

MIDI Solutions Beat Converter

Operating Instructions

The MIDI Solutions Beat Converter can be programmed to generate a Note or Control Change message on the beat in response to MIDI Timing Clock messages. A footswitch can be connected to the Beat Converter to enable the transmission of this programmed message to be toggled on/off. Programmed settings are retained by the Beat Converter even after power is removed.

After receiving any of the following programming commands, the Beat Converter's LED will flash rapidly for about a second to indicate that it has been programmed. Refer to the table below for conversions to hexadecimal values.

The Beat Converter's Echo parameter is in effect regardless of which message below the Beat Converter is programmed to generate. When Echo is ON, all incoming MIDI messages received by the Beat Converter are echoed to its MIDI output. When Echo is OFF, only the messages generated by the Beat Converter are sent to its MIDI output.

- To program the Echo parameter, send the Beat Converter the following System Exclusive message:

F0 00 00 50 23 00 ee F7 where **ee** = 00 for Echo OFF, **ee** = 01 for Echo ON

- To program the Beat Converter to generate a Note in response to MIDI Timing Clock messages, send it the following System Exclusive message (all values in Hexadecimal):

F0 00 00 50 23 01 nn vv cc dd (00) F7 where **nn** = Note number
vv = Note velocity
cc = MIDI channel
dd = duration of Note in milliseconds (00 = don't send Note-off)
(00) is optional, if included the Beat Converter will not wait for a Start or Continue message to begin sending Notes

Example: To program the Beat Converter to send a middle C (Note #60) on MIDI channel 1 of velocity 127 and duration 20 milliseconds on each beat, send the Beat Converter the following:

F0 00 00 50 23 01 3C 7F 00 14 F7

- To program the Beat Converter to generate a Control Change message in response to MIDI Timing Clock messages, send it the following System Exclusive message (all values in Hexadecimal):

F0 00 00 50 23 02 nn vv cc dd (00) F7 where **nn** = Control Change number
vv = Control Change value
cc = MIDI channel
dd = duration in milliseconds (00 = don't reset value to zero)
(00) is optional, if included the Beat Converter will not wait for a Start or Continue message to begin sending messages

Example: To program the Beat Converter to send Control Change #64 on MIDI channel 1 of value 127 on each beat, and reset the Control Change value to zero after 100 milliseconds, send the Beat Converter the following:

F0 00 00 50 23 02 40 7F 00 64 F7

HEXADECIMAL CONVERSION TABLE														
Dec/Hex	16	10	32	20	48	30	64	40	80	50	96	60	112	70
1 01	17	11	33	21	49	31	65	41	81	51	97	61	113	71
2 02	18	12	34	22	50	32	66	42	82	52	98	62	114	72
3 03	19	13	35	23	51	33	67	43	83	53	99	63	115	73
4 04	20	14	36	24	52	34	68	44	84	54	100	64	116	74
5 05	21	15	37	25	53	35	69	45	85	55	101	65	117	75
6 06	22	16	38	26	54	36	70	46	86	56	102	66	118	76
7 07	23	17	39	27	55	37	71	47	87	57	103	67	119	77
8 08	24	18	40	28	56	38	72	48	88	58	104	68	120	78
9 09	25	19	41	29	57	39	73	49	89	59	105	69	121	79
10 0A	26	1A	42	2A	58	3A	74	4A	90	5A	106	6A	122	7A
11 0B	27	1B	43	2B	59	3B	75	4B	91	5B	107	6B	123	7B
12 0C	28	1C	44	2C	60	3C	76	4C	92	5C	108	6C	124	7C
13 0D	29	1D	45	2D	61	3D	77	4D	93	5D	109	6D	125	7D
14 0E	30	1E	46	2E	62	3E	78	4E	94	5E	110	6E	126	7E
15 0F	31	1F	47	2F	63	3F	79	4F	95	5F	111	6F	127	7F

MIDI CHANNEL TABLE

cc must be set according to the following table:

Chan.	cc	Chan.	cc	Chan.	cc
1 -	00	7 -	06	13 -	0C
2 -	01	8 -	07	14 -	0D
3 -	02	9 -	08	15 -	0E
4 -	03	10 -	09	16 -	0F
5 -	04	11 -	0A	ALL -	7F
6 -	05	12 -	0B		