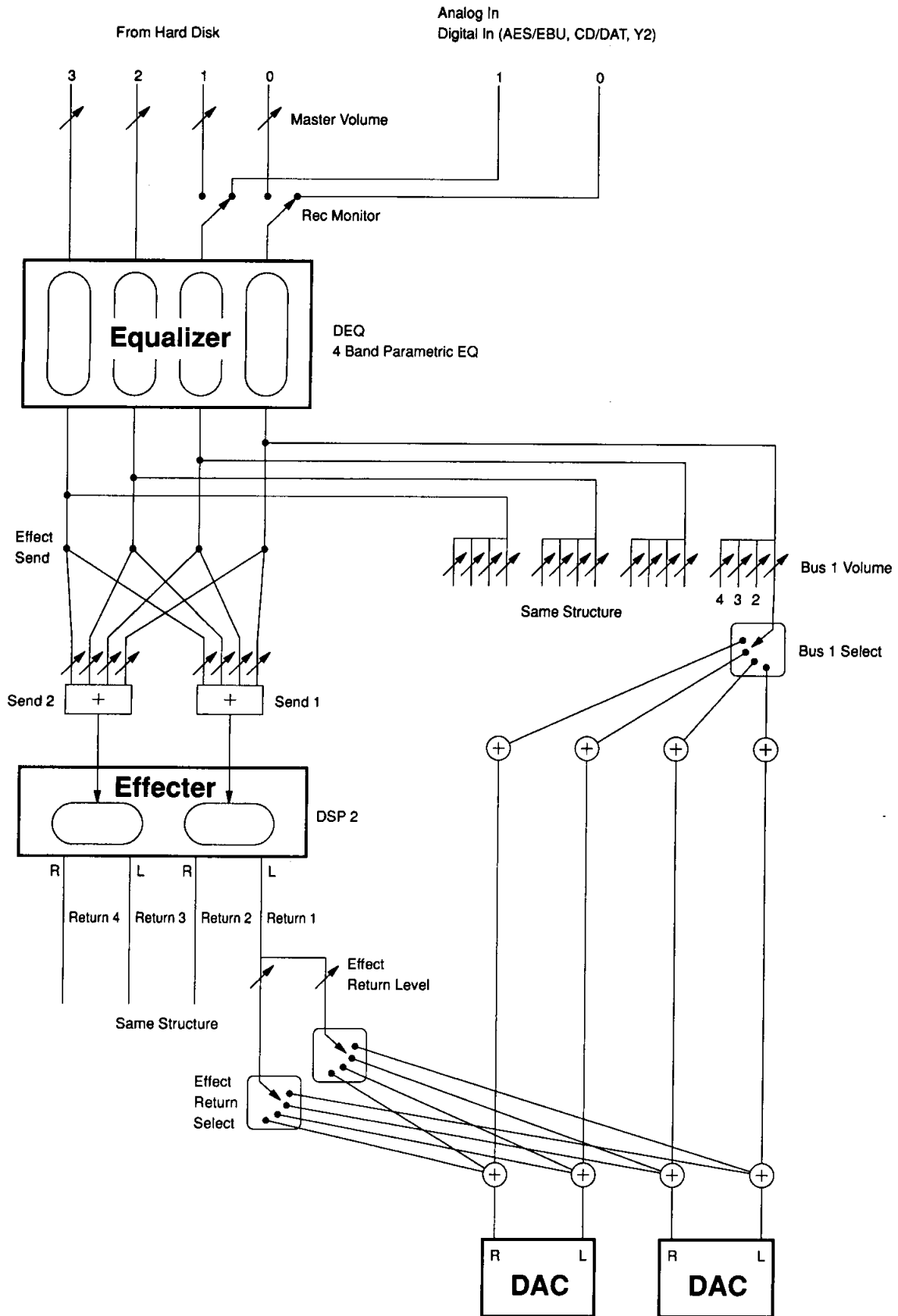


# DSP/DEQ/DMIX Block Diagram



# Effect Program List

No.	Effect Name	Category	No.	Effect Name	Category
0	Orchestra Hall	S: Rev Hall	47	Stadium	C: Echo->Rev
1	Concert Hall		48	Delay L,R->Rev	C: Delay L,R->Rev
2	Warm Hall		49	Flange->Rev	C: Flange->Rev
3	Vocal Hall		50	Gtr Cho Reverb	C: Chorus->Rev
4	Vocal Large Hall		51	Sympho->Rev	C: Sympho->Rev
5	Vocal Small Hall		52	Phaser->Rev	C: Phaser->Rev
6	Large Room	S: Rev Room	53	Aural Exc@->Rev	C: Aural Exc->Rev
7	Bright Small Room		54	Dist->Rev	C: Dist->Rev
8	Backing Vocal Tight Room		55	Dist->Dly L,R	C: Dist->Dly L,R
9	Smooth Room		56	Dist->Echo	C: Dist->Echo
10	Small Vocal Room		57	High Cut Reverb	C: EQ->Rev
11	Slap Room		58	EQ Mid Reverb	
12	Vocal Stage	S: Rev Stage	59	Sparkling Reverb	
13	Vocal Club		60	Mid Delay	C: EQ->Dly L,R
14	Female Vocal Club		61	Deep Echo	C: EQ->Echo
15	Sax Stage		62	EQ->Flange	C: EQ->Flange
16	Vocal Plate	S: Rev Plate	63	Bass Chorus	C: EQ->Chorus
17	Percussion Plate		64	Elec Guitar EQ/Sympho	C: EQ->Symphonic
18	Big Plate		65	Warm Phase	C: EQ->Phaser
19	Distant Plate		66	St.Flange->Dly LR	C: St.Flange->Dly LR
20	Stone Room	S: Rev White Room	67	St.Chorus->Dly LR	C: St.Chorus->Dly LR
21	Cathedral		68	Symph->Dly LR	C: Symph->Dly LR
22	Dark Church	S: Rev Tunnel	69	St.Phasing->Dly LR	C: St.Phasing->Dly LR
23	Tunnel		70	Hall & Plate	D: Hall & Plate
24	Cavern	S: Rev Canyon	71	Echo & Rev	D: Echo & Rev
25	Soft Caynon		72	Delay & Rev	D: Delay & Rev
26	Alhambra Guitar	S: Rev Basement	73	Flange & Chorus	D: Flange & Chorus
27	Small Cellar		74	Flange & Sympho	D: Flange & Sympho
28	Drum Room		75	Sympho & Chorus	D: Sympho & Chorus
29	Bathroom Vocals		76	Flange & Rev	D: Flange & Rev
30	Early Ref Vocal	S: Early Ref	77	Chorus & Rev	D: Chorus & Rev
31	Early Ref Special Effect		78	Sympho & Rev	D: Sympho & Rev
32	Early Ref Hall		79	Flange & Dly LR	D: Flange & Dly LR
33	Early Ref Slap Plate		80	Chorus & Dly LR	D: Chorus & Dly LR
34	Early Ref Spring Vocal		81	Sympho & Dly LR	D: Sympho & Dly LR
35	Early Ref Reverse Vocal		Categoryの最初の1文字はエフェクトモードを示します。 S: シングル C: カスケード D: デュアル		
36	Gate Reverb	S: Gate Reverb			
37	Reverse Gate	S: Reverse Gate			
38	Delay L,R	S: Delay L,R			
39	Vocal Multi Delay	S: Delay L,C,R			
40	Stereo Echo	S: Stereo Echo			
41	Subtle Pitch Change	S: Pitch Change			
42	Wide Guitar				
43	Multi Pitch Delay				
44	Aural Exciter®	S: Aural Exciter			
45	Rotary Speaker	S: Rotary Speaker			
46	Ring Modulator	S: Ring Modulator			

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# Data - Value Assign Table

Table #1 Rev Time

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

Table #2 LPF

Data	Value (KHz)
0	1.0
1	1.1
2	1.2
3	1.4
4	1.6
5	1.8
6	2.0
7	2.2
8	2.5
9	2.8
10	3.2
11	3.6
12	4.0
13	4.5
14	5.0
15	5.6
16	6.3
17	7.0
18	8.0
19	9.0
20	10.0
21	11.0
22	12.0
23	14.0
24	16.0
25	Thru

Table #3 HPF1

Data	Value (Hz)
0	Thru
1	32
2	35
3	40
4	45
5	50
6	56
7	63
8	70
9	80
10	90
11	100
12	110
13	125
14	140
15	160
16	180
17	200
18	220
19	250
20	280
21	315
22	355
23	400
24	450
25	500
26	560
27	630
28	700
29	800
30	900
31	1000

# Data - Value Assign Table

**Table #4 HPF2**

Data	Value (Hz)
0	500
1	630
2	800
3	1000
4	1200
5	1600
6	2000
7	2500
8	3200
9	4000
10	5000
11	6300
12	8000
13	10000
14	12000
15	16000

**Table #5 Low Shelving**

Data	Value (Hz)
0	32
1	40
2	50
3	63
4	80
5	100
6	125
7	160
8	200
9	250
10	315
11	400
12	500
13	630
14	800
15	1000
16	1200
17	1600
18	2000

**Table #6 Mid Presence**

Data	Value (Hz)
0	315
1	400
2	500
3	630
4	800
5	900
6	1000
7	1200
8	1600
9	2000
10	2500
11	3200
12	4000
13	5000
14	6300

**Table #7 High Shelving**

Data	Value (Hz)
0	500
1	630
2	800
3	1000
4	1200
5	1600
6	2000
7	2500
8	3200
9	4000
10	5000
11	6300
12	8000
13	10000
14	12000
15	16000

# Data - Value Assign Table

Table #8 Length

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

Table #9 Trans Time

Data	Value (ms)	Data	Value (ms)
0	2	40	3100
1	3	41	3600
2	4	42	4400
3	5	43	5400
4	6	44	6200
5	7	45	7200
6	8	46	8700
7	11	47	11000
8	12	48	12500
9	14	49	14500
10	17	50	17500
11	21	51	22000
12	24		
13	28		
14	34		
15	43		
16	49		
17	57		
18	68		
19	85		
20	97		
21	114		
22	137		
23	170		
24	195		
25	230		
26	280		
27	340		
28	390		
29	450		
30	550		
31	680		
32	780		
33	910		
34	1100		
35	1400		
36	1600		
37	1800		
38	2200		
39	2700		

# Preset Values

No.	Effect Name	Parameter Number													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	Orchestra Hall	19	8	10	319	199	4	60	8	6	20	0			
1	Concert Hall	23	8	10	639	479	4	75	8	6	20	0			
2	Warm Hall	17	1	10	149	299	4	80	9	3	17	0			
3	Vocal Hall	21	1	10	99	239	3	75	8	7	20	6			
4	Vocal Large Hall	34	4	8	239	319	2	55	8	6	18	0			
5	Vocal Small Hall	19	2	7	119	239	4	64	8	6	18	6			
6	Large Room	11	6	9	159	999	4	52	6	7	24	0			
7	Bright Small Room	9	7	6	199	249	4	64	6	9	24	12			
8	Backing Vocal Tight Room	9	5	8	319	499	4	86	8	8	22	0			
9	Smooth Room	5	2	6	319	239	4	72	7	6	20	0			
10	Small Vocal Room	9	3	5	159	249	4	60	8	8	17	0			
11	Slap Room	3	3	8	332	399	3	40	9	4	18	19			
12	Vocal Stage	13	5	10	479	319	4	72	10	6	22	7			
13	Vocal Club	15	3	9	319	179	4	40	9	6	16	0			
14	Female Vocal Club	13	3	8	319	199	4	70	10	5	22	10			
15	Sax Stage	13	6	8	79	0	4	65	8	6	24	0			
16	Vocal Plate	15	5	10	479	199	4	72	8	8	22	0			
17	Percussion Plate	11	7	5	639	319	4	64	6	9	23	13			
18	Big Plate	33	3	7	101	304	4	33	8	4	16	0			
19	Distant Plate	17	3	10	99	913	4	25	8	9	25	0			
20	Stone Room	9	5	4	99	29	15	11	30	7	20	99	4	60	0
21	Cathedral	33	7	10	639	98	99	93	4	0	20	299	4	30	2
22	Dark Church	19	3	10	299	84	58	73	20	0	17	199	4	40	0
23	Tunnel	31	4	2	299	68	9	103	4	0	22	299	4	10	2
24	Cavern	25	5	10	639	40	60	66	10	0	24	399	4	70	2
25	Soft Caynon	24	4	10	1109	74	55	41	20	21	10	399	4	70	2
26	Alhambra Guitar	21	8	10	79	72	79	103	4	0	23	499	4	70	1
27	Small Cellar	9	3	5	79	22	18	38	26	0	22	199	4	70	1
28	Drum Room	17	4	9	79	18	29	38	28	3	24	199	4	70	1
29	Bathroom Vocals	5	8	3	79	32	15	31	6	6	22	99	4	70	1
30	Early Ref Vocal	2	14	10	10	379	9	2499	111	0	13				
31	Early Ref Special Effect	3	159	10	10	639	18	7999	100	0	23				
32	Early Ref Hall	1	27	8	8	199	1	459	108	0	22				
33	Early Ref Slap Plate	4	15	10	10	299	6	2399	105	7	23				
34	Early Ref Spring Vocal	5	15	6	8	239	13	239	123	0	22				
35	Early Ref Reverse Vocal	3	27	10	10	1999	18	3999	119	0	23				
36	Gate Reverb	0	21	5	10	49	12	199	99	0	16				
37	Reverse Gate	1	21	10	10	399	18	3999	109	0	24				
38	Delay L,R	9999	9999		9999	9999	109	4	3	0	22				
39	Vocal Multi Delay	8999	13499	4499	6749	8999	124	8	8	0	24				

Parameter Number の示す Parameter Name は10~21ページをご覧ください。



# Preset Values

No.	Effect Name	Parameter Number													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
40	Stereo Echo	4998	4998	124	4999	4999	124	9	9	0	24				
41	Subtle Pitch Change	24	108	179	108	100	24	88	319	100	100				
42	Wide Guitar	24	111	299	99	24	89	399	100						
43	Multi Pitch Delay	24	92	359	24	106	3999	24	112	7999					
44	Aural Exciter®	0	80	75	579										
45	Rotary Speaker	74	48	40	49	1	8	7							
46	Ring Modulator	20	28	100	96	5	8								
47	Stadium	3199	119	1599	119	43	1	45	70	0	15				
48	Delay L,R->Rev	474	6399	107	9	11	8	78	75	0	22				
49	Flange->Rev	13	90	11	75	17	7	399	20	0	24				
50	Gtr Cho Reverb	16	56	40		20	2	148	15	0	15				
51	Sympho->Rev	13	45	13			6	499	20	0	22				
52	Phaser->Rev	24	100	32		9	3	239	24	0	18				
53	Aural Exc®->Rev	1	62	72	9	0	10	219	20	24	15				
54	Dist->Rev	66	6	9	7	9	1	359	40	0	19				
55	Dist->Dly L,R	75	3	0	9	9030	3008	129	40	0	21				
56	Dist->Echo	80	3	11	8	2999	3199	84	50	0	20				
57	High Cut Reverb	9	8	9	4	11	3	35	796	40	40	3	10	4	
58	EQ Mid Reverb	15	9	8	8	8	12	6	265	70	40	3	10	6	
59	Sparkling Reverb	11	4	14	7	13	9	14	421	26	35	3	8	9	
60	Mid Delay	14	8	5	8	9	11	2806	5628	100	40				
61	Deep Echo	10	12	6	6	7	6	4799	4999	67	29				
62	EQ->Flange	11	8	7	5	7	7	11	35	72	100				
63	Bass Chorus	10	9	8	6	8	7	28	50	30	100				
64	Elec Guitar EQ/Sympho	7	8	10	10	3	9	14	69		100				
65	Warm Phase	11	9	8	3	8	9	28	100	45	100				
66	St.Flange->Dly LR	8	86	11	80	4149	4299	4149	4299	123	100				
67	St.Chorus->Dly LR	17	70	60		4149	4299	4149	4299	126	40				
68	Symph->Dly LR	15	80			3405	4299	4299	4149	122	40				
69	St.Phasing->Dly LR	11	100	45		3718	2081	7999	3988	119	40				
70	Hall & Plate	29	2	7	663	15	9	7	8	897	17				
71	Echo & Rev	3199	2999	74	19	2	10	299	78	3	15				
72	Delay & Rev	4799	4949	79	30	6	7	599	40	24	15				
73	Flange & Chorus	6	68	18	80		18	75	45						
74	Flange & Sympho	16	45	40	85		19	75							
75	Sympho & Chorus	19	75				18	75	45						
76	Flange & Rev	7	70	13	90	15	3	7	249	6	16				
77	Chorus & Rev	27	80	55		30	2	6	449	0	20				
78	Sympho & Rev	32	70			10	2	10	726	22	25				
79	Flange & Dly LR	15	50	27	80	3749	1559	3530	7079	133	24				
80	Chorus & Dly LR	29	60	50		4149	4299	4149	4299	113	24				
81	Sympho & Dly LR	29	80			2499	3749	4999	5099	133	25				

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Parameter Number の示す Parameter Name は10~21ページをご覧ください。

# Preset Value List

## 0:Orchestra Hall ~ 19:Distant Plate (Reverb Type)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Reverb Time	sec	0.3	30.0	Table #1	69
2	High Freq Rev Time Ratio	-	0.1	1.0	0.1	9
3	Diffusion	-	0	10	1	10
4	Initial Delay	ms	0.1	200.0	0.1	1999
5	Reverb Delay	ms	0.1	200.0	0.1	1999
6	Reverb Density	-	0	4	1	4
7	Early Reflec/Rev Balance	%	0	100	1	100
8	Low Gain	dB	-12	12	2	12
9	High Gain	dB	-12	12	2	12
10	LPF Freq	KHz	1	Thru	Table #2	25
11	HPF Freq	Hz	Thru	1000	Table #3	31

## 20:Stone Room ~ 29:Bathroom Vocal (Room Simulation Type)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Reverb Time	sec	0.3	30.0	Table #1	69
2	High Freq Rev Time Ratio	-	0.1	1.0	0.1	9
3	Diffusion	-	0	10	1	10
4	Initial Delay	ms	0.1	200.0	0.1	1999
5	Width	m	0.5	30.2	Table #8	103
6	Height	m	0.5	30.2	Table #8	103
7	Depth	m	0.5	30.2	Table #8	103
8	Wall Vary	-	0	30	1	30
9	HPF Freq	Hz	Thru	1000	Table #3	31
10	LPF Freq	KHz	1	Thru	Table #2	25
11	Reverb Delay	ms	0.1	200.0	0.1	1999
12	Density	-	0	4	1	4
13	Early Reflec/Rev Balance	%	0	100	1	100
14	Listening Position	-	Front	Rear	Local Table 1	2

Data	Value
0	Front
1	Center
2	Rear

## 30:Early Ref Vocal ~ 35:Early Ref Reverse Vocal (Early Reflection Type)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Type	sec	S-Hall	Spring	Local Table 2	5
2	Room Size	-	0.1	20.0	0.1	199
3	Liveness	-	0	10	1	10
4	Diffusion	-	0	10	1	10
5	Initial Delay	ms	0.1	400.0	0.1	3999
6	Early Reflec Number	-	1	19	1	18
7	Feedback Delay	ms	0.1	800.0	0.1	7999
8	Feedback Gain	%	-99	99	1	198
9	HPF Freq	Hz	Thru	1000	Table #3	31
10	LPF Freq	KHz	1	Thru	Table #2	25

Data	Value
0	S-Hall
1	L-Hall
2	Random
3	Reverse
4	Plate
5	Spring

## 36:Gate Reverb ~ 37:Reverse Gate

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Type	sec	Type-A	Type-B	Local Table 3	1
2	Room Size	-	0.1	20.0	0.1	199
3	Liveness	-	0	10	1	10
4	Diffusion	-	0	10	1	10
5	Initial Delay	ms	0.1	400.0	0.1	3999
6	Early Reflec Number	-	1	19	1	18
7	Feedback Delay	ms	0.1	800.0	0.1	7999
8	Feedback Gain	%	-99	99	1	198
9	HPF Freq	Hz	Thru	1000	Table #3	31
10	LPF Freq	KHz	1	Thru	Table #2	25

Data	Value
0	Type-A
1	Type-B

Unit : 単位 Minimum Maximum : 設定幅 Step/Table : 設定ステップ Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 38:Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Lch Delay Time	ms	0.1	1360.0	0.1	13599
2	Rch Delay Time	ms	0.1	1360.0	0.1	13599
3						
4	FB1 Delay Time	ms	0.1	1360.0	0.1	13599
5	FB2 Delay Time	ms	0.1	1360.0	0.1	13599
6	FB Gain	%	-99	99	1	198
7	FB1 High Freq Control	-	0.1	1.0	0.1	9
8	FB2 High Freq Control	-	0.1	1.0	0.1	9
9	HPF Freq	Hz	Thru	1000	Table #3	31
10	LPF Freq	KHz	1	Thru	Table #2	25

## 39:Vocal Multi Delay (Delay L,C,R)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Lch Delay Time	ms	0.1	1360.0	0.1	13599
2	Rch Delay Time	ms	0.1	1360.0	0.1	13599
3	Center Delay Time	ms	0.1	1360.0	0.1	13599
4	FB1 Delay Time	ms	0.1	1360.0	0.1	13599
5	FB2 Delay Time	ms	0.1	1360.0	0.1	13599
6	FB Gain	%	-99	99	1	198
7	FB1 High Freq Control	-	0.1	1.0	0.1	9
8	FB2 High Freq Control	-	0.1	1.0	0.1	9
9	HPF Freq	Hz	Thru	1000	Table #3	31
10	LPF Freq	KHz	1	Thru	Table #2	25

## 40:Stereo Echo

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Lch Init Delay Time	ms	0.1	680.0	0.1	6799
2	Lch FB Delay Time	ms	0.1	680.0	0.1	6799
3	Lch FB Gain	%	-99	99	1	198
4	Rch Init Delay Time	ms	0.1	680.0	0.1	6799
5	Rch FB Delay Time	ms	0.1	680.0	0.1	6799
6	Rch FB Gain	%	-99	99	1	198
7	Lch FB High Freq Control	-	0.1	1.0	0.1	9
8	Rch FB High Freq Control	-	0.1	1.0	0.1	9
9	HPF Freq	Hz	Thru	1000	Table #3	31
10	LPF Freq	KHz	1	Thru	Table #2	25

## 41:Subtle Pitch Change (Pitch Change 1)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	1 Pitch	-	-24	24	1	48
2	1 Fine	cent	-100	100	1	200
3	1 Delay	ms	0.1	650.0	0.1	6499
4	1 FB Gain	%	-99	99	1	198
5	1 Level	%	0	100	1	100
6	2 Pitch	-	-24	24	1	48
7	2 Fine	cent	-100	100.0	1	200
8	2 Delay	ms	0.1	650.0	0.1	6499
9	2 FB Gain	%	-99	99	1	198
10	2 Level	%	0	100	1	100

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 42:Wide Guitar (Pitch Change 2)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	L Pitch	-	-24	24	1	48
2	L Fine	cent	-100	100	1	200
3	L Delay	ms	0.1	650.0	0.1	6499
4	L FB Gain	%	-99	99	1	198
5	R Pitch	-	-24	24	1	48
6	R Fine	cent	-100	100.0	1	200
7	R Delay	ms	0.1	650.0	0.1	6499
8	R FB Gain	%	-99	99	1	198
9						
10						

## 43:Multi Pitch Delay (Pitch Change3)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	1 Pitch	-	-24	24	1	48
2	1 Fine	cent	-100	100	1	200
3	1 Delay	ms	0.1	1300.0	0.1	12999
4	2 Pitch	-	-24	24	1	48
5	2 Fine	cent	-100	100	1	200
6	2 Delay	ms	0.1	1300.0	0.1	12999
7	3 Pitch	-	-24	24.0	1	48
8	3 Fine	cent	-100	100	1	200
9	3 Delay	ms	0.1	1300.0	0.1	12999
10						

## 44:Aural Exciter®

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	HPF	Hz	500	16000	Table #4	15
2	Enhance	%	0	100	1	100
3	Mix Level	%	0	100	1	100
4	Delay Time	ms	0.1	650.0	0.1	6499
5						
6						
7						
8						
9						
10						

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## 45:Rotary Speaker

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Middle Speed	Hz	0.05	40.00	0.05	799
2	Depth	%	0	100	1	100
3	Transition Time	ms	2	22000	Table #9	51
4	L/M/H Speed Diff	Hz	0.05	5.80	0.05	115
5	Switch L/M/H	-	Low	High	LocalTab4	2
6	Low Gain	dB	-12	12	2	12
7	High Gain	dB	-12	12	2	12
8						
9						
10						

Local Tab4	
Data	Value
0	Low
1	Middle
2	High

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 46: Ring Modulator

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Wave PM Depth	%	0	100	1	100
2	Wave PM Freq	Hz	0.05	40.00	0.05	799
3	Wave AM Depth	%	0	100	1	100
4	Wave AM Freq	Hz	0.05	40.00	0.05	799
5	Low Gain	dB	-12	12	2	12
6	High Gain	dB	-12	12	2	12
7						
8						
9						
10						

## 47: Stadium

(Echo->Reverb)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Echo Lch Delay	ms	0.1	320.0	0.1	3199
2	Echo Lch FB Gain	%	-99	99.0	1	198
3	Echo Rch Delay	ms	0.1	320	0.1	3199
4	Echo Rch FB Gain	%	-99	99.0	1	198
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	ER/Rev Balance	%	0	100	1	100
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 48: Delay L,R -> Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Dly Lch Delay	ms	0.1	640.0	0.1	6399
2	Dly Rch Delay	ms	0.1	640.0	0.1	6399
3	Dly Lch FB Gain	%	-99	99	1	198
4	Dly Rch FB Gain	%	-99	99	1	198
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	ER/Rev Balance	%	0	100	1	100
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 49: Flange -> Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3	Modulation Delay	%	0.1	100.0	0.1	999
4	Modulation FB Gain	%	0	99	1	99
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	Rev Initial Delay	ms	0.1	200	0.1	1999
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 50: Guitar Chorus Reverb (Chorus->Rev)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Chorus Mod Freq	Hz	0.05	40.00	0.05	799
2	Chorus PM Depth	%	0	100	1	100
3	Chorus AM Depth	%	0	100.0	1	100
4						
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	Rev Initial Delay	ms	0.1	200	0.1	1999
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 51: Sympho -> Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3						
4						
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	Rev Initial Delay	ms	0.1	200	0.1	1999
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 52: Phaser -> Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3	Modulation Delay	%	0.1	5.0	0.1	49
4						
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	Rev Initial Delay	ms	0.1	200	0.1	1999
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 53:Aural Exciter®->Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	HPF	Hz	500	16000	Table #4	15
2	Enhance	%	0	100	1	100
3	Mix Level	%	0	100	1	100
4	Reverb Time	sec	0.3	30.0	Table #1	69
5	High	-	0.1	1.0	0.1	9
6	Diffusion	-	0	10	1	10
7	Initial Delay	ms	0.1	200.0	0.1	1999
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

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Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 54: Distortion -> Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Distortion Level	%	0	100	1	100
2	Middle Freq	Hz	315	6300	Table #6	14
3	Middle Gain	dB	-12	12	2	12
4	Treble Gain	dB	-12	12	2	12
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1.0	0.1	9
7	Rev Initial Delay	ms	0.1	200	0.1	1999
8	Rev Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 55: Distortion->Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Distortion Level	%	0	100	1	100
2	Middle Freq	Hz	315	6300	Table #6	14
3	Middle Gain	dB	-12	12	2	12
4	Treble Gain	dB	-12	12	2	12
5	Dly Lch Delay	ms	0.1	1360.0	0.1	13599
6	Dly Rch Delay	ms	0.1	1360.0	0.1	13599
7	Dly FB Gain	%	-99	99	1	198
8	Delay Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 56: Distortion->Echo

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Distortion Level	%	0	100	1	100
2	Middle Freq	Hz	315	6300	Table #6	14
3	Middle Gain	dB	-12	12	2	12
4	Treble Gain	dB	-12	12	2	12
5	Echo Lch Delay	ms	0.1	680.0	0.1	6799
6	Echo Rch Delay	ms	0.1	680.0	0.1	6799
7	Echo FB Gain	%	-99	99	1	198
8	Echo Mix Level	%	0	100	1	100
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 57: HighCut Reverb ~ 59: Sparkling Reverb (EQ->Rev)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Low Freq	Hz	32	2000	Table #5	18
2	Low Gain	dB	-12	12	2	12
3	Mid Freq	Hz	315	6300	Table #6	14
4	Mid Gain	dB	-12	12	2	12
5	High Freq	Hz	500	16000	Table #7	15
6	High Gain	dB	-12	12	2	12
7	Reverb Time	sec	0.3	30	Table #1	69
8	Initial Delay	ms	0.1	200.0	0.1	1999
9	ER/Rev Balance	%	0	100	1	100
10	Rev Mix Level	%	0	100	1	100
11	Density	-	0	3	1	3
12	Diffusion	-	0	10	1	10
13	High	-	0.1	1.0	0.1	9

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 60: Mid Delay

(EQ->Delay L,R)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Low Freq	Hz	32	2000	Table #5	18
2	Low Gain	dB	-12	12	2	12
3	Mid Freq	Hz	315	6300	Table #6	14
4	Mid Gain	dB	-12	12	2	12
5	High Freq	Hz	500	16000	Table #7	15
6	High Gain	dB	-12	12	2	12
7	Dly Lch Delay	ms	0.1	1360.0	0.1	13599
8	Dly Rch Delay	ms	0.1	1360.0	0.1	13599
9	Dly FB Gain	%	-99	99	1	198
10	Delay Mix Level	%	0	100	1	100

## 61: Deep Echo

(EQ->Echo)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Low Freq	Hz	32	2000	Table #5	18
2	Low Gain	dB	-12	12	2	12
3	Mid Freq	Hz	315	6300	Table #6	14
4	Mid Gain	dB	-12	12	2	12
5	High Freq	Hz	500	16000	Table #7	15
6	High Gain	dB	-12	12	2	12
7	Echo Lch Delay	ms	0.1	680.0	0.1	6799
8	Echo Rch Delay	ms	0.1	680.0	0.1	6799
9	Echo FB Gain	%	-99	99	1	198
10	Echo Mix Level	%	0	100	1	100

## 62: EQ->Flange

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Low Freq	Hz	32	2000	Table #5	18
2	Low Gain	dB	-12	12	2	12
3	Mid Freq	Hz	315	6300	Table #6	14
4	Mid Gain	dB	-12	12	2	12
5	High Freq	Hz	500	16000	Table #7	15
6	High Gain	dB	-12	12	2	12
7	Modulation Freq	Hz	0.05	40.0	0.05	799
8	Modulation Depth	%	0	100	1	100
9	Modulation FB Gain	%	0	99	1	99
10	Flange Mix Level	%	0	100	1	100

## 63: Bass Chorus

(EQ->Chorus)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Low Freq	Hz	32	2000	Table #5	18
2	Low Gain	dB	-12	12	2	12
3	Mid Freq	Hz	315	6300	Table #6	14
4	Mid Gain	dB	-12	12	2	12
5	High Freq	Hz	500	16000	Table #7	15
6	High Gain	dB	-12	12	2	12
7	Chorus Mod Freq	Hz	0.05	40.0	0.05	799
8	Chorus PM Depth	%	0	100	1	100
9	Chorus AM Depth	%	0	100	1	100
10	Chorus Mix Level	%	0	100	1	100

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。



# Preset Value List

## 64: Elec Guitar EQ/Sympho (EQ->Sympho)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Low Freq	Hz	32	2000	Table #5	18
2	Low Gain	dB	-12	12	2	12
3	Mid Freq	Hz	315	6300	Table #6	14
4	Mid Gain	dB	-12	12	2	12
5	High Freq	Hz	500	16000	Table #7	15
6	High Gain	dB	-12	12	2	12
7	Modulation Freq	Hz	0.05	40.0	0.05	799
8	Modulation Depth	%	0	100	1	100
9						
10	Sympho Mix Level	%	0	100	1	100

## 65: Warm Phase (EQ->Phaser)

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Low Freq	Hz	32	2000	Table #5	18
2	Low Gain	dB	-12	12	2	12
3	Mid Freq	Hz	315	6300	Table #6	14
4	Mid Gain	dB	-12	12	2	12
5	High Freq	Hz	500	16000	Table #7	15
6	High Gain	dB	-12	12	2	12
7	Modulation Freq	Hz	0.05	40.0	0.05	799
8	Modulation Depth	%	0	100	1	100
9	Modulation Delay	ms	0.1	5.0	0.1	49
10	Phaser Mix Level	%	0	100	1	100

## 66: Flange -> Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3	Modulation Delay	%	0.1	100.0	0.1	999
4	Modulation FB Gain	%	0	99	1	99
5	Delay Lch Delay	ms	0.1	800.0	0.1	7999
6	Delay Rch Delay	ms	0.1	800.0	0.1	7999
7	Delay FB1 Delay	ms	0.1	800.0	0.1	7999
8	Delay FB2 Delay	ms	0.1	800.0	0.1	7999
9	Delay FB Gain	%	-99	99	1	198
10	Delay Mix Level	%	0	100	1	100

## 67: St.Chorus -> Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Chorus Mod Freq	Hz	0.05	40.00	0.05	799
2	Chorus PM Depth	%	0	100	1	100
3	Chorus AM Depth	%	0	100.0	1	100
4						
5	Delay Lch Delay	ms	0.1	800.0	0.1	7999
6	Delay Rch Delay	ms	0.1	800.0	0.1	7999
7	Delay FB1 Delay	ms	0.1	800.0	0.1	7999
8	Delay FB2 Delay	ms	0.1	800.0	0.1	7999
9	Delay FB Gain	%	-99	99	1	198
10	Delay Mix Level	%	0	100	1	100

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 68: Sympho -> Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3						
4						
5	Delay Lch Delay	ms	0.1	800.0	0.1	7999
6	Delay Rch Delay	ms	0.1	800.0	0.1	7999
7	Delay FB1 Delay	ms	0.1	800.0	0.1	7999
8	Delay FB2 Delay	ms	0.1	800.0	0.1	7999
9	Delay FB Gain	%	-99	99	1	198
10	Delay Mix Level	%	0	100	1	100

## 69: Phaser -> Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3	Modulation Delay	%	0.1	5.0	0.1	49
4						
5	Delay Lch Delay	ms	0.1	800.0	0.1	7999
6	Delay Rch Delay	ms	0.1	800.0	0.1	7999
7	Delay FB1 Delay	ms	0.1	800.0	0.1	7999
8	Delay FB2 Delay	ms	0.1	800.0	0.1	7999
9	Delay FB Gain	%	-99	99	1	198
10	Delay Mix Level	%	0	100	1	100

## 70: Hall & Plate

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Hall Reverb Time	sec	0.3	30.0	Table #1	69
2	Hall High	-	0.1	1.0	0.1	9
3	Hall Diffusion	-	0	10	1	10
4	Hall Initial Delay	ms	0.1	200.0	0.1	1999
5	Hall LPF	KHz	1	Thru	Table #2	25
6	Plate Reverb Time	sec	0.3	30	Table #1	69
7	Plate High	-	0.1	1	0.1	9
8	Plate Diffusion	-	0	10	1	10
9	Plate Initial Delay	ms	0.1	200	0.1	1999
10	Plate LPF	KHz	1	Thru	Table #2	25

## 71: Echo & Reverb

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Echo Lch Delay	ms	0.1	320.0	0.1	3199
2	Echo Rch Delay	ms	0.1	320.0	0.1	3199
3	Echo FB Gain	%	-99	99	1	198
4	Reverb Time	sec	0.3	30.0	Table #1	69
5	Rev High	-	0.1	1.0	0.1	9
6	Rev Diffusion	-	0	10	1	10
7	Rev Initial Delay	ms	0.1	200.0	0.1	1999
8	Rev ER/Rev Balance	%	0	100	1	100
9	Rev HPF	Hz	Thru	1000	Table #3	31
10	Rev LPF	KHz	1	Thru	Table #2	25

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
 Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 72: Delay & Reverb

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Delay Lch Delay	ms	0.1	640.0	0.1	6399
2	Delay Rch Delay	ms	0.1	640.0	0.1	6399
3	Delay FB Gain	%	-99	99	1	198
4	Reverb Time	sec	0.3	30.0	Table #1	69
5	Rev High	-	0.1	1.0	0.1	9
6	Rev Diffusion	-	0	10	1	10
7	Rev Initial Delay	ms	0.1	200.0	0.1	1999
8	Rev ER/Rev Balance	%	0	100	1	100
9	Rev HPF	Hz	Thru	1000	Table #3	31
10	Rev LPF	KHz	1	Thru	Table #2	25

## 73: Flange & Chorus

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Flange Mod Freq	Hz	0.05	40.0	0.05	799
2	Flange Mod Depth	%	0	100.0	1	100
3	Flange Mod Delay	%	0.1	100	0.1	999
4	Flange Mod FB Gain	%	0	99.0	1	99
5						
6	Chorus Mod Freq	Hz	0.05	40	0.05	799
7	Chorus PM Depth	%	0	100.0	1	100
8	Chorus AM Depth	%	0	100	1	100
9						
10						

## 74: Flange & Sympho

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Flange Mod Freq	Hz	0.05	40.0	0.05	799
2	Flange Mod Depth	%	0	100.0	1	100
3	Flange Mod Delay	%	0.1	100	0.1	999
4	Flange Mod FB Gain	%	0	99.0	1	99
5						
6	Sympho Mod Freq	Hz	0.05	40	0.05	799
7	Sympho Mod Depth	%	0	100.0	1	100
8						
9						
10						

## 75: Sympho & Chorus

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Sympho Mod Freq	Hz	0.05	40.0	0.05	799
2	Sympho Mod Depth	%	0	100.0	1	100
3						
4						
5						
6	Chorus Mod Freq	Hz	0.05	40	0.05	799
7	Chorus PM Depth	%	0	100.0	1	100
8	Chorus AM Depth	%	0	100	1	100
9						
10						

Unit : 単位 Minimum Maximum : 設定幅 Step/Table : 設定ステップ Max.Int. : 最大設定段階  
Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 76: Flange & Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Flange Mod Freq	Hz	0.05	40.0	0.05	799
2	Flange Mod Depth	%	0	100.0	1	100
3	Flange Mod Delay	%	0.1	100	0.1	999
4	Flange Mod FB Gain	%	0	99.0	1	99
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	Rev Diffusion	-	0	10	1	10
8	Rev Initial Delay	ms	0.1	200	0.1	1999
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 77: Chorus & Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Chorus Mod Freq	Hz	0.05	40.0	0.05	799
2	Chorus PM Depth	%	0	100.0	1	100
3	Chorus AM Depth	%	0	100	1	100
4						
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	Rev Diffusion	-	0	10	1	10
8	Rev Initial Delay	ms	0.1	200	0.1	1999
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 78: Sympho & Rev

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.0	0.05	799
2	Modulation Depth	%	0	100.0	1	100
3						
4						
5	Reverb Time	sec	0.3	30.0	Table #1	69
6	Reverb High	-	0.1	1	0.1	9
7	Rev Diffusion	-	0	10	1	10
8	Rev Initial Delay	ms	0.1	200	0.1	1999
9	HPF	Hz	Thru	1000	Table #3	31
10	LPF	KHz	1	Thru	Table #2	25

## 79: Flange & Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3	Modulation Delay	%	0.1	100.0	0.1	999
4	Modulation FB Gain	%	0	99	1	99
5	Delay Lch Delay	ms	0.1	800.0	0.1	7999
6	Delay Rch Delay	ms	0.1	800.0	0.1	7999
7	Delay FB1 Delay	ms	0.1	800.0	0.1	7999
8	Delay FB2 Delay	ms	0.1	800.0	0.1	7999
9	Delay FB Gain	%	-99	99	1	198
10	LPF	KHz	1	Thru	Table #2	25

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
 Table #1~#9は5~7ページをご覧ください。

# Preset Value List

## 80: Chorus & Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Chorus Mod Freq	Hz	0.05	40.00	0.05	799
2	Chorus PM Depth	%	0	100	1	100
3	Chorus AM Depth	%	0	100.0	1	100
4						
5	Delay Lch Delay	ms	0.1	800.0	0.1	7999
6	Delay Rch Delay	ms	0.1	800.0	0.1	7999
7	Delay FB1 Delay	ms	0.1	800.0	0.1	7999
8	Delay FB2 Delay	ms	0.1	800.0	0.1	7999
9	Delay FB Gain	%	-99	99	1	198
10	LPF	KHz	1	Thru	Table #2	25

## 81: Sympho & Delay L,R

No.	Parameter Name	Unit	Minimum	Maximum	Step/Table	Max.Int.
1	Modulation Freq	Hz	0.05	40.00	0.05	799
2	Modulation Depth	%	0	100	1	100
3						
4						
5	Delay Lch Delay	ms	0.1	800.0	0.1	7999
6	Delay Rch Delay	ms	0.1	800.0	0.1	7999
7	Delay FB1 Delay	ms	0.1	800.0	0.1	7999
8	Delay FB2 Delay	ms	0.1	800.0	0.1	7999
9	Delay FB Gain	%	-99	99	1	198
10	LPF	KHz	1	Thru	Table #2	25

Unit : 単位    Minimum Maximum : 設定幅    Step/Table : 設定ステップ    Max.Int. : 最大設定段階  
 Table #1~#9は5~7ページをご覧ください。

# MIDI Data Format

## 1. MIDI 受信／送信ブロック図

### <MIDI 受信条件>

MIDI IN or TO HOST ————— \$F0,\$43,\$78,\$41,\$[ch#],\$[pa/H],\$[pa/L],\$[bc/H],\$[bc/L],\$F7  
PARAMETER REQUEST

————— \$F0,\$43,\$78,\$40,\$[ch#],\$[pa/H],\$[pa/L],\$[bc/H],\$[bc/L],\$[d/H],\$[d/L],\$F7  
PARAMETER DUMP

※ホストセレクトスイッチがMIDI以外るとき、HOST IN → MIDI OUT、MIDI IN → HOST OUT へそれぞれエコーバックされます。

### <MIDI 送信条件>

MIDI OUT or TO HOST ————— \$F0,\$43,\$78,\$40,\$[ch#],\$[pa/H],\$[pa/L],\$[bc/H],\$[bc/L],\$[d/H],\$[d/L],\$F7  
PARAMETER DUMP

※ホストセレクトスイッチがMIDI以外るとき、HOST IN → MIDI OUT、MIDI IN → HOST OUT へそれぞれエコーバックされます。

## 2. チャンネルメッセージ

チャンネルメッセージの送信／受信は行なわない。  
ホストセレクトスイッチがMIDI以外るとき  
HOST IN → MIDI OUT  
MIDI IN → HOST OUT へそれぞれエコーバックされます。

## 3. システムメッセージ

CBX-D5 は、Digital Track Message (注1) というシステムエクスクルーシブメッセージを扱います。

(注1) Digital Track Message (以降DTメッセージと称します)とは、ヤマハシステムエクスクルーシブID と、Digital Track Command から成り立つ、システムエクスクルーシブメッセージです。

本機のDigital Track Message は以下のようなフォーマットになっています。

Digital Track Message の一般的な Format

11110000	F0		
01000011	43	}	YAMAHA System Exclusive ID
01111000	78		YAMAHA System Exclusive Sub ID
	<ab>	*1	DT command
	data bytes	*2	
11110111	F7		

# MIDI Data Format

\*1 <ab>

DT ステータス (MS 3bits)	Sub ステータス (LS 4bits)
0 - 2 : reserved	
3 : Encapsulated MIDI command の DT status	Sub status equals to MIDI status code
4 : Device specific messages の DT status	Substatus=0 → parameter dump Substatus=1 → parameter request
5 - 7 : reserved	

(DT command format 別表1参照)

\*2 data bytes

フォーマットと長さはDTステータスバイトによって成り立ちます。

DTメッセージの最初のデータバイト (MAX 128チャンネル) はチャンネルナンバーで、CBX-D5のbaseChが0の場合、0~3になります。

1つのDTメッセージの中には複合のDTコマンドが存在します。

DTメッセージの終了にはEOX (F7) を使用します。

DTメッセージはエラー補正の観点で100ms毎にブレイクを入れることをお勧めします。

## DT command format (別表1)

3 : Encapsulated MIDI command (詳細は別表2参照)

Status	3
Substatus	MIDI status byte
Databyte[0]	channel
Databyte[1...]	MIDI data bytes

4 : Device specific messages

4.1 parameter dump

Status	4
Substatus	0
Databyte[0]	channel
Databyte[1 - 2]	parameter address
Databyte[3 - 4]	byte count
Databyte[5...]	data

注意：ハードディスクレコーディングは、1つのユニットを使いマルチチャンネル録音/再生を行なうので、パラメーターは、CommonパラメーターとChannelパラメーターの2つに分けられます。各パラメーターアドレスは以下の番地となります。

Channel parameter base address = h'0

Common parameter base address = h'2000

# MIDI Data Format

## Parameter Dump Format (4.1資料)

```

11110000 F0
01000011 43 YAMAHA system exclusive ID
01111000 78 YAMAHA system exclusive sub ID
01000000 40 parameter dump status
0ccccccc nn channel number
0mmmmmmm mm parameter address Most significant 7bits [pa/H]
01111111 11 parameter address Least significant 7bits [pa/L]
    parameter address = 0x80 * [pa/H] + [pa/L]
    0x0000-0xx1FFF: channel parameter 0x0000-0x1FFF
    0x2000-0xx3FFF: common parameter 0x0000-0x1FFF
0mmmmmmm mm byte count Most significant 7bits [bc/H]
01111111 11 byte count Least significant 7bits [bc/L]
    byte count = 0x80 * [bc/H] + [bc/L]
0ddddddd dd data
    :      :      :
0ddddddd dd data
11110111 F7
  
```

} ASCII化されたときのサイズ

## 4.2 parameter request

Status	4
Substatus	1
Databyte[0]	channel
Databyte[1 - 2]	parameter address
Databyte[3 - 4]	byte count

## Parameter Request Format (4.2資料)

```

11110000 F0
01000011 43 YAMAHA system exclusive ID
01111000 78 YAMAHA system exclusive sub ID
01000001 41 parameter request status
0ccccccc nn channel number
0mmmmmmm mm parameter address Most significant 7bits [pa/H]
01111111 11 parameter address Least significant 7bits [pa/L]
    parameter address = 0x80 * [pa/H] + [pa/L]
    0x0000-0xx1FFF: channel parameter 0x0000-0x1FFF
    0x2000-0xx3FFF: common parameter 0x0000-0x1FFF
0mmmmmmm mm byte count Most significant 7bits [bc/H]
01111111 11 byte count Least significant 7bits [bc/L]
    byte count = 0x80 * [bc/H] + [bc/L]
0ddddddd dd data
    :      :      :
0ddddddd dd data
11110111 F7
  
```

} ASCII化されたときのサイズ



# MIDI Data Format

## Encapsulated MIDI command (別表2)

### Control changes (Assignable)

00000110	06	data entry for RPN
00000111	07	channel volume
00001011	0B	channel expression
00010000	10	
01100000	60	data increment for RPN
01100001	61	data decrement for RPN
01111000	78	All sound off

これ以外のコントロールナンバーは使用できません。  
またコントローラー値はメモリーされません。

### RPN

00000000	00	Pitch bend range
----------	----	------------------

### Pitch bend

### Channel mode message

01111001	79	reset all controllers
----------	----	-----------------------

# MIDI Parameter

## Common parameter

### System

parameter name	value
Rec Source	*1
Rec Frequency	*2
Play Back Frequency	*3
Trigger Rec Mode on/off	*4
Trigger Rec Level	*5
Sync Mode Select	*6
MIDI Sync on/off	*4
Channel Status bit0 (out)	*13
Channel Status Sampling Freq	*14

(\*1~\*14は27ページ)

### Effect Return Sel/Level

parameter name	value
Effect Return 1 Select 1	*7
Effect Return 1 Select 2	*7
Effect Return 2 Select 1	*7
Effect Return 2 Select 2	*7
Effect Return 3 Select 1	*7
Effect Return 3 Select 2	*7
Effect Return 4 Select 1	*7
Effect Return 4 Select 2	*7
Effect Return 1 Level 1	0-127
Effect Return 1 Level 2	0-127
Effect Return 2 Level 1	0-127
Effect Return 2 Level 2	0-127
Effect Return 3 Level 1	0-127
Effect Return 3 Level 2	0-127
Effect Return 4 Level 1	0-127
Effect Return 4 Level 2	0-127

(\*7は27ページ)

### DEQ

parameter name	value
Mode	*8

(\*8は27ページ)

### DSP2

parameter name	value
Type	0-81
Parameter 1	0-? (word)
Parameter 2	0-? (word)
:	:
:	:
Parameter 30	0-? (word)

## Channel parameter

### System (ch 0,1 only)

parameter name	value
Rec Monitor on/off	*4

(\*4は27ページ)

### Volume,Effect Send

parameter name	value
Channel Volume	0-127
Bus 1 Select	*7
Bus 2 Select	*7
Bus 3 Select	*7
Bus 4 Select	*7
Bus 1 Volume	0-127
Bus 2 Volume	0-127
Bus 3 Volume	0-127
Bus 4 Volume	0-127
Effect Send 1 Level	0-127
Effect Send 2 Level	0-127

(\*7は27ページ)

### DEQ

parameter name	value
IIR 1 Parameter	**
IIR 2 Parameter	**
IIR 3 Parameter	**
IIR 4 Parameter	**

(\*\*は下表)

### \*\* IIR n Parameter (n=1-4)

parameter	value
Type	*9
Frequency	*10
Gain	*11
Q	*12

(\*9~\*12は27ページ)

# MIDI Parameter

\*1

value	source
0	AES/EBU
1	Y2
2	CD/DAT
3	ANALOG

\*2

value	Freq(KHz)
0	48
1	44.1
2	32
3	22.05

\*3

value	Freq(KHz)
0	48
1	44.1

\*4

value	on/off
0	off
1	on

\*5

value	Level(dB)
0	-9
1	-15
2	-18
3	-24
4	-30
5	-36
6	-42
7	-48
8	-∞

\*6

value	Mode
0	internal
1	external
2	AES/EBU
3	Y2
4	CD/DAT

\*7

value	Select
0	OUT1
1	OUT2
2	OUT3
3	OUT4
4	mute

\*8

value	Mode
0	Reserved
1	Thru
2	PEQ

Software Thru  
4 IIR/4Ch

\*9

value	Type	Freq	Gain	Q
0	Through	0	0	0
1	Lo1	1	0	0
2	Lo2	1	0	1
3	Hi1	1	0	0
4	Hi2	1	0	1
5	LoSh	1	1	0
6	HISh	1	1	0
7	Presence	1	1	1
8	BandEl	1	0	1
9	BandPass	1	0	1

0:無効  
1:有効

\*10

value	Freq(Hz)
0	18
1	20
2	22
3	25
4	28
5	32
6	36
7	40
8	45
9	50
10	56
11	63
12	70
13	80
14	90
15	100
16	110
17	125
18	140
19	160
20	180
21	200
22	220
23	250
24	280
25	315
26	355
27	400
28	450
29	500
30	560
31	630
32	700
33	800
34	900
35	1000
36	1100
37	1200
38	1400
39	1600
40	1800
41	2000
42	2200
43	2500
44	2800
45	3200
46	3600
47	4000
48	4500
49	5000
50	5600
51	6300
52	7000
53	8000
54	9000
55	10000
56	11000
57	12000
58	14000
59	16000
60	18000

注: RecFreq=32KHz 時  
value=59,60 は 15000 Hz

\*11

value	Gain(dB)
0	-15
:	:
30	15

\*12

value	Q
0	0.1
:	:
49	5.0

\*13

value	bit0
0	consumer
1	professional

\*14 Sync mode Select = internal 以外の時の  
Channel Status Sampling Freq

value	Freq(KHz)
0	48
1	44.1
2	32

# MIDI Parameter Map

## Common parameter

Common Parameter (base address=h'2000)
Channel 0 Parameter (base address=h'0)
Channel 1 Parameter (base address=h'0)
Channel 2 Parameter (base address=h'0)
Channel 3 Parameter (base address=h'0)

System	Rec Source	0	Parameter 6 MSB	50	
	Rec Frequency	1	Parameter 6 LSB	51	
	Play Back Frequency	2	Parameter 7 MSB	52	
	Trigger Rec Mode on/off	3	Parameter 7 LSB	53	
	Trigger Rec Level	4	Parameter 8 MSB	54	
	Sync Mode Select	5	Parameter 8 LSB	55	
	MIDI Sync on/off	6	Parameter 9 MSB	56	
	Channel Status bit0	7	Parameter 9 LSB	57	
	Channel Status Sampling Freq	8	Parameter 10 MSB	58	
	Reserved	9	Parameter 10 LSB	59	
	Reserved	10	Parameter 11 MSB	60	
Efct Rtn	Reserved	11	Parameter 11 LSB	61	
	Effect Return 1 Select 1	12	Parameter 12 MSB	62	
	Effect Return 1 Select 2	13	Parameter 12 LSB	63	
	Effect Return 2 Select 1	14	Parameter 13 MSB	64	
	Effect Return 2 Select 2	15	Parameter 13 LSB	65	
	Effect Return 3 Select 1	16	Parameter 14 MSB	66	
	Effect Return 3 Select 2	17	Parameter 14 LSB	67	
	Effect Return 4 Select 1	18	Parameter 15 MSB	68	
	Effect Return 4 Select 2	19	Parameter 15 LSB	69	
	Effect Return 1 Level 1	20	Parameter 16 MSB	70	
	Effect Return 1 Level 2	21	Parameter 16 LSB	71	
	Effect Return 2 Level 1	22	Parameter 17 MSB	72	
	Effect Return 2 Level 2	23	Parameter 17 LSB	73	
	Effect Return 3 Level 1	24	Parameter 18 MSB	74	
	Effect Return 3 Level 2	25	Parameter 18 LSB	75	
	Effect Return 4 Level 1	26	Parameter 19 MSB	76	
	Effect Return 4 Level 2	27	Parameter 19 LSB	77	
	Reserved	28	Parameter 20 MSB	78	
	Reserved	29	Parameter 20 LSB	79	
	Reserved	30	Parameter 21 MSB	80	
	Reserved	31	Parameter 21 LSB	81	
	DEQ	Mode	32	Parameter 22 MSB	82
		Reserved	33	Parameter 22 LSB	83
		Reserved	34	Parameter 23 MSB	84
		Reserved	35	Parameter 23 LSB	85
		Reserved	36	Parameter 24 MSB	86
		Reserved	37	Parameter 24 LSB	87
DSP2	Reserved	38	Parameter 25 MSB	88	
	Type	39	Parameter 25 LSB	89	
	Parameter 1 MSB	40	Parameter 26 MSB	90	
	Parameter 1 LSB	41	Parameter 26 LSB	91	
	Parameter 2 MSB	42	Parameter 27 MSB	92	
	Parameter 2 LSB	43	Parameter 27 LSB	93	
	Parameter 3 MSB	44	Parameter 28 MSB	94	
	Parameter 3 LSB	45	Parameter 28 LSB	95	
	Parameter 4 MSB	46	Parameter 29 MSB	96	
	Parameter 4 LSB	47	Parameter 29 LSB	97	
	Parameter 5 MSB	48	Parameter 30 MSB	98	
	Parameter 5 LSB	49	Parameter 30 LSB	99	

# MIDI Parameter Map

## Channel N parameter

System	Rec Monitor on/off	0	Valid only for ch 0,1	
	Reserved	1		
	Reserved	2		
	Reserved	3		
	Reserved	4		
	Reserved	5		
Vol,Efct Snd	Channel Volume	6		
	Reserved	7		
	Bus 1 Select	8		
	Bus 2 Select	9		
	Bus 3 Select	10		
	Bus 4 Select	11		
	Bus 1 Volume	12		
	Bus 2 Volume	13		
	Bus 3 Volume	14		
	Bus 4 Volume	15		
	Effect Send 1 Level	16		
	Effect Send 2 Level	17		
	Reserved	18		
	Reserved	19		
	Reserved	20		
	Reserved	21		
	Reserved	22		
	Reserved	23		
	DEQ	Reserved	24	
		Reserved	25	
Reserved		26		
Reserved		27		
Reserved		28		
Reserved		29		
IIR 1 Parameter *		30		
		37		
IIR 2 Parameter *		38		
		45		
IIR 3 Parameter *		46		
		53		
IIR 4 Parameter *	54			
	61			
Reserved	62			
:				
Reserved	69			

### \* IIR n Parameter

Type	0
Frequency	1
Gain	2
Q	3
Reserved	4
Reserved	5
Reserved	6
Reserved	7

# Digital Track Message Example

CBX-D5のDSP2/DEQ/DMIX はコンピューターのアプリケーションで操作するようになっています。

ご使用になっているアプリケーションがCBX-D5に対応している場合、必ずアプリケーション側から操作してください。

万一、外部シーケンサーなどからコントロールしなければならない場合、以下のDTメッセージの使用例を参考に操作してください。

## 1. 例えばDTメッセージを使って、DEQをコントロールする場合

```
F0 43 78 40 baseCh# 40 20 00 02 '0' '2' F7          [PEQ Mode]
F0 43 78 40 baseCh# 00 1E 00 08 '0' '7' '2' '3' '0' '3' '0' '9' F7
                                     [Ch.0 Presence 1KHz -12dB Q=1.0]
F0 43 78 40 baseCh#+1 00 1E 00 08 '0' '7' '2' '3' '0' '3' '0' '9' F7 [Ch.1]
F0 43 78 40 baseCh#+2 00 1E 00 08 '0' '7' '2' '3' '0' '3' '0' '9' F7 [Ch.2]
F0 43 78 40 baseCh#+3 00 1E 00 08 '0' '7' '2' '3' '0' '3' '0' '9' F7 [Ch.3]
```

元にもどすときは、

```
F0 43 78 40 baseCh# 40 20 00 02 '0' '1' F7          [Thru Mode]
```

## 2. 例えばDTメッセージを使って、DSP2でDelay L/Rをかける場合

```
F0 43 78 40 baseCh# 40 0C 00 18
'0' '0' '0' '2' '0' '1' '0' '3'
'0' '4' '0' '4' '0' '4' '0' '4'
'7' 'F' '7' 'F' '7' 'F' '7' 'F' F7          [return destination & level]
F0 43 78 40 baseCh# 40 27 00 1A
'2' '6'
                                     [type = Delay L/R]
'1' '3' '8' '7'          [param1 Lch Initial Delay = 500msec]
'0' '9' 'C' '3'          [param2 Rch Initial Delay = 250msec]
'0' '0' '0' '0'          [param3]
'1' '3' '8' '7'          [param4 Lch Feedback Delay = 500msec]
'1' '3' '8' '7'          [param5 Rch Feedback Delay = 500msec]
'0' '0' 'A' 'E' F7          [param6 Feedback Gain = 75%]
F0 43 78 40 baseCh# 00 10 00 02 '7' 'F' F7          [send1 level max]
F0 43 78 40 baseCh# 00 08 00 02 '0' '4' F7          [mute dry]
F0 43 78 40 baseCh#+1 00 09 00 02 '0' '4' F7          [mute dry]
F0 43 78 40 baseCh#+2 00 0A 00 02 '0' '4' F7          [mute dry]
F0 43 78 40 baseCh#+3 00 0B 00 02 '0' '4' F7          [mute dry]
```

元にもどすときは、

```
F0 43 78 40 baseCh# 00 10 00 02 '0' '0' F7          [send level 0]
F0 43 78 40 baseCh# 00 08 00 02 '0' '0' F7          [Open dry]
F0 43 78 40 baseCh#+1 00 09 00 02 '0' '1' F7
F0 43 78 40 baseCh#+2 00 0A 00 02 '0' '2' F7
F0 43 78 40 baseCh#+3 00 0B 00 02 '0' '3' F7
F0 43 78 40 baseCh# 40 0C 00 08
'0' '4' '0' '4' '0' '4' '0' '4' F7          [Mute Effect return]
```

## 3. 例えばDTメッセージを使って、DSP2でBass Chorusをかける場合

```
F0 43 78 40 baseCh# 40 0C 00 18
'0' '0' '0' '2' '0' '1' '0' '3'
'0' '4' '0' '4' '0' '4' '0' '4'
'7' 'F' '7' 'F' '7' 'F' '7' 'F' F7
F0 43 78 40 baseCh# 40 27 00 2A
'3' 'F',
'0' '0' '0' '0' '0' '0' '0' '6',
'0' '0' '0' '0' '0' '0' '0' '6',
'0' '0' '0' '0' '0' '0' '0' '6',
'0' '0' '1' '3',
'0' '0' '3' '2',
'0' '0' '3' '2',
'0' '0' '3' '2' F7
```

```
[type = Bass Chorus]
[low freq gain 0]
[mid freq gain 0]
[high freq gain 0]
[mod freq 1Hz]
[pm depth 50%]
[am depth 50%]
[mix level 50%]
```

```
F0 43 78 40 baseCh# 00 10 00 02 '7' 'F' F7
F0 43 78 40 baseCh# 00 08 00 02 '0' '4' F7
F0 43 78 40 baseCh#+1 00 09 00 02 '0' '4' F7
F0 43 78 40 baseCh#+2 00 0A 00 02 '0' '4' F7
F0 43 78 40 baseCh#+3 00 0B 00 02 '0' '4' F7
```

```
[Send Level max]
[Mute Dry]
```

元にもどすときは、

```
F0 43 78 40 baseCh# 00 10 00 02 '0' '0' F7
F0 43 78 40 baseCh# 00 08 00 02 '0' '0' F7
F0 43 78 40 baseCh#+1 00 09 00 02 '0' '1' F7
F0 43 78 40 baseCh#+2 00 0A 00 02 '0' '2' F7
F0 43 78 40 baseCh#+3 00 0B 00 02 '0' '3' F7
F0 43 78 40 baseCh# 40 0C 00 08
'0' '4' '0' '4' '0' '4' '0' '4' F7
```

```
[Send Level 0]
[Open Dry]
```

```
[Mute Effect return]
```

### 【参考】

baseCh#の値として、0を使用してください。

Function ...	Transmitted	Recognized	Remarks
:Basic Default	: x	: x	:
:Channel Changed	: x	: x	:
:Mode Default	: x	: x	:
:Mode Messages	: x	: x	:
: altered	: *****	: x	:
:Note	: x	: x	:
:Number : True voice:	: *****	: x	:
:Velocity Note ON	: x	: x	:
: Note OFF	: x	: x	:
:After Key's	: x	: x	:
:Touch Ch's	: x	: x	:
:Pitch Bender	: x	: x	:
:	: x	: x	:
: Control	:	:	:
: Change	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:Prog	: x	: x	:
:Change : True #	: *****	: x	:
:System Exclusive	: o	: o	:
: common : Sont Pos.	: x	: x	:
: Song Sel.	: x	: x	:
: Tune	: x	: x	:
:System :Clock	: x	: x	:
:Real Time :Commands:	: x	: x	:
:Aux :Local ON/OFF	: x	: x	:
: :All Notes OFF:	: x	: x	:
:Mes- :Active Sense	: x	: x	:
:sages:Reset	: x	: x	:
:Note	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:

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