Parameter List

Patch Parameters

Parameter		Full Name of Parameter	Value
EFFECTS Section			
TONE CONTROL	BASS	Tone Control Bass	-64–+63
	TREBLE	Tone Control Treble	-64–+63
MULTI-FX LEVEL		Multi Effects Level	0–127
DELAY	TIME	Delay Time	0–127
	FEEDBACK	Delay Feedback	0–127
	LEVEL	Delay Level	0–127
	VOICE MOD SEND	Voice Modulator Send Switch	OFF, ON
LFO 1 Section	WAVEFORM	LFO 1 Waveform	TRI, SAW, SQR, S/H
	RATE	LFO 1 Rate	0–127
	FADE	LFO 1 Fade Time	0–127
MODULATION	RATE	LFO 2 Rate	0–127
(LFO 2) Section	DEPTH SELECT	Depth Select	PITCH, FILTER, AMP
	DEPTH (PITCH)	Pitch LFO 2 Depth	-64–+63
	DEPTH (FILTER)	Filter LFO 2 Depth	-64–+63
	DEPTH (AMP)	Amplifier LFO 2 Depth	-64–+63
PORTAMENTO Section	ON	Portamento Switch	OFF, ON
	TIME	Portamento Time	0–127
OSC1 Section	WAVEFORM	Oscillator 1 Waveform	SUPER SAW, TRIANGLE MOD, NOISE, FEEDBACK OSC, SQR (PWM), SAW, TRI
	CONTROL 1	Oscillator 1 Control 1	0–127
	CONTROL 2	Oscillator 1 Control 2	0–127
OSC2 Section	WAVEFORM	Oscillator 2 Waveform	SQR (PWM), SAW, TRI, NOISE
	EXT	External Input Switch	OFF, ON
	SYNC	Sync Switch	OFF, ON
	RANGE	Oscillator 2 Range	-WIDE, -24–+24, +WIDE
	FINE/WIDE	Oscillator 2 Fine Tune/Wide	-50–+50cent/-4–0oct/0–+4oct
	CONTROL 1	Oscillator 2 Control 1	0–127
	CONTROL 2	Oscillator 2 Control 2	0–127
	RING	Ring Modulator Switch	OFF, ON
OSC COMMON Section	OSC BALANCE	Oscillator Balance	-64 (OSC1)–+63 (OSC2)
	X-MOD DEPTH	Cross Modulation Depth	0–127
	LFO 1&ENV DESTINATION	LFO 1& Envelope Destination	OSC1+2, OSC2, X-MOD
	LFO 1 DEPTH	Oscillator LFO 1 Depth	-64–+63
	OSC SHIFT	Oscillator Shift	-2OCT–+2OCT
PITCH ENVELOPE Section	DEPTH	Pitch Envelope Depth	-64–+63
	A	Pitch Envelope Attack Time	0–127
	D	Pitch Envelope Decay Time	0–127
FILTER Section	TYPE	Filter Type	HPF, BPF, LPF
	-12dB/-24dB	Cutoff Slope	-12dB/oct, -24dB/oct
	CUTOFF FREQ	Cutoff Frequency	0–127
	RESONANCE	Resonance	0–127
	KEY FOLLOW	Cutoff Frequency Key Follow	-64–+63
	LFO 1 DEPTH	Filter LFO 1 Depth	-64–+63

FILTER ENVELOPE Section	DEPTH	Filter Envelope Depth	-64–+63
	A	Filter Envelope Attack Time	0–127
	D	Filter Envelope Decay Time	0–127
	S	Filter Envelope Sustain Level	0–127
	R	Filter Envelope Release Time	0–127
AMP Section	LEVEL	Amplifier Level	0–127
	PAN	Auto Pan/Manual Pan Switch	OFF, AUTO, MANUAL
	LFO 1 DEPTH	Amplifier LFO 1 Depth	-64 (L)–+63 (R)
AMP ENVELOPE Section	A	Amplifier Envelope Attack Time	0–127
	D	Amplifier Envelope Decay Time	0–127
	S	Amplifier Envelope Sustain Level	0–127
	R	Amplifier Envelope Release Time	0–127
CONTROL Section			
SOLO SW	MONO	Mono Switch	OFF, ON
	LEGATO	Legato Switch	OFF, ON
	UNISON	Unison Switch	OFF, ON
VELOCITY		Velocity Switch	OFF, ON
MORPHING	VELOCITY ASSIGN	Velocity Assign	-127–+127/-100–+100/-50–+50
	CONTROL ASSIGN	Control Assign	-127–+127/-100–+100/-50–+50
[PATCH] (BANK [4])	Patch Name	Patch Name	ASCII Character (max.16)
	Multi-FX Type	Multi Effects Type	SUPER CHORUS SLW/MID/FST/ CLR, FLANGER SLOW/DEEP/ FAST, DEEP PHASING SLW, JET PHASING, TWISTING, FREEZE PHASE 1/2, DISTORTION
	Delay Type	Delay Type	PANNING L->R/R->L/SHORT, MONO SHORT/LONG
	Bend Range Up	Bend Range Up	0–+24 semitone
	Bend Range Down	Bend Range Down	-24–0 semitone
	Morph Bend Assgn	Morph Bend Assign Switch	OFF, ON
	Unison Detune	Unison Detune	0–50
	Env Type in Solo	Envelope Type in Solo	STANDARD, ANALOG
	Patch Gain	Patch Gain	0dB, +6dB, +12dB
	Ext Trig Switch	External Trigger Switch	OFF, ON
	Ext Trig Dest	External Trigger Destination	FILTER, AMP, FILTER&AMP

Performance Common Parameters

Parameter		Full Name of Parameter	Value
PANEL SELECT Section	LOWER, UPPER	Lower, Upper	LOWER, UPPER, LOWER & UPPER, VOICE MOD
KEY MODE Section	KEY MODE	Key Mode Select	SINGLE, DUAL, SPLIT
ARPEGGIATOR/RPS Section	ON	Arpeggio/RPS Switch	OFF, ON
	MODE	Mode	UP, DOWN, UP & DOWN, RANDOM, RPS
	RANGE	Arpeggio Range	1OCT–4OCT
	HOLD	Arpeggio/RPS Hold Switch	OFF, ON
	TEMPO	Tempo	20–250
VOICE MODULATOR Section	ON	Voice Modulator Switch	OFF, ON
EXTERNAL INPUT Section	REAR/FRONT	Vocal Input Select Switch	OFF (REAR), ON (FRONT)
[PFM COMMON] (BANK [1])	Performance Name	Performance Name	ASCII Character (max.16)
	Part Detune	Part Detune	-50–+50
	Output Assign	Output Assign	MIX OUT, PARALLEL OUT
	Voice Assign (Only DUAL & SPLIT Mode) *( ) = Voice Modulator is ON	Voice Assign	(6) 8-2 (2), (5) 7-3 (3), (4) 6-4 (4), (4) 5-5 (4), (4) 4-6 (4), (3) 3-7 (5), (2) 2-8 (6)
	Split Point (Only SPLIT Mode)	Split Point	C-1–G 9
	Arpeggio Dest (Only DUAL Mode)	Arpeggio Destination	LOWER & UPPER, LOWER, UPPER
	Arp Beat Pattern	Arpeggio Beat Pattern	1/4, 1/6, 1/8, 1/12, 1/16, 1/32, PORTA-A1–11, PORTA-B1–15, SEQUENCE-A1–7, SEQUENCE-B1–5, SEQUENCE-C1–2, SEQUENCE-D1–8, ECHO1–3, MUTE1–16, STRUMMING1–8, REFRAIN1–2, PERCUSSION1–4, WALKING BASS, HARP, RANDOM
	Indv Trig Switch	Individual Trigger Switch	OFF, ON
	Indv Trig Dest	Individual Trigger Destination	FILTER, AMP, FILTER & AMP
	Indv Trig Src CH	Individual Trigger Source Channel	1–16
	IndvTrigSrc Note	Individual Trigger Source Note	C-1–G 9, ALL
[VOICE MOD] (BANK [2])	Algorithm	Algorithm	SOLID, SMOOTH, WIDE, FLT BANK WIDE, FLT BANK NARROW
	Control1 Assign	Control 1 Assign	ENSEMBLE LEVEL, V DELAY TIME, V DELAY FEEDBACK, V DELAY LEVEL, VOCAL MIX, V RESONANCE, V RELEASE, V PAN, V LEVEL, V NOISE CUTOFF, V NOISE LEVEL, GATE THRESHOLD, ROBOT PITCH, ROBOT CONTROL, ROBOT LEVEL, CHARACTER1–12
	Control2 Assign	Control 2 Assign	ENSEMBLE LEVEL, V DELAY TIME, V DELAY FEEDBACK, V DELAY LEVEL, VOCAL MIX, V RESONANCE, V RELEASE, V PAN, V LEVEL, V NOISE CUTOFF, V NOISE LEVEL, GATE THRESHOLD, ROBOT PITCH, ROBOT CONTROL, ROBOT LEVEL, CHARACTER1–12

	Ext->Inst Send	External To Instrumental Send Switch	OFF, ON
	Ext->Vocal Send	External To Vocal Send Switch	OFF, ON
	V Delay Type	Voice Modulator Delay Type	PANNING L->R/R->L/SHORT, MONO SHORT/LONG
	V Delay Sync	Voice Modulator Delay Sync	OFF, 1/16, 1/8 (3), 1/16 (.), 1/8, 1/4 (3), 1/8 (.), 1/4, 1/2 (3), 1/4 (.), 1/2
	Ensemble Type	Ensemble Type	ENSEMBLE MILD/CLEAN/FAST, SUPER CHORUS SLW/MID/FST/CLR, FLANGER SLOW/DEEP/FAST, DEEP PHASING SLW, JET PHASING, TWISTING, FREEZE PHASE 1/2
	Ensemble Sync	Ensemble Sync	OFF, 1/16, 1/8 (3), 1/16 (.), 1/8, 1/4 (3), 1/8 (.), 1/4, 1/2 (3), 1/4 (.), 1/2, 1/1 (3), 1/2 (.), 1/1, 2/1 (3), 1/1 (.), 2/1, 3–8MEASURES
	Vocal Morph Ctrl	Vocal Morph Control	OFF, ON
	Vocal Morph Sens	Vocal Morph Sens	-64–+63
	VocalMorph Thrsh	Vocal Morph Threshold	0–127
VOICE MODULATOR PANEL	ENSEMBL LEVEL	Ensemble Level	0–127
	V DELAY LEVEL	Voice Modulator Delay Level	0–127
	V DELAY TIME	Voice Modulator Delay Time	0–127
	V DELAY FEEDBACK	Voice Modulator Delay Feedback	0–127
	VOCAL MIX	Vocal Mix	0–127
	V RESONANCE	Voice Modulator Resonance	0–127
	V RELEASE	Voice Modulator Envelope Release Time	0–127
	VOCAL HOLD	Vocal Hold Switch	OFF, ON
	V PAN	Voice Modulator Pan	-64–+63
	V LEVEL	Voice Modulator Level	0–127
	V NOISE LEVEL	Voice Modulator Noise Level	0–127
	V NOISE CUTOFF	Voice Modulator Noise Cutoff	0–127
	GATE THRESHOLD	Gate Threshold	0–127
	ROBOT LEVEL	Robot Oscillator Level	0–127
	ROBOT PITCH	Robot Oscillator Pitch	0–127
	ROBOT CONTROL	Robot Oscillator Control	0–127
	CHARACTER1–12	Character1–12	0–127

Performance Part Parameters

Parameter	Full Name of Parameter	Value
[PFM PART] (BANK [3]) Part Transpose	Part Transepose	-24–+24 semitone
Part MIDI CH	Part MIDI Channel	1–16, OFF
Chorus Sync	Chorus Sync	OFF, 1/16, 1/8(3), 1/16(.), 1/8, 1/4(3), 1/8(.), 1/4, 1/2(3), 1/4(.), 1/2, 1/1(3), 1/2(.), 1/1, 2/1(3), 1/1(.), 2/1, 3–8MEASURES, LFO1
Delay Sync	Delay Sync	OFF, 1/16, 1/8(3), 1/16(.), 1/8, 1/4(3), 1/8(.), 1/4, 1/2(3), 1/4(.), 1/2
LFO Sync	LFO Sync	OFF, 1/16, 1/8(3), 1/16(.), 1/8, 1/4(3), 1/8(.), 1/4, 1/2(3), 1/4(.), 1/2, 1/1(3), 1/2(.), 1/1, 2/1(3), 1/1(.), 2/1, 3–8MEASURES

System Parameters

Parameter	Full Name of Parameter	Value
[MIDI] (BANK [5]) Local Switch	Local Switch	OFF, ON
MIDI Sync	MIDI Sync Switch	OFF, MIDI IN, REMOTE KBD IN
Device ID	Device ID Number	17–32
Rx Exclusive SW	Exclusive Receive Switch	OFF, ON
Perform Ctrl CH	Performance Control Channel	1–16, OFF
Remote KBD CH	Remote Keyboard Channel	1–16, ALL
MIDI Thru	MIDI Thru Switch	OFF, ON (w/o SysEx), ON (ALL)
Tx/Rx Edit SW	Edit Transmit/Receive Switch	OFF, ON
Tx/Rx Edit Mode	Edit Transmit/Receive Mode	MODE1, MODE2
Tx/Rx Setting	Transmit/Receive Setting	OFF, MODULATION: CC01–CC31, CC33–PHASER: CC95, AFTERTOUCH, EXCLUSIVE
Tx/Rx ProgChg SW	Program Change Transmit/Receive Switch	ON, PC, BANK SEL + PC
Control Up	Control Up	OFF, MODULATION: CC01–CC31, CC33–PHASER: CC95, AFTERTOUCH
Control Down	Control Down	OFF, MODULATION: CC01–CC31, CC33–PHASER: CC95, AFTERTOUCH
[SETUP] (BANK [6]) LCD Contrast	LCD Contrast	1–8
Master Tune	Master Tune	427.5–452.9 Hz
Power Up Mode	Power Up Mode	PERFORM U: 11, LAST-SET
Pattern Trig Qtz	Pattern Trigger Quantize	OFF, BEAT, MEASURE
Motion Restart	Motion Restart Switch	OFF, ON

Recording Parameters

Parameter		Full Name of Parameter	Value
Pattern	Loop Length	Pattern Loop Length	1–4 measures
	Input Quantize	Input Quantize	OFF, 1⁄16 (3), 1⁄16, 1⁄8 (3), 1⁄8, 1⁄4 (3), 1⁄4
	Gate Time Ratio	Gate Time Ratio	REAL, STACCATO, 33%, 50%, 66%, 100%
	Metronome	Pattern Metronome	Beep: VOLUME 4–1, OFF, Click: VOLUME 1–4
Motion	Loop Length	Motion Loop Length	1–8 measures, 99 (PLAY ONCE) measures
	Metronome	Motion Metronome	Beep: VOLUME 4–1, OFF, Click: VOLUME 1–4

Transmit/Receive Setting List

Parameter			MODE1	MODE2
EFFECTS Section				
	TONE CONTROL	BASS	TREMOLO: CC92	TREMOLO: CC92
		TREBLE	PHASER: CC95	PHASER: CC95
	MULTI-FX LEVEL		CHORUS: CC93	CHORUS: CC93
	DELAY	TIME	EFFECT-CTL1: CC12	EFFECT-CTL1: CC12
		FEEDBACK	EFFECT-CTL2: CC13	EFFECT-CTL2: CC13
		LEVEL	CELESTE: CC94	CELESTE: CC94
LFO 1 Section		RATE	GENERAL1: CC16	GENERAL1: CC16
		FADE	EXCLUSIVE	CC20
MODULATION		RATE	GENERAL2: CC17	GENERAL2: CC17
(LFO 2) Section		DEPTH (PITCH)	EXCLUSIVE	CC22
		DEPTH (FILTER)	EXCLUSIVE	CC23
		DEPTH (AMP)	EXCLUSIVE	CC24
PORTAMENTO Section		TIME	PORTA-TIME: CC05	PORTA-TIME: CC05
OSC 1 Section		CONTROL 1	FOOT-TYPE: CC04	FOOT-TYPE: CC04
		CONTROL 2	SOUND-CTL7: CC76	SOUND-CTL7: CC76
OSC 2 Section		RANGE	EXCLUSIVE	CC21
		FINE/WIDE	SOUND-CTL8: CC77	SOUND-CTL8: CC77
		CONTROL 1	SOUND-CTL9: CC78	SOUND-CTL9: CC78
		CONTROL 2	SOUND-CTL10: CC79	SOUND-CTL10: CC79
OSC COMMON Section		OSC BALANCE	BALANCE: CC08	BALANCE: CC08
		X-MOD DEPTH	SOUND-CTL1: CC70	SOUND-CTL1: CC70
		LFO 1 DEPTH	GENERAL3: CC18	GENERAL3: CC18
PITCH ENVELOPE		DEPTH	EXCLUSIVE	CC25
Section		A	EXCLUSIVE	CC26
		D	EXCLUSIVE	CC27
FILTER Section		CUTOFF FREQ	SOUND-CTL5: CC74	SOUND-CTL5: CC74
		RESONANCE	SOUND-CTL2: CC71	SOUND-CTL2: CC71
		KEY FOLLOW	EXCLUSIVE	CC30
		LFO 1 DEPTH	GENERAL4: CC19	GENERAL4: CC19
FILTER ENVELOPE		DEPTH	GENERAL6: CC81	GENERAL6: CC81
Section		A	GENERAL7: CC82	GENERAL7: CC82
		D	GENERAL8: CC83	GENERAL8: CC83
		S	EXCLUSIVE	CC28
		R	EXCLUSIVE	CC29
AMP Section		LFO 1 DEPTH	GENERAL5: CC80	GENERAL5: CC80
		LEVEL	VOLUME: CC07	VOLUME: CC07
AMP ENVELOPE		A	SOUND-CTL4: CC73	SOUND-CTL4: CC73
Section		D	SOUND-CTL6: CC75	SOUND-CTL6: CC75
		S	EXCLUSIVE	CC31
		R	SOUND-CTL3: CC72	SOUND-CTL3: CC72

* With the factory settings, Edit Transmit/receive Mode is set to MODE1. When you set the Edit Transmit/receive Mode to MODE2, you can set the MIDI messages of each parameter by the Transmit/Receive Setting (p.125). The factory settings of Transmit/receive Setting is according to "MODE2" in this table.