Touch the PRESETS button to show the list and navigate it with the encoder.
Look at *Banks & Sys. Exclusive* section to update these lists.



With the button XG/FX you can catch and record incoming *system exclusive* messages that will be sended over the output port of the MAP. This can be usefull to drive some presets with the own effects that are specified by *system exclusive* strings (for istanse XG sounds).

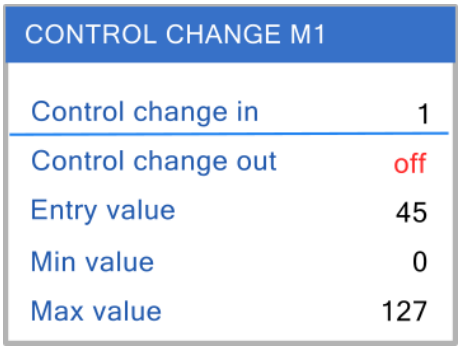


Tab *ctrl* is the page where remap input *control change*. To add a *control* touch "+" button, to edit it press the "..." button, to delete it press and hold on the image. In figure above we are controlling *filter cutoff* (CC74) by the *mod. wheel* (CC1) and we are stopping *volume* (CC7). To auto learn the *control change*, touch the button on the row *in* and move the control (potenziometer or slider on the keyboard).

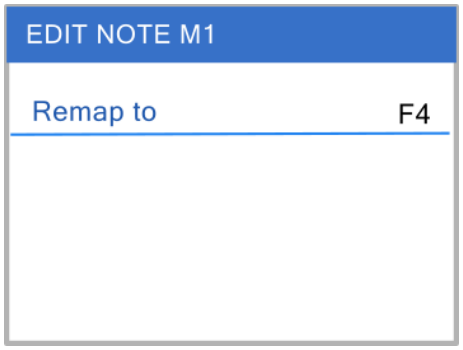
To go deep in programmation edit the control:
Control change in [Off, 0 ⟺ 127, vel]:

- *off*: no control change remapping, just sending *control change* if *control change out* is valorized.
- values [0 ⟺ 127]: control change input value to catch and remap.
- *vel*: siparioX generates a control change proportional to the velocity note, if *control change out* is valorized.

Control change out [Off, 0 ⟺ 127]: control change value to send.
Entry value [Off, 0 ⟺ 127]: control change value sended on PERFORMANCE selection.
Min value [0 ⟺ 127]: control change value range, minimum value.
Max value [0 ⟺ 127]: control change value range, maximum value.



In addition to the *controls* you can remap a single note auto learning it selecting the button input and pressing the key note. Once accepted go to edit to change the remapping mode:

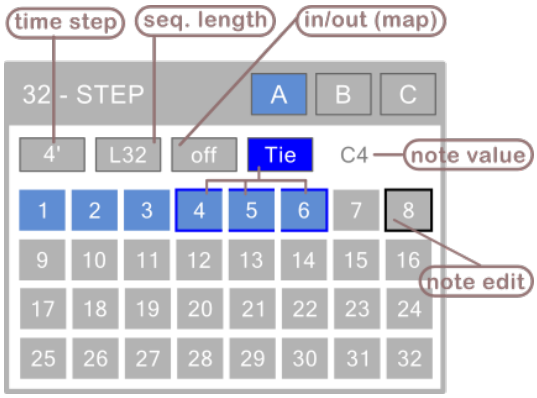


Remap to [C-1 ⟺ G9, start, stop, cont]:

- values [C-1 ⟺ G9]: note output value.
- *start, stop, cont*: MIDI RTM sended when pressed the note (to manage external sequencer).

Step Sequencer

Each PERFORMANCE inside the SCENE can run up to 3 tracks A, B, C.



Each track has 32 programmable steps with the following parameters:

- duration time [4', 8', 16', 32', 4'T, 8'T, 16'T, 32'T].
- length of the sequence [1 $\Longleftrightarrow$ 32 step].
- tie notes [off, on]: when toggle the note is *legato* to the next one, it affects only steps with the same note value.

Each steps can be activated/deactivated by a touch, to activate the track set the in/out parameter to a specific map, the track will take the input and output settings of the map. To entry the note value of the steps, push the encoder and play the keyboard set as input in the map: the note value will be shown in the graphics.

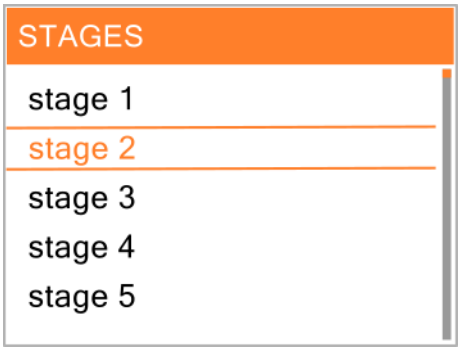
To start and stop the sequencer push the backlit color button (a BPM value is necessary). Use transpose MAP parameter to scale the sequence.

The Stages

SIPARIOX has preinstalled 50 STAGES initialized and numbered from 1 to 50 (*Stage 1*, *Stage 2*, ...).



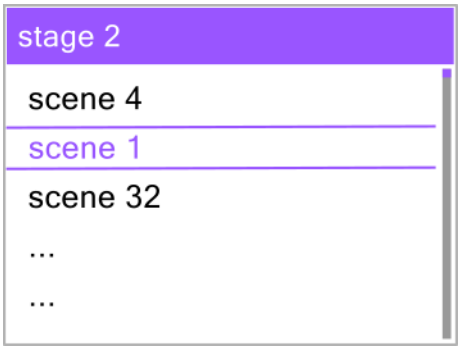
To select the list of STAGES go to the menu STAGES and confirm by pressing the encoder.



Tap and hold on an item of the list to show the context menu:

- *Edit*: rename the STAGE.
- *Copy*: copies the STAGE in memory.
- *Paste*: overrides the STAGE previously copied to the selected location.
- *Delete*: initializes the STAGE selected.

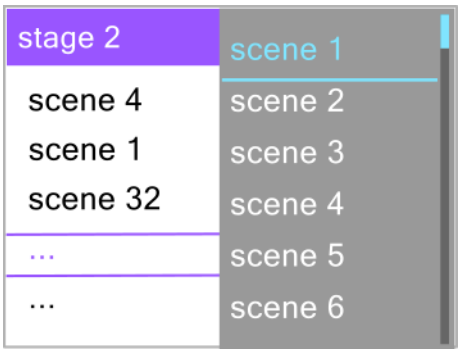
The stages are thinked as your lineup of tracks of a gig or a show. Every single STAGE can hold a list of 60 SCENES that you can rearrange.



Tap and hold on an item of the list to show the context menu:

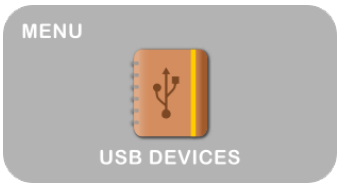
- *Copy*: copies the SCENE in memory.
- *Paste*: overrides the SCENE previously copied to the selected location.
- *Insert*: inserts the SCENE previously copied to the selected location and moves the others SCENE by one position.
- *Cut*: deletes the SCENE selected shifting the others SCENE by one position.
- *Delete*: removes the SCENE from the list (it doesn't affect original SCENE).

Confirm with the encoder on an empty item ("...") to show the list of SCENES from which select the right one.

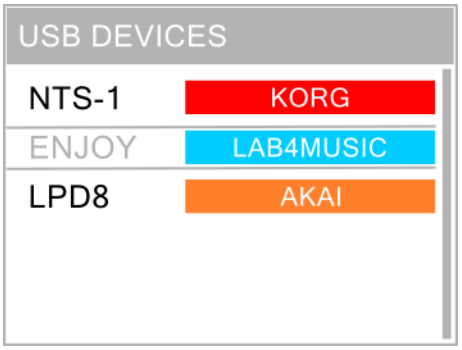


USB Devices

SIPARIOX stores all the USB/MIDI COMPLIANT devices recognized on the USB HOST input port.



To view the list, select USB DEVICES from the menu and confirm by pressing the encoder.



Tap and hold on an item of the list to show the context menu:

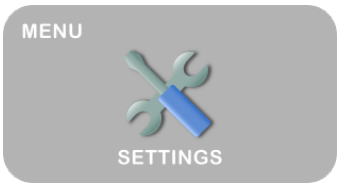
- *Delete*: removes the DEVICE from the list.

To rename the device confirm with the encoder on the selected item.

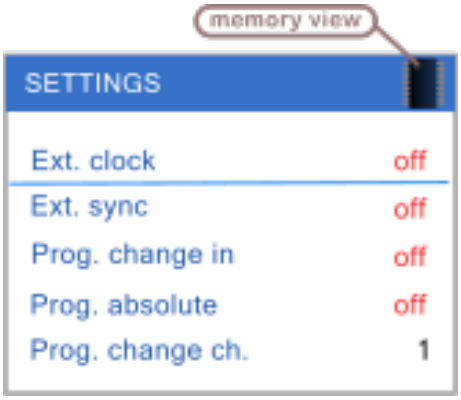
At the MAP level, only the USB devices real time connected to SIPARIOX will be listed.

Settings

Select SETTINGS from the menu and confirm by pressing the encoder.



Below the list of general settings:



Ext. clock [off, thru]:

- *off*: disable external clock.
- *thru*: routes external clock to all MIDI ports and USB devices.

Ext. sync [off, thru]:

- *off*: disable external sync messages: *active sensing*, *start*, *stop*, *continue*, *system reset*.
- *thru*: routes external sync messages to all MIDI ports and USB devices.

Prog. change in [off, to perf, route]:

- *off*: disable routing of external program change.
- *to perf*: enable program change to selects PERFORMANCES.
- *route*: enable routing of input program change.

Prog. absolute [off, on]:

- *off*: enable program change to selects PERFORMANCES from 1 to 40 and banks to select the SCENE. Example: B.MSB=0 B.LSB=0 PC=0 selects SCENE=1 PERF=1.
- *on*: enable program change to selects PERFORMANCES from 1 to 127, no need banks to select the SCENE. Example: PC=40 selects SCENE=2 PERF=1.

Prog. change ch [off, 1 $\Longleftrightarrow$ 16]: specifies the MIDI channel of the input program change. If set on *off* no midi channel is filter out.
Click note [C-1 $\Longleftrightarrow$ G9]: note value sended over MIDI PORT OUT 1 when clock generation is active on a PERFORMANCE. Generally it's used to give the BPM to the drummer.
Pedal polarity [norm, inv]: change this value is the pedal not works correctly.
Beep [off, on]: disable, enable the sound on touch.
CC delay ms [off, 1 $\Longleftrightarrow$ 250]: specifies the delay time in ms before sending *control changes*.
Memory view: display the memory view status.

Backup

You can save a backup of the system by connecting an USB memory (FAT formatted) and selecting WRITE BACKUP from the menu. If the memory stick is readable well the system will ask for a filename.



The system will overwrite identical filenames.

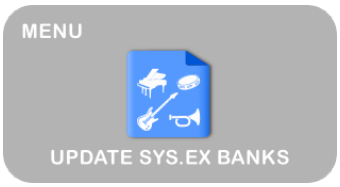
To get a list of backup stored on a USB memory, select READ BACKUP from the menu.



Navigate with the encoder and conbfirm the filename to restore all data.

Banks & Sys. Exclusive

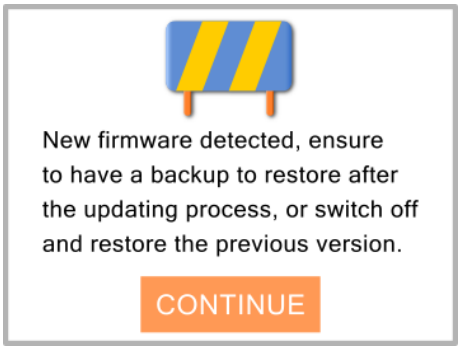
You can update the *system exclusive* and *banks* preset list, downloading the file with extension ".sxm" from *www.lab4music.it* site.



To load the file, store it on a USB memory, and select the menu item UPDATE SYS.EX BANKS.

Firmware Update

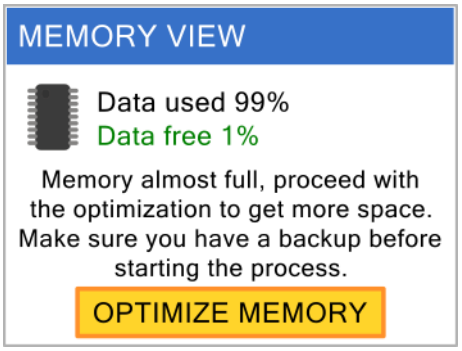
Download from the web site *www.lab4music.it* the latest firmware, save it on a USB memory, plug the USB stick into the SIPARIOX USB HOST port and power it. Wait until all the process has finished.



Before the updating process, make sure to do a backup of the system, new firmware may need to initialize and erase the internal memory. After the updating, restore the data with the *Read Backup* function.

Memory view

Memory view gives a snapshot of the occupation of the internal memory in terms of percentages.



In case the total free space falls below a certain threshold the system enable the OPTIMIZATION process with which, the user, can reorganize and compact the memory. It's important not to turn off the unit during this process!

MIDI MAP

o: yes, x: no

Function		Recognized	Transmitted	Routed
control change		o	o	o
program change		o	o	o
note on/off		o	x	o
velocity		o	x	o
after touch		o	x	o
pitch bend		o	o	o
system exclusive		x	o	o
system common		x	x	o
system real time	clock	o	o	o
	start	o	o	o
	stop	o	o	o
	continue	o	o	o

TECNICAL SPECIFICATIONS

power	USB (+5V)
connections	5 MIDI input (1 MIDI DIN, 4 TRS MINI JACKS) 5 MIDI output (3 MIDI DIN, 2 TRS MINI JACKS) 1 input pedal jack 6.3mm (2.4 inches) off/on sustain type 1 USB-TYPE A for MIDI DEVICES and USB memories (HUB support up to 4 ports) 1 USB-TYPE B for power only
interface	Display touch 320 x 240 Rotary encoder Backlit programmable button Pitch wheel Metal chassis, black finish
dimensions	200 x 100 x 56 mm (7.9 x 4 x 2.2 inches) [L x D x H]
weight	700gr (1.54 lb)

Specifications and appearance of the device may change without notice!

CONTACTS

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