

The River MIDI Implementation Chart

Channel Control Change Messages

Hex = B(ch) Param Value

Dec = (176+ch) Param Value

Ch = channel 0..15

Function	Param (Hex)	Range (Hex)	Remark
Mix Osc 1	40 (28)	0..127 (00..7F)	
Osc 1 Range	41 (29)	0..3 (00..03)	0=32',1=16',2=8',3=4'
Osc 1 Wave	42 (2A)	0..2 (00..02)	0=Tri, 1=Saw 2=Sqr
Osc 1 PWM Lfo	44 (2C)	0..127 (00..7F)	
Pwm Env	47 (2F)	0,1 (00,01)	0=Lfo,1=Env. Filter
Negative Env	48 (30)	0,1 (00,01)	0=Normal, 1=Invert
Mix Noise	49 (31)	0..127 (00..7F)	
Mix Osc 2	50 (32)	0..127 (00..7F)	
Osc 2 Range	51 (33)	0..3 (00..03)	0=32',1=16',2=8',3=4'
Osc 2 Wave	52 (34)	0..2 (00..02)	0=Tri, 1=Saw 2=Sqr
Osc 2 PWM L/E	54 (36)	0..127 (00..7F)	
Synchro Osc	58 (3A)	0,1 (00,01)	0=Off,1=On
Osc 2 Interval	59 (3B)	0..25 (00..19)	0=-12,12=0,24=+12,25=Keyb Off
Bend range	64 (40)	0..12 (00..0C)	
Flt Key Tracking	65 (41)	0..127 (00..7F)	
Flt Env Amount	66 (42)	0..127 (00..7F)	
Osc 2 FM Filter	67 (43)	0..127 (00..7F)	
Filter Attack	70 (46)	0..127 (00..7F)	
Filter Decay	71 (47)	0..127 (00..7F)	
Filter Sustain	72 (48)	0..127 (00..7F)	
Filter Release	73 (49)	0..127 (00..7F)	
VCA Decay	75 (4B)	0..127 (00..7F)	
VCA Sustain	76 (4C)	0..127 (00..7F)	
VCA Release	77 (4D)	0..127 (00..7F)	
Velo. Expression	78 (4E)	0..127 (00..7F)	

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Function	Param (Hex)	Range (Hex)	Remark
Velo/Delay Lfo	79 (4F)	0..127 (00..7F)	
Lfo Wave	80 (50)	0,1 (00,01)	0=Tri, 1=Sqr
Wheel Lfo & Others	88 (58)		Bit 1 = Wheel 2 Lfo Bit 2 = Glide semiton Bit 3 = Delai LFO
Glide	89 (59)	0..127 (00..7F)	
Detune	90 (5A)	0..15 (00..0F)	

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Channel NRPN Messages

Hex = B(ch) 63 (Msb Param) B(ch) 62 (Lsb Param) B(ch) 06 (Msb Value) B(ch) 26 (Lsb Value)

Dec = (176+ch) 99 (Msb Param) 98 (Lsb Param) (176+ch) 6 (Msb Value) 38 (Lsb Value)

Ch = channel 0..15

Function	Param (Msb Lsb)	Range (Max Msb Lsb)	Remark
Osc 1 PW	43 (Dec=0 43, Hex=00 2B)	0..400 (Dec=3 16, Hex=03 10)	
Osc 1 DLfo	45 (Dec=0 45, Hex=00 2D)	0..400 (Dec=3 16, Hex=03 10)	
Osc 1 Lfo	46 (Dec=0 46, Hex=00 2E)	0..400 (Dec=3 16, Hex=03 10)	
Osc 2 PW	53 (Dec=0 53, Hex=00 35)	0..400 (Dec=3 16, Hex=03 10)	
Osc 2 DLfo	55 (Dec=0 55, Hex=00 37)	0..400 (Dec=3 16, Hex=03 10)	
Osc 2 Lfo	56 (Dec=0 56, Hex=00 38)	0..400 (Dec=3 16, Hex=03 10)	
Osc 2 Fine Tune	57 (Dec=0 57, Hex=00 39)	0..400 (Dec=3 16, Hex=03 10)	
Filter Cutoff	60 (Dec=0 60, Hex=00 3C)	0..400 (Dec=3 16, Hex=03 10)	
Filter Emphasis	61 (Dec=0 61, Hex=00 3D)	0..400 (Dec=3 16, Hex=03 10)	
Filter DLfo	62 (Dec=0 62, Hex=00 3E)	0..400 (Dec=3 16, Hex=03 10)	
Filter Lfo	63 (Dec=0 63, Hex=00 3F)	0..400 (Dec=3 16, Hex=03 10)	
VCA Attack	74 (Dec=0 74, Hex=00 4A)	0..400 (Dec=3 16, Hex=03 10)	
Lfo Rate	81 (Dec=0 81, Hex=00 51)	0..400 (Dec=3 16, Hex=03 10)	
DLfo Wave	82 (Dec=0 82, Hex=00 52)	0..10 (Dec=0 10, Hex=00 0A)	0=Const, 1=Sin, 2=Tri, 3=Sqr, 4=Saw Up, 5=Saw Down, 6=S&H, 7=Rand, 8=Tape, 9 = One Up, 10 = One Down
DLfo Rate	83 (Dec=0 83, Hex=00 53)	0..400 (Dec=3 16, Hex=03 10)	
DLfo Decay	151 (Dec=1 23, Hex=01 17)	0..400 (Dec=3 16, Hex=03 10)	
DLfo Ampl/Rate %	84 (Dec=0 84, Hex=00 54)	0..400 (Dec=3 16, Hex=03 10)	
DLfo Wheel	85 (Dec=0 85, Hex=00 55)	0..127 (Dec=0 127, Hex=00 7F)	
DLfo Velocity	86 (Dec=0 86, Hex=00 56)	0..127 (Dec=0 127, Hex=00 7F)	
DLfo Aftertouch	87 (Dec=0 87, Hex=00 57)	0..127 (Dec=0 127, Hex=00 7F)	
DLfo Pedal	88 (Dec=0 88, Hex=00 58)	0..127 (Dec=0 127, Hex=00 7F)	
Pedal Min Level	89 (Dec=0 89, Hex=00 59)	0..127 (Dec=0 127, Hex=00 7F)	
Vel. Attack	140 (Dec=1 12, Hex=01 0C)	0..127 (Dec=0 127, Hex=00 7F)	

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Vel. Release	142 (Dec=1 14, Hex=01 0E)	0..127 (Dec=0 127, Hex=00 7F)	
Function	Param (Msb Lsb)	Range (Max Msb Lsb)	Remark
Flt. Vel. Attack	143 (Dec=1 15, Hex=01 0F)	0..127 (Dec=0 127, Hex=00 7F)	
Flt Vel. Release	145 (Dec=1 17, Hex=01 11)	0..127 (Dec=0 127, Hex=00 7F)	
DLfo Emphasis	146 (Dec=1 18, Hex=01 12)	0..127 (Dec=0 127, Hex=00 7F)	
DLfo Keyb Reset	147 (Dec=1 19, Hex=01 13)	0..3 (Dec=0 3, Hex=00 03)	0=None, 1=Reset, 2=Loop, 3 =Reset + Loop
DLFo Mix OSC1	148 (Dec=1 20, Hex=01 14)	0..127 (Dec=0 127, Hex=00 7F)	
DLFo Mix OSC2	149 (Dec=1 21, Hex=01 15)	0..127 (Dec=0 127, Hex=00 7F)	
DLfo Mix Noise	150 (Dec=1 22, Hex=01 16)	0..127 (Dec=0 127, Hex=00 7F)	
MPE Z	166 (Dec=1 38, Hex=01 26)	0..29 (Dec=0 29, Hex=00 1D)	
MPE Y	167 (Dec=1 39, Hex=01 27)	0..29 (Dec=0 29, Hex=00 1D)	
Vel. VCF	168 (Dec=1 40, Hex=01 28)	0..127 (Dec=0 127, Hex=00 7F)	