

# FXBUS 1.0

## Multiple FX Morpher

### Presentation

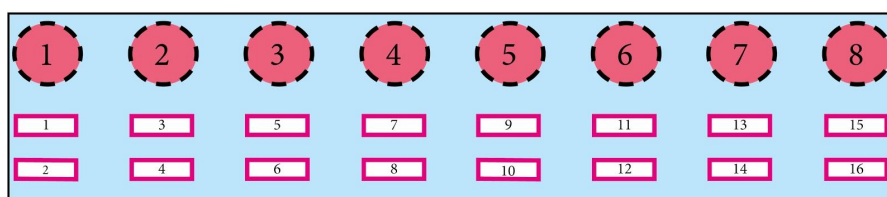
FX-BUS is a multi-effect "to play" that resides within any project Ableton and is proposed as add-on of the two "stations" Live386 and DreamMachine.

It is part of the "Tech2Hand" series that is developed in order to fill the terrible and insidious gap in Ableton that there is between a traditional user focused on sound and emotion, and a technically more experienced and attentive to the technological vanguards related to it. Our series could therefore represent the missing link between an approach that makes use of new technological features and a creative mode linked to traditional gestures and actions.

The idea of Multiple FX Morpher takes its cue from the graphic interface of the effects section of Traktor, but in its use it broadens its horizons. Some essential logic functions (the fateful ClyphX Actions by Stray) are exposed in the Ableton project both in order to allow the user to edit and transform behaviors at will, and to give him an idea of how ClyphX works and maybe start writing his own custom actions.

In addition, with a wifi network and a mobile device we will have a display dedicated to the controls in use at the time thanks to the dynamic mapping of Bindings.

FXBUS is equipped with 8 Rack effects (Device) and is controlled with 8 knobs (two groups of 4 knobs) and 16 buttons.



There are dozens of controllers with such features for a few euros, but the best, in our opinion, is undoubtedly Behringer X-Touch mini that with its 8 backlit knobs makes use more immediate.

A second grid controller will make the use more performing.

### Managing Effects

Thanks to the 3 active modes on the 16 buttons and the 8 knobs with dynamic assignment (BINDING), the multiple features of FX BUS will always be at hand. The FXBUS control parameters (8 effect racks with 8 knobs each) are 64 and can always be recalled in groups of four (Parameters 1-4 and 5-8 of the 8 Racks) in order to have greater combinations of combinations of effects on the eight physical knobs available.

It should be remembered that each single device can contain inside it many other nested devices, whose use will always be reduced to 8 knobs, those of the rack effects Ableton precisely.

SMART, the eighth rack in the chain, is a special macro control device that allows you to put on one of its 8 knobs the 8 knobs of each of the first 7 Racks in the chain. Its first 7 "1x8" points move by themselves the eight knobs of each of the previous 7 Racks.

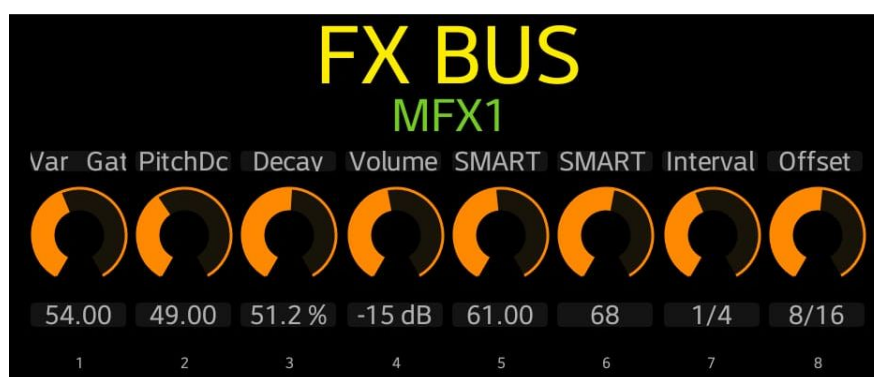
The eighth knob of the Rack SMART is a "Hyper control" that, moving alone the first seven of its own Rack, actually drives 56 parameters at the same time.

We can recall or save 20 presets for each rack, they are activated with transitions of variable RAMP time and predefined by the user.

There are a further 6 "global" presets that store all 64 BUS FX parameters and are also equipped with a manual morphing control knob to create semirandom transitions, paving the way for unexpected results. These in turn can be stored in one of the 20 standard SMART rack presets.

The display of FXBUS on Android, which takes place automatically when the effect is selected, will allow you to always have an eye on the parameters chosen and other useful information.

A simple wifi network like the one at home rather than a predefined network share will serve the purpose.



Display su "Touch-OSC", Android mobile.

The Project that incorporates FXBUS 1.0 fully utilizes the first 16 tracks and 20 scenes of Ableton.



Schermata principale.

## Features

1. 8 effect units (ClyphX Pro + SMART required)
2. Dynamic BIND Mapping and Button Modes
3. Recalling presets and time ramps
4. Saving presets for individual devices
5. Global A/B/C/D/E/F Preset Save/Recall Morphing
6. 8 Macro "1X8" controls on individual devices
7. Hyper control "1X64"
8. Parameter randomization
9. Display of controls on Android (Touch OSC + Bindings required)
10. Dynamic Mapping SysEx on Behringer X-Touch Mini
11. Simplified customization
12. Using a Second Grid Controller

### 1) 8 Unità effetti

	1	2	3	4	5	6	7	8
<b>BEAT REPEAT</b>	SMART GRID	FILTER	INTERVAL	OFFSET	VARIATION + GATE	PITCH + PITCH DECAY	DECAY	VOLUME
<b>ONE KNOB</b>	REV HI + REV LOW	JUMP START	FADE	TIME WARP	REV LOW + REV HI	FILTER SWEEP	LOW PASS Q	HI PASS Q
<b>PERFEX KNOB FADER FX</b>	NOISE SWEEP	METALIZER	VERBLISH	RAZO VERB	RTD2 LAUGHT	PARTY'S OVER	FLANGER	OLD RADIO
<b>SM PSYCHEDELIZER</b>	PITCH SPRAY	SPECTRAL FILTER	VAPOUR FILTER	BUBBELIZER	ANALOG LOW PASS	DUB DELAY	PITCH UP	CRUNCHY PONG
<b>SM GLITCH MACHINE</b>	BEAT SHUTTER	RANDOM GLITCH	CRUSH	DECIMATE	PITCH DROPS	OCTO FLANGER	WAVE DISTORT	LIQUID DELAY
<b>MULTI FX 1</b>	LFO + PHASE	RATE + SPEED	BASS	HICUT	REVERB	REVERB DECAY	KAMONI DELAY	
<b>EXP LFO TOOLS</b>	???	???	???	???	???	???	???	???
<b>SMART</b>	BEAT REPEAT	ONE KNOB	P.K. FADER FX	SM PSYCHEDELIZER	SM GLITCH MACHINE	MULTI FX1	???	Hyper CONTROL

In blue the Racks, in yellow the knobs of each Rack.

## 2) Dynamic BIND mapping and Button modes

Mode 1 - (Default) Allows you to change individual effects and manage their presets

Mode 2 - (Button 15) Reset and randomize individual effect racks

Mode 3 - (Button 16) Manages Global Preset Morphing

	1	2	3	4	5	6	7	8
<b>Modo 1</b>	Bind A Up	Preset Up	Switch 1	Switch 2	Bind B Up	Reset On Bind	FLAT	Mode 1-2
	Bind A Down	Preset Down	STORE	Switch 3	Bind B Down	Global Ramp	Ramps To 0	Mode 1-3
	1	2	3	4	5	6	7	8
<b>Modo 2</b>	FX-1 Reset	FX-2 Reset	FX-3 Reset	FX-4 Reset	FX-5 Reset	FX-6 Reset	FX-8 Reset	Mode 1-2
	FX-1 Random	FX-2 Random	FX-3 Random	FX-4 Random	FX-5 Random	FX-6 Random	FX-8 Random	Mode 1-3
	1	2	3	4	5	6	7	8
<b>Modo 3</b>	Snap 1 STORE	Snap 1 STORE	Snap 1 STORE	Snap 1 STORE	Snap 1 STORE	Snap 1 STORE	MORPH ON	Mode 1-2
	Snap 1 PLAY	Snap 1 PLAY	Snap 1 PLAY	Snap 1 PLAY	Snap 1 PLAY	Snap 1 PLAY	MORPH OFF	Mode 1-3

By default (Mode 1) with buttons 1 (up) and 2 (down) we launch the X-Clips that recall (BIND-A) the Rack effects on the controller (4 of the eight knobs at a time) for the knobs 1-4.

With the buttons 9 (up) and 10 (down) we launch the X-Clips that recall (BIND-B) the Rack effects (4 of the eight knobs at a time) on the controller for the knobs 5-8.

By default, each time you recall an effects rack (BIND), the previous effect is reset to zero, bringing all its knobs back to flat. This "Reset on Bind" function can be deactivated/activated by pressing button 11.

With "Reset on Bind" deactivated, the previous effect will remain active when changing racks.

### 3) Recalling presets and time ramps

For each BIND A (Buttons 1 and 2), the related preset track, with its SNAP XClip memory, will be automatically assigned to buttons 3 and 4, as well as button 6 for storage (STORE).

The transition time when you recall a preset is determined by the RAMP value located within the name of each of the 8 memory tracks.

By default it is 0. With the button 12 (RAMP) we can change it automatically and scroll through 10 predefined ramps ranging from 0 to 60 seconds. The RAMP button will overwrite any previous custom settings.

Pressing the 14 (RAMP TO ZERO) button will also reset the transition time to zero. Changing the RAMP value manually in the name of a preset track will allow you to customize the transition times.

#### 4) Saving presets for individual devices

Press the 6 button on the controller (STORE). This action will overwrite the previous memory.

#### 5) Global A/B/C/D/E/F Save/Recall Morphing (MODE 3)

Pressing the 15 (MODE 3 - MODE-1) button will enter global preset mode.

There are 6 memories available, each with STORE and RECALL buttons (fig. 4).

In MODE 3, knobs 5-8 of the controller will be automatically assigned to :

5 - Free

6 - Swing (Groove Amount by Ableton)

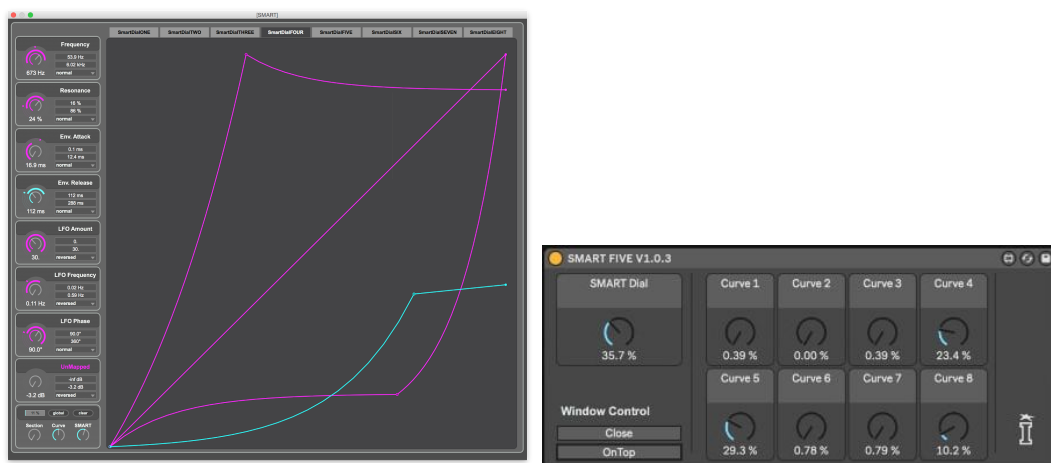
7 - Hyper Control "1x64" (knob no. 8 of the eighth Smart Rack)

8 - Morphing of the above mentioned 6 global effects

The morphing knob will return to zero each time one of the six global effects is called (RECALL). Only by moving it completely to the right will the effect change be applied 100%, creating a new approach to the use of effects. In its intermediate positions and sputtering modes we can experiment and design extremely involving semirandom variations,

#### 6) 8 Macro "1X8" controls on individual devices

The eighth X-SMART Rack of the FX BUS chain consists of 8 instances of ISOTONIK SMART. It does not process any audio signal but simply remotely on each of its 8 knobs the knobs of the first 8 Racks of the chain. For example, if you move the knob 1 of X-SMART, all the knobs of the first rack will move at the same time. The response curves of each remote knob can be edited extensively, making it possible to create a sequence of effects controlled by a knob.



The 20 SMART presets reside on track 10. They actually recall the position of all the knobs of all the FX BUS Racks.

## **7) Hyper control "1X64"**

The eighth knob, called "Hyper Control", is also assigned this time to the first 7 knobs of himself.

This makes it possible to bring back on a knob the Hyper control that alone moves all 56 knobs of FX BUS.

## **8) Parameter randomization**

Pressing the 16 button (MODE 2 - MODE-1) will enter the parameter randomization mode. Two buttons are available for each Rack: RESET and RANDOM. From this page the seventh Rack is excluded. (See fig. N. 3)

## **9) Control display on Android/IOS (Touch OSC + Bindings required)**

Thanks to OSC wireless communication and by installing the Touch-OSC app on the Android or IOS mobile phone or tablet, the parameters (BIND) remote from the controller will always be on the display.

## **10) Dynamic Mapping SysEx on Behringer X-Touch Mini**

The steps to adapt any controller to the use of FX BUS are very simple as only 8 MIDI messages of Control Change and 16 of Note on are enough to drive it. In table X in addendum the values.

We have created for the Behringer X-Touch Mini a SysEX MIDI file for automatic mapping.

We recommend using Sysex Librarian to load the preset.

Please refer to the manual for instructions on how to load the SysEX preset.

## **11) Simplified customization**

Customizing the FX BUS interface is an operation that often requires very few and simple steps.

On our Facebook page we are always happy and willing to accept requests for use.

You can, for example :

- Replace your Racks with those of the FX BUS

- Create alternative combinations by assigning your own Favorite knobs on the controller
- Increase the preset number

## **12) Using a second grid controller**

With the use of a second "Ringed" controller on the FX Bus, the presets and the BINDs themselves (i.e. the association of the controller knobs with a certain RACK) can be recalled more immediately, giving the system a more immediate response.



## ADDENDUM

	<b>MODO 1</b>	<b>MODO 2</b>	<b>MODO 3</b>
<b>1</b>	<b>BIND A UP</b> Scroll up between Racks (1-4)	<b>FX-1 RESET</b> default	<b>SNAP 1 STORE</b> overwrites memory 1
<b>2</b>	<b>BIND A DOWN</b> Scroll down between Racks (1-4)	<b>FX-1 RANDOM</b> Parameter randomization	<b>SNAP 1 PLAY</b> recall memory 1
<b>3</b>	<b>PRESET UP</b>	<b>FX-2 RESET</b> default	<b>SNAP 2 STORE</b> overwrites memory 2
<b>4</b>	<b>PRESET DOWN</b>	<b>FX-2 RESET</b> Parameter randomization	<b>SNAP 2 PLAY</b> recall memory 2
<b>5</b>	<b>SWITCH A-1</b>	<b>FX-3 RESET</b> default	<b>SNAP 3 STORE</b> overwrites memory 3
<b>6</b>	<b>STORE</b> stores current effect	<b>FX-3 RESET</b> Parameter randomization	<b>SNAP 3 PLAY</b> recall memory 3
<b>7</b>	<b>SWITCH A-2</b>	<b>FX-4 RESET</b> default	<b>SNAP 4 STORE</b> overwrites memory 4
<b>8</b>	<b>SWITCH A-3</b>	<b>FX-4 RESET</b> Parameter randomization	<b>SNAP 4 PLAY</b> recall memory 4
<b>9</b>	<b>BIND B UP</b> Scroll up between Racks (5-8)	<b>FX-5 RESET</b> default	<b>SNAP 5 STORE</b> overwrites memory 5
<b>10</b>	<b>BIND B DOWN</b> Scroll down between Racks (5-8)	<b>FX-5 RESET</b> Parameter randomization	<b>SNAP 5 PLAY</b> recall memory 5
<b>11</b>	<b>RESET ON BIND</b> ON/OFF	<b>FX-6 RESET</b> default	<b>SNAP 6 STORE</b> overwrites memory 6
<b>12</b>	<b>GLOBAL RAMP</b> ramp time	<b>FX-6 RESET</b> Parameter randomization	<b>SNAP 6 PLAY</b> recall memory 6
<b>13</b>	<b>FLAT</b> Flat all	<b>FX-8 RESET</b> default	<b>MORPH ON</b>
<b>14</b>	<b>RAMPS TO 0</b> All Ramps to 0	<b>FX-8 RESET</b> Parameter randomization	<b>MORPH OFF</b>
<b>15</b>	<b>MODE 2 /MODE 1</b>	<b>MODE 2 /MODE 1</b>	<b>MODE 2 /MODE 1</b>



16	MODE 3/MODE 1	MODE 3/MODE 1	MODE 3/MODE 1
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On the controller, the knobs group from 1 to 4 are called "A" and from 5 to 8 "B".

**Tabella MIDI**

Controller Buttons	TYPE	CH #	NOTE #
1	note	11	1
2	note	11	2
3	note	11	3
4	note	11	4
5	note	11	5
6	note	11	6
7	note	11	7
8	note	11	8
9	note	11	9
10	note	11	10
11	note	11	11
12	note	11	12
13	note	11	13
14	note	11	14
15	note	11	15
16	note	11	16

MIDI Buttons

controller Knobs	TYPE	CH #	Control Change #
1	ctrl	11	1
2	ctrl	11	2

3	ctrl	11	3
4	ctrl	11	4
5	ctrl	11	5
6	ctrl	11	6
7	ctrl	11	7
8	ctrl	11	8

controller Knobs