

SYNESTHESIA

MIDI IMPLEMENTATION

You can use any standard MIDI controller capable of sending *Program Change* (PC), *Control Change* (CC) messages, and *MIDI Clock* to remotely change presets or controlling other functions or parameters in Synesthesia.

CONTROL CHANGE

The CC numbers listed in the tables below are the default values. You may assign arbitrary (0 to 99) to each CC functions using the SymmLab editor software (*Menu > MIDI Configuration*).

OPERATION	CC# (default)	Value Range
DSP-X	14	Bypass = 0, Engage = 127
DSP-Y	15	Bypass = 0, Engage = 127
Ramp-X	16	Release = 0, Trigger = 127
Ramp-Y	17	Release = 0, Trigger = 127
X Tap-Divide	18	0 - 7
Y Tap-Divide	19	0 - 7
X Algorithm	20	0 - 36
Y Algorithm	21	0 - 36
Bypass / Engage	22	Bypass = 0, Engage = 127
Tap Tempo	23	any
Pre / Post	24	Pre = 0, Post = 127
		Cascade = 0
DSP Routing	25	Mixture = 1 Split = 2
Load Patch A / B	26	Load A = 0, Load B = 127
Toggle Rotor Speed	27	any
Reset Sequence	28	any
Bank Up / Down	29	Down = 0, Up = 127

Tap-Divide

- 0 = Ignore Tap tempo / Midi Clock
- 1 = 4 : 1 (4x slower)
- 2 = 2 : 1 (2x slower)
- 3 = 1 : 1
- 4 = 1 : 2 (2x faster)
- 5 = 1 : 3 (3x faster)
- 6 = 1 : 4 (4x faster)
- 7 = 3 : 4 (4/3x faster - dotted 8th)

PARAMETERS	CC# (Default)	Value Range
X-Speed	30	0 - 127
X-Depth	31	0 - 127
X-Tweak	32	0 - 127
X-SP1	33	0 - A
X-SP2	34	0 - B
X-SP3	35	0 - C
Y-Speed	36	0 - 127
Y-Depth	37	0 - 127
Y-Tweak	38	0 - 127

The values **A**, **B**, **C**, vary from one algorithm to the next.

For example, the TREMOLO algorithm has 3 possible values for SP1 (wave-shape) :

- Triangle - 0
- Sine - 1
- Square - 2

Therefore in this case the range of valid values is from 0 to 2.



(firmware v2.3.0 and above)

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PARAMETERS	CC# (Default)	Value Range
Y-SP1	39	0 - A
Y-SP2	40	0 - B
Y-SP3	41	0 - C
Expression	42	0 - 127
Patch Up/Down	43	Patch Down = 0 , Patch Up = 127

Note :

SP1 = secondary parameter 1 (twisting the SPEED knob).

SP2 = secondary parameter 2 (twisting the DEPTH knob).

SP3 = secondary parameter 3 (twisting the TWEAK knob).

CC#42 is added in firmware v2.3.0.

CC#42 simulates an expression pedal control, you can use it as a direct substitution to an expression pedal.

CC#43 is added in firmware 2.4.6

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PROGRAM CHANGE (PC)

BANK	PATCH	PC #
1	A	0
	B	1
2	A	2
	B	3
3	A	4
	B	5
...

16	A	30
	B	31

Total preset : 32

MIDI CHANNEL

Synesthesia is pre-programmed to use MIDI channel 1. You can change the channel number to any number from 1 through 16 in **Global Settings** menu.

MIDI CLOCK

MIDI clock allows you to sync the tempo of Synesthesia to other gears via MIDI sync timing pulses. You have the freedom to decide which preset and which DSP should respond to midi clock and which should not. To configure a DSP to respond to midi clock simply set the Tap-Divide option for that DSP to any values other than "Ignore Tap/Clk".

Example :

	Tap-Divide (Y)	Tap-Divide (X)	Result
Preset 1	Ignore Tap/Clk	Ignore Tap/Clk	Both DSPs will not respond to midi clock.
Preset 2	1:1	Ignore Tap/Clk	DSP-Y will respond to midi clock, DSP-X won't.
Preset 3	Ignore Tap/Clk	2:1	DSP-X will respond to midi clock, DSP-Y won't.
Preset 4	1:1	2:1	Both DSPs will respond to midi clock.

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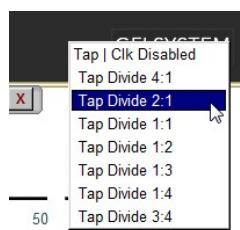


Tap-Division can be set in **Options** menu :

OR

via the editor software :

```
<MENU           DONE>
>>Y Tap.Div 2:1
```



The tempo of the pedal will follow the tempo set by midi clock, subdivided as per selected Tap-Divide value.

Examples :

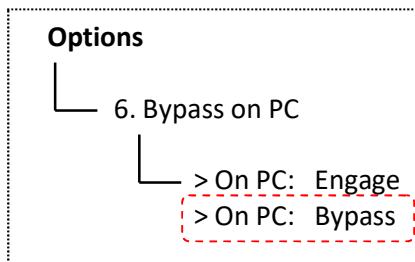
Tap Divide	= 1:4
Midi Clock tempo	= 60 BPM
Synesthesia's tempo	= 4 x 60 BPPM = 240 BPM.

Tap Divide	= 2:1
Midi Clock tempo	= 60 BPM
Synesthesia's tempo	= 1/2 x 60 BPPM = 30 BPM.

Calling a preset in 'Bypassed' state.

There will be times where you need to call a preset but have it loaded 'bypassed', instead of 'engaged.' Normally you can accomplish this by sending the PC message followed by a CC message that bypasses the pedal. Beginning with firmware v2.3.0 we added an option that enables you to configure a preset to be loaded in bypassed state when the preset is called via a PC message. This may be done in the SymmLab interface, or on the pedal itself.

On the pedal :



BANK-PATCH	PRESET TITLES (12 char max)	AUTO STOMP ON MODE	BYPASS PC
PAGE - 1			
1 - A	Sun Down	<input type="checkbox"/> S	<input checked="" type="checkbox"/> B
B	Octolean	<input type="checkbox"/> S	<input type="checkbox"/> B
2 - A	The Funk	<input type="checkbox"/> S	<input type="checkbox"/> B
B	Perfect Peak	<input type="checkbox"/> S	<input type="checkbox"/> B
3 - A	Shiverhowls	<input type="checkbox"/> S	<input type="checkbox"/> B
B	Reflections	<input type="checkbox"/> S	<input type="checkbox"/> B

In SymmLab editor :

Check the box to configure the preset for "bypass-on-PC".

Do this for every preset you wish to load (via PC message) in bypassed state.