YAMAHA

Clavinova

CVP-709
CVP-705
CVP-701

MIDI Reference
MIDI-Referenz
Référence MIDI
Referencia MIDI

GENERAL MIDI2 XG GS XF STYLE FILE GE

Manual Development Department

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CVP-709/CVP-705

Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Real Large Hall	1	32	REAL REVERB
Real Medium Hall	1	33	REAL REVERB
Real Bright Hall	1	34	REAL REVERB
Basic Hall	1	21	REVERB1
Light Hall	1	22	REVERB1
Ballad Hall	1	19	REVERB2
Piano Hall	1	20	REVERB2
Hall 1	1	0	REVERB1
Hall 2	1	16	REVERB1
Hall 3	1	17	REVERB1
Hall 4	1	18	REVERB1
Hall 5	1	1	REVERB1
Vocal Hall 1	1	27	REVERB1
Vocal Hall 2	1	28	REVERB1
Piano Recital Hall	1	24	REAL PIANO REVERB
Piano Concert Hall	1	4	REAL PIANO REVERB
Piano Cathedral	1	5	REAL PIANO REVERB
Real Room	2	32	REAL REVERB
Real Power Room	2	33	REAL REVERB
Acoustic Room	2	20	REVERB1
Drums Room	2	21	REVERB1
Piano Chamber	2	24	REAL PIANO REVERB
Stage	3	16	REVERB1
Piano Club	3	24	REAL PIANO REVERB
Real Large Plate	4	32	REAL REVERB
Real Medium Plate	4	33	REAL REVERB
Real Rattle Plate	4	34	REAL REVERB
Plate	4	16	REVERB1
Piano Plate	4	24	REAL PIANO REVERB
Hall M	1	6	REVERB1
Hall L	1	7	REVERB1
Atmosphere Hall	1	23	REVERB1
Large Hall	1	2	REVERB2
Medium Hall	1	3	REVERB2
Percussion Room	2	22	REVERB1
Room 1	2	16	REVERB1
Room 2	2	17	REVERB1
Room 3	2	18	REVERB1
Room 4	2	19	REVERB1
Room 5	2	0	REVERB1
Room 6	2	1	REVERB1
Room 7	2	2	REVERB1
Room S	2	5	REVERB1
Room M	2	6	REVERB1
Room L	2	7	REVERB1
Warm Room	2	3	REVERB2
White Room	16	0	REVERB3
Woody Room	2	4	REVERB2
Stage 2	3	17	REVERB1
Stage 3	3	0	REVERB1
Stage 4	3	1	REVERB1
Plate 2	4	17	REVERB1
Plate 3	4	0	REVERB1
GM Plate	4	7	REVERB1
Rich Plate	4	1	REVERB2
Tunnel	17	0	REVERB3
Canyon	18	0	REVERB3
Basement	19	0	REVERB3
Delay LCR 1	5	16	DELAY LCR
Delay LCR 2	5	0	DELAY LCR
Delay LR	6	0	DELAY LR
Echo	7	0	ECHO
Cross Delay 1	8	0	CROSS DELAY
Cross Delay 2	8	16	CROSS DELAY
Tempo Delay 1	21	0	TEMPO DELAY
Tempo Delay 2	21	16	TEMPO DELAY
Tempo Echo	21	8	TEMPO DELAY
Tempo Cross 1	22	0	TEMPO CROSS DELAY
Tempo Cross 2	22	16	TEMPO CROSS DELAY
Tempo Cross 3	22	17	TEMPO CROSS DELAY
Tempo Cross 4	22	18	TEMPO CROSS DELAY
US Combo Twin	99	32	US COMBO
US Combo Rich Clean	99	33	US COMBO
US Combo Thin Clean	99	34	US COMBO
US Combo Crunch	99	35	US COMBO
Jazz Combo Basic	100	32	JAZZ COMBO
Jazz Combo Warm Chorus	100	33	JAZZ COMBO
US High Gain Dirty	101	32	US HIGH GAIN
US High Gain Riff	101	33	US HIGH GAIN
US High Gain Burn	101	34	US HIGH GAIN
US High Gain Solo	101	35	US HIGH GAIN
British Lead Dirty	102	32	BRITISH LEAD
British Lead Drive	102	33	BRITISH LEAD
British Lead Gainer	102	34	BRITISH LEAD
British Lead Hard	102	35	BRITISH LEAD
Multi FX Distortion Solo	95	32	MULTI FX
Multi FX Distortion Basic	95	33	MULTI FX
Multi FX Overdrive Chorus	95	34	MULTI FX
Multi FX Crunch Wah	95	35	MULTI FX
Multi FX Oldies Delay	95	36	MULTI FX
Multi FX Vintage Echo	95	37	MULTI FX
Small Stereo Distortion	96	32	SMALL STEREO DIST
Small Stereo Overdrive	96	33	SMALL STEREO DIST
Small Stereo Vintage Amp	96	34	SMALL STEREO DIST
Small Stereo Heavy Dist	96	35	SMALL STEREO DIST
British Combo Classic	97	32	BRITISH COMBO
British Combo Top Boost	97	33	BRITISH COMBO
British Combo Custom	97	34	BRITISH COMBO
British Combo Heavy	97	35	BRITISH COMBO
British Legend Blues	98	32	BRITISH LEGEND
British Legend Heavy1	98	33	BRITISH LEGEND
British Legend Heavy2	98	34	BRITISH LEGEND
British Legend Clean	98	35	BRITISH LEGEND
British Legend Dirty Clean	98	36	BRITISH LEGEND
V Distortion Crunch	98	18	V DISTORTION
V Distortion Blues	98	21	V DISTORTION
Stereo Amp Sim Solid	75	29	STEREO AMP SIMULATOR
Stereo Amp Sim Crunch	75	30	STEREO AMP SIMULATOR
Stereo Amp Sim Blues	75	28	STEREO AMP SIMULATOR
V Distortion Hard + Delay	98	1	V DISTORTION DELAY
Vintage Compressor	124	4	VINTAGE COMPRESSOR
Compressor Medium	83	16	COMPRESSOR
Compressor Heavy	83	17	COMPRESSOR
Compressor Melody	105	16	MULTI BAND COMP
Compressor Bass	105	17	MULTI BAND COMP
EQ Telephone	76	17	3BAND EQ
3Band EQ	76	0	3BAND EQ
Loop FX 1	94	16	LO FI
Loop FX 2	94	17	LO FI
Lo-Fi Drum 1	94	18	LO FI
Lo-Fi Drum 2	94	19	LO FI
Lo-Fi Drum 3	76	19	3BAND EQ
Lo-Fi Drum 4	76	20	3BAND EQ
Chorus 1	66	17	CHORUS
Chorus 2	66	8	CHORUS
Symphonic	68	16	SYMPHONIC
Vintage Flanger	124	1	VINTAGE FLANGER
Flanger	67	8	FLANGER
V Flanger	104	0	V FLANGER
Tempo Flanger	107	0	TEMPO FLANGER
Vintage Phaser	124	2	VINTAGE PHASER MONO
Vintage Phaser Stereo	124	3	VINTAGE PHASER STEREO
Phaser	72	0	PHASER1
Tempo Phaser	108	0	TEMPO PHASER
E-Piano Phaser	72	17	PHASER1
Vintage Auto Wah	124	5	VINTAGE AUTO WAH
Auto Wah	78	16	AUTO WAH
Auto Wah + Distortion	78	17	AUTO WAH DISTORTION

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Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Tempo Auto Wah	79	0	TEMPO AUTO WAH1
Vintage Touch Wah	125	2	VINTAGE TOUCH WAH
Touch Wah	82	0	TOUCH WAH1
Touch Wah + Distortion	82	16	TOUCH WAH1
Vintage Pedal Wah Basic	125	1	VINTAGE PEDAL WAH
Vintage Pedal Wah Disco	125	16	VINTAGE PEDAL WAH
Pedal Wah	122	0	PEDAL WAH1
Pedal Wah + Distortion	122	1	PEDAL WAH2
Dual Rotary Speaker Bright	99	16	ROTARY SPEAKER1
Dual Rotary Speaker Warm	99	17	ROTARY SPEAKER1
Rotary Speaker	69	16	ROTARY SPEAKER2
Tremolo	70	16	TREMOLO
E-Piano Tremolo	70	18	TREMOLO
Tempo Tremolo	120	0	TEMPO TREMOLO
Auto Pan	71	16	AUTO PAN1
Tempo Auto Pan	121	0	TEMPO AUTO PAN1
Karaoke 1	20	0	KARAOKE
Karaoke 2	20	1	KARAOKE
Karaoke 3	20	2	KARAOKE
Early Reflection 1	9	0	EARLY REFLECTION
Early Reflection 2	9	1	EARLY REFLECTION
Gate Reverb 1	10	0	GATE REVERB
Gate Reverb 2	10	16	GATE REVERB
Reverse Gate	11	0	GATE REVERB
V Distortion Warm	98	22	V DISTORTION
V Distortion Classic Hard	98	23	V DISTORTION
V Distortion Classic Soft	98	20	V DISTORTION
V Distortion Metal	98	24	V DISTORTION
V Distortion Edgy	98	19	V DISTORTION
V Distortion Solid	98	25	V DISTORTION
V Distortion Clean 1	98	17	V DISTORTION
V Distortion Clean 2	98	26	V DISTORTION
V Distortion Twin	98	16	V DISTORTION
V Distortion Rockabilly	103	18	V DIST TEMPO DELAY
V Distortion Jazz Clean	98	27	V DISTORTION
V Distortion Fusion	103	19	V DIST TEMPO DELAY
V Distortion Hard	98	0	V DISTORTION
V Distortion Soft	98	2	V DISTORTION
Stereo Amp Sim Clean	75	27	STEREO AMP SIMULATOR
Stereo Amp Sim BluesHarp	75	31	STEREO AMP SIMULATOR
Distortion Hard 1	75	16	AMP SIMULATOR1
Distortion Hard 2	75	22	AMP SIMULATOR1
Distortion Soft 1	75	17	AMP SIMULATOR1
Distortion Soft 2	75	23	AMP SIMULATOR1
Distortion Heavy	73	0	DISTORTION
Overdrive	74	0	DISTORTION
Stereo Distortion	73	8	STEREO DISTORTION
Stereo Overdrive	74	8	STEREO DISTORTION
Stereo Distortion Hard	75	18	STEREO AMP SIMULATOR
Stereo Distortion Soft	75	19	STEREO AMP SIMULATOR
Amp Simulator 1	75	0	AMP SIMULATOR1
Amp Simulator 2	75	1	AMP SIMULATOR2
Stereo Amp Simulator 1	75	20	STEREO AMP SIMULATOR
Stereo Amp Simulator 2	75	21	STEREO AMP SIMULATOR
Stereo Amp Simulator 3	75	8	STEREO AMP SIMULATOR
Stereo Amp Simulator 4	75	24	STEREO AMP SIMULATOR
Stereo Amp Simulator 5	75	25	STEREO AMP SIMULATOR
Stereo Amp Simulator 6	75	26	STEREO AMP SIMULATOR
Distortion + Delay 1	95	16	DISTORTION DELAY
Distortion + Delay 2	95	0	DISTORTION DELAY
Overdrive + Delay 1	95	17	DISTORTION DELAY
Overdrive + Delay 2	95	1	DISTORTION DELAY
Comp + Dist + Delay 1	96	16	COMP DIST DELAY
Comp + Dist + Delay 2	96	0	COMP DIST DELAY
Comp + OD + Delay 1	96	17	COMP DIST DELAY
Comp + OD + Delay 2	96	1	COMP DIST DELAY
V Distortion Soft + Delay	98	3	V DISTORTION DELAY
V Dist Hard + Tmp Delay 1	103	0	V DIST TEMPO DELAY
V Dist Hard + Tmp Delay 2	103	17	V DIST TEMPO DELAY

Type Name	MSB	LSB	Parameter List (pages 8 – 20)
V Dist Soft + Tmp Delay 1	103	1	V DIST TEMPO DELAY
V Dist Soft + Tmp Delay 2	103	16	V DIST TEMPO DELAY
Distortion + Tempo Delay	100	0	DIST TEMPO DELAY
Overdrive + Tempo Delay	100	1	DIST TEMPO DELAY
Comp + Distortion 1	73	16	COMP DISTORTION
Comp + Distortion 2	73	1	COMP DISTORTION
Comp + Dist + Tmp Delay	101	0	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 1	101	1	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 2	101	16	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 3	101	17	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 4	101	18	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 5	101	19	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 6	101	20	COMP DIST TEMPO DELAY
Multiband Compressor	105	0	MULTI BAND COMP
Compressor	83	0	COMPRESSOR
Noise Gate	84	0	NOISE GATE
EQ Disco	76	16	3BAND EQ
2Band EQ	77	0	2BAND EQ
Stereo 3Band EQ	76	18	3BAND EQ
Harmonic Enhancer 1	81	16	HARMONIC ENHANCER
Harmonic Enhancer 2	81	0	HARMONIC ENHANCER
Isolator	115	0	ISOLATOR
Chorus 3	66	16	CHORUS
Chorus 4	66	1	CHORUS
Chorus 5	65	2	CHORUS
Chorus 6	65	0	CHORUS
Chorus 7	65	1	CHORUS
Chorus 8	65	8	CHORUS
Chorus Fast	65	16	CHORUS
Chorus Lite	65	17	CHORUS
GM Chorus 1	65	3	CHORUS
GM Chorus 2	65	4	CHORUS
GM Chorus 3	65	5	CHORUS
GM Chorus 4	65	6	CHORUS
Feedback Chorus	65	7	CHORUS
Celeste 1	66	0	CHORUS
Celeste 2	66	2	CHORUS
Symphonic 2	68	0	SYMPHONIC
Ensemble Detune 1	87	0	ENSEMBLE DETUNE
Ensemble Detune 2	87	16	ENSEMBLE DETUNE
Ambience Chorus	65	9	AMBIENCE CHORUS
Ambience Celeste	66	9	AMBIENCE CHORUS
Ambience Symphonic	68	9	AMBIENCE SYMPHONIC
Vintage Flanger 2	124	16	VINTAGE FLANGER
Flanger 2	67	16	FLANGER
Flanger 3	67	17	FLANGER
Flanger 4	67	1	FLANGER
Flanger 5	67	0	FLANGER
GM Flanger	67	7	FLANGER
Dynamic Flanger	110	0	DYNAMIC FLANGER
Ambience Flanger	67	9	AMBIENCE FLANGER
Vintage Phaser 2	124	17	VINTAGE PHASER MONO
Vintage Phaser Stereo 2	124	18	VINTAGE PHASER STEREO
Vintage Phaser Stereo 3	124	19	VINTAGE PHASER STEREO
Vintage Phaser Stereo 4	124	20	VINTAGE PHASER STEREO
Phaser 2	72	8	PHASER2
Phaser 3	72	19	PHASER2
Tempo Phaser 2	108	16	TEMPO PHASER
E-Piano Phaser 2	72	18	PHASER1
E-Piano Phaser 3	72	16	PHASER1
Dynamic Phaser	111	0	DYNAMIC PHASER
Auto Wah 2	78	0	AUTO WAH
Auto Wah + Distortion 2	78	1	AUTO WAH DISTORTION
Auto Wah + Dist Hard	78	21	AUTO WAH DISTORTION
Auto Wah + Dist Heavy	78	23	AUTO WAH DISTORTION
Auto Wah + Dist Lite	78	25	AUTO WAH DISTORTION
Auto Wah + Overdrive 1	78	18	AUTO WAH DISTORTION
Auto Wah + Overdrive 2	78	2	AUTO WAH DISTORTION
Auto Wah + OD Hard	78	22	AUTO WAH DISTORTION

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Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Auto Wah + OD Heavy	78	24	AUTO WAH DISTORTION
Auto Wah + OD Lite	78	26	AUTO WAH DISTORTION
Tmp AutoWah + Dist	79	1	TEMPO AUTO WAH2
Tmp AutoWah + Dist Hard	79	21	TEMPO AUTO WAH2
Tmp AutoWah + Dist Heavy	79	23	TEMPO AUTO WAH2
Tmp AutoWah + Dist Lite	79	25	TEMPO AUTO WAH2
Tmp AutoWah + OD	79	2	TEMPO AUTO WAH2
Tmp AutoWah + OD Hard	79	22	TEMPO AUTO WAH2
Tmp AutoWah + OD Heavy	79	24	TEMPO AUTO WAH2
Tmp AutoWah + OD Lite	79	26	TEMPO AUTO WAH2
Touch Wah 2	82	8	TOUCH WAH2
Touch Wah 3	82	20	TOUCH WAH2
Touch Wah + Distortion 2	82	1	TOUCH WAH1
Touch Wah + Dist Hard	82	21	TOUCH WAH2
Touch Wah + Dist Heavy	82	23	TOUCH WAH2
Touch Wah + Dist Lite	82	25	TOUCH WAH2
Touch Wah + Overdrive 1	82	17	TOUCH WAH2
Touch Wah + Overdrive 2	82	2	TOUCH WAH2
Touch Wah + OD Hard	82	22	TOUCH WAH2
Touch Wah + OD Heavy	82	24	TOUCH WAH2
Touch Wah + OD Lite	82	26	TOUCH WAH2
Wah + Dist + Delay 1	97	16	WAH DISTORTION DELAY
Wah + Dist + Delay 2	97	0	WAH DISTORTION DELAY
Wah + Dist + Tmp Delay	102	0	WAH DIST TEMPO DELAY
Wah + Overdrive + Delay 1	97	17	WAH DISTORTION DELAY
Wah + Overdrive + Delay 2	97	1	WAH DISTORTION DELAY
Wah + OD + Tmp Delay 1	102	1	WAH DIST TEMPO DELAY
Wah + OD + Tmp Delay 2	102	16	WAH DIST TEMPO DELAY
Clavi Touch Wah	82	18	TOUCH WAH2
EP Touch Wah	82	19	TOUCH WAH2
Pedal Wah + Dist Hard	122	21	PEDAL WAH2
Pedal Wah + Dist Heavy	122	23	PEDAL WAH2
Pedal Wah + Dist Lite	122	25	PEDAL WAH2
Pedal Wah + Overdrive	122	2	PEDAL WAH2
Pedal Wah + OD Hard	122	22	PEDAL WAH2
Pedal Wah + OD Heavy	122	24	PEDAL WAH2
Pedal Wah + OD Lite	122	26	PEDAL WAH2
Dual Rotary Speaker 1	99	0	ROTARY SPEAKER1
Dual Rotary Speaker 2	99	1	ROTARY SPEAKER1
Rotary Speaker 2	71	17	AUTO PAN1
Rotary Speaker 3	71	18	AUTO PAN1
Rotary Speaker 4	70	17	TREMOLO
Rotary Speaker 5	66	18	CHORUS
Rotary Speaker 6	69	0	ROTARY SPEAKER2
Rotary Speaker 7	71	22	AUTO PAN1
2way Rotary Speaker	86	0	2WAY ROTARY SPEAKER
Dist + Rotary SP	69	1	DIST ROTARY SPEAKER
Dist + 2way Rotary SP	86	1	DIST 2WAY ROTARY SP
OD + Rotary SP	69	2	DIST ROTARY SPEAKER
OD + 2way Rotary SP	86	2	DIST 2WAY ROTARY SP
Amp Sim + Rotary SP	69	3	AMP ROTARY SPEAKER
Amp Sim + 2way Rotary SP	86	3	AMP 2WAY ROTARY SP
Tremolo 2	71	19	AUTO PAN1
Tremolo 3	70	0	TREMOLO
Guitar Tremolo 1	71	20	AUTO PAN1
Guitar Tremolo 2	70	19	TREMOLO
Vibraphone Rotor	119	0	VIBE VIBRATE
Auto Pan 2	71	0	AUTO PAN1
Auto Pan 3	71	1	AUTO PAN2
E-Piano Auto Pan	71	21	AUTO PAN1
Tempo Auto Pan 2	121	1	TEMPO AUTO PAN2
Pitch Change 1	80	16	PITCH CHANGE1
Pitch Change 2	80	0	PITCH CHANGE1
Pitch Change 3	80	1	PITCH CHANGE2
Voice Cancel	85	0	VOICE CANCELAR
Ambience	88	0	AMBIENCE
Talking Modulation	93	0	TALKING MODULATION
Lo-Fi	94	0	LO FI
Dynamic Filter	109	0	DYNAMIC FILTER

Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Dynamic Ring Modulator	112	0	DYNAMIC RING MOD
Ring Modulator	113	0	RING MODULATOR
No Effect	0	0	NO EFFECT
Through	64	0	THRU

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Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Real Large Hall	1	32	REAL REVERB
Real Medium Hall	1	33	REAL REVERB
Real Bright Hall	1	34	REAL REVERB
Basic Hall	1	21	REVERB1
Light Hall	1	22	REVERB1
Ballad Hall	1	19	REVERB2
Piano Hall	1	20	REVERB2
Hall 1	1	0	REVERB1
Hall 2	1	16	REVERB1
Hall 3	1	17	REVERB1
Hall 4	1	18	REVERB1
Hall 5	1	1	REVERB1
Vocal Hall 1	1	27	REVERB1
Vocal Hall 2	1	28	REVERB1
Piano Recital Hall	1	24	REAL PIANO REVERB
Piano Concert Hall	1	4	REAL PIANO REVERB
Piano Cathedral	1	5	REAL PIANO REVERB
Real Room	2	32	REAL REVERB
Real Power Room	2	33	REAL REVERB
Acoustic Room	2	20	REVERB1
Drums Room	2	21	REVERB1
Piano Chamber	2	24	REAL PIANO REVERB
Stage	3	16	REVERB1
Piano Club	3	24	REAL PIANO REVERB
Real Large Plate	4	32	REAL REVERB
Real Medium Plate	4	33	REAL REVERB
Real Rattle Plate	4	34	REAL REVERB
Plate	4	16	REVERB1
Piano Plate	4	24	REAL PIANO REVERB
Hall M	1	6	REVERB1
Hall L	1	7	REVERB1
Atmosphere Hall	1	23	REVERB1
Large Hall	1	2	REVERB2
Medium Hall	1	3	REVERB2
Percussion Room	2	22	REVERB1
Room 1	2	16	REVERB1
Room 2	2	17	REVERB1
Room 3	2	18	REVERB1
Room 4	2	19	REVERB1
Room 5	2	0	REVERB1
Room 6	2	1	REVERB1
Room 7	2	2	REVERB1
Room S	2	5	REVERB1
Room M	2	6	REVERB1
Room L	2	7	REVERB1
Warm Room	2	3	REVERB2
White Room	16	0	REVERB3
Woody Room	2	4	REVERB2
Stage 2	3	17	REVERB1
Stage 3	3	0	REVERB1
Stage 4	3	1	REVERB1
Plate 2	4	17	REVERB1
Plate 3	4	0	REVERB1
GM Plate	4	7	REVERB1
Rich Plate	4	1	REVERB2
Tunnel	17	0	REVERB3
Canyon	18	0	REVERB3
Basement	19	0	REVERB3
Delay LCR 1	5	16	DELAY LCR
Delay LCR 2	5	0	DELAY LCR
Delay LR	6	0	DELAY LR
Echo	7	0	ECHO
Cross Delay 1	8	0	CROSS DELAY
Cross Delay 2	8	16	CROSS DELAY
Tempo Delay 1	21	0	TEMPO DELAY
Tempo Delay 2	21	16	TEMPO DELAY
Tempo Echo	21	8	TEMPO DELAY
Tempo Cross 1	22	0	TEMPO CROSS DELAY
Tempo Cross 2	22	16	TEMPO CROSS DELAY
Tempo Cross 3	22	17	TEMPO CROSS DELAY
Tempo Cross 4	22	18	TEMPO CROSS DELAY
Multi FX Distortion Solo	95	32	MULTI FX
Multi FX Distortion Basic	95	33	MULTI FX
Multi FX Overdrive Chorus	95	34	MULTI FX
Multi FX Crunch Wah	95	35	MULTI FX
Multi FX Oldies Delay	95	36	MULTI FX
Multi FX Vintage Echo	95	37	MULTI FX
Small Stereo Distortion	96	32	SMALL STEREO DIST
Small Stereo Overdrive	96	33	SMALL STEREO DIST
Small Stereo Vintage Amp	96	34	SMALL STEREO DIST
Small Stereo Heavy Dist	96	35	SMALL STEREO DIST
British Combo Classic	97	32	BRITISH COMBO
British Combo Top Boost	97	33	BRITISH COMBO
British Combo Custom	97	34	BRITISH COMBO
British Combo Heavy	97	35	BRITISH COMBO
British Legend Blues	98	32	BRITISH LEGEND
British Legend Heavy1	98	33	BRITISH LEGEND
British Legend Heavy2	98	34	BRITISH LEGEND
British Legend Clean	98	35	BRITISH LEGEND
British Legend Dirty Clean	98	36	BRITISH LEGEND
V Distortion Crunch	98	18	V DISTORTION
V Distortion Blues	98	21	V DISTORTION
Stereo Amp Sim Solid	75	29	STEREO AMP SIMULATOR
Stereo Amp Sim Crunch	75	30	STEREO AMP SIMULATOR
Stereo Amp Sim Blues	75	28	STEREO AMP SIMULATOR
V Distortion Hard + Delay	98	1	V DISTORTION DELAY
Compressor Medium	83	16	COMPRESSOR
Compressor Heavy	83	17	COMPRESSOR
Compressor Melody	105	16	MULTI BAND COMP
Compressor Bass	105	17	MULTI BAND COMP
EQ Telephone	76	17	3BAND EQ
3Band EQ	76	0	3BAND EQ
Loop FX 1	94	16	LO FI
Loop FX 2	94	17	LO FI
Lo-Fi Drum 1	94	18	LO FI
Lo-Fi Drum 2	94	19	LO FI
Lo-Fi Drum 3	76	19	3BAND EQ
Lo-Fi Drum 4	76	20	3BAND EQ
Chorus 1	66	17	CHORUS
Chorus 2	66	8	CHORUS
Symphonic	68	16	SYMPHONIC
Flanger	67	8	FLANGER
V Flanger	104	0	V FLANGER
Tempo Flanger	107	0	TEMPO FLANGER
Phaser	72	0	PHASER1
Tempo Phaser	108	0	TEMPO PHASER
E-Piano Phaser	72	17	PHASER1
Auto Wah	78	16	AUTO WAH
Auto Wah + Distortion	78	17	AUTO WAH DISTORTION
Tempo Auto Wah	79	0	TEMPO AUTO WAH1
Touch Wah	82	0	TOUCH WAH1
Touch Wah + Distortion	82	16	TOUCH WAH1
Pedal Wah	122	0	PEDAL WAH1
Pedal Wah + Distortion	122	1	PEDAL WAH2
Dual Rotary Speaker Bright	99	16	ROTARY SPEAKER1
Dual Rotary Speaker Warm	99	17	ROTARY SPEAKER1
Rotary Speaker	69	16	ROTARY SPEAKER2
Tremolo	70	16	TREMOLO
E-Piano Tremolo	70	18	TREMOLO
Tempo Tremolo	120	0	TEMPO TREMOLO
Auto Pan	71	16	AUTO PAN1
Tempo Auto Pan	121	0	TEMPO AUTO PAN1
Karaoke 1	20	0	KARAOKE
Karaoke 2	20	1	KARAOKE
Karaoke 3	20	2	KARAOKE
Early Reflection 1	9	0	EARLY REFLECTION
Early Reflection 2	9	1	EARLY REFLECTION
Gate Reverb 1	10	0	GATE REVERB

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Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Gate Reverb 2	10	16	GATE REVERB
Reverse Gate	11	0	GATE REVERB
V Distortion Warm	98	22	V DISTORTION
V Distortion Classic Hard	98	23	V DISTORTION
V Distortion Classic Soft	98	20	V DISTORTION
V Distortion Metal	98	24	V DISTORTION
V Distortion Edgy	98	19	V DISTORTION
V Distortion Solid	98	25	V DISTORTION
V Distortion Clean 1	98	17	V DISTORTION
V Distortion Clean 2	98	26	V DISTORTION
V Distortion Twin	98	16	V DISTORTION
V Distortion Rockabilly	103	18	V DIST TEMPO DELAY
V Distortion Jazz Clean	98	27	V DISTORTION
V Distortion Fusion	103	19	V DIST TEMPO DELAY
V Distortion Hard	98	0	V DISTORTION
V Distortion Soft	98	2	V DISTORTION
Stereo Amp Sim Clean	75	27	STEREO AMP SIMULATOR
Stereo Amp Sim BluesHarp	75	31	STEREO AMP SIMULATOR
Distortion Hard 1	75	16	AMP SIMULATOR1
Distortion Hard 2	75	22	AMP SIMULATOR1
Distortion Soft 1	75	17	AMP SIMULATOR1
Distortion Soft 2	75	23	AMP SIMULATOR1
Distortion Heavy	73	0	DISTORTION
Overdrive	74	0	DISTORTION
Stereo Distortion	73	8	STEREO DISTORTION
Stereo Overdrive	74	8	STEREO DISTORTION
Stereo Distortion Hard	75	18	STEREO AMP SIMULATOR
Stereo Distortion Soft	75	19	STEREO AMP SIMULATOR
Amp Simulator 1	75	0	AMP SIMULATOR1
Amp Simulator 2	75	1	AMP SIMULATOR2
Stereo Amp Simulator 1	75	20	STEREO AMP SIMULATOR
Stereo Amp Simulator 2	75	21	STEREO AMP SIMULATOR
Stereo Amp Simulator 3	75	8	STEREO AMP SIMULATOR
Stereo Amp Simulator 4	75	24	STEREO AMP SIMULATOR
Stereo Amp Simulator 5	75	25	STEREO AMP SIMULATOR
Stereo Amp Simulator 6	75	26	STEREO AMP SIMULATOR
Distortion + Delay 1	95	16	DISTORTION DELAY
Distortion + Delay 2	95	0	DISTORTION DELAY
Overdrive + Delay 1	95	17	DISTORTION DELAY
Overdrive + Delay 2	95	1	DISTORTION DELAY
Comp + Dist + Delay 1	96	16	COMP DIST DELAY
Comp + Dist + Delay 2	96	0	COMP DIST DELAY
Comp + OD + Delay 1	96	17	COMP DIST DELAY
Comp + OD + Delay 2	96	1	COMP DIST DELAY
V Distortion Soft + Delay	98	3	V DISTORTION DELAY
V Dist Hard + Tmp Delay 1	103	0	V DIST TEMPO DELAY
V Dist Hard + Tmp Delay 2	103	17	V DIST TEMPO DELAY
V Dist Soft + Tmp Delay 1	103	1	V DIST TEMPO DELAY
V Dist Soft + Tmp Delay 2	103	16	V DIST TEMPO DELAY
Distortion + Tempo Delay	100	0	DIST TEMPO DELAY
Overdrive + Tempo Delay	100	1	DIST TEMPO DELAY
Comp + Distortion 1	73	16	COMP DISTORTION
Comp + Distortion 2	73	1	COMP DISTORTION
Comp + Dist + Tmp Delay	101	0	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 1	101	1	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 2	101	16	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 3	101	17	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 4	101	18	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 5	101	19	COMP DIST TEMPO DELAY
Comp + OD + Tmp Delay 6	101	20	COMP DIST TEMPO DELAY
Multiband Compressor	105	0	MULTI BAND COMP
Compressor	83	0	COMPRESSOR
Noise Gate	84	0	NOISE GATE
EQ Disco	76	16	3BAND EQ
2Band EQ	77	0	2BAND EQ
Stereo 3Band EQ	76	18	3BAND EQ
Harmonic Enhancer 1	81	16	HARMONIC ENHANCER
Harmonic Enhancer 2	81	0	HARMONIC ENHANCER
Isolator	115	0	ISOLATOR

Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Chorus 3	66	16	CHORUS
Chorus 4	66	1	CHORUS
Chorus 5	65	2	CHORUS
Chorus 6	65	0	CHORUS
Chorus 7	65	1	CHORUS
Chorus 8	65	8	CHORUS
Chorus Fast	65	16	CHORUS
Chorus Lite	65	17	CHORUS
GM Chorus 1	65	3	CHORUS
GM Chorus 2	65	4	CHORUS
GM Chorus 3	65	5	CHORUS
GM Chorus 4	65	6	CHORUS
Feedback Chorus	65	7	CHORUS
Celeste 1	66	0	CHORUS
Celeste 2	66	2	CHORUS
Symphonic 2	68	0	SYMPHONIC
Ensemble Detune 1	87	0	ENSEMBLE DETUNE
Ensemble Detune 2	87	16	ENSEMBLE DETUNE
Ambience Chorus	65	9	AMBIENCE CHORUS
Ambience Celeste	66	9	AMBIENCE CHORUS
Ambience Symphonic	68	9	AMBIENCE SYMPHONIC
Flanger 2	67	16	FLANGER
Flanger 3	67	17	FLANGER
Flanger 4	67	1	FLANGER
Flanger 5	67	0	FLANGER
GM Flanger	67	7	FLANGER
Dynamic Flanger	110	0	DYNAMIC FLANGER
Ambience Flanger	67	9	AMBIENCE FLANGER
Phaser 2	72	8	PHASER2
Phaser 3	72	19	PHASER2
Tempo Phaser 2	108	16	TEMPO PHASER
E-Piano Phaser 2	72	18	PHASER1
E-Piano Phaser 3	72	16	PHASER1
Dynamic Phaser	111	0	DYNAMIC PHASER
Auto Wah 2	78	0	AUTO WAH
Auto Wah + Distortion 2	78	1	AUTO WAH DISTORTION
Auto Wah + Dist Hard	78	21	AUTO WAH DISTORTION
Auto Wah + Dist Heavy	78	23	AUTO WAH DISTORTION
Auto Wah + Dist Lite	78	25	AUTO WAH DISTORTION
Auto Wah + Overdrive 1	78	18	AUTO WAH DISTORTION
Auto Wah + Overdrive 2	78	2	AUTO WAH DISTORTION
Auto Wah + OD Hard	78	22	AUTO WAH DISTORTION
Auto Wah + OD Heavy	78	24	AUTO WAH DISTORTION
Auto Wah + OD Lite	78	26	AUTO WAH DISTORTION
Tmp AutoWah + Dist	79	1	TEMPO AUTO WAH2
Tmp AutoWah + Dist Hard	79	21	TEMPO AUTO WAH2
Tmp AutoWah + Dist Heavy	79	23	TEMPO AUTO WAH2
Tmp AutoWah + Dist Lite	79	25	TEMPO AUTO WAH2
Tmp AutoWah + OD	79	2	TEMPO AUTO WAH2
Tmp AutoWah + OD Hard	79	22	TEMPO AUTO WAH2
Tmp AutoWah + OD Heavy	79	24	TEMPO AUTO WAH2
Tmp AutoWah + OD Lite	79	26	TEMPO AUTO WAH2
Touch Wah 2	82	8	TOUCH WAH2
Touch Wah 3	82	20	TOUCH WAH2
Touch Wah + Distortion 2	82	1	TOUCH WAH1
Touch Wah + Dist Hard	82	21	TOUCH WAH2
Touch Wah + Dist Heavy	82	23	TOUCH WAH2
Touch Wah + Dist Lite	82	25	TOUCH WAH2
Touch Wah + Overdrive 1	82	17	TOUCH WAH2
Touch Wah + Overdrive 2	82	2	TOUCH WAH2
Touch Wah + OD Hard	82	22	TOUCH WAH2
Touch Wah + OD Heavy	82	24	TOUCH WAH2
Touch Wah + OD Lite	82	26	TOUCH WAH2
Wah + Dist + Delay 1	97	16	WAH DISTORTION DELAY
Wah + Dist + Delay 2	97	0	WAH DISTORTION DELAY
Wah + Dist + Tmp Delay	102	0	WAH DIST TEMPO DELAY
Wah + Overdrive + Delay 1	97	17	WAH DISTORTION DELAY
Wah + Overdrive + Delay 2	97	1	WAH DISTORTION DELAY
Wah + OD + Tmp Delay 1	102	1	WAH DIST TEMPO DELAY

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Type Name	MSB	LSB	Parameter List (pages 8 – 20)
Wah + OD + Tmp Delay 2	102	16	WAH DIST TEMPO DELAY
Clavi Touch Wah	82	18	TOUCH WAH2
EP Touch Wah	82	19	TOUCH WAH2
Pedal Wah + Dist Hard	122	21	PEDAL WAH2
Pedal Wah + Dist Heavy	122	23	PEDAL WAH2
Pedal Wah + Dist Lite	122	25	PEDAL WAH2
Pedal Wah + Overdrive	122	2	PEDAL WAH2
Pedal Wah + OD Hard	122	22	PEDAL WAH2
Pedal Wah + OD Heavy	122	24	PEDAL WAH2
Pedal Wah + OD Lite	122	26	PEDAL WAH2
Dual Rotary Speaker 1	99	0	ROTARY SPEAKER1
Dual Rotary Speaker 2	99	1	ROTARY SPEAKER1
Rotary Speaker 2	71	17	AUTO PAN1
Rotary Speaker 3	71	18	AUTO PAN1
Rotary Speaker 4	70	17	TREMOLO
Rotary Speaker 5	66	18	CHORUS
Rotary Speaker 6	69	0	ROTARY SPEAKER2
Rotary Speaker 7	71	22	AUTO PAN1
2way Rotary Speaker	86	0	2WAY ROTARY SPEAKER
Dist + Rotary SP	69	1	DIST ROTARY SPEAKER
Dist + 2way Rotary SP	86	1	DIST 2WAY ROTARY SP
OD + Rotary SP	69	2	DIST ROTARY SPEAKER
OD + 2way Rotary SP	86	2	DIST 2WAY ROTARY SP
Amp Sim + Rotary SP	69	3	AMP ROTARY SPEAKER
Amp Sim + 2way Rotary SP	86	3	AMP 2WAY ROTARY SP
Tremolo 2	71	19	AUTO PAN1
Tremolo 3	70	0	TREMOLO
Guitar Tremolo 1	71	20	AUTO PAN1
Guitar Tremolo 2	70	19	TREMOLO
Vibraphone Rotor	119	0	VIBE VIBRATE
Auto Pan 2	71	0	AUTO PAN1
Auto Pan 3	71	1	AUTO PAN2
E-Piano Auto Pan	71	21	AUTO PAN1
Tempo Auto Pan 2	121	1	TEMPO AUTO PAN2
Pitch Change 1	80	16	PITCH CHANGE1
Pitch Change 2	80	0	PITCH CHANGE1
Pitch Change 3	80	1	PITCH CHANGE2
Voice Cancel	85	0	VOICE CANCELAR
Ambience	88	0	AMBIENCE
Talking Modulation	93	0	TALKING MODULATION
Lo-Fi	94	0	LO FI
Dynamic Filter	109	0	DYNAMIC FILTER
Dynamic Ring Modulator	112	0	DYNAMIC RING MOD
Ring Modulator	113	0	RING MODULATOR
No Effect	0	0	NO EFFECT
Through	64	0	THRU

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.
(*1) Reverb Block
(*2) Chorus Block, DSP1 (Variation) Block and DSP2 – 9 (Insertion) Block

REVERB

REAL PIANO REVERB
Block: Reverb

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

Note: No parameters

REAL REVERB
Block: Reverb

No.	Parameter	Display	Min	Max	Table	Control
1	Reverb Time	0.3s – 30.0s	0	69	Table #1	●
2						
3	Initial Delay	0.1ms – 200.0ms	0	127	Table #2	
4	High Damp Frequency	1.0kHz – 18kHz, Thru	34	60	Table #3	
5						
6	High Ratio	0.0 – 1.0	0	10		
7						
8						
9						
10						
11						
12						
13	EQ Low Frequency	22Hz – 1.0kHz	1	34	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52	76		
15	EQ High Frequency	500Hz – 18.0kHz	28	59	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52	76		

REVERB1
Block: Reverb, Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Reverb Time	0.3s – 30.0s	0	69	Table #1	
2	Diffusion	0 – 10	0	10		
3	Initial Delay	0.1ms – 200.0ms (*1) 0.1ms – 99.3ms (*2)	0 0	127 63	Table #2	
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 0	127 63	Table #2	
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						

REVERB2
Block: Reverb

No.	Parameter	Display	Min	Max	Table	Control
1	Reverb Time	0.3s – 30.0s	0	69	Table #1	●
2	Diffusion	0 – 10	0	10		
3	Initial Delay	0.1ms – 200.0ms	0	127	Table #2	
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						
12						
13						
14	High Damp	0.1 – 1.0	1	10		
15						
16						

REVERB3
Block: Reverb, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Reverb Time	0.3s – 30.0s	0	69	Table #1	
2	Diffusion	0 – 10	0	10		
3	Initial Delay	0.1ms – 200.0ms (*1) 0.1ms – 99.3ms (*2)	0 0	127 63	Table #2	
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 0	104 37	Table #4	
7	Height	0.5m – 30.2m (*1) 0.5m – 20.2m (*2)	0 0	104 73	Table #4	
8	Depth	0.5m – 30.2m	0	104	Table #4	
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 0	127 63	Table #2	
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 LCR
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
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	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 LR
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Lch Delay	0.1ms – 1638.3ms	1	16383		
2	Rch Delay	0.1ms – 1638.3ms	1	16383		
3	Feedback Delay 1	0.1ms – 1638.3ms	1	16383		
4	Feedback Delay 2	0.1ms – 1638.3ms	1	16383		
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		

ECHO
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Lch Delay1	0.1ms – 1486.0ms	1	14860		
2	Lch Feedback Level	-63 – 0 – +63	1	127		
3	Rch Delay1	0.1ms – 1486.0ms	1	14860		
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	1	14860		
7	Rch Delay2	0.1ms – 1486.0ms	1	14860		
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		

CROSS DELAY
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
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	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		

TEMPO DELAY
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	32nd/3 – 4thx6	0	19	Table #5	
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		

TEMPO CROSS DELAY
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time L>R	32nd/3 – 4thx6	0	19	Table #5	
2	Delay Time R>L	32nd/3 – 4thx6	0	19	Table #5	
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

KARAOKE
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	0.1ms – 400.0ms	0	127	Table #6	
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						

EARLY REFLECTION
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

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 #7	
3	Diffusion	0 – 10	0	10		
4	Initial Delay	0.1ms – 200.0ms	0	127	Table #2	
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						

GATE REVERB
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Type	TypeA, TypeB	0	1		
2	Room Size	0.1 – 20.0	0	127	Table #7	
3	Diffusion	0 – 10	0	10		
4	Initial Delay	0.1ms – 200.0ms	0	127	Table #2	
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
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #9	
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	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						

SYMPHONIC
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
2	LFO Depth	0 – 127	0	127		
3	Delay Offset	0.0ms – 50ms	0	127	Table #9	
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	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						
16						

ENSEMBLE DETUNE
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Detune	-50cent – 0cent – +50cent	14	114		
2	Lch Initial Delay	0.0ms – 50ms	0	127	Table #9	
3	Rch Initial Delay	0.0ms – 50ms	0	127	Table #9	
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						

AMBIENCE CHORUS
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
2	LFO PMod Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #9	
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		

AMBIENCE SYMPHONIC
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
2	LFO Depth	0 – 127	0	127		
3	Delay Offset	0.0ms – 50ms	0	127	Table #9	
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

FLANGER
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #9	
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	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	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15						
16						

VINTAGE FLANGER
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.040Hz – 10.00Hz	0	235	Table #10	●
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						

V FLANGER
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
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 #11	
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 #12	
15	Feedback High Damp	0.1 – 1.0	1	10		
16	Analog Feel	0 – 10	0	10		

TEMPO FLANGER
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	16th – 4thx16	5	29	Table #5	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #9	
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	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	LFO Phase Difference	-180deg – 0deg – +180deg	4	124		
15						
16						

DYNAMIC FLANGER
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 #13	
5	Release Time	2.6ms – 2171.4ms	0	127	Table #14	
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		

AMBIENCE FLANGER
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
2	LFO Depth	0 – 127	0	127		
3	Feedback Level	-63 – 0 – +63	1	127		
4	Delay Offset	0.0ms – 50ms	0	127	Table #9	
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->Flg, Flg->Amb	0	1		

PHASER

PHASER1
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
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	4	22		
12	Diffusion	Mono, Stereo	0	1		
13						
14						
15						
16						

PHASER2
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
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						

VINTAGE PHASER MONO
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.100Hz – 10.00Hz	0	252	Table #15	●
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						

(*) In the case of the following settings, Color is not effective. When Stage is set to 4, 6 or 8 at Mode = 1, and 4 or 10 at Mode = 2.

VINTAGE PHASER STEREO
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.100Hz – 10.00Hz	0	252	Table #15	●
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						

(*) In the case of the following settings, Color is not effective. When Stage is set to 4, 6 or 8 at Mode = 1, and 4 or 10 at Mode = 2.

TEMPO PHASER
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	16th – 4thx16	5	29	Table #5	
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						

DYNAMIC PHASER
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 #13	
5	Release Time	2.6ms – 2171.4ms	0	127	Table #14	
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		

DISTORTION/AMP SIMULATOR

V DISTORTION
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 Type	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						

V DIST TEMPO DELAY
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 Type	Flat, Stack, Combo, Twin, Radio, Megaphone	0	5		
4	Presence	0 – 20	0	20		
5	Output Level	0% – 100%	0	100		
6	Delay Time	32nd/3 – 4thx6	0	19	Table #5	
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						

STEREO AMP SIMULATOR
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

AMP SIMULATOR1
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

STEREO DISTORTION
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

AMP SIMULATOR2
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Drive	0 – 127	0	127		●
2	AMP Type	Off, Stack, Combo, Tube, Crunch, Hi-Gain, 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 DELAY
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

COMP DIST DELAY
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 #16	
12	Comp. Release	10ms – 680ms	0	15	Table #17	
13	Comp. Threshold	-48dB – -6dB	79	121		
14	Comp. Ratio	1.0 – 20.0	0	7	Table #18	
15						
16						

V DISTORTION DELAY
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 Type	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						

DIST TEMPO DELAY
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	32nd/3 – 4thx6	0	19	Table #5	
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						

COMP DISTORTION
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 #16	
13	Release	10ms – 680ms	0	15	Table #17	
14	Threshold	-48dB – -6dB	79	121		
15	Ratio	1.0 – 20.0	0	7	Table #18	
16						

COMP DIST TEMPO DELAY
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	32nd/3 – 4thx6	0	19	Table #5	
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 #16	
12	Comp. Release	10ms – 680ms	0	15	Table #17	
13	Comp. Threshold	-48dB – -6dB	79	121		
14	Comp. Ratio	1.0 – 20.0	0	7	Table #18	
15						
16						

MULTI FX
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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, Hi-Gain, 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	Speaker 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 #19	
13	Phaser SW	Off, Standard, Wide, Vibe, Tremolo	0	4		
14	Delay SW	Off, Delay M, Echo1 M, Echo2 M, Chorus M, Dl Chorus M, Flanger1 M, Flanger2 M, Flanger3 M, Delay St, Echo1 St, Echo2 St, Chorus St, Dl Chorus St, Flanger1 St, Flanger2 St, Flanger3 St	0	16		
15	Delay Ctrl	0 – 127	0	127		
16	Delay Time	0 – 127	0	127		

SMALL STEREO DIST
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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, Hi-Gain, 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	Speaker Type	Off, Stack, Twin, Tweed, Oldies, Modern, Mean, Soft, Small, Dip1, Dip2, Metal, Light	0	12		
12						
13						
14						
15						
16						

BRITISH COMBO

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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	Speaker 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	Speaker Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14						
15						
16						

BRITISH LEGEND

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 Volume	0.0 – 10.0	0	100		
9	Output	0 – 127	0	127		
10						•
11	Speaker 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	Speaker Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14						
15						
16						

US COMBO

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Gain Boost	Low, High	0	1		
2	Volume	0.0 – 10.0	0	100		•
3	Low Cut	0.0 – 10.0	0	100		
4	Mid Cut	0.0 – 10.0	0	100		
5	Mid Width	0.0 – 10.0	0	100		
6	Mid Sweep	0.0 – 10.0	0	100		
7	High Cut	0.0 – 10.0	0	100		
8	Balance	0.0 – 10.0	0	100		
9	Output	0 – 127	0	127		
10						
11	Speaker 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	Speaker Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14	Presence	0.0 – 10.0	0	100		
15						
16						

JAZZ COMBO

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Panning	0.0 – 10.0	0	100		
2	Volume	0.0 – 10.0	0	100		•
3	Distortion	Off, 0.1 – 10.0	0	100		
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	High Treble	0.0 – 10.0	0	100		
8						
9	Output	0 – 127	0	127		
10						
11	Speaker 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	Speaker Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14	Chorus	Off, Chorus, Vib	0	2		
15	Vib Speed	0.0 – 10.0	0	100		
16	Depth	0.0 – 10.0	0	100		

US HIGH GAIN

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Type	Raw1, Vintage1, Modern1, Raw2, Vintage2, Modern2	0	5		
2	Gain	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 Volume	0.0 – 10.0	0	100		•
9	Output	0 – 127	0	127		
10						
11	Speaker 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	Speaker Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14						
15						
16						

BRITISH LEAD

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Type	Crunch, Hi-Gain, Lead	0	2		
2	Preamp	0.0 – 10.0	0	100		
3	Tone Shift	Normal, Loose, Tight	0	2		
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 Volume	0.0 – 10.0	0	100		•
9	Output	0 – 127	0	127		
10						
11	Speaker 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	Speaker Air	0 – 2	0	2		
13	Mic Position	Center, Edge	0	1		
14						
15						
16						

PITCH CHANGE

PITCH CHANGE1

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Pitch	-24 – 0 – +24	40	88		
2	Initial Delay	0.1ms – 400.0ms	0	127	Table #6	
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 CHANGE2

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Pitch	-24 – 0 – +24	40	88		
2	Initial Delay	0.1ms – 400.0ms	0	127	Table #6	
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						

AUTO WAH

AUTO WAH

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
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						
13						
14						
15						
16						

VINTAGE AUTO WAH

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Speed	0.100Hz – 20.00Hz	0	254	Table #20	●
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						

AUTO WAH DISTORTION

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
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						

TEMPO AUTO WAH1

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	16th – 4thx16	5	29	Table #5	
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						
13						
14						
15						
16						

TEMPO AUTO WAH2

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	16th – 4thx16	5	29	Table #5	
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						

TOUCH WAH/PEDAL WAH

TOUCH WAH1

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

TOUCH WAH2

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 #21	

VINTAGE TOUCH WAH

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 DISTORTION DELAY

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 Frequency Offset	0 – 127	0	127		
13	Wah Resonance	1.0 – 12.0	10	120		
14	Wah Release	10ms – 680ms	52	67	Table #21	
15						
16						

WAH DIST TEMPO DELAY

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	32nd/3 – 4thx6	0	19	Table #5	
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 Frequency Offset	0 – 127	0	127		
13	Wah Resonance	1.0 – 12.0	10	120		
14	Wah Release	10ms – 680ms	52	67	Table #21	
15						
16						

VINTAGE PEDAL WAH

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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		

PEDAL WAH1

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						
13						
14						
15						
16						

PEDAL WAH2

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

COMPRESSOR/NOISE GATE

COMPRESSOR

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Attack	1ms – 40ms	0	19	Table #16	
2	Release	10ms – 680ms	0	15	Table #17	
3	Threshold	-48dB – -6dB	79	121		
4	Ratio	1.0 – 20.0	0	7	Table #18	
5	Output Level	0 – 127	0	127		
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

MULTI BAND COMP

Block: DSP1 (Variation), DSP2 – 9 (Insertion), Master (96 step)

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						

VINTAGE COMPRESSOR

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Input Level	-∞ – 0.00dB	0	200	Table #22	
2	Output Level	-∞ – 0.00dB	0	200	Table #22	
3	Ratio	2, 4, 8, 12, 20	0	4		
4	Attack	0.022ms – 50.40ms	0	200	Table #23	
5	Release	10.88ms – 544.22ms	0	200	Table #24	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

NOISE GATE

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Attack	1ms – 40ms	0	19	Table #16	
2	Release	10ms – 680ms	0	15	Table #17	
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 SPEAKER/AUTO PAN/TREMOLO

ROTARY SPEAKER1

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed Slow	0.00Hz – 2.65Hz	0	63	Table #8	
2	Horn Speed Slow	0.00Hz – 2.65Hz	0	63	Table #8	
3	Rotor Speed Fast	2.69Hz – 39.7Hz	64	127	Table #8	
4	Horn Speed Fast	2.69Hz – 39.7Hz	64	127	Table #8	
5	Slow-Fast Time of Rotor	0 – 127	0	127		
6	Slow-Fast Time of Horn	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 SPEAKER2

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
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	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						
16						

AUTO PAN1

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	●
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	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						
16						

TREMOLO

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	●
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	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	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15	Input Mode	Mono, Stereo	0	1		
16						

2WAY ROTARY SPEAKER

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0	127	Table #8	●
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 (resolution=3deg.)	0	60		
13						
14						
15						
16						

DIST ROTARY SPEAKER

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	●
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		

DIST 2WAY ROTARY SP

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0	127	Table #8	●
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		

AMP ROTARY SPEAKER

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	●
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		

AMP 2WAY ROTARY SP

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0	127	Table #8	●
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	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		

VIBE VIBRATE

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0	127	Table #8	
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	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	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15	Input Mode	Mono, Stereo	0	1		
16	Rotor SW	Off, On	0	1		●

TEMPO TREMOLO

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	16th – 4thx16	5	29	Table #5	●
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	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	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4	124		
15	Input Mode	Mono, Stereo	0	1		
16						

AUTO PAN2

Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	●
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						

TEMPO AUTO PAN1
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	16th – 4thx16	5	29	Table #5	●
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	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						
16						

TEMPO AUTO PAN2
Block: Chorus, DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	LFO Frequency	16th – 4thx16	5	29	Table #5	●
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

3BAND EQ
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

2BAND EQ
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

HARMONIC ENHANCER
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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

VOICE CANCELAR
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

AMBIENCE
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Delay Time	0.0ms – 50ms	0	127	Table #9	
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						

TALKING MODULATION
Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

LO FI

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	Sampling Frequency Control	44.1kHz – 345Hz	0	127	Table #25	●
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						

DYNAMIC FILTER

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 #13	
6	Release Time	2.6ms – 2171.4ms	0	127	Table #14	
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		

DYNAMIC RING MOD

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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 #13	
5	Release Time	2.6ms – 2171.4ms	0	127	Table #14	
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		

RING MODULATOR

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

No.	Parameter	Display	Min	Max	Table	Control
1	OSC Frequency Coarse	0.7Hz – 5002.6kHz	0	127	Table #26	●
2	OSC Frequency Fine	0 – 127	0	127		
3	LFO Wave	Triangle, Sine	0	1		
4	LFO Depth	0 – 127	0	127		
5	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8	
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		

ISOLATOR

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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						

NO EFFECT

Block: Reverb, Chorus, DSP1 (Variation)

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

THRU

Block: DSP1 (Variation), DSP2 – 9 (Insertion)

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

Effect Data Assign Table / Effektdaten-Zuordnungstabelle / Tableau d'assignation des données d'effets / Tabla de asignación de datos para efectos

Table #1
Reverb Time [s]

Data	Value	Data	Value	Data	Value
0	0.3	32	3.5	64	17.0
1	0.4	33	3.6	65	18.0
2	0.5	34	3.7	66	19.0
3	0.6	35	3.8	67	20.0
4	0.7	36	3.9	68	25.0
5	0.8	37	4.0	69	30.0
6	0.9	38	4.1		
7	1.0	39	4.2		
8	1.1	40	4.3		
9	1.2	41	4.4		
10	1.3	42	4.5		
11	1.4	43	4.6		
12	1.5	44	4.7		
13	1.6	45	4.8		
14	1.7	46	4.9		
15	1.8	47	5.0		
16	1.9	48	5.5		
17	2.0	49	6.0		
18	2.1	50	6.5		
19	2.2	51	7.0		
20	2.3	52	7.5		
21	2.4	53	8.0		
22	2.5	54	8.5		
23	2.6	55	9.0		
24	2.7	56	9.5		
25	2.8	57	10.0		
26	2.9	58	11.0		
27	3.0	59	12.0		
28	3.1	60	13.0		
29	3.2	61	14.0		
30	3.3	62	15.0		
31	3.4	63	16.0		

Table #2
Delay Time (0.1 – 200.0 [ms])

Data	Value	Data	Value	Data	Value	Data	Value
0	0.1	32	50.5	64	100.8	96	151.2
1	1.7	33	52.0	65	102.4	97	152.8
2	3.2	34	53.6	66	104.0	98	154.4
3	4.8	35	55.2	67	105.6	99	155.9
4	6.4	36	56.8	68	107.1	100	157.5
5	8.0	37	58.3	69	108.7	101	159.1
6	9.5	38	59.9	70	110.3	102	160.6
7	11.1	39	61.5	71	111.9	103	162.2
8	12.7	40	63.1	72	113.4	104	163.8
9	14.3	41	64.6	73	115.0	105	165.4
10	15.8	42	66.2	74	116.6	106	166.9
11	17.4	43	67.8	75	118.2	107	168.5
12	19.0	44	69.4	76	119.7	108	170.1
13	20.6	45	70.9	77	121.3	109	171.7
14	22.1	46	72.5	78	122.9	110	173.2
15	23.7	47	74.1	79	124.4	111	174.8
16	25.3	48	75.7	80	126.0	112	176.4
17	26.9	49	77.2	81	127.6	113	178.0
18	28.4	50	78.8	82	129.2	114	179.5
19	30.0	51	80.4	83	130.7	115	181.1
20	31.6	52	81.9	84	132.3	116	182.7
21	33.2	53	83.5	85	133.9	117	184.3
22	34.7	54	85.1	86	135.5	118	185.8
23	36.3	55	86.7	87	137.0	119	187.4
24	37.9	56	88.2	88	138.6	120	189.0
25	39.5	57	89.8	89	140.2	121	190.6
26	41.0	58	91.4	90	141.8	122	192.1
27	42.6	59	93.0	91	143.3	123	193.7
28	44.2	60	94.5	92	144.9	124	195.3
29	45.7	61	96.1	93	146.5	125	196.9
30	47.3	62	97.7	94	148.1	126	198.4
31	48.9	63	99.3	95	149.6	127	200.0

Table #3
EQ Frequency [Hz]

Data	Value	Data	Value
0	THRU (20)	32	800
1	22	33	900
2	25	34	1.0k
3	28	35	1.1k
4	32	36	1.2k
5	36	37	1.4k
6	40	38	1.6k
7	45	39	1.8k
8	50	40	2.0k
9	56	41	2.2k
10	63	42	2.5k
11	70	43	2.8k
12	80	44	3.2k
13	90	45	3.6k
14	100	46	4.0k
15	110	47	4.5k
16	125	48	5.0k
17	140	49	5.6k
18	160	50	6.3k
19	180	51	7.0k
20	200	52	8.0k
21	225	53	9.0k
22	250	54	10.0k
23	280	55	11.0k
24	315	56	12.0k
25	355	57	14.0k
26	400	58	16.0k
27	450	59	18.0k
28	500	60	THRU (20.0k)
29	560		
30	630		
31	700		

Table #4
Reverb Width; Depth; Height [m]

Data	Value	Data	Value	Data	Value	Data	Value
0	0.5	32	8.8	64	17.6	96	27.5
1	0.8	33	9.1	65	17.9	97	27.8
2	1.0	34	9.4	66	18.2	98	28.1
3	1.3	35	9.6	67	18.5	99	28.5
4	1.5	36	9.9	68	18.8	100	28.8
5	1.8	37	10.2	69	19.1	101	29.2
6	2.0	38	10.4	70	19.4	102	29.5
7	2.3	39	10.7	71	19.7	103	29.9
8	2.6	40	11.0	72	20.0	104	30.2
9	2.8	41	11.2	73	20.2		
10	3.1	42	11.5	74	20.5		
11	3.3	43	11.8	75	20.8		
12	3.6	44	12.1	76	21.1		
13	3.9	45	12.3	77	21.4		
14	4.1	46	12.6	78	21.7		
15	4.4	47	12.9	79	22.0		
16	4.6	48	13.1	80	22.4		
17	4.9	49	13.4	81	22.7		
18	5.2	50	13.7	82	23.0		
19	5.4	51	14.0	83	23.3		
20	5.7	52	14.2	84	23.6		
21	5.9	53	14.5	85	23.9		
22	6.2	54	14.8	86	24.2		
23	6.5	55	15.1	87	24.5		
24	6.7	56	15.4	88	24.9		
25	7.0	57	15.6	89	25.2		
26	7.2	58	15.9	90	25.5		
27	7.5	59	16.2	91	25.8		
28	7.8	60	16.5	92	26.1		
29	8.0	61	16.8	93	26.5		
30	8.3	62	17.1	94	26.8		
31	8.6	63	17.3	95	27.1		

Table #5
Tempo

Data	Value	Data	Value	Data	Value
0	32nd/3	32	4thX19	64	4thX51
1	64th.	33	4thX20	65	4thX52
2	32nd	34	4thX21	66	4thX53
3	16th/3	35	4thX22	67	4thX54
4	32nd.	36	4thX23	68	4thX55
5	16th	37	4thX24	69	4thX56
6	8th/3	38	4thX25	70	4thX57
7	16th.	39	4thX26	71	4thX58
8	8th	40	4thX27	72	4thX59
9	4th/3	41	4thX28	73	4thX60
10	8th.	42	4thX29	74	4thX61
11	4th	43	4thX30	75	4thX62
12	2nd/3	44	4thX31	76	4thX63
13	4th.	45	4thX32	77	4thX64
14	2nd	46	4thX33		
15	Whole/3	47	4thX34		
16	2nd.	48	4thX35		
17	4thX4	49	4thX36		
18	4thX5	50	4thX37		
19	4thX6	51	4thX38		
20	4thX7	52	4thX39		
21	4thX8	53	4thX40		
22	4thX9	54	4thX41		
23	4thX10	55	4thX42		
24	4thX11	56	4thX43		
25	4thX12	57	4thX44		
26	4thX13	58	4thX45		
27	4thX14	59	4thX46		
28	4thX15	60	4thX47		
29	4thX16	61	4thX48		
30	4thX17	62	4thX49		
31	4thX18	63	4thX50		

Table #6
Delay Time (0.1 – 400.0 [ms])

Data	Value	Data	Value	Data	Value	Data	Value
0	0.1	32	100.9	64	201.6	96	302.4
1	3.2	33	104.0	65	204.8	97	305.5
2	6.4	34	107.2	66	207.9	98	308.7
3	9.5	35	110.3	67	211.1	99	311.8
4	12.7	36	113.5	68	214.2	100	315.0
5	15.8	37	116.6	69	217.4	101	318.1
6	19.0	38	119.8	70	220.5	102	321.3
7	22.1	39	122.9	71	223.7	103	324.4
8	25.3	40	126.1	72	226.8	104	327.6
9	28.4	41	129.2	73	230.0	105	330.7
10	31.6	42	132.4	74	233.1	106	333.9
11	34.7	43	135.5	75	236.3	107	337.0
12	37.9	44	138.6	76	239.4	108	340.2
13	41.0	45	141.8	77	242.6	109	343.3
14	44.2	46	144.9	78	245.7	110	346.5
15	47.3	47	148.1	79	248.9	111	349.6
16	50.5	48	151.2	80	252.0	112	352.8
17	53.6	49	154.4	81	255.2	113	355.9
18	56.8	50	157.5	82	258.3	114	359.1
19	59.9	51	160.7	83	261.5	115	362.2
20	63.1	52	163.8	84	264.6	116	365.4
21	66.2	53	167.0	85	267.7	117	368.5
22	69.4	54	170.1	86	270.9	118	371.7
23	72.5	55	173.3	87	274.0	119	374.8
24	75.7	56	176.4	88	277.2	120	378.0
25	78.8	57	179.6	89	280.3	121	381.1
26	82.0	58	182.7	90	283.5	122	384.3
27	85.1	59	185.9	91	286.6	123	387.4
28	88.3	60	189.0	92	289.8	124	390.6
29	91.4	61	192.2	93	292.9	125	393.7
30	94.6	62	195.3	94	296.1	126	396.9
31	97.7	63	198.5	95	299.2	127	400.0

Table #7
Room Size

Data	Value	Data	Value	Data	Value	Data	Value
0	0.1	32	5.1	64	10.1	96	15.1
1	0.3	33	5.3	65	10.3	97	15.3
2	0.4	34	5.4	66	10.4	98	15.5
3	0.6	35	5.6	67	10.6	99	15.6
4	0.7	36	5.7	68	10.8	100	15.8
5	0.9	37	5.9	69	10.9	101	15.9
6	1.0	38	6.1	70	11.1	102	16.1
7	1.2	39	6.2	71	11.2	103	16.2
8	1.4	40	6.4	72	11.4	104	16.4
9	1.5	41	6.5	73	11.5	105	16.6
10	1.7	42	6.7	74	11.7	106	16.7
11	1.8	43	6.8	75	11.9	107	16.9
12	2.0	44	7.0	76	12.0	108	17.0
13	2.1	45	7.2	77	12.2	109	17.2
14	2.3	46	7.3	78	12.3	110	17.3
15	2.5	47	7.5	79	12.5	111	17.5
16	2.6	48	7.6	80	12.6	112	17.6
17	2.8	49	7.8	81	12.8	113	17.8
18	2.9	50	7.9	82	12.9	114	18.0
19	3.1	51	8.1	83	13.1	115	18.1
20	3.2	52	8.2	84	13.3	116	18.3
21	3.4	53	8.4	85	13.4	117	18.4
22	3.5	54	8.6	86	13.6	118	18.6
23	3.7	55	8.7	87	13.7	119	18.7
24	3.9	56	8.9	88	13.9	120	18.9
25	4.0	57	9.0	89	14.0	121	19.1
26	4.2	58	9.2	90	14.2	122	19.2
27	4.3	59	9.3	91	14.4	123	19.4
28	4.5	60	9.5	92	14.5	124	19.5
29	4.6	61	9.7	93	14.7	125	19.7
30	4.8	62	9.8	94	14.8	126	19.8
31	5.0	63	10.0	95	15.0	127	20.0

Table #8
LFO Frequency [Hz]

Data	Value	Data	Value	Data	Value	Data	Value
0	0.00	32	1.35	64	2.69	96	8.41
1	0.04	33	1.39	65	2.78	97	8.75
2	0.08	34	1.43	66	2.86	98	9.08
3	0.13	35	1.47	67	2.94	99	9.42
4	0.17	36	1.51	68	3.03	100	9.76
5	0.21	37	1.56	69	3.11	101	10.1
6	0.25	38	1.60	70	3.20	102	10.8
7	0.29	39	1.64	71	3.28	103	11.4
8	0.34	40	1.68	72	3.37	104	12.1
9	0.38	41	1.72	73	3.45	105	12.8
10	0.42	42	1.77	74	3.53	106	13.5
11	0.46	43	1.81	75	3.62	107	14.1
12	0.51	44	1.85	76	3.70	108	14.8
13	0.55	45	1.89	77	3.87	109	15.5
14	0.59	46	1.94	78	4.04	110	16.2
15	0.63	47	1.98	79	4.21	111	16.8
16	0.67	48	2.02	80	4.37	112	17.5
17	0.72	49	2.06	81	4.54	113	18.2
18	0.76	50	2.10	82	4.71	114	19.5
19	0.80	51	2.15	83	4.88	115	20.9
20	0.84	52	2.19	84	5.05	116	22.2
21	0.88	53	2.23	85	5.22	117	23.6
22	0.93	54	2.27	86	5.38	118	24.9
23	0.97	55	2.31	87	5.55	119	26.2
24	1.01	56	2.36	88	5.72	120	27.6
25	1.05	57	2.40	89	6.06	121	28.9
26	1.09	58	2.44	90	6.39	122	30.3
27	1.14	59	2.48	91	6.73	123	31.6
28	1.18	60	2.52	92	7.07	124	33.0
29	1.22	61	2.57	93	7.40	125	34.3
30	1.26	62	2.61	94	7.74	126	37.0
31	1.30	63	2.65	95	8.08	127	39.7

Table #9
Modulation Delay Offset [ms]

Data	Value	Data	Value	Data	Value	Data	Value
0	0.0	32	3.2	64	6.4	96	9.6
1	0.1	33	3.3	65	6.5	97	9.7
2	0.2	34	3.4	66	6.6	98	9.8
3	0.3	35	3.5	67	6.7	99	9.9
4	0.4	36	3.6	68	6.8	100	10.0
5	0.5	37	3.7	69	6.9	101	11.1
6	0.6	38	3.8	70	7.0	102	12.2
7	0.7	39	3.9	71	7.1	103	13.3
8	0.8	40	4.0	72	7.2	104	14.4
9	0.9	41	4.1	73	7.3	105	15.5
10	1.0	42	4.2	74	7.4	106	17.1
11	1.1	43	4.3	75	7.5	107	18.6
12	1.2	44	4.4	76	7.6	108	20.2
13	1.3	45	4.5	77	7.7	109	21.8
14	1.4	46	4.6	78	7.8	110	23.3
15	1.5	47	4.7	79	7.9	111	24.9
16	1.6	48	4.8	80	8.0	112	26.5
17	1.7	49	4.9	81	8.1	113	28.0
18	1.8	50	5.0	82	8.2	114	29.6
19	1.9	51	5.1	83	8.3	115	31.2
20	2.0	52	5.2	84	8.4	116	32.8
21	2.1	53	5.3	85	8.5	117	34.3
22	2.2	54	5.4	86	8.6	118	35.9
23	2.3	55	5.5	87	8.7	119	37.5
24	2.4	56	5.6	88	8.8	120	39.0
25	2.5	57	5.7	89	8.9	121	40.6
26	2.6	58	5.8	90	9.0	122	42.2
27	2.7	59	5.9	91	9.1	123	43.7
28	2.8	60	6.0	92	9.2	124	45.3
29	2.9	61	6.1	93	9.3	125	46.9
30	3.0	62	6.2	94	9.4	126	48.4
31	3.1	63	6.3	95	9.5	127	50.0

Table #10
VCM Flanger Speed [Hz]

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	10.00
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 #11
V-Flanger Delay Offset [ms]

Data	Value	Data	Value	Data	Value
0	0.09	64	4.72	128	31.38
1	0.11	65	4.96	129	31.82
2	0.13	66	5.21	130	32.25
3	0.15	67	5.47	131	32.69
4	0.18	68	5.75	132	33.13
5	0.20	69	6.04	133	33.57
6	0.22	70	6.35	134	34.01
7	0.24	71	6.67	135	34.45
8	0.27	72	7.01	136	34.89
9	0.29	73	7.37	137	35.33
10	0.31	74	7.74	138	35.77
11	0.34	75	8.13	139	36.21
12	0.36	76	8.54		
13	0.38	77	8.97		
14	0.40	78	9.41		
15	0.42	79	9.85		
16	0.43	80	10.29		
17	0.46	81	10.73		
18	0.48	82	11.17		
19	0.51	83	11.61		
20	0.53	84	12.05		
21	0.56	85	12.49		
22	0.59	86	12.93		
23	0.62	87	13.37		
24	0.65	88	13.81		
25	0.68	89	14.24		
26	0.72	90	14.68		
27	0.76	91	15.12		
28	0.79	92	15.56		
29	0.83	93	16.00		
30	0.88	94	16.44		
31	0.92	95	16.88		
32	0.97	96	17.32		
33	1.02	97	17.76		
34	1.07	98	18.20		
35	1.12	99	18.64		
36	1.18	100	19.08		
37	1.24	101	19.52		
38	1.30	102	19.96		
39	1.37	103	20.40		
40	1.44	104	20.83		
41	1.51	105	21.27		
42	1.59	106	21.71		
43	1.67	107	22.15		
44	1.76	108	22.59		
45	1.84	109	23.03		
46	1.94	110	23.47		
47	2.04	111	23.91		
48	2.14	112	24.35		
49	2.25	113	24.79		
50	2.36	114	25.23		
51	2.48	115	25.66		
52	2.61	116	26.10		
53	2.74	117	26.54		
54	2.88	118	26.98		
55	3.03	119	27.42		
56	3.18	120	27.86		
57	3.34	121	28.30		
58	3.51	122	28.74		
59	3.69	123	29.18		
60	3.87	124	29.62		
61	4.07	125	30.06		
62	4.28	126	30.50		
63	4.49	127	30.94		

Table #12
V-Flanger Modulation Phase [deg]

Data	Value
0	-180
1	-158
2	-135
3	-113
4	-90
5	-68
6	-45
7	-23
8	0
9	23
10	45
11	68
12	90
13	113
14	135
15	158
16	180

Table #13
Dyna Attack Time [ms]

Data	Value	Data	Value	Data	Value	Data	Value
0	0.3	32	54.0	64	112	96	170
1	0.9	33	56.0	65	114	97	172
2	1.8	34	58.0	66	116	98	174
3	2.7	35	60.0	67	118	99	176
4	3.6	36	61.0	68	120	100	178
5	5.4	37	63.0	69	121	101	180
6	7.2	38	65.0	70	123	102	181
7	9.0	39	67.0	71	125	103	183
8	10.0	40	69.0	72	127	104	185
9	12.0	41	70.0	73	129	105	187
10	14.0	42	72.0	74	130	106	189
11	16.0	43	74.0	75	132	107	190
12	18.0	44	76.0	76	134	108	192
13	20.0	45	78.0	77	136	109	194
14	21.0	46	80.0	78	138	110	196
15	23.0	47	81.0	79	140	111	198
16	25.0	48	83.0	80	141	112	200
17	27.0	49	85.0	81	143	113	201
18	29.0	50	87.0	82	145	114	203
19	30.0	51	89.0	83	147	115	205
20	32.0	52	90.0	84	149	116	207
21	34.0	53	92.0	85	150	117	209
22	36.0	54	94.0	86	152	118	210
23	38.0	55	96.0	87	154	119	212
24	40.0	56	98.0	88	156	120	214
25	41.0	57	100.0	89	158	121	216
26	43.0	58	101.0	90	160	122	218
27	45.0	59	103.0	91	161	123	220
28	47.0	60	105.0	92	163	124	221
29	49.0	61	107.0	93	165	125	223
30	50.0	62	109.0	94	167	126	225
31	52.0	63	110.0	95	169	127	227

Table #14
Dyna Release Time [ms]

Data	Value	Data	Value	Data	Value	Data	Value
0	2.6	32	86.8	64	369.1	96	1064.0
1	3.0	33	91.2	65	390.8	97	1085.7
2	3.4	34	95.5	66	412.5	98	1107.4
3	3.9	35	99.8	67	434.2	99	1129.1
4	4.3	36	104.2	68	456.0	100	1150.8
5	4.7	37	108.5	69	477.7	101	1172.5
6	5.2	38	112.9	70	499.4	102	1194.3
7	5.6	39	117.2	71	521.1	103	1216.0
8	6.0	40	121.6	72	542.8	104	1237.7
9	6.5	41	125.9	73	564.5	105	1259.4
10	6.9	42	130.2	74	586.2	106	1281.1
11	7.3	43	134.6	75	608.0	107	1302.8
12	7.8	44	138.9	76	629.7	108	1346.3
13	8.2	45	143.3	77	651.4	109	1389.7
14	8.6	46	147.6	78	673.1	110	1433.1
15	13.0	47	152.0	79	694.8	111	1476.6
16	17.3	48	156.3	80	716.5	112	1520.0
17	21.7	49	160.6	81	738.3	113	1563.4
18	26.0	50	165.0	82	760.0	114	1606.8
19	30.4	51	169.3	83	781.7	115	1650.3
20	34.7	52	173.7	84	803.4	116	1693.7
21	39.0	53	178.0	85	825.1	117	1737.1
22	43.4	54	182.4	86	846.8	118	1780.6
23	47.7	55	186.7	87	868.5	119	1824.0
24	52.1	56	195.4	88	890.3	120	1867.4
25	56.4	57	217.1	89	912.0	121	1910.8
26	60.8	58	238.8	90	933.7	122	1954.3
27	65.1	59	260.5	91	955.4	123	1997.7
28	69.4	60	282.2	92	977.1	124	2041.1
29	73.8	61	304.0	93	998.8	125	2084.6
30	78.1	62	325.7	94	1020.5	126	2128.0
31	82.5	63	347.4	95	1042.3	127	2171.4

Table #15
VCM Phaser Speed [Hz]

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	4.206
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	6.393
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	10.00
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 #16
Compressor Attack Time [ms]

Data	Value
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	12
11	14
12	16
13	18
14	20
15	23
16	26
17	30
18	35
19	40

Table #17
Compressor Release Time [ms]

Data	Value
0	10
1	15
2	25
3	35
4	45
5	55
6	65
7	75
8	85
9	100
10	115
11	140
12	170
13	230
14	340
15	680

Table #18
Compressor Ratio

Data	Value
0	1.0
1	1.5
2	2.0
3	3.0
4	5.0
5	7.0
6	10.0
7	20.0

Table #19
EgMultiFx LFO Freq [Hz]

Data	Value	Data	Value
0	0.100	64	1.009
1	0.103	65	1.051
2	0.105	66	1.093
3	0.110	67	1.125
4	0.113	68	1.167
5	0.118	69	1.22
6	0.124	70	1.262
7	0.129	71	1.304
8	0.131	72	1.346
9	0.137	73	1.409
10	0.142	74	1.451
11	0.147	75	1.514
12	0.152	76	1.556
13	0.158	77	1.619
14	0.166	78	1.682
15	0.171	79	1.745
16	0.176	80	1.808
17	0.184	81	1.872
18	0.192	82	1.956
19	0.197	83	2.019
20	0.205	84	2.103
21	0.213	85	2.166
22	0.221	86	2.25
23	0.229	87	2.334
24	0.237	88	2.418
25	0.247	89	2.502
26	0.255	90	2.608
27	0.265	91	2.692
28	0.276	92	2.776
29	0.284	93	2.902
30	0.294	94	2.986
31	0.308	95	3.112
32	0.318	96	3.238
33	0.329	97	3.365
34	0.342	98	3.491
35	0.352	99	3.617
36	0.368	100	3.743
37	0.379	101	3.869
38	0.394	102	4.037
39	0.410	103	4.164
40	0.426	104	4.332
41	0.442	105	4.500
42	0.457	106	4.668
43	0.473	107	4.837
44	0.489	108	5.005
45	0.51	109	5.173
46	0.526	110	5.383
47	0.547	111	5.552
48	0.568	112	5.804
49	0.589	113	5.972
50	0.61	114	6.224
51	0.631	115	6.393
52	0.657	116	6.645
53	0.673	117	6.897
54	0.704	118	7.15
55	0.725	119	7.402
56	0.757	120	7.738
57	0.789	121	7.991
58	0.81	122	8.327
59	0.841	123	8.58
60	0.873	124	8.916
61	0.904	125	9.253
62	0.946	126	9.589
63	0.978	127	9.925

Table #20
VCM Wah Speed [Hz]

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	221	10.09
30	0.189	126	1.409	222	10.26
31	0.195	127	1.430	223	10.51
32	0.200	128	1.451	224	10.77
33	0.202	129	1.493	225	10.93
34	0.208	130	1.514	226	11.10
35	0.210	131	1.556	227	11.44
36	0.216	132	1.598	228	11.61
37	0.221	133	1.619	229	11.94
38	0.226	134	1.661	230	12.11
39	0.231	135	1.703	231	12.45
40	0.234	136	1.724	232	12.62
41	0.239	137	1.766	233	12.95
42	0.244	138	1.808	234	13.29
43	0.250	139	1.851	235	13.46
44	0.255	140	1.872	236	13.79
45	0.260	141	1.914	237	13.96
46	0.265	142	1.956	238	14.30
47	0.271	143	1.999	239	14.64
48	0.276	144	2.040	240	14.97
49	0.284	145	2.082	241	15.31
50	0.289	146	2.124	242	15.65
51	0.294	147	2.166	243	15.98
52	0.302	148	2.229	244	16.32
53	0.308	149	2.250	245	16.65
54	0.315	150	2.313	246	16.99
55	0.321	151	2.355	247	17.33
56	0.326	152	2.397	248	17.66
57	0.334	153	2.460	249	18.00
58	0.342	154	2.502	250	18.34
59	0.347	155	2.566	251	18.84
60	0.357	156	2.608	252	19.18
61	0.363	157	2.671	253	19.51
62	0.368	158	2.734	254	20.00
63	0.379	159	2.776		
64	0.384	160	2.818		
65	0.394	161	2.902		
66	0.405	162	2.944		
67	0.410	163	3.028		
68	0.421	164	3.070		
69	0.426	165	3.154		
70	0.436	166	3.196		
71	0.447	167	3.280		
72	0.457	168	3.336		
73	0.463	169	3.407		
74	0.473	170	3.491		
75	0.484	171	3.575		
76	0.494	172	3.659		
77	0.505	173	3.701		
78	0.515	174	3.785		
79	0.526	175	3.869		
80	0.536	176	3.953		
81	0.547	177	4.037		
82	0.563	178	4.122		
83	0.573	179	4.206		
84	0.584	180	4.290		
85	0.599	181	4.374		
86	0.610	182	4.500		
87	0.620	183	4.584		
88	0.636	184	4.668		
89	0.652	185	4.795		
90	0.662	186	4.879		
91	0.673	187	4.963		
92	0.694	188	5.090		
93	0.704	189	5.173		
94	0.725	190	5.299		
95	0.736	191	5.383		

Table #21
Wah Release Time [ms]

Data	Value
52	10
53	15
54	25
55	35
56	45
57	55
58	65
59	75
60	85
61	100
62	115
63	140
64	170
65	230
66	340
67	680

Table #22
VCM Comp Level [dB]

Data	Value	Data	Value	Data	Value
0	-∞	96	-19.13	192	-1.06
1	-138.0	97	-18.86	193	-0.93
2	-120.0	98	-18.59	194	-0.79
3	-109.4	99	-18.32	195	-0.66
4	-101.9	100	-18.06	196	-0.53
5	-96.12	101	-17.80	197	-0.39
6	-91.37	102	-17.55	198	-0.26
7	-87.36	103	-17.29	199	-0.13
8	-83.88	104	-17.04	200	0.00
9	-80.81	105	-16.79		
10	-78.06	106	-16.54		
11	-75.58	107	-16.30		
12	-73.31	108	-16.06		
13	-71.23	109	-15.82		
14	-69.29	110	-15.58		
15	-67.50	111	-15.34		
16	-65.81	112	-15.11		
17	-64.23	113	-14.88		
18	-62.75	114	-14.65		
19	-61.34	115	-14.42		
20	-60.00	116	-14.19		
21	-58.73	117	-13.97		
22	-57.52	118	-13.75		
23	-56.36	119	-13.53		
24	-55.25	120	-13.31		
25	-54.19	121	-13.09		
26	-53.16	122	-12.88		
27	-52.18	123	-12.67		
28	-51.23	124	-12.46		
29	-50.32	125	-12.25		
30	-49.43	126	-12.04		
31	-48.58	127	-11.83		
32	-47.75	128	-11.63		
33	-46.95	129	-11.43		
34	-46.17	130	-11.23		
35	-45.42	131	-11.03		
36	-44.68	132	-10.83		
37	-43.97	133	-10.63		
38	-43.27	134	-10.44		
39	-42.60	135	-10.24		
40	-41.94	136	-10.05		
41	-41.29	137	-9.86		
42	-40.67	138	-9.67		
43	-40.05	139	-9.48		
44	-39.45	140	-9.29		
45	-38.87	141	-9.11		
46	-38.30	142	-8.92		
47	-37.74	143	-8.74		
48	-37.19	144	-8.56		
49	-36.65	145	-8.38		
50	-36.12	146	-8.20		
51	-35.61	147	-8.02		
52	-35.10	148	-7.85		
53	-34.61	149	-7.67		
54	-34.12	150	-7.50		
55	-33.64	151	-7.32		
56	-33.17	152	-7.15		
57	-32.71	153	-6.98		
58	-32.26	154	-6.81		
59	-31.81	155	-6.64		
60	-31.37	156	-6.47		
61	-30.94	157	-6.31		
62	-30.52	158	-6.14		
63	-30.10	159	-5.98		
64	-29.69	160	-5.81		
65	-29.29	161	-5.65		
66	-28.89	162	-5.49		
67	-28.50	163	-5.33		
68	-28.11	164	-5.17		
69	-27.73	165	-5.01		
70	-27.36	166	-4.86		
71	-26.99	167	-4.70		
72	-26.62	168	-4.54		
73	-26.26	169	-4.39		
74	-25.91	170	-4.23		
75	-25.56	171	-4.08		
76	-25.21	172	-3.93		
77	-24.87	173	-3.78		
78	-24.54	174	-3.63		
79	-24.20	175	-3.48		
80	-23.88	176	-3.33		
81	-23.55	177	-3.18		
82	-23.23	178	-3.04		
83	-22.92	179	-2.89		
84	-22.61	180	-2.75		
85	-22.30	181	-2.60		
86	-21.99	182	-2.46		
87	-21.69	183	-2.31		
88	-21.39	184	-2.17		
89	-21.10	185	-2.03		
90	-20.81	186	-1.89		
91	-20.52	187	-1.75		
92	-20.23	188	-1.61		
93	-19.95	189	-1.47		
94	-19.67	190	-1.34		
95	-19.40	191	-1.20		

Table #23
VCM Comp Attack Time [ms]

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

Table #24
VCM Comp Release Time [ms]

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

Table #25
LO-FI Sampling Frequency Control [Hz]

Data	Value	Data	Value
0	44.1k	64	678.0
1	22.1k	65	668.0
2	14.7k	66	658.0
3	11.0k	67	649.0
4	8.8k	68	639.0
5	7.4k	69	630.0
6	6.3k	70	621.0
7	5.5k	71	613.0
8	4.9k	72	604.0
9	4.4k	73	596.0
10	4.0k	74	588.0
11	3.7k	75	580.0
12	3.4k	76	573.0
13	3.2k	77	565.0
14	2.9k	78	558.0
15	2.8k	79	551.0
16	2.6k	80	544.0
17	2.5k	81	538.0
18	2.3k	82	531.0
19	2.2k	83	525.0
20	2.1k	84	519.0
21	2.0k	85	513.0
22	1.92k	86	507.0
23	1.84k	87	501.0
24	1.76k	88	496.0
25	1.70k	89	490.0
26	1.63k	90	485.0
27	1.58k	91	479.0
28	1.52k	92	474.0
29	1.47k	93	469.0
30	1.42k	94	464.0
31	1.38k	95	459.0
32	1.34k	96	455.0
33	1.30k	97	450.0
34	1.26k	98	445.0
35	1.23k	99	441.0
36	1.19k	100	437.0
37	1.16k	101	432.0
38	1.13k	102	428.0
39	1.10k	103	424.0
40	1.08k	104	420.0
41	1.05k		
42	1.03k		
43	1.00k		
44	980.0		
45	959.0		
46	938.0		
47	919.0		
48	900.0		
49	882.0		
50	865.0		
51	848.0		
52	832.0		
53	817.0		
54	802.0		
55	788.0		
56	774.0		
57	760.0		
58	747.0		
59	735.0		
60	723.0		
61	711.0		
62	700.0		
63	689.0		

Table #26
Ring Mod OSC Freq Coarse [Hz]

Data	Value	Data	Value
0	0.7	64	151.4
1	1.3	65	160.2
2	2.0	66	169.6
3	2.7	67	179.0
4	3.4	68	189.1
5	4.0	69	199.9
6	4.7	70	211.3
7	5.4	71	223.4
8	6.1	72	236.2
9	6.7	73	249.7
10	7.4	74	263.8
11	8.1	75	279.3
12	8.7	76	294.7
13	9.4	77	311.6
14	10.1	78	329.7
15	10.8	79	348.6
16	11.4	80	368.1
17	12.1	81	389.6
18	12.8	82	411.8
19	13.5	83	435.4
20	14.1	84	459.6
21	14.8	85	485.9
22	15.5	86	514.1
23	16.2	87	543.1
24	16.8	88	574.0
25	17.5	89	607.0
26	18.2	90	642.0
27	19.5	91	678.3
28	20.9	92	717.3
29	21.5	93	757.7
30	22.9	94	801.5
31	24.2	95	847.2
32	25.6	96	895.0
33	26.9	97	946.1
34	28.9	98	1000.7
35	30.3	99	1057.2
36	32.3	100	1117.7
37	33.6	101	1181.7
38	35.7	102	1249.0
39	37.7	103	1320.3
40	39.7	104	1395.7
41	42.4	105	1475.1
42	44.4	106	1559.2
43	47.1	107	1648.7
44	49.8	108	1742.9
45	52.5	109	1841.8
46	55.9	110	1947.5
47	59.2	111	2058.5
48	62.6	112	2175.6
49	65.9	113	2300.1
50	70.0	114	2431.3
51	73.3	115	2569.9
52	78.1	116	2716.6
53	82.1	117	2871.4
54	86.8	118	3035.6
55	92.2	119	3208.5
56	96.9	120	3391.6
57	103.0	121	3585.4
58	108.3	122	3790.0
59	115.1	123	4006.6
60	121.1	124	4234.8
61	128.5	125	4477.0
62	135.9	126	4732.1
63	143.3	127	5002.6

Chordal Type List

Type Name	Description
2Abv&1Blw.Simple	Harmony based on 3-tone chord, 2 above and 1 below; suitable for backing chorus parts. Basically it generates harmonies within an octave.
1Abv&2Blw.Simple	Harmony based on 3-tone chord, 1 above and 2 below; suitable for backing chorus parts. Basically it generates harmonies within an octave.
1Abv&2Blw.Open	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Basically it generates open harmonies of an octave or more.
1Abv&2Blw.OpenPara	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Basically it generates open harmonies of an octave or more. It includes the effect of creating parallel motion of a half tone in certain conditions.
1Abv&2Blw.OpenBlues	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Basically it generates open harmonies of an octave or more. Since it adds a major second as a scale tone to harmony during 7th chords, it provides a passing tone during 7th chords. Suitable for 3-tone chord blues or for country rock in major keys. There are cases where it is not suitable during 7th chord in minor keys.
1Abv&1Blw+UnsD.Simple	Harmony suitable for a trio based on 2-tone chord, 1 above and 1 below (+ Oct. below the input pitch); it is suitable for backing chorus parts.
3Blw.Closed	Harmony based on 3 total tones from chords and scales, 3 below; it can produce a feeling of movement. Basically it generates harmonies within an octave. It is unsuitable for low input pitch, because the harmonies are low.
3Blw.ClosedPara	Harmony based on 3 total tones from chords and scales, 3 below; it can produce a feeling of movement. Basically it generates harmonies within an octave. It is unsuitable for low input pitch, because the harmonies are low. It includes the effect of creating parallel motion of a half tone in certain conditions.
3Blw.ClosedBlues	Harmony based on 3 total tones from chords and scales, 3 below; it can produce a feeling of movement. Basically it generates harmonies within an octave. It is unsuitable for low input pitch, because the harmonies are low. Because it adds the major second as the scale tone to harmony during 7th chord, it provides a passing tone during 7th chords. Suitable for 3-tone chord blues in major keys or for country rock. There are cases where it is not suitable during 7th chord in minor keys.
2Blw+Bass.Chordal	Harmony based on 3-tone chord, 2 below and a chord root; it is suited for backing chorus parts.
2Blw+UnsD.Modal	Harmony suitable for a trio based on 2 total tones from chords and scales, 2 below (+ Oct. below the input pitch); it can produce a feeling of movement.
2Blw+UnsD.ModalBlues	Harmony suitable for a trio based on 2 total tones from chords and scales, 2 below (+ Oct. below the input pitch); it can produce a feeling of movement. Because it adds a major second as a scale tone to harmony during 7th chords, it provides a passing tone during 7th chords. Suitable for 3-tone chord blues or for country rock in major keys. There are cases where it is not suitable during 7th chord in minor keys.
1Blw+UnsD+Bass	Harmony suitable for a duet based on 1 total tone from chord and scale, the nearby 1 below (+ Oct. below the input pitch and chord root); it can produce a feeling of movement.
1Blw.Far+UnsD+Bass	Harmony suitable for a duet based on 1-tone chord, 1 below, (priority on character) (+ Oct. below the input pitch and chord root). This setting skillfully expresses the chord character.
3Abv.Jazz	Harmony based on 3 total tones from chords and scales, 3 above; it can produce a feeling of movement. Basically it generates harmonies within an octave. It is suitable for low pitched vocals.
3Abv.Chordal	Harmony based on 3-tone chord, 3 above; it is suitable for backing chorus parts. It is also good for low pitched vocals.
3Abv.JazzPara	Harmony based on 3 total tones from chords and scales, 3 above; it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Basically it generates harmonies within an octave. It includes the effect of creating parallel motion of a half tone in certain conditions. It is suitable for low pitched vocals.
3Abv.JazzBluesPara	Harmony based on 3 total tones from chords and scales, 3 above; it handles a major triad as add 6th chord. Since it handles the major second as a scale tone in major triads, it can also provide passing tones. Because it adds a major second as a scale tone to harmony during 7th chords, it provides a passing tone during 7th chords. Suitable for 3-tone chord blues or for country rock in major keys. Basically it generates harmonies within an octave. It includes the effect of creating parallel motion of a half tone in certain conditions. There are cases where it is not suitable during 7th chord in minor keys. It is suitable for low pitched vocals.
2Abv&1Blw.WideH	Harmony based on 3 total tones from chords and scales, 2 above and 1 below; it can produce a feeling of movement. Basically it generates open harmonies of an octave or more. It is suitable for low pitched vocals.
2Abv&1Blw.forDuo	Harmony based on 3 total tones from chords and scales, 2 above and 1 below; it can produce a feeling of movement. Because it combines elements suited for duets, Harmony1, 2 and 3 can be independently selected for use for duets. It can also be used for octave transposing. Basically, the highest tone (Harmony1) is an octave above the lowest tone (Harmony3), and this tone (Harmony1 or Harmony3) handles the major second as the scale tone in major triads. (You should be careful, however, depending on the song.) It is suited for low pitched vocals in situations where all harmonies are used for a quartet.
2Abv&1Blw.Jazz	Harmony based on 3 total tones from chords and scales, 2 above and 1 below; it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Basically, the highest tone (Harmony1) is an octave above the lowest tone (Harmony3). Each of its tones is treated as an element, so it can be used for duets or trios. It is suitable for low pitched vocals.
2Abv&1Blw.WideL	Harmony based on 3 total tones from chords and scales, 2 above and 1 below; it can produce a feeling of movement. Its harmony range tends to be lower than that of "2Abv&1Blw.WideH." Basically it generates open harmonies of an octave or more. It is suitable for low pitched vocals.
2Abv+UnsD.Modal6th	Harmony suitable for a trio based on 2 total tones from chords and scales, 2 above (+ Oct. below the input pitch); it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. It is suitable for low pitched vocals.
2Abv+Bass.Modal6th	Harmony suitable for a trio based on 2 total tones from chords and scales, 2 above (+ chord root); it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. It is suitable for low pitched vocals.
UnsU+1Abv+Bass.Open	Harmony suitable for a duet based on 1 total tone from chord and scale, the nearby 1 above (+ Oct. below the input pitch and chord root); it can produce a feeling of movement.
1Abv&2Blw.Jazz	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Basically it is a closed harmony within an octave.
1Abv&2Blw.80s	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Because it handles the major second as a scale tone in major triads, it can also provide passing tone. With priority on the chord's character, it is good for broadening the sound in which Maj7 and m7 chords are often used. Basically it generates closed harmonies within an octave.
1Abv&2Blw.Blues	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Since it handles the major second as a scale tone in major triads, it can also provide passing tones. Because it adds the major second as a scale tone to harmony during 7th chords, it provides a passing tone during 7th chords. Suitable for 3-tone chord blues in major keys or for country rock. Basically it generates closed harmonies within an octave.
1Abv&2Blw.ChordalBlues	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Because it adds the major second as a scale tone to harmony during 7th chords, it provides a passing tone during 7th chords. Suitable for 3-tone chord blues in major keys or for country rock. With priority on the chord's character, it is good for broadening the sound in which Maj7 and m7 chords are often used. Basically it generates closed harmonies within an octave.
1Abv&2Blw.Chordal	Harmony based on tone chords and scale tones used as duet, 1 above and 2 below; it can produce a feeling of movement. Harmony1 is a tone above and nearest the input pitch. Harmony2, tone which is below the input pitch and nearest the input pitch, handles a major triad as add 6th chord. Harmony3 is harmony with priority on the chord character of the lower notes. Because it handles the major second as a scale tone in major triads, it can also provide passing tones.
1Abv&2Blw.Wide	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. It handles a major triad as add 6th chord. Since it handles the major second as a scale tone, it can also provide passing tones. Basically it generates open harmonies of an octave or more.

Type Name	Description
1Abv&2Blw.WideBlues	Harmony based on 3 total tones from chords and scales, 1 above and 2 below; it can produce a feeling of movement. Since it handles a major triad as add 6th chord, and handles the major second as a scale tone, it can also provide passing tones. Because it adds the major second as a scale tone to harmony during 7th chords, it provides a passing tone during 7th chords. Suitable for 3-tone chord in major keys or for country rock. Basically it generates open harmonies of an octave or more.
1Abv&1Blw+Bass	Harmony based on tone chords and scale tones used as duet, 1 above and 1 below; (+ chord root); it can produce a feeling of movement. Harmony1 is a tone above and nearest the input pitch. Harmony2, tone which is below the input pitch and nearest the input pitch, handles a major triad as add 6th chord, and since it handles the major second as a scale tone in major triads, it can provide passing tones.
1Abv&1Blw+UnsD.Modal6th	Harmony suitable for a trio based on 2 total tones from chords and scales, a above and below (+ Oct. below the input pitch); it can produce a feeling of movement. Because it handles a major triad as add 6th chord, and handles the major second as a scale tone, it can provide passing tones.
1Abv&1Blw+Bass.Modal6th	Harmony based on tone chords and scale tones used as duet, 1 above and 1 below (+ chord root); it can produce a feeling of movement. Harmony1 is harmony of above tone with priority on the chord character. Harmony2, harmony near the below side, handles a major triad as add 6th chord, and since it handles the major second as a scale tone in major triads, it can provide passing tones.
3Blw.Jazz	Harmony based on 3 total tones from chords and scales, 3 below; it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Basically it generates harmonies within an octave. It is suitable for high pitched vocals.
3Blw.JazzBlues	Harmony based on 3 total tones from chords and scales, 3 below; it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Because it adds the major second as a scale tone to harmony during 7th chords, it provides a passing tone during 7th chords. Suitable for 3-tone chord blues or for country rock in major keys. Basically it generates harmonies within an octave. It is suitable for high pitched vocals.
2Blw+UnsD.Modal6th	Harmony suitable for a trio based on 2 total tones from chords and scales, 2 below (+ Oct. below input pitch); it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Basically it generates harmonies within an octave. It is suitable for high pitched vocals.
2Blw+Bass.Modal6th	Harmony suitable for a trio based on 2 total tones from chords and scales, 2 below (+ chord root); it handles a major triad as add 6th chord. Because it handles the major second as a scale tone in major triads, it can also provide passing tones. Basically it generates harmonies within an octave. It is suitable for high pitched vocals.
ScaleDiatonic	This generates harmonies based on the scale specified by the KEY ROOT/TYPE value and the degree specified by the DEGREE value. The harmonies are not dependent on a chord. If there are many notes, the chord feeling intensifies, so it is suitable for use as duets, fixed at a third above. This setting is good for modal church music or modal jazz.
Parallel	This can reproduce harmonies for which semitone pitches are fixed 4th build or diminished sounds, for example. This setting is good, for example, in modal jazz scales (when you want to eliminate chordal feeling) or in progressive music.

Harmony Assign Parameters

Parameter	Value	Description
TRANS.MODE *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.
	3	Assigns the harmony to a range roughly 3 octaves above the pitch of the played note.
SESSION TABLE *These are effective only when a Chordal Type other than Scale Diatonic or Parallel is selected.	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 a sophisticated, urban feel.
KEY ROOT *These are effective only When the Chordal Type parameter is set to Scale Diatonic.	Determines the root key for the transposition. Refer to the Reference Manual.	
KEY TYPE *These are effective only When the Chordal Type parameter is set to Scale Diatonic.	Determines the scale type for the transposition. Refer to the Reference Manual.	

Pitch Correct Parameters

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 pitches 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 pitches of the harmony are more accurate, this setting is good for backing chorus parts, etc.

Vocal Harmony Edit (Detail) Parameters

Parameter	Value	Description
HUMANIZE	OFF	The harmony will not be humanized.
	1	The harmony will be humanized so as to feel more natural. An authentic-sounding widening effect will be applied, giving the impression of more people playing.
	2	The harmony will be humanized so as to have a more distinct groove. Even faster passages will retain their rhythmic essence.
	3	The harmony will reflect the way in which vocalist and back chorus interact, with the lead vocal out front. In addition, the timing will be slightly relaxed.
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.

Vocal Effect Parameter List

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

Romantic Rev, 80s Pop Rev, Room, Stage, Plate

No.	Parameter	Display	Min	Max	Table
1	Reverb Time	0.3s – 30.0s	0	69	Table #1
2	Diffusion	0 – 10	0	10	
3	Initial Delay	0.1ms – 99.3ms	0	63	Table #2
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 #2
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					

VocalDoubler, StereoSpread, Delay, Short Delay, R&R Delay

No.	Parameter	Display	Min	Max	Table
1	L ch Delay	0.1ms – 1486.0ms	1	14860	
2	R ch Delay	0.1ms – 1486.0ms	1	14860	
3	C ch Delay	0.1ms – 1486.0ms	1	14860	
4	Feedback Delay	0.1ms – 1486.0ms	1	14860	
5	Feedback Level	-63 – 0 – +63	1	127	
6	C ch 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	

Cross Delay

No.	Parameter	Display	Min	Max	Table
1	L->R Delay	0.1ms – 743.0ms	1	7430	
2	R->L Delay	0.1ms – 743.0ms	1	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					
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	

Tempo Delay

No.	Parameter	Display	Min	Max	Table
1	Delay Time	64th/3 – 4thx6	0	19	Table #5
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	

Tempo Cross

No.	Parameter	Display	Min	Max	Table
1	Delay Time L>R	64th/3 – 4thx6	0	19	Table #5
2	Delay Time R>L	64th/3 – 4thx6	0	19	Table #5
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	

Chorus

No.	Parameter	Display	Min	Max	Table
1	LFO Frequency	0.00Hz – 39.7Hz	0	127	Table #8
2	LFO Depth	0 – 127	0	127	
3	Feedback Level	-63 – 0 – +63	1	127	
4	Delay Offset	0.0ms – 50ms	0	127	Table #9
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	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 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					

Gramophone, Robot

No.	Parameter	Display	Min	Max	Table
1	Sampling Freq Control	44.1kHz – 345Hz	0	127	Table #25
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, VintageTube, 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					

TempoFlanger

No.	Parameter	Display	Min	Max	Table
1	LFO Frequency	16th – 4thx16	5	29	Table #5
2	LFO Depth	0 – 127	0	127	
3	Feedback Level	-63 – 0 – +63	1	127	
4	Delay Offset	0.0ms – 50ms	0	127	Table #9
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	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	LFO Phase Difference	-180deg – 0deg – +180deg	4	124	
15					
16					

TempoPhaser

No.	Parameter	Display	Min	Max	Table
1	LFO Frequency	16th – 4thx16	5	29	Table #5
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					

TempoAutoPan

No.	Parameter	Display	Min	Max	Table
1	LFO Frequency	16th – 4thx16	5	29	Table #5
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					

NO EFFECT

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

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
0	00	0000 0000
1	01	0000 0001
2	02	0000 0010
3	03	0000 0011
4	04	0000 0100
5	05	0000 0101
6	06	0000 0110
7	07	0000 0111
8	08	0000 1000
9	09	0000 1001
10	0A	0000 1010
11	0B	0000 1011
12	0C	0000 1100
13	0D	0000 1101
14	0E	0000 1110
15	0F	0000 1111
16	10	0001 0000
17	11	0001 0001
18	12	0001 0010
19	13	0001 0011
20	14	0001 0100
21	15	0001 0101
22	16	0001 0110
23	17	0001 0111
24	18	0001 1000
25	19	0001 1001
26	1A	0001 1010
27	1B	0001 1011
28	1C	0001 1100
29	1D	0001 1101
30	1E	0001 1110
31	1F	0001 1111

Decimal	Hexadecimal	Binary
32	20	0010 0000
33	21	0010 0001
34	22	0010 0010
35	23	0010 0011
36	24	0010 0100
37	25	0010 0101
38	26	0010 0110
39	27	0010 0111
40	28	0010 1000
41	29	0010 1001
42	2A	0010 1010
43	2B	0010 1011
44	2C	0010 1100
45	2D	0010 1101
46	2E	0010 1110
47	2F	0010 1111
48	30	0011 0000
49	31	0011 0001
50	32	0011 0010
51	33	0011 0011
52	34	0011 0100
53	35	0011 0101
54	36	0011 0110
55	37	0011 0111
56	38	0011 1000
57	39	0011 1001
58	3A	0011 1010
59	3B	0011 1011
60	3C	0011 1100
61	3D	0011 1101
62	3E	0011 1110
63	3F	0011 1111

Decimal	Hexadecimal	Binary
64	40	0100 0000
65	41	0100 0001
66	42	0100 0010
67	43	0100 0011
68	44	0100 0100
69	45	0100 0101
70	46	0100 0110
71	47	0100 0111
72	48	0100 1000
73	49	0100 1001
74	4A	0100 1010
75	4B	0100 1011
76	4C	0100 1100
77	4D	0100 1101
78	4E	0100 1110
79	4F	0100 1111
80	50	0101 0000
81	51	0101 0001
82	52	0101 0010
83	53	0101 0011
84	54	0101 0100
85	55	0101 0101
86	56	0101 0110
87	57	0101 0111
88	58	0101 1000
89	59	0101 1001
90	5A	0101 1010
91	5B	0101 1011
92	5C	0101 1100
93	5D	0101 1101
94	5E	0101 1110
95	5F	0101 1111

Decimal	Hexadecimal	Binary
96	60	0110 0000
97	61	0110 0001
98	62	0110 0010
99	63	0110 0011
100	64	0110 0100
101	65	0110 0101
102	66	0110 0110
103	67	0110 0111
104	68	0110 1000
105	69	0110 1001
106	6A	0110 1010
107	6B	0110 1011
108	6C	0110 1100
109	6D	0110 1101
110	6E	0110 1110
111	6F	0110 1111
112	70	0111 0000
113	71	0111 0001
114	72	0111 0010
115	73	0111 0011
116	74	0111 0100
117	75	0111 0101
118	76	0111 0110
119	77	0111 0111
120	78	0111 1000
121	79	0111 1001
122	7A	0111 1010
123	7B	0111 1011
124	7C	0111 1100
125	7D	0111 1101
126	7E	0111 1110
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)

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

[MIDI] [Internal Sequencer]

MIDI Events	Status byte	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-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/ Left)
Key Off [GM1] [GM2] [GS]	8nH (n: Channel Number)	kk		Key no. (0-127)	vv		Velocity (0-127)	○	○ (Harmony Channel)	○	○	○	○	○	○	×	○	○	○	×	○
Key On [GM1] [GM2] [GS]	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] [GS]	0 0 8 8 8 64 104 104 118 119 120 121 126 127	(00H) (00H) (08H) (08H) (08H) (40H) (68H) (68H) (76H) (77H) (78H) (79H) (7EH) (7FH)	Normal S.Articulation Voice MegaVoice S.Articulation Voice S.Articulation2 Voice SFX Voice Normal S.Articulation Voice GS Rhythm GS Normal GM2 Rhythm GM2 Normal SFX kit Drum kit	○	×	○	○	○ (Right1)	○	○	●	●	●	×	○	○	○
		1	(01H)	Modulation [GM1] [GM2] [GS]	0–127	(00H...7FH)	Data	○	×	○	○	○ (All keyboard parts)	○	○	●	○	○	●	○	○	○
		5	(05H)	Portamento Time [GM2] [GS]	0–127	(00H...7FH)	Data	○ (Except S.Articulation Piano, Organ Flutes)	×	○	○	○ (All keyboard parts)	×	○	●	×	○	×	○	○	○
		6	(06H)	Data Entry MSB [GM2] [GS]	0–127	(00H...7FH)	Data	○	○ (Harmony Channel)	○	○	○ (All keyboard parts)	○	○	●	○	○	×	○	×	○
		7	(07H)	Main Volume [GM1] [GM2] [GS]	0–127	(00H...7FH)	Data	○	○ (A/D Part Receive Channel)	○	○	○ (All keyboard parts)	○	○	●	●	●	×	○	○	○
		10	(0AH)	Panpot [GM1] [GM2] [GS]	0–127	(00H...7FH)	L64…C…R63	○	○ (A/D Part Receive Channel)	○	○	○ (All keyboard parts)	○	○	●	●	●	×	○	○	○
		11	(0BH)	Expression [GM1] [GM2] [GS]	0–127	(00H...7FH)	Data	○	×	○	○	○ (All keyboard parts)	○	○	●	●	●	●	○	○	○
		16	(10H)	General Purpose Controller	0–127	(00H...7FH)	Data	○	×	○	○	○ (All keyboard parts)	×	○	×	×	○	×	○	○	×
		32	(20H)	Bank Select LSB [GM2] [GS]	0–127	(00H...7FH)	Data	○	×	○	○	○ (Right1)	○	○	●	●	●	×	○	○	○
		38	(26H)	Data Entry LSB [GM2] [GS]	0–127	(00H...7FH)	Data	○	×	○	○	○ (All keyboard parts)	○	○	●	×	○	×	○	×	○
		64	(40H)	Sustain (Damper) [GM1] [GM2] [GS]	0–127	(00H...7FH)	Data	○	○ (Harmony Channel)	○	○	○ (All keyboard parts)	×	○	●	×	○	●	○	○	○
		65	(41H)	Portamento [GM2] [GS]	0–127	(00H...7FH)	0…63, 64…127 (OFF, ON)	○ (Except S.Articulation Piano, Organ Flutes)	×	○	○	○ (All keyboard parts)	×	○	●	×	○	●	○	○	○
		66	(42H)	Sostenuto [GM2] [GS]	0–127	(00H...7FH)	0…63, 64…127 (OFF, ON)	○	×	○	○	○ (All keyboard parts)	×	○	●	×	○	●	○	○	○
		67	(43H)	Soft Pedal [GM2] [GS]	0–127	(00H...7FH)	0…63, 64…127 (OFF, ON)	○	×	○	○	○ (All keyboard parts)	×	○	●	×	○	●	○	○	○
		71	(47H)	Harmonic Content [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	●	●	●	×	○	○	○
		72	(48H)	Release Time [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	●	○	○	×	○	○	○
		73	(49H)	Attack Time [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	●	○	○	×	○	○	○
		74	(4AH)	Brightness [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	●	●	●	×	○	○	○
		75	(4BH)	Decay Time [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	×	×	○	×	○	○	×
		76	(4CH)	Vibrato Rate [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	×	×	○	×	○	○	×
		77	(4DH)	Vibrato Depth [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	×	×	○	×	○	○	×
		78	(4EH)	Vibrato Delay [GM2]	0–127	(00H...7FH)	-64…0…+63	○	×	○	○	○ (All keyboard parts)	○	○	×	×	○	×	○	○	×
		80	(50H)	General Purpose Controller (Articulation 1)	0–127	(00H...7FH)	0: OFF 127: ON	○ (SA/SA2 Voice only)	×	○	×	×	×	×	●	○	○	×	○	○	○
		81	(51H)	General Purpose Controller (Articulation 2)	0–127	(00H...7FH)	0: OFF 127: ON	○ (SA2 Voice only)	×	○	×	×	×	×	●	○	○	×	○	○	○
		84	(54H)	Portamento Control	0–127	(00H...7FH)	Key no. (0-127)	○	×	○	○	×	○	○	○	●	○	×	○	×	○

[MIDI] [Internal Sequencer]

MIDI Events	Status byte	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-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/ Left)
		91	(5BH)	Effect1 Depth (Reverb Send Level) [GM2] [GS]	0–127	(00H...7FH)	Data	○	○ (A/D Part Receive Channel)	○	○	○ (All keyboard parts)	○	○	●	●	●	×	○	○	○
		93	(5DH)	Effect3 Depth (Chorus Send Level) [GM2] [GS]	0–127	(00H...7FH)	Data	○	○ (A/D Part Receive Channel)	○	○	○ (All keyboard parts)	○	○	●	●	●	×	○	○	○
		94	(5EH)	Effect4 Depth (Variation Send Level)	0–127	(00H...7FH)	Data	○	×	○	○	○ (All keyboard parts)	○	○	○	●	●	×	○	○	× Multi Part Recording
		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 [GS]	0–127	(00H...7FH)	Data	○	×	○	○	×	○	○	●	○	○	×	○	○	○
		99	(63H)	NRPN MSB [GS]	0–127	(00H...7FH)	Data	○	×	○	○	×	○	○	●	○	○	×	○	○	○
		100	(64H)	RPN LSB [GM2] [GS]	0–127	(00H...7FH)	Data	○	○ (Harmony Channel)	○	○	○ (All keyboard parts)	○	○	●	○	○	×	○	○	○
		101	(65H)	RPN MSB [GM2] [GS]	0–127	(00H...7FH)	Data	○	○ (Harmony Channel)	○	○	○ (All keyboard parts)	○	○	●	○	○	×	○	○	○
Mode Message	BnH (n: Channel Number)	120	(78H)	All Sound Off [GM2] [GS]	0	(00H)	Data	○	×	○	○	○ (All keyboard parts) (Same operation as when All Note Off)	○	○	×	×	○	×	○	×	×
		121	(79H)	Reset All Controllers [GM1] [GM2] [GS]	0	(00H)	Data	○	×	○	×	×	×	×	×	×	○	×	○	×	×
		122	(7AH)	Local Control	0 127	(00H) (7FH)	OFF ON	—	—			○			×	×	×	×	×	×	×
		123	(7BH)	All Note Off [GM1] [GM2] [GS]	0	(00H)	Data	○	○ (Harmony Channel)	○	○	○ (All keyboard parts)	○	○	×	×	○	×	○	×	×
		124	(7CH)	Omni Off [GM2] [GS]	0	(00H)	Data	○	×	○ *1	×	×	×	×	×	×	○	×	○	×	×
		125	(7DH)	Omni On [GM2] [GS]	0	(00H)	Data	○	×	○ *2	×	×	×	×	×	×	○	×	○	×	×
		126	(7EH)	Mono [GM2] [GS]	0–16	(00H...10H)	Data	○	×	○	×	×	×	×	×	×	○	×	○	×	×
		127	(7FH)	Poly [GM2] [GS]	0	(00H)	Data	○	×	○	×	×	×	×	×	×	○	×	○	×	×
Program Change [GM1] [GM2] [GS]	CnH (n: Channel Number)	pp	(00H...7FH)	Voice no. (0–127)	—	—	—	○	×	○	○	○ (Right1)	○	○	●	●	●	×	○	○	○
Channel After Touch [GM1] [GM2] [GS]	DnH (n: Channel Number)	vv	(00H...7FH)	Data	—	—	—	○	×	○	○	○ (All keyboard parts)	×	○	×	×	○	×	○	×	○
Polyphonic After Touch [GS]	AnH (n: Channel Number)	kk	(00H...7FH)	Key no. (0–127)	vv	(00H...7FH)	Data	○	×	○	×	×	×	×	×	×	○	×	○	×	×
Pitch Bend Change [GM1] [GM2] [GS]	EnH (n: Channel Number)	cc	(00H...7FH)	LSB	dd	(00H...7FH)	MSB	○	○ (Harmony Channel)	○	○	○ (All keyboard parts)	○	○	●	○	○	●	○	○	○
Realtime Message	F8H MIDI Clock	—		—	—		—	—	—	○ (Received when the Clock is set to MIDI, 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, 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, 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-701	×
CVP-705	○
CVP-709	○

SA (Super Articulation)

CVP-701	○
CVP-705	○
CVP-709	○

SA2 (Super Articulation2)

CVP-701	×
CVP-705	×
CVP-709	○

Wireless LAN

CVP-701	×
CVP-705	○
CVP-709	○

MIDI CHANNEL MESSAGE (2)

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

NRPN (Non Registered Parameter Number)

[MIDI] [Internal Sequencer]

NRPN		Data Entry		Parameter	Data Range	Voice		MIDI Reception (respond/ignored)					MIDI Transmission (generated data)				PLAY		REC
MSB	LSB	MSB	LSB			Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
01H	08H	mmH	–	Vibrato Rate [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	09H	mmH	–	Vibrato Depth [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	0AH	mmH	–	Vibrato Delay [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	20H	mmH	–	Low Pass Filter Cutoff Frequency [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	×	×	○	×	×	×	○	×	○	○	×
01H	21H	mmH	–	Low Pass Filter Resonance [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	×	×	○	×	×	×	○	×	○	○	×
01H	30H	mmH	–	EQ Bass Gain	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	×	×	○	×	×	×	○	×	○	○	×
01H	31H	mmH	–	EQ Treble Gain	mm: 00H-40H-7FH (-64...0...+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 [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	×	×	○	×	×	×	○	×	○	○	×
01H	64H	mmH	–	EG Decay Time [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	○	×	○	○	●	○	○	×	○	○	○
01H	66H	mmH	–	EG Release [GS]	mm: 00H-40H-7FH (-64...0...+63)	○	×	○	×	×	○	×	×	×	○	×	○	○	×
14H	rrH	mmH	–	Drum Low Pass Filter Cutoff Frequency	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
15H	rrH	mmH	–	Drum Low Pass Filter Resonance	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
16H	rrH	mmH	–	Drum EG Attack Rate	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
17H	rrH	mmH	–	Drum EG Decay Rate	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
18H	rrH	mmH	–	Drum Pitch Coarse [GS]	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
19H	rrH	mmH	–	Drum Pitch Fine	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
1AH	rrH	mmH	–	Drum Level [GS]	rr: drum instrument note number mm: 00H-7FH (0...127)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
1CH	rrH	mmH	–	Drum Pan [GS]	rr: drum instrument note number mm: 00H, 01H-40H-7FH (RND, L63...C...R63)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
1DH	rrH	mmH	–	Drum Reverb Send Level [GS]	rr: drum instrument note number mm: 00H-7FH (0...127)	○ (Drum only)	×	○	×	×	×	×	×	○	○	×	○	×	×
1EH	rrH	mmH	–	Drum Chorus Send Level [GS]	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.

RPN (Registered Parameter Number)

[MIDI] [Internal Sequencer]

NRPN		Data Entry		Parameter	Data Range	Voice		MIDI Reception (respond/ignored)					MIDI Transmission (generated data)				PLAY		REC
MSB	LSB	MSB	LSB			Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
00H	00H	mmH	–	Pitch Bend Sensitivity [GM1] [GM2] [GS]	mm: 00H-18H (0…+24[semitones])	○	×	○	○	○ (All keyboard parts)	○	○	●	○	○	×	○	○	○
00H	01H	mmH	llH	Fine Tune [GM1] [GM2] [GS]	mm ll: 00H 00H -100[cent] … mm ll: 40H 00H 0[cent] … mm ll: 7FH 7FH 100[cent]	○	×	○	○	○ (All keyboard parts)	○	○	●	○	○	×	○	○	○
00H	02H	mmH	–	Coarse Tune [GM1] [GM2] [GS]	mm: 00H-7FH (0...127)	○	×	○	○	○ (All keyboard parts)	○	○	×	○	○	×	○	○	×
00H	05H	mmH	llH	Modulation Sensitivity [GM2]	mm: Specified in semitone steps ll: Specified in 100/128 cent steps	○	×	○	×	×	×	×	×	×	○	×	○	×	×
7FH	7FH	–	–	Null [GM2]	–	○	○	○	○	○ (All keyboard parts)	○	○	×	○	○	×	○	×	×

●: 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-701	×
CVP-705	○
CVP-709	○

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] Voice		[MIDI] MIDI Reception					[MIDI] MIDI Transmission				[Internal Sequencer] PLAY		[Internal Sequencer] REC
								Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: 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	○	×	○ (Available for extra parts and Song)					○				○	○	×
		05	1	00-7F	MASTER ATTENUATOR	0…127	00	×	×	×					×				×	×	×
		06	1	28-58	TRANSPOSE	-24…0…+24[semitones]	40	○	○	○ (Available for extra parts and Song)					○				○	○	×
		7D	1	N	DRUM SETUP RESET	N: Drum setup number	—	○ (Drum only)	×	○ (Available for extra parts and Song)					○				○	×	○
		7E	1	00	XG SYSTEM ON	00=XG system ON	—	○	×	○ (Available for extra parts and Song)					○				○	×	○
		7F	1	00	ALL PARAMETER RESET	00=ON	—	○	×	○ (Available for extra parts and Song)					○				○	×	×

TOTAL SIZE 07
●: Transmitted via panel operations

MIDI Parameter Change Table (SYSTEM INFORMATION)

Address (H)			Size (H)	Data (H)	Parameter	Description	[MIDI] Voice		[MIDI] MIDI Reception					[MIDI] MIDI Transmission				[Internal Sequencer] PLAY		[Internal Sequencer] REC
							Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/709: Main/Layer/Left CVP-701: Right1/Right2/ Left	Keyboard	Style	Extra	CVP-705/709: Main/Layer/Left CVP-701: Right1/Right2/ Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/709: Main/Layer/Left CVP-701: Right1/Right2/ Left)
01	00	00 … 0D 0E 0F	E … 1 NOT USED NOT USED	20-7F … 20-7F	Model Name 1 … Model Name 14	32…127 (ASCII CHARACTER) … 32…127 (ASCII CHARACTER)	—	—	—					○ (Available only when receiving requests via MIDI)				—	—	—

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] Voice		[MIDI] MIDI Reception					[MIDI] MIDI Transmission				[Internal Sequencer] PLAY		[Internal Sequencer] REC
								Regular/ Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: 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

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-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
02	01	20	2	00-7F 00-7F	CHORUS TYPE MSB CHORUS TYPE LSB	Refer to Effect Parameter List	41 (=CHORUS1) 00	○	○		○				●				○	○	○
		22	1	00-7F	CHORUS PARAMETER 1	:	Depends on Chorus Type	○	○		○				●				○	○	○
		23	1	00-7F	CHORUS PARAMETER 2	:	Depends on Chorus Type	○	○		○				●				○	○	○
		24	1	00-7F	CHORUS PARAMETER 3	:	Depends on Chorus Type	○	○		○				●				○	○	○
		25	1	00-7F	CHORUS PARAMETER 4	:	Depends on Chorus Type	○	○		○				●				○	○	○
		26	1	00-7F	CHORUS PARAMETER 5	:	Depends on Chorus Type	○	○		○				●				○	○	○
		27	1	00-7F	CHORUS PARAMETER 6	:	Depends on Chorus Type	○	○		○				●				○	○	○
		28	1	00-7F	CHORUS PARAMETER 7	:	Depends on Chorus Type	○	○		○				●				○	○	○
		29	1	00-7F	CHORUS PARAMETER 8	:	Depends on Chorus Type	○	○		○				●				○	○	○
		2A	1	00-7F	CHORUS PARAMETER 9	:	Depends on Chorus Type	○	○		○				●				○	○	○
		2B	1	00-7F	CHORUS PARAMETER 10	:	Depends on Chorus Type	○	○		○				●				○	○	○
		2C	1	00-7F	CHORUS RETURN	-∞dB…0dB…+6dB (0…64…127)	40	○	○		○				●				○	○	○
		2D	1	01-7F	CHORUS PAN	L63…C…R63	40	○	○		○				○				○	○	×
		2E	1	00-7F	SEND CHORUS TO REVERB	-∞dB…0dB…+6dB (0…64…127)	00	○	○		○				○				○	○	×

TOTAL SIZE 0F

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-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
02	01	40	2	00-7F 00-7F	VARIATION TYPE MSB VARIATION TYPE LSB	Refer to Effect Parameter List	05 (=DELAY L, C, R) 00	○	○		○				●				○	○	○
		42	2	00-7F 00-7F	VARIATION PARAMETER 1 MSB VARIATION PARAMETER 1 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		44	2	00-7F 00-7F	VARIATION PARAMETER 2 MSB VARIATION PARAMETER 2 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		46	2	00-7F 00-7F	VARIATION PARAMETER 3 MSB VARIATION PARAMETER 3 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		48	2	00-7F 00-7F	VARIATION PARAMETER 4 MSB VARIATION PARAMETER 4 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		4A	2	00-7F 00-7F	VARIATION PARAMETER 5 MSB VARIATION PARAMETER 5 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		4C	2	00-7F 00-7F	VARIATION PARAMETER 6 MSB VARIATION PARAMETER 6 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		4E	2	00-7F 00-7F	VARIATION PARAMETER 7 MSB VARIATION PARAMETER 7 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		50	2	00-7F 00-7F	VARIATION PARAMETER 8 MSB VARIATION PARAMETER 8 LSB	:	Depends on Variation Type	○	○		○				●				○	○	○
		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	○	○		○				●				○	○	○

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	[MIDI] Voice		[MIDI] MIDI Reception					[MIDI] MIDI Transmission				[Internal Sequencer] PLAY		[Internal Sequencer] REC
								Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
		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)

Address (H)			Size (H)	Data (H)	Parameter	Description	* The MULTI EQ Parameter cannot be reset to its factory setting with XG SYSTEM ON.	[MIDI] Voice		[MIDI] MIDI Reception					[MIDI] MIDI Transmission				[Internal Sequencer] PLAY		[Internal Sequencer] REC
								Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
02	40	00	1	00-04	EQ TYPE	flat, jazz, pops, rock, classic		○	○			○				○			○	×	×
		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.

EQ GAIN 1 – 5
EQ FREQUENCY 1 – 5
EQ Q 1 – 5
EQ SHAPE 1 – 5

CVP-701	○
CVP-705	○
CVP-709	○

MIDI Parameter Change Table (EFFECT2)

[MIDI] [Internal Sequencer]

Address (H)			Size (H)	Data (H)	Parameter	Description	* The EFFECT 2 Parameter cannot be reset to its factory setting with XG SYSTEM ON.	Voice		MIDI Reception					MIDI Transmission				PLAY		REC
								Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
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 6

		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-701	n = 0 – 2
CVP-705	n = 0 – 2
CVP-709	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-701	×
CVP-705	○
CVP-709	○

Address (H)			Size (H)	Data (H)	Parameter	Description	* The SPECIAL EFFECT Parameter cannot be reset to its factory setting with XG SYSTEM ON.	[MIDI] Voice		[MIDI] MIDI Reception					[MIDI] MIDI Transmission				[Internal Sequencer] PLAY		[Internal Sequencer] REC
								Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
04	00	00	2	00-7F 00-7F	VOCAL HARMONY TYPE MSB VOCAL HARMONY TYPE LSB	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)		×	○		○					●			○	○	×
		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			0D																		
		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																		
		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			×	○		○					●			○	○	×
		3B	1	00-7F	VOCAL HARMONY PARAMETER 38			×	○		○					●			○	○	×
		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 00-7F	VOCAL EFFECT TYPE MSB VOCAL EFFECT TYPE LSB			×	○	○	●	○	○	×
		62	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 1 MSB VOCAL EFFECT PARAMETER 1 LSB			×	○	○	●	○	○	×
		64	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 2 MSB VOCAL EFFECT PARAMETER 2 LSB			×	○	○	●	○	○	×
		66	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 3 MSB VOCAL EFFECT PARAMETER 3 LSB			×	○	○	●	○	○	×
		68	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 4 MSB VOCAL EFFECT PARAMETER 4 LSB			×	○	○	●	○	○	×
		6A	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 5 MSB VOCAL EFFECT PARAMETER 5 LSB			×	○	○	●	○	○	×
		6C	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 6 MSB VOCAL EFFECT PARAMETER 6 LSB			×	○	○	●	○	○	×
		6E	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 7 MSB VOCAL EFFECT PARAMETER 7 LSB			×	○	○	●	○	○	×
		70	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 8 MSB VOCAL EFFECT PARAMETER 8 LSB			×	○	○	●	○	○	×
		72	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 9 MSB VOCAL EFFECT PARAMETER 9 LSB			×	○	○	●	○	○	×
		74	2	00-7F 00-7F	VOCAL EFFECT PARAMETER 10 MSB 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.

When the Vocal Harmony 1 is selected, the Parameters for Address 00-25 will be effective.

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

CVP-701	×
CVP-705	×
CVP-709	○

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

CVP-701	×
CVP-705	×
CVP-709	○

MIDI Parameter Change Table (MULTI PART)

[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-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
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	00-0F, 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…0…+24[semitones]	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		09 0A	2	00-0F 00-0F	DETUNE	-12.8…0…+12.7[Hz] 1st bit 3-0 → bit 7-4 2nd bit 3-0 → bit 3-0	08 00	○	×	○	○	×	○	○	×	×	○	×	○	×	×
		0B	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…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		16	1	00-7F	VIBRATO DEPTH	-64…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		17	1	00-7F	VIBRATO DELAY	-64…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		18	1	00-7F	FILTER CUTOFF FREQUENCY	-64…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		19	1	00-7F	FILTER RESONANCE	-64…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		1A	1	00-7F	EG ATTACK TIME	-64…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		1B	1	00-7F	EG DECAY TIME	-64…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		1C	1	00-7F	EG RELEASE TIME	-64…0…+63	40	○	×	○	○	×	○	○	×	×	○	×	○	○	×
		1D	1	28-58	MW PITCH CONTROL	-24…0…+24[semitones]	40	○	×	○	○	×	×	○	×	×	○	×	○	×	×
		1E	1	00-7F	MW LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	○	○	×	×	○	●	×	○	×	○	○	○
		1F	1	00-7F	MW AMPLITUDE CONTROL	-100…0…+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…0…+24[semitones]	42	○	×	○	○	×	○	○	×	×	○	×	○	×	×
		24	1	00-7F	BEND LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	○	○	×	○	○	×	×	○	×	○	×	×
		25	1	00-7F	BEND AMPLITUDE CONTROL	-100…0…+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

		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…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		42	1	00-7F	SCALE TUNING C#	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		43	1	00-7F	SCALE TUNING D	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		44	1	00-7F	SCALE TUNING D#	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		45	1	00-7F	SCALE TUNING E	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		46	1	00-7F	SCALE TUNING F	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		47	1	00-7F	SCALE TUNING F#	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		48	1	00-7F	SCALE TUNING G	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		49	1	00-7F	SCALE TUNING G#	-64…0…+63[cent]	40	○	×	○	○	×	○	○	●	●	○	×	○	○	○
		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	BEND OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	×	×	×	×	×	×	○	×	○	○	×
		42	1	00-7F	CAT OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	○	×	×	○	×	×	○	×	○	○	×
		43	1	00-7F	PAT OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	×	×	×	×	×	×	○	×	○	○	×
		44	1	00-7F	AC1 OFFSET LEVEL CONTROL	-100 - 100[%]	40	○	—	○	○	×	×	○	×	×	○	×	○	○	○
		45	1	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-701	×
CVP-705	○
CVP-709	○

[MIDI] [Internal Sequencer]

Address (H)			Size (H)	Data (H)	Parameter	Description	* The A/D PART parameter cannot be reset to its factory setting with XG System On.	Voice		MIDI Reception					MIDI Transmission				PLAY		REC
								Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
10	0n	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
*1: Channels 17 – 32 only send to TG.

10	0n	30	1		NOT USED			—	—		—				—				—	—	—
		31	1		NOT USED			—	—		—				—				—	—	—
		32	1	00-01	Rcv PROGRAM CHANGE	OFF, ON		×	×		×				×				×	×	×
		33	1	00-01	Rcv CONTROL CHANGE	OFF, ON		×	×		×				×				×	×	×
		34	1		NOT USED			—	—		—				—				—	—	—
		35	1	00-01	MUTE	OFF, ON		×	×		×				×				×	×	×
		36	1		NOT USED			—	—		—				—				—	—	—
		37	1		NOT USED			—	—		—				—				—	—	—
		38	1		NOT USED			—	—		—				—				—	—	—
		39	1	00-01	Rcv VOLUME	OFF, ON		×	×		×				×				×	×	×
		3A	1	00-01	Rcv PAN	OFF, ON		×	×		×				×				×	×	×
		3B	1	00-01	Rcv EXPRESSION	OFF, ON		×	×		×				×				×	×	×
		3C	1		NOT USED			—	—		—				—				—	—	—
		3D	1		NOT USED			—	—		—				—				—	—	—
		3E	1		NOT USED			—	—		—				—				—	—	—
		3F	1		NOT USED			—	—		—				—				—	—	—
		40	1	00-01	Rcv BANK SELECT	OFF, ON		×	×		×				×				×	×	×
		41	1		NOT USED			—	—		—				—				—	—	—
		42	1		NOT USED			—	—		—				—				—	—	—
		43	1		NOT USED			—	—		—				—				—	—	—
		44	1		NOT USED			—	—		—				—				—	—	—
		45	1		NOT USED			—	—		—				—				—	—	—
		46	1		NOT USED			—	—		—				—				—	—	—
		47	1		NOT USED			—	—		—				—				—	—	—
		48	1		NOT USED			—	—		—				—				—	—	—
		49	1		NOT USED			—	—		—				—				—	—	—
		4A	1		NOT USED			—	—		—				—				—	—	—
		4B	1		NOT USED			—	—		—				—				—	—	—
		4C	1		NOT USED			—	—		—				—				—	—	—
		4D	1		NOT USED			—	—		—				—				—	—	—
		4E	1		NOT USED			—	—		—				—				—	—	—
		4F	1		NOT USED			—	—		—				—				—	—	—
		50	1		NOT USED			—	—		—				—				—	—	—
		51	1		NOT USED			—	—		—				—				—	—	—
		52	1		NOT USED			—	—		—				—				—	—	—
		53	1		NOT USED			—	—		—				—				—	—	—
		54	1		NOT USED			—	—		—				—				—	—	—
		55	1		NOT USED			—	—		—				—				—	—	—
		56	1		NOT USED			—	—		—				—				—	—	—
		57	1		NOT USED			—	—		—				—				—	—	—
		58	1		NOT USED			—	—		—				—				—	—	—
		59	1	00-5F	AC1 CONTROLLER NUMBER	0…95		×	×		×				×				×	×	×
		5A	1		NOT USED			—	—		—				—				—	—	—
		5B	1		NOT USED			—	—		—				—				—	—	—
		5C	1		NOT USED			—	—		—				—				—	—	—
		5D	1		NOT USED			—	—		—				—				—	—	—
		5E	1		NOT USED			—	—		—				—				—	—	—
		5F	1		NOT USED			—	—		—				—				—	—	—
		60	1	00-5F	AC2 CONTROLLER NUMBER	0…95		×	×		×				×				×	×	×

TOTAL SIZE 31

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-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel (CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left)
3n	rr	00	1	00-7F	PITCH COARSE	-64…0…+63	40	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		01	1	00-7F	PITCH FINE	-64…0…+63[cent]	40	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		02	1	00-7F	LEVEL	0…127	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		03	1	00-7F	ALTERNATE GROUP	OFF, 1…127	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		04	1	00-7F	PAN	RND, L63…C…R63	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		05	1	00-7F	REVERB SEND	0…127	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		06	1	00-7F	CHORUS SEND	0…127	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		07	1	00-7F	VARIATION SEND	0…127	7F	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		08	1	00-01	KEY ASSIGN	SINGLE, MULTI	00	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		09	1	00-01	Rcv NOTE OFF	OFF, ON	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		0A	1	00-01	Rcv NOTE ON	OFF, ON	01	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		0B	1	00-7F	LOW PASS FILTER CUTOFF FREQUENCY	-64…0…+63	40	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		0C	1	00-7F	LOW PASS FILTER RESONANCE	-64…0…+63	40	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		0D	1	00-7F	EG ATTACK RATE	-64…0…+63	40	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		0E	1	00-7F	EG DECAY1 RATE	-64…0…+63	40	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
		0F	1	00-7F	EG DECAY2 RATE	-64…0…+63	40	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×

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

		70	4	00-7F	SOURCE DRUM KIT (Bank Select MSB)	0…127	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
				00-7F	SOURCE DRUM KIT (Bank Select LSB)	0…127	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
				00-7F	SOURCE DRUM KIT (Program Number)	0…127	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×
				0D-5B	SOURCE DRUM KIT (Note Number)	C-1…G5	Depends on the note	○ (Drum only)	×	○ (Available only for song parts)					○				○	×	×

TOTAL SIZE 04

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] Voice		[MIDI] MIDI Reception					[MIDI] MIDI Transmission				[Internal Sequencer] PLAY		[Internal Sequencer] REC
		Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel
Master Volume [GM2]	F0 7F XN 04 01 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000001 01 = Sub-ID #2 = Master Volume 0sssssss SS = Volume LSB 0ttttttt TT = Volume MSB 11110111 F7 = End of Exclusive	○	×	○ (Available for extra parts of a song)					○				○	○	×
Master Fine Tuning [GM2]	F0 7F XN 04 03 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000001 03 = Sub-ID #2 = Master Fine Tuning 0sssssss SS = Fine Tuning LSB 0ttttttt TT = Fine Tuning MSB 11110111 F7 = End of Exclusive	○	×	○ (Available for extra parts of a song)					○				○	×	×
Master Coarse Tuning [GM2]	F0 7F XN 04 04 00 TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000100 04 = Sub-ID #2=Master Coarse Tuning 00000000 00 0ttttttt TT = Coarse Tuning MSB 11110111 F7 = End of Exclusive	○	×	○ (Available for extra parts of a song)					○				○	×	×
Reverb Parameter [GM2]	F0 7F XN 04 05 01 01 01 01 PP VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000101 05 = Sub-ID #2 = Global Parameter Control 00000001 01 = Slot path length = 1 00000001 01 = Parameter ID width = 1 00000001 01 = Value width = 1 00000001 01 = Slot path MSB = 1 00000001 01 = Slot path LSB = 1 (Reverb) 0ppppppp PP = Parameter to be controlled. 0vvvvvvv VV = Value for the Parameter. ... ... 11110111 F7 = End of Exclusive 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]	F0 7F XN 04 05 01 01 01 01 02 PP VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000101 05 = Sub-ID #2 = Global Parameter Control 00000001 01 = Slot path length = 1 00000001 01 = Parameter ID width = 1 00000001 01 = Value width = 1 00000001 01 = Slot path MSB = 1 00000010 02 = Slot path LSB = 2 (Chorus) 0ppppppp PP = Parameter to be controlled. 0vvvvvvv VV = Value for the Parameter. ... ... 11110111 F7 = End of Exclusive 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	○	○	○					○				○	○	×

[MIDI] [Internal Sequencer]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission				PLAY		REC
		Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel
Channel Pressure (Aftertouch) [GM2]	F0 7F XN 09 01 0M PP RR ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1= Controller Destination Setting 00000001 01 = Sub-ID #2= Controller Type: 01 (Channel Pressure) 0000mmmm 0M = MIDI Channel (00-0F) 0ppppppp PP = Controlled Parameter 0rrrrrrr RR = Data ... ... 11110111 F7 = End of Exclusive Make sure to set both the controlled parameter and the range. Parameters not set will be restored to their default values. Control Parameter (pp) / Data (RR) / Description / Default Value pp=00 Pitch Control / 28H-58H / -24...0...+24semitones / 40H pp=01 Filter Cutoff Control / 00H-7FH / -9600...0...+9450cents / 40H pp=02 Amplitude Control / 00H-7FH / -100...0...+100% / 40H pp=03 LFO Pitch Depth / 00H-7FH / 0...127 / 00H pp=04 LFO Filter Depth / 00H-7FH / 0...127 / 00H pp=05 LFO Amplitude Depth / 00H-7FH / 0...127 / 00H	○	×	○	×	×	×	×	×	×	○	×	○	×	×
Controller (Control Change) [GM2]	F0 7F XN 09 03 0M CC PP RR ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = Controller Destination Setting 00000011 03 = Sub-ID #2 = Controller Type: 03 (Control Change) 0000mmmm 0M = MIDI Channel (00-0F) 0ccccccc CC = Controller Number (01H-1FH, 40H-5FH) 0ppppppp PP = Controlled Parameter 0rrrrrrr RR = Range ... ... 11110111 F7 = End of Exclusive Make sure to set both the controlled parameter and the range. Parameters not set will be restored to their default values. Control Parameter (pp) / Data (RR) / Description / Default Value pp=00 Pitch Control / 28H-58H / -24...0...+24semitones / 40H pp=01 Filter Cutoff Control / 00H-7FH / -9600...0...+9450cents / 40H pp=02 Amplitude Control / 00H-7FH / -100...0...+100% / 40H pp=03 LFO Pitch Depth / 00H-7FH / 0...127 / 00H pp=04 LFO Filter Depth / 00H-7FH / 0...127 / 00H pp=05 LFO Amplitude Depth / 00H-7FH / 0...127 / 00H	○	×	○	×	×	×	×	×	×	○	×	○	×	×
Key-Based Instrument Control [GM2]	F0 7F XN 0A 01 0M KK CC VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001010 0A = Sub-ID #1 = Key-Based Instrument Control 00000001 01 = Sub-ID #2= Controller 0000mmmm 0M = MIDI Channel (00-0F) 0kkkkkkk KK = Key Number 0ccccccc CC = Controller Number 0vvvvvvv VV = Value ... ... 11110111 F7 = End of Exclusive Make sure to set both the controlled parameter and the value. Control Number (CC) / Value (VV) / Description / Default Value CC=07H Volume / 00H-7FH / -100...0...+100% / 40H CC=0AH Pan / 00H-7FH (absolute) / -L63...C...R63 / (Preset value) CC=5BH Reverb Send Level / 00H-7FH (absolute) / 0...Max / (Preset value) CC=5DH Chorus Send Level / 00H-7FH (absolute) / 0...Max / (Preset value)	○ (Drum only)	×	○	×	×	×	×	×	×	○	×	○	×	×

System Exclusive Messages (Universal Non-Real Time Messages)

[MIDI] [Internal Sequencer]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission				PLAY		REC
		Regular/ Drum/ Natural/ Organ Voice	Mic/ Vocal Harmony	Song	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/ 709: Main/ Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower	PLAY	REW	From panel
GM1 System On [GM1] [GM2]	F0 7E XN 09 01 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxnnnn 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	○	—	○ (Available for extra parts of a song)					○				○	×	○
GM2 System On [GM2]	F0 7E XN 09 03 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxnnnn 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 MIDI2 On 11110111 F7 = End of Exclusive	○	—	○ (Available for extra parts of a song)					○				○	×	×
General MIDI System Off [GM1] [GM2]	F0 7E XN 09 02 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxnnnn 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	○	—	○ (Available for extra parts of a song)					○				○	×	×
Scale/Octave Tuning [GM2]	F0 7E XN 08 08 JJ GG MM SS ... F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxnnnn 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 0mmmmmm 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	○	×	○ (Available for song parts)					○				○	×	×

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]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower
Section Control	F0 43 7E 00 ss dd F7 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	F0 43 7E 01 t4 t3 t2 t1 F7 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	F0 43 7E tt d1 d2 d3 d4 F7 Type1 (tt=02) 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01111110 7E = Style 00000010 02 = type 1 0ddddddd d1 = chord root (cr) 0ddddddd d2 = chord type (ct) 0ddddddd d3 = bass note (bn) 0ddddddd d4 = bass type (bt) 11110111 F7 = End of Exclusive cr: Chord Root 0fffnnnn fff: b or #, nnnn: note (root) 0000nnnn 0n bbb 0001nnnn 1n bb 0010nnnn 2n b 0011nnnn 3n natural 0100nnnn 4n # 0101nnnn 5n ## 0110nnnn 6n ### 0fff0000 x0 reserved 0fff0001 x1 C 0fff0010 x2 D 0fff0011 x3 E 0fff0100 x4 F 0fff0101 x5 G 0fff0110 x6 A 0fff0111 x7 B ct: Chord Type 0-34, 127 00000000 00 0 Maj 00000001 01 1 Maj6 00000010 02 2 Maj7 00000011 03 3 Maj7(#11) 00000100 04 4 Maj(9) 00000101 05 5 Maj7(9) 00000110 06 6 Maj6(9) 00000111 07 7 aug 00001000 08 8 min 00001001 09 9 min6 00001010 0A 10 min7 00001011 0B 11 min7b5 00001100 0C 12 min(9) 00001101 0D 13 min7(9) 00001110 0E 14 min7(11) 00001111 0F 15 minMaj7 00010000 10 16 minMaj7(9) 00010001 11 17 dim 00010010 12 18 dim7 00010011 13 19 7th 00010100 14 20 7sus4 00010101 15 21 7b5 00010110 16 22 7(9) 00010111 17 23 7(#11) 00011000 18 24 7(13) 00011001 19 25 7(b9) 00011010 1A 26 7(b13) 00011011 1B 27 7(#9) 00011100 1C 28 Maj7aug 00011101 1D 29 7aug 00011110 1E 30 1+8 00011111 1F 31 1+5 00100000 20 32 sus4 00100001 21 33 1+2+5 00100010 22 34 cc 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 0ddddddd dd = note1 0ddddddd dd = note2 0ddddddd dd = note3 : : 0ddddddd dd = note10 11110111 F7 = End of Exclusive	—	—			○				×		

●: Transmitted via panel operations.

System Exclusive Messages (XG)

[MIDI]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower
XG Parameter Changes	F0 43 1n 4C hh mm ll dd … F7 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	F0 43 0n 4C aa bb hh mm ll dd … dd cc F7 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 0aaaaaaa 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	F0 43 3n 4C hh mm ll F7 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	F0 43 2n 4C hh mm ll F7 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]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/709: Main/Layer/Left CVP-701: 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 CVP-701 × CVP-705 × CVP-709 ○	○ (Organ Flute)	×	○	○	×	×	○	●	×	○	×
Display open/close	F0 43 73 01 51 00 00 02 05 A1 A2 A3 A4 dd F7 00000001 01 = Model ID (Clavinova common ID) 01010001 51 = PK/CL common variable length data 00000000 00 00000000 00 = Panel 00000001 02 = Display open/close 00000011 05 = Size A1 = Display Address1 A2 = Display Address2 A3 = Display Address3 A4 = Display Address4 dd = 00 -> Display is opened at the time of starting and closed at the time of stopping. *This message is effective only for playback from an internal sequencer. Display address / Score display / Lyrics display A1 / 00H / 00H A2 / 00H / 00H A3 / 00H / 01H A4 / 00H / 00H	×	×	×					×			

●: Transmitted via panel operations.

System Exclusive Messages (Natural Voice)

[MIDI]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower
Key Off Sampling Depth	F0 43 73 01 50 11 0n 04 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) 00000100 04 = Sub ID (Key Off Sampling Depth) 0ddddddd dd = Depth (00-50) 11110111 F7 = End of Exclusive CVP-701 ○ CVP-705 ○ CVP-709 ○	○ Available for some Natural Voices.	×	○	○	×	×	○	●	×	○	×

●: Transmitted via panel operations.

System Exclusive Messages Special Operators (Vocal Harmony Additional Parameters)

Vocal Harmony

CVP-701	×
CVP-705	○
CVP-709	○

[MIDI]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/709: Main/Layer/Left CVP-701: 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. 0ddddddd dd = data 00H: Off 01H: Upper 02H: Lower 11110111 F7 = End of Exclusive	×	○	○					●			

●: Transmitted via panel operations.

System Exclusive Messages (Others)

[MIDI]

MIDI Event	Data Format	Voice		MIDI Reception					MIDI Transmission			
		Regular/Drum/ Natural/ Organ Voice	Mic/Vocal Harmony	Song	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Keyboard	Style	Extra	CVP-705/709: Main/Layer/Left CVP-701: Right1/ Right2/Left	Style	Song	Upper Lower
MIDI Master Tuning	F0 43 1n 27 30 00 0m 01 cc F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n n= 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 0ddddddd 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). CVP-701 ○ CVP-705 ○ CVP-709 ○	—	—	○	×	×	×	×	×	×	×	×
Guide ON	F0 43 73 01 1F 00 cc dd F7 00000001 01 = Model ID (Clavinova common ID) 00011111 1F = Guide On Substatus 00000000 00 = 0ccccccc cc = Part Select Number (1/Right, 2/Left) cc: 00 1/Right On 2/Left On; 01 Off On; 02 On Off; 03 Off Off 0ddddddd dd = Mode 00:Off, 01:Follow Lights, 02:Any Key, 03:Karao Key. 04:Vocal Cue Time 06=YourTempo 11110111 F7 = End of Exclusive	—	—			○			×			

Data Format	Parameter	Description
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 06 =Your Tempo
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-709 and CVP-705 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.

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-709/705: Voice settings for Main, Layer, and Left CVP-701: 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-709 and CVP-705 only.

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

Yamaha [Digial Piano] Date : 17-Jun-2015
Model CVP-701/705/709 MIDI Implementation Chart Version : 1.1

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

Mode 1 : OMNI ON , POLY Mode 2 : OMNI ON ,MONO O : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF,MONO × : No