

MCS-3000x Addendum

For v1.10 firmware

The MCS-3000x firmware v1.10 and later adds support for MIDI Control Change messages. This documents details these messages.

In v1.10 firmware, support was added for a specific type of MIDI messages called Control Change messages. These are 3 byte messages that are in the form:

BEh <parameter> <value>

or

BFh <parameter> <value>

The MCS-3000x uses one message for each of the 8 faders and associated buttons that are controllable. Those messages are detailed in the table below.

The MCS-3000x transmits all messages except touch messages on MIDI channel 16. Touch messages are transmitted on MIDI channel 15.

For faders 1-8 the DIP switches on the rear panel must be set to:
SW1=on, SW2=off, SW3=off, SW4=on

For faders 9-16 the DIP switches on the rear panel must be set to:
SW1=on, SW2=on, SW3=on, SW4=on

Each unit requires its own MIDI connection to the host application, the units cannot be daisy chained.

Fader operation is bidirectional, that is, the unit will transmit MIDI messages when the fader is moved and it will respond to messages that are received.

Button messages are unidirectional. The unit will transmit MIDI messages when buttons are pressed. The LED will toggle their state when buttons are pressed. However, the unit will not respond to those messages. Button values toggle between 00h and 7Fh. The LED illuminates after a value of 7Fh is transmitted. Conversely, the LED extinguishes after a value of 00h is transmitted.

MCS-3000x Addendum

For v1.10 firmware

Fader 1	=	BF	01	<value>	Modulation Wheel MSB
Fader 2	=	BF	02	<value>	Breath Contoller MSB
Fader 3	=	BF	03	<value>	Undefined
Fader 4	=	BF	04	<value>	Foot Controller MSB
Fader 5	=	BF	05	<value>	Portamento Time MSB
Fader 6	=	BF	06	<value>	Data Entry MSB
Fader 7	=	BF	07	<value>	Channel Volume MSB
Fader 8	=	BF	08	<value>	Balance MSB
Fader 9	=	BF	09	<value>	Undefined
Fader 10	=	BF	10	<value>	Pan MSB
Fader 11	=	BF	11	<value>	Expression MSB
Fader 12	=	BF	12	<value>	Effect Control 1 MSB
Fader 13	=	BF	13	<value>	Effect Control 2 MSB
Fader 14	=	BF	14	<value>	Undefined
Fader 15	=	BF	15	<value>	General Purpose 1 MSB
Fader 16	=	BF	16	<value>	General Purpose 2 MSB

Fader to MIDI Control Change Mapping

Fader 1	Touch	=	BE	01	<value>	Modulation Wheel MSB
Fader 2	Touch	=	BE	02	<value>	Breath Contoller MSB
Fader 3	Touch	=	BE	03	<value>	Undefined
Fader 4	Touch	=	BE	04	<value>	Foot Controller MSB
Fader 5	Touch	=	BE	05	<value>	Portamento Time MSB
Fader 6	Touch	=	BE	06	<value>	Data Entry MSB
Fader 7	Touch	=	BE	07	<value>	Channel Volume MSB
Fader 8	Touch	=	BE	08	<value>	Balance MSB
Fader 9	Touch	=	BE	09	<value>	Undefined
Fader 10	Touch	=	BE	10	<value>	Pan MSB
Fader 11	Touch	=	BE	11	<value>	Expression MSB
Fader 12	Touch	=	BE	12	<value>	Effect Control 1 MSB
Fader 13	Touch	=	BE	13	<value>	Effect Control 2 MSB
Fader 14	Touch	=	BE	14	<value>	Undefined
Fader 15	Touch	=	BE	15	<value>	General Purpose 1 MSB
Fader 16	Touch	=	BE	16	<value>	General Purpose 2 MSB

Fader Touch to MIDI Control Change Mapping

MCS-3000x Addendum

For v1.10 firmware

Fader	1	Mute	=	BF	21	<value>	Modulation Wheel LSB
Fader	2	Mute	=	BF	22	<value>	Breath Contoller LSB
Fader	3	Mute	=	BF	23	<value>	Undefined
Fader	4	Mute	=	BF	24	<value>	Foot Controller LSB
Fader	5	Mute	=	BF	25	<value>	Portamento Time LSB
Fader	6	Mute	=	BF	26	<value>	Data Entry LSB
Fader	7	Mute	=	BF	27	<value>	Channel Volume LSB
Fader	8	Mute	=	BF	28	<value>	Balance LSB
Fader	9	Mute	=	BF	41	<value>	Portamento
Fader	10	Mute	=	BF	42	<value>	Sostenuto
Fader	11	Mute	=	BF	43	<value>	Soft Pedal
Fader	12	Mute	=	BF	44	<value>	Legato Footswitch
Fader	13	Mute	=	BF	45	<value>	Hold 2
Fader	14	Mute	=	BF	46	<value>	Sound Controller 1
Fader	15	Mute	=	BF	47	<value>	Sound Controller 2
Fader	16	Mute	=	BF	48	<value>	Sound Controller 3

Mute to MIDI Control Change Mapping

Fader	1	Solo	=	BF	29	<value>	Undefined
Fader	2	Solo	=	BF	2A	<value>	Pan LSB
Fader	3	Solo	=	BF	2B	<value>	Expression LSB
Fader	4	Solo	=	BF	2C	<value>	Effect Control 1 LSB
Fader	5	Solo	=	BF	2D	<value>	Effect Control 2 LSB
Fader	6	Solo	=	BF	2E	<value>	Undefined
Fader	7	Solo	=	BF	2F	<value>	Undefined
Fader	8	Solo	=	BF	30	<value>	General Purpose1 LSB
Fader	9	Solo	=	BF	49	<value>	Sound Controller 4
Fader	10	Solo	=	BF	4A	<value>	Sound Controller 5
Fader	11	Solo	=	BF	4B	<value>	Sound Controller 6
Fader	12	Solo	=	BF	4C	<value>	Sound Controller 7
Fader	13	Solo	=	BF	4D	<value>	Sound Controller 8
Fader	14	Solo	=	BF	4E	<value>	Sound Controller 9
Fader	15	Solo	=	BF	4F	<value>	Sound Controller 10
Fader	16	Solo	=	BF	50	<value>	General Purpose 5

Solo to MIDI Control Change Mapping

MCS-3000x Addendum

For v1.10 firmware

Fader	1	Aux	=	BF	31	<value>	General Purpose 2 LSB
Fader	2	Aux	=	BF	32	<value>	General Purpose 3 LSB
Fader	3	Aux	=	BF	33	<value>	General Purpose 4 LSB
Fader	4	Aux	=	BF	34	<value>	Undefined
Fader	5	Aux	=	BF	35	<value>	Undefined
Fader	6	Aux	=	BF	36	<value>	Undefined
Fader	7	Aux	=	BF	37	<value>	Undefined
Fader	8	Aux	=	BF	38	<value>	Undefined
Fader	9	Aux	=	BF	66	<value>	Undefined
Fader	10	Aux	=	BF	67	<value>	Undefined
Fader	11	Aux	=	BF	68	<value>	Undefined
Fader	12	Aux	=	BF	69	<value>	Undefined
Fader	13	Aux	=	BF	6A	<value>	Undefined
Fader	14	Aux	=	BF	6B	<value>	Undefined
Fader	15	Aux	=	BF	6C	<value>	Undefined
Fader	16	Aux	=	BF	6D	<value>	Undefined

Aux to MIDI Control Change Mapping

Fader	1	Select	=	BF	39	<value>	Undefined
Fader	2	Select	=	BF	3A	<value>	Undefined
Fader	3	Select	=	BF	3B	<value>	Undefined
Fader	4	Select	=	BF	3C	<value>	Undefined
Fader	5	Select	=	BF	3D	<value>	Undefined
Fader	6	Select	=	BF	3E	<value>	Undefined
Fader	7	Select	=	BF	3F	<value>	Undefined
Fader	8	Select	=	BF	40	<value>	Damper Pedal
Fader	9	Select	=	BF	6E	<value>	Undefined
Fader	10	Select	=	BF	6F	<value>	Undefined
Fader	11	Select	=	BF	70	<value>	Undefined
Fader	12	Select	=	BF	71	<value>	Undefined
Fader	13	Select	=	BF	72	<value>	Undefined
Fader	14	Select	=	BF	73	<value>	Undefined
Fader	15	Select	=	BF	74	<value>	Undefined
Fader	16	Select	=	BF	75	<value>	Undefined

Select to MIDI Control Change Mapping