

# OB-Xa

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## MIDIcontrol REV.C3





# mLab

## OB-Xa MIDIcontrol

This MIDI-Interface transforms your OB-Xa into a fully MIDI controlled Synthesizer.  
Plug the box to the rear panel DB37 connector and you have Real-Time access to all 38 parameters.

### 19 encoder parameter

VCF RELEASE  
VCA RELEASE  
VCF SUSTAIN  
VCA SUSTAIN  
VCF DECAY  
VCA DECAY  
VCF ATTACK  
VCA ATTACK  
PULSE WIDTH  
RESONANCE  
VCF ENV AMOUNT  
LFO RATE  
VCF/VCO MODULATION  
PULSE MODULATION  
PORTAMENTO  
VCF FREQUENCY  
OSC 2 DETUNE  
OSC 1 FREQUENCY  
OSC 2 FREQUENCY

### 19 switch parameter

OSC 1 FM  
OSC 2 FM  
VCF FM  
OSC 1 SAW ON/OFF  
OSC 2 SAW ON/OFF  
OSC 1 PULSE ON/OFF  
OSC 2 PULSE ON/OFF  
LFO WAVE SINE  
LFO WAVE SQUARE  
LFO WAVE S&H  
OSC 1 FM  
OSC 1 PWM  
OSC 2 PWM  
VCF KEY TRACK  
OSC 2 HALF  
SYNC  
F\_ENV  
UNISON  
NOISE ON/OFF

### Futher features:

MIDI NOTE ON / OFF 8 voice Polyphonic or UNISON  
PITCH (+/- 1 tone) in half tone steps doesn't sound really bad, better than nothing.  
PROGRAM 1 ... 56 56 additional OB-Xa ROM presets. (supported by this interface)  
PROGRAM 57 ... 112 56 additional user memory locations (you can copy, paste, edit and save).

### Hardware support:

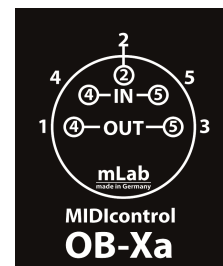
- All generic MIDI controllers.
- Behringer BCR2000 support with parameter feedback function.
- iPad apps e.g. touch OSC or TB MIDI stuff ...

### MIDI IN/OUT:

This MIDI Jack has the fully MIDI IN/OUT functionality,  
where the (normally unused) pins 1,2,3 are the MIDI OUT pins.

All you need is a MIDI Y-Split cable, and here comes the pin out.

Use such a MIDI Y-Split cable to connect MIDI OUT to MIDI IN of your BCR2000 (or iPad)  
and connect MIDI IN to the MIDI OUT B/THRU of your BCR2000 (or your iPad MIDI-Interface)



### **MIDI OUT function:**

#### ***1<sup>st</sup> MIDI SysEx dump CC 107 (value 127)***

sends a MIDI SysEx dump of all 56 user memories to the MIDI OUT pins.

So you can backup all your programs. Of course you can send back these SysEx files via MIDI to your interface.

This will replace the user memory locations automatically.

#### ***2<sup>nd</sup> Parameter Feedback***

After a Program Load, the interface sends the current program parameter values to its MIDI OUT pins.

If a BCR-2000 or an iPad receives such a parameter feedback, then a BCR-2000 as well an iPad will display all parameter values. Now you know exactly where you are and you can visually edit your program relatively to the current settings. To avoid MIDI feedback loops using a BCR2000, set the Global setting to S-3 by pressing EDIT & STORE, then dial the upper most left encoder until the display shows S-3 and at least press the EXIT button.

### **BCR2000 Setup:**

#### ***How to load a SysEx Setup into your BCR2000:***

1<sup>st</sup> check if your BCR2000 has the right SysEx ID by holding the EDIT and STORE button together.

2<sup>nd</sup> use the 5th rotary encoder in the upper row to set the ID to number 1.

3<sup>rd</sup> press EXIT to quit.

4<sup>th</sup> send the sysex file to your BCR2000. (The BCR2000 now holds the SysEx file in a temporary memory area).

Before using it, you must STORE it to one of the 32 BCR2000 memory locations.

#### ***To do so:***

1<sup>st</sup> press the STORE BUTTON once. (The STORE LED will blink continuously)

2<sup>nd</sup> use the curser buttons to select a BCR2000 preset number of your choice.

3<sup>rd</sup> press STORE again.

That's it.

### **Presets & Memory management with the BCR-2000:**

Dialing the lowest most left encoder will select one of the ROM preset locations 1..56

Dialing the the lowest most right encoder will select one of the RAM user memory locations 1..56

Pressing the lowest left button will Load the selected sound into the edit buffer.

Pressing the lowest right button will save your sound.

### **Example how to copy, edit and save your own sounds:**

Load a PRESET by dialling a number with the lowest most left encoder and press the LOAD button.



The preset now has been loaded into the edit buffer where you can edit and make your changes.

After that, store your modifications to any of the 56 user memory locations by dialling your desired user memory number with the lowest most right encoder and press the SAVE button.





### If you don't own a Behringer BCR-2000:

here comes the controller numbers for all encoder and switch functions:

This will help to configure other hard- and software MIDI remote controllers.

CC 85 (value 1..56) Select a preset location 1...56

CC 86 (value 1..56) Select a user memory location 1..56

CC 87 (value 127) Load the selection into the OB-Xa edit buffer

CC 88 (value 127) Save the current sound to the selected user memory location

#### 19 ENCODER

6	VCF REL
7	VCA REL
8	VCF SUS
9	VCA SUS
10	VCF DCY
11	VCA DCY
12	VCF ATK
13	VCA ATK
14	PULSE WIDTH
15	*RESONANCE
16	VCF ADSR
17	LFO RATE
18	VCF/VCO MOD
19	PULSE MOD
20	PORTAMENTO
21	OSC DET
22	VCF FREQ
23	OSC 2 FREQ
24	OSC 1 FREQ

#### 19 SWITCH

25	OSC1 MOD	LFO SQUARE	LFO SINE	UNISON	VCF MOD	OSC2 MOD
26	*F-ENV	*SYNC	OSC2 SAW	OSC1 SAW	OSC2 PWM	OSC1 PWM
27	NOISE	4-POLE	*OSC2 HALF	*OSC2 PULSE	*OSC1 PULSE	*TRACK
MIDI	chn 8	chn 7	chn 6	chn 5	chn 4	chn 3



You might wonder why there are only 18 entries in the switch table above. #19 is the S/H mod source. The S/H Waveform becomes active when the LFO SQUARE and SINE switches are turned off.

LFO RATE

17

FREQ. MOD

18

PULSE MOD

19

DETUNE

21

OSC 1 FREQ

24

PULSE WIDTH

14

OSC 2 FREQ

23

OSC 2 VOL.

27/6

FILTER

25/6

SINE

25/8

OSC 1

26/3

NOISE

27/8

PULSE

27/4

SYNC

26/7

27/5

27/7

25/7

25/3

26/4

OSC 2

26/5

SAW

26/8

F-ENV

27/3

TRACK

SQUARE

OSC 2

OSC 2

UNISON

SAW

SAW

4-POLE

CC#/MIDI channel  
reverse value

GROUP 1

GROUP 2

GROUP 3

GROUP 4

77/16

global parameter

GROUP 4

120/6

VOICES

WHEEL AMT

mLab  
OB-Xa MIDI control

22

15

16

20

12

10

8

6

VCF FREQ

RESONANCE

VCF ADSR

PORTAMENTO

ATTACK

DECAY

SUSTAIN

RELEASE

13

11

9

7

ATTACK

DECAY

SUSTAIN

RELEASE

85

86

PRESET 1..56

MEMORY CONTROL

86

107

NEXT

DUMP

87

88

LOAD

SAVE

# Labels for your controller

LFO RATE	FREQ. MOD	PULSE MOD	DETUNE	OSC 1 FREQ	PULSE WIDTH	OSC 2 FREQ	OSC 2 VOL.	<b>mLab</b> OB-Xa MIDIcontrol	
	FILTER								
SINE	OSC 1	OSC 1	NOISE	PULSE	SYNC	PULSE	4-POLE	GROUP 1	GROUP 2
SQUARE	OSC 2	OSC 2	UNISON	SAW	F-ENV	SAW	TRACK	GROUP 3	GROUP 4
VCF FREQ	RESONANCE	VCF ADSR	PORTAMENTO	ATTACK	DECAY	SUSTAIN	RELEASE		
WHEEL AMT		VOICES		ATTACK	DECAY	SUSTAIN	RELEASE		DUMP
PRESET 1..56							MEMORY 1..56	LOAD	SAVE

LFO RATE	FREQ. MOD	PULSE MOD	DETUNE	OSC 1 FREQ	PULSE WIDTH	OSC 2 FREQ	OSC 2 VOL.	<b>mLab</b> OB-Xa MIDIcontrol	
	FILTER								
SINE	OSC 1	OSC 1	NOISE	PULSE	SYNC	PULSE	4-POLE	GROUP 1	GROUP 2
SQUARE	OSC 2	OSC 2	UNISON	SAW	F-ENV	SAW	TRACK	GROUP 3	GROUP 4
VCF FREQ	RESONANCE	VCF ADSR	PORTAMENTO	ATTACK	DECAY	SUSTAIN	RELEASE		
WHEEL AMT		VOICES		ATTACK	DECAY	SUSTAIN	RELEASE		DUMP
PRESET 1..56							MEMORY 1..56	LOAD	SAVE