

# Clavinova®

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CVP-609 / CVP-605 / CVP-601

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Referencia MIDI

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# Effect Parameter List / Liste der Effektparameter / Liste des paramètres d'effets / Lista de parámetros de efectos

Parameters marked with a ● in the "Control" column can be controlled from an AC1 (assignable controller 1) etc. However, these only affect insertion type effects. Parameter 10 Dry/Wet only affects insertion type effects.

	CVP-609	CVP-605	CVP-601
(*1)	Reverb	Reverb	Reverb
(*2)	Chorus, Variation, Insertion1 – 8	Chorus, Variation, Insertion1 – 3	Chorus, DSP1
(*3)	–	–	DSP2 – 4
(*4)	–	–	Not exist in DSP2 – 4.

## REVERB

**REVERB: BASIC HALL, LIGHT HALL, HALL1, HALL2, HALL3, HALL4, HALL5, HALL M, HALL L, ATMO HALL, VOCAL HALL1, VOCAL HALL2, ACOSTIC ROOM, DRUMS ROOM, PERC ROOM, ROOM1, ROOM2, ROOM3, ROOM4, ROOM5, ROOM6, ROOM7, ROOM S, ROOM M, ROOM L, STAGE1, STAGE2, STAGE3, STAGE4, PLATE1, PLATE2, PLATE3, GM PLATE**

No.	Parameter	Display	Min	Max	Table	Control
1	Reverb Time	0.3s – 30.0s	0	69	Table #4	
2	Diffusion	0 – 10	0	10		
3	Initial Delay	0.1ms – 200.0ms (*1) 0.1ms – 99.3ms (*2) 0.1ms – 99.3ms (*3)	0	127 63 63	Table #5	
4	HPF Cutoff	Thru, 22Hz – 8.0kHz	0	52	Table #3	
5	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Reverb Delay	0.1ms – 200.0ms (*1) 0.1ms – 99.3ms (*2) 0.1ms – 99.3ms (*3)	0	127 63 63	Table #5	
12	Density	0 – 4 (192step, 96step) 0 – 2 (*3)	0	4 2		
13	ER/Reverb Balance	E63>R – E=R – E<R63	1	127		
14	High Damp	0.1 – 1.0	1	10		
15	Feedback Level	-63 – 0 – +63	1	127		
16						

**REVERB: BALLAD HALL, PIANO HALL, LARGE HALL, MEDIUM HALL, WARM ROOM, WOODY ROOM, RICH PLATE**

No.	Parameter	Display	Min	Max	Table	Control
1	Reverb Time	0.3s – 30.0s	0	69	Table #4	
2	Diffusion	0 – 10	0	10		
3	Initial Delay	0.1ms – 200.0ms	0	127	Table #5	
4	HPF Cutoff	Thru, 22Hz – 8.0kHz	0	52	Table #3	
5	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14	High Damp	0.1 – 1.0	1	10		
15						
16						

**REVERB: TUNNEL, CANYON, BASEMENT, WHITE ROOM**

No.	Parameter	Display	Min	Max	Table	Control
1	Reverb Time	0.3s – 30.0s	0	69	Table #4	
2	Diffusion	0 – 10	0	10		
3	Initial Delay	0.1ms – 200.0ms (*1) 0.1ms – 99.3ms (*2)	0	127 63	Table #5	
4	HPF Cutoff	Thru, 22Hz – 8.0kHz	0	52	Table #3	
5	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
6	Width	0.5m – 30.2m (*1) 0.5m – 10.2m (*2)	0	104 37	Table #11	
7	Height	0.5m – 30.2m (*1) 0.5m – 20.2m (*2)	0	104 73	Table #11	
8	Depth	0.5m – 30.2m	0	104	Table #11	
9	Wall Vary	0 – 30	0	30		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Reverb Delay	0.1ms – 200.0ms (*1) 0.1ms – 99.3ms (*2)	0	127 63	Table #5	
12	Density	0 – 4	0	4		
13	ER/Reverb Balance	E63>R – E=R – E<R63	1	127		
14	High Damp	0.1 – 1.0	1	10		
15	Feedback Level	-63 – 0 – +63	1	127		
16						

## DELAY

**DELAY: DELAY LCR1, DELAY LCR2**

No.	Parameter	Display	Min	Max	Table	Control
1	Lch Delay	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
2	Rch Delay	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
3	Cch Delay	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
4	Feedback Delay	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
5	Feedback Level	-63 – 0 – +63	1	127		
6	Cch Level	0 – 127	0	127		
7	High Damp	0.1 – 1.0	1	10		
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

**DELAY: DELAY LR**

No.	Parameter	Display	Min	Max	Table	Control
1	Lch Delay	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
2	Rch Delay	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
3	Feedback Delay 1	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
4	Feedback Delay 2	0.1ms – 1638.3ms (*2) 0.1ms – 1486.0ms (*3)	1	16383 14860		
5	Feedback Level	-63 – 0 – +63	1	127		
6	High Damp	0.1 – 1.0	1	10		
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

**DELAY: ECHO**

No.	Parameter	Display	Min	Max	Table	Control
1	Lch Delay1	0.1ms – 1486.0ms (*2) 0.1ms – 743.0ms (*3)	1	14860 7430		
2	Lch Feedback Level	-63 – 0 – +63	1	127		
3	Rch Delay1	0.1ms – 1486.0ms (*2) 0.1ms – 743.0ms (*3)	1	14860 7430		
4	Rch Feedback Level	-63 – 0 – +63	1	127		
5	High Damp	0.1 – 1.0	1	10		
6	Lch Delay2	0.1ms – 1486.0ms (*2) 0.1ms – 743.0ms (*3)	1	14860 7430		
7	Rch Delay2	0.1ms – 1486.0ms (*2) 0.1ms – 743.0ms (*3)	1	14860 7430		
8	Delay2 Level	0 – 127	0	127		
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

**DELAY: CROSS DELAY1, CROSS DELAY2**

No.	Parameter	Display	Min	Max	Table	Control
1	L → R Delay	0.1ms – 1486.0ms (*2) 0.1ms – 743.0ms (*3)	1	14860 7430		
2	R → L Delay	0.1ms – 1486.0ms (*2) 0.1ms – 743.0ms (*3)	1	14860 7430		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Input Select	L, R, L&R	0	2		
5	High Damp	0.1 – 1.0	1	10		
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

**DELAY: TEMPO DELAY1, TEMPO DELAY2, TEMPO ECHO**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	64th/3 – 4thx6	0	19	Table #14	
2	Feedback Level	-63 – 0 – +63	1	127		
3	Feedback High Dump	0.1 – 1.0	1	10		
4	L/R Diffusion	-63ms – 0ms – 63ms	1	127		
5	Lag	-63ms – 0ms – 63ms	1	127		
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40		
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58		
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

**DELAY: TEMPO CROSS1, TEMPO CROSS2, TEMPO CROSS3, TEMPO CROSS4**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time L>R	64th/3 – 4thx6	0	19	Table #14	
2	Delay Time R>L	64th/3 – 4thx6	0	19	Table #14	
3	Feedback Level	-63 – 0 – +63	1	127		
4	Input Select	L, R, L&R	0	2		
5	Feedback High Dump	0.1 – 1.0	1	10		
6	Lag	-63ms – 0ms – 63ms	1	127		
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40		
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58		
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

**ER/KARAOKE**
**ER/KARAOKE: KARAOKE1, KARAOKE2, KARAOKE3**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	0.1ms – 400.0ms	0	127	Table #7	
2	Feedback Level	-63 – 0 – +63	1	127		
3	HPF Cutoff	Thru, 22Hz – 8.0kHz	0	52	Table #3	
4	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
5						
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Density	0 – 3	0	3		
12						
13						
14						
15						
16						

**ER/KARAOKE: ER1, ER2**

No.	Parameter	Display	Min	Max	Table	Control
1	Type	S-H, L-H, Rdm, Rvs, Plt, Spr	0	5		
2	Room Size	0.1 – 20.0	0	127	Table #6	
3	Diffusion	0 – 10	0	10		
4	Initial Delay	0.1ms – 200.0ms	0	127	Table #5	
5	Feedback Level	-63 – 0 – +63	1	127		
6	HPF Cutoff	Thru, 22Hz – 8.0kHz	0	52	Table #3	
7	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Liveness	0 – 10	0	10		
12	Density	0 – 3	0	3		
13	High Damp	0.1 – 1.0	1	10		
14						
15						
16						

**ER/KARAOKE: GATE REVERB1, GATE REVERB2, REVERS GATE**

No.	Parameter	Display	Min	Max	Table	Control
1	Type	TypeA, TypeB	0	1		
2	Room Size	0.1 – 20.0	0	127	Table #6	
3	Diffusion	0 – 10	0	10		
4	Initial Delay	0.1ms – 200.0ms	0	127	Table #5	
5	Feedback Level	-63 – 0 – +63	1	127		
6	HPF Cutoff	Thru, 22Hz – 8.0kHz	0	52	Table #3	
7	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Liveness	0 – 10	0	10		
12	Density	0 – 3	0	3		
13	High Damp	0.1 – 1.0	1	10		
14						
15						
16						

**CHORUS**
**CHORUS: CHORUS1, CHORUS2, CHORUS3, CHORUS4, CHORUS5, CHORUS6, CHORUS7, CHORUS8, CHORUS FAST, CHORUS LITE, GM CHORUS1, GM CHORUS2, GM CHORUS3, GM CHORUS4, FB CHORUS, CELESTE1, CELESTE2, ROTARY SP: ROTARY SP5**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #2	
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14						
15	Input Mode	mono, stereo	0	1		
16						

**CHORUS: SYMPHONIC1, SYMPHONIC2**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Delay Offset	0.0ms – 50ms	0	127	Table #2	
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14						
15						
16						

**CHORUS: ENS DETUNE1, ENS DETUNE2**

No.	Parameter	Display	Min	Max	Table	Control
1	Detune	-50cent – 0cent – +50cent	14	114		
2	Lch Init Delay	0.0ms – 50ms	0	127	Table #2	
3	Rch Init Delay	0.0ms – 50ms	0	127	Table #2	
4						
5						
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
12	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
13	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
14	EQ High Gain	-12dB – 0dB – +12dB	52	76		
15						
16						

**FLANGER: VIN.FLANGER1, VIN.FLANGER2**

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.040Hz – 10.00Hz	0	235	Table #21	●
2	Manual	0 – 127	0	127		
3	Depth	0 – 127	0	127		
4	Feedback	0 – 127	0	127		
5	Type	1 – 3	0	2		
6	Spread	0 – 127	0	127		
7	Mix	0 – 127	0	127		
8						
9						
10						
11						
12						
13						
14						
15						
16						

**CHORUS: AMB CHORUS, AMB CELESTE**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #2	
5	LFO AMod Depth	0 – 127	0	127		
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14	Ambience	0 – 127	0	127		
15						
16	Connect Mode	Amb → Cho, Cho → Amb	0	1		

**FLANGER: V\_FLANGER**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	LFO Wave	Triangle, Sine, Random	0	2		
4	Delay Offset	0.09ms – 36.21ms	0	139	Table #19	
5	Feedback Level	-100% – 0% – +100%	0	200		
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	EQ Mid Frequency	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width	0.1 – 12.0	1	120		
14	Modulation Phase	-180deg – 0deg – +180deg	0	16	Table #20	
15	Feedback High Damp	0.1 – 1.0	1	10		
16	Analog Feel	0 – 10	0	10		

**CHORUS: AMB SYMPHONIC**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Delay Offset	0.0ms – 50ms	0	127	Table #2	
4						
5						
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14	Ambience	0 – 127	0	127		
15						
16	Connect Mode	Amb → Sym, Sym → Amb	0	1		

**FLANGER: T\_FLANGER**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	16th – 4thx16	5	29	Table #14	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #2	
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14	LFO Phase Difference	-180deg – 0deg – +180deg	4	124		
15						
16						

**FLANGER**

**FLANGER: FLANGER1, FLANGER2, FLANGER3, FLANGER4, FLANGERS, GM FLANGER**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #2	
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15						
16						

**FLANGER: DYN FLANGER**

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		●
2	Delay Time Offset	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Attack Time	0.3ms – 227ms	0	127	Table #16	
5	Release Time	2.6ms – 2171.4ms	0	127	Table #17	
6	Release Curve	0 – 127	0	127		
7	Direction	Up, Down	0	1		
8	Dyna Threshold Level	0 – 127	0	127		
9	Dyna Level Offset	0 – 127	0	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

### FLANGER: AMB FLANGER

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #2	
5						
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15	Ambience	0 – 127	0	127		
16	Connect Mode	Amb → Fig, Flg → Amb	0	1		

### PHASER: VIN.PHASER ST1, VIN.PHASER ST2, VIN.PHASER ST3, VIN.PHASER ST4

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.100Hz – 10.00Hz	0	252	Table #22	●
2	Manual	0 – 127	0	127		
3	Depth	0 – 127	0	127		
4	Feedback	0 – 127	0	127		
5	Stage	4, 6, 8, 10	0	3		
6	Mode	1, 2	0	1		
7	Color (*)	0 – 127	0	127		
8	Spread	0 – 127	0	127		
9						
10						
11						
12						
13						
14						
15						
16						

NOTE: (\*) Color has no effect on the sound when Mode and Stage are set in either of the following ways.

- Mode = 1; Stage = 4, 6, or 8
- Mode = 2; Stage = 4 or 10

### PHASER

#### PHASER: PHASER1, EP PHASER1, EP PHASER2, EP PHASER3

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Phase Shift Offset	0 – 127	0	127		
4	Feedback Level	-63 – 0 – +63	1	127		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Stage	4 – 22 (*2) 4 – 12 (*3)	4	22 12		
12	Diffusion	mono, stereo	0	1		
13						
14						
15						
16						

#### PHASER: T\_PHASER1, T\_PHASER2

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	16th – 4thx16	5	29	Table #14	
2	LFO Depth	0 – 127	0	127		
3	Phase Shift Offset	0 – 127	0	127		
4	Feedback Level	-63 – 0 – +63	1	127		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Stage	3 – 11	3	11		
12						
13	LFO Phase Difference	-180deg – 0deg – +180deg	4	124		
14						
15						
16						

#### PHASER: PHASER2, PHASER3

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Phase Shift Offset	0 – 127	0	127		
4	Feedback Level	-63 – 0 – +63	1	127		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Stage	3 – 11	3	11		
12						
13	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
14						
15						
16						

#### PHASER: DYN PHASER

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		●
2	Dyna Level Offset	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Attack Time	0.3ms – 227ms	0	127	Table #16	
5	Release Time	2.6ms – 2171.4ms	0	127	Table #17	
6	Release Curve	0 – 127	0	127		
7	Direction	Up, Down	0	1		
8	Dyna Threshold Level	0 – 127	0	127		
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Stage	4, 5, 6	4	6		
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

#### PHASER: VIN.PHASER1, VIN.PHASER2

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.100Hz – 10.00Hz	0	252	Table #22	●
2	Manual	0 – 127	0	127		
3	Depth	0 – 127	0	127		
4	Feedback	0 – 127	0	127		
5	Stage	4, 6, 8, 10, 12, 16	0	5		
6	Mode	1, 2, 3	0	2		
7	Color (*)	0 – 127	0	127		
8						
9						
10						
11						
12						
13						
14						
15						
16						

NOTE: (\*) Color has no effect on the sound when Mode and Stage are set in either of the following ways.

- Mode = 1; Stage = 4, 6, or 8
- Mode = 2; Stage = 4 or 10

## DISTORTION/DISTORTION+

DISTORTION: V\_DIST WARM, V\_DIST CLS H, V\_DIST CLS S, V\_DIST METAL, V\_DIST CRUNC, V\_DIST BLUES, V\_DIST EDGY, V\_DIST SOLID, V\_DIST CLEAN1, V\_DIST CLEAN2, V\_DIST TWIN, V\_DIST JZ CLN, V\_DIST HARD, V\_DIST SOFT

No.	Parameter	Display	Min	Max	Table	Control
1	Overdrive	0% – 100%	0	100		
2	Device	Transistor, Vintage Tube, Dist1, Dist2, Fuzz	0	4		
3	Speaker	Flat, Stack, Combo, Twin, Radio, Megaphone	0	5		
4	Presence	0 – 20	0	20		
5	Output Level	0% – 100%	0	100		
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14						
15						
16						

No.	Parameter	Display	Min	Max	Table	Control
13						
14						
15						
16						

## DISTORTION: DIST HEAVY, OVERDRIVE

No.	Parameter	Display	Min	Max	Table	Control
1	Drive	0 – 127	0	127		●
2	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
3	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
4	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
5	Output Level	0 – 127	0	127		
6						
7	EQ Mid Frequency	100Hz – 10.0kHz	14	54	Table #3	
8	EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
9	EQ Mid Width	0.1 – 12.0	1	120		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Edge (Clip Curve)	0 – 127 (mild – sharp)	0	127		
12						
13						
14						
15						
16						

DISTORTION: V\_DIST ROCA, V\_DIST FUSION  
DISTORTION+: V\_DIST H+TDL1, V\_DIST H+TDL2, V\_DIST S+TDL1, V\_DIST S+TDL2

No.	Parameter	Display	Min	Max	Table	Control
1	Overdrive	0% – 100%	0	100		
2	Device	Transistor, Vintage Tube, Dist1, Dist2, Fuzz	0	4		
3	Speaker	Flat, Stack, Combo, Twin, Radio, Megaphone	0	5		
4	Presence	0 – 20	0	20		
5	Output Level	0% – 100%	0	100		
6	Delay Time	64th/3 – 4thx6	0	19	Table #14	
7	Delay Feedback Level	-63 – 0 – +63	1	127		
8	L/R Diffusion	-63ms – 0ms – 63ms	1	127		
9	Lag	-63ms – 0ms – 63ms	1	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Delay Mix	0 – 127	0	127		
12	Feedback High Dump	0.1 – 1.0	1	10		
13						
14						
15						
16						

## DISTORTION: ST DIST, ST OD

No.	Parameter	Display	Min	Max	Table	Control
1	Drive	0 – 127	0	127		●
2	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
3	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
4	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
5	Output Level	0 – 127	0	127		
6						
7	EQ Mid Frequency	100Hz – 10.0kHz	14	54	Table #3	
8	EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
9	EQ Mid Width	0.1 – 12.0	1	120		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Edge (Clip Curve)	0 – 127	0	127		
12						
13						
14						
15						
16						

DISTORTION: ST AMP SOLID, ST AMP CRUNC, ST AMP BLUES, ST AMP CLEAN, ST AMP HARP, ST DIST HARD, ST DIST SOFT, ST AMP1, ST AMP2, ST AMP3, ST AMP4, ST AMP5, ST AMP6

No.	Parameter	Display	Min	Max	Table	Control
1	Drive	0 – 127	0	127		●
2	AMP Type	Off, Stack, Combo, Tube	0	3		
3	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
4	Output Level	0 – 127	0	127		
5						
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Edge (Clip Curve)	0 – 127 (mild – sharp)	0	127		
12						
13						
14						
15						
16						

## DISTORTION: AMP SIM2

No.	Parameter	Display	Min	Max	Table	Control
1	Drive	0 – 127	0	127		●
2	AMP Type	Off, Stack, Combo, Tube, Crunch, Higain, British	0	6		
3	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
4	Output Level	0 – 127	0	127		
5						
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12						
13						
14						
15						
16						

DISTORTION: DIST HARD1, DIST HARD2, DIST SOFT1, DIST SOFT2, AMP SIM1

No.	Parameter	Display	Min	Max	Table	Control
1	Drive	0 – 127	0	127		●
2	AMP Type	Off, Stack, Combo, Tube	0	3		
3	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
4	Output Level	0 – 127	0	127		
5						
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Edge (Clip Curve)	0 – 127 (mild – sharp)	0	127		
12						

## DISTORTION+: DST+DELAY1, DST+DELAY2, OD+DELAY1, OD+DELAY2

No.	Parameter	Display	Min	Max	Table	Control
1	Lch Delay Time	0.1ms – 1638.3ms	1	16383		
2	Rch Delay Time	0.1ms – 1638.3ms	1	16383		
3	Delay Feedback Time	0.1ms – 1638.3ms	1	16383		
4	Delay Feedback Level	-63 – 0 – +63	1	127		
5	Delay Mix	0 – 127	0	127		
6	Dist Drive	0 – 127	0	127		
7	Dist Output Level	0 – 127	0	127		
8	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
9	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14						
15						
16						

**DISTORTION+: CMP+DST+DLY1, CMP+DST+DLY2, CMP+OD+DLY1, CMP+OD+DLY2**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	0.1ms – 1638.3ms	1	16383		
2	Delay Feedback Level	-63 – 0 – +63	1	127		
3	Delay Mix	0 – 127	0	127		
4	Dist Drive	0 – 127	0	127		
5	Dist Output Level	0 – 127	0	127		
6	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
7	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Comp. Attack	1ms – 40ms	0	19	Table #8	
12	Comp. Release	10ms – 680ms	0	15	Table #9	
13	Comp. Threshold	-48dB – -6dB	79	121		
14	Comp. Ratio	1.0 – 20.0	0	7	Table #10	
15						
16						

**DISTORTION+: CMP+DST+TDL, CMP+OD+TDLY1, CMP+OD+TDLY2, CMP+OD+TDLY3, CMP+OD+TDLY4, CMP+OD+TDLY5, CMP+OD+TDLY6**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	64th/3 – 4thx6	0	19	Table #14	
2	Delay Feedback Level	-63 – 0 – +63	1	127		
3	Delay Mix	0 – 127	0	127		
4	Dist Drive	0 – 127	0	127		
5	Dist Output Level	0 – 127	0	127		
6	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
7	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
8	L/R Diffusion	-63ms – 0ms – 63ms	1	127		
9	Lag	-63ms – 0ms – 63ms	1	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Comp. Attack	1ms – 40ms	0	19	Table #8	
12	Comp. Release	10ms – 680ms	0	15	Table #9	
13	Comp. Threshold	-48dB – -6dB	79	121		
14	Comp. Ratio	1.0 – 20.0	0	7	Table #10	
15						
16						

**DISTORTION+: V\_DST H+DLY, V\_DST S+DLY**

No.	Parameter	Display	Min	Max	Table	Control
1	Overdrive	0% – 100%	0	100		
2	Device	Transistor, Vintage Tube, Dist1, Dist2, Fuzz	0	4		
3	Speaker	Flat, Stack, Combo, Twin, Radio, Megaphone	0	5		
4	Presence	0 – 20	0	20		
5	Output Level	0% – 100%	0	100		
6	Delay Time L	0.1ms – 1638.3ms	1	16383		
7	Delay Time R	0.1ms – 1638.3ms	1	16383		
8	Delay Feedback Time	0.1ms – 1638.3ms	1	16383		
9	Delay Feedback Level	-63 – 0 – +63	1	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Delay Mix	0 – 127	0	127		
12	Feedback High Dump	0.1 – 1.0	1	10		
13						
14						
15						
16						

**REAL DIST**

**REAL DIST: MLT DS SOLO, MLT DS BASIC, MLT OD CHO, MLT CR WAH, MLT OLD DLY, VINTAGE ECHO**

No.	Parameter	Display	Min	Max	Table	Control
1	Comp. Sustain	Off, 0.1 – 10.0	0	100		
2	Wah Sw	Off, Wah Pedal, Auto+ Full, Auto+ Mid, Auto+ Light, Auto- Full, Auto- Mid, Auto- Light	0	7		
3	Wah Pedal	0 – 127	0	127		●
4	Dist Sw	Off, Overdrive, Distortion1, Distortion2, Clean, Crunch, Higain, Modern	0	7		
5	Dist Drive	0.0 – 10.0	0	100		
6	Dist EQ	High Boost, Mid Boost, Mid Cut 1, Mid Cut 2, Mid Cut 3, Low Cut 1, Low Cut 2, High Cut, High/Low	0	8		
7	Dist Tone	0.0 – 10.0	0	100		
8	Dist Presence	0.0 – 10.0	0	100		
9	Output	0 – 127	0	127		
10						
11	SP Type	Off, Stack, Twin, Tweed, Oldies, Modern, Mean, Soft, Small, Dip1, Dip2, Metal, Light	0	12		
12	LFO Speed	0.1Hz – 9.925Hz	0	127	Table #27	
13	Phaser Sw	Off, Standard, Wide, Vibe, Tremolo	0	4		
14	Delay Sw	Off, Delay M, Echo1 M, Echo2 M, Chorus M, DI Chorus M, Flanger1 M, Flanger2 M, Flanger3 M, Delay St, Echo1 St, Echo2 St, Chorus St, DI Chorus St, Flanger1 St, Flanger2 St, Flanger3 St	0	16		
15	Delay Ctrl	0 – 127	0	127		
16	Delay Time	0 – 127	0	127		

**DISTORTION+: DST+TDLY, OD+TDLY**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	64th/3 – 4thx6	0	19	Table #14	
2	Delay Feedback Level	-63 – 0 – +63	1	127		
3	Delay Mix	0 – 127	0	127		
4	Dist Drive	0 – 127	0	127		
5	Dist Output Level	0 – 127	0	127		
6	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
7	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
8	L/R Diffusion	-63ms – 0ms – 63ms	1	127		
9	Lag	-63ms – 0ms – 63ms	1	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14						
15						
16						

**REAL DIST: ST AMP DS, ST AMP OD, ST AMP VT, ST AMP HV**

No.	Parameter	Display	Min	Max	Table	Control
1	Comp. Sw	Off, On	0	1		
2	Comp. Sustain	0.0 – 10.0	0	100		
3	Comp. Level	0.0 – 10.0	0	100		
4	Dist Type	Overdrive, Distortion1, Distortion2, Clean, Crunch, Higain, Modern	1	7		
5	Dist Drive	0.0 – 10.0	0	100		
6	Dist EQ	High Boost, Mid Boost, Mid Cut 1, Mid Cut 2, Mid Cut 3, Low Cut 1, Low Cut 2, High Cut, High/Low	0	8		
7	Dist Tone	0.0 – 10.0	0	100		
8	Dist Presence	0.0 – 10.0	0	100		
9	Output	0 – 127	0	127		
10						
11	SP Type	Off, Stack, Twin, Tweed, Oldies, Modern, Mean, Soft, Small, Dip1, Dip2, Metal, Light	0	12		●
12						
13						
14						
15						
16						

**DISTORTION+: COMP+DIST1, COMP+DIST2**

No.	Parameter	Display	Min	Max	Table	Control
1	Drive	0 – 127	0	127		●
2	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
3	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
4	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
5	Output Level	0 – 127	0	127		
6						
7	EQ Mid Frequency	100Hz – 10.0kHz	14	54	Table #3	
8	EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
9	EQ Mid Width	0.1 – 12.0	1	120		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Edge (Clip Curve)	0 – 127 (mild – sharp)	0	127		
12	Attack	1ms – 40ms	0	19	Table #8	
13	Release	10ms – 680ms	0	15	Table #9	
14	Threshold	-48dB – -6dB	79	121		
15	Ratio	1.0 – 20.0	0	7	Table #10	
16						

**REAL DIST: AMP1 CLASSIC, AMP1 TOP BST, AMP1 CUSTOM, AMP1 HEAVY**

No.	Parameter	Display	Min	Max	Table	Control
1	Mode	Bright, Top Boost	0	1		
2	Normal	0.0 – 10.0	0	100		
3	Brilliant	0.0 – 10.0	0	100		
4	Bass	0.0 – 10.0	0	100		
5						
6	Treble	0.0 – 10.0	0	100		
7	Cut	0.0 – 10.0	0	100		
8						
9	Output	0 – 127	0	127		
10						●
11	SP Type	Off, BS 4x12, AC 2x12, AC 1x12, AC 4x10, BC 2x12, AM 4x12, YC 4x12, JC 2x12, OC 2x12, OC 1x8	0	10		
12	SP Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14						
15						
16						

**REAL DIST: AMP2 BLUES, AMP2 HEAVY1, AMP2 HEAVY2, AMP2 CLEAN, AMP2 DRT CLN**

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	High, Low	0	1		
2	PreAmp	0.0 – 10.0	0	100		
3						
4	Bass	0.0 – 10.0	0	100		
5	Middle	0.0 – 10.0	0	100		
6	Treble	0.0 – 10.0	0	100		
7	Presence	0.0 – 10.0	0	100		
8	Master	0.0 – 10.0	0	100		
9	Output	0 – 127	0	127		
10						●
11	SP Type	Off, BS 4x12, AC 2x12, AC 1x12, AC 4x10, BC 2x12, AM 4x12, YC 4x12, JC 2x12, OC 2x12, OC 1x8	0	10		
12	SP Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14						
15						
16						

**PITCH CHANGE**

**PITCH CHANGE: PITCH CHG1, PITCH CHG2**

No.	Parameter	Display	Min	Max	Table	Control
1	Pitch	-24 – 0 – +24	40	88		
2	Initial Delay	0.1ms – 400.0ms	0	127	Table #7	
3	Fine 1	-50 – 0 – +50	14	114		
4	Fine 2	-50 – 0 – +50	14	114		
5	Feedback Level	-63 – 0 – +63	1	127		
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Pan 1	L63 – C – R63	1	127		
12	Output Level 1	0 – 127	0	127		
13	Pan 2	L63 – C – R63	1	127		
14	Output Level 2	0 – 127	0	127		
15						
16						

**PITCH CHANGE: PITCH CHG3**

No.	Parameter	Display	Min	Max	Table	Control
1	Pitch	-24 – 0 – +24	40	88		
2	Initial Delay	0.1ms – 400.0ms	0	127	Table #7	
3	Fine 1	-50cent – 0cent – +50cent	14	114		
4	Fine 2	-50cent – 0cent – +50cent	14	114		
5	Feedback Level	-63 – 0 – +63	1	127		
6						
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Pan 1	L63 – C – R63	1	127		
12	Output Level 1	0 – 127	0	127		
13	Pan 2	L63 – C – R63	1	127		
14	Output Level 2	0 – 127	0	127		
15						
16						

**WAH AUTO**

**WAH AUTO: AUTO WAH1, AUTO WAH2**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Cutoff Frequency Offset	0 – 127	0	127		●
4	Resonance	1.0 – 12.0	10	120		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive (*4)	0 – 127	0	127		
12						
13						
14						
15						
16						

**WAH AUTO: V.AUTO WAH**

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.100Hz – 20.00Hz	0	254	Table #23	●
2	Bottom	0 – 127	0	127		
3	Top	0 – 127	0	127		
4	Resonance Offset	-12.0 – 0.0 – +12.0	40	88		
5	LFO Wave	Sin, Trp	0	1		
6	Type	High, Mid, Low, Bass	0	3		
7	Overdrive	0.0dB – +40.0dB	0	80		
8	Output	-20.0dB – 0.0dB – +10.0dB	24	84		
9						
10						
11						
12						
13						
14						
15						
16						

**WAH AUTO: AT.WAH+DST1, AT.WAH+DST2, AT.WH+DST HD, AT.WH+DST HV, AT.WH+DST LT, AT.WAH+OD1, AT.WAH+OD2, AT.WH+OD HD, AT.WH+OD HV, AT.WH+OD LT**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3	Cutoff Frequency Offset	0 – 127	0	127		●
4	Resonance	1.0 – 12.0	10	120		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive	0 – 127	0	127		
12	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
13	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
14	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
15	Output Level	0 – 127	0	127		
16						

**WAH AUTO: TEMPO AT.WAH**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	16th – 4thx16	5	29	Table #14	
2	LFO Depth	0 – 127	0	127		
3	Cutoff Frequency Offset	0 – 127	0	127		●
4	Resonance	1.0 – 12.0	10	120		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive (*4)	0 – 127	0	127		
12						
13						
14						
15						
16						



**WAH AUTO: T\_AT.WH+DST, T\_A.WH+DSTHD, T\_A.WH+DSTHV,  
T\_A.WH+DSTLT, T\_AT.WH+OD, T\_A.WH+OD HD, T\_A.WH+OD HV,  
T\_A.WH+OD LT**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	16th – 4thx16	5	29	Table #14	
2	LFO Depth	0 – 127	0	127		
3	Cutoff Frequency Offset	0 – 127	0	127		●
4	Resonance	1.0 – 12.0	10	120		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive	0 – 127	0	127		
12	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
13	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
14	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
15	Output Level	0 – 127	0	127		
16						

**WAH TCH/PDL: TC.WH+DST1, TC.WH+DST2**

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		
2	Cutoff Frequency Offset	0 – 127	0	127		●
3	Resonance	1.0 – 12.0	10	120		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive	0 – 127	0	127		
12						
13						
14						
15						
16						

**WAH TCH/PDL: TC.WAH+OD1, TC.WAH+OD2, TC.WAH+OD HD,  
TC.WAH+OD HV, TC.WAH+OD LT**

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		
2	Cutoff Frequency Offset	0 – 127	0	127		●
3	Resonance	1.0 – 12.0	10	120		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive	0 – 127	0	127		
12	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
13	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
14	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
15	Output Level	0 – 127	0	127		
16	Release	10ms – 680ms	52	67	Table #12	

**WAH TCH/PDL**

**WAH TCH/PDL: TOUCH WAH1**

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		
2	Cutoff Frequency Offset	0 – 127	0	127		●
3	Resonance	1.0 – 12.0	10	120		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive (*4)	0 – 127	0	127		
12						
13						
14						
15						
16						

**WAH TCH/PDL: WH+DST+DLY1, WH+DST+DLY2, WH+OD+DLY1,  
WH+OD+DLY2**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	0.1ms – 1638.3ms	1	16383		
2	Delay Feedback Level	-63 – 0 – +63	1	127		
3	Delay Mix	0 – 127	0	127		
4	Dist Drive	0 – 127	0	127		
5	Dist Output Level	0 – 127	0	127		
6	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
7	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Wah Sensitivity	0 – 127	0	127		
12	Wah Cutoff Freq Offset	0 – 127	0	127		
13	Wah Resonance	1.0 – 12.0	10	120		
14	Wah Release	10ms – 680ms	52	67	Table #12	
15						
16						

**WAH TCH/PDL: TOUCH WAH2, TOUCH WAH3, TC.WH+DST HD,  
TC.WH+DST HV, TC.WH+DST LT, CLAVI TC.WAH, EP TC.WAH**

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		
2	Cutoff Frequency Offset	0 – 127	0	127		●
3	Resonance	1.0 – 12.0	10	120		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive (*4)	0 – 127	0	127		
12	Dist EQ Low Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	Dist EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
14	LPF Cutoff (*4)	1.0kHz – 18kHz, Thru	34	60	Table #3	
15	Output Level (*4)	0 – 127	0	127		
16	Release	10ms – 680ms	52	67	Table #12	

**WAH TCH/PDL: WH+DST+TDLY, WH+OD+TDLY1, WH+OD+TDLY2**

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	64th/3 – 4thx6	0	19	Table #14	
2	Delay Feedback Level	-63 – 0 – +63	1	127		
3	Delay Mix	0 – 127	0	127		
4	Dist Drive	0 – 127	0	127		
5	Dist Output Level	0 – 127	0	127		
6	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
7	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
8	L/R Diffusion	-63ms – 0ms – 63ms	1	127		
9	Lag	-63ms – 0ms – 63ms	1	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11	Wah Sensitivity	0 – 127	0	127		
12	Wah Cutoff Freq Offset	0 – 127	0	127		
13	Wah Resonance	1.0 – 12.0	10	120		
14	Wah Release	10ms – 680ms	52	67	Table #12	
15						
16						

**WAH TCH/PDL: V.TOUCH WAH**

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		●
2	Bottom	0 – 127	0	127		
3	Top	0 – 127	0	127		
4	Resonance Offset	-12.0 – 0.0 – +12.0	40	88		
5	Direction	Up, Down	0	1		
6	Type	High, Mid, Low, Bass	0	3		
7	Overdrive	0.0dB – +40.0dB	0	80		
8	Output	-20.0dB – 0.0dB – +10.0dB	24	84		
9						
10						
11	Attack Offset	-5 – 0 – +5	59	69		
12						
13						
14						
15						
16						

**WAH TCH/PDL: V.PEDAL WH B, V.PEDAL WH D**

No.	Parameter	Display	Min	Max	Table	Control
1	Pedal Control	0 – 127	0	127		●
2	Bottom	0 – 127	0	127		
3	Top	0 – 127	0	127		
4	Resonance Offset	-12.0 – 0.0 – +12.0	40	88		
5	Direction	Up, Down	0	1		
6	Type	High, Mid, Low, Bass	0	3		
7	OverDrive	0.0dB – +40.0dB	0	80		
8	Output	-20.0dB – 0.0dB – +10.0dB	24	84		
9						
10						
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

**WAH TCH/PDL: PEDAL WAH**

No.	Parameter	Display	Min	Max	Table	Control
1	Pedal Control	0 – 127	0	127		●
2	Depth	0 – 127	0	127		
3	Cutoff Frequency Offset	0 – 127	0	127		
4	Resonance	1.0 – 12.0	10	120		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive (*4)	0 – 127	0	127		
12						
13						
14						
15						
16						

**WAH TCH/PDL: PEDAL WH+DST, P.WH+DIST HD, P.WH+DIST HV, P.WH+DIST LT, PEDAL WH+OD, P.WH+OD HD, P.WH+OD HV, P.WH+OD LT**

No.	Parameter	Display	Min	Max	Table	Control
1	Pedal Control	0 – 127	0	127		●
2	Depth	0 – 127	0	127		
3	Cutoff Frequency Offset	0 – 127	0	127		
4	Resonance	1.0 – 12.0	10	120		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	Drive	0 – 127	0	127		
12	Dist EQ Low Gain	-12dB – 0dB – +12dB	52	76		
13	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
14	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
15	Output Level	0 – 127	0	127		
16						

**DYNAMIC**

**DYNAMIC: COMP MED, COMP HEAVY, COMPRESSOR**

No.	Parameter	Display	Min	Max	Table	Control
1	Attack	1ms – 40ms	0	19	Table #8	
2	Release	10ms – 680ms	0	15	Table #9	
3	Threshold	-48dB – -6dB	79	121		
4	Ratio	1.0 – 20.0	0	7	Table #10	
5	Output Level	0 – 127	0	127		
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

**DYNAMIC: COMP MELODY, COMP BASS, MBAND COMP**

No.	Parameter	Display	Min	Max	Table	Control
1	Type	Normal, Low, Mid, High, Low/High, Low/Mid, Mid/High, Full Bit, Wild, Attacky, Low End, Hard, Basic	0	12		
2	Threshold Offset	-32 – +32	32	96		●
3	Low Gain Offset	-63 – 0 – +63	1	127		
4	Mid Gain Offset	-63 – 0 – +63	1	127		
5	High Gain Offset	-63 – 0 – +63	1	127		
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

**DYNAMIC: V.COMPRESSOR**

No.	Parameter	Display	Min	Max	Table	Control
1	Input Level	-∞ – 0.00dB	0	200	Table #24	
2	Output Level	-∞ – 0.00dB	0	200	Table #24	
3	Ratio	2, 4, 8, 12, 20	0	4		
4	Attack	0.022ms – 50.40ms	0	200	Table #25	
5	Release	10.88ms – 544.22ms	0	200	Table #26	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

**DYNAMIC: NOISE GATE**

No.	Parameter	Display	Min	Max	Table	Control
1	Attack	1ms – 40ms	0	19	Table #8	
2	Release	10ms – 680ms	0	15	Table #9	
3	Threshold	-72dB – -30dB	55	97		
4	Output Level	0 – 127	0	127		
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

**ROTARY SP**

**ROTARY SP: DUAL ROT BRT, DUAL ROT WRM, DUAL ROT SP1, DUAL ROT SP2**

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed Slow	0.00Hz – 2.65Hz	0	63	Table #1	
2	Horn Speed Slow	0.00Hz – 2.65Hz	0	63	Table #1	
3	Rotor Speed Fast	2.69Hz – 39.7Hz	64	127	Table #1	
4	Horn Speed Fast	2.69Hz – 39.7Hz	64	127	Table #1	
5	Slow-Fast Time of R	0 – 127	0	127		
6	Slow-Fast Time of H	0 – 127	0	127		
7	Drive Low	0 – 127	0	127		
8	Drive High	0 – 127	0	127		
9	Low/High Balance	L63>H – L=H – L<H63	1	127		
10						
11	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
12	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
13	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
14	EQ High Gain	-12dB – 0dB – +12dB	52	76		
15	Mic L-R Angle	0deg – 180deg	0	60		
16	Speed Control	Slow, Fast	0	1		●

**ROTARY SP: ROTARY SP1, ROTARY SP6**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	
2	LFO Depth	0 – 127	0	127		
3						
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14						
15						
16						

**ROTARY SP: DST+ROT SP, OD+ROT SP**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	●
2	LFO Depth	0 – 127	0	127		
3						
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12						
13						
14	Drive	0 – 127	0	127		
15	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
16	Output Level	0 – 127	0	127		

**ROTARY SP: ROTARY SP2, ROTARY SP3, ROTARY SP7  
TREMLO: TREMOLO2, GT TREMOLO1  
SPATIAL: AUTO PAN1, AUTO PAN2, EP AUTOPAN**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	●
2	L/R Depth	0 – 127	0	127		
3	F/R Depth	0 – 127	0	127		
4	PAN Direction	L ↔ R, L → R, L ← R, Lturn, Rturn, L/R	0	5		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14						
15						
16						

**ROTARY SP: DST+2ROT SP, OD+2ROT SP**

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0	127	Table #1	●
2	Drive Low	0 – 127	0	127		
3	Drive High	0 – 127	0	127		
4	Low/High Balance	L63>H – L=H – L<H63	1	127		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	Crossover Frequency	100Hz – 10.0kHz	14	54	Table #3	
12	Mic L-R Angle	0deg – 180deg	0	60		
13						
14	Drive	0 – 127	0	127		
15	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
16	Output Level	0 – 127	0	127		

**ROTARY SP: ROTARY SP4  
TREMLO: TREMOLO1, TREMOLO3, EP TREMOLO, GT TREMOLO2**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	●
2	AM Depth	0 – 127	0	127		
3	PM Depth	0 – 127	0	127		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15	Input Mode	mono, stereo	0	1		
16						

**ROTARY SP: AMP+ROT SP**

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	●
2	LFO Depth	0 – 127	0	127		
3	AMP Type	Off, Stack, Combo, Tube	0	3		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12						
13						
14	Drive	0 – 127	0	127		
15	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
16	Output Level	0 – 127	0	127		

**ROTARY SP: AMP+2ROT SP**

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0	127	Table #1	●
2	Drive Low	0 – 127	0	127		
3	Drive High	0 – 127	0	127		
4	Low/High Balance	L63>H – L=H – L<H63	1	127		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	Crossover Frequency	100Hz – 10.0kHz	14	54	Table #3	
12	Mic L-R Angle	0deg – 180deg	0	60		
13	AMP Type	Off, Stack, Combo, Tube (AMPSIM only)	0	3		
14	Drive	0 – 127	0	127		
15	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3	
16	Output Level	0 – 127	0	127		

**ROTARY SP: 2WAY ROT SP**

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0	127	Table #1	●
2	Drive Low	0 – 127	0	127		
3	Drive High	0 – 127	0	127		
4	Low/High	L63>H – L=H – L<H63	1	127		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	Crossover Frequency	100Hz – 10.0kHz	14	54	Table #3	
12	Mic L-R Angle	0deg – 180deg (resolution=3deg.)	0	60		
13						
14						
15						
16						

## TREMOLO

### TREMOLO: VIBE VIBRATE

No.	Parameter	Display	Min	Max	Table	Control
1	Vibrate Speed	0.00Hz – 39.7Hz	0	127	Table #1	
2	Vibrate Depth (AM)	0 – 127	0	127		
3	Vibrate Depth (PM)	0 – 127	0	127		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15	Input Mode	mono, stereo	0	1		
16	Vibrate SW	Off, On	0	1		●

### TREMOLO: T\_TREMOLO

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	16th – 4thx16	5	29	Table #14	●
2	AM Depth	0 – 127	0	127		
3	PM Depth	0 – 127	0	127		
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15	Input Mode	mono, stereo	0	1		
16						

## SPATIAL

### SPATIAL: AUTO PAN3

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1	●
2	L/R Depth	0 – 127	0	127		
3	F/R Depth	0 – 127	0	127		
4	PAN Direction	L ↔ R, L → R, L ← R, Lturn, Rturn, L/R	0	5		
5	LFO Wave	0 – 28	0	28		
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	EQ Mid Frequency	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width	0.1 – 12.0	1	120		
14						
15	Input Mode	mono, stereo	0	1		
16						

### SPATIAL: T\_AUTO PAN1

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	16th – 4thx16	5	29	Table #14	●
2	L/R Depth	0 – 127	0	127		
3	F/R Depth	0 – 127	0	127		
4	PAN Direction	L ↔ R, L → R, L ← R, Lturn, Rturn, L/R	0	5		
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	EQ Mid Frequency (*4)	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain (*4)	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width (*4)	0.1 – 12.0	1	120		
14						
15						
16						

## SPATIAL: T\_AUTO PAN2

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Freq	16th – 4thx16	5	29	Table #14	●
2	L/R Depth	0 – 127	0	127		
3	F/R Depth	0 – 127	0	127		
4	PAN Direction	L ↔ R, L → R, L ← R, Lturn, Rturn, L/R	0	5		
5	LFO Wave	0 – 28	0	28		
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10						
11	EQ Mid Frequency	100Hz – 10.0kHz	14	54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
13	EQ Mid Width	0.1 – 12.0	1	120		
14						
15	Input Mode	mono, stereo	0	1		
16						

## EQ/ENHANCER

### EQ/ENHANCER: EQ DISCO, EQ TEL, 3BAND EQ, ST 3BAND EQ MISC: LO-FI DRUM3, LO-FI DRUM4

No.	Parameter	Display	Min	Max	Table	Control
1	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
2	EQ Mid Frequency	100Hz – 16.0kHz	14	58	Table #3	
3	EQ Mid Gain	-12dB – 0dB – +12dB	52	76		
4	EQ Mid Width	0.1 – 12.0	1	120		
5	EQ High Gain	-12dB – 0dB – +12dB	52	76		
6	EQ Low Frequency	50Hz – 2.0kHz	8	40	Table #3	
7	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
8						
9						
10						
11						
12						
13						
14						
15	Input Mode	mono, stereo	0	1		
16						

### EQ/ENHANCER: 2BAND EQ

No.	Parameter	Display	Min	Max	Table	Control
1	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
2	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
3	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
4	EQ High Gain	-12dB – 0dB – +12dB	52	76		
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

### EQ/ENHANCER: HM ENHANCE1, HM ENHANCE2

No.	Parameter	Display	Min	Max	Table	Control
1	HPF Cutoff	500Hz – 16.0kHz	28	58		
2	Drive	0 – 127	0	127		
3	Mix Level	0 – 127	0	127		
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

## MISC

### MISC: VCE CANCEL

No.	Parameter	Display	Min	Max	Table	Control
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11	Low Adjust	0 – 26	0	26		
12	High Adjust	0 – 26	0	26		
13						
14						
15						
16						

### MISC: AMBIENCE

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	0.0ms – 50ms	0	127	Table #2	
2	Output Phase	normal, inverse	0	1		
3						
4						
5						
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52	76		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14						
15						
16						

### MISC: LOOP FX1

No.	Parameter	Display	Min	Max	Table	Control
1	Vowel	a, i, u, e, o	0	4		●
2	Move speed	1 – 62	1	62		
3	Drive	0 – 127	0	127		
4	Output Level	0 – 127	0	127		
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

### MISC: LOOP FX2, LO-FI DRUM1, LO-FI DRUM2

No.	Parameter	Display	Min	Max	Table	Control
1	Sampling Freq Control	44.1kHz – 345Hz	0	127	Table #13	
2	Word Length	1 – 127	1	127		
3	Output Gain	-6dB – +36dB	0	42		
4	LPF Cutoff	63Hz – 18kHz, Thru	10	60	Table #3	
5	Filter Type	Thru, PowerBass, Radio, Tel, Clean, Low	0	5		
6	LPF Resonance	1.0 – 12.0	10	120		
7	Bit Assign	0 – 6	0	6		
8	Emphasis	Off, On	0	1		
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		●
11						
12						
13						
14						
15	Input Mode	mono, stereo	0	1		
16						

### MISC: DYN FILTER

No.	Parameter	Display	Min	Max	Table	Control
1	Filter Type	LPF (12dB), LPF (18dB), LPF (24dB), HPF, BPF, BEF	0	5		
2	Sensitivity	0 – 127	0	127		●
3	Dyna Level Offset	0 – 127	0	127		
4	Resonance	-16 – +111	0	127		
5	Attack Time	0.3ms – 227ms	0	127	Table #16	
6	Release Time	2.6ms – 2171.4ms	0	127	Table #17	
7	Release Curve	0 – 127	0	127		
8	Direction	Up, Down	0	1		
9	Dyna Threshold Level	0 – 127	0	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

### MISC: DYN RINGMOD

No.	Parameter	Display	Min	Max	Table	Control
1	Sensitivity	0 – 127	0	127		●
2	HPF Cutoff Frequency	Thru, 22Hz – 8.0kHz	0	52	Table #3	
3	LPF Cutoff Frequency	1.0kHz – 18kHz, Thru	34	60	Table #3	
4	Attack Time	0.3ms – 227ms	0	127	Table #16	
5	Release Time	2.6ms – 2171.4ms	0	127	Table #17	
6	Release Curve	0 – 127	0	127		
7	Direction	Up, Down	0	1		
8	Dyna Threshold Level	0 – 127	0	127		
9	Dyna Level Offset	0 – 127	0	127		
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

### MISC: RING MOD

No.	Parameter	Display	Min	Max	Table	Control
1	OSC Frequency Coarse	0.7Hz – 5kHz	0	127	Table #18	●
2	OSC Frequency Fine	0 – 127	0	127		
3	LFO Wave	Triangle, Sine	0	1		
4	LFO Depth	0 – 127	0	127		
5	LFO Freq	0.00Hz – 39.7Hz	0	127	Table #1	
6	HPF Cutoff Frequency	Thru, 22Hz – 8.0kHz	0	52	Table #3	
7	LPF Cutoff Frequency	1.0kHz – 18kHz, Thru	34	60	Table #3	
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12						
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

### MISC: ISOLATOR

No.	Parameter	Display	Min	Max	Table	Control
1	On/Off SW	Off, On	0	1		●
2	Low Level	0 – 127	0	127		
3	Mid Level	0 – 127	0	127		
4	High Level	0 – 127	0	127		
5	Low Mute	Off, On	0	1		
6	Mid Mute	Off, On	0	1		
7	High Mute	Off, On	0	1		
8						
9						
10						
11						
12						
13						
14						
15						
16						

**MISC: DAMPER\_RESO1, 2**

No.	Parameter	Display	Min	Max	Table	Control
1	HPF Cutoff	20Hz – 8.0kHz	0	52	Table #3	
2	LPF Cutoff	1.0kHz – 20.0kHz	34	60	Table #3	
3	LSF Frequency (*4)	32kHz – 2.0kHz	4	40	Table #3	
4	LSF Gain (*4)	-12dB – +12dB	52	76		
5	High Damp	1 – 10	1	10		
6	Pedal Response	Slow/Normal/Fast	0	2		
7						
8						
9						
10	Dry/Wet	D63>W – D=W – D<W63	1	127		
11						
12	Soundboard Effect Depth	0 – 127	0	127		
13	Damper Mode	Sharp/Soft	0	1		
14	Damper Curve	0 – 4	0	4		
15	Damper Adjust	0 – 63	0	63		
16	Damper Pedal	0 – 127	0	127		●

**---: NO EFFECT**

No.	Parameter	Display	Min	Max	Table	Control
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

**---: THRU**

No.	Parameter	Display	Min	Max	Table	Control
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						







**Table #21**  
VCM Flanger Speed

Data	Value	Data	Value	Data	Value
0	0.040	96	0.494	192	3.953
1	0.042	97	0.505	193	4.037
2	0.045	98	0.515	194	4.122
3	0.047	99	0.526	195	4.206
4	0.050	100	0.536	196	4.290
5	0.053	101	0.547	197	4.374
6	0.055	102	0.563	198	4.500
7	0.058	103	0.573	199	4.584
8	0.060	104	0.589	200	4.668
9	0.063	105	0.599	201	4.752
10	0.066	106	0.615	202	4.879
11	0.068	107	0.626	203	5.005
12	0.071	108	0.636	204	5.131
13	0.074	109	0.652	205	5.215
14	0.076	110	0.668	206	5.341
15	0.079	111	0.683	207	5.467
16	0.081	112	0.704	208	5.552
17	0.084	113	0.715	209	5.720
18	0.087	114	0.725	210	5.804
19	0.089	115	0.747	211	5.972
20	0.092	116	0.757	212	6.056
21	0.095	117	0.778	213	6.224
22	0.097	118	0.789	214	6.309
23	0.100	119	0.810	215	6.477
24	0.102	120	0.831	216	6.645
25	0.105	121	0.852	217	6.813
26	0.108	122	0.862	218	6.897
27	0.110	123	0.883	219	7.066
28	0.113	124	0.904	220	7.234
29	0.116	125	0.925	221	7.402
30	0.118	126	0.946	222	7.570
31	0.121	127	0.967	223	7.738
32	0.124	128	0.988	224	7.907
33	0.126	129	1.009	225	8.075
34	0.129	130	1.030	226	8.243
35	0.131	131	1.051	227	8.411
36	0.134	132	1.072	228	8.580
37	0.137	133	1.093	229	8.748
38	0.139	134	1.125	230	9.000
39	0.145	135	1.146	231	9.168
40	0.147	136	1.167	232	9.337
41	0.150	137	1.199	233	9.589
42	0.152	138	1.220	234	9.757
43	0.158	139	1.251	235	10.000
44	0.160	140	1.272		
45	0.163	141	1.304		
46	0.168	142	1.335		
47	0.171	143	1.367		
48	0.173	144	1.409		
49	0.179	145	1.430		
50	0.181	146	1.451		
51	0.187	147	1.493		
52	0.189	148	1.514		
53	0.195	149	1.556		
54	0.197	150	1.577		
55	0.202	151	1.619		
56	0.208	152	1.661		
57	0.210	153	1.682		
58	0.216	154	1.724		
59	0.221	155	1.766		
60	0.226	156	1.808		
61	0.231	157	1.851		
62	0.237	158	1.893		
63	0.242	159	1.935		
64	0.247	160	1.977		
65	0.252	161	2.019		
66	0.258	162	2.061		
67	0.263	163	2.103		
68	0.268	164	2.145		
69	0.273	165	2.187		
70	0.281	166	2.250		
71	0.287	167	2.292		
72	0.292	168	2.334		
73	0.300	169	2.397		
74	0.308	170	2.460		
75	0.313	171	2.502		
76	0.321	172	2.565		
77	0.326	173	2.608		
78	0.334	174	2.671		
79	0.342	175	2.733		
80	0.347	176	2.776		
81	0.357	177	2.860		
82	0.363	178	2.902		
83	0.373	179	2.986		
84	0.379	180	3.028		
85	0.389	181	3.112		
86	0.400	182	3.154		
87	0.405	183	3.238		
88	0.415	184	3.323		
89	0.426	185	3.365		
90	0.431	186	3.449		
91	0.442	187	3.533		
92	0.452	188	3.617		
93	0.463	189	3.701		
94	0.473	190	3.785		
95	0.484	191	3.869		

**Table #22**  
VCM Phaser Speed

Data	Value	Data	Value	Data	Value
0	0.100	96	0.599	192	3.365
1	0.103	97	0.610	193	3.449
2	0.105	98	0.620	194	3.491
3	0.108	99	0.631	195	3.575
4	0.110	100	0.641	196	3.659
5	0.113	101	0.652	197	3.701
6	0.116	102	0.668	198	3.785
7	0.118	103	0.683	199	3.827
8	0.121	104	0.694	200	3.911
9	0.124	105	0.704	201	3.995
10	0.126	106	0.715	202	4.080
11	0.129	107	0.725	203	4.122
12	0.131	108	0.747	204	4.290
13	0.134	109	0.758	205	4.290
14	0.137	110	0.768	206	4.374
15	0.139	111	0.789	207	4.458
16	0.142	112	0.799	208	4.500
17	0.145	113	0.810	209	4.584
18	0.147	114	0.831	210	4.668
19	0.150	115	0.841	211	4.752
20	0.152	116	0.862	212	4.837
21	0.155	117	0.873	213	4.921
22	0.158	118	0.894	214	5.047
23	0.160	119	0.904	215	5.131
24	0.163	120	0.925	216	5.215
25	0.166	121	0.936	217	5.299
26	0.168	122	0.957	218	5.383
27	0.171	123	0.967	219	5.551
28	0.173	124	0.988	220	5.636
29	0.179	125	1.000	221	5.720
30	0.181	126	1.030	222	5.804
31	0.184	127	1.051	223	5.888
32	0.187	128	1.062	224	6.056
33	0.192	129	1.083	225	6.140
34	0.195	130	1.104	226	6.224
35	0.200	131	1.125	227	6.309
36	0.202	132	1.146	228	6.477
37	0.205	133	1.167	229	6.561
38	0.210	134	1.188	230	6.729
39	0.213	135	1.209	231	6.813
40	0.218	136	1.230	232	6.981
41	0.221	137	1.251	233	7.066
42	0.226	138	1.272	234	7.234
43	0.229	139	1.304	235	7.318
44	0.234	140	1.325	236	7.486
45	0.237	141	1.346	237	7.654
46	0.242	142	1.367	238	7.774
47	0.247	143	1.410	239	7.907
48	0.250	144	1.430	240	8.075
49	0.255	145	1.451	241	8.159
50	0.260	146	1.472	242	8.327
51	0.265	147	1.493	243	8.496
52	0.271	148	1.535	244	8.664
53	0.276	149	1.556	245	8.832
54	0.281	150	1.577	246	9.000
55	0.287	151	1.619	247	9.168
56	0.289	152	1.640	248	9.337
57	0.294	153	1.682	249	9.505
58	0.300	154	1.703	250	9.673
59	0.308	155	1.724	251	9.841
60	0.310	156	1.767	252	10.000
61	0.318	157	1.808		
62	0.323	158	1.829		
63	0.329	159	1.872		
64	0.334	160	1.893		
65	0.342	161	1.935		
66	0.347	162	1.977		
67	0.357	163	2.000		
68	0.363	164	2.040		
69	0.368	165	2.082		
70	0.373	166	2.124		
71	0.379	167	2.145		
72	0.389	168	2.187		
73	0.394	169	2.229		
74	0.400	170	2.271		
75	0.410	171	2.313		
76	0.415	172	2.355		
77	0.426	173	2.397		
78	0.431	174	2.439		
79	0.442	175	2.503		
80	0.447	176	2.544		
81	0.457	177	2.587		
82	0.463	178	2.629		
83	0.473	179	2.671		
84	0.478	180	2.734		
85	0.489	181	2.776		
86	0.499	182	2.860		
87	0.510	183	2.902		
88	0.515	184	2.944		
89	0.526	185	2.986		
90	0.536	186	3.028		
91	0.547	187	3.070		
92	0.557	188	3.154		
93	0.568	189	3.196		
94	0.578	190	3.280		
95	0.589	191	3.323		

**Table #23**  
VCM Wah Speed

Data	Value	Data	Value	Data	Value
0	0.100	96	0.747	192	5.552
1	0.103	97	0.768	193	5.636
2	0.105	98	0.778	194	5.720
3	0.108	99	0.799	195	5.888
4	0.110	100	0.820	196	5.972
5	0.113	101	0.831	197	6.140
6	0.116	102	0.852	198	6.224
7	0.118	103	0.873	199	6.393
8	0.121	104	0.883	200	6.477
9	0.124	105	0.904	201	6.665
10	0.126	106	0.935	202	6.813
11	0.129	107	0.946	203	6.897
12	0.131	108	0.967	204	7.066
13	0.134	109	0.988	205	7.234
14	0.137	110	0.999	206	7.402
15	0.139	111	1.020	207	7.570
16	0.142	112	1.051	208	7.654
17	0.145	113	1.072	209	7.823
18	0.147	114	1.093	210	7.991
19	0.152	115	1.115	211	8.159
20	0.155	116	1.136	212	8.327
21	0.157	117	1.157	213	8.496
22	0.163	118	1.188	214	8.748
23	0.166	119	1.209	215	8.916
24	0.168	120	1.241	216	9.084
25	0.173	121	1.262	217	9.253
26	0.176	122	1.293	218	9.505
27	0.179	123	1.314	219	9.673
28	0.184	124	1.346	220	9.841
29	0.187	125	1.367</		

**Table #25**  
VCM Comp Attack Time

Data	Value	Data	Value	Data	Value
0	0.022ms	96	8.063ms	192	45.51ms
1	0.023ms	97	8.274ms	193	46.10ms
2	0.024ms	98	8.489ms	194	46.70ms
3	0.025ms	99	8.706ms	195	47.31ms
4	0.026ms	100	8.927ms	196	47.91ms
5	0.028ms	101	9.151ms	197	48.53ms
6	0.031ms	102	9.379ms	198	49.15ms
7	0.035ms	103	9.610ms	199	49.77ms
8	0.039ms	104	9.844ms	200	50.40ms
9	0.045ms	105	10.09ms		
10	0.051ms	106	10.33ms		
11	0.059ms	107	10.57ms		
12	0.068ms	108	10.82ms		
13	0.077ms	109	11.07ms		
14	0.088ms	110	11.33ms		
15	0.101ms	111	11.59ms		
16	0.114ms	112	11.85ms		
17	0.129ms	113	12.11ms		
18	0.146ms	114	12.38ms		
19	0.163ms	115	12.66ms		
20	0.182ms	116	12.93ms		
21	0.203ms	117	13.21ms		
22	0.225ms	118	13.50ms		
23	0.249ms	119	13.78ms		
24	0.274ms	120	14.07ms		
25	0.301ms	121	14.37ms		
26	0.330ms	122	14.67ms		
27	0.360ms	123	14.97ms		
28	0.393ms	124	15.27ms		
29	0.426ms	125	15.58ms		
30	0.462ms	126	15.90ms		
31	0.500ms	127	16.21ms		
32	0.539ms	128	16.53ms		
33	0.580ms	129	16.86ms		
34	0.623ms	130	17.18ms		
35	0.668ms	131	17.52ms		
36	0.716ms	132	17.85ms		
37	0.765ms	133	18.19ms		
38	0.816ms	134	18.53ms		
39	0.869ms	135	18.88ms		
40	0.924ms	136	19.23ms		
41	0.982ms	137	19.59ms		
42	1.041ms	138	19.95ms		
43	1.103ms	139	20.31ms		
44	1.167ms	140	20.68ms		
45	1.233ms	141	21.05ms		
46	1.301ms	142	21.42ms		
47	1.372ms	143	21.80ms		
48	1.444ms	144	22.18ms		
49	1.520ms	145	22.57ms		
50	1.597ms	146	22.96ms		
51	1.677ms	147	23.36ms		
52	1.759ms	148	23.75ms		
53	1.844ms	149	24.16ms		
54	1.931ms	150	24.56ms		
55	2.021ms	151	24.97ms		
56	2.113ms	152	25.39ms		
57	2.207ms	153	25.81ms		
58	2.304ms	154	26.23ms		
59	2.404ms	155	26.66ms		
60	2.506ms	156	27.09ms		
61	2.611ms	157	27.53ms		
62	2.718ms	158	27.97ms		
63	2.828ms	159	28.41ms		
64	2.941ms	160	28.86ms		
65	3.056ms	161	29.31ms		
66	3.174ms	162	29.77ms		
67	3.295ms	163	30.23ms		
68	3.418ms	164	30.70ms		
69	3.544ms	165	31.17ms		
70	3.673ms	166	31.64ms		
71	3.805ms	167	32.12ms		
72	3.940ms	168	32.60ms		
73	4.077ms	169	33.09ms		
74	4.217ms	170	33.58ms		
75	4.361ms	171	34.07ms		
76	4.507ms	172	34.57ms		
77	4.656ms	173	35.08ms		
78	4.807ms	174	35.59ms		
79	4.962ms	175	36.10ms		
80	5.120ms	176	36.62ms		
81	5.281ms	177	37.14ms		
82	5.445ms	178	37.67ms		
83	5.611ms	179	38.20ms		
84	5.781ms	180	38.73ms		
85	5.954ms	181	39.27ms		
86	6.130ms	182	39.82ms		
87	6.309ms	183	40.36ms		
88	6.491ms	184	40.92ms		
89	6.677ms	185	41.48ms		
90	6.865ms	186	42.04ms		
91	7.057ms	187	42.61ms		
92	7.252ms	188	43.18ms		
93	7.450ms	189	43.75ms		
94	7.651ms	190	44.33ms		
95	7.855ms	191	44.92ms		

**Table #26**  
VCM Comp Release Time

Data	Value	Data	Value	Data	Value
0	10.88ms	96	133.76ms	192	502.40ms
1	10.90ms	97	136.34ms	193	507.54ms
2	10.94ms	98	138.94ms	194	512.70ms
3	11.00ms	99	141.56ms	195	517.88ms
4	11.10ms	100	144.22ms	196	523.10ms
5	11.22ms	101	146.90ms	197	528.34ms
6	11.36ms	102	149.60ms	198	533.60ms
7	11.54ms	103	152.34ms	199	538.90ms
8	11.74ms	104	155.10ms	200	544.22ms
9	11.96ms	105	157.88ms		
10	12.22ms	106	160.70ms		
11	12.50ms	107	163.54ms		
12	12.80ms	108	166.40ms		
13	13.14ms	109	169.30ms		
14	13.50ms	110	172.22ms		
15	13.88ms	111	175.16ms		
16	14.30ms	112	178.14ms		
17	14.74ms	113	181.14ms		
18	15.20ms	114	184.16ms		
19	15.70ms	115	187.22ms		
20	16.22ms	116	190.30ms		
21	16.76ms	117	193.40ms		
22	17.34ms	118	196.54ms		
23	17.94ms	119	199.70ms		
24	18.56ms	120	202.88ms		
25	19.22ms	121	206.10ms		
26	19.90ms	122	209.34ms		
27	20.60ms	123	212.60ms		
28	21.34ms	124	215.90ms		
29	22.10ms	125	219.22ms		
30	22.88ms	126	222.56ms		
31	23.70ms	127	225.94ms		
32	24.54ms	128	229.34ms		
33	25.40ms	129	232.76ms		
34	26.30ms	130	236.22ms		
35	27.22ms	131	239.70ms		
36	28.16ms	132	243.20ms		
37	29.14ms	133	246.74ms		
38	30.14ms	134	250.30ms		
39	31.16ms	135	253.88ms		
40	32.22ms	136	257.50ms		
41	33.30ms	137	261.14ms		
42	34.40ms	138	264.80ms		
43	35.54ms	139	268.50ms		
44	36.70ms	140	272.22ms		
45	37.88ms	141	275.96ms		
46	39.10ms	142	279.74ms		
47	40.34ms	143	283.54ms		
48	41.60ms	144	287.36ms		
49	42.90ms	145	291.22ms		
50	44.22ms	146	295.10ms		
51	45.56ms	147	299.00ms		
52	46.94ms	148	302.94ms		
53	48.34ms	149	306.90ms		
54	49.76ms	150	310.88ms		
55	51.22ms	151	314.90ms		
56	52.70ms	152	318.94ms		
57	54.20ms	153	323.00ms		
58	55.74ms	154	327.10ms		
59	57.30ms	155	331.22ms		
60	58.88ms	156	335.36ms		
61	60.50ms	157	339.54ms		
62	62.14ms	158	343.74ms		
63	63.80ms	159	347.96ms		
64	65.50ms	160	352.22ms		
65	67.22ms	161	356.50ms		
66	68.96ms	162	360.80ms		
67	70.74ms	163	365.14ms		
68	72.54ms	164	369.50ms		
69	74.36ms	165	373.88ms		
70	76.22ms	166	378.30ms		
71	78.10ms	167	382.74ms		
72	80.00ms	168	387.20ms		
73	81.94ms	169	391.70ms		
74	83.90ms	170	396.22ms		
75	85.88ms	171	400.76ms		
76	87.90ms	172	405.34ms		
77	89.94ms	173	409.94ms		
78	92.00ms	174	414.56ms		
79	94.10ms	175	419.22ms		
80	96.22ms	176	423.90ms		
81	98.36ms	177	428.60ms		
82	100.54ms	178	433.34ms		
83	102.74ms	179	438.10ms		
84	104.96ms	180	442.88ms		
85	107.22ms	181	447.70ms		
86	109.50ms	182	452.54ms		
87	111.80ms	183	457.40ms		
88	114.14ms	184	462.30ms		
89	116.50ms	185	467.22ms		
90	118.88ms	186	472.16ms		
91	121.30ms	187	477.14ms		
92	123.74ms	188	482.14ms		
93	126.20ms	189	487.16ms		
94	128.70ms	190	492.22ms		
95	131.22ms	191	497.30ms		

**Table #27**  
EgMultiFx LFO Freq

Data	Value	Data	Value
0	0.1Hz	64	1.009Hz
1	0.103Hz	65	1.051Hz
2	0.105Hz	66	1.093Hz
3	0.11Hz	67	1.125Hz
4	0.113Hz	68	1.167Hz
5	0.118Hz	69	1.22Hz
6	0.124Hz	70	1.282Hz
7	0.129Hz	71	1.304Hz
8	0.131Hz	72	1.346Hz
9	0.137Hz	73	1.409Hz
10	0.142Hz	74	1.451Hz
11	0.147Hz	75	1.514Hz
12	0.152Hz	76	1.556Hz
13	0.158Hz	77	1.619Hz
14	0.166Hz	78	1.682Hz
15	0.171Hz	79	1.745Hz
16	0.176Hz	80	1.808Hz
17	0.184Hz	81	1.872Hz
18	0.192Hz	82	1.956Hz
19	0.197Hz	83	2.019Hz
20	0.205Hz	84	2.103Hz
21	0.213Hz	85	2.166Hz
22	0.221Hz	86	2.25Hz
23	0.229Hz	87	2.334Hz
24	0.237Hz	88	2.418Hz
25	0.247Hz	89	2.502Hz
26	0.255Hz	90	2.608Hz
27	0.265Hz	91	2.692Hz
28	0.276Hz	92	2.776Hz
29	0.284Hz	93	2.902Hz
30	0.294Hz	94	2.986Hz
31	0.308Hz	95	3.112Hz
32	0.318Hz	96	3.238Hz
33	0.329Hz	97	3.365Hz
34	0.342Hz	98	3.491Hz
35	0.352Hz	99	3.617Hz
36	0.368Hz	100	3.743Hz
37	0.379Hz	101	3.869Hz
38	0.394Hz	102	4.037Hz
39	0.41Hz	103	4.164Hz
40	0.426Hz	104	4.332Hz
41	0.442Hz	105	4.5Hz
42	0.457Hz	106	4.668Hz
43	0.473Hz	107	4.837Hz
44	0.489Hz	108	5.005Hz
45	0.51Hz	109	5.173Hz
46	0.526Hz	110	5.383Hz
47	0.547Hz	111	5.552Hz
48	0.568Hz	112	5.804Hz
49	0.589Hz	113	5.972Hz
50	0.61Hz</		

# Vocal Harmony Parameter List / Liste der Vokalharmonie-Parameter / Liste des paramètres liés à l'harmonie vocale / Lista de parámetros de armonía vocal

## Vocal Harmony Type List (CVP-605)

Order	Type	LCD Name	Mode	Vocoder Type		Chordal Type		Detune Type		Chromatic Type		Thru Type	
				MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB	MSB	LSB
1	CountryQuartet	CountryQuar	Chordal/Vocoder	89	111	90	47						
2	ClosedMenQuartet	ClsdMenQuar	Chordal/Vocoder	89	117	90	53						
3	MixAcapQuartet	MixAcapQuar	Chordal/Vocoder	89	119	90	55						
4	Women Choir	WomenChoir	Chordal/Vocoder	89	88	90	24						
5	Jazz Sisters	JazzSisters	Chordal/Vocoder	89	120	90	56						
6	Standard Duet	Std Duet	Chordal/Vocoder	89	80	90	16						
7	Men Choir	MenChoir	Chordal/Vocoder	89	87	90	23						
8	Closed Choir	ClosedChoir	Chordal/Vocoder	89	90	90	26						
9	Girl in Duet	Girl Duet	Chordal/Vocoder	89	81	90	17						
10	Speedy Mouse	SpdyMouse	Chromatic							92	17		
11	HighMaleQuartet	HighMaleQua	Chordal/Vocoder	89	115	90	51						
12	Jazz Quartet	JazzQuartet	Chordal/Vocoder	89	114	90	50						
13	Mixed Choir	MixedChoir	Chordal/Vocoder	89	91	90	27						
14	Country Girls	CntryGirls	Chordal/Vocoder	89	89	90	25						
15	Sisters Trio	SistersTrio	Chordal/Vocoder	89	113	90	49						
16	Country Men	CountryMen	Chordal/Vocoder	89	83	90	19						
17	A Capella Boy	ACapellBoy	Chordal/Vocoder	89	85	90	21						
18	A Capella Mix	ACapellaMix	Chordal/Vocoder	89	86	90	22						
19	Gospel Diva	GospelDiva	Chordal/Vocoder	89	112	90	48						
20	Lisa and Tina	Lisa&Tina	Chordal/Vocoder	89	82	90	18						
21	AcapMenQuartet	AcapMenQuar	Chordal/Vocoder	89	118	90	54						
22	JazzMenChoir	JazzMenCho	Chordal/Vocoder	89	101	90	37						
23	JazzClosedCho	J_CloseCho	Chordal/Vocoder	89	103	90	39						
24	JazzWomenCho	J_WomenCho	Chordal/Vocoder	89	102	90	38						
25	LadiesQuartet	LadiesQuart	Chordal/Vocoder	89	116	90	52						
26	Sing B+G	Sing B+G	Chordal/Vocoder	89	93	90	29						
27	Barbershop	Barbershop	Chordal/Vocoder	89	96	90	32						
28	JazzMixedCho	J_MixedCho	Chordal/Vocoder	89	104	90	40						
29	Dream Girls	Dream Girls	Chordal/Vocoder	89	94	90	30						
30	Sing the Bass	SingBass	Chromatic							92	16		
31	Falsetto Duet	FalsetDuet	Chordal/Vocoder	89	84	90	20						
32	Falsetto Trio	FalsetTrio	Chordal/Vocoder	89	92	90	28						
33	Falsetto Dia	FalsettoDia	Chordal/Vocoder	89	100	90	36						
34	Fal A Capella	FalACapella	Chordal/Vocoder	89	95	90	31						
35	Falsetto Jazz	FalsetJazz	Chordal/Vocoder	89	105	90	41						
36	2 Unison Low	2UnisonLow	Chordal/Vocoder	89	106	90	42						
37	3 Unison Low	3UnisonLow	Chordal/Vocoder	89	108	90	44						
38	Diatonic Jazz	DiatncJazz	Chordal/Vocoder	89	97	90	33						
39	Diatonic Girl	DiatncGirl	Chordal/Vocoder	89	98	90	34						
40	A Capella Dia	ACapellaDia	Chordal/Vocoder	89	99	90	35						
41	ChordalXG	ChordalXG	Chordal/Vocoder	89	64	90	0						
42	Karaoke Auto	KaraokAuto	Chordal/Vocoder	89	24	90	88						
43	Karaoke Mode	KaraokMode	Chordal/Vocoder	89	25	90	89						
44	Karaoke Girl	KaraokGirl	Chordal/Vocoder	89	26	90	90						
45	Pitch Correct	PitchCorrect	Chordal/Vocoder	89	27	90	91						
46	2 Unison High	2UnisonHigh	Chordal/Vocoder	89	107	90	43						
47	3 Unison High	3UnisonHigh	Chordal/Vocoder	89	109	90	45						
48	Vocoder Auto Upper	VocodAutoU	Chordal/Vocoder	89	16	90	80						
49	Vocoder Auto Lower	VocodAutoL	Chordal/Vocoder	89	17	90	81						
50	DetuneXG	DetuneXG	Detune					91	0				
51	VocoderXG	VocoderXG	Chordal/Vocoder	89	0	90	64						
52	Vocoder Mode Upper	VocodModeU	Chordal/Vocoder	89	18	90	82						
53	Vocoder Mode Lower	VocodModeL	Chordal/Vocoder	89	19	90	83						
54	Vocoder Girl Upper	VocodGirlU	Chordal/Vocoder	89	20	90	84						
55	Vocoder Girl Lower	VocodGirlL	Chordal/Vocoder	89	21	90	85						
56	Vocoder Pitch Upper	VocodPichU	Chordal/Vocoder	89	22	90	86						
57	Vocoder Pitch Lower	VocodPichL	Chordal/Vocoder	89	23	90	87						
58	ChromaticXG	ChromatXG	Chromatic							92	0		
59	Voice&Inst	Voice&Inst	Chordal/Vocoder	89	110	90	46						
60	Pop Vocal	Pop Vocal	Chordal/Vocoder	89	121	90	57						
61	Thru	Thru	-									64	0

## Vocal Harmony 2 Type List (CVP-609)

Type Name	MSB	LSB	Vocal Harmony	Vocal Effect	Description
StandardDuet	12	0	On	Off	Standard setting for lead vocal plus 1 harmony part. Useful for many music genres.
StandardTrio	12	1	On	Off	Standard setting for lead vocal plus 2 harmony parts. Useful for many music genres.
StandardQuartet	12	2	On	Off	Standard setting for lead vocal plus 3 harmony parts. Useful for many music genres.
StudioVocals	12	33	On	On	Good for studio productions with suitable EQ setting and less Reverb.
JazzyQuartet	12	3	On	Off	Good for Bass, Tenor and Alto singers; for Jazz repertoire. You will hear additional 6th notes.
SchlagerTrio	12	4	On	On	Good for standard Schlager repertoire with simple harmony chords.
Destiny'sPop	12	5	On	On	Good for female singers with lead vocal plus 2 harmony parts above; for female Pop and R&B repertoire.
VocalDoubler	12	34	Off	On	Use this preset to overdub your singing in real time. Turn the [VOCAL HARMONY] button on to add harmony parts with Vocal Doubler effect.
VocoderVH	12	6	On	Off	Standard vocoder setting; ideal for controlling with "UPPER" part.
VocoderMONO	12	7	On	Off	Standard vocoder setting; ideal for controlling with "UPPER" part. You can play mono (single-note) melodies.
Rock&Roll	12	35	Off	On	Good for Rock&Roll songs from the 50's and 60's with typical delay sound. Turn the [VOCAL HARMONY] button on to add harmony parts with Blues chords.
TempoCross	12	36	Off	On	Tempo Cross Delay on lead vocal. Turn the [VOCAL HARMONY] button on to add harmony parts; good for Pop songs or special show effects.
HeavyVoice	12	37	Off	On	Good for Rock and Pop with overdriven vocal. Turn the [VOCAL HARMONY] button on to add Harm.1 with 1 octave down.
TelephoneChoir	12	38	On	On	Typical LoFi vocal ensemble; use as old fashioned ensemble sound or exciting effect in Rock, Pop and Jazz.
LikeThe80s	12	39	On	On	Good for 80's Pop with typical reverb image.
Gramophone	12	40	On	On	Typical 30's vocal ensemble; use as old fashioned gramophone sound.
PokerPhaser	12	41	On	On	Good for modern Pop songs using phaser effect for lead vocal.
DetuneVoice	12	8	On	Off	Lead vocal plus two additional detuned harmony parts for exciting detuned sound.
PerfectFourth	12	9	On	On	Quartet singing only perfect fourths; parallel movement of all parts.
SingCMajorScale	12	10	On	Off	Sing C major scale and the harmony parts will create suitable chord notes based on the C major scale. You can edit the key root and type by "Harmony Assign" setting.
BalladChoir	12	11	On	On	Good for Ballad backing vocals with long reverb.
ChurchChoir	12	12	On	On	Good for standard church songs and Christmas songs with long reverb; recommended for Bass, Tenor and Alto voice.
GregorianChoir	12	13	On	On	Good for rubato Gregorian-chant-type monophonic songs with large reverb; parallel movement of all parts.
GospelChoir	12	14	On	On	Good for Gospel songs with long reverb on harmony parts and minor 7th feel.
CosmicChoir	12	42	On	On	Extreme phasing vocals; useful for exciting effects in Dance and Modern Music.
AlpenGirls	12	15	On	On	Good for male singer with 2 female harmony parts above lead vocal.
CountryRock	12	16	On	On	Typical Country Rock quartet; recommended range is tenor/alto.
R&BDiva	12	17	On	On	Good for female alto singer for R&B repertoire; also usable with Tenor lead vocal.
ClosedPopChicks	12	18	On	On	Good for female singers with two harmony parts below. Change volume of Harm.3 for an additional (3rd) part below.
QueenOfPop	12	43	Off	On	Good for Pop and R&B songs using Tempo Delay. Turn the [VOCAL HARMONY] button on to add 2nd Voice.
Bob->Mary	12	19	On	On	Male singer can sound like Female voice with long romantic reverb. Use "BALANCE" on the VOCAL HARMONY EDIT display to add a male duet partner.
Mary->Bob	12	20	On	Off	Female singer can sound like Male voice with short reverb. Use "BALANCE" on the VOCAL HARMONY EDIT display to add a female duet partner.
FlangingVocals	12	44	Off	On	Useful for modern Pop, Rock and Dance music.
JazzySisters	12	21	On	On	Good for Bass and Tenor Singers. Harmony parts add 3 female Jazz singers.
QuartetOnStage	12	22	On	On	Good for Rock and Pop Music. Harmony parts make up a quartet.
DelayedHarmony	12	45	On	On	Useful in several genres with a tempo-synced delay choir as background.
KidsChoir	12	23	On	Off	Want to be a child again? Use this preset type and sing with your friends...
ChorusChoir	12	46	On	On	The chorus effect adds a rich and exciting characteristics to your voice and the harmony parts.
BohemianVocode	12	47	On	On	Tempo flanging Vocoder Type; good for Rock or Pop songs and Intros.
RobotVoice	12	48	On	On	Do you want to sound like a robot? This is the setting. Use Harm.3 for variation.
ChordalXG	90	0	On	Off	CHORDAL type setting of previous Vocal Harmony system.
DetuneXG	91	0	On	Off	DETUNE type setting of previous Vocal Harmony system.
ChromaticXG	92	0	On	Off	CHROMATIC type setting of previous Vocal Harmony system.
VocoderXG	89	0	On	Off	VOCODER type setting of previous Vocal Harmony system.
Thru	64	0			Bypass without any harmonies and effects.

## Vocal Effect Type List (CVP-609)

Type Name	Description	MSB	LSB
ROMANTIC REV (Romantic Reverb)	Long reverb for vocal part. Romantic image.	1	0
80sPOP REV (80s'Pop Reverb)	Long reverb for vocal part. 80's pop image.	1	16
ROOM	Reverb simulating the acoustics of a room.	2	0
STAGE (Concert Stage)	Reverb simulating the concert stage.	3	0
PLATE	Reverb simulating a plate reverb unit.	4	0
VCL DOUBLE (Vocal Doubler)	Immediate delay with center focused feeling.	5	16
SPREAD (Stereo Spread)	Immediate delay with spread feeling.	5	17
DELAY	Produces simple delayed sounds: L, R, and C (center).	5	0
SHORT DELAY	Produces short delayed sound with narrow image.	5	1
R&R DELAY (Rock&Roll Delay)	Produces slap back echo sound. Good for Rock&Roll music.	5	18
CROSS DELAY	The feedback of the two delayed sounds is crossed.	8	0
TEMPO DELAY	Tempo-synchronized delay.	21	0
TEMPO CROSS (Tempo Cross Delay)	Tempo-synchronized cross delay.	22	0
CHORUS (Chorus)	Conventional chorus program with rich, warm chorusing.	66	0
EQ HI-FI	Equalizer effect that boosts both high and low frequencies.	76	16
EQ TEL	Equalizer effect that cuts both high and low frequencies.	76	0
GRAMOPHONE	Produces Lo-Fi sound with gramophone image.	94	0
ROBOT	Produces Lo-Fi sound with robotic image.	94	16
OVERDRIVEN	Produces overdriven sound. Good for rock and dance music.	98	0
SCREAM&SHOUT	Produces heavy distorted sound.	98	16
TEMPO FLANGE (Tempo Flanger)	Tempo-synchronized flanger.	107	0
TEMPO PHASER	Tempo-synchronized phaser.	108	0
TEMPO A.PAN (Tempo Auto Pan)	Tempo-synchronized auto pan.	121	0
NO EFFECT	No effect.	0	0

## Harmony Assign Parameters (CVP-609)

Parameter	Value	Description
<b>Transpose Mode</b>  * These are effective only when Vocoder or Vocoder-Mono is selected in Mode.	0	Assigns the harmony to the octave range centered around the pitch of the played note.
	Auto	Assigns the harmony to the same octave range as the vocal (microphone) input.
	-3	Assigns the harmony to a range roughly 3 octaves below the pitch of the played note.
	-2	Assigns the harmony to a range roughly 2 octaves below the pitch of the played note.
	-1	Assigns the harmony to a range roughly 1 octave below the pitch of the played note.
	+1	Assigns the harmony to a range roughly 1 octave above the pitch of the played note.
	+2	Assigns the harmony to a range roughly 2 octaves above the pitch of the played note.
<b>Session Table</b>  * These are effective only when a Chordal Type other than Scale Diatonic or Parallel is selected.	+3	Assigns the harmony to a range roughly 3 octaves above the pitch of the played note.
	Normal	The chord designation is used as shown. This is for general use in conventional music genres.
	Simple	Tends to add a simpler harmony. Use this when you need simple accompaniment.
	R&R	Tends to add harmony with a strong major 6th in both major and minor triads. This is good with rock 'n' roll music.
	UrbanA	Tends to add harmony with a strong major 6th to the major triad and a minor 7th to the minor triad. This is good for a sophisticated, urban feel.
	UrbanB	Tends to add harmony with a strong major 7th to the major triad and a minor 7th to the minor triad. This is good for a sophisticated, urban feel.
	Blues7	Tends to add harmony with a strong minor 7th. This is good for blues music.
UrbanC	Tends to add harmony with a strong major 9th to both the major and minor triads. This is good for ballads.	
<b>Key Root</b>	Refer to the Reference Manual.	
<b>Key Type</b>		

# Vocal Effect Parameter List (CVP-609)

Table: Indicates the corresponding table number in the Effect Data Assign Table.

## ROMANTIC REV, 80sPOP REV, ROOM, STAGE, PLATE

No.	Parameter	Display	Min	Max	Table
1	Reverb Time	0.3s – 30.0s	0	69	Table #4
2	Diffusion	0 – 10	0	10	
3	Initial Delay	0.1ms – 99.3ms	0	63	Table #5
4	HPF Cutoff	Thru, 22Hz – 8.0kHz	0	52	Table #3
5	LPF Cutoff	1.0kHz – 18kHz, Thru	34	60	Table #3
6					
7					
8					
9					
10					
11	Reverb Delay	0.1ms – 99.3ms	0	63	Table #5
12	Density	0 – 4	0	4	
13	ER/Reverb Balance	E63>R – E=R – E<R63	1	127	
14	High Damp	0.1 – 1.0	1	10	
15	Feedback Level	-63 – 0 – +63	1	127	
16					

## TEMPO CROSS

No.	Parameter	Display	Min	Max	Table
1	Delay Time L>R	64th/3 – 4thx6	0	19	Table #14
2	Delay Time R>L	64th/3 – 4thx6	0	19	Table #14
3	Feedback Level	-63 – 0 – +63	1	127	
4	Input Select	L, R, L&R	0	2	
5	Feedback High Dump	0.1 – 1.0	1	10	
6	Lag	-63ms – 0ms – 63ms	1	127	
7					
8					
9					
10					
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
15	EQ High Frequency	500Hz – 16.0kHz	28	58	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76	

## VCL DOUBLE, SPREAD, DELAY, SHORT DELAY, R&R DELAY

No.	Parameter	Display	Min	Max	Table
1	Lch Delay	0.1ms – 1638.3ms	1	16383	
2	Rch Delay	0.1ms – 1638.3ms	1	16383	
3	Cch Delay	0.1ms – 1638.3ms	1	16383	
4	Feedback Delay	0.1ms – 1638.3ms	1	16383	
5	Feedback Level	-63 – 0 – +63	1	127	
6	Cch Level	0 – 127	0	127	
7	High Damp	0.1 – 1.0	1	10	
8					
9					
10					
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3
16	EQ High Gain	-12dB – 0dB – +12dB	52	76	

## CHORUS

No.	Parameter	Display	Min	Max	Table
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #1
2	LFO Depth	0 – 127	0	127	
3	Feedback Level	-63 – 0 – +63	1	127	
4	Delay Offset	0.0ms – 50ms	0	127	Table #2
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3
9	EQ High Gain	-12dB – 0dB – +12dB	52	76	
10					
11	EQ Mid Frequency (w/o 48step)	100Hz – 10.0kHz	14	54	Table #3
12	EQ Mid Gain (w/o 48step)	-12dB – 0dB – +12dB	52	76	
13	EQ Mid Width (w/o 48step)	0.1 – 12.0	1	120	
14					
15	Input Mode	mono, stereo	0	1	
16					

## CROSS DELAY

No.	Parameter	Display	Min	Max	Table
1	L->R Delay	0.1ms – 1486.0ms	1	14860	
2	R->L Delay	0.1ms – 1486.0ms	1	14860	
3	Feedback Level	-63 – 0 – +63	1	127	
4	Input Select	L, R, L&R	0	2	
5	High Damp	0.1 – 1.0	1	10	
6					
7					
8					
9					
10					
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
15	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3
16	EQ High Gain	-12dB – 0dB – +12dB	52	76	

## EQ HI-FI, EQ TEL

No.	Parameter	Display	Min	Max	Table
1	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
2	EQ Mid Frequency	100Hz – 16.0kHz	14	58	Table #3
3	EQ Mid Gain	-12dB – 0dB – +12dB	52	76	
4	EQ Mid Width	0.1 – 12.0	1	120	
5	EQ High Gain	-12dB – 0dB – +12dB	52	76	
6	EQ Low Frequency	50Hz – 2.0kHz	8	40	Table #3
7	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3
8					
9					
10					
11					
12					
13					
14					
15	Input Mode	mono, stereo	0	1	
16					

## TEMPO DELAY

No.	Parameter	Display	Min	Max	Table
1	Delay Time	64th/3 – 4thx6	0	19	Table #14
2	Feedback Level	-63 – 0 – +63	1	127	
3	Feedback High Dump	0.1 – 1.0	1	10	
4	L/R Diffusion	-63ms – 0ms – 63ms	1	127	
5	Lag	-63ms – 0ms – 63ms	1	127	
6					
7					
8					
9					
10					
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4	40	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
15	EQ High Frequency	500Hz – 16.0kHz	28	58	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76	

## GRAMOPHONE, ROBOT

No.	Parameter	Display	Min	Max	Table
1	Sampling Freq Control	44.1kHz – 345Hz	0	127	Table #13
2	Word Length	1 – 127	1	127	
3	Output Gain	-6dB – +36dB	0	42	
4	LPF Cutoff	63Hz – 18kHz, Thru	10	60	Table #3
5	Filter Type	Thru, PowerBass, Radio, Tel, Clean, Low	0	5	
6	LPF Resonance	1.0 – 12.0	10	120	
7	Bit Assign	0 – 6	0	6	
8	Emphasis	Off, On	0	1	
9					
10					
11					
12					
13					
14					
15	Input Mode	mono, stereo	0	1	
16					

### OVERDRIVEN, SCREAM&SHOUT

No.	Parameter	Display	Min	Max	Table
1	Overdrive	0% – 100%	0	100	
2	Device	Transistor, Vintage Tube, Dist1, Dist2, Fuzz	0	4	
3	Speaker	Flat, Stack, Combo, Twin, Radio, Megaphone	0	5	
4	Presence	0 – 20	0	20	
5	Output Level	0% – 100%	0	100	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

### NO EFFECT

No.	Parameter	Display	Min	Max	Table
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

### TEMPO FLANGE

No.	Parameter	Display	Min	Max	Table
1	LFO Freq	16th – 4thx16	5	29	Table #14
2	LFO Depth	0 – 127	0	127	
3	Feedback Level	-63 – 0 – +63	1	127	
4	Delay Offset	0.0ms – 50ms	0	127	Table #2
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3
9	EQ High Gain	-12dB – 0dB – +12dB	52	76	
10					
11	EQ Mid Frequency (w/o 48step)	100Hz – 10.0kHz	14	54	Table #3
12	EQ Mid Gain (w/o 48step)	-12dB – 0dB – +12dB	52	76	
13	EQ Mid Width (w/o 48step)	0.1 – 12.0	1	120	
14	LFO Phase Difference	-180deg – 0deg – +180deg	4	124	
15					
16					

### TEMPO PHASER

No.	Parameter	Display	Min	Max	Table
1	LFO Freq	16th – 4thx16	5	29	Table #14
2	LFO Depth	0 – 127	0	127	
3	Phase Shift Offset	0 – 127	0	127	
4	Feedback Level	-63 – 0 – +63	1	127	
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3
9	EQ High Gain	-12dB – 0dB – +12dB	52	76	
10					
11	Stage	3 – 11	3	11	
12					
13	LFO Phase Difference	-180deg – 0deg – +180deg	4	124	
14					
15					
16					

### TEMPO A.PAN

No.	Parameter	Display	Min	Max	Table
1	LFO Freq	16th – 4thx16	5	29	Table #14
2	L/R Depth	0 – 127	0	127	
3	F/R Depth	0 – 127	0	127	
4	PAN Direction	L ↔ R, L → R, L ← R, Lturn, Rturn, L/R	0	5	
5	LFO Wave	0 – 28	0	28	
6	EQ Low Frequency	32Hz – 2.0kHz	4	40	Table #3
7	EQ Low Gain	-12dB – 0dB – +12dB	52	76	
8	EQ High Frequency	500Hz – 16.0kHz	28	58	Table #3
9	EQ High Gain	-12dB – 0dB – +12dB	52	76	
10					
11	EQ Mid Frequency	100Hz – 10.0kHz	14	54	Table #3
12	EQ Mid Gain	-12dB – 0dB – +12dB	52	76	
13	EQ Mid Width	0.1 – 12.0	1	120	
14					
15	Input Mode	mono, stereo	0	1	
16					

## Pitch Correct Parameters (CVP-609)

Parameter	Description
OFF	The input sound is not pitch corrected. Since the harmony has a more natural sound, this setting is good for duets, etc.
SOFT1	The input sound is almost without pitch correction. Since the intervals of the harmony are more accurate, this setting is good for backing chorus parts, etc.
SOFT2	The input sound is slightly pitch corrected. Since the harmony has a more natural sound, this setting is good for duets, etc.
HARD	The input sound is pitch corrected. Since the intervals of the harmony are more accurate, this setting is good for backing chorus parts, etc.

## Vocal Harmony Edit (Detail) Parameters (CVP-609)

Parameter	Value	Description
LEAD PITCH DETECT SPEED/HARM. PITCH DETECT SPEED	as Mic Setting	This setting gives priority to the speed which is set on the Vocal page of the Mic Setting display.
	1 (Slow)	This setting responds most slowly to pitch changes, and even if the vocal is slightly off pitch, the harmony easily follows.
	2	This setting responds relatively slowly to pitch changes, and even if the vocal is slightly off pitch, the harmony easily follows.
	3	This setting responds relatively quickly to pitch changes, and even if the vocal is slightly off pitch, the harmony easily follows.
	4 (Normal)	This setting responds relatively quickly to pitch changes, and pitch detection is moderately precise.
	5	This setting responds a little quickly to pitch changes, and even if the vocal is slightly off pitch, the harmony easily follows.
	6	This setting responds a little quickly to pitch changes, and pitch detection is moderately precise.
	7	This setting responds a little quickly to pitch changes, and sensitivity of pitch detection is slightly low.
	8	This setting responds a little quickly to pitch changes, and sensitivity of pitch detection is slightly high.
	9	This setting responds fairly quickly to pitch changes, and even if the vocal is slightly off pitch, the harmony easily follows.
	10	This setting responds a little quickly to pitch changes, and pitch detection is moderately precise.
	11	This setting responds a little quickly to pitch changes, and sensitivity of pitch detection is slightly low.
	12	This setting responds a little quickly to pitch changes, and sensitivity of pitch detection is slightly high.
	13	This setting responds quickly to pitch changes, and sensitivity of pitch detection is slightly high.
	14	This setting responds even more quickly to pitch changes, and sensitivity of pitch detection is slightly high.
15 (Fast)	This setting responds even more quickly to pitch changes, and even if the vocal is slightly off pitch, the harmony easily follows; however, sensitivity is high.	
HARMONY EFFECT	Thru	This is a bypass setting. It has no harmony effect.
	Basic	This setting is suited for male vocalists.
	Lite	This setting is suited for male vocalists. It attenuates the bass range and provides a light image.
	Female	This setting is suited for female vocalists.
	Female Lite	This setting is suited for female vocalists. It attenuates the bass range and provides a light image.
	EQ Hi	This EQ setting emphasizes the treble range.
	EQ HiLo	This EQ setting emphasizes the treble and bass ranges.
	EQ Heavy	This EQ setting has a heavy feeling.
	EQ Lite	This EQ setting has a light feeling, while emphasizing the bass range.
	EQ Mid	This EQ setting emphasizes the mid range.
	EQ Wide	This is a well-balanced EQ setting which covers a wide spectrum range.
	Cmp	This compresses strong peaks for a narrower dynamic range.
	Cmp&EQ Hi	This EQ setting emphasizes the treble range. It also compresses strong peaks for a narrower dynamic range.
	Cmp&EQ HiLo	This EQ setting emphasizes the treble and bass ranges. It also compresses strong peaks for a narrower dynamic range.
Cmp&EQ Heavy	This EQ setting has a heavy feel. It also uses compresses strong peaks for a narrower dynamic range.	
Cmp&EQ Lite	This EQ setting has a light feel, while emphasizing the bass range. It also compresses strong peaks for a narrower dynamic range.	
Cmp&EQ Mid	An EQ setting which emphasizes the mid range, it also compresses strong peaks for a narrower dynamic range.	
Cmp&EQ Wide	This is a well-balanced EQ setting covering a wide range. It also compress strong peaks for a narrower dynamic range.	
Cmp&EQ Solid	This compresses strong peaks and consonant sounds, etc.	
HARMONY STABILITY	Dynamic	This tends to add harmony with motion according to the input sound.
	Stable	This has a relatively stable sound with little harmony motion.
LEAD VIBRATO DEPTH		This specifies the vibrato depth of the lead sound.
HARM. VIBRATO DEPTH		This specifies the vibrato depth of the harmony sound.
VIBRATO SPEED		It specifies the vibrato speed of both the lead and harmony sounds.
VIBRATO DELAY		It specifies the vibrato delay of both the lead and harmony sounds.



# MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

Many MIDI messages listed in the MIDI Data Format are expressed in decimal numbers, binary numbers and hexadecimal numbers. Hexadecimal numbers may include the letter "H" as a suffix.

Also, "n" can freely be defined as any whole number. To enter data/values, refer to the table below.

Decimal	Hexadecimal	Binary	Decimal	Hexadecimal	Binary	Decimal	Hexadecimal	Binary	Decimal	Hexadecimal	Binary
0	00	0000 0000	32	20	0010 0000	64	40	0100 0000	96	60	0110 0000
1	01	0000 0001	33	21	0010 0001	65	41	0100 0001	97	61	0110 0001
2	02	0000 0010	34	22	0010 0010	66	42	0100 0010	98	62	0110 0010
3	03	0000 0011	35	23	0010 0011	67	43	0100 0011	99	63	0110 0011
4	04	0000 0100	36	24	0010 0100	68	44	0100 0100	100	64	0110 0100
5	05	0000 0101	37	25	0010 0101	69	45	0100 0101	101	65	0110 0101
6	06	0000 0110	38	26	0010 0110	70	46	0100 0110	102	66	0110 0110
7	07	0000 0111	39	27	0010 0111	71	47	0100 0111	103	67	0110 0111
8	08	0000 1000	40	28	0010 1000	72	48	0100 1000	104	68	0110 1000
9	09	0000 1001	41	29	0010 1001	73	49	0100 1001	105	69	0110 1001
10	0A	0000 1010	42	2A	0010 1010	74	4A	0100 1010	106	6A	0110 1010
11	0B	0000 1011	43	2B	0010 1011	75	4B	0100 1011	107	6B	0110 1011
12	0C	0000 1100	44	2C	0010 1100	76	4C	0100 1100	108	6C	0110 1100
13	0D	0000 1101	45	2D	0010 1101	77	4D	0100 1101	109	6D	0110 1101
14	0E	0000 1110	46	2E	0010 1110	78	4E	0100 1110	110	6E	0110 1110
15	0F	0000 1111	47	2F	0010 1111	79	4F	0100 1111	111	6F	0110 1111
16	10	0001 0000	48	30	0011 0000	80	50	0101 0000	112	70	0111 0000
17	11	0001 0001	49	31	0011 0001	81	51	0101 0001	113	71	0111 0001
18	12	0001 0010	50	32	0011 0010	82	52	0101 0010	114	72	0111 0010
19	13	0001 0011	51	33	0011 0011	83	53	0101 0011	115	73	0111 0011
20	14	0001 0100	52	34	0011 0100	84	54	0101 0100	116	74	0111 0100
21	15	0001 0101	53	35	0011 0101	85	55	0101 0101	117	75	0111 0101
22	16	0001 0110	54	36	0011 0110	86	56	0101 0110	118	76	0111 0110
23	17	0001 0111	55	37	0011 0111	87	57	0101 0111	119	77	0111 0111
24	18	0001 1000	56	38	0011 1000	88	58	0101 1000	120	78	0111 1000
25	19	0001 1001	57	39	0011 1001	89	59	0101 1001	121	79	0111 1001
26	1A	0001 1010	58	3A	0011 1010	90	5A	0101 1010	122	7A	0111 1010
27	1B	0001 1011	59	3B	0011 1011	91	5B	0101 1011	123	7B	0111 1011
28	1C	0001 1100	60	3C	0011 1100	92	5C	0101 1100	124	7C	0111 1100
29	1D	0001 1101	61	3D	0011 1101	93	5D	0101 1101	125	7D	0111 1101
30	1E	0001 1110	62	3E	0011 1110	94	5E	0101 1110	126	7E	0111 1110
31	1F	0001 1111	63	3F	0011 1111	95	5F	0101 1111	127	7F	0111 1111

- Except the table above, for example 144-159 (decimal)/9nH/1001 0000-1001 1111 (binary) denotes the Note On Message for each channel (1-16). 176-191/BnH/1011 0000-1011 1111 denotes the Control Change Message for each channel (1-16). 192-207/CnH/1100 0000-1100 1111 denotes the Program Change Message for each channel (1-16). 240/FOH/1111 0000 denotes the start of a System Exclusive Message. 247/F7H/1111 0111 denotes the end of a System Exclusive Message.
- aaH (hexidecimal)/0aaaaaaa (binary) denotes the data address. The address contains High, Mid, and Low.
- bbH/0bbbbbbb denotes the byte count.
- ccH/0ccccccc denotes the check sum.
- ddH/0ddddddd denotes the data/value.

# MIDI CHANNEL MESSAGE (1)

MIDI Events	Status byte	[MIDI]														[Internal Sequencer]										
		1st Data byte		2nd Data byte		Voice		MIDI Reception (respond/ignored)				MIDI Transmission (generated data)				PLAY	REC									
		Status	Data (Hex)	Parameter	Data (Hex)	Parameter	Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left)	CVP-601: Right1/Right2/Left					
Key Off [GM1] [GM2]	8nH (n: Channel Number)	kk	Key no. (0-127)	vv	Velocity (0-127)	○	○ (Harmony Channel)	○	○	○	○	○	○	○	○	○	○	○	○	○	○					
Key On [GM1] [GM2]	9nH (n: Channel Number)	kk	Key no. (0-127)	vv	Key On: vv=1-127 Key Off: vv=0	○	○ (Harmony Channel)	○	○	○	○	○	●	○	○	○	○	○	○	○	○					
Control Change	BnH	0 (00H)	Bank Select MSB [GM2]	0 (00H) 8 (08H) 8 (08H) 8 (08H) 64 (40H) 104 (68H) 108 (6CH) 118 (76H) 119 (77H) 120 (78H) 121 (79H) 126 (7EH) 127 (7FH)	Regular Mega voice S.Articulation voice S.Articulation2 voice SFX voice Regular Regular GS Rhythm GS Normal GM2 Rhythm GM2 Normal SFX kit Drum kit	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
		1 (01H)	Modulation [GM1] [GM2]	0-127 (00H...7FH)	Data	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		5 (05H)	Portamento Time [GM2]	0-127 (00H...7FH)	Data	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		6 (06H)	Data Entry MSB [GM2]	0-127 (00H...7FH)	Data	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		7 (07H)	Main Volume [GM1] [GM2]	0-127 (00H...7FH)	Data	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		10 (0AH)	Panpot [GM1] [GM2]	0-127 (00H...7FH)	L64...C...R63	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		11 (0BH)	Expression [GM1] [GM2]	0-127 (00H...7FH)	Data	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		16 (10H)	General Purpose Controller	0-127 (00H...7FH)	Data	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		32 (20H)	Bank Select LSB [GM2]	0-127 (00H...7FH)	Data	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		38 (26H)	Data Entry LSB [GM2]	0-127 (00H...7FH)	Data	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		64 (40H)	Sustain (Damper) [GM1] [GM2]	0-127 (00H...7FH)	Data	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		65 (41H)	Portamento [GM2]	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		66 (42H)	Sostenuto [GM2]	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		67 (43H)	Soft Pedal [GM2]	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		71 (47H)	Harmonic Content [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		72 (48H)	Release Time [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		73 (49H)	Attack Time [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		74 (4AH)	Brightness [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		75 (4BH)	Decay Time [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		76 (4CH)	Vibrato Rate [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		77 (4DH)	Vibrato Depth [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		78 (4EH)	Vibrato Delay [GM2]	0-127 (00H...7FH)	-64...0...+63	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		80 (50H)	General Purpose Controller (Articulation 1)	0-127 (00H...7FH)	0: OFF 127: ON	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		81 (51H)	General Purpose Controller (Articulation 2)	0-127 (00H...7FH)	0: OFF 127: ON	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		84 (54H)	Portamento Control	0-127 (00H...7FH)	Key no. (0-127)	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

MIDI Events	Status byte	[MIDI]														[Internal Sequencer]						
		1st Data byte		2nd Data byte		Voice		MIDI Reception (respond/ignored)				MIDI Transmission (generated data)				PLAY	REW	REC				
		Status	Data (Hex)	Parameter	Data (Hex)	Parameter	Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)
		91 (5BH)	Effect1 Depth (Reverb Send Level) [GM2]	0-127 (00H...7FH)	Data	○	○ (A/D Part Receive Channel)	○	○	○	○	○	○	●	●	●	×	○	○	○	○	○
		93 (5DH)	Effect3 Depth (Chorus Send Level) [GM2]	0-127 (00H...7FH)	Data	○	○ (A/D Part Receive Channel)	○	○	○	○	○	○	●	●	●	×	○	○	○	○	○
		94 (5EH)	Effect4 Depth (Variation Send Level)	0-127 (00H...7FH)	Data	○	×	○	○	○	○	○	○	○	●	●	×	○	○	○	○	×
		96 (60H)	RPN Increment	— —	The data byte is ignored.	○	○ (Harmony Channel)	○	○	×	○	○	○	×	×	○	×	○	×	○	×	×
		97 (61H)	RPN Decrement	— —	The data byte is ignored.	○	○ (Harmony Channel)	○	○	×	○	○	○	×	×	○	×	○	×	○	×	×
		98 (62H)	NRPN LSB	0-127 (00H...7FH)	Data	○	×	○	○	×	○	○	○	●	○	○	×	○	○	○	○	○
		99 (63H)	NRPN MSB	0-127 (00H...7FH)	Data	○	×	○	○	×	○	○	○	●	○	○	×	○	○	○	○	○
		100 (64H)	RPN LSB [GM2]	0-127 (00H...7FH)	Data	○	○ (Harmony Channel)	○	○	○	○	○	○	●	○	○	×	○	○	○	○	○
		101 (65H)	RPN MSB [GM2]	0-127 (00H...7FH)	Data	○	○ (Harmony Channel)	○	○	○	○	○	○	●	○	○	×	○	○	○	○	○
Mode Message	BnH (n: Channel Number)	120 (78H)	All Sound Off [GM2]	0 (00H)	Data	○	○	○	○	○	○	○	○	×	×	○	×	○	×	○	×	×
		121 (79H)	Reset All Controllers [GM1] [GM2]	0 (00H)	Data	○	×	○	×	×	×	×	×	×	×	○	×	×	○	×	×	×
		122 (7AH)	Local Control	0 127 (00H) (7FH)	OFF ON	—	—				○			×	×	×	×	×	×	×	×	×
		123 (7BH)	All Note Off [GM1] [GM2]	0 (00H)	Data	○	○ (Harmony Channel)	○	○	○	○	○	○	×	×	○	×	×	○	×	×	×
		124 (7CH)	Omn Off [GM2]	0 (00H)	Data	○	×	○	×	×	×	×	×	×	×	○	×	×	○	×	×	×
		125 (7DH)	Omn On [GM2]	0 (00H)	Data	○	×	○	×	×	×	×	×	×	×	○	×	×	○	×	×	×
		126 (7EH)	Mono [GM2]	0-16 (00H...10H)	Data	○	×	○	×	×	×	×	×	×	×	○	×	×	○	×	×	×
		127 (7FH)	Poly [GM2]	0 (00H)	Data	○	×	○	×	×	×	×	×	×	×	○	×	×	○	×	×	×
Program Change [GM1] [GM2]	CnH (n: Channel Number)	pp (00H...7FH)	Voice no. (0-127)	— —	—	○	×	○	○	○	○	○	○	●	●	●	×	○	○	○	○	○
Channel After Touch [GM1] [GM2]	DnH (n: Channel Number)	vv (00H...7FH)	Data	— —	—	○	×	○	○	○	○	○	○	×	×	○	×	○	×	○	×	○
Polyphonic After Touch	AnH (n: Channel Number)	kk (00H...7FH)	Key no. (0-127)	vv (00H...7FH)	Data	○	×	○	×	×	×	×	×	×	×	○	×	×	○	×	×	×
Pitch Bend Change [GM1] [GM2]	EnH (n: Channel Number)	cc (00H...7FH)	LSB	dd (00H...7FH)	MSB	○	○ (Harmony Channel)	○	○	○	○	○	○	●	○	○	●	○	○	○	○	○
Realtime Message	F8H MIDI Clock	—	—	—	—	—	—	—	—	—	—	—	—	○ (Received when the Clock is set to MIDI A, USB1, USB2 or Wireless LAN.)	○ (Transmitted when the Clock is set to Internal and the Transmit Clock is set to on.)	—	—	—	—	—	—	—
	FAH Start	—	—	—	—	—	—	—	—	—	—	—	—	○ (Received when the Clock is set to MIDI A, USB1, USB2 or Wireless LAN.)	○ (Transmitted when the Transmit Clock is set to on.)	—	—	—	—	—	—	—
	FBH Continue	—	—	—	—	—	—	—	—	—	—	—	—	×	×	—	—	—	—	—	—	—
	FCH Stop	—	—	—	—	—	—	—	—	—	—	—	—	○ (Received when the Clock is set to MIDI A, USB1, USB2 or Wireless LAN.)	○ (Transmitted when the Transmit Clock is set to on.)	—	—	—	—	—	—	—
	FEH Active Sense [GM2]	—	—	—	—	—	—	—	—	—	—	—	—	○	○	—	—	—	—	—	—	—
	FFH System Reset	—	—	—	—	—	—	—	—	—	—	—	—	×	×	—	—	—	—	—	—	—

●: Transmitted via panel operations and keyboard/controller performances.

About Mic/Vocal Harmony column:  
 (Harmony Channel): The relevant parameters are received by the song part designated by the Special Effect's Harmony Channel Parameter.  
 (A/D Part Receive Channel): The relevant parameters are received by the song part designated by the XG's AD Part Receive Ch.

\*1: Same operation as when receiving All Note Off.

\*2: Same operation as when receiving All Note Off. OMNI ON is not enabled.

Mic/Vocal Harmony

CVP-601	×
CVP-605	○
CVP-609	○

SA (Super Articulation)

CVP-601	×
CVP-605	○
CVP-609	○

SA2 (Super Articulation2)

CVP-601	×
CVP-605	×
CVP-609	○

Wireless LAN

CVP-601	×
CVP-605	○
CVP-609	○

[GM1] ... GM Required Parameter  
 [GM2] ... GM Level 2 Required Parameter

# MIDI CHANNEL MESSAGE (2)

## NRPN (Non Registered Parameter Number)

NRPN		Data Entry		Parameter	Data Range	[MIDI]										[Internal Sequencer]			
MSB	LSB	MSB	LSB			Voice		MIDI Reception (respond/ignored)				MIDI Transmission (generated data)				PLAY	REW	REC	
						Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-605/ 609: Main/ Layer/Left	Keyboard	Style	Song	CVP-605/ 609: Main/ Layer/Left	Style	Song	Upper Lower			From panel (CVP-605/ 609: Main/ Layer/Left CVP-601: Right1/ Right2/Left)
01H	08H	mmH	-	Vibrato Rate	mm: 00H-40H-7FH (-64...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	09H	mmH	-	Vibrato Depth	mm: 00H-40H-7FH (-64...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	0AH	mmH	-	Vibrato Delay	mm: 00H-40H-7FH (-64...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	20H	mmH	-	Low Pass Filter Cutoff Frequency	mm: 00H-40H-7FH (-64...+63)	○	×	○	×	×	○	×	×	×	○	×	○	×	○
01H	21H	mmH	-	Low Pass Filter Resonance	mm: 00H-40H-7FH (-64...+63)	○	×	○	×	×	○	×	×	×	○	×	○	×	○
01H	30H	mmH	-	EQ Bass Gain	mm: 00H-40H-7FH (-64...+63)	○	×	○	×	×	○	×	×	×	○	×	○	×	○
01H	31H	mmH	-	EQ Treble Gain	mm: 00H-40H-7FH (-64...+63)	○	×	○	×	×	○	×	×	×	○	×	○	×	○
01H	34H	mmH	-	EQ Bass Frequency	mm: 04H-28H (32..2.0K(Hz))	○	×	○	×	×	×	×	×	×	○	×	○	×	○
01H	35H	mmH	-	EQ Treble Frequency	mm: 1CH-3AH (500...16.0K(Hz))	○	×	○	×	×	×	×	×	×	○	×	○	×	○
01H	63H	mmH	-	EG Attack Time	mm: 00H-40H-7FH (-64...+63)	○	×	○	×	×	○	×	×	×	○	×	○	×	○
01H	64H	mmH	-	EG Decay Time	mm: 00H-40H-7FH (-64...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	66H	mmH	-	EG Release	mm: 00H-40H-7FH (-64...+63)	○	×	○	×	×	○	×	×	×	○	×	○	×	○
14H	rrH	mmH	-	Drum Low Pass Filter Cutoff Frequency	rr: drum instrument note number mm: 00H-40H-7FH (-64...+63)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
15H	rrH	mmH	-	Drum Low Pass Filter Resonance	rr: drum instrument note number mm: 00H-40H-7FH (-64...+63)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
16H	rrH	mmH	-	Drum EG Attack Rate	rr: drum instrument note number mm: 00H-40H-7FH (-64...+63)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
17H	rrH	mmH	-	Drum EG Decay Rate	rr: drum instrument note number mm: 00H-40H-7FH (-64...+63)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
18H	rrH	mmH	-	Drum Pitch Coarse	rr: drum instrument note number mm: 00H-40H-7FH (-64...+63)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
19H	rrH	mmH	-	Drum Pitch Fine	rr: drum instrument note number mm: 00H-40H-7FH (-64...+63)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
1AH	rrH	mmH	-	Drum Level	rr: drum instrument note number mm: 00H-7FH (0..127)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
1CH	rrH	mmH	-	Drum Pan	rr: drum instrument note number mm: 00H, 01H-40H-7FH (RND, L63..C..R63)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
1DH	rrH	mmH	-	Drum Reverb Send Level	rr: drum instrument note number mm: 00H-7FH (0..127)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
1EH	rrH	mmH	-	Drum Chorus Send Level	rr: drum instrument note number mm: 00H-7FH (0..127)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
1FH	rrH	mmH	-	Drum Variation Send Level	rr: drum instrument note number mm: 00H-7FH (0..127) (Variation Connection = SYSTEM) mm: 00H, 01H-7FH (OFF, ON) (Variation Connection = INSERTION)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×
30H	rrH	mmH	-	Drum EQ Bass Gain	rr: drum instrument note number mm: 00H-7FH (0..127)	×	×	×	×	×	×	×	×	×	○	×	×	×	×
31H	rrH	mmH	-	Drum EQ Treble Gain	rr: drum instrument note number mm: 00H-7FH (0..127)	×	×	×	×	×	×	×	×	×	○	×	×	×	×
34H	rrH	mmH	-	Drum EQ Bass Frequency	rr: drum instrument note number mm: 04H-28H (32..2.0K(Hz))	×	×	×	×	×	×	×	×	×	○	×	×	×	×
35H	rrH	mmH	-	Drum EQ Treble Frequency	rr: drum instrument note number mm: 1CH-3AH (500...16.0K(Hz))	×	×	×	×	×	×	×	×	×	○	×	×	×	×

●: Transmitted via panel operations and keyboard/controller performances.  
 NRPN MSB: 14H-35H (for drums) message is accepted as long as the channel is set with a drum voice.  
 Data Entry LSB: Ignored.

## NRPN (Non Registered Parameter Number)/ Vocal Harmony 1

NRPN		Data Entry		Parameter	Data Range	[MIDI]										[Internal Sequencer]				
MSB	LSB	MSB	LSB			Voice		MIDI Reception (respond/ignored)				MIDI Transmission (generated data)				PLAY	REW	REC		
						Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-605/ 609: Main/ Layer/Left	Keyboard	Style	Song	CVP-605/ 609: Main/ Layer/Left	Style	Song	Upper Lower			From panel (CVP-605/ 609: Main/ Layer/Left CVP-601: Right1/ Right2/Left)	
02H	10H	mmH	-	Harmony1 Volume	mm: 00H-7FH (0..127)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	11H	mmH	-	Harmony2 Volume	mm: 00H-7FH (0..127)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	12H	mmH	-	Harmony3 Volume	mm: 00H-7FH (0..127)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	20H	mmH	-	Harmony1 Pan	mm: 00H, 01H-40H-7FH (RND, L63..C..R63)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	21H	mmH	-	Harmony2 Pan	mm: 00H, 01H-40H-7FH (RND, L63..C..R63)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	22H	mmH	-	Harmony3 Pan	mm: 00H, 01H-40H-7FH (RND, L63..C..R63)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	30H	mmH	-	Harmony1 Detune	mm: 00H-40H-7FH (-64...+63)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	31H	mmH	-	Harmony2 Detune	mm: 00H-40H-7FH (-64...+63)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×
02H	32H	mmH	-	Harmony3 Detune	mm: 00H-40H-7FH (-64...+63)	×	○ (Harmony Channel)	○ (Harmony Channel)	×	×	×	×	×	×	○	×	○	×	×	×

Data Entry LSB: Ignored.  
 Vocal Harmony 1

CVP-601	×
CVP-605	○
CVP-609	×

## CVP-609/605/601 MIDI Reference

## RPN (Registered Parameter Number)

NRPN				Data Entry				Parameter	Data Range	[MIDI]										[Internal Sequencer]						
MSB	LSB	MSB	LSB	Voice		MIDI Reception (respond/ignored)				MIDI Transmission (generated data)				PLAY		REC										
				Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-605/ 609: Main/ Layer/Left			CVP-601: Right1/ Right2/Left	Keyboard	Style	Song	CVP-605/ 609: Main/ Layer/Left	CVP-601: Right1/ Right2/Left		Style	Song	Upper Lower	PLAY	REW					
00H	00H	mmH	-	Pitch Bend Sensitivity [GM1] [GM2]	mm: 00H-18H (0...+24[semitones])	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
00H	01H	mmH	IIH	Fine Tune [GM1] [GM2]	mm II: 00H 00H -100[cent] ... mm II: 40H 00H 0[cent] ... mm II: 7FH 7FH 100[cent]	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
00H	02H	mmH	-	Coarse Tune [GM1] [GM2]	mm: 00H-7FH (0...127)	○	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
00H	05H	mmH	IIH	Modulation Sensitivity [GM2]	mm: Specified in semitone steps II: Specified in 100/128 cent steps	○	×	○	×	○	×	×	×	×	×	○	×	○	×	○	×	○	×	×	×	×
7FH	7FH	-	-	Null [GM2]	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

- : Transmitted via panel operations and keyboard/controller performances.

About Mic/Vocal Harmony column:

The relevant parameters are received by the song part designated by the Effect's Harmony Channel Parameter or Melody Channel Parameter.

Mic/Vocal Harmony

CVP-601	×
CVP-605	○
CVP-609	○

[GM1] ... GM Required Parameter

[GM2] ... GM Level 2 Required Parameter

# XG PARAMETER CHANGE TABLE

\* Not received when Receive System Exclusive Message Parameters is set to off.  
 \* Not transmitted when Transmit System Exclusive Message Parameters is set to off.

## MIDI Parameter Change Table (XG SYSTEM)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]								[Internal Sequencer]							
						Voice		MIDI Reception				MIDI Transmission				PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)		
00	00	00 01 02 03	4	00-0F 00-0F 00-0F 00-0F	MASTER TUNE	-102.4...0...+102.3[cent] 1st bit 3-0 → bit 15-12 2nd bit 3-0 → bit 11-8 3rd bit 3-0 → bit 7-4 4th bit 3-0 → bit 3-0	Panel setting value	○	○		○					●			○	×	×
		04	1	00-7F	MASTER VOLUME	0...127	7F	○	×		○					○			○	○	×
		05	1	00-7F	MASTER ATTENUATOR	0...127	00	×	×		×					×			×	×	×
		06	1	28-58	TRANSPOSE	-24...0...+24[semitones]	40	○	○		○					○			○	○	×
		7D	1	N	DRUM SETUP RESET	N: Drum setup number	—	○	×		○					○			○	×	○
		7E	1	00	XG SYSTEM ON	00=XG system ON	—	○	×		○					○			○	×	○
		7F	1	00	ALL PARAMETER RESET	00=ON	—	○	×		○					○			○	×	×

TOTAL SIZE 07  
 ●: Transmitted via panel operations

## MIDI Parameter Change Table (SYSTEM INFORMATION)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]								[Internal Sequencer]							
						Voice		MIDI Reception				MIDI Transmission				PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)		
01	00	00 ... 0D 0E 0F	E 1 1	20-7F ... 20-7F	Model Name 1 ... Model Name 14 NOT USED NOT USED	32...127 (ASCII CHARACTER) ... 32...127 (ASCII CHARACTER)	—	—							○						

TOTAL SIZE 10  
 Transmitted in response to Dump Request. Not received.

## MIDI Parameter Change Table (EFFECT1)

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]								[Internal Sequencer]							
						Voice		MIDI Reception				MIDI Transmission				PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)		
02	01	00	2	00-7F 00-7F	REVERB TYPE MSB REVERB TYPE LSB	Refer to Effect Parameter List	01 (=HALL1) 00	○	○		○					●			○	○	○
		02	1	00-7F	REVERB PARAMETER 1	:	Depends on Reverb Type	○	○		○					●			○	○	○
		03	1	00-7F	REVERB PARAMETER 2	:	Depends on Reverb Type	○	○		○					●			○	○	○
		04	1	00-7F	REVERB PARAMETER 3	:	Depends on Reverb Type	○	○		○					●			○	○	○
		05	1	00-7F	REVERB PARAMETER 4	:	Depends on Reverb Type	○	○		○					●			○	○	○
		06	1	00-7F	REVERB PARAMETER 5	:	Depends on Reverb Type	○	○		○					●			○	○	○
		07	1	00-7F	REVERB PARAMETER 6	:	Depends on Reverb Type	○	○		○					●			○	○	○
		08	1	00-7F	REVERB PARAMETER 7	:	Depends on Reverb Type	○	○		○					●			○	○	○
		09	1	00-7F	REVERB PARAMETER 8	:	Depends on Reverb Type	○	○		○					●			○	○	○
		0A	1	00-7F	REVERB PARAMETER 9	:	Depends on Reverb Type	○	○		○					●			○	○	○
		0B	1	00-7F	REVERB PARAMETER 10	:	Depends on Reverb Type	○	○		○					●			○	○	○
		0C	1	00-7F	REVERB RETURN	→dB...0dB...+6dB (0...64...127)	40	○	○		○					●			○	○	○
		0D	1	01-7F	REVERB PAN	L63...C...R63	40	○	○		○					○			○	○	×

TOTAL SIZE 0E  
 ●: Transmitted via panel operations.

										[MIDI]				[Internal Sequencer]							
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception				MIDI Transmission				PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)
02	01	10	1	00-7F	REVERB PARAMETER 11	Refer to Effect Parameter List	Depends on Reverb Type	○	○		○						●		○	○	○
		11	1	00-7F	REVERB PARAMETER 12	:	Depends on Reverb Type	○	○		○						●		○	○	○
		12	1	00-7F	REVERB PARAMETER 13	:	Depends on Reverb Type	○	○		○						●		○	○	○
		13	1	00-7F	REVERB PARAMETER 14	:	Depends on Reverb Type	○	○		○						●		○	○	○
		14	1	00-7F	REVERB PARAMETER 15	:	Depends on Reverb Type	○	○		○						●		○	○	○
		15	1	00-7F	REVERB PARAMETER 16	:	Depends on Reverb Type	○	○		○						●		○	○	○

TOTAL SIZE 06  
● Transmitted via panel operations.

										[MIDI]				[Internal Sequencer]							
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception				MIDI Transmission				PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)
02	01	20	2	00-7F	CHORUS TYPE MSB	Refer to Effect Parameter List	41 (=CHORUS1)	○	○		○						●		○	○	○
		22	1	00-7F	CHORUS TYPE LSB	:	00	○	○		○						●		○	○	○
		23	1	00-7F	CHORUS PARAMETER 1	:	Depends on Chorus Type	○	○		○						●		○	○	○
		24	1	00-7F	CHORUS PARAMETER 2	:	Depends on Chorus Type	○	○		○						●		○	○	○
		25	1	00-7F	CHORUS PARAMETER 3	:	Depends on Chorus Type	○	○		○						●		○	○	○
		26	1	00-7F	CHORUS PARAMETER 4	:	Depends on Chorus Type	○	○		○						●		○	○	○
		27	1	00-7F	CHORUS PARAMETER 5	:	Depends on Chorus Type	○	○		○						●		○	○	○
		28	1	00-7F	CHORUS PARAMETER 6	:	Depends on Chorus Type	○	○		○						●		○	○	○
		29	1	00-7F	CHORUS PARAMETER 7	:	Depends on Chorus Type	○	○		○						●		○	○	○
		2A	1	00-7F	CHORUS PARAMETER 8	:	Depends on Chorus Type	○	○		○						●		○	○	○
		2B	1	00-7F	CHORUS PARAMETER 9	:	Depends on Chorus Type	○	○		○						●		○	○	○
		2C	1	00-7F	CHORUS PARAMETER 10	:	Depends on Chorus Type	○	○		○						●		○	○	○
		2D	1	01-7F	CHORUS RETURN	-->dB...0dB...+6dB (0...64...127)	40	○	○		○						●		○	○	○
		2E	1	00-7F	CHORUS PAN	L63...C...R63	40	○	○		○						●		○	○	○
		2E	1	00-7F	SEND CHORUS TO REVERB	-->dB...0dB...+6dB (0...64...127)	00	○	○		○						●		○	○	○

TOTAL SIZE 0F  
● Transmitted via panel operations.

02	01	30	1	00-7F	CHORUS PARAMETER 11	Refer to Effect Parameter List	Depends on Chorus Type	○	○		○						●		○	○	○
		31	1	00-7F	CHORUS PARAMETER 12	:	Depends on Chorus Type	○	○		○						●		○	○	○
		32	1	00-7F	CHORUS PARAMETER 13	:	Depends on Chorus Type	○	○		○						●		○	○	○
		33	1	00-7F	CHORUS PARAMETER 14	:	Depends on Chorus Type	○	○		○						●		○	○	○
		34	1	00-7F	CHORUS PARAMETER 15	:	Depends on Chorus Type	○	○		○						●		○	○	○
		35	1	00-7F	CHORUS PARAMETER 16	:	Depends on Chorus Type	○	○		○						●		○	○	○

TOTAL SIZE 06  
● Transmitted via panel operations.

										[MIDI]				[Internal Sequencer]							
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception				MIDI Transmission				PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)
02	01	40	2	00-7F	VARIATION TYPE MSB	Refer to Effect Parameter List	05 (=DELAY L, C, R)	○	○		○						●		○	○	○
		42	2	00-7F	VARIATION TYPE LSB	:	00	○	○		○						●		○	○	○
		44	2	00-7F	VARIATION PARAMETER 1 MSB	:	Depends on Variation Type	○	○		○						●		○	○	○
		46	2	00-7F	VARIATION PARAMETER 1 LSB	:	Depends on Variation Type	○	○		○						●		○	○	○
		48	2	00-7F	VARIATION PARAMETER 2 MSB	:	Depends on Variation Type	○	○		○						●		○	○	○
		4A	2	00-7F	VARIATION PARAMETER 2 LSB	:	Depends on Variation Type	○	○		○						●		○	○	○
		4C	2	00-7F	VARIATION PARAMETER 3 MSB	:	Depends on Variation Type	○	○		○						●		○	○	○
		4E	2	00-7F	VARIATION PARAMETER 3 LSB	:	Depends on Variation Type	○	○		○						●		○	○	○
		50	2	00-7F	VARIATION PARAMETER 4 MSB	:	Depends on Variation Type	○	○		○						●		○	○	○
		50	2	00-7F	VARIATION PARAMETER 4 LSB	:	Depends on Variation Type	○	○		○						●		○	○	○

## CVP-609/605/601 MIDI Reference

										[MIDI]				[Internal Sequencer]					
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception				MIDI Transmission				PLAY		REC	
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW
	52	2	00-7F 00-7F	VARIATION PARAMETER 9 MSB VARIATION PARAMETER 9 LSB	:	Depends on Variation Type	○	○	○				●				○	○	○
	54	2	00-7F 00-7F	VARIATION PARAMETER 10 MSB VARIATION PARAMETER 10 LSB	:	Depends on Variation Type	○	○	○				●				○	○	○
	56	1	00-7F	VARIATION RETURN	→dB...0dB...+6dB (0...64...127)	40	○	○	○				●				○	○	○
	57	1	01-7F	VARIATION PAN	L63...C...R63	40	○	○	○				○				○	○	×
	58	1	00-7F	SEND VARIATION TO REVERB	→dB...0dB...+6dB (0...64...127)	00	○	○	○				○				○	○	×
	59	1	00-7F	SEND VARIATION TO CHORUS	→dB...0dB...+6dB (0...64...127)	00	○	○	○				○				○	○	×
	5A	1	00-01	VARIATION CONNECTION	INSERTION, SYSTEM	00	○	○	○				●				○	○	○
	5B	1	00-7F	VARIATION PART NUMBER	Reception: Part1...16 (0...15) Transmission: Part1...16 (0...15) AD (64) OFF (127)	7F	○	○	○				●				○	○	○
	5C	1	00-7F	MW VARIATION CONTROL DEPTH	-64...0...+63	40	○	○	○				○				○	○	×
	5D	1	00-7F	BEND VARIATION CONTROL DEPTH	-64...0...+63	40	○	○	○				○				○	○	×
	5E	1	00-7F	CAT VARIATION CONTROL DEPTH	-64...0...+63	40	○	○	○				○				○	○	×
	5F	1	00-7F	AC1 VARIATION CONTROL DEPTH	-64...0...+63	40	○	○	○				○				○	○	×
	60	1	00-7F	AC2 VARIATION CONTROL DEPTH	-64...0...+63	40	○	○	○				○				○	○	×

TOTAL SIZE 21

	02	01	70	1	00-7F	VARIATION PARAMETER 11	Refer to Effect Parameter List	Depends on Variation Type	○	○	○				●				○	○	○
			71	1	00-7F	VARIATION PARAMETER 12	:	Depends on Variation Type	○	○	○				●				○	○	○
			72	1	00-7F	VARIATION PARAMETER 13	:	Depends on Variation Type	○	○	○				●				○	○	○
			73	1	00-7F	VARIATION PARAMETER 14	:	Depends on Variation Type	○	○	○				●				○	○	○
			74	1	00-7F	VARIATION PARAMETER 15	:	Depends on Variation Type	○	○	○				●				○	○	○
			75	1	00-7F	VARIATION PARAMETER 16	:	Depends on Variation Type	○	○	○				●				○	○	○

TOTAL SIZE 06

●: Transmitted via panel operations.

## MIDI Parameter Change Table (MULTI EQ)

										[MIDI]				[Internal Sequencer]						
Address (H)	Size (H)	Data (H)	Parameter	Description		Voice		MIDI Reception				MIDI Transmission				PLAY		REC		
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW
02	40	00	1	00-04	EQ TYPE	flat, jazz, pops, rock, classic	* The MULTI EQ Parameter cannot be reset to its factory setting with XG SYSTEM ON.	○	○	○				○				○	×	×
		01	1	34-4C	EQ GAIN1	-12...0...+12[dB]		○	○	○				●				○	×	×
		02	1	04-28	EQ FREQUENCY1	32...2.0k[Hz]		○	○	○				●				○	×	×
		03	1	01-78	EQ Q1	0.1...12.0		○	○	○				●				○	×	×
		04	1	00-01	EQ SHAPE1	shelving, peaking		○	○	○				○				○	×	×
		05	1	34-4C	EQ GAIN2	-12...0...+12[dB]		○	○	○				●				○	×	×
		06	1	0E-36	EQ FREQUENCY2	100...10.0k[Hz]		○	○	○				●				○	×	×
		07	1	01-78	EQ Q2	0.1...12.0		○	○	○				●				○	×	×
		08	1		NOT USED			—	—	—				—				—	—	—
		09	1	34-4C	EQ GAIN3	-12...0...+12[dB]		○	○	○				●				○	×	×
		0A	1	0E-36	EQ FREQUENCY3	100...10.0k[Hz]		○	○	○				●				○	×	×
		0B	1	01-78	EQ Q3	0.1...12.0		○	○	○				●				○	×	×
		0C	1		NOT USED			—	—	—				—				—	—	—
		0D	1	34-4C	EQ GAIN4	-12...0...+12[dB]		○	○	○				●				○	×	×
		0E	1	0E-36	EQ FREQUENCY4	100...10.0k[Hz]		○	○	○				●				○	×	×
		0F	1	01-78	EQ Q4	0.1...12.0		○	○	○				●				○	×	×
		10	1		NOT USED			—	—	—				—				—	—	—
		11	1	34-4C	EQ GAIN5	-12...0...+12[dB]		○	○	○				●				○	×	×
		12	1	1C-3A	EQ FREQUENCY5	0.5k...16.0k[Hz]		○	○	○				●				○	×	×
		13	1	01-78	EQ Q5	0.1...12.0		○	○	○				●				○	×	×
		14	1	00-01	EQ SHAPE5	shelving, peaking		○	○	○				○				○	×	×

TOTAL SIZE 15

●: Transmitted via panel operations.

About PLAY column:

Not available when Function → Utility → Parameter Lock is checked.



## MIDI Parameter Change Table (EFFECT2)

Address (H)	Size (H)	Data (H)	Parameter	Description		[MIDI]							[Internal Sequencer]							
						Voice		MIDI Reception				MIDI Transmission				PLAY		REC		
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW
03	n	00	2	00-7F 00-7F	INSERTION EFFECT TYPE MSB INSERTION EFFECT TYPE LSB	Refer to Effect Parameter List	*	○	○		○					●		○	○	○
		02	1	00-7F	INSERTION EFFECT PARAMETER 1	:		○	○		○					●		○	○	○
		03	1	00-7F	INSERTION EFFECT PARAMETER 2	:		○	○		○					●		○	○	○
		04	1	00-7F	INSERTION EFFECT PARAMETER 3	:		○	○		○					●		○	○	○
		05	1	00-7F	INSERTION EFFECT PARAMETER 4	:		○	○		○					●		○	○	○
		06	1	00-7F	INSERTION EFFECT PARAMETER 5	:		○	○		○					●		○	○	○
		07	1	00-7F	INSERTION EFFECT PARAMETER 6	:		○	○		○					●		○	○	○
		08	1	00-7F	INSERTION EFFECT PARAMETER 7	:		○	○		○					●		○	○	○
		09	1	00-7F	INSERTION EFFECT PARAMETER 8	:		○	○		○					●		○	○	○
		0A	1	00-7F	INSERTION EFFECT PARAMETER 9	:		○	○		○					●		○	○	○
		0B	1	00-7F	INSERTION EFFECT PARAMETER 10	:		○	○		○					●		○	○	○
		0C	1	00-7F	INSERTION EFFECT PART NUMBER	Reception: Part1...16 (0...15) Transmission: Part1...16 (0...15) AD (64) OFF (127)		○	○		○					●		○	○	○
		0D	1	00-7F	MW INSERTION CONTROL DEPTH	-64...0...+63		○	○		○					○		○	○	×
		0E	1	00-7F	BEND INSERTION CONTROL DEPTH	-64...0...+63		○	○		○					○		○	○	×
		0F	1	00-7F	CAT INSERTION CONTROL DEPTH	-64...0...+63		○	○		○					○		○	○	×
		10	1	00-7F	AC1 INSERTION CONTROL DEPTH	-64...0...+63		○	○		○					○		○	○	×
		11	1	00-7F	AC2 INSERTION CONTROL DEPTH	-64...0...+63		○	○		○					●		○	○	○

TOTAL SIZE 12

		20	1	00-7F	INSERTION EFFECT PARAMETER 11	Refer to Effect Parameter List		○	○		○					●		○	○	○
		21	1	00-7F	INSERTION EFFECT PARAMETER 12	:		○	○		○					●		○	○	○
		22	1	00-7F	INSERTION EFFECT PARAMETER 13	:		○	○		○					●		○	○	○
		23	1	00-7F	INSERTION EFFECT PARAMETER 14	:		○	○		○					●		○	○	○
		24	1	00-7F	INSERTION EFFECT PARAMETER 15	:		○	○		○					●		○	○	○
		25	1	00-7F	INSERTION EFFECT PARAMETER 16	:		○	○		○					●		○	○	○

TOTAL SIZE 06

		30	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 1 MSB INSERTION EFFECT PARAMETER 1 LSB	Refer to Effect Parameter List		○	○		○					●		○	○	○
		32	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 2 MSB INSERTION EFFECT PARAMETER 2 LSB	:		○	○		○					●		○	○	○
		34	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 3 MSB INSERTION EFFECT PARAMETER 3 LSB	:		○	○		○					●		○	○	○
		36	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 4 MSB INSERTION EFFECT PARAMETER 4 LSB	:		○	○		○					●		○	○	○
		38	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 5 MSB INSERTION EFFECT PARAMETER 5 LSB	:		○	○		○					●		○	○	○
		3A	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 6 MSB INSERTION EFFECT PARAMETER 6 LSB	:		○	○		○					●		○	○	○
		3C	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 7 MSB INSERTION EFFECT PARAMETER 7 LSB	:		○	○		○					●		○	○	○
		3E	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 8 MSB INSERTION EFFECT PARAMETER 8 LSB	:		○	○		○					●		○	○	○
		40	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 9 MSB INSERTION EFFECT PARAMETER 9 LSB	:		○	○		○					●		○	○	○
		42	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 10 MSB INSERTION EFFECT PARAMETER 10 LSB	:		○	○		○					●		○	○	○

TOTAL SIZE 14

● Transmitted via panel operations

The second byte of the address is considered as an Insertion effect number  
n: insertion effect number

CVP-601	n = 0-2
CVP-605	n = 0-2
CVP-609	n = 0-5

For effect types that do not require MSB, the Parameters for Address 02-0B will be received and the Parameters for Address 30-42 will not be received.

For effect types that require MSB, the Parameters for Address 30-42 will be received and the Parameters for Address 02-0B will not be received.

Type MSB of the effect types that require Parameter MSB are: 5, 6, 7, 8, 95, 96, 97, 98, 104.

When bulk dumps that include Effect Type data are transmitted, the parameters for addresses 02-0B will always be transmitted.

For effects that require MSB however, when a bulk dump is received, the parameters for addresses 02-0B will not be received.

## MIDI Parameter Change Table (SPECIAL EFFECT)

CVP-601	×
CVP-605	○
CVP-609	○

				[MIDI]									[Internal Sequencer]								
Address (H)	Size (H)	Data (H)	Parameter	Description		Voice		MIDI Reception				MIDI Transmission			PLAY		REC				
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left
04	00	00	2	00-7F	VOCAL HARMONY TYPE MSB	Vocal Harmony (12), Synth Vocoder (13), Vocoder XG (89), Chordal XG (90), Detune XG (91), Chromatic XG (92), Thru (0...11, 14...88, 93...127)	* The SPECIAL EFFECT Parameter cannot be reset to its factory setting with XG SYSTEM ON.	×	○		○					●			○	○	×
				00-7F	VOCAL HARMONY TYPE LSB											●			○	○	×
	02	1		00-7F	VOCAL HARMONY PARAMETER 1		×	○		○						●			○	○	×
	03	1		00-7F	VOCAL HARMONY PARAMETER 2		×	○		○						●			○	○	×
	04	1		00-7F	VOCAL HARMONY PARAMETER 3		×	○		○						●			○	○	×
	05	1		00-7F	VOCAL HARMONY PARAMETER 4		×	○		○						●			○	○	×
	06	1		00-7F	VOCAL HARMONY PARAMETER 5		×	○		○						○			○	○	×
	07	1		00-7F	VOCAL HARMONY PARAMETER 6		×	○		○						○			○	○	×
	08	1		00-7F	VOCAL HARMONY PARAMETER 7		×	○		○						●			○	○	×
	09	1		00-7F	VOCAL HARMONY PARAMETER 8		×	○		○						●			○	○	×
	0A	1		00-7F	VOCAL HARMONY PARAMETER 9		×	○		○						●			○	○	×
	0B	1		00-7F	VOCAL HARMONY PARAMETER 10		×	○		○						○			○	○	×
	0C	1		00-7F	VOCAL HARMONY PART NUMBER	ON (64), OFF (0...63, 65...127)	×	○		○						●			○	○	○
	0D	1		00-7F	MW INSERTION CONTROL DEPTH	-64...0...+63	×	×		×						×			×	×	×
	0E	1		00-7F	BEND INSERTION CONTROL DEPTH	-64...0...+63	×	×		×						×			×	×	×
	0F	1		00-7F	CAT INSERTION CONTROL DEPTH	-64...0...+63	×	×		×						×			×	×	×
	10	1		00-7F	AC1 INSERTION CONTROL DEPTH	-64...0...+63	×	×		×						×			×	×	×
	11	1		00-7F	AC2 INSERTION CONTROL DEPTH	-64...0...+63	×	×		×						×			×	×	×

TOTAL SIZE 12

		14	1	00-7F	HARMONY CHANNEL	1...16 (0...15), OFF (127)	×	○		○						●			○	○	×
		15	1	00-7F	MELODY CHANNEL	1...16 (0...15), OFF (127)	×	○		○						○			○	○	×

TOTAL SIZE 2

		16	1	00-7F	Lead Output Level		×	○		○						●			○	○	×	
		17	1	00-7F	Harmony Output Level		×	○		○							●			○	○	×

TOTAL SIZE 2

		18	1	00-7F	Lead Vocal Effect Dry Level		×	○		○						●			○	○	×	
		19	1	00-7F	Harmony Vocal Effect Dry Level		×	○		○							●			○	○	×
		1A	1	00-7F	Lead Vocal Effect Send Level		×	○		○							●			○	○	×
		1B	1	00-7F	Harmony Vocal Effect Send Level		×	○		○							●			○	○	×

TOTAL SIZE 4

		20	1	00-7F	VOCAL HARMONY PARAMETER 11		×	○		○						●			○	○	×	
		21	1	00-7F	VOCAL HARMONY PARAMETER 12		×	○		○							●			○	○	×
		22	1	00-7F	VOCAL HARMONY PARAMETER 13		×	○		○							●			○	○	×
		23	1	00-7F	VOCAL HARMONY PARAMETER 14		×	○		○							●			○	○	×
		24	1	00-7F	VOCAL HARMONY PARAMETER 15		×	○		○							●			○	○	×
		25	1	00-7F	VOCAL HARMONY PARAMETER 16		×	○		○							●			○	○	×

TOTAL SIZE 6

				[MIDI]									[Internal Sequencer]									
Address (H)	Size (H)	Data (H)	Parameter	Description		Voice		MIDI Reception				MIDI Transmission			PLAY		REC					
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left	
		26	1	00-7F	VOCAL HARMONY PARAMETER 17		×	○		○						●			○	○	×	
		27	1	00-7F	VOCAL HARMONY PARAMETER 18		×	○		○							●			○	○	×
		28	1	00-7F	VOCAL HARMONY PARAMETER 19		×	○		○							●			○	○	×
		29	1	00-7F	VOCAL HARMONY PARAMETER 20		×	○		○							●			○	○	×
		2A	1	00-7F	VOCAL HARMONY PARAMETER 21		×	○		○							●			○	○	×
		2B	1	00-7F	VOCAL HARMONY PARAMETER 22		×	○		○							●			○	○	×
		2C	1	00-7F	VOCAL HARMONY PARAMETER 23		×	○		○							●			○	○	×
		2D	1	00-7F	VOCAL HARMONY PARAMETER 24		×	○		○							●			○	○	×
		2E	1	00-7F	VOCAL HARMONY PARAMETER 25		×	○		○							●			○	○	×
		2F	1	00-7F	VOCAL HARMONY PARAMETER 26		×	○		○							●			○	○	×
		30	1	00-7F	VOCAL HARMONY PARAMETER 27		×	○		○							●			○	○	×
		31	1	00-7F	VOCAL HARMONY PARAMETER 28		×	○		○							●			○	○	×
		32	1	00-7F	VOCAL HARMONY PARAMETER 29		×	○		○							●			○	○	×
		33	1	00-7F	VOCAL HARMONY PARAMETER 30		×	○		○							●			○	○	×
		34	1	00-7F	VOCAL HARMONY PARAMETER 31		×	○		○							●			○	○	×
		35	1	00-7F	VOCAL HARMONY PARAMETER 32		×	○		○							●			○	○	×
		36	1	00-7F	VOCAL HARMONY PARAMETER 33		×	○		○							●			○	○	×
		37	1	00-7F	VOCAL HARMONY PARAMETER 34		×	○		○							●			○	○	×
		38	1	00-7F	VOCAL HARMONY PARAMETER 35		×	○		○							●			○	○	×
		39	1	00-7F	VOCAL HARMONY PARAMETER 36		×	○		○							●			○	○	×
		3A	1	00-7F	VOCAL HARMONY PARAMETER 37		×	○		○							●			○	○	×

### CVP-609/605/601 MIDI Reference

Address (H)	Size (H)	Data (H)	Parameter	Description		[MIDI]							[Internal Sequencer]							
						Voice		MIDI Reception				MIDI Transmission			PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)	
	3B	1	00-7F	VOCAL HARMONY PARAMETER 38	* The SPECIAL EFFECT Parameter cannot be reset to its factory setting with XG SYSTEM ON.	×	○			○				●			○	○	×	
	3C	1	00-7F	VOCAL HARMONY PARAMETER 39		×	○			○					●			○	○	×
	3D	1	00-7F	VOCAL HARMONY PARAMETER 40		×	○			○					●			○	○	×
	3E	1	00-7F	VOCAL HARMONY PARAMETER 41		×	○			○					●			○	○	×
	3F	1	00-7F	VOCAL HARMONY PARAMETER 42		×	○			○					●			○	○	×
	40	1	00-7F	VOCAL HARMONY PARAMETER 43		×	○			○					●			○	○	×
	41	1	00-7F	VOCAL HARMONY PARAMETER 44		×	○			○					●			○	○	×
	42	1	00-7F	VOCAL HARMONY PARAMETER 45		×	○			○					●			○	○	×
	43	1	00-7F	VOCAL HARMONY PARAMETER 46		×	○			○					●			○	○	×
	44	1	00-7F	VOCAL HARMONY PARAMETER 47		×	○			○					●			○	○	×
	45	1	00-7F	VOCAL HARMONY PARAMETER 48		×	○			○					●			○	○	×

TOTAL SIZE 20

04	00	60	2	00-7F	VOCAL EFFECT TYPE MSB		×	○			○				●			○	○	×	
				00-7F	VOCAL EFFECT TYPE LSB																
		62	2	00-7F	VOCAL EFFECT PARAMETER 1 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 1 LSB																
		64	2	00-7F	VOCAL EFFECT PARAMETER 2 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 2 LSB																
		66	2	00-7F	VOCAL EFFECT PARAMETER 3 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 3 LSB																
		68	2	00-7F	VOCAL EFFECT PARAMETER 4 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 4 LSB																
		6A	2	00-7F	VOCAL EFFECT PARAMETER 5 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 5 LSB																
		6C	2	00-7F	VOCAL EFFECT PARAMETER 6 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 6 LSB																
		6E	2	00-7F	VOCAL EFFECT PARAMETER 7 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 7 LSB																
		70	2	00-7F	VOCAL EFFECT PARAMETER 8 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 8 LSB																
		72	2	00-7F	VOCAL EFFECT PARAMETER 9 MSB		×	○			○					●			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 9 LSB																
		74	2	00-7F	VOCAL EFFECT PARAMETER 10 MSB		×	○			○					○			○	○	×
				00-7F	VOCAL EFFECT PARAMETER 10 LSB																
		76	1	00-7F	VOCAL EFFECT SWITCH	ON (1-127), OFF (0)	×	○			○					●			○	○	○
		77	1	00-7F	VOCAL EFFECT OUTPUT LEVEL		×	○			○					○			○	○	×

TOTAL SIZE 18

04	00	7A	1	00-7F	VOCAL EFFECT PARAMETER 11		×	○			○				●			○	○	×	
		7B	1	00-7F	VOCAL EFFECT PARAMETER 12		×	○			○					●			○	○	×
		7C	1	00-7F	VOCAL EFFECT PARAMETER 13		×	○			○					●			○	○	×
		7D	1	00-7F	VOCAL EFFECT PARAMETER 14		×	○			○					●			○	○	×
		7E	1	00-7F	VOCAL EFFECT PARAMETER 15		×	○			○					●			○	○	×
		7F	1	00-7F	VOCAL EFFECT PARAMETER 16		×	○			○					●			○	○	×

TOTAL SIZE 6

● Transmitted via panel operations.

MW INSERTION CONTROL DEPTH  
 BEND INSERTION CONTROL DEPTH  
 CAT INSERTION CONTROL DEPTH  
 AC1 INSERTION CONTROL DEPTH  
 AC2 INSERTION CONTROL DEPTH  
 MELODY CHANNEL

CVP-601	×
CVP-605	○
CVP-609	×

Lead Output Level  
 Harmony Output Level  
 Lead Vocal Effect Dry Level  
 Lead Vocal Effect Send Level  
 Harmony Vocal Effect Send Level  
 Vocal Effect

CVP-601	×
CVP-605	×
CVP-609	○

**MIDI Parameter Change Table (MULTI PART)**

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]											[Internal Sequencer]					
						Voice		MIDI Reception				MIDI Transmission					PLAY		REC			
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW				
08	nn	00	1	00-20	ELEMENT RESERVE	0...32	part 10, 26-0, other parts=2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		01	1	00-7F	BANK SELECT MSB	0...127	part 10=7F, other parts=00	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		02	1	00-7F	BANK SELECT LSB	0...127	00	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		03	1	00-7F	PROGRAM NUMBER	1...128	00	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		04	1	00-7F	Rcv CHANNEL	1...16, OFF	Part No.	○	×	○	×	×	×	×	×	×	○	×	○	×	×	×
		05	1	00-01	MONO/POLY MODE	MONO, POLY	01	○	×	○	×	×	×	×	×	×	○	×	○	×	×	×
		06	1	00-02	SAME NOTE NUMBER KEY ON ASSIGN	SINGLE, MULTI, INST (for Drum)	01	○	×	○	×	×	○	×	×	×	○	×	○	×	×	×
		07	1	00-03	PART MODE	NORMAL, DRUM, DRUMS1...2	part 10=02, other parts=00	○	×	○	×	×	×	×	●	●	●	×	○	×	○	○
		08	1	28-58	NOTE SHIFT	-24...+24[semitones]	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		09	2	00-0F	DETUNE	-12.8...+12.7[Hz]	08	○	×	○	○	×	○	○	×	×	○	×	○	×	×	×
	0A	00-0F	00-0F		1st bit 3-0 → bit 7-4		00															
		08	1	00-7F	VOLUME	0...127	64	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		0C	1	00-7F	VELOCITY SENSE DEPTH	0...127	40	○	×	○	○	×	×	○	●	×	○	×	○	○	○	○
		0D	1	00-7F	VELOCITY SENSE OFFSET	0...127	40	○	×	○	○	×	×	○	●	×	○	×	○	○	○	○
		0E	1	00-7F	PAN	RND, L63...C...R63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		0F	1	00-7F	NOTE LIMIT LOW	C-2...G8	00	○	×	○	×	×	×	×	×	×	○	×	○	×	×	×
		10	1	00-7F	NOTE LIMIT HIGH	C-2...G8	7F	○	×	○	×	×	×	×	×	×	○	×	○	×	×	×
		11	1	00-7F	DRY LEVEL	0...127	7F	○	×	○	○	×	○	○	×	●	●	×	○	○	○	○
		12	1	00-7F	CHORUS SEND	0...127	00	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		13	1	00-7F	REVERB SEND	0...127	28	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		14	1	00-7F	VARIATION SEND	0...127	00	○	×	○	○	×	○	○	×	×	○	×	○	○	○	○
		15	1	00-7F	VIBRATO RATE	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		16	1	00-7F	VIBRATO DEPTH	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		17	1	00-7F	VIBRATO DELAY	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		18	1	00-7F	FILTER CUTOFF FREQUENCY	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
		19	1	00-7F	FILTER RESONANCE	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×
	1A	1	00-7F	EG ATTACK TIME	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×	×
	1B	1	00-7F	EG DECAY TIME	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×	×
	1C	1	00-7F	EG RELEASE TIME	-64...+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	○	×	×
	1D	1	28-58	MW PITCH CONTROL	-24...+24[semitones]	40	○	×	○	○	×	×	○	×	×	○	×	○	○	○	×	×
	1E	1	00-7F	MW LOW PASS FILTER CONTROL	-9600...+9450[cent]	40	○	×	○	○	×	×	○	○	●	×	○	×	○	○	○	○
	1F	1	00-7F	MW AMPLITUDE CONTROL	-100...+100[%]	40	○	×	○	○	×	×	○	○	×	×	○	×	○	×	○	×
	20	1	00-7F	MW LFO PMOD DEPTH	0...127	0A	○	×	○	○	×	×	○	○	●	○	○	×	○	○	○	○
	21	1	00-7F	MW LFO FMOD DEPTH	0...127	00	○	×	○	○	×	×	○	○	●	○	○	×	○	○	○	○
	22	1	00-7F	MW LFO AMOD DEPTH	0...127	00	○	×	○	○	×	×	○	○	●	○	○	×	○	○	○	○
	23	1	28-58	BEND PITCH CONTROL	-24...+24[semitones]	42	○	×	○	○	×	×	○	○	×	×	○	×	○	×	○	×
	24	1	00-7F	BEND LOW PASS FILTER CONTROL	-9600...+9450[cent]	40	○	×	○	○	×	×	○	○	×	×	○	×	○	○	○	×
	25	1	00-7F	BEND AMPLITUDE CONTROL	-100...+100[%]	40	○	×	○	○	×	×	○	○	×	×	○	×	○	×	○	×
	26	1	00-7F	BEND LFO PMOD DEPTH	0...127	00	○	×	○	○	×	×	○	○	×	×	○	×	○	×	○	×
	27	1	00-7F	BEND LFO FMOD DEPTH	0...127	00	○	×	○	○	×	×	○	○	×	×	○	×	○	×	○	×
	28	1	00-7F	BEND LFO AMOD DEPTH	0...127	00	○	×	○	○	×	×	○	○	×	×	○	×	○	×	○	×

TOTAL SIZE 29  
● Transmitted via panel operations.

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI]											[Internal Sequencer]						
						Voice		MIDI Reception				MIDI Transmission					PLAY		REC				
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW					
		30	1	00-01	Rcv PITCH BEND	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	
		31	1	00-01	Rcv CH AFTER TOUCH (CAT)	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		32	1	00-01	Rcv PROGRAM CHANGE	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		33	1	00-01	Rcv CONTROL CHANGE	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		34	1	00-01	Rcv POLY AFTER TOUCH (PAT)	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		35	1	00-01	Rcv NOTE MESSAGE	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		36	1	00-01	Rcv RPN	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		37	1	00-01	Rcv NRPN	OFF, ON	XG mode=01, GM mode=00	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		38	1	00-01	Rcv MODULATION	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		39	1	00-01	Rcv VOLUME	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		3A	1	00-01	Rcv PAN	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		3B	1	00-01	Rcv EXPRESSION	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		3C	1	00-01	Rcv HOLD1	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		3D	1	00-01	Rcv PORTAMENTO	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		3E	1	00-01	Rcv SOSTENUTO	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		3F	1	00-01	Rcv SOFT PEDAL	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		40	1	00-01	Rcv BANK SELECT	OFF, ON	01	○	×	○	×	×	×	×	×	×	○	×	○	×	○	×	×
		41	1	00-7F	SCALE TUNING C	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		42	1	00-7F	SCALE TUNING C#	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		43	1	00-7F	SCALE TUNING D	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		44	1	00-7F	SCALE TUNING D#	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		45	1	00-7F	SCALE TUNING E	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		46	1	00-7F	SCALE TUNING F	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		47	1	00-7F	SCALE TUNING F#	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		48	1	00-7F	SCALE TUNING G	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	
		49	1	00-7F	SCALE TUNING G#	-64...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○	○	

										[MIDI]				[Internal Sequencer]					
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception				MIDI Transmission				PLAY		REC	
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left/Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left/Right1/Right2/Left	Style	Song	Upper Lower	PLAY		REW
4A	1	00-7F	SCALE TUNING A	-64...0...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	
4B	1	00-7F	SCALE TUNING A#	-64...0...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	
4C	1	00-7F	SCALE TUNING B	-64...0...+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	
4D	1	28-58	CAT PITCH CONTROL	-24...0...+24[semitones]	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
4E	1	00-7F	CAT LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
4F	1	00-7F	CAT AMPLITUDE CONTROL	-100...0...+100[%]	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
50	1	00-7F	CAT LFO PMOD DEPTH	0...127	00	○	×	○	○	×	×	○	×	×	○	×	○	×	
51	1	00-7F	CAT LFO FMOD DEPTH	0...127	00	○	×	○	○	×	×	○	×	×	○	×	○	×	
52	1	00-7F	CAT LFO AMOD DEPTH	0...127	00	○	×	○	○	×	×	○	×	×	○	×	○	×	
53	1	28-58	PAT PITCH CONTROL	-24...0...+24[semitones]	40	○	×	○	×	×	×	○	×	×	○	×	○	×	
54	1	00-7F	PAT LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
55	1	00-7F	PAT AMPLITUDE CONTROL	-100...0...+100[%]	40	○	×	○	×	×	×	○	×	×	○	×	○	×	
56	1	00-7F	PAT LFO PMOD DEPTH	0...127	00	○	×	○	×	×	×	○	×	×	○	×	○	×	
57	1	00-7F	PAT LFO FMOD DEPTH	0...127	00	○	×	○	×	×	×	○	×	×	○	×	○	×	
58	1	00-7F	PAT LFO AMOD DEPTH	0...127	00	○	×	○	×	×	×	○	×	×	○	×	○	×	
59	1	00-5F	AC1 CONTROLLER NUMBER	0...95	10	○	×	○	×	×	×	○	×	×	○	×	○	×	
5A	1	28-58	AC1 PITCH CONTROL	-24...0...+24[semitones]	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
5B	1	00-7F	AC1 LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40	○	×	○	○	×	×	○	×	×	○	×	○	○	
5C	1	00-7F	AC1 AMPLITUDE CONTROL	-100...0...+100[%]	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
5D	1	00-7F	AC1 LFO PMOD DEPTH	0...127	00	○	×	○	○	×	×	○	×	×	○	×	○	○	
5E	1	00-7F	AC1 LFO FMOD DEPTH	0...127	00	○	×	○	○	×	×	○	×	×	○	×	○	○	
5F	1	00-7F	AC1 LFO AMOD DEPTH	0...127	00	○	×	○	○	×	×	○	×	×	○	×	○	○	
60	1	00-5F	AC2 CONTROLLER NUMBER	0...95	11	○	×	○	○	×	×	○	×	×	○	×	○	○	
61	1	28-58	AC2 PITCH CONTROL	-24...0...+24[semitones]	40	○	×	○	×	×	×	○	×	×	○	×	○	×	
62	1	00-7F	AC2 LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40	○	×	○	×	×	×	○	×	×	○	×	○	×	
63	1	00-7F	AC2 AMPLITUDE CONTROL	-100...0...+100[%]	40	○	×	○	×	×	×	○	×	×	○	×	○	×	
64	1	00-7F	AC2 LFO PMOD DEPTH	0...127	00	○	×	○	×	×	×	○	×	×	○	×	○	×	
65	1	00-7F	AC2 LFO FMOD DEPTH	0...127	00	○	×	○	×	×	×	○	×	×	○	×	○	×	
66	1	00-7F	AC2 LFO AMOD DEPTH	0...127	00	○	×	○	×	×	×	○	×	×	○	×	○	×	
67	1	00-01	PORTAMENTO SWITCH	OFF, ON	00	○	×	○	○	×	×	○	×	×	○	×	○	×	
						(Except S.Articulation Piano, Organ Flutes)													
68	1	00-7F	PORTAMENTO TIME	0...127	00	○	×	○	○	×	×	○	×	×	○	×	○	×	
69	1	00-7F	PITCH EG INITIAL LEVEL	-64...0...+63	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
6A	1	00-7F	PITCH EG ATTACK TIME	-64...0...+63	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
6B	1	00-7F	PITCH EG RELEASE LEVEL	-64...0...+63	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
6C	1	00-7F	PITCH EG RELEASE TIME	-64...0...+63	40	○	×	○	○	×	×	○	×	×	○	×	○	×	
6D	1	01-7F	VELOCITY LIMIT LOW	1...127	01	○	×	○	○	×	×	○	×	×	○	×	○	×	
6E	1	01-7F	VELOCITY LIMIT HIGH	1...127	7F	○	×	○	○	×	×	○	×	×	○	×	○	×	

TOTAL SIZE 3F

70	1		NOT USED															
71	1		NOT USED															
72	1	00-7F	EQ BASS GAIN	-12dB...+12dB	40	○	×	○	○	×	○	○	●	●	●	×	○	○
73	1	00-7F	EQ TREBLE GAIN	-12dB...+12dB	40	○	×	○	○	×	○	○	●	●	●	×	○	○

TOTAL SIZE 04

74	1		NOT USED															
75	1		NOT USED															
76	1	04-28	EQ BASS FREQUENCY	32...2.0K[Hz]	0C	○	×	○	○	×	×	○	●	●	○	×	○	○
77	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0K[Hz]	36	○	×	○	○	×	×	○	●	●	○	×	○	○
78	1		NOT USED															
79	1		NOT USED															
7A	1		NOT USED															
7B	1		NOT USED															
7C	1		NOT USED															
7D	1		NOT USED															
7E	1		NOT USED															
7F	1		NOT USED															

TOTAL SIZE 0C

0A	nn	40	1	00-7F	MW OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	○	×	×	○	●	×	○	×	○	○	○
41	1	00-7F		00-7F	BEND OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	×	×	×	×	×	×	○	×	○	○	×
42	1	00-7F		00-7F	CAT OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	○	×	×	○	×	×	○	×	○	○	×
43	1	00-7F		00-7F	PAT OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	×	×	×	×	×	×	○	×	○	○	×
44	1	00-7F		00-7F	AC1 OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	○	×	×	○	×	×	○	×	○	○	○
45	1	00-7F		00-7F	AC2 OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	×	×	×	×	×	×	○	×	○	○	×

TOTAL SIZE 06

●: Transmitted via panel operations  
nn = PART NUMBER

If there is a Drum Voice assigned to the part, the following parameters are ineffective.

- BANK SELECT LSB
- PORTAMENTO
- MONO/POLY
- SCALE TUNING
- POLY AFTER TOUCH
- PITCH EG

## MIDI Parameter Change Table (A/D PART)

CVP-601	×
CVP-605	○
CVP-609	○

							[MIDI]							[Internal Sequencer]						
Address (H)	Size (H)	Data (H)	Parameter	Description		Voice		MIDI Reception				MIDI Transmission				PLAY		REC		
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song		Upper	Lower
10	On	00	1	00-01	INPUT GAIN	MIC_LINE		×	×									×	×	×
		01	1	00-7F	BANK SELECT MSB	0...127		×	×									×	×	×
		02	1	00-7F	BANK SELECT LSB	0...127		×	×									×	×	×
		03	1	00-7F	PROGRAM NUMBER	1...128		×	×									×	×	×
		04	1	00-0F, 7F	Rcv CHANNEL	1...32 (*1), OFF		×	○									○	×	×
		05	1		NOT USED			—	—									—	—	—
		06	1		NOT USED			—	—									—	—	—
		07	1		NOT USED			—	—									—	—	—
		08	1		NOT USED			—	—									—	—	—
		09	1		NOT USED			—	—									—	—	—
		0A	1		NOT USED			—	—									—	—	—
		0B	1	00-7F	VOLUME	0...127		×	○									●	○	×
		0C	1		NOT USED			—	—									—	—	—
		0D	1		NOT USED			—	—									—	—	—
		0E	1	01-7F	PAN	L63...C...R63		×	○									●	○	×
		0F	1		NOT USED			—	—									—	—	—
		10	1		NOT USED			—	—									—	—	—
		11	1	00-7F	DRY LEVEL	0...127		×	○									●	○	×
		12	1	00-7F	CHORUS SEND	0...127		×	○									●	○	×
		13	1	00-7F	REVERB SEND	0...127		×	○									●	○	×
		14	1	00-7F	VARIATION SEND	0...127		×	○									●	○	×

TOTAL SIZE 15  
n: A/D Part Number (0)

## MIDI Parameter Change Table (DRUM SETUP)

							[MIDI]							[Internal Sequencer]						
Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	Voice		MIDI Reception				MIDI Transmission				PLAY		REC		
						Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left	CVP-601: Right1/Right2/Left	Style	Song		Upper	Lower
3n	rr	00	1	00-7F	PITCH COARSE	-64...0...+63	40	○	×									○	×	×
		01	1	00-7F	PITCH FINE	-64...0...+63[cent]	40	○	×									○	×	×
		02	1	00-7F	LEVEL	0...127	Depends on the note	○	×									○	×	×
		03	1	00-7F	ALTERNATE GROUP	OFF, 1...127	Depends on the note	○	×									○	×	×
		04	1	00-7F	PAN	RND, L63...C...R63	Depends on the note	○	×									○	×	×
		05	1	00-7F	REVERB SEND	0...127	Depends on the note	○	×									○	×	×
		06	1	00-7F	CHORUS SEND	0...127	Depends on the note	○	×									○	×	×
		07	1	00-7F	VARIATION SEND	0...127	7F	○	×									○	×	×
		08	1	00-01	KEY ASSIGN	SINGLE, MULTI	00	○	×									○	×	×
		09	1	00-01	Rcv NOTE OFF	OFF, ON	Depends on the note	○	×									○	×	×
		0A	1	00-01	Rcv NOTE ON	OFF, ON	01	○	×									○	×	×
		0B	1	00-7F	LOW PASS FILTER CUTOFF FREQUENCY	-64...0...+63	40	○	×									○	×	×
		0C	1	00-7F	LOW PASS FILTER RESONANCE	-64...0...+63	40	○	×									○	×	×
		0D	1	00-7F	EG ATTACK RATE	-64...0...+63	40	○	×									○	×	×
		0E	1	00-7F	EG DECAY1 RATE	-64...0...+63	40	○	×									○	×	×
		0F	1	00-7F	EG DECAY2 RATE	-64...0...+63	40	○	×									○	×	×

TOTAL SIZE 10

		20	1	00-7F	EQ BASS GAIN	-12...+12[db]	40	×	×									○	×	×
		21	1	00-7F	EQ TREBLE GAIN	-12...+12[db]	40	×	×									○	×	×
		22	1		NOT USED		—	—	—									—	—	—
		23	1		NOT USED		—	—	—									—	—	—
		24	1	04-28	EQ BASS FREQUENCY	32...2.0k[Hz]	0C	×	×									○	×	×
		25	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0k[Hz]	36	×	×									○	×	×
		26	1		NOT USED		—	—	—									—	—	—
		27	1		NOT USED		—	—	—									—	—	—
		28	1		NOT USED		—	—	—									—	—	—
		29	1		NOT USED		—	—	—									—	—	—
		2A	1		NOT USED		—	—	—									—	—	—
		2B	1		NOT USED		—	—	—									—	—	—
		2C	1		NOT USED		—	—	—									—	—	—
		2D	1		NOT USED		—	—	—									—	—	—

TOTAL SIZE 0E

## CVP-609/605/601 MIDI Reference

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

n: Drum Setup Number (0-1)  
rr: note number (0D-5B)

In the following cases, the instrument will initialize all Drum Setups.

- XG SYSTEM ON received
- GM SYSTEM ON received
- GM LEVEL2 SYSTEM ON received
- GS RESET received
- DRUM SETUP RESET received (only when in XG mode)

[Note]

When a part to which a Drum Setup is assigned receives a program change, the assigned Drum Setup will be initialized.

If the same Drum Setup is assigned to two or more parts, changes in Drum Setup parameters (including program changes) will apply to all parts to which it is assigned.

## System Exclusive Messages (1)

[GM1] ... GM Required Parameter

[GM2] ... GM Level2 Required Parameter

\* Not received when Receive System Exclusive Message Parameters is set to off.  
 \* Not transmitted when Transmit System Exclusive Message Parameters is set to off.

### System Exclusive Messages (Universal Real Time Messages)

MIDI Event	Data Format	[MIDI]								[Internal Sequencer]																					
		Voice		MIDI Reception				MIDI Transmission		PLAY		REC																			
		Regular/Drum/Natural/Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-605/609: Main/Layer/Left CVP-601: Right1/Right2/Left)																
Master Volume [GM2]	<p>F0 7F XN 04 01 SS TT F7</p> <p>11110000 F0 = Exclusive status</p> <p>01111111 7F = Universal Real Time</p> <p>0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored</p> <p>00000100 04 = Sub-ID #1 = Device Control Message</p> <p>00000001 01 = Sub-ID #2 = Master Volume</p> <p>0sssssss SS = Volume LSB</p> <p>0ttttttt TT = Volume MSB</p> <p>11110111 F7 = End of Exclusive</p>	○	×	○	(Available for extra parts of a song)				○	○	○	○	×																		
Master Fine Tuning [GM2]	<p>F0 7F XN 04 03 SS TT F7</p> <p>11110000 F0 = Exclusive status</p> <p>01111111 7F = Universal Real Time</p> <p>0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored</p> <p>00000100 04 = Sub-ID #1 = Device Control Message</p> <p>00000001 03 = Sub-ID #2 = Master Fine Tuning</p> <p>0sssssss SS = Fine Tuning LSB</p> <p>0ttttttt TT = Fine Tuning MSB</p> <p>11110111 F7 = End of Exclusive</p>	○	×	○	(Available for extra parts of a song)				○	○	○	×	×																		
Master Coarse Tuning [GM2]	<p>F0 7F XN 04 04 00 TT F7</p> <p>11110000 F0 = Exclusive status</p> <p>01111111 7F = Universal Real Time</p> <p>0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored</p> <p>00000100 04 = Sub-ID #1 = Device Control Message</p> <p>00000100 04 = Sub-ID #2 = Master Coarse Tuning</p> <p>00000000 00</p> <p>0ttttttt TT = Coarse Tuning MSB</p> <p>11110111 F7 = End of Exclusive</p>	○	×	○	(Available for extra parts of a song)				○	○	○	×	×																		
Reverb Parameter [GM2]	<p>F0 7F XN 04 05 01 01 01 01 01 PP VV ... F7</p> <p>11110000 F0 = Exclusive status</p> <p>01111111 7F = Universal Real Time</p> <p>0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored</p> <p>00000100 04 = Sub-ID #1 = Device Control Message</p> <p>00000101 05 = Sub-ID #2 = Global Parameter Control</p> <p>00000001 01 = Slot path length = 1</p> <p>00000001 01 = Parameter ID width = 1</p> <p>00000001 01 = Value width = 1</p> <p>00000001 01 = Slot path MSB = 1</p> <p>00000001 01 = Slot path LSB = 1 (Reverb)</p> <p>0ppppppp PP = Parameter to be controlled.</p> <p>0vvvvvvv VV = Value for the Parameter.</p> <p>...</p> <p>11110111 F7 = End of Exclusive</p> <table border="1"> <tr> <th>Parameter (pp)</th> <th>Value (vv)</th> <th>Display</th> </tr> <tr> <td>pp=0 Reverb Type</td> <td>0..8</td> <td>0: RoomS 1: RoomM 2: RoomL 3: HallM 4: HallL (default) 8: GM Plate</td> </tr> <tr> <td>pp=1 Reverb Time</td> <td>0..127</td> <td>0..11.0s</td> </tr> </table>	Parameter (pp)	Value (vv)	Display	pp=0 Reverb Type	0..8	0: RoomS 1: RoomM 2: RoomL 3: HallM 4: HallL (default) 8: GM Plate	pp=1 Reverb Time	0..127	0..11.0s	○	○	○	(Available for extra parts of a song)				○	○	○	○	×									
Parameter (pp)	Value (vv)	Display																													
pp=0 Reverb Type	0..8	0: RoomS 1: RoomM 2: RoomL 3: HallM 4: HallL (default) 8: GM Plate																													
pp=1 Reverb Time	0..127	0..11.0s																													
Chorus Parameter [GM2]	<p>F0 7F XN 04 05 01 01 01 01 02 PP VV ... F7</p> <p>11110000 F0 = Exclusive status</p> <p>01111111 7F = Universal Real Time</p> <p>0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored</p> <p>00000100 04 = Sub-ID #1 = Device Control Message</p> <p>00000101 05 = Sub-ID #2 = Global Parameter Control</p> <p>00000001 01 = Slot path length = 1</p> <p>00000001 01 = Parameter ID width = 1</p> <p>00000001 01 = Value width = 1</p> <p>00000001 01 = Slot path MSB = 1</p> <p>00000010 02 = Slot path LSB = 2 (Chorus)</p> <p>0ppppppp PP = Parameter to be controlled.</p> <p>0vvvvvvv VV = Value for the Parameter.</p> <p>...</p> <p>11110111 F7 = End of Exclusive</p> <table border="1"> <tr> <th>Parameter (pp)</th> <th>Value (vv)</th> <th>Display</th> </tr> <tr> <td>pp=0 Chorus Type</td> <td>0..5</td> <td>0: GM Chorus1 1: GM Chorus2 2: GM Chorus3 (default) 3: GM Chorus4 4: FB Chorus 5: GM Flanger</td> </tr> <tr> <td>pp=1 Mod Rate</td> <td>0..127</td> <td>0..15.5Hz</td> </tr> <tr> <td>pp=2 Mod Depth</td> <td>0..127</td> <td></td> </tr> <tr> <td>pp=3 Feedback</td> <td>0..127</td> <td></td> </tr> <tr> <td>pp=4 Send to Reverb</td> <td>0..127</td> <td></td> </tr> </table>	Parameter (pp)	Value (vv)	Display	pp=0 Chorus Type	0..5	0: GM Chorus1 1: GM Chorus2 2: GM Chorus3 (default) 3: GM Chorus4 4: FB Chorus 5: GM Flanger	pp=1 Mod Rate	0..127	0..15.5Hz	pp=2 Mod Depth	0..127		pp=3 Feedback	0..127		pp=4 Send to Reverb	0..127		○	○	○	(Available for extra parts of a song)				○	○	○	○	×
Parameter (pp)	Value (vv)	Display																													
pp=0 Chorus Type	0..5	0: GM Chorus1 1: GM Chorus2 2: GM Chorus3 (default) 3: GM Chorus4 4: FB Chorus 5: GM Flanger																													
pp=1 Mod Rate	0..127	0..15.5Hz																													
pp=2 Mod Depth	0..127																														
pp=3 Feedback	0..127																														
pp=4 Send to Reverb	0..127																														





## System Exclusive Messages (Universal Non-Real Time Messages)

MIDI Event	Data Format	[MIDI]										[Internal Sequencer]		
		Voice		MIDI Reception				MIDI Transmission				PLAY		REC
		Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-605/ 609: Main/ Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/ 609: Main/ Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW
GM1 System On [GM1] [GM2]	<b>F0 7E XN 09 01 F7</b> 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = General MIDI Message 00000001 01 = Sub-ID #2 = General MIDI On 11110111 F7 = End of Exclusive	○	—					○				○	×	○
GM2 System On [GM2]	<b>F0 7E XN 09 03 F7</b> 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = General MIDI Message 00000011 03 = Sub-ID #2 = General MIDI On 11110111 F7 = End of Exclusive	○	—					○				○	×	×
General MIDI System Off [GM1] [GM2]	<b>F0 7E XN 09 02 F7</b> 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = General MIDI Message 00000010 02 = Sub-ID #2 = General MIDI Off 11110111 F7 = End of Exclusive	○	—					○				○	×	×
Scale/Octave Tuning [GM2]	<b>F0 7E XN 08 08 JJ GG MM SS ... F7</b> 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001000 08 = Sub-ID #1= MIDI Tuning Standard 00001000 08 = Sub-ID #2= scale/octave tuning 1 byte form 0jjjjjjj JJ = Channel/option byte1 bits 0 to 1 = channel 15 to 16 bits 2 to 6 = reserved 0ggggggg GG = Channel byte 2 – bits 0 to 6 = channel 8 to 14 0mmmmmmmm MM= Channel byte 2 – bits 0 to 6 = channel 1 to 7 0sssssss SS = 12byte tuning offset of 12 semitones from C to B 00H means -64cent 40H means 0cent 7FH means +63cent ... 11110111 F7= End of Exclusive	○	×					○				○	×	×

# System Exclusive Messages (2)

\* Not received when Receive System Exclusive Message Parameters is set to off.  
 \* Not transmitted when Transmit System Exclusive Message Parameters is set to off.

## System Exclusive Messages (Style)

MIDI Event	Data Format	[MIDI]										
		Voice		MIDI Reception				MIDI Transmission				
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower
Section Control	<b>F0 43 7E 00 ss dd F7</b> 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000000 00 0sssssss ss = Switch No.  00H INTRO 1 01H INTRO 2 02H INTRO 3 03H INTRO 4 08H MAIN A 09H MAIN B 0AH MAIN C 0BH MAIN D 10H FILL IN AA 11H FILL IN BB 12H FILL IN CC 13H FILL IN DD 18H BREAK FILL 20H ENDING 1 21H ENDING 2 22H ENDING 3 23H ENDING 4  0ddddddd dd = Switch On/Off 00H (Off) 7FH (On) 11110111 F7 = End of Exclusive	—	—			○				●		
Tempo Control	<b>F0 43 7E 01 t4 t3 t2 t1 F7</b> 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000001 01 0ttttttt t4 = tempo4 0ttttttt t3 = tempo3 0ttttttt t2 = tempo2 0ttttttt t1 = tempo1 11110111 F7 = End of Exclusive	—	—			○				●		
Chord Control	<b>F0 43 7E tt d1 d2 d3 d4 F7</b> Type1 (tt-02) 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000010 02 = type 1 0dcdcdcd d1 = chord root (cr) 0dcdcdcd d2 = chord type (ct) 0dcdcdcd d3 = bass note (bn) 0dcdcdcd d4 = bass type (bt) 11110111 F7 = End of Exclusive  cr: Chord Root Offnnnn fff: b or #, nnn: note (root) 0000nnnn 0n bbb 0fff0000 x0 reserved 0001nnnn 1n bb 0fff0001 x1 C 0010nnnn 2n b 0fff0010 x2 D 0011nnnn 3n natural 0fff0011 x3 E 0100nnnn 4n # 0fff0100 x4 F 0101nnnn 5n ## 0fff0101 x5 G 0110nnnn 6n ### 0fff0110 x6 A 0fff0111 x7 B  ct: Chord Type 0-34, 127 00000000 00 0 Maj 00010010 12 18 dim7 00000001 01 1 Maj6 00010011 13 19 7th 00000010 02 2 Maj7 00010100 14 20 7sus4 00000011 03 3 Maj7(#11) 00010101 15 21 7b5 00000100 04 4 Maj(9) 00010110 16 22 7(9) 00000101 05 5 Maj7(9) 00010111 17 23 7(#11) 00000110 06 6 Maj6(9) 00011000 18 24 7(13) 00000111 07 7 aug 00011001 19 25 7(b9) 00001000 08 8 min 00011010 1A 26 7(b13) 00001001 09 9 min6 00011011 1B 27 7(#9) 00001010 0A 10 min7 00011100 1C 28 Maj7aug 00001011 0B 11 min7b5 00011101 1D 29 7aug 00001100 0C 12 min(9) 00011110 1E 30 1+8 00001101 0D 13 min7(9) 00011111 1F 31 1+5 00001110 0E 14 min7(11) 00100000 20 32 sus4 00001111 0F 15 minMaj7 00100001 21 33 1+2+5 00010000 10 16 minMaj7(9) 00100010 22 34 cc 00010001 11 17 dim  bn: On Bass Note Same as Chord root 127: No bass chord bt: Bass Chord Same as Chord root 127: No bass chord  * Not received when Chord System Exclusive Message Parameters is set to off. * Not received when Transmit Chord System Exclusive Message Parameters is set to off.	—	—			○				●		
	Type2 (tt-03) 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000011 03 = type 2 0dcdcdcd dd = note1 0dcdcdcd dd = note2 0dcdcdcd dd = note3 : 0dcdcdcd dd = note10 11110111 F7 = End of Exclusive	—	—			○				×		

●: Transmitted via panel operations.

**System Exclusive Messages (XG)**

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower
XG Parameter Changes	<b>F0 43 1n 4C hh mm ll dd ... F7</b> 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 0ddddddd dd = Data : : 11110111 F7 = End of Exclusive	* Refer to XG Parameter Change Table.		○ * Refer to XG Parameter Change Table.					○ * Refer to XG Parameter Change Table.			
XG Bulk Dump	<b>F0 43 0n 4C aa bb hh mm ll dd ... dd cc F7</b> 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0000nnnn 0n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0aaaaaaaa aa = Byte Count MSB 0bbbbbbb bb = Byte Count LSB 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 0ddddddd dd = Data : : 0ddddddd dd = Data 0ccccccc cc = Checksum 11110111 F7 = End of Exclusive	* Refer to XG Parameter Change Table.		○ * Refer to XG Parameter Change Table.					○ * Refer to XG Parameter Change Table.			
XG Parameter Request	<b>F0 43 3n 4C hh mm ll F7</b> 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0011nnnn 3n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 11110111 F7 = End of Exclusive	—	—	○ * Refer to XG Parameter Change Table.					○ * Refer to XG Parameter Change Table.			
XG Dump Request	<b>F0 43 2n 4C hh mm ll F7</b> 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0010nnnn 2n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 11110111 F7 = End of Exclusive	—	—	○ * Refer to XG Parameter Change Table.					○ * Refer to XG Parameter Change Table.			

### System Exclusive Messages (Clavinova compliance)

11110000	F0 = Exclusive status
01000011	43 = YAMAHA ID
01110011	73 = Clavinova ID
:	:
11110111	F7 = End of Exclusive

MIDI Event	Data Format	[MIDI]																
		Voice		MIDI Reception				MIDI Transmission										
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower						
Internal Clock	F0 43 73 01 02 F7 00000001 01 = Model ID (Clavinova common ID) 00000010 02 = Internal Clock Substatus	—	—			○						×						
External Clock	F0 43 73 01 03 F7 00000001 01 = Model ID (Clavinova common ID) 00000011 03 = External Clock Substatus	—	—			○						×						
Organ Flutes data Bulk Dump	F0 43 73 01 06 0B 00 00 01 06 0n [Bulk Data] sum F7 01H Model ID (Clavinova common ID) 06H Bulk ID 0BH Bulk No. (Organ Flutes data Bulk Dump) 00H, 00H, 01H, 06H Data Length: 16 bytes  1st Channel No. 0nH 2nd Footage [1] 00-08H 3rd [1 1/3] 00-08H 4th [1 3/5] 00-08H 5th [2] 00-08H 6th [2 2/3] 00-08H 7th [4] 00-08H 8th [5 1/3] 00-08H 9th [8] 00-08H 10th [16] 00-08H 11th [Attack 2'] 00-08H 12th [Attack 2 2/3] 00-08H 13th [Attack 4'] 00-08H 14th Settings [Attack Length] 00-08H 15th [Response] 00-08H 16th [Attack Mode] 00-01H 00H: Each, 01H: First 17th [Wave Variation] 00-02H 00H: Sine, 01H: Vintage, 02H: Euro 18th [Volume] 01-09H 19th [aux] 00H 20th [aux] 00H 21st [aux] 00H 22nd [aux] 00H sum Check Sum = 0-sum (BULK DATA) Wave Variation: Euro <table border="1" style="margin-left: 20px;"><tr><td>CVP-601</td><td>×</td></tr><tr><td>CVP-605</td><td>×</td></tr><tr><td>CVP-609</td><td>○</td></tr></table>	CVP-601	×	CVP-605	×	CVP-609	○	○ (Organ Flute)	×	○	○	×	×	○	●	×	○	×
CVP-601	×																	
CVP-605	×																	
CVP-609	○																	

● Transmitted via panel operations.

### System Exclusive Messages (Natural Voice)

MIDI Event	Data Format	[MIDI]										
		Voice		MIDI Reception				MIDI Transmission				
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower
String Resonance Depth	F0 43 73 01 50 11 0n 02 ddd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub ID 00010001 11 = Sub ID 0000nnnn 0n = Channel (00-0F) 00000010 02 = Sub ID (String Resonance Depth) 0ddddddd dd = Depth (00-48) 11110111 F7 = End of Exclusive	○ Available for some Natural Voices.	×	○	○	×	×	○	●	×	○	×
Sustain Sample Depth	F0 43 73 01 50 11 0n 03 ddd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub ID 00010001 11 = Sub ID 0000nnnn 0n = Channel (00-0F) 00000011 03 = Sub ID (Sustain Sample Depth) 0ddddddd dd = Depth (00-48) 11110111 F7 = End of Exclusive	○ Available for some Natural Voices.	×	○	○	×	×	○	●	×	○	×
Key Off Sampling Depth	F0 43 73 01 50 11 0n 04 ddd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub ID 00010001 11 = Sub ID 0000nnnn 0n = Channel (00-0F) 00000100 04 = Sub ID (Key Off Sampling Depth) 0ddddddd dd = Depth (00-50) 11110111 F7 = End of Exclusive	○ Available for some Natural Voices.	×	○	○	×	×	○	●	×	○	×

MIDI Event	Data Format	[MIDI]										
		Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower
Soft Pedal Depth	F0 43 73 01 50 11 0n 05 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub ID 00010001 11 = Sub ID 0000nnnn 0n = Channel (00-0F) 00000101 05 = Sub ID (Soft Pedal Depth) 0ddddd dd = Depth (00-7F) 11110111 F7 = End of Exclusive	○	×	○	○	×	×	○	●	×	○	×

● Transmitted via panel operations.

## System Exclusive Messages Special Operators (Vocal Harmony Additional Parameters)

Vocal Harmony

CVP-601	×
CVP-605	○
CVP-609	○

MIDI Event	Data Format	[MIDI]										
		Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower
Vocal Harmony Vocoder Part (Harmony Part (Panel))	F0 43 73 01 11 0n 50 10 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 00010001 11 = Special Operators 0000nnnn 0n = Channel No. (Always 00) 01010000 50 = Vocal Harmony Additional Parameter Control No. 00010000 10 = Vocoder Part Parameter No. 0ddddd dd = data 00H: Off 01H: Upper 02H: Lower 11110111 F7 = End of Exclusive	×	○			○				●		

● Transmitted via panel operations.

## System Exclusive Messages (Others)

MIDI Event	Data Format	[MIDI]										
		Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-605/609: Main/Layer/Left CVP-601: Right1/ Right2/Left	Style	Song	Upper Lower
MIDI Master Tuning	F0 43 1n 27 30 00 0m 0l cc F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n = always 0 (when transmit), n=0-F (when receive) 00100111 27 = Model ID of TG100 00110000 30 = Address High 00000000 00 = Address Mid 00000000 00 = Address Low 0000mmmm 0m = Master Tune MSB 00001111 0l = Master Tune LSB 0ccccccc cc = don't care 11110111 F7 = End of Exclusive	○	○			○				×		
MIDI Key LED Mode	F0 43 73 01 11 0n 47 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 00010001 11 = Special Operators 0000nnnn 0n = Channel No. 01000111 47 = MIDI Key LED Mode On Off Substatus 0ddddd dd = data 00H: Light Off & Sound 01H: Light On & No Sound 02H: Light On & Sound 03H: Light Off & No Sound 11110111 F7 = End of Exclusive  When set to Key LED + No Sound (01H) and Key LED (02H), the LED is turned on/off by a note on message of the channel specified via the Channel No. 9n, note, Vel=0: off 9n, note, Vel=1: flush 9n, note, Vel=2-: on  Up to two channels can be specified simultaneously. A channel become available with Normal (00H).	—	—	○	×	×	×	○	×	×	×	×

# Song System Exclusive Message List / Liste der System-Exclusive-Meldungen der Songs / Liste des messages exclusifs au système demorceaux / Lista de mensajes exclusivos del sistema de canciones

Data Format	Parameter	Description
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## Guide

F0 43 73 01 1F 00 cc dd F7	Guide Mode	ccH = Part Select No 00H (TRACK1=ON, TRACK2=ON) 01H (TRACK1=OFF, TRACK2=ON) 02H (TRACK1=ON, TRACK2=OFF) 03H (TRACK1=OFF, TRACK2=OFF) ddH = Mode 00H=Guide OFF 01H=Follow Lights 02H=Any Key 03H=Karao-Key 06H=Your Tempo
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## Score

F0 43 73 01 50 12 00 00 dd F7	Left Part indication On/Off	00H: OFF, 7FH: ON
F0 43 73 01 50 12 00 01 dd F7	Right Part indication On/Off	00H: OFF, 7FH: ON
F0 43 73 01 50 12 00 02 dd F7	Lyrics indication On/Off	00H: OFF, 7FH: ON
F0 43 73 01 50 12 00 03 dd F7	Chord indication On/Off	00H: OFF, 7FH: ON
F0 43 73 01 50 12 00 04 dd F7	N.Name indication On/Off	00H: OFF, 7FH: ON
F0 43 73 01 50 12 00 05 dd F7	Size designation	00H: SMALL, 01H: MIDDLE, 02H: LARGE, 03H: X-LARGE 01H: MIDDLE and 03H: X-LARGE are available on the CVP-609 and CVP-605 only.
F0 43 73 01 50 12 00 06 dd F7	Left Ch	00H-0FH=CH, 7EH=OFF, 7FH=AUTO
F0 43 73 01 50 12 00 07 dd F7	Right Ch	00H-0FH=CH, 7EH=OFF, 7FH=AUTO
F0 43 73 01 50 12 00 08 dd F7	Quantize triplet On/Off	00H: Triplet OFF, 7FH: Triplet ON
F0 43 73 01 50 12 00 09 dd F7	Quantize	00H: quarter, 01H: eighth, 02H: sixteenth, 03H: thirty-second
F0 43 73 01 50 12 00 0A dd F7	Note Name	00H: ABC, 01H: FixedDo, 02H: MovableDo
F0 43 73 01 50 12 00 0B dd F7	Color Note	00H: OFF, 7FH: ON

## Style

F0 43 73 01 51 00 00 00 03 10 00 dd F7	STYLE SPLIT POINT	dd=STYLE SPLIT POINT (Note Number)
F0 43 73 01 51 05 00 03 04 00 00 dd dd F7	Style No.	dd dd = Style No.
F0 43 7E 00 ss dd F7	Section Control	Refer to the MIDI Data Format.

# Song Meta Event List / Liste der Meta-Events der Songs / Liste des métaévénements des morceaux / Lista de meta-eventos de canciones

Data Format	Parameter	Description
FF 05 len [Data]	Lyrics	len=Data length, [Data]=Lyrics Data
FF 51 03 t1 t2 t3	Set Tempo	t1 t2 t3 = Tempo value B7 1B 00-01 D4 C0 (Tempo 5-500)
FF 58 04 nn dd cc bb	Beat	nn = Numerator dd = Denominator (2n) cc = MIDI clock per metronome click bb = Number of thirty-second notes in MIDI quarter note
FF 59 02 sf mi	Key Signature	sf = -7 - 7 mi = 0: Major key, 1: Minor key

## YAMAHA META EVENT

FF 7F 06 43 73 0A 00 07 dd	Score Start Bar	ddH: Start form this measure dd = -100 - 1, 1 - 100
FF 7F len 43 73 0D 01 [Data]	Keyboard Voice	CVP-609/605: Voice settings for Main, Layer, and Left CVP-601: Voice settings for RIGHT1, 2, and LEFT

## YAMAHA XF META EVENT

FF 7F 07 43 7B 01 cr ct bn bt	Chord Name	Refer to "Chord Control" in the MIDI Data Format (System Exclusive Messages).
FF 7F 05 43 7B 03 20 08	Phrase Mark	Used as a marker for each phrase when executing Phrase Mark repeat playback.
FF 7F 04 43 7B 04 dd	Phrase Max	Maximum Phrase Number
FF 7F 05 43 7B 0C rr ll	Guide Track Flag	Sets the TRACK 1 and TRACK 2 parameters on the [FUNCTION] > [SONG SETTING] display. rr = TRACK1 (0: OFF, 1: 1CH~16: 16CH) ll = TRACK2 (0: OFF, 1: 1CH~16: 16CH)
FF 7F len 43 7B 21 00 pp [Data]	Lyrics Bitmap	Specifies the background picture of the Lyrics display. pp = Display type (00H: Center, 01H: Tile) [Data] = File Path

Lyrics Bitmap is available for the CVP-609 and CVP-605 only.



# MIDI Implementation Chart / MIDI-Implementierungstabelle / Tableau d'implémentation MIDI / Gráfico de implementación MIDI

Yamaha [ Digital Piano ]  
Model CVP-601/605/609 MIDI Implementation Chart

Date : 13-July-2012  
Version : 1.0

Function...	Transmitted	Recognized	Remarks
Basic Channel    Default Changed	1 - 16 1 - 16	1 - 16 1 - 16	
Mode            Default Messages Altered	3 × *****	3 × ×	
Note Number : True voice	0 - 127 *****	0 - 127 0 - 127	
Velocity        Note ON Note OFF	○ 9nH,v=1-127 ○ 8nH,v=1-127	○ 9nH,v=1-127 ○ 9nH,v=0 or 8nH	
After Touch    Key's Ch's	× ×	○ ○	
Pitch Bend	○	○ 0 - 24 semi	
Control Change	0,32 1,5,7,10,11 16 6,38 64,65,66,67 71,72,73,74 80,81 84 91,93,94 96,97 98,99 100,101	○ ○ × ○ ○ ○ ○ ○ ○ ○ ○ × ○ ○ ○	Bank Select General Purpose Controller Data Entry Sound Controller Portamento Cntrl Effect Depth RPN Inc,Dec NRPN LSB,MSB RPN LSB,MSB
Prog Change : True #	○ 0 - 127 *****	○ 0 - 127	
System Exclusive	○	○	
Common : Song Pos. : Song Sel. : Tune	× × ×	× × ×	
System : Clock Real Time: Commands	○ ○	○ ○	
Aux : All Sound Off : Reset All Cntrls : Local ON/OFF Mes- : All Notes OFF sages: Active Sense : Reset	× × × × ○ ×	○ (120,126,127) ○ (121) ○ (122) ○ (123-125) ○ ×	
Notes:			

Mode 1 : OMNI ON , POLY  
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON , MONO  
Mode 4 : OMNI OFF, MONO

○ : Yes 49  
× : No