Version 4



propellerhead

MIDI Implementation Chart

	MIDI Controller Name	Mixer 14:2	NN-19	NN-XT	Subtractor	Thor	Malström	Redrum	Dr. Rex
0	ControlBankSelect		NA INA	NA 1340 1	M. 1380	M. 1340. 1	14 1345		M. DANG. I
2	ControlModulationWheel		Mod Wheel	Mod Wheel	Mod Wheel	Mod Wheel	Mod Wheel		Mod Wheel
3	ControlBreathController ControlUndefined3			Mod Wheel 2*				Pattern Select	
4	ControlOnderined3					Osc 1+2 Level		Pattern Select	
5	ControlPortamentoTime		Portamento		Portamento	Portamento	Portamento	Flam Amount	_
6	Control Data Entry MSB		Portamento		Fortamento	Fortamento	Fortamento	Flam Amount	
7	ControlChannelVolume	Master Level	Master Level	Master Volume	Master Level	Master Level	Master Level	Master Level	Master Level
8	ControlBalance	Channel 1 Level	Master Lever	waster volume	Iviaster Level	Mixer 1-2 Balance	Iviaster Level	Drum 1 Level	Master Lever
9	ControlUndefined9	Channel 2 Level	Amp Env Decay	Amp Env Decay	Amp Env Decay	Amp Env Decay	Oscillator B Decay	Drum 2 Level	Amp Env Decay
10	ControlPan	Channel 3 Level	Amp Life Decay	Allip Lilv Decay	Allip Eliv Decay	Amplifier Pan	Oscillator B Decay	Drum 3 Level	Allip Lilv Decay
11	ControlExpressionController	Charmer o Level		Mod Wheel 2**		Ampliner r air		Didili o Level	
12	ControlEffectControl1	Channel 4 Level	Amp Env Sustain	IVIOU VVIICEI 2	Amp Env Sustain	Delay Dry/wet	Oscillator B Sustain	Drum 4 Level	Amp Env Sustain
13	ControlEffectControl2	Channel 5 Level	Amp Env Oustain		Amp Env Oustain	Chorus Dry/Wet	Oscillator B Gustairi	Drum 5 Level	Amp Env Oustain
14	ControlUndefined14	Channel 6 Level	Filter Env Attack		Filter Env Attack	Filter Env Attack	Filter Env Attack	Drum 6 Level	Filter Env Attack
15	ControlUndefined15	Channel 7 Level	Filter Env Decay	Mod Env Decay	Filter Env Decay	Filter Env Decay	Filter Env Decay	Drum 7 Level	Filter Env Decay
16	ControlGeneralPurpose1	Channel 8 Level	Filter Env Sustain	Wood Env Decay	Filter Env Sustain	Filter Env Sustain	Filter Env Sustain	Drum 8 Level	Filter Env Sustain
7	ControlGeneralPurpose2	Channel 9 Level	Filter Env Release		Filter Env Release	Filter Env Release	Filter Env Release	Drum 9 Level	Filter Env Release
8	ControlGeneralPurpose3	Channel 10 Level	Filter Env Amount		Filter Env Amount	Delay Time	Filter Env Amount	Drum 10 Level	Filter Env Amount
9	ControlGeneralPurpose4	Channel 11 Level	Filter Env Invert		Filter Env Invert	Osc 3 Level	Filter Env Invert	Drum 1 Pan	Tittor Environment
0	ControlUndefined20	Channel 12 Level	Sample Start	1	Osc1 Wave	Osc1 Mod Amount		Drum 2 Pan	1
1	ControlUndefined21	Channel 13 Level	Osc Octave		Osc1 Octave	Osc1 Octave	Oscillator B Octave	Drum 3 Pan	Osc Octave
2	ControlUndefined22	Channel 14 Level	Osc Semitone	1	Osc1 Semitone	Osc1 Semitone	Oscillator B Semi	Drum 4 Pan	Transpose
3	ControlUndefined23	Channel 1 Pan	Osc Fine Tune		Osc1 Fine Tune	Osc1 Fine Tune	Oscillator B Cent	Drum 5 Pan	Osc Fine Tune
4	ControlUndefined24	Channel 2 Pan	Osc Env Amount			Osc1 Type		Drum 6 Pan	Osc Env Amount
25	ControlUndefined25	Channel 3 Pan	Osc Kbd Track		Osc1 Kbd Track	Delay Feedback	Modulator A On/Off	Drum 7 Pan	
6	ControlUndefined26	Channel 4 Pan	LFO Rate	1	LFO1 Rate	LFO1 Rate	Modulator A Rate	Drum 8 Pan	LFO1 Rate
7	ControlUndefined27	Channel 5 Pan	LFO Amount		LFO1 Amount	LFO1 Delay	Modulator A To Pitch	Drum 9 Pan	LFO1 Amount
8	ControlUndefined28	Channel 6 Pan	LFO Wave		LFO1 Wave	LFO1 Wave	Modulator A Curve	Drum 10 Pan	LFO1 Wave
9	ControlUndefined29	Channel 7 Pan	LFO Dest		LFO1 Dest	LFO1 Kbd track	Modulator A One Shot	Drum 1 Send 1 Amount	LFO1 Dest
0	ControlUndefined30	Channel 8 Pan	LFO Sync Enable		LFO Sync Enable	LFO1 Key Sync Enable	Modulator A Target	Drum 2 Send 1 Amount	LFO Sync Enable
1	ControlUndefined31	Channel 9 Pan	*		1	LFO1 Tempo Sync Enable	Modulator A To Index	Drum 3 Send 1 Amount	-
2	ControlLSB0 (Bank select)								
3	ControlLSB1 (ModWheel)	Channel 10 Pan	Filter Freq Mod Wheel Amount		Filter Freq Mod Wheel Amount	Mod Bus 1 Amount	Mod Wheel To Filter	Drum 4 Send 1 Amount	Filter Freq Mod Wheel Amou
4	ControlLSB2 (Breath)	Channel 11 Pan	Filter Res Mod Wheel Amount		Filter Res Mod Wheel Amount		Mod Wheel To Index	Drum 5 Send 1 Amount	Filter Res Mod Wheel Amou
5	ControlLSB3 (Undefined)	Channel 12 Pan	Filter Decay Mod Wheel Amoun	t	LFO1Mod Wheel Amount	Mod Bus 3 Amount	Mod Wheel To Modulator	Drum 6 Send 1 Amount	Filter Decay Mod Wheel Am
6	ControlLSB4 (Foot controller)	Channel 13 Pan	Amp Mod Wheel Amount		FM Mod Wheel Amount	Mod Bus 4 Amount	Mod Wheel Target	Drum 7 Send 1 Amount	Amp Vel Amount
7	ControlLSB5 (Portamento time)	Channel 14 Pan	LFO Mod Wheel Amount		Phase Diff Mod Wheel Amount	Mod Bus 5 Amount	Mod Wheel To Shift	Drum 8 Send 1 Amount	
8	ControlLSB6 (DataEntry LSB)								
9	ControlLSB7 (Channel Volume)	Channel 1 Aux 1 Send	Pitch Bend Range		Pitch Bend Range	Pitch Bend Range	Pitch Bend Range	Drum 9 Send 1 Amount	Pitch Bend Range
0	ControlLSB8 (Balance)	Channel 2 Aux 1 Send	Filter Freq Ext Mod		Filter Freq Ext Mod	Mod Bus 6 Amount	Modulator A To Shift	Drum 10 Send 1 Amount	-
1	ControlLSB9 (Undefined)	Channel 3 Aux 1 Send	LFO Ext Mod		LFO1 Ext Mod,	Mod Bus 7 Amount	Oscillator B On/Off	Drum 1 Send 2 Amount	
2	ControlLSB10 (Pan)	Channel 4 Aux 1 Send	Amp Ext Mod		Amp Ext Mod	Mod Bus 8 Amount	Oscillator B Index	Drum 2 Send 2 Amount	
3	ControlLSB11 (Expression)	Channel 5 Aux 1 Send	Ext Mod Select		Ext Mod Select	Mod Bus 9 Amount	Oscillator B Motion	Drum 3 Send 2 Amount	
4	ControlLSB12 (Effect control 1)	Channel 6 Aux 1 Send			FM Ext Mod	Mod Bus 10 Amount	Oscillator B Shift	Drum 4 Send 2 Amount	
5	ControlLSB13 (Effect control 2)	Channel 7 Aux 1 Send	Amp Vel Amount		Amp Vel Amount	Mod Bus 11 Amount		Drum 5 Send 2 Amount	1
6	ControlLSB14 (Undefined)	Channel 8 Aux 1 Send	Filter Env Vel Amount		Filter Env Vel Amount	Mod Bus 12 Amount	Velocity To Filter Env	Drum 6 Send 2 Amount	Filter Env Vel Amount
7	ControlLSB15 (Undefined)	Channel 9 Aux 1 Send	Filter Decay Vel Amount		Filter Decay Vel Amount	Mod Bus 13 Amount	Velocity Target	Drum 7 Send 2 Amount	Filter Decay Vel Amount
8	ControlLSB16 (General purpose 1)	Channel 10 Aux 1 Send	Amp Attack Vel Amount		Amp Attack Vel Attack	Osc3 Mod Amount	Velocity To Attack	Drum 8 Send 2 Amount	
9	ControlLSB17 (General purpose 2)	Channel 11 Aux 1 Send	Sample Start Vel Amount		FM Vel Amount	Osc3 Octave	Velocity To Level B	Drum 9 Send 2 Amount	1
0	ControlLSB18 (General purpose 3)	Channel 12 Aux 1 Send	1		Mod Env Vel Amount	Osc3 Semitone	Velocity To Level A	Drum 10 Send 2 Amount	
1	ControlLSB19 (General purpose 4)	Channel 13 Aux 1 Send				Osc3 Fine Tune	Velocity To Shift	Drum 1 Pitch	1
2	ControlLSB20 (Undefined)	Channel 14 Aux 1 Send	1		Filter2 Freq Vel Amount	Osc3 Type	Velocity To Modulator	Drum 2 Pitch	1
3	ControlLSB21 (Undefined)	Channel 1 Aux 2 Send			Mix Vel Amount	Osc3 Sync Amount	Oscillator B Gain	Drum 3 Pitch	1
4	ControlLSB22 (Undefined)	Channel 2 Aux 2 Send				Osc3 Sync Enabled	Filter A On/Off	Drum 4 Pitch	
5	ControlLSB23 (Undefined)	Channel 3 Aux 2 Send	Solo Sample			Chorus Delay	Filter A Mode	Drum 5 Pitch	
6	ControlLSB24 (Undefined)	Channel 4 Aux 2 Send	Spread Mode			Filter 2 Kbd Track	Shaper On/Off	Drum 6 Pitch	1
7	ControlLSB25 (Undefined)	Channel 5 Aux 2 Send	Stereo Spread			Filter 3 Type	Shaper Mode	Drum 7 Pitch	
В	ControlLSB26 (Undefined)	Channel 6 Aux 2 Send				Filter 3 Freq	Shaper Amount	Drum 8 Pitch	
9	ControlLSB27 (Undefined)	Channel 7 Aux 2 Send				Filter 3 Res	Route Oscillator B To Filter B	Drum 9 Pitch	
0	ControlLSB28 (Undefined)	Channel 8 Aux 2 Send	1			Filter 3 Kbd Track	Route Oscillator A To Filter B	Drum 10 Pitch	
1	ControlLSB29 (Undefined)	Channel 9 Aux 2 Send	1			Rotary 1	Route Oscillator A To Shaper	Drum 1 Tone	
2	ControlLSB30 (Undefined)	Channel 10 Aux 2 Send	1			Rotary 2	Route Filter B To Shaper	Drum 2 Tone	
3	ControlLSB31 (Undefined)	Channel 11 Aux 2 Send	1			Button 1		Drum 10 Tone	
4	ControlDamperPedal (Sustain)								
5	ControlPortamentoOnOff	Channel 12 Aux 2 Send				Portament Mode		Drum 6 Pitch Bend Amount	
6	ControlSostenuto	Channel 13 Aux 2 Send				Amp Env Sustain		Drum 7 Pitch Bend Amount	
7	ControlSoftPedal	Channel 14 Aux 2 Send				Button 2		Drum 1 Vel to Level	
8	ControlLegatoFootSwitch	Channel 1 Bass Amount	Key Mode		Key Mode	Key Mode	Legato On/Off	Drum 2 Vel to Level	
		Channel 2 Bass Amount				Sequencer Run Mode	Modulator A Sync	Drum 3 Vel to Level	
9	ControlHold2 ControlSoundController1 (Sound Variation)	Channel 2 bass Amount				Sequencer Direction	Modulator B Sync	Drum 4 Vel to Level	

MIDI Contr. #	MIDI Controller Name	Mixer 14:2		NN-XT	Subtractor	Thor	Malström	Redrum	Dr. Rex
71	ControlSoundController2 (Harmonic Intensity)	Channel 4 Bass Amount	Filter Res	Filter Res	Filter Res	Filter 1 Res	Filter B Resonance	Drum 5 Vel to Level	Filter Res
72	ControlSoundController3 (Release time)	Channel 5 Bass Amount	Amp Env Release	Amp Env Release	Amp Env Release	Amp Env Release	Oscillator B Release	Drum 6 Vel to Level	Amp Env Release
73	ControlSoundController4 (Attack time)	Channel 6 Bass Amount	Amp Env Attack	Amp Env Attack	Amp Env Attack	Amp Env Attack	Oscillator B Attack	Drum 7 Vel to Level	Amp Env Attack
74	ControlSoundController5 (Brightness)	Channel 7 Bass Amount	Filter Freq	Filter Freq	Filter Freq	Filter 1 Freq	Filter B Freq	Drum 8 Vel to Level	Filter Freq
75	ControlSoundController6	Channel 8 Bass Amount	Filter On/Off		Filter2 On/Off	Filter 2 to Amp Enabled	Filter B On/Off	Drum 9 Vel to Level	Filter On/Off
76	ControlSoundController7	Channel 9 Bass Amount	Filter Mode		Filter Type	Filter 1 Type	Filter B Mode	Drum 10 Vel to Level	Filter Mode
77	ControlSoundController8	Channel 10 Bass Amount	Filter Kbd Track		Filter Kbd Track	Filter 1 Kbd Track	Filter B Kbd Track	Drum 1 Length	
78	ControlSoundController9	Channel 11 Bass Amount			Filter2 Res	Filter 2 Res	Filter A Resonance	Drum 2 Length	
79	ControlSoundController10	Channel 12 Bass Amount			Filter2 Freq	Filter 2 Freq	Filter A Freq	Drum 3 Length	
80	ControlGeneralPurposeController5	Channel 13 Bass Amount			Filter Link Freq On/Off	Shaper Output Dest	Filter A Env	Drum 4 Length	
81	ControlGeneralPurposeController6	Channel 14 Bass Amount			Noise On/Off	Shaper On/Off	Filter A Kbd Track	Drum 5 Length	
82	ControlGeneralPurposeController7	Channel 1 Treble Amount			Noise Level	Shaper Drive	Filter B Env	Drum 6 Length	
83	ControlGeneralPurposeController8	Channel 2 Treble Amount			Noise Decay	Chours Feedback		Drum 7 Length	
84	ControlPortamentoControl	Channel 3 Treble Amount			Noise Color	Shaper Type		Drum 8 Length	
85	ControlUndefined85	Channel 4 Treble Amount			Mod Env Gain	Delay Mod Rate		Drum 9 Length	
86	ControlUndefined86	Channel 5 Treble Amount			Mod Env Invert	Delay Mod Amount	Oscillator A Shift	Drum 10 Length	
87	ControlUndefined87	Channel 6 Treble Amount			Mod Env Attack	Mod Env Attack	Oscillator A Attack	Drum 3 Sample Start	
88	ControlUndefined88	Channel 7 Treble Amount			Mod Env Decay	Mod Env Decay	Oscillator A Decay	Drum 4 Sample Start	T
89	ControlUndefined89	Channel 8 Treble Amount			Mod Env Sustain	Filter 2 Type	Oscillator A Sustain	Drum 5 Sample Start	
90	ControlUndefined90	Channel 9 Treble Amount			Mod Env Release	Mod Env Release	Oscillator A Release	Drum 8 Sample Start	<u> </u>
91	ControlEffects1Depth	Channel 10 Treble Amount			Mod Env Dest	Mod Env Loop Enabled	Oscillator A Gain	Drum 9 Sample Start	<u> </u>
92	ControlEffects2Depth	Channel 11 Treble Amount			Osc1 Phase Mode	Global Env Loop Enabled	Oscillator A Motion	Pattern Enable	
93	ControlEffects3Depth	Channel 12 Treble Amount			Osc1 Phase Diff	Chorus Mod Amount	Oscillator A Index		
94	ControlEffects4Depth	Channel 13 Treble Amount			Osc2 On/Off	Osc2 Type		Drum 6 Vel to Pitch Bend	
95	ControlEffects5Depth	Channel 14 Treble Amount			Osc2 Wave	Osc2 Mod Amount	Oscillator A On/Off	Drum 7 Vel to Pitch Bend	
96	ControlDataIncrement								
97	ControlDataDecrement								
98	ControlNonRegisteredParameterNumberLSB								
99	ControlNonRegisteredParameterNumberMSB								
100	ControlRegisteredParameterNumberLSB								
101	ControlRegisteredParameterNumberMSB								
102	ControlUndefined102	Channel 1 Aux 3 Send			Osc2 Octave	Osc2 Octave	Oscillator A Octave	Drum 6 Pitch Bend Rate	
103	ControlUndefined103	Channel 2 Aux 3 Send			Osc2 Semitone	Osc2 Semitone	Oscillator A Semi	Drum 7 Pitch Bend Rate	
104	ControlUndefined104	Channel 3 Aux 3 Send			Osc2 Fine Tune	Osc2 Fine Tune	Oscillator A Cent	Drum 1 Vel to Tone	
105	ControlUndefined105	Channel 4 Aux 3 Send			Osc2 Phase Mode	Osc2 Sync Amount	Spread Amount	Drum 2 Vel to Tone	
106	ControlUndefined106	Channel 5 Aux 3 Send			Osc2 Phase Diff	Osc2 Sync Enabled		Drum 10 Vel to Tone	
107	ControlUndefined107	Channel 6 Aux 3 Send			Osc Mix	Seq Rate		Drum 3 Vel to Sample Start	
108	ControlUndefined108	Channel 7 Aux 3 Send			FM Amount	AM Amount		Drum 4 Vel to Sample Start	
109	ControlUndefined109	Channel 8 Aux 3 Send			Ring Mod	LFO2 Tempo Sync		Drum 5 Vel to Sample Start	
110	ControlUndefined110	Channel 9 Aux 3 Send			LFO2 Rate	LFO2 Rate	Modulator B Rate	Drum 8 Vel to Sample Start	
111	ControlUndefined111	Channel 10 Aux 3 Send			LFO2 Amount	LFO2 Wave	Modulator B To Level	Drum 9 Vel to Sample Start	
112	ControlUndefined112	Channel 11 Aux 3 Send			LFO2 Delay	LFO2 Delay	Modulator B To Filter		
113	ControlUndefined113	Channel 12 Aux 3 Send			LFO2 Dest	LFO2 Key Sync Enable	Modulator B To Modulator A		
114	ControlUndefined114	Channel 13 Aux 3 Send			LFO2 Kbd Track	Global Env Delay	Modulator B On/Off		
115	ControlUndefined115	Channel 14 Aux 3 Send			Osc2 Kbd Track	Global Env Attack	Modulator B Curve		
116	ControlUndefined116	Aux 1 Return Level				Global Env Hold	Modulator B One Shot		
117	ControlUndefined117	Aux 2 Return Level				Global Env Decay	Modulator B Target		1
118	ControlUndefined118	Aux 3 Return Level				Global Env Sustain	Modulator B To Motion		1
119	ControlUndefined119	Aux 4 Return Level				Global Env Release			1
120	ControlReservedForChannelModeMessages120								
121	ControlReservedForChannelModeMessages121								
122	ControlReservedForChannelModeMessages122								
123	ControlReservedForChannelModeMessages123								
124	ControlReservedForChannelModeMessages124								
	ControlReservedForChannelModeMessages125								
125									
125 126 127	ControlReservedForChannelModeMessages126 ControlReservedForChannelModeMessages127								

^{*} Assuming source is set to Breath
** Assuming Source is set to Expression

MIDI Contr #	MIDI Controller Name	CF-101 Chorus	DDI -1 Delay	COMP-01 Compressor	D-11 Distortion	FCF-42 Filter	PFO2 Param FO	PH-90 Phaser	RV-7 Reverb ReBirth Inpu	Matrix	BV512 Vocoder	UN-16 Unison	Scream 4	RV7000 Reverb
	Controller Name ControlBankSelect	Ci - IVI Ciloids	DDL-1 DCIAY	COMP-01 Compressor	D-11 DISTOITION	LOF-42 FILLER	r Luz Farani. EU	, i ii Ju Filasci	IVA-1 VEACID VEDILII IIIbn	ITIGUIA	DIVIZ VOCOUR	CIN-10 OIIISOII	Julyani 4	KA1000 KEAGID
1	ControlModulationWheel													
2	ControlBreathController													
3	ControlUndefined3								Algorithm	Pattern Selec	t			
4	ControlFootController													
	ControlPortamentoTime													
6	ControlDataEntryMSB													
7	ControlChannelVolume												Master Level	
	ControlBalance	E 11 1	F 11 1	F 11 1	F 11 1	F 11 1	F 11 1	F 11 1	5.11.1	D	F 11 1	F 11 1	F	5 11 1
	ControlUndefined9 ControlPan	Enabled	Enabled Pan	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled	Pattern Enabl	e Enabled Shift	Enabled	Enabled	Enabled
11	ControlExpressionController		ran								Shirt			
	ControlEffectControl1	Delay	DelayTime (steps)	Threshold	Amount	Mode	Filter A Gain	Split	Size		Band Count	Detune	Damage Type	Hi EQ
	ControlEffectControl2	Feedback	Feedback	Attack	Foldback	Sustain	Filter B Gain	Feedback	Damping		Vocoder/Equalizer	Voice Count	Damage Control	HF Damp
	ControlUndefined14	Rate	Dry/Wet Balance	Release		Release	Filter B On/Off	Rate	Decay		Dry/Wet	Dry/Wet	Parameter 1	Decay
	ControlUndefined15	Modulation Amount				Velocity		Frequency Modulation	Dry/Wet		Band Level 1		Parameter 2	Dry/Wet
	ControlGeneralPurpose1		Step Length	Ratio		Env Amount		Width			Band Level 2		Damage On/Off	SmallSpace Size
	ControlGeneralPurpose2										Band Level 3		Cut On/Off	SmallSpace Mod Rate
	ControlGeneralPurpose3										Band Level 4		Cut Lo	SmallSpace Room Shape
19	ControlGeneralPurpose4										Band Level 5		Cut Mid	SmallSpace LF Damp
	ControlUndefined20			1	1	1	1	1		1	Band Level 6		Cut Hi	SmallSpace Wall Irreg
21	ControlUndefined21				-	-		1		1	Band Level 7			SmallSpace Predelay SmallSpace Mod Amount
	ControlUndefined22 ControlUndefined23										Band Level 8			Room Size
	ControlUndefined23 ControlUndefined24			1	1	1	1	+		+	Band Level 9 Band Level 10	+	1	Room Size Room Diffusion
	ControlUndefined25										Band Level 11			Room Shape
	ControlUndefined26										Band Level 12			Room ER -> Late Delay
	ControlUndefined27										Band Level 13			Room ER Level
	ControlUndefined28										Band Level 14			Room Predelay
	ControlUndefined29										Band Level 15			Room Mod Amount
	ControlUndefined30	LFO Sync Enable						LFO Sync Enable			Band Level 16			Hall Size
	ControlUndefined31							1						Hall Diffusion
32	ControlLSB0 (Bank select)													
33	ControlLSB1 (ModWheel)													Hall Room Shape
	ControlLSB2 (Breath)													Hall ER -> Late Delay
	ControlLSB3 (Undefined)													Hall ER Level
36	ControlLSB4 (Foot controller)													Hall Predelay
	ControlLSB5 (Portamento time)													Hall Mod Amount
38	ControlLSB6 (DataEntry LSB)													. 0
39 40	ControlLSB7 (Channel Volume) ControlLSB8 (Balance)													Arena Size Arena Diffusion
	ControlLSB9 (Undefined)													Arena Mono Delay
	ControlLSB10 (Pan)													Arena Mono Level
43	ControlLSB11 (Expression)													Arena Left Delay
44	ControlLSB12 (Effect control 1)													Arena Right Delay
45	ControlLSB13 (Effect control 2)													Arena Stereo Level
46	ControlLSB14 (Undefined)													
47	ControlLSB15 (Undefined)													Plate LF Damp
48	ControlLSB16 (General purpose 1)													Plate Predelay
49	ControlLSB17 (General purpose 2)				1	1	1			1				Spring Length
	ControlLSB18 (General purpose 3)							1		1				Spring Diffusion
51	ControlLSB19 (General purpose 4)			1	1	1	1	1		1	1		1	Spring Dispersion Freq
52 53	ControlLSB20 (Undefined) ControlLSB21 (Undefined)							-		1				Spring LF Damp
	ControlLSB21 (Undefined) ControlLSB22 (Undefined)			1	1	1	1	+		+		+	1	Spring Stereo Enable Spring Predelay
55	ControlLSB23 (Undefined)				1		<u> </u>	+		1				Spring Predelay Spring Dispersion Amount
	ControlLSB24 (Undefined)				1	1	1	1		1				
57	ControlLSB25 (Undefined)			1				1		1				Echo Tempo Sync
58	ControlLSB26 (Undefined)							İ						Echo Time
	ControlLSB27 (Undefined)													Echo Time Steps
60	ControlLSB28 (Undefined)													Echo Diffusion
	ControlLSB29 (Undefined)													Echo LF Damp
62	ControlLSB30 (Undefined)													Echo Spread
	ControlLSB31 (Undefined)													Echo Predelay
64	ControlDamperPedal (Sustain)										Hold			
65	ControlPortamentoOnOff				1	1	1			1				MultiTap Tempo Sync
66	ControlSostenuto			1				1		1				MultiTap Repeat Time
67	ControlSoftPedal			1				1		1				MultiTap Repeat Time Steps
68	ControlLegatoFootSwitch				-	-		1		1				MultiTap Diffusion
69 70	ControlHold2 ControlSoundController1 (Sound Variation)			1	1	1	1	+		+		+	Body On/Off	MultiTap LF Damp MultiTap 1 Delay
70	Control Count Count variation)	_	1	-1	1	1	1	1	1 1	1	1	1	Dody On/On	пминтар г регау

MIDI Contr. #	MIDI Controller Name	CF-101 Chorus	DDL-1 Delay	COMP-01 Compressor	D-11 Distortion	ECF-42 Filter	PEQ2 Param. EQ	PH-90 Phaser	Reverb	ReWire Input	Matrix	BV512 Vocoder	UN-16 Unison	Scream 4	RV7000 Reverb
71	ControlSoundController2 (Harmonic Intensity)					Resonance	Filter A Q							Body Resonance	MultiTap 1 Delay Steps
72	ControlSoundController3 (Release time)					Decay								,	MultiTap 2 Delay
73	ControlSoundController4 (Attack time)					Attack						Decay			MultiTap 2 Delay Steps
74	ControlSoundController5 (Brightness)					Frequency	Filter A Freq	Frequency				Attack		Body Scale	MultiTap 3 Delay
75	ControlSoundController6		+			requericy	Tillel A Treq	rrequericy				HF Emphasis		Dody Ocale	MultiTap 3 Delay Steps
76	ControlSoundController7											I II LIIIpiiasis			MultiTap 4 Delay
77	ControlSoundController8						FII: D.O.								MultiTap 4 Delay Steps
78	ControlSoundController9						Filter B Q							Body Auto	MultiTap 1 Level
79	ControlSoundController10						Filter B Freq							Body Type	MultiTap 2 Level
80	ControlGeneralPurposeController5														MultiTap 3 Level
81	ControlGeneralPurposeController6														MultiTap 4 Level
82	ControlGeneralPurposeController7														MultiTap 1 Pan
83	ControlGeneralPurposeController8														MultiTap 2 Pan
84	ControlPortamentoControl														MultiTap 3 Pan
85	ControlUndefined85														MultiTap 4 Pan
86	ControlUndefined86														Reverse Tempo Sync
87	ControlUndefined87														Reverse Length
88	ControlUndefined88														Reverse Length Steps
89	ControlUndefined89														Reverse Rev Dry/Wet
90	ControlUndefined90		+												Reverse Density
91	ControlEffects1Depth														Algorithm Select
92	ControlEffects2Depth										Enable				
93	ControlEffects3Depth														
94	ControlEffects4Depth														Gate On/Off
95	ControlEffects5Depth														EQ On/Off
96	ControlDataIncrement														
97	ControlDataDecrement														
98	ControlNonRegisteredParameterNumberLSB														
99	ControlNonRegisteredParameterNumberMSB														
100	ControlRegisteredParameterNumberLSB			_											_
101	ControlRegisteredParameterNumberMSB														
102	ControlUndefined102											Band Level 17			Gate Threshold
103	ControlUndefined103											Band Level 18			Gate Decay Mod
104	ControlUndefined104											Band Level 19			Gate Trig Source
105	ControlUndefined105											Band Level 20			Gate High Pass
106	ControlUndefined106											Band Level 21			Gate Attack
107	ControlUndefined107											Band Level 22			Gate Hold
108	ControlUndefined108											Band Level 23			Gate Release
109	ControlUndefined109											Band Level 24			EQ Low Gain
110	ControlUndefined110											Band Level 25			EQ Low Freq
111	ControlUndefined111											Band Level 26			EQ Param Gain
112	ControlUndefined112											Band Level 27			EQ Param Freq
113	ControlUndefined113											Band Level 28			EQ Param Q
114	ControlUndefined114			1			1			1	l	Band Level 29		1	
115	ControlUndefined115											Band Level 30			+
116	ControlUndefined116			-								Band Level 31			+
117	ControlUndefined117		1	_			 		_	+		Band Level 32		1	+
				+						_		Dand Level 32			+
118	ControlUndefined118		1	_		 	-							1	+
119	ControlUndefined119			_											
120	ControlReservedForChannelModeMessages120														
121	ControlReservedForChannelModeMessages121														
122	ControlReservedForChannelModeMessages122														
123	ControlReservedForChannelModeMessages123	3													
124	ControlReservedForChannelModeMessages124														
125	ControlReservedForChannelModeMessages125	5													
126	ControlReservedForChannelModeMessages126	3													
127	ControlReservedForChannelModeMessages127														
127	Control Coerveur or Charmenvioue wessages 127														

	# MIDI Controller Name	Line Mixer 6:2	Combinator	MClass Equalizer	MClass Stereo Imag	er MClass Compress	or MClass Maximizer
0	ControlBankSelect						
1	ControlModulationWheel		Mod Wheel				
2	ControlBreathController						
3	ControlUndefined3						
4	ControlFootController						
5	ControlPortamentoTime						
6	ControlDataEntryMSB						
7	ControlChannelVolume	Master Level				Output Gain	Output Gain
8	ControlBalance	Channel 1 Level			Solo Mode	Sidechain Solo	
9	ControlUndefined9	Channel 2 Level	Enabled	Enabled	Enabled	Enabled	Enabled
10	ControlPan	Channel 3 Level					
11	ControlExpressionController	Chambre & Ecver					
12	ControlEffectControl1	Channel 4 Level		Parametric 1 Gain	Low Width	Threshold	Soft Clip Amount
13	ControlEffectControl2	Channel 5 Level			High Width	Attack	
14	ControlUndefined14	Channel 6 Level		Parametric 2 Gain	riigii vvidiii	Release	Attack Speed
		Channel 6 Level		Low Shelf Gain			Release Speed
15	ControlUndefined15			Hi Shelf Gain		Adapt	Look Ahead Enable
16	ControlGeneralPurpose1			Low Cut Enable		Ratio	Limiter Enable
17	ControlGeneralPurpose2			Low Shelf Enable		Soft Knee	Soft Clip Enable
18	ControlGeneralPurpose3			Parametric 1 Enable			Output Level Meter Mode
19	ControlGeneralPurpose4			Parametric 2 Enable		Input Gain	Input Gain
20	ControlUndefined20			Hi Shelf Enable			
21	ControlUndefined21						
22	ControlUndefined22						
23	ControlUndefined23	Channel 1 Pan					
24	ControlUndefined24	Channel 2 Pan					
25	ControlUndefined25	Channel 3 Pan					
26	ControlUndefined26	Channel 4 Pan					1
27	ControlUndefined27	Channel 5 Pan					
28	ControlUndefined28	Channel 6 Pan					
29	ControlUndefined29	Charinei 6 Pari					
30	Controlondelined29						
	ControlUndefined30						
31	ControlUndefined31						
32	ControlLSB0 (Bank select)						
33	ControlLSB1 (ModWheel)						
34	ControlLSB2 (Breath)						
35	ControlLSB3 (Undefined)						
36	ControlLSB4 (Foot controller)						
37	ControlLSB5 (Portamento time)						
38	ControlLSB6 (DataEntry LSB)						
39	ControlLSB7 (Channel Volume)	Channel 1 Aux Send					
40	ControlLSB8 (Balance)	Channel 2 Aux Send					
41	ControlLSB9 (Undefined)	Channel 3 Aux Send					
42	ControlLSB10 (Pan)	Channel 4 Aux Send					
43	ControlLSB11 (Expression)	Channel 5 Aux Send					
44	ControlLSB12 (Effect control 1)	Channel 6 Aux Send					+
45	ControlLSB12 (Effect control 1) ControlLSB13 (Effect control 2)	Channel 6 Aux Send					
46	ControlLSB13 (Effect control 2) ControlLSB14 (Undefined)				_		
47	ControlLSB15 (Undefined)		_			-	
48	ControlLSB16 (General purpose 1)						
49	ControlLSB17 (General purpose 2)						
50	ControlLSB18 (General purpose 3)						
51	ControlLSB19 (General purpose 4)						
52	ControlLSB20 (Undefined)						
53	ControlLSB21 (Undefined)						
54	ControlLSB22 (Undefined)						
55	ControlLSB23 (Undefined)						
56	ControlLSB24 (Undefined)						
57	ControlLSB25 (Undefined)						
58	ControlLSB26 (Undefined)						
59	ControlLSB26 (Undefined)		+				1
60	ControlLSB27 (Undefined)		-1			1	+
			_			+	+
61	ControlLSB29 (Undefined)						
62	ControlLSB30 (Undefined)		_				
63	ControlLSB31 (Undefined)						
64	ControlDamperPedal (Sustain)						
65	ControlPortamentoOnOff						
66	ControlSostenuto						
67	ControlSoftPedal						
68	ControlLegatoFootSwitch						
69	ControlHold2						
	ControlSoundController1 (Sound Variation)			-		-	

	# MIDI Controller Name	Line Mixer 6:2		MClass Equalizer	MClass Stereo Imager	MClass Compressor	MClass Maximizer
71	ControlSoundController2 (Harmonic Intensity)		Rotary 1	Parametric 1 Q			
72	ControlSoundController3 (Release time)		Rotary 2				
73	ControlSoundController4 (Attack time)		Rotary 3				
74	ControlSoundController5 (Brightness)		Rotary 4	Parametric 1 Frequency	X-Over Frequency		
75	ControlSoundController6		Button 1	' '			
76	ControlSoundController7		Button 2				
77	ControlSoundController8		Button 3				
78	ControlSoundController9		Button 4	Parametric 2 Q			
79	ControlSoundController10		Dutton 1	Parametric 2 Frequency			
80	ControlGeneralPurposeController5			Low Shelf Q			
81	ControlGeneralPurposeController6			Low Shelf Frequency	+		
82	ControlGeneralPurposeController7			Hi Shelf Q	+		
83	ControlGeneralPurposeController8			Hi Shelf Frequency			
84	ControlGeneralPurposeControllero			HI Shell Frequency			
85	ControlUndefined85						
86	ControlUndefined86						
87	ControlUndefined87						
88	ControlUndefined88						
89	ControlUndefined89						
90	ControlUndefined90						
91	ControlEffects1Depth						*
92	ControlEffects2Depth						
93	ControlEffects3Depth						
94	ControlEffects4Depth						
95	ControlEffects5Depth						
96	ControlDataIncrement						
97	ControlDataDecrement						
98	ControlNonRegisteredParameterNumberLSB						
99	ControlNonRegisteredParameterNumberMSB						
100	ControlNonRegisteredParameterNumberIvSB ControlRegisteredParameterNumberLSB						
100							
	ControlRegisteredParameterNumberMSB						
102	ControlUndefined102						
103	ControlUndefined103						
104	ControlUndefined104						
105	ControlUndefined105						
106	ControlUndefined106						
107	ControlUndefined107						
108	ControlUndefined108						
109	ControlUndefined109						
110	ControlUndefined110						
111	ControlUndefined111						
112	ControlUndefined112						
113	ControlUndefined113						
114	ControlUndefined114						
115	ControlUndefined115		_		+		
116	ControlUndefined116	Aux Return Level	-				
117	ControlUndefined117	Aux return Level			+		
118	ControlUndefined118		-		1		
119	ControlUndefined119				+		
120	ControlReservedForChannelModeMessages120				-		
121	ControlReservedForChannelModeMessages121						
122	ControlReservedForChannelModeMessages122						
123	ControlReservedForChannelModeMessages123						
124	ControlReservedForChannelModeMessages124						
125	ControlReservedForChannelModeMessages125						
126	ControlReservedForChannelModeMessages126						
					+		