mLab

OB-SX
MIDIcontrol

OB-SX MIDIcontrol

is a plug & Play MIDI-Interface for The OBSX 37Pin COMPUTER PORT
All parameters are editable in Real Time via MIDI controller change messages.

This interface needs an external power supply
(not included)
Use a 5…9V DC power supply
where the center pin = (+) .

Plug & Play

Plug the OBSX MIDIcontrol into your DB37
connector at the rear panel of your OB-SX.
and you have real time access to all 32 Parameters.

CC#	OB-SX	Chn	CC#		VALUE	type	function	description	
6	VCF ATK	x	1	MOD WHEEL	0…127	encoder		same as CC# 21	
7	VCA ATK	x	77	MOD AMOUNT	0…127	encoder			
8	VCF DCY	x	78	REQ FEEDBACK	127	switch			
9	VCA REL	x	79	KBD MODE	0/127	switch			
10	VCF FREQ	1	85	PRESET memory	1…65	encoder	select PRESET	memory #	
11	OSC DET	1	86	USER memory	1…65	encoder	select USER #	memory #	
12	LFO RATE	1	87	LOAD	127	switch	LOAD PRESET/USER	current memory #	
13	PORTAMENTO	1	88	SAVE	127	switch	SAVE USER	current memory #	
14	VCA DECAY	1	107	DUMP	127	switch	DUMP all USER	memory	
15	VCF SUS	1..6	108	unison detune	1…6	encoder	OSC2 Detune 1…6	fat UNISON	
16	VCA SUS	7	108	zero detune	127	encoder	NO AUTO TUNE!	Service purpose	
17	VCF REL	16	120	# of voices	1…6	encoder	# of voice cards		
18	RESONANCE	1…6	122	Voice defeat	1…6	switch	defeat voices 1…6	played on the OBSX	
19	VCF ADSR	x	123	ALL NOTE OFF	127	switch			
20	PULSE WIDTH								
21	MOD VCF/VCO	System							
22	PWM	F6		TUNE REQUEST	246	switch	AUTOTUNE		
23	OSC 2 FREQ								
24	OSC 1 FREQ								

		Chn	7	6	5	4	3	2	1
25	Switch-SET #1			OSC1_MOD	LFO_WAVE	OSC2_WAVE	OSC1_WAVE	VCF_MOD	OSC2_MOD
26	Switch-SET #2		UNISON	X-MOD	SYN	OSC2_HALF	KBD_TRK	OSC2_PWM	OSC1_PWM

Additional features

since REV.3C	**number of voice cards**	MIDI cc # 120 (1…6)
	MIDI–AMOUNT of MOD-WHEEL	MIDI controller # 77
since REV.2C	**Store number of voices**	MIDI cc # 88 (> 63)
	VCO / VCF MODULATION	MIDI controller # 1 (modulation wheel)
	MIDI NOTE ON / OFF	6 voice Polyphonic or UNISONO
	PITCH (+/- 1 Tone)	in half tone steps (sounds OK, better than nothing)
	FLASH MEMORY 1..56	These memory locations can be edit and save.
	MIDI PROGRAM CHANGE	1 ... 112
	PROGRAM 1 ... 56	These are the OBSX ROM presets 1..56.
	PROGRAM 57 ... 112	These are the user memory locations 1..56

Presets & Memory management with Behringer BCR-2000

Use the lowest most left encoder to select one of the OBSX presets 1..56
and use the lowest most right encoder to select one of the flash memory locations 1..56
The lowest left button is the Load button and the lowest right button is the save button.

Example copy, edit and save

Load e.g. the OBSX Preset 33 by dialing the lowest most left encoder to number 33 and press the LOAD button.
The OBSX preset number 33 now has been loaded and can be edit as desired. After that you can store your modifications to any of the 56 user memory location s by dialing your desired memory location number with the lowest most right encoder and press the save button .

If you don't use a Behringer BCR-2000, here is a controller list of the preset encoder, memory location encoder, the Load button and the Save button. This will help you to configure these functions for other MIDI controllers too.

CC 85 (value 1..56)	preselect a preset memory location 1…56	(read only memory)
CC 86 (value 1..56)	preselect a user memory location 1…56	(read/write memory)
CC 87 (value 127)	Load this selection into the OBSX	
CC 88 (value 127)	Save to the selected user memory location	

MIDI OUT

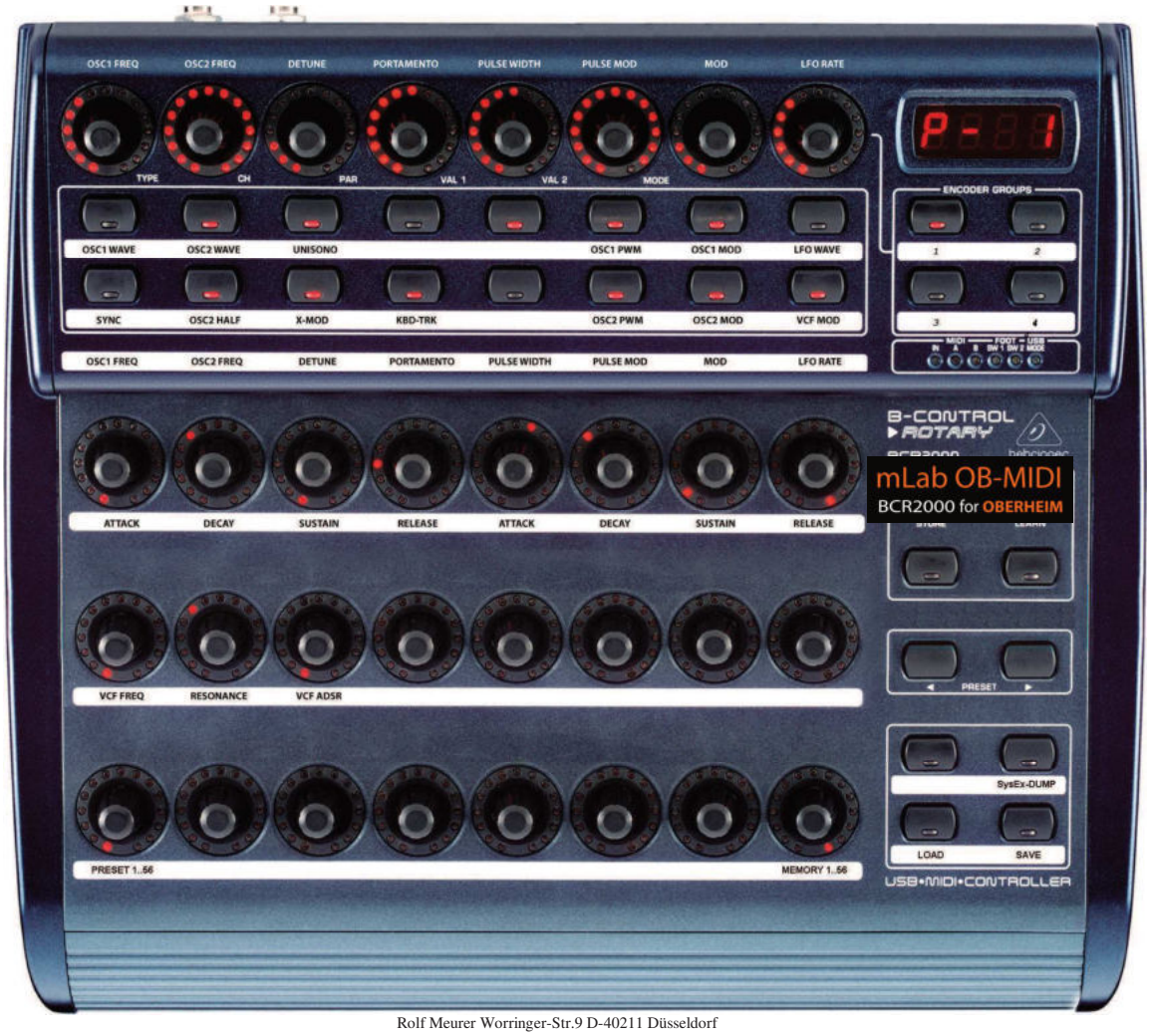
1. MIDI SysEx dump

CC 107 (value 127) tells the interface to send a MIDI SysEx dump of all 56 memory locations to the MIDI OUT pins. So you can backup all your programs.

Of course you can send back these SysEx files via MIDI into your interface. This will replace your current user memory automatically.

2. PARAMETER FEEDBACK After a MIDI Program Change or a Program Load, the interface sends the current program parameter values to the MIDI OUT jack.
If e.g. a BCR-2000 receives such a parameter feedback, then the BCR-2000 will display all values in its LED bar graphs.
Now you know exactly where you are and you can visually edit your program relatively to the current settings.

To avoid MIDI feedback loops, use the BCR2000 Global setting S3 by pressing EDIT & STORE, then dial the upper most left encoder until the display shows S-3 and press the EXIT button.
Now connect MIDI OUT to the BCR2000 MIDI IN jack,
and connect MIDI IN to the BCR2000 MIDI OUT B/THRU jack.



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HOW to load a SysEx Preset into your BCR2000.

1. check if your BCR2000 has the right SysEx ID
   While holding down the EDIT BUTTON, press STORE.
   Use the upper row 5th rotary encoder to set the ID to number 1
   Press EXIT to quit this menu.

2. send the sysex file to your BCR2000.
   After that, the BCR2000 holds the sysex file in a temporary memory.
   You must save this temporary memory to any of the 32 BCR2000 memory location before you can use it!
   To do so:

3. Press the STORE BUTTON once.
   The STORE LED will blink continuously.

4. Now use the curser buttons to select the BCR2000 memory location of your choice.

5. Then press STORE again.

That's it.

BLUE OB-SX POWER SUPPLY MOD

Power supply your MagicBox from the OBSX

This interface needs DC 5V 130mA

To supply the MagixBox with power from your OBSX, please follow figure 1…3

1. **Cut trace below U67 as shown in figure 1 & 2**
2. **Solder a 1-ohm resistor from U67 to the through hole solder point below the trace cut as shown in figure 3.**

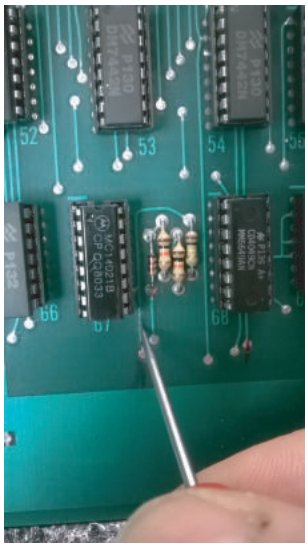

Figure 1

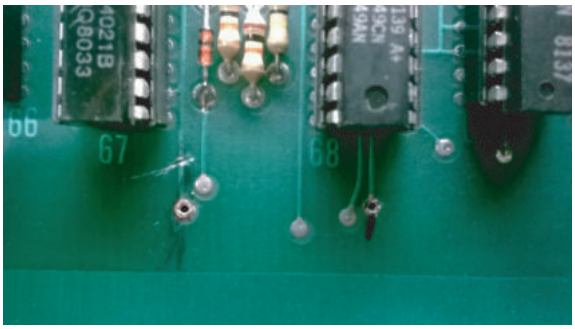

Figure 2

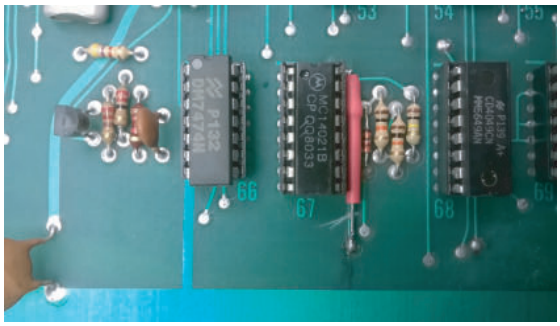

Figure 3

GREY OB-SX POWER SUPPLY MOD

H28 is connected to H23-27 (all to ground). So there is no trace to cut.

Desolder the H28 female contact from the socket, make a little room to bend out the connectors pin . Then solder the 1-ohm resistor between PIN 28 and +5V. That's it.