Controller Numbers

Controllers marked with * don't change the Sound program but can perform temporary modulations or other tasks.

Ctrl #	Controller Range	Controller name or Sound Parameter	Value Range
0	*- not used -*	Bank Select MSB	*- not used*
1	0…127	Modulation Wheel*	0…127
2	0…127	Breath Control*	0…127
3	*- not used -*	*undefined*	*- not used -*
4	0…127	Foot Control*	0…127
5	0…127	Glide Rate	0…127
6	*- not used --*	Data Entry	*- not used -*
7	0…127	Channel Volume*	0…127
8	*- not used --*	Balance	*- not used -*
9	*- not used -*	*undefined*	*- not used -*
10	0…127	Pan*	L64…R63
11	*- not used -*	Expression	*- not used -*
12	0…9	Arp Range	1…10 octaves
13	0…15	Arp Length	1…16 steps
14	0…3	Arp Active	off, on, one shot, hold
15	0…5	LFO 1 Shape	sine, triangle, square,

			sawtooth, random, S&H
16	0…127	LFO 1 Speed	0…127 or 256 bars…1/96
17	0…1	LFO 1 Sync	off, on
18	0…127	LFO 1 Delay	0…127
19	0…5	LFO 2 Shape	sine, triangle, square, sawtooth, random, S&H
20	0…127	LFO 2 Speed	0…127 or 256 bars…1/96
21	0…1	LFO 2 Sync	off, on
22	0…127	LFO 2 Delay	0…127
23	0…5	LFO 3 Shape	sine, triangle, square, sawtooth, random, S&H
24	0…127	LFO 3 Speed	0…127 or 256 bars…1/96
25	0…1	LFO 3 Sync	off, on
26	0…127	LFO 3 Delay	0…127
27	16, 28, 40…112	Osc 1 Octave	128'…1/2'
28	52…76	Osc 1 Semitone	-12…+12
29	0…127	Osc 1 Detune	-64…+63
30	0…127	Osc 1 FM	0…127
31	0…5	Osc 1 Shape	pulse, saw, triangle, sine, alt 1, alt 2
32	0…n	Bank Select LSB*	Bank A...
33	0…127	Osc 1 PW	0…127
34	0…127	Osc 1 PWM	-64…+63
35	16, 28, 40…112	Osc 2 Octave	128'…1/2'
36	52…76	Osc 2 Semitone	-12…+12
37	0…127	Osc 2 Detune	-64…+63
38	0…127	Osc 2 FM	0…127
39	0…5	Osc 2 Shape	pulse, saw, triangle, sine, alt 1, alt 2
40	0…127	Osc 2 PW	0…127
41	0…127	Osc 2 PWM	-64…+63
42	16, 28, 40…112	Osc 3 Octave	128'…1/2'
43	52…76	Osc 3 Semitone	-12…+12
44	0…127	Osc 3 Detune	-64…+63
45	0…127	Osc 3 FM	0…127
46	0…5	Osc 3 Shape	pulse, saw, triangle, sine,

			alt 1, alt 2
47	0…127	Osc 3 PW	0…127
48	0…127	Osc 3 PWM	-64…+63
49	0…1	Sync	off, on
50	0…127	Pitchmod	-64…+63
51	0…9	Glide Mode	siehe “Glide Mode”
52	0…127	Osc 1 Level	0…127
53	0…127	Osc 1 Balance	F1 64…mid…F2 63
54	0…127	Ringmod Level	0…127
55	0…127	Ringmod Balance	F1 64…mid…F2 63
56	0…127	Osc 2 Level	0…127
57	0…127	Osc 2 Balance	F1 64…mid…F2 63
58	0…127	Osc 3 Level	0…127
59	0…127	Osc 3 Balance	F1 64…mid…F2 63
60	0…127	Noise Level	0…127
61	0…127	Noise Balance	F1 64…mid…F2 63
62	0…127	Noise Colour	0…127
63	*- not used -*	*undefined*	*- not used -*
64	0…127	Sustain Pedal*	off, on
65	0…127	Glide Active	off, on
66	0…127	Sostenuto	off, on
67	0…127	Routing	serial/parallel
68	0…10	Filter 1 Type	See Filter types
69	0…127	Filter 1 Cutoff	0…127
70	0…127	Filter 1 Resonance	0…127
71	0…127	Filter 1 Drive	0…127
72	0…127	Filter 1 Keytrack	- 200%… +197%
73	0…127	Filter 1 Env. Amount	-64…+63
74	0…127	Filter 1 Env. Velocity	-64…+63
75	0…127	Filter 1 CutoffMod	-64…+63

76	0…127	Filter 1 FM	off, 1…127
77	0…127	Filter 1 Pan	L64…center…R63
78	0…127	Filter 1 Panmod	-64…+63
79	0…10	Filter 2 Type	See Filter types
80	0…127	Filter 2 Cutoff	0…127
81	0…127	Filter 2 Resonance	0…127
82	0…127	Filter 2 Drive	0…127
83	0…127	Filter 2 Keytrack	- 200%…+197%
84	0…127	Filter 2 Env. Amount	-64…+63
85	0…127	Filter 2 Env. Velocity	-64…+63
86	0…127	Filter 2 CutoffMod	-64…+63
87	0…127	Filter 2 FM	off, 1…127
88	0…127	Filter 2 Pan	L64…center…R63
89	0…127	Filter 2 Panmod	-64…+63
90	0…127	Amp Volume	0…127
91	0…127	Amp Velocity	-64…+63

92	0…127	Amp Mod	-64…+63
93	0…127	FX 1 Mix	0…127
94	0…127	FX 2 Mix	0…127
95	0…127	FE Attack	0…127
96	0…127	FE Decay	0…127
97	0…127	FE Sustain	0…127
98	0…127	FE Decay 2	0…127
99	0…127	FE Sustain 2	0…127
100	0…127	FE Release	0…127
101	0…127	AE Attack	0…127
102	0…127	AE Decay	0…127
103	0…127	AE Sustain	0…127
104	0…127	AE Decay 2	0…127
105	0…127	AE Sustain 2	0…127
106	0…127	AE Release	0…127
107	0…127	E3 Attack	0…127
108	0…127	E3 Decay	0…127
109	0…127	E3 Sustain	0…127
110	0…127	E3 Decay 2	0…127
111	0…127	E3 Sustain 2	0…127
112	0…127	E3 Release	0…127
113	0…127	E4 Attack	0…127

114	0…127	E4 Decay	0…127
115	0…127	E4 Sustain	0…127
116	0…127	E4 Decay 2	0…127
117	0…127	E4 Sustain 2	0…127
118	0…127	E4 Release	0…127
119	*- not used -*	*undefined*	*- not used -*
120	0	All Sound Off*	immediate silence
121	0	Reset All Controllers*	resets all controllers
122	0…127	Local Control	Local Control Off/On
123	0	All Notes Off*	releases all voices
124	*- not used -*	Omni Mode Off	*- not used -*
125	*- not used -*	Omni Mode On	*- not used -*
126	*- not used -*	Poly Mode On/Off	*- not used -*
127	*- not used -*	Poly Mode On	*- not used -*