

MIDI Solutions MIDI Delay Operating Instructions

MIDI Solutions MIDI Delay delays all MIDI messages by a preprogrammed delay time from 0 to 1023 ms. MIDI Solutions MIDI Delay is powered by the MIDI signal and requires no batteries or power supply to operate.

CONNECTIONS

Connect the **In** of the MIDI Delay to the MIDI Out or Thru of the sending MIDI device using a standard MIDI cable. Connect the **Out** of the MIDI Delay to the MIDI In of the receiving MIDI device. It is recommended that the number of MIDI Solutions products chained together between any two MIDI devices be limited to four.

OPERATION

The MIDI Delay's MIDI Indicator LED will light as soon as the sending device is turned on, and flashes whenever MIDI data passes through the unit. All MIDI messages are delayed by the preprogrammed time.

PROGRAMMING

The delay time is programmed by sending the unit the following System Exclusive message:

F0 00 00 50 13 01 aa bb F7 (values in Hex)

where **aa** = 128 ms delay increments (00 < **aa** < 07)

bb = 1 ms delay increments (00 < **bb** < 7F)

The message contains two values, **aa** and **bb**, that combine to specify the total delay. **aa** adds to the delay time in 128 ms increments, and **bb** adds to the delay time in 1 ms increments. For example to specify a 300 ms delay requires 2 x 128 ms increments + 44 x 1 ms increments = 300 ms total. All values must be entered in hexadecimal (see table below), so in this example **aa** = 02, and **bb** = 2C. Upon receipt of the System Exclusive message, the MIDI indicator LED will flash rapidly for about one second to indicate that the setting has been stored. The setting is retained in memory until reprogrammed with a new setting.

EXAMPLES

100 ms delay = 0 x 128 ms + 100 x 1 ms	aa = 00,	bb = 64
127 ms delay = 0 x 128 ms + 127 x 1 ms	aa = 00,	bb = 7F
128 ms delay = 1 x 128 ms + 0 x 1 ms	aa = 01,	bb = 00
129 ms delay = 1 x 128 ms + 1 x 1 ms	aa = 01,	bb = 01
200 ms delay = 1 x 128 ms + 72 x 1 ms	aa = 01,	bb = 48
255 ms delay = 1 x 128 ms + 127 x 1 ms	aa = 01,	bb = 7F
256 ms delay = 2 x 128 ms + 0 x 1 ms	aa = 02,	bb = 00
257 ms delay = 2 x 128 ms + 1 x 1 ms	aa = 02,	bb = 01
300 ms delay = 2 x 128 ms + 44 x 1 ms	aa = 02,	bb = 2C
400 ms delay = 3 x 128 ms + 16 x 1 ms	aa = 03,	bb = 10
500 ms delay = 3 x 128 ms + 116 x 1 ms	aa = 03,	bb = 74

Dec/Hex										HEXADECIMAL CONVERSION TABLE									
0	00	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				