Table 2 *Function definition of 16 sliders drawbar controller (each slider has 9 positions) for generating some* **Control Change (CC)** *messages on MIDI channel #1 (another or different MIDI channels are also possible). For each drawbar only one scanpoint can be closed at a time. When no closed point is found, this means the drawbar is on position #0. Proper CC with value = 0 is generated in this case.*

Scanpoint #	On Function	Off Function	Contact type	Note
1	CC01:Modulation Wheel, value = 10	none	9 position slider (or rotary	Position #1
2	CC01:Modulation Wheel, value = 30	none	switch), numbered from 0 to 8	Position #2
3	CC01:Modulation Wheel, value = 45	none		Position #3
4	CC01:Modulation Wheel, value = 60	none		Position #4
5	CC01:Modulation Wheel, value = 78	none		Position #5
6	CC01:Modulation Wheel, value =99	none		Position #6
7	CC01:Modulation Wheel, value = 114	none		Position #7
8	CC01:Modulation Wheel, value = 127	none		Position #8
9	CC02: Breath Controller, value = 10	none	9 position slider (or rotary	Position #1
10	CC02: Breath Controller, value = 30	none	switch), numbered from 0 to 8	Position #2
11	CC02: Breath Controller, value = 45	none		Position #3
12	CC02: Breath Controller, value = 60	none		Position #4
13	CC02: Breath Controller, value = 78	none		Position #5
14	CC02: Breath Controller, value = 99	none		Position #6
15	CC02: Breath Controller, value = 114	none		Position #7
16	CC02: Breath Controller, value = 127	none		Position #8
17	CC03: User Controller, value = 10	none	9 position slider (or rotary	Position #1
18	CC03: User Controller, value = 30	none	switch), numbered from 0 to 8	Position #2
19	CC03: User Controller, value = 45	none		Position #3
20	CC03: User Controller, value = 60	none		Position #4
21	CC03: User Controller, value = 78	none		Position #5
22	CC03: User Controller, value = 99	none		Position #6
23	CC03: User Controller, value = 114	none		Position #7
24	CC03: User Controller, value = 127	none		Position #8
25	CC04: Foot Controller, value = 10	none	9 position slider (or rotary	Position #1
26	CC04: Foot Controller, value = 30	none	switch), numbered from 0 to 8	Position #2
27	CC04: Foot Controller, value = 45	none		Position #3
28	CC04: Foot Controller, value = 60	none		Position #4
29	CC04: Foot Controller, value = 78	none		Position #5
30	CC04: Foot Controller, value = 99	none		Position #6
31	CC04: Foot Controller, value = 114	none		Position #7
32	CC04: Foot Controller, value = 127	none		Position #8
33	CC5: Portamento Time, value = 10	none	9 position slider (or rotary	Position #1
34	CC5: Portamento Time, value = 30	none	switch), numbered from 0 to 8	Position #2
35	CC5: Portamento Time, value = 45	none		Position #3
36	CC5: Portamento Time, value = 60	none		Position #4
37	CC5: Portamento Time, value = 78	none		Position #5
38	CC5: Portamento Time, value = 99	none		Position #6
39	CC5: Portamento Time, value = 114	none		Position #7
40	CC5: Portamento Time, value = 127	none		Position #8
41	CC7: Main Volume, value = 10	none	9 position slider (or rotary	Position #1
42	CC7: Main Volume, value = 30	none	switch), numbered from 0 to 8	Position #2
43	CC7: Main Volume, value = 45	none		Position #3
44	CC7: Main Volume, value = 60	none		Position #4
45	CC7: Main Volume, value = 78	none		Position #5
46	CC7: Main Volume, value = 99	none		Position #6
47	CC7: Main Volume, value = 114	none		Position #7
48	CC7: Main Volume, value = 127	none		Position #8
49	CC8: Balance Controller, value = 10	none	9 position slider (or rotary	Position #1
50	CC8: Balance Controller, value = 30	none	switch), numbered from 0 to 8	Position #2
51	CC8: Balance Controller, value = 45	none		Position #3
52	CC8: Balance Controller, value = 60	none		Position #4
53	CC8: Balance Controller, value = 78	none		Position #5
54	CC8: Balance Controller, value = 99	none		Position #6
55	CC8: Balance Controller, value = 114	none		Position #7
56	CC8: Balance Controller, value = 127	none		Position #8
57	CC10: Pan Controller, value = 10	none	9 position slider (or rotary	Position #1
58	CC10: Pan Controller, value = 30	none	switch), numbered from 0 to 8	Position #2
59	CC10: Pan Controller, value = 45	none		Position #3
60	CC10: Pan Controller, value = 60	none		Position #4
61	CC10: Pan Controller, value = 78	none		Position #5
62	CC10: Pan Controller, value = 99	none		Position #6
63	CC10: Pan Controller, value = 114	none		Position #7
64	CC10: Pan Controller, value = 127	none		Position #8
65	CC11: Expression Controller, value = 10	none	9 position slider (or rotary	Position #1
66	CC11: Expression Controller, value = 30	none	switch), numbered from 0 to 8	Position #2
67	CC11: Expression Controller, value = 45	none		Position #3
68	CC11: Expression Controller, value = 60	none		Position #4
69	CC11: Expression Controller, value = 78	none		Position #5
70	CC11: Expression Controller, value = 99	none		Position #6
71	CC11: Expression Controller, value = 114	none		Position #7
72	CC11: Expression Controller, value = 127	none		Position #8
73	CC12: User Controller, value = 10	none	9 position slider (or rotary	Position #1
74	CC12: User Controller, value = 30	none	switch), numbered from 0 to 8	Position #2
75	CC12: User Controller, value = 45	none		Position #3
76	CC12: User Controller, value = 60	none		Position #4
77	CC12: User Controller, value = 78	none		Position #5
78	CC12: User Controller, value = 99	none		Position #6
79	CC12: User Controller, value = 114	none		Position #7
80	CC12: User Controller, value = 127	none		Position #8

81	CC13: User Controller, value = 10	none	9 position slider (or rotary switch), numbered from 0 to 8	Position #1
82	CC13: User Controller, value = 30	none		Position #2
83	CC13: User Controller, value = 45	none		Position #3
84	CC13: User Controller, value = 60	none		Position #4
85	CC13: User Controller, value = 78	none		Position #5
86	CC13: User Controller, value = 99	none		Position #6
87	CC13: User Controller, value = 114	none		Position #7
88	CC13: User Controller, value = 127	none		Position #8
89	CC14: User Controller, value = 10	none	9 position slider (or rotary switch), numbered from 0 to 8	Position #1
90	CC14: User Controller, value = 30	none		Position #2
91	CC14: User Controller, value = 45	none		Position #3
92	CC14: User Controller, value = 60	none		Position #4
93	CC14: User Controller, value = 78	none		Position #5
94	CC14: User Controller, value = 99	none		Position #6
95	CC14: User Controller, value = 114	none		Position #7
96	CC14: User Controller, value = 127	none		Position #8
97	CC15: User Controller, value = 10	none	9 position slider (or rotary switch), numbered from 0 to 8	Position #1
98	CC15: User Controller, value = 30	none		Position #2
99	CC15: User Controller, value = 45	none		Position #3
100	CC15: User Controller, value = 60	none		Position #4
101	CC15: User Controller, value = 78	none		Position #5
102	CC15: User Controller, value = 99	none		Position #6
103	CC15: User Controller, value = 114	none		Position #7
104	CC15: User Controller, value = 127	none		Position #8
105	CC16: User Controller, value = 10	none	9 position slider (or rotary switch), numbered from 0 to 8	Position #1
106	CC16: User Controller, value = 30	none		Position #2
107	CC16: User Controller, value = 45	none		Position #3
108	CC16: User Controller, value = 60	none		Position #4
109	CC16: User Controller, value = 78	none		Position #5
110	CC16: User Controller, value = 99	none		Position #6
111	CC16: User Controller, value = 114	none		Position #7
112	CC16: User Controller, value = 127	none		Position #8
113	CC17: User Controller, value = 10	none	9 position slider (or rotary switch), numbered from 0 to 8	Position #1
114	CC17: User Controller, value = 30	none		Position #2
115	CC17: User Controller, value = 45	none		Position #3
116	CC17: User Controller, value = 60	none		Position #4
117	CC17: User Controller, value = 78	none		Position #5
118	CC17: User Controller, value = 99	none		Position #6
119	CC17: User Controller, value = 114	none		Position #7
120	CC17: User Controller, value = 127	none		Position #8
121	CC18: User Controller, value = 10	none	9 position slider (or rotary switch), numbered from 0 to 8	Position #1
122	CC18: User Controller, value = 30	none		Position #2
123	CC18: User Controller, value = 45	none		Position #3
124	CC18: User Controller, value = 60	none		Position #4
125	CC18: User Controller, value = 78	none		Position #5
126	CC18: User Controller, value = 99	none		Position #6
127	CC18: User Controller, value = 114	none		Position #7
128	CC18: User Controller, value = 127	none		Position #8

NOTE: This table is an example of how user can order his own function table to be pre-programmed into PIC16F84 chip for **MKC128** controller more details about **MKC128** project can be found on it's homepage: www.geocities.com/jdpetkov

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