

## GENERAL MIDI SETTINGS

### ■ SOUND

P.CNG#	SOUND NAME	P.CNG#	SOUND NAME	P.CNG#	SOUND NAME	P.CNG#	SOUND NAME
1	Piano	33	Acoustic Bass	65	Soprano Sax	97	Ice Rain
2	Rock Piano	34	Bright E.Bass	66	Alto Sax	98	Soundtrack
3	Electric Grand	35	Picked E.Bass	67	Tenor Sax	99	Synth Glocken
4	Honky-Tonk Piano	36	Fretless Bass	68	Baritone Sax	100	Atmosphere
5	E.Piano 1	37	Slap Bass 1	69	Oboe	101	Mist
6	Modern E.P.1	38	Slap Bass 2	70	English Horn	102	Goblins
7	Harpichord	39	Wow Bass 1	71	Bassoon	103	Echo Drops
8	Clavi	40	Synth Choppar	72	Jazz Clarinet 1	104	Star Theme
9	Celesta	41	Violin	73	Piccolo	105	Sitar
10	Glockenspiel	42	Viola	74	Jazz Flute	106	Banjo
11	Music Box	43	Cello	75	Recorder	107	Shamisen
12	Vibraphone	44	Bowed Bass	76	Pan Flute 1	108	Koto
13	Marimba	45	Tremolo Strings	77	Blown Bottle	109	Kalimba
14	Xylophone	46	Pizzicato Str.	78	Shakuhachi	110	Bagpipe
15	Tubular Bells	47	Harp	79	Whistle	111	Fiddle
16	Dulcimer	48	Timpani	80	Ocarina	112	Shanai
17	Full Drawbars	49	Classical Strings	81	Square Lead	113	Tinkle Bell
18	Jazz Organ	50	Slow Strings	82	Saw Lead	114	Agogo
19	Rock Organ	51	Synth Strings 1	83	Synth Calliopo	115	Steel Drum
20	Pipe Organ 1	52	Synth Strings 2	84	Chiffer Lead	116	Wood Block
21	Harmonium	53	Vocal Ah	85	Charang	117	Taiko Drum
22	Bright Accordion	54	Vocal Doo	86	Air Vox	118	Melodic Tom
23	Blues Harmonica	55	Synth Vocal	87	5th Wave	119	Synth Drum
24	Bandoneon	56	Orchestra Hit 1	88	Bass & Lead	120	Reverse Cymbal
25	Jazz Ac.Guitar	57	Trumpet 1	89	Fantasia	121	Fret Noise
26	Folk Guitar	58	Bright Trombone	90	Mellow Ensemble	122	Breath Noise
27	Jazz Guitar 1	59	Orchestral Tuba	91	Polysynth	123	Seashore
28	Bright Solid Gtr	60	Harmon Mute Tpt	92	Spacy Pad	124	Bird Tweet
29	Mute Guitar	61	Open Fr.Horn	93	Bowed Glass	125	Telephone
30	Overdrive Guitar	62	Brass	94	Metal Pad	126	Helicopter
31	Distortion Gtr	63	Synth Brass 1	95	Halo Pad	127	Applause
32	Rock Harmonics	64	Mellow Synth Brass	96	Sweep Pad	128	Gun Shot

### ■ Parts

MIDI CHANNEL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PART	R1	R2	L	P4	P5	P6	P7	P8	P9	P16	P11	P12	P13	P14	P15	P10
SEQUENCER TRACK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

### ■ Non-working Function

DEMO,RHYTHM GROUP,ONE TOUCH PLAY/MUSIC STYLE SELECT,  
MUSIC STYLE ARRANGER, PANEL MEMORY, TECHNI-CHORD, AUTO PLAY CHORD, COMPOSER,  
SOUND ARRANGER,SOUND EDIT etc.

## SX-KN3000 REFERENCE GUIDE

### Contents

■ DISPLAY GUIDE .....	2
■ EASY SETTING .....	2
■ SOUND .....	3
■ RHYTHM .....	7
■ KEYBOARD PERCUSSION .....	9
■ TECHNI-CHORD TYPE .....	11
■ REVERB.....	12
■ DSP EFFECT .....	13
■ TONE .....	21
■ DIGITAL EFFECT .....	22
■ MIDI Implementation Chart .....	23
■ MIDI DATA FORMAT .....	25

# DISPLAY GUIDE

- SEQUENCER**
- REALTIME RECORD
  - PUNCH RECORD
  - STEP RECORD
  - SONG SELECT/NAME
  - EDIT
  - TRACK ASSIGN
  - MEDLEY
  - AFTER TOUCH SET

- SOUND EDIT**
- EASY EDIT
  - tone SELECT
  - AMPLITUDE
  - PITCH
  - FILTER
  - tone LAYER
  - DIGITAL EFFECT
  - CONTROLLER

- MEMORY& CONTROL**
- INITIAL
  - FOOT SWITCH SETTING
  - PANEL MEMORY MODE
  - MUSIC STYLE ARRANGER MODE
  - DYNAMIC ACCOMP RESPONSE
  - DISK LOAD
  - DISK SAVE
  - MIDI FILE DIRECT PLAY
  - FLOPPY DISK FORMAT

- MIDI**
- BASIC CHANNEL
  - CONTROL MESSAGE
  - OCTAVE SHIFT & LOCAL ON/OFF
  - REALTIME MESSAGES
  - COMMON SETTING
  - MIDI PRESETS
  - INPUT/OUTPUT SETTING
  - SYSEX BULK DUMP
  - GENERAL MIDI
  - P. MEM OUTPUT

- SOUND**
- PART SETTING
  - OVERALL TOUCH SENSITIVITY
  - MASTER TUNING
  - KEY SCALING
  - LEFT HOLD
  - MIXER
  - REVERB
  - DSP EFFECT
  - TECHNI-CHORD

- COMPOSER**
- RECORDING MEMORY-A
  - RECORDING MEMORY-B
  - RECORDING MEMORY-C
  - MODE SELECT
  - BEND RANGE
  - EASY COMPOSER
  - COPY
  - SEQ TO COMP COPY
  - LOAD SINGLE COMPOSER PATTERN

# EASY SETTING (Press and hold)

- TECHNI-CHORD**
- TECHNI-CHORD TYPE SETTING

- SET**
- PANEL MEMORY MODE

- DIGITAL REVERB**
- REVERB

- MUSIC STYLE ARRANGER**
- MUSIC STYLE ARRANGER MODE

- DSP EFFECT**
- DSP EFFECT

- MEMORY& CONTROL**
- FLOPPY DISK LOAD

- SPLIT POINT**
- SPLIT POINT SELECT

- COMPOSER**
- FLOPPY DISK LOAD (COMPOSER)

- DYNAMIC ACCOMP**
- DYNAMIC ACCOMP RESPONSE

# SOUND

Sound	MIDI Program change data				Sound	MIDI Program change data					
	Normal		Technics			Normal		Technics		GM	
	No.	Bank	Data	Bank		No.	Bank	Data	Bank		
<b>PIANO &amp; E PIANO</b>					<b>HARPSI &amp; MALLET</b>						
Piano	9	0	0	0	1	Harpsichord	1	0	16	0	7
Piano 1 Octave	9	1	0	16		Clavi	1	1	17	0	8
Piano 2 Octave	9	2	2	16		Synth Clavi	1	2	115	0	
Honky-Tonk Piano	9	3	1	16	4	Glockenspiel	1	3	9	0	10
Electric Grand	9	4	3	0	3	Vibraphone	1	4	8	0	12
Midi Grand 1	9	5	0	32		Marimba	1	5	10	0	13
E. Piano 1	9	6	5	0	5	Xylophone	1	6	11	0	14
Suitcase E.P.	9	7	4	32		Steel Drum	1	7	15	0	115
Modern E.P.1	9	8	6	0	6	Celeste	1	8	12	0	9
Modern E.P.2	9	9	4	0		Bottle Marimba	1	9	13	0	
Mellow Piano	9	10	2	0		Cembalo	1	10	18	0	
Solo Piano	9	11	0	48		Harpsi. Octave	1	11	16	16	
Rock Piano	9	12	3	32	2	Vibes & Jazz Guitar	1	12	8	64	
Midi Grand 2	9	13	0	64		Power Steel Drum	1	13	15	16	
Jangle Piano	9	14	1	48		Tubular Bells	1	14	14	0	15
E. Piano 2	9	15	5	32		Wind Chime	1	15	14	16	
Tremolo E. Piano	9	16	4	64		Tinkle Bell	1	16	14	32	113
Wurlly E.P.	9	17	4	80		African Mallet	1	17	113	0	
Modern E.P.3	9	18	6	48		Caribbean Mallet	1	18	11	16	
Bell Piano	9	19	116	16		Synth Glocken	1	19	9	32	99
<b>GUITAR</b>					<b>SPECIAL PERC</b>						
Classical Guitar	10	0	20	0		Hawaiian Guitar 1	2	0	31	48	
Spanish Guitar	10	1	20	16		Hawaiian Guitar 2	2	1	31	0	
Folk Guitar	10	2	22	0	26	Banjo	2	2	33	0	106
Jazz Guitar 1	10	3	25	0	27	Mandolin	2	3	35	0	
Bright Solid Gtr	10	4	26	0	28	Harp	2	4	32	0	47
Clean Solid Gtr	10	5	26	16		Orchestra Hit 1	2	5	127	16	56
Mute Guitar	10	6	29	0	29	Timpani	2	6	126	0	48
Distortion Gtr	10	7	30	0	31	Koto	2	7	37	0	108
Overdrive Guitar	10	8	27	32	30	Kalimba	2	8	39	0	109
Country Guitar	10	9	31	16		Metal Kalimba	2	9	39	16	
Jazz Ac. Guitar	10	10	21	0	25	Orchestra Hit 2	2	10	127	32	
Guitar Harmonics	10	11	27	64		Music Box	2	11	7	0	11
12 String Guitar	10	12	23	0		Christmas Piano	2	12	7	32	
Electro Ac. Guitar	10	13	25	32		Shamisen	2	13	36	0	107
Jazz Guitar 2	10	14	24	0		Sitar	2	14	38	0	105
Mellow Solid Gtr	10	15	28	0		Gamelan 1	2	15	14	48	
Fusion Solid Gtr	10	16	28	32		Gamelan 2	2	16	14	112	
Funk Mute Guitar	10	17	29	48		Dulcimer	2	17	38	16	16
Rock Harmonics	10	18	27	16	32	Kanun	2	18	38	32	
MIDI Guitar	10	19	26	48		Cumbus	2	19	38	48	

# SOUND

Sound	MIDI Program change data				Sound	MIDI Program change data			
	Normal		Technics			Normal		Technics	
	No.	Bank	Data	Bank		No.	Bank	Data	Bank
<b>STRINGS &amp; VOCAL</b>					<b>ORGAN &amp; ACCORDION</b>				
Symphonic Strings	11	0	100	48	Jazz Organ	3	0	88	0 18
Classical Strings	11	1	100	0 49	Full Drawbars	3	1	89	0 17
Slow Strings	11	2	101	0 50	Jazz Drawbars	3	2	93	0
Pizzicato Str.	11	3	99	0 46	16' & 1'	3	3	91	0
Synth Strings 1	11	4	103	0 51	Pop Organ 1	3	4	90	0
Violin	11	5	96	0 41	Pipe Organ 1	3	5	84	0 20
Cello	11	6	97	0 43	Theatre Organ 1	3	6	87	32
Vocal Ah	11	7	104	48 53	Bright Accordion	3	7	80	0 22
Vocal Ooh	11	8	104	32	Mellow Accordion	3	8	81	0
Vocal Doo	11	9	109	0 54	Musette	3	9	82	0
Marcato Strings	11	10	100	64	Mellow Drawbars	3	10	91	32
Octave Strings	11	11	102	0	Pop Organ 2	3	11	89	32
Bass Strings	11	12	98	16	Rock Organ	3	12	92	32 19
Tremolo Strings	11	13	100	32 45	Organ Bass	3	13	94	16
Synth Strings 2	11	14	103	16 52	Pipe Organ 2	3	14	85	0
Jazz Violin	11	15	96	16	Theatre Organ 2	3	15	87	48
Fiddle	11	16	96	32 111	Theatre Organ 3	3	16	87	64
Viola	11	17	97	32 42	Theatre Organ 4	3	17	87	80
Bowed Bass	11	18	98	0 44	Harmonium	3	18	86	32 21
Humming	11	19	105	0	Bandoneon	3	19	80	16 24
<b>BRASS</b>					<b>REED</b>				
Brass	12	0	56	0 62	Soprano Sax	4	0	76	0 65
Brass & Synth	12	1	56	48	Alto Sax	4	1	77	0 66
Trumpet 1	12	2	48	0 57	Mellow Alto Sax	4	2	77	16
Harmon Mute Tpt	12	3	50	0 60	Tenor Sax	4	3	78	48 67
Flugel Horn	12	4	51	0	Breathy Tenor	4	4	78	16
Bright Trombone	12	5	52	0 58	Baritone Sax	4	5	79	16 68
Cup Mute Trombone	12	6	52	48	Jazz Clarinet 1	4	6	68	0 72
Closed Fr. Horn	12	7	54	0	Oboe	4	7	66	0 69
Open Fr. Horn	12	8	54	16 61	Harmonica	4	8	83	0
Synth Brass 1	12	9	60	0 63	Blues Harmonica	4	9	83	16 23
Octave Brass	12	10	56	16	Rock Tenor Sax	4	10	79	0
Mute Brass Ens.	12	11	56	32	Distortion Sax	4	11	78	32
Trumpet 2	12	12	48	64	Synth Sax	4	12	79	48
Orchest. Trumpet	12	13	48	32	Jazz Clarinet 2	4	13	68	32
Straight Mute Tpt	12	14	50	16	Mellow Clarinet	4	14	68	16
Cornet	12	15	49	16	Classic Clarinet	4	15	69	0
Mellow Trombone	12	16	53	0	Bass Clarinet	4	16	69	16
Orchestral Tuba	12	17	55	0 59	English Horn	4	17	67	0 70
Marching Tuba	12	18	55	16	Bassoon	4	18	70	0 71
Synth Brass 2	12	19	63	48	Bagpipe	4	19	73	0 110

Program change number = Program change data + 1 / Bank number = Bank data + 1

# SOUND

Sound	MIDI Program change data				Sound	MIDI Program change data			
	Normal		Technics			Normal		Technics	
	No.	Bank	Data	Bank		No.	Bank	Data	Bank
<b>FLUTE &amp; ETHNIC</b>					<b>SYNTH LEAD</b>				
Piccolo	13	0	64	0 73	Square Lead	5	0	117	0 81
Jazz Flute	13	1	65	0 74	Saw Lead	5	1	118	16 82
Classical Flute	13	2	65	16	Sine Lead	5	2	94	0
Alto Flute	13	3	64	16	Air Vox	5	3	106	16 86
Pan Flute 1	13	4	72	0 76	Chiffer Lead	5	4	117	32 84
Recorder	13	5	74	0 75	Charang	5	5	27	48 85
Ocarina	13	6	74	16 80	Metallica Solo	5	6	115	96
Whistle	13	7	111	0 79	Talking Lead	5	7	117	80
Shakuhachi	13	8	75	0 78	Digi Stack	5	8	116	96
Quena	13	9	75	16	80's Solo	5	9	121	80
Alto Ensemble	13	10	64	48	Steamy Keys	5	10	106	80
Pan Flute 2	13	11	72	16	Olymp Synth	5	11	60	64
Blown Bottle	13	12	72	32 77	Voco Synth	5	12	118	32
Ney	13	13	73	32	5th Wave	5	13	119	0 87
Shanai	13	14	73	16 112	Bass & Lead	5	14	46	32 88
Synth Recorder	13	15	74	32	Sleigh Synth	5	15	61	64
Synth Calliope	13	16	72	48 83	Talking Synth	5	16	60	80
Knock Whistle	13	17	112	48	Synth Harp	5	17	32	64
Misty Flute	13	18	75	64	Afro Dance	5	18	11	80
Flutter Flute	13	19	75	80	Digi Bells	5	19	14	96
<b>BASS</b>					<b>SYNTH PAD</b>				
Acoustic Bass	14	0	43	0 33	Mellow Ensemble	6	0	107	16 90
Mellow Ac. Bass	14	1	43	16	Warm Synth Pad	6	1	62	80
Electric Bass	14	2	40	0	Synth Vocal	6	2	107	0 55
Bright E. Bass	14	3	40	16 34	Spacy Pad	6	3	107	32 92
Funky E. Bass	14	4	40	48	Metal Pad	6	4	106	32 94
Fretless Bass	14	5	40	32 36	Star Theme	6	5	120	16 104
Picked E. Bass	14	6	42	0 35	Bowed Glass	6	6	120	0 93
Slap Bass 1	14	7	41	0 37	Atmosphere	6	7	21	48 100
Analog Bass	14	8	46	16	Fantasia	6	8	116	48 89
Wow Bass 1	14	9	46	0 39	Bell Pad	6	9	116	32
Fusion E. Bass	14	10	40	64	Dream	6	10	108	32
Mute Bass	14	11	47	0	Mist	6	11	108	48 101
Slap Bass 2	14	12	41	16 38	Sweep Pad	6	12	62	32 96
Soul Bass	14	13	42	16	Halo Pad	6	13	107	48 95
Synth Chopper	14	14	45	0 40	Echo Drops	6	14	106	48 103
Wow Bass 2	14	15	46	64	Polysynth	6	15	102	32 91
Dance Bass	14	16	47	48	Mellow Synth Brass	6	16	62	64 64
House Bass	14	17	47	32	Voxmosphere	6	17	61	96
Plastic Bass	14	18	46	80	Wide Window	6	18	61	112
Dr. M Bass	14	19	46	96	Dark Universe	6	19	106	64

# SOUND

Sound	MIDI Program change data				Sound	MIDI Program change data					
	Normal		Technics			GM	Normal		Technics		
	No.	Bank	Data	Bank			No.	Bank	Data	Bank	
<b>KEYBOARD PERC</b>					<b>PERC &amp; EFFECT</b>						
Jazz Kit	15	0	113	128	Agogo	7	0	122	0	114	
Brush Kit	15	1	117	128	Wood Block	7	1	122	16	116	
Trad Kit	15	2	118	128	Taiko Drum	7	2	123	48	117	
Standard Kit	15	3	112	128	GM	Melodic Tom	7	3	122	32	118
Room Kit	15	4	115	128	Synth Drum	7	4	124	0	119	
Light Rock Kit	15	5	126	128	Reverse Cymbal	7	5	122	48	120	
Power Kit	15	6	119	128	Ice Rain	7	6	121	48	97	
Funk Kit	15	7	120	128	Soundtrack	7	7	119	16	98	
Soul Kit	15	8	121	128	Goblins	7	8	106	0	102	
Electric Kit	15	9	114	128	Windy Sweep	7	9	106	96		
Dance Kit	15	10	122	128	Sleigh Bell	7	10	125	0		
House Kit	15	11	123	128	Talking Drum	7	11	123	64		
Synth Kit	15	12	116	128	Fret Noise	7	12	124	16	121	
Orchestral Kit	15	13	124	128	Breath Noise	7	13	124	32	122	
Sound Effect Kit	15	14	125	128	Seashore	7	14	124	48	123	
User Kit	15	15			Bird Tweet	7	15	125	32	124	
					Telephone	7	16	123	0	125	
					Helicopter	7	17	123	16	126	
					Applause	7	18	125	48	127	
					Gun Shot	7	19	123	32	128	
<b>MEMORY A</b>					<b>MEMORY B</b>						
MEMORY A - 1	8	0	0	128	MEMORY B - 1	0	0	20	128		
MEMORY A - 2	8	1	1	128	MEMORY B - 2	0	1	21	128		
MEMORY A - 3	8	2	2	128	MEMORY B - 3	0	2	22	128		
MEMORY A - 4	8	3	3	128	MEMORY B - 4	0	3	23	128		
MEMORY A - 5	8	4	4	128	MEMORY B - 5	0	4	24	128		
MEMORY A - 6	8	5	5	128	MEMORY B - 6	0	5	25	128		
MEMORY A - 7	8	6	6	128	MEMORY B - 7	0	6	26	128		
MEMORY A - 8	8	7	7	128	MEMORY B - 8	0	7	27	128		
MEMORY A - 9	8	8	8	128	MEMORY B - 9	0	8	28	128		
MEMORY A - 10	8	9	9	128	MEMORY B - 10	0	9	29	128		
MEMORY A - 11	8	10	10	128	MEMORY B - 11	0	10	30	128		
MEMORY A - 12	8	11	11	128	MEMORY B - 12	0	11	31	128		
MEMORY A - 13	8	12	12	128	MEMORY B - 13	0	12	32	128		
MEMORY A - 14	8	13	13	128	MEMORY B - 14	0	13	33	128		
MEMORY A - 15	8	14	14	128	MEMORY B - 15	0	14	34	128		
MEMORY A - 16	8	15	15	128	MEMORY B - 16	0	15	35	128		
MEMORY A - 17	8	16	16	128	MEMORY B - 17	0	16	36	128		
MEMORY A - 18	8	17	17	128	MEMORY B - 18	0	17	37	128		
MEMORY A - 19	8	18	18	128	MEMORY B - 19	0	18	38	128		
MEMORY A - 20	8	19	19	128	MEMORY B - 20	0	19	39	128		

Program change number = Program change data + 1 / Bank number = Bank data + 1

# RHYTHM

RHYTHM	MIDI PROGRAM CHANGE DATA				RHYTHM	MIDI PROGRAM CHANGE DATA					
	Normal		TECH			Normal		TECH			
	No.	Bank	Data	Bank		No.	Bank	Data	Bank		
<b>8BEAT 1</b>					<b>DANCE POP</b>						
8Bt Standard	109	7	(0)	90	(96)	Disco 1	120	2	(0)	124	(80)
8Bt Soft Rock	110	7	(1)	88	(64)	Disco 2	110	2	(1)	123	(64)
8Bt Rock	112	7	(2)	90	(112)	Rep	112	2	(2)	127	(96)
8Bt Pop Ballad	96	7	(3)	91	(64)	Hip Hop	103	2	(3)	127	(80)
8Bt Ballad 1	70	7	(4)	91	(48)	Dance	112	2	(4)	124	(96)
8Bt Ballad 2	88	7	(5)	91	(32)	House	120	2	(5)	125	(32)
Country Rock	140	7	(6)	85	(32)	Garage	120	2	(6)	125	(48)
60's Pop	140	7	(7)	86	(32)						
<b>8BEAT 2</b>					<b>BIG BAND &amp; SWING</b>						
Rock'n'Roll 1	152	0	(0)	80	(80)	Big Band 1	174	10	(0)	36	(64)
Rock'n'Roll 2	168	0	(1)	80	(64)	Big Band 2	117	10	(1)	38	(80)
U.S. Rock	140	0	(2)	94	(32)	B. Band Ballad	84	10	(2)	39	(32)
Hard Rock	140	0	(3)	92	(32)	Standard Swing	170	10	(3)	25	(32)
8Bt Soul 1	124	0	(4)	87	(32)	Orch. Swing	86	10	(4)	37	(32)
8Bt Soul 2	108	0	(5)	87	(16)	Jazz Waltz	176	10	(5)	46	(48)
8Bt Pop	120	0	(6)	84	(64)						
<b>16BEAT</b>					<b>ROCK (OTHERS)</b>						
16Bt Standard 1	82	8	(0)	96	(80)	Shuffle R&R 1	164	3	(0)	76	(112)
16Bt Standard 2	87	8	(1)	96	(64)	Shuffle R&R 2	170	3	(1)	76	(16)
16Bt Rock	77	8	(2)	100	(32)	Shuffle Boogie	178	3	(2)	76	(0)
16Bt Pop	98	8	(3)	101	(32)	Shuffle H.Rock	140	3	(3)	79	(16)
16Bt Ballad 1	83	8	(4)	99	(16)	Rock Ballad	70	3	(4)	74	(80)
16Bt Ballad 2	83	8	(5)	99	(112)	Slow Soul Ballad	66	3	(5)	75	(32)
16Bt Pop Ballad	75	8	(6)	107	(80)	Swing Rock	94	3	(6)	72	(64)
						Shuffle Ballad	76	3	(7)	78	(32)
<b>JAZZ ROCK &amp; SOUL</b>					<b>JAZZ COMBO</b>						
Jazz Rock 1	110	1	(0)	113	(96)	Jazz Combo	165	11	(0)	34	(80)
Jazz Rock 2	90	1	(1)	113	(80)	Euro Combo	131	11	(1)	34	(64)
Soul Rock	94	1	(2)	102	(64)	Jazz Quartet	190	11	(2)	32	(64)
Jazz Funk 1	102	1	(3)	112	(48)	Jazz Ballad	86	11	(3)	44	(16)
Jazz Funk 2	110	1	(4)	113	(64)	Modern Jazz	190	11	(4)	40	(80)
Soul Ballad	80	1	(5)	103	(32)	Organ Blues	146	11	(5)	38	(96)
						Dixie	180	11	(6)	24	(96)
<b>FUNK &amp; LATIN ROCK</b>					<b>U.S. TRAD</b>						
Funk	117	9	(0)	110	(48)	Country 2 Step	142	4	(0)	17	(112)
Swing Funk	96	9	(1)	65	(32)	Country Swing	132	4	(1)	17	(80)
Salsa	112	9	(2)	66	(64)	Bluegrass	127	4	(2)	20	(48)
Samba Rock	110	9	(3)	117	(16)	Hawaiian	112	4	(3)	22	(16)
Latin Pop	110	9	(4)	116	(16)	R&B Soul	128	4	(4)	123	(80)
Carib. Rock	103	9	(5)	118	(48)	R&B Ballad	96	4	(5)	75	(64)
						Gospel Shuffle	136	4	(6)	77	(64)

# RHYTHM

TEMPO  
↓

RHYTHM	MIDI PROGRAM CHANGE DATA			RHYTHM	MIDI PROGRAM CHANGE DATA		
	NORM	TECH			NORM	TECH	
<b>MARCH &amp; WALTZ</b>				<b>LATIN 1</b>			
		bank	bank		bank	bank	
U.S. March 2/4 128	12	(0)	0 (80)	Rhumba 120	13 (0)	58 (64)	
German March 2/4 120	12	(1)	1 (48)	Beguine 120	13 (1)	59 (32)	
U.S. March 6/8 120	12	(2)	2 (16)	Cha Cha 132	13 (2)	57 (48)	
Pop March 112	12	(3)	4 (64)	Mambo 132	13 (3)	56 (32)	
Polka 2/4 124	12	(4)	4 (32)	Swingy Reggae 90	13 (4)	71 (32)	
Stand. Waltz 90	12	(5)	8 (96)	Modern Reggae 100	13 (5)	71 (48)	
Vienna Waltz 180	12	(6)	9 (32)				
Chanson Waltz 132	12	(7)	11 (32)				
Swingy Waltz 128	12	(8)	12 (16)				
Polka 6/8 128	12	(9)	5 (32)				
<b>TRAD &amp; SHOWTIME</b>				<b>LATIN 2</b>			
Foxtrot 120	5	(0)	29 (96)	Bossanova 1 78	6 (0)	48 (112)	
Chanson Fox. 176	5	(1)	29 (64)	Bossanova 2 74	6 (1)	48 (96)	
Jive 190	5	(2)	29 (0)	Samba 114	6 (2)	51 (80)	
Quickstep 200	5	(3)	28 (16)	Tango Argent. 122	6 (3)	53 (48)	
Soft shoe 168	5	(4)	24 (80)	Tango Conti. 132	6 (4)	53 (64)	
Broadway Show 136	5	(5)	15 (32)	Arabian 114	6 (5)	60 (0)	
Hollywood 130	5	(6)	30 (16)				
Cabaret 124	5	(7)	15 (48)				
Paris Ballad 94	5	(8)	74 (96)				
<b>MEMORY</b>				<b>COMPOSER CHORD MAP</b>			
MEMORY A V1	14	(0)	0 (128)	MAP 1	15 (0)	112 (128)	
MEMORY A V2	14	(1)	1 (128)	MAP 2	15 (1)	113 (128)	
MEMORY A V3	14	(2)	2 (128)	MAP 3	15 (2)	114 (128)	
MEMORY A V4	14	(3)	3 (128)	MAP 4	15 (3)	115 (128)	
MEMORY B V1	14	(4)	4 (128)	MAP 5	15 (4)	116 (128)	
MEMORY B V2	14	(5)	5 (128)				
MEMORY B V3	14	(6)	6 (128)				
MEMORY B V4	14	(7)	7 (128)				
MEMORY C V1	14	(8)	8 (128)				
MEMORY C V2	14	(9)	9 (128)				
MEMORY C V3	14	(10)	10 (128)				
MEMORY C V4	14	(11)	11 (128)				

\*The numbers in parentheses ( ) are bank data.  
Program change number = Program change data + 1 / Bank number = Bank data + 1

# KEYBOARD PERCUSSION

	GM	Other kits	MIDI NOTE NUMBER	TECH		Orchestral kit	MIDI NOTE NUMBER		
				NORM	TECH		NORM	TECH	
C1	36	Bass Drum	36	36	Orchestral Bass Drum	36	36		Rock bass
	37	Rim Shot	37	47	Rim Shot	37	47		Trsd bass
D1	38	Snare Drum 1	38	38	Orchestral Snare Drum 1	38	38		Rock snare
		Special Snare Drum	39	31	Castanets	39	55		elit. snare
E1		Snare Drum 2	40	32	Orchestral Snare Drum 2	40	32		Rock sn
F1		Floor Tom	41	95	Triangle	41	57		Rock tom
		Splash Cymbal	42	24	Cymbal Soft Mallet	42	24		elit. tom
A1		Tom Low	43	41	Orchestral Tambourine	43	21		Rock tom
		Crash Cymbal Low	44	51	Orchestral Cymbal 1	44	51		elit tom
B1		Tom Mid	45	43	Tam-Tam	45	30		Rock tom
		Crash Cymbal High	46	25	Orchestral Cymbal 2	46	25		elit tom
C2		Tom High	47	45	Rattle	47	58		Rock tom
		Hi Hat Close 1	48	48	Tublar Bells C	48	84		H H close
		Hi Hat Close 2	49	49	Tublar Bells C'	49	85		H H close
		Hi Hat Open	50	50	Tublar Bells D	50	86		H H open
		Ride Bell	51	28	Tublar Bells D'	51	87		Crash cym
		Ride Cymbal	52	52	Tublar Bells E	52	88		Ride cym
		Conga Low	53	53	Tublar Bells F	53	89		Conga low
		Small Conga Low	54	54	Tublar Bells F'	54	90		Small Conga
		Conga High	55	55	Tublar Bells G	55	91		Conga high
		Small Conga High	56	56	Tublar Bells G'	56	92		Small Conga
		Conga Crash	57	57	Tublar Bells A	57	93		Conga crash
		Metal Cabasa	58	58	Tublar Bells A'	58	94		Cabasa 1
		Timbales Low	59	99	Tublar Bells B	59	95		Cabasa 2
		Timbales High	60	100	Tublar Bells c	60	96		Cabasa 1
		Cowbell Low	61	66	Tublar Bells c'	61	97		
		Cowbell High	62	62	Tublar Bells d	62	98		
		Agogo Low	63	102	Tublar Bells d'	63	99		
		Agogo High	64	101	Timpani E	64	64		
		Samba Whistle Low	65	65	Timpani F	65	65		
		Samba Whistle High	66	66	Timpani F'	66	66		
		Claves	67	67	Timpani G	67	67		
		Slap	68	68	Timpani G'	68	68		
	39	Hand Claps	69	69	Timpani A	69	69		
		Tambourine	70	74	Timpani A'	70	70		
		Shaker	71	96	Timpani B	71	71		
		Triangle Mute	72	108	Timpani c	72	72		
		Maracas	73	105	Timpani c'	73	73		
		Triangle Open	74	107	Timpani d	74	74		
		Guiro Short	75	77	Timpani d'	75	75		
		Guiro Long	76	76	Timpani e	76	76		
		Orchestral Bass Drum	77	85	Timpani f	77	77		
		Orchestral Snare Drum	78	86	Wood Block Low	78	115		
		Orchestral Cymbal	79	87	Wood Block Mid	79	116		
		Wind Chime	80	29	Wood Block High	80	117		
		Scratch 1	81	118	Hi Hat Close 1	81	48		
		Vibraslap	82	111	Hi Hat Close 2	82	49		
		Scratch 2	83	119	Hi Hat Open	83	50		

\* Sounds in SEQUENCER and MIDI function.

# KEYBOARD PERCUSSION

SCRATCH 1  
SCRATCH 2  
RIM SHOT  
SQUARE CLICK  
METRO CLICK  
METRO BELL

34

	Sound Effect kit	MIDI NOTE NUMBER		General MIDI	TECH	MIDI NOTE NUMBER
		NORM	TECH			
B0				Bass Drum 2*		35
C1		36	36	Bass Drum 1	36	36
D1		37	47	Rim Shot	47	37
D1		38	38	Snare Drum 1	38	38
E1		39	31	Hand Claps	69	39
E1		40	32	Snare Drum 2	32	40
F1		41	95	Floor Tom Low	95	41
F1		42	24	Hi Hat Close	48	42
G1		43	26	Floor Tom High	43	43
A1		44	51	Hi Hat Pedal	44	44
A1		45	43	Tom Low	43	45
A1		46	25	Hi Hat Open	50	46
B1		47	45	Tom Mid	43	47
C2		48	48	Tom High 1	45	48
D2		49	49	Crash Cymbal 1	25	49
D2		50	50	Tom High 2	50	50
E2		51	28	Ride Cymbal 1	52	51
E2		52	52	China Cymbal	51	52
F2		53	53	Ride Bell	28	53
F2		54	54	Tambourine	74	54
G2		55	55	Splash Cymbal	24	55
A2		56	56	Cowbell	66	56
A2		57	57	Crash Cymbal 2	25	57
B2		58	27	Vibraslap	111	58
B2		59	59	Ride Cymbal 2	59	59
C3		60	100	Bongo High	60	60
D3		61	66	Bongo Low	61	61
D3		62	62	Conga Mute Crash	57	62
E3		63	102	Conga High	55	63
E3		64	101	Conga Low	53	64
F3		65	65	Timbales High	100	65
F3		66	66	Timbales Low	99	66
G3		67	67	Agogo High	101	67
G3		68	96	Agogo Low	102	68
A3		69	35	Cabasa	58	69
B3		70	33	Maracas	105	70
B3		71	34	Samba Whistle Short	66	71
C4		72	108	Samba Whistle Long	65	72
D4		73	105	Guiro Short	77	73
D4		74	107	Guiro Long	76	74
E4		75	77	Claves	67	75
E4		76	76	Wood Block Mid	76	76
F4		77	85	Wood Block Low	77	77
F4		78	86	Cuica High	78	78
G4		79	87	Cuica Low	79	79
A4		80	29	Triangle Mute	108	80
A4		81	16	Triangle Open	107	81
B4		82	17	Shaker	76	82
B4		83	15	Sleigh Bell	83	83

\* Sounds in SEQUENCER and MIDI function.

WIND CHIME 84  
ASTRANETS 85  
MIRDO MUTE 86

# TECHNI-CHORD TYPE

<Example: C major chord>

Legend:  
 ♪: Played note (right-hand melody)  
 ○: Added notes

## REVERB

SINGLE DELAY	An echo effect, in which the original sound is repeated after a delay.	DELAY L	0 - 350 ms
		DELAY R	0 - 350 ms
		FEEDBACK L	-99 - 99
		FEEDBACK R	-99 - 99
		HIGH DUMP GAIN	-24 - 0 dB
VOLUME	0 - 99		

DELAY : Time difference between original sound and the repeat (ms).  
 FEEDBACK : Feedback volume (inverted when a minus level).  
 HIGH DUMP GAIN : Adjusts the degree of damping in the treble range.  
 VOLUME : Adjusts the volume of the sound to which the effect is applied.

MULTI TAP DELAY	An echo effect in which the length of the delay can be set to vary depending upon pan position.	DELAY 1	0 - 700 ms
		DELAY 2	0 - 700 ms
		DELAY 3	0 - 700 ms
		DELAY 4	0 - 700 ms
		PAN 1	0 - 99
		PAN 2	0 - 99
		PAN 3	0 - 99
		PAN 4	0 - 99
		FEED BACK	-99 - 99
		HIGH DUMP GAIN	-24 - 0 dB
		VOLUME	0 - 99

PAN : panning setting.

ROOM REVERB 1,2	Reverberations sound as if produced in a room (indoors) .	DEPTH	0 - 99
		REVERB TIME	0.1 - 10 S
		PRE DELAY	0 - 200 ms
		HIGH DUMP GAIN	-24 - 0 dB
		EARLY REFL LEVEL	0 - 99

DEPTH : Depth of the reverb.  
 REVERB TIME : The time it takes for the reverb effect to fade out.  
 PRE DELAY : The time elapsed between the beginning of the reverb effect.  
 EARLY REFL LEVEL : Adjusts the early-reflection level.

PLATE REVERB 1,2	A type of reverberation obtained from a reverb unit which utilizes the vibrations of a metal plate.	DEPTH	0 - 99
		REVERB TIME	0.1 - 10 S
		PRE DELAY	0 - 200 ms
		HIGH DUMP GAIN	-24 - 0 dB
		EARLY REFL LEVEL	0 - 99

CONCERT REVERB 1,2	Reverberations sound as if produced in a concert hall.	DEPTH	0 - 99
		REVERB TIME	0.4 - 30 S
		PRE DELAY	0 - 200 ms
		HIGH DUMP GAIN	-24 - 0 dB
		EARLY REFL LEVEL	0 - 99

DARK REVERB 1,2	Reverberations evoke images of darkness.	DEPTH	0 - 99
		REVERB TIME	0.4 - 30 S
		PRE DELAY	0 - 200 ms
		HIGH DUMP GAIN	-24 - 0 dB
		EARLY REFL LEVEL	0 - 99

## REVERB

BRIGHT REVERB 1,2	Reverberations evoke images of brightness.	DEPTH	0 - 99
		REVERB TIME	0.4 - 30 S
		PRE DELAY	0 - 200 ms
		HIGH DUMP GAIN	-24 - 0 dB
		EARLY REFL LEVEL	0 - 99

WAVE REVERB 1,2	Reverberations evoke images of waves.	DEPTH	0 - 99
		REVERB TIME	0.4 - 30 S
		PRE DELAY	0 - 200 ms
		HIGH DUMP GAIN	-24 - 0 dB
		EARLY REFL LEVEL	0 - 99

## DSP EFFECT

CHORUS	A natural fullness and richness is achieved by adding a sound of a slightly different pitch to the original sound.	DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		LFO WAVEFORM	sin, tri, square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

DEPTH : Depth of the effect.  
 LFO SPEED : Transmission frequency of the LFO (low frequency oscillator) modulator.  
 LFO WAVEFORM : Waveform of the LFO (low frequency oscillator) modulator.  
 VOLUME : Volume of the sound to the effect is applied.  
 REVERB SEND : The volume sent to DIGITAL REVERB.

MODULATED CHORUS	A differently modulated chorus in which the swell is emphasized.	DEPTH	0 - 99
		SLOW LFO SPEED	0 - 40.2 Hz
		FAST LFO SPEED	0 - 40.2 Hz
		FAST LFO BALANCE	0 - 99
		LFO WAVEFORM	sin, tri, square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

FAST LFO BALANCE : The degree to which the fast LFO is applied.

ENHANCER	Emphasizes a specific frequency by shifting the phrase. Clarifies sound profile.	MANUAL	0 - 99
		LOW MIX	0 - 99
		HIGH MIX	0 - 99
		DELAY TIME L	0 - 350 ms
		DELAY TIME R	0 - 350 ms
		VOLUME	0 - 99
REVERB SEND	0 - 99		

MANUAL : Center frequency to which the effect is applied.  
 MIX : Adjusts the mix of the original sound and the harmonic.  
 DELAY TIME : Delay time.

## DSP EFFECT

FLANGER	An undulation is added, giving an intensity to sounds having many overtones (harmonics).	DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		RESONANCE	-99 - 99
		MANUAL	0 - 99
		PHASE	0 - 180 degree
		LFO WAVEFORM	sin, tri, square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

RESONANCE : Feedback volume (inverted when a minus value).  
 PHASE : Phase difference between left and right modulation.

PHASER	A more distinct undulation effect than FLANGER. Ideal for electric piano type sounds.	DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		RESONANCE	-99 - 99
		MANUAL	0 - 99
		PHASE	0 - 180 degree
		LFO WAVEFORM	sin, tri, square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

ENSEMBLE	Produces the effect of many musical instruments being played together.	DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		LFO WAVEFORM	sin, tri, square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

GATED REVERB	Reverberation is applied for a limited time. An interesting effect can be obtained by muting a reverberation in the middle.	GATE TIME	10 - 2900 ms
		HIGH DUMP GAIN	-24 - 0 dB
		THRESHOLD	0 - 99
		MASK TIME	10 - 2900 ms
		VOLUME	0 - 99
		REVERB SEND	0 - 99

GATE TIME : The time period during which the effect is applied.  
 THRESHOLD : The boundary point at which the effect is applied.  
 MASK TIME : The time period during the effect is masked.

SINGLE DELAY	An echo effect, in which the original sound is repeated after a delay.	DELAY L	0 - 350 ms
		DELAY R	0 - 350 ms
		FEEDBACK L	-99 - 99
		FEEDBACK R	-99 - 99
		HIGH DUMP GAIN	-24 - 0 dB
		VOLUME	0 - 99
		REVERB SEND	0 - 99

DELAY : Time difference between original sound and the repeat (ms).  
 FEEDBACK : Feedback volume (inverted when a minus level).  
 HIGH DUMP GAIN : Adjusts the degree of damping in the treble range.  
 VOLUME : Adjusts the volume of the sound to which the effect is applied.

## DSP EFFECT

MULTI TAP DELAY	An echo effect in which the length of the delay can be set to vary depending upon pan position.	DELAY 1	0 - 700 ms
		DELAY 2	0 - 700 ms
		DELAY 3	0 - 700 ms
		DELAY 4	0 - 700 ms
		PAN 1	0 - 99
		PAN 2	0 - 99
		PAN 3	0 - 99
		PAN 4	0 - 99
		FEED BACK	-99 - 99
		HIGH DUMP GAIN	-24 - 0 dB
		VOLUME	0 - 99
		REVERB SEND	0 - 99

PAN : panning setting.

DISTORTION	The sound is very distorted. A powerful effect when applied to a sound which is played solo.	DRIVE	0 - 99
		ADJUST	0 - 99
		VOLUME	0 - 99
		REVERB SEND	0 - 99

DRIVE : Degree of distortion.  
 ADJUST : The manner in which the effect is applied.

OVERDRIVE	A more natural distortion than the above effect, similar to that achieved with a vacuum tube amplifier.	DRIVE	0 - 99
		ADJUST	0 - 99
		VOLUME	0 - 99
		REVERB SEND	0 - 99

FUZZ	Powerful distortion effect ideal for electric guitar type sounds.	DRIVE	0 - 99
		ADJUST	0 - 99
		VOLUME	0 - 99
		REVERB SEND	0 - 99

EXCITER	Modulates sounds, clarifies sound profile, and projects sound forward.	DRIVE	0 - 99
		ADJUST	0 - 99
		EMPHASIS Fc	50 Hz - 16kHz
		EMPHASIS GAIN	0 - 99
		VOLUME	0 - 99

EMPHASIS Fc : The frequency of the emphasis.  
 EMPHASIS GAIN : The volume of the emphasis.

COMPRESSOR	Compresses the dynamic range.	THRESHOLD	0 - 99
		RATIO	0 - 99
		ATTACK SENSITIVITY	0.001 - 0.1 S
		RELEASE SENSITIVITY	0.001 - 0.1 S
		VOLUME	0 - 99
		REVERB SEND	0 - 99

RATIO : The ratio of the effect.  
 ATTACK SENSITIVITY : Sensitivity of the effect at the time of attack (reaction speed).  
 RELEASE SENSITIVITY : Sensitivity of the effect at the time of release (reaction speed).



## DSP EFFECT

SLOW ATTACKER	Slows down the attack.	THRESHOLD	0 - 99
		ATTACK RATE	0.2 - 20.0 S
		RELEASE RATE	0.01 - 1.0 S
		VOLUME	0 - 99
		REVERB SEND	0 - 99

ATTACK RATE : Attack rate (slope) .  
RELEASE RATE : Release rate (slope) .

PARAMETRIC EQ	An equalizer which sets sound quality for a precise frequency point.	BAND EMPHASIS 1 Fc	50 Hz - 16kHz
		BAND EMPHASIS 1 Q	0.1 - 20
		BAND EMPHASIS 1 G	-12 - 12 dB
		BAND EMPHASIS 2 Fc	50 Hz - 16kHz
		BAND EMPHASIS 2 Q	0.1 - 20
		BAND EMPHASIS 2 G	-12 - 12 dB
		BAND EMPHASIS 3 Fc	50 Hz - 16kHz
		BAND EMPHASIS 3 Q	0.1 - 20
		BAND EMPHASIS 3 G	-12 - 12 dB
		BAND EMPHASIS 4 Fc	50 Hz - 16kHz
		BAND EMPHASIS 4 Q	0.1 - 20
		BAND EMPHASIS 4 G	-12 - 12 dB
		BAND EMPHASIS 5 Fc	50 Hz - 16kHz
		BAND EMPHASIS 5 Q	0.1 - 20
		BAND EMPHASIS 5 G	-12 - 12 dB
		VOLUME	0 - 99
		REVERB SEND	0 - 99

BAND EMPHASIS Fc : Center frequency of the modified band.  
BAND EMPHASIS Q : Sharpness of the curve of the frequency characteristic of the modified band.  
BAND EMPHASIS G : Volume of emphasis/damping in the modified band.

AUTO PAN	Periodically shifts the sound's pan position.	DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		PHASE	0 - 180 degree
		LFO WAVEFORM	sin,tri,square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

VIBRATO	Modulates frequency in a vibrato pattern.	DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		PHASE	0 - 180 degree
		LFO WAVEFORM	sin,tri,square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

AUTO WAH	A filter effect which automatically changes peak frequency in response to an increase in the volume of the input.	RESONANCE	wide,middle,narrow
		MANUAL	0 - 99
		SWEEP RANGE	0 - 99
		VOLUME	0 - 99
		REVERB SEND	0 - 99

SWEEP RANGE : The range of frequencies to be changed.

## DSP EFFECT

ROTARY SPEAKER	Produces sounds that seem to be emitted from rotary speakers. Ideal for organ type sounds.	DRIVE	0 - 99
		VOLUME ADJUST	0 - 99
		TREBLE DEPTH	0 - 99
		FAST	0 - 34.95 Hz
		SLOW	0 - 34.95 Hz
		WIND UP	1.0 - 61.0 S
		WIND DOWN	1.0 - 61.0 S
		BASS DEPTH	0 - 99
		FAST	0 - 34.95 Hz
		SLOW	0 - 34.95 Hz
		WIND UP	1.0 - 61.0 S
		WIND DOWN	1.0 - 61.0 S
		VOLUME	0 - 99
		SLOW/FAST	slow,fast
		REVERB SEND	0 - 99

WIND UP : The time it takes to reach the (TREBLE/BASS) FAST speed when the speed is changed from slow to fast.  
WIND DOWN : The time it takes to reach the (TREBLE/BASS) SLOW speed when the speed is changed from fast to slow.  
SLOW/FAST : Switches speaker rotation speed between SLOW and FAST.

RING MODULATOR	Produces a metallic sound. Tends to sound off key.	OSC-SPEED	0 - 19.6 kHz
		PHASE	0 - 180 degree
		OSC WAVEFORM	sin,tri,square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

OSC WAVEFORM : Oscillator waveform.  
OSC SPEED : Oscillator frequency.

MIX UP	Mixes in LFO modulation.	DEPTH	0 - 99
		SLOW LFO SPEED	0 - 40.2 Hz
		FAST LFO SPEED L	0 - 40.2 Hz
		FAST LFO SPEED R	0 - 40.2 Hz
		PHASE	0 - 180 degree
		OSC WAVEFORM	sin,tri,square
		VOLUME	0 - 99
		REVERB SEND	0 - 99

SINGLE DELAY + CHORUS	Combines delay with chorus.	DELAY DRY/WET	0 - 99
		DELAY L	0 - 300 ms
		DELAY R	0 - 300 ms
		FEEDBACK L	-99 - 99
		FEEDBACK R	-99 - 99
		CHORUS DRY/WET	0 - 99
		DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		LFO WAVEFORM	sin,tri,square
		VOLUME	0 - 99
REVERB SEND	0 - 99		

SINGLE DELAY + SINGLE DELAY	Combines two types of delay.	DELAY1 DRY/WET	0 - 99
		DELAY L	0 - 180 degree
		DELAY R	0 - 180 degree
		FEEDBACK L	-99 - 99
		FEEDBACK R	-99 - 99
		DELAY2 DRY/WET	0 - 99
		DELAY L	0 - 180 degree
		DELAY R	0 - 180 degree
		FEEDBACK L	-99 - 99
		FEEDBACK R	-99 - 99
		VOLUME	0 - 99
		REVERB SEND	0 - 99

## DSP EFFECT

SINGLE DELAY + FLANGER	Combines delay with flanger.	DELAY DRY/WET	0 - 99		
		DELAY L	0 - 300 ms		
		DELAY R	0 - 300 ms		
		FEEDBACK L	-99 - 99		
		FEEDBACK R	-99 - 99		
		FLANGER DRY/WET	0 - 99		
		DEPTH	0 - 99		
		LFO SPEED	0 - 40.2 Hz		
		RESONANCE	-99 - 99		
		MANUAL	0 - 99		
		PHASE	0 - 180 degree		
		LFO WAVEFORM	sin,tri,square		
		VOLUME	0 - 99		
REVERB SEND	0 - 99				
SINGLE DELAY + VIBRATO	Combines delay with vibrato.	DELAY DRY/WET	0 - 99		
		DELAY L	0 - 300 ms		
		DELAY R	0 - 300 ms		
		FEEDBACK L	-99 - 99		
		FEEDBACK R	-99 - 99		
		DEPTH	0 - 99		
		LFO SPEED	0 - 40.2 Hz		
		PHASE	0 - 180 degree		
		LFO WAVEFORM	sin,tri,square		
		VOLUME	0 - 99		
		REVERB SEND	0 - 99		
		SINGLE DELAY + PHASER	Combines delay with phaser.	DELAY DRY/WET	0 - 99
				DELAY L	0 - 300 ms
DELAY R	0 - 300 ms				
FEEDBACK L	-99 - 99				
FEEDBACK R	-99 - 99				
PHASER DRY/WET	0 - 99				
DEPTH	0 - 99				
LFO SPEED	0 - 40.2 Hz				
RESONANCE	-99 - 99				
MANUAL	0 - 99				
PHASE	0 - 180 degree				
LFO WAVEFORM	sin,tri,square				
VOLUME	0 - 99				
REVERB SEND	0 - 99				
AUTO WAH + SINGLE DELAY	Combines auto wah with delay.	RESONANCE	wide,middle,narrow		
		MANUAL	0 - 99		
		SWEEP RANGE	0 - 99		
		DELAY DRY/WET	0 - 99		
		DELAY L	0 - 300 ms		
		DELAY R	0 - 300 ms		
		FEEDBACK L	-99 - 99		
		FEEDBACK R	-99 - 99		
		VOLUME	0 - 99		
		REVERB SEND	0 - 99		

## DSP EFFECT

PEQ + CHORUS	Combines parametric equalizer with chorus.	BAND EMPHASIS 1Fc	50 Hz - 16kHz
		BAND EMPHASIS 1 Q	0.1 - 20
		BAND EMPHASIS 1 G	-12 - 12 dB
		CHORUS DRY/WET	0 - 99
		DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		LFO WAVEFORM	sin,tri,square
		VOLUME	0 - 99
		REVERB SEND	0 - 99
		PEQ + SINGLE DELAY	Combines parametric equalizer with delay.
BAND EMPHASIS 1 Q	0.1 - 20		
BAND EMPHASIS 1 G	-12 - 12 dB		
DELAY DRY/WET	0 - 99		
DELAY L	0 - 300 ms		
DELAY R	0 - 300 ms		
FEEDBACK L	-99 - 99		
FEEDBACK R	-99 - 99		
VOLUME	0 - 99		
REVERB SEND	0 - 99		
PEQ + FLANGER	Combines parametric equalizer with flanger.	BAND EMPHASIS 1Fc	50 Hz - 16kHz
		BAND EMPHASIS 1 Q	0.1 - 20
		BAND EMPHASIS 1 G	-12 - 12 dB
		FLANGER DRY/WET	0 - 99
		DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		RESONANCE	-99 - 99
		MANUAL	0 - 99
		PHASE	0 - 180 degree
		LFO WAVEFORM	sin,tri,square
VOLUME	0 - 99		
REVERB SEND	0 - 99		
PEQ + VIBRATO	Combines parametric equalizer with vibrato.	BAND EMPHASIS 1Fc	50 Hz - 16kHz
		BAND EMPHASIS 1 Q	0.1 - 20
		BAND EMPHASIS 1 G	-12 - 12 dB
		DEPTH	0 - 99
		LFO SPEED	0 - 40.2 Hz
		PHASE	0 - 180 degree
		LFO WAVEFORM	sin,tri,square
		VOLUME	0 - 99
		REVERB SEND	0 - 99
		PEQ + COMPRESSOR	Combines parametric equalizer with compressor.
BAND EMPHASIS 1 Q	0.1 - 20		
BAND EMPHASIS 1 G	-12 - 12 dB		
THRESHOLD	0 - 99		
RATIO	0 - 99		
ATTACK SENSITIVITY	0.001 - 0.1 s		
RELEASE SENSITIVITY	0.001 - 0.1 s		
VOLUME	0 - 99		
REVERB SEND	0 - 99		

# DSP EFFECT

PEQ + COMPR + DIST	Combines parametric equalizer, compressor, and distortion.	BAND EMPHASIS 1 Fc BAND EMPHASIS 1 Q BAND EMPHASIS 1 G THRESHOLD RATIO ATTACK SENSITIVITY RELEASE SENSITIVITY DRIVE ADJUST VOLUME REVERB SEND	50 Hz - 16kHz 0.1 - 20 -12 - 12 dB 0 - 99 0 - 99 0.001 - 0.1 S 0.001 - 0.1 S 0 - 99 0 - 99 0 - 99 0 - 99
PEQ + COMPR + OVERDR	Combines parametric equalizer, compressor, and overdrive.	BAND EMPHASIS 1 Fc BAND EMPHASIS 1 Q BAND EMPHASIS 1 G THRESHOLD RATIO ATTACK SENSITIVITY RELEASE SENSITIVITY DRIVE ADJUST VOLUME REVERB SEND	50 Hz - 16kHz 0.1 - 20 -12 - 12 dB 0 - 99 0 - 99 0.001 - 0.1 S 0.001 - 0.1 S 0 - 99 0 - 99 0 - 99 0 - 99
PEQ + DIST + DELAY	Combines parametric equalizer, distortion, and delay.	BAND EMPHASIS 1 Fc BAND EMPHASIS 1 Q BAND EMPHASIS 1 G DRIVE ADJUST DELAY DRY/WET DELAY L DELAY R FEEDBACK L FEEDBACK R VOLUME REVERB SEND	50 Hz - 16kHz 0.1 - 20 -12 - 12 dB 0 - 99 0 - 99 0 - 99 0 - 300 ms 0 - 300 ms -99 - 99 -99 - 99 0 - 99 0 - 99
PEQ + OVERDR + DELAY	Combines parametric equalizer, overdrive, and delay.	BAND EMPHASIS 1 Fc BAND EMPHASIS 1 Q BAND EMPHASIS 1 G DRIVE ADJUST DELAY DRY/WET DELAY L DELAY R FEEDBACK L FEEDBACK R VOLUME REVERB SEND	50 Hz - 16kHz 0.1 - 20 -12 - 12 dB 0 - 99 0 - 99 0 - 99 0 - 300 ms 0 - 300 ms -99 - 99 -99 - 99 0 - 99 0 - 99

# STONE

A	PIANO	E	STRINGS & VOCAL	I	FLUTE	L	VARIOUS NOISE	N	DRUMS & PERCUSSION
	Piano Bright Piano E.Grand E.Piano 1 E.Piano 2 Suitcase E.P. Modern E.P.1 Modern E.P.2 Bell Piano		Clas. Strings 1 Clas. Strings 2 Marcato Str. 1 Marcato Str. 2 Pizzicato Violin Jazz Violin Viola Cello Bowed Bass Vocal Ah Vocal Ooh 1 Vocal Ooh 2 Vocal Doo		Piccolo Jazz Flute Classic Flute Alto Flute Pan Flute Recorder Ocarina Whistle Shakuhachi		White Noise HiPass Noise Sax Breath 1 Sax Breath 2 Flute Breath 1 Flute Breath 2 Flute Breath 3 Harpsi.key Off Clavi key Off Organ Click Slap Shot Pick Noise 1 Pick Noise 2 Pick Noise 3 Fret Noise Gtr.Resonance 1 Gtr.Resonance 2 Ambient Hammer Hammer		Rock Bass Dr. Elect. Bass Dr. Dance Bass Dr. House Bass Dr. Soul Bass Dr. Orch.Bass Dr. Rock Snare Soul Snare House Snare Analog Snare Piccolo Snare Orch.Snare Reverse Snare Melodic Tom Electric Tom Elect.Bass Tom Analog Tom Brush Short Brush Long Rim 1 Rim 2 Rim 3
B	HARPSI & MALLET		Harpischord 1 Harpischord 2 Clavi Synth Clavi Glockenspiel Vibraphone Celesta Tubular Bells Solid Bars Steel Drum Xylophone Marimba Bottle Marimba African Mallet	F	ORGAN & ACCORDION	J	BASS	M	SOUND EFFECTS
					Jazz Organ Full Drawbars Jazz Drawbars 16' & 1' 16' & 8' 16' Pipe Organ 1 Pipe Organ 2 Brt.Accordion Mel.Accordion Musette		Acoustic Bass Mellow Ac.Bass Electric Bass Bright E.Bass Fusion E.Bass Funky E.Bass Fretless Bass 1 Fretless Bass 2 Picked E.Bass Mute Bass Slap Bass 1 Pul Bass 1 Slap Bass 2 Pul Bass 2 Analog Bass Soul Bass Synth Chopper Click Bass Dance Bass House Bass Plastic Bass		Scratch 1 Scratch 2 Voice Ah Voice Yeh Bird 1 Bird 2 Bird 3 Bird 4 Gun Shot Helicopter Telephone Applause Seashore
C	GUITAR		Classical Gtr. Jazz Ac.Gtr. Spanish Gtr. Gtr.Harmonics Folk Guitar Electro Ac.Gtr. Jazz Guitar Bright Solid Mellow Solid Clen Solid Fusion Solid Mute Guitar Funk Mute Gtr. Distortion Gtr. Overdrive Gtr. Rock Harmonics Country Gtr. Hawaiian Gtr.1 Hawaiian Gtr.2	G	BRASS	K	SYNTH BASICS		HiHat Closed 1 HiHat Closed 2 HiHat Open 1 Crash Cymbal Splash Cymbal China Cymbal Orch.Cymbal Ride Cymbal 1 Ride Cymbal 2 Ride Bell Reverse Cymb 1 Reverse Cymb 2 Conga 1 Conga 2 Bongo Timbales 1 Timbales 2 Samba Drum Samba Drum Mute Wood Block Claves Castanets Slap Hand Claps Maracas Cabasa Shaker Guiro Short Guiro Long Cuica 1 Cuica 2 Triangle Mute Triangle Open Agogo Cowbell Sleigh Bell Tambourine 1 Tambourine 2 Orch.Tamb. Crickets Vibraslap Samba Whistle Wind Chime
					Brass 1 Brass 2 Trumpet 1 Trumpet 2 Orch.Trumpet Mute Trumpet 1 Mute Trumpet 2 Flugel Horn Cornet Brt.Trombone Mel.Trombone Mute Trombone Closed Fr.Horn Open Fr.Horn Tuba Analog Brass Saw Brass		Click Sine Sine Wave Triangle Wave Sawtooth Wave Square Wave Pulse Wave 1 Pulse Wave 2 Pulse Wave 3 Pulse Wave 4 Pulse Mod. Organ Bell Bright Bell Digi Lead Digi Wire Crystal Wave Bell Pad Fog Vox Mellow Ens.		
D	SPECIAL PERCUSSION		Benjo Mandolin Harp Orchestra Hit Timpani Music Box Koto Shamisen Kalimba Sitar Dulcimer Gamelan 1 Gamelan 2 Gamelan 3	H	REED				
					Soprano Sax Alto Sax Mel.Alto Sax Tenor Sax 1 Tenor Sax 2 Rock Tenor Sax Baritone Sax Jazz Clarinet 1 Jazz Clarinet 2 Clas.Clarinet Mel.Clarinet Bass Clarinet Oboe English Horn Bassoon Harmonica Blues Harm. Bagpipe				

# DIGITAL EFFECT

EFFECT	PARAMETER	RANGE	EFFECT	PARAMETER	RANGE	
CELESTE1•2	DEPTH	0 - 50	ORGAN TREMOLO	DEPTH1	0 - 50	
	SPEED	0 - 50		SPEED1	0 - 50	
	DETUNE	-50 - +50		DEPTH2	0 - 50	
	DELAY	0 - 50		SPEED2	0 - 50	
	BALANCE	0 - 100		INTENSITY	-50 - +50	
	REVERB DEPTH	-5 - +5		REVERB DEPTH	-5 - +5	
CHORUS1•2	DEPTH	0 - 50	SINGLE DELAY	DELAY	0 - 50	
	SPEED	0 - 50		DETUNE	-50 - +50	
	DETUNE	-50 - +50		KEY SHIFT	-24 - +24	
	DELAY	0 - 50		BALANCE	0 - 100	
	BALANCE	0 - 100		INTENSITY	-50 - +50	
	REVERB DEPTH	-5 - +5		REVERB DEPTH	-5 - +5	
ENSEMBLE1•2	DEPTH1	0 - 50	REPEAT DELAY	SPEED	0 - 30	
	SPEED1	0 - 50		DECAY	0 - 30	
	DEPTH2	0 - 50		SUSTAIN	0 - 30	
	SPEED2	0 - 50		RELEASE	0 - 30	
	DETUNE	-50 - +50		INTENSITY	-50 - +50	
	REVERB DEPTH	-5 - +5		REVERB DEPTH	-5 - +5	
TREMOLO	DEPTH	0 - 50	SOLO EFFECT1	DISTORTION	ON / OFF	
	SPEED	0 - 50		TOUCH DEPTH	0 - 50	
	WAVE	SIN/TRI/SQR/SAW		DEPTH	0 - 100	
	BALANCE	0 - 100		REVERB DEPTH	-5 - +5	
	INTENSITY	-50 - +50		SOLO EFFECT2	DISTORTION	ON / OFF
	REVERB DEPTH	-5 - +5			TOUCH DEPTH	0 - 50
		DEPTH	0 - 100			
		INTENSITY	-50 - +50			
		REVERB DEPTH	-5 - +5			

# MIDI Implementation Chart

Keyboard [ SX-KN3000 ]

(Transmitted)

Function	RIGHT1,2,LEFT, PART4~15	PART16	ACMP1	ACMP2,3	BASS	DRUMS	CHORD	CONTROL	Remarks
Basic Default	1-16	1-16	1-16	1-16	1-16	1-16	1-16	1-16	memorized
Channel Changed	1-16	1-16	1-16	1-16	1-16	1-16	1-16	1-16	
Mode Default	3	3	3	3	3	3	3	3	OMNI OFF, POLY MODE
Mode Messages	x	x	x	x	x	x	x	x	
Mode Altered	-	-	-	-	-	-	-	-	
Note Number True voice	0-119	0-119	0-119	0-119	0-119	0-119	0-119	-	Changes depending on the position of the transpose control, octave shift, and drums type.
Velocity Note ON	0	0	0	0	0	0	0	-	
Velocity Note OFF	x	x	x	x	x	x	x	-	
After Key's	x	x	x	x	x	x	x	-	
Touch Ch's	OX*	x	x	x	x	x	x	-	
Pitch Bend	OX*	x	OX*	OX*	OX*	x	OX*	x	
Control Change	0,32	OX*	OX*	OX*	OX*	OX*	OX*	x	bank select MSB, LSB
	1	OX*	x	OX*	OX*	OX*	x	OX*	modulation
	6,38	OX*	x	x	x	x	x	x	data entry MSB, LSB
	7	OX*	OX*	OX*	OX*	OX*	OX*	OX*	volume
	10	OX*	x	OX*	OX*	OX*	x	x	panpot
	11	OX*	OX*	OX*	OX*	OX*	OX*	x	OX*
	64	OX*	x	OX*	OX*	OX*	x	x	expression
	80	x	x	OX*	x	x	x	x	sustain
	82	x	x	x	x	x	OX*	x	auto play chord
	91	OX*	OX*	OX*	OX*	OX*	OX*	OX*	OX*
	93	OX*	OX*	x	x	x	x	x	intro, fill in, ending
	94	OX*	x	OX*	OX*	OX*	x	OX*	x
100,101	OX*	x	x	x	x	x	x	x	
120	0	0	x	x	x	x	x	x	
121	OX*	OX*	x	x	x	x	x	x	
Prog Change True #	OX*	OX*	OX*	OX*	OX*	OX*	OX*	x	Changes depending on program change mode and prog.ong to p.mem.
System exclusive					0				
System common	Song Pos				OX*				
	Song Sel				OX* (0-19)				
	Tune				x				
System Real Time	Clock				0				
Commands					OX*				start/stop, continue
Aux	Local ON/OFF	x	x	x	x	x	x	-	
	All notes OFF	x	x	x	x	x	x	-	
Messages	Active Sense							0	
	Reset							x	
Notes	OX*.....Whether or not the data for each of these items is transmitted can be set.								

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

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

○:Yes  
x:No

# MIDI Implementation Chart

Keyboard [ SX-KN3000 ]

(Recognized)

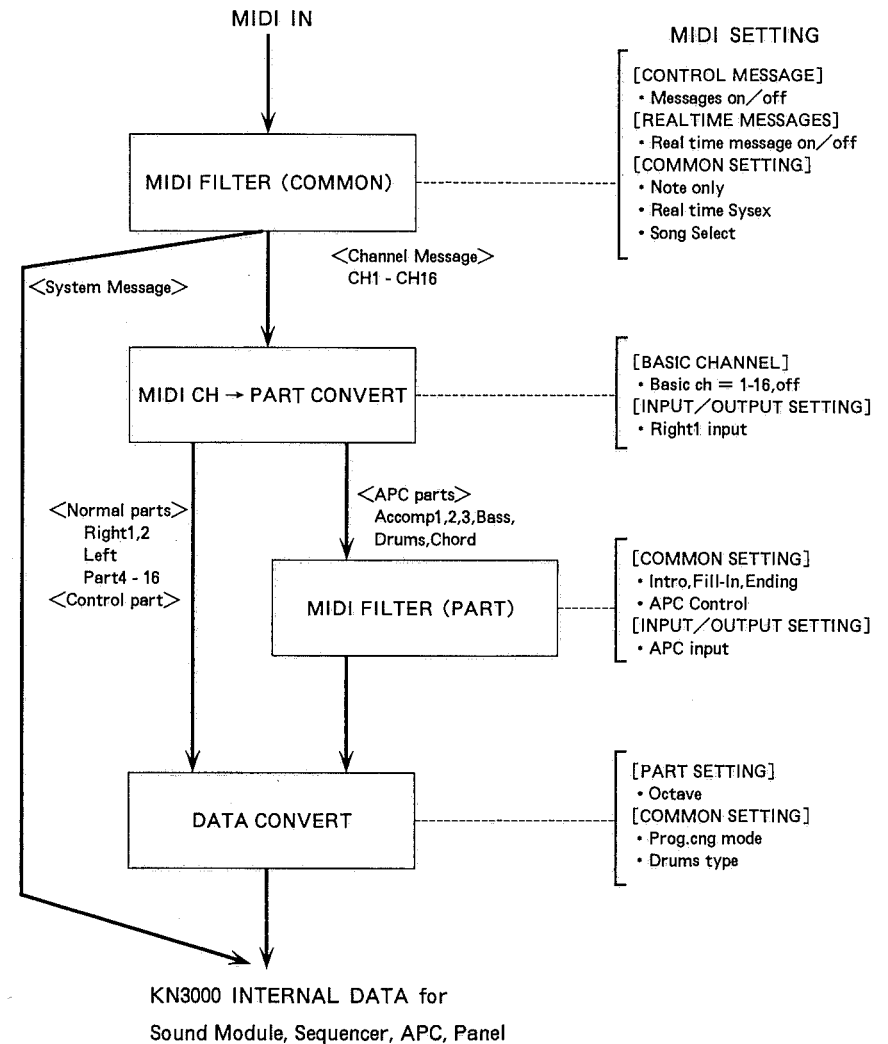
Function		RIGHT1,2,LEFT, PART4~15	PART16	ACMP1	ACMP2,3	BASS	DRUMS	CHORD	CONTROL	Remarks
Basic Channel	Default Changed	1-16 1-16	1-16 1-16	1-16 1-16	1-16 1-16	1-16 1-16	1-16 1-16	1-16 1-16	1-16 1-16	memorized
Mode	Default	3	3	3	3	3	3	3	3	OMNI OFF, POLY MODE
	Messages	x	x	x	x	x	x	x	x	
	Altered	-	-	-	-	-	-	-	-	
Note Number		0-127	0-127	0-127	0-127	0-127	0-127	0-127	0-127	Changes depending on the position of the transpose control, octave shift, and drums type.
	True voice	0-127	0-127	0-127	0-127	0-127	0-127	0-127	0-127	
Velocity	Note ON	○	○	○	○	○	○	○	-	
	Note OFF	x	x	x	x	x	x	x	-	
After Touch	Key's	x	x	x	x	x	x	x	-	
	Ch's	○x*	x	x	x	x	x	x	-	
Pitch Bend		○x*	x	○x*	○x*	○x*	x	○x*	x	
Control Change	0,32	○x*	○x*	○x*	○x*	○x*	○x*	○x*	x	bank select MSB, LSB modulation data entry MSB, LSB volume panpot expression sustain auto play chord intro, fill in, ending reverb DSP effect digital effect RPN LSB, MSB all sound off reset all controllers
	1	○x*	x	○x*	○x*	○x*	x	○x*	x	
	6,38	○x*	x	x	x	x	x	x	x	
	7	○x*	○x*	○x*	○x*	○x*	○x*	○x*	x	
	10	○x*	x	○x*	○x*	○x*	x	x	x	
	11	○x*	○x*	○x*	○x*	○x*	○x*	○x*	○x*	
	64	○x*	x	○x*	○x*	○x*	x	x	x	
	80	x	x	○x*	x	x	x	x	x	
	82	x	x	x	x	x	○x*	x	x	
	91	○x*	○x*	○x*	○x*	○x*	○x*	○x*	○x*	
	93	○x*	○x*	x	x	x	x	x	x	
	94	○x*	x	○x*	○x*	○x*	x	○x*	x	
100,101	○x*	x	x	x	x	x	x	x		
120	○	○	○	○	○	○	○	○		
121	○x*	○x*	○x*	○x*	○x*	○x*	○x*	x		
Prog Change	True #	0-127	0-127	0-127	0-127	0-127	0-127	0-127	-	Changes depending on program change mode and prog.eng to p.mem.
System exclusive					○					
System common	Song Pos				○x*					
	Song Sel				○x* (0-19)					
	Tune				x					
System	Clock				○					
Real Time	Commands				○x*					start/stop,continue
Aux Messages	Local ON/OFF	x	x	x	x	x	x	x	-	
	All notes OFF	○	○	○	○	○	○	○	-	
Messages	Active Sense				○					
	Reset				x					
Notes		○x*.....Whether or not the data for each of these items is received can be set.								

Mode 1: OMNI ON, POLY      Mode 2: OMNI ON, MONO      ○:Yes  
 Mode 3: OMNI OFF, POLY      Mode 4: OMNI OFF, MONO      x:No

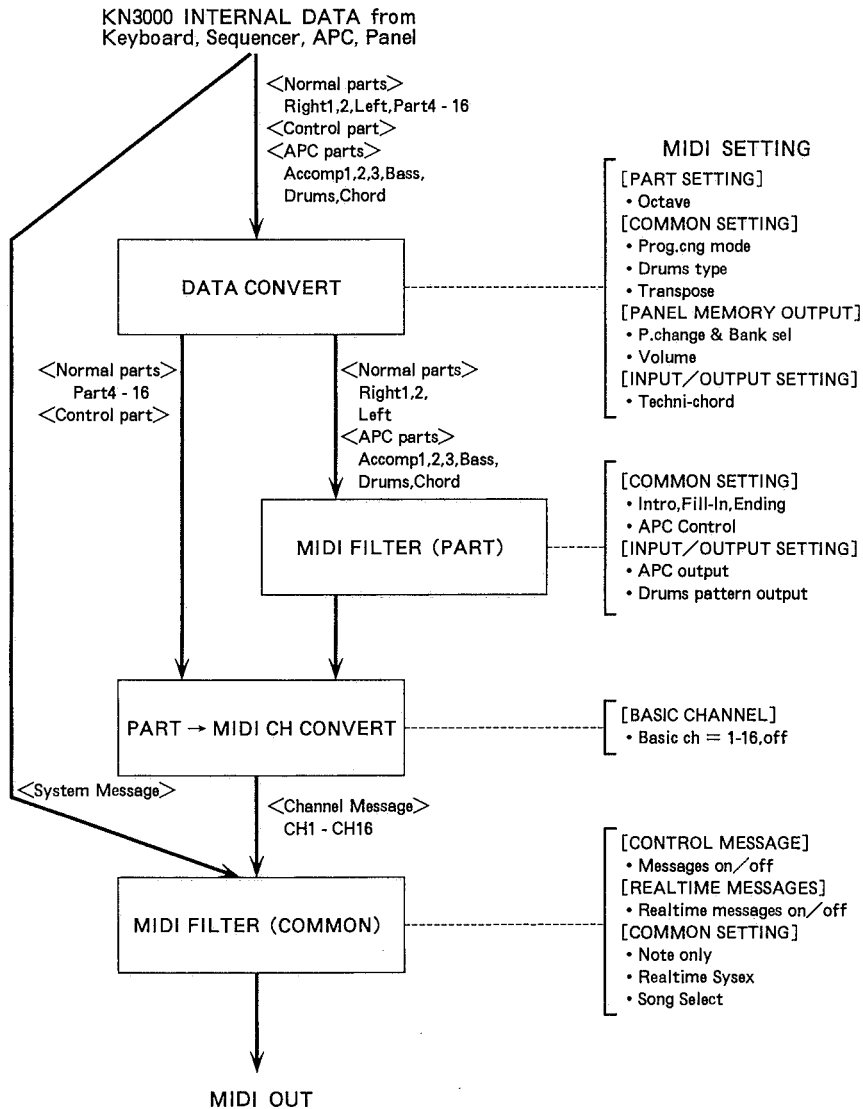
# MIDI DATA FORMAT

## MIDI DATA FLOWCHART

<MIDI INPUT>



## <MIDI OUTPUT>



## Message format

### ■ Channel voice message

#### Note off

8nH	Note off status
kk	Note number
vv	Velocity

n: 0-F Basic channel  
 kk: 00H-7FH Note number  
 vv: 00H-7FH Velocity  
 • This status is not used during transmission; rather, velocity=0 is transmitted with the note on status.

#### Note on

9nH	Note on status
kk	Note number
vv	Velocity

n: 0-F Basic channel  
 kk: 00H-7FH Note number  
 vv: 01H-7FH Velocity  
 00H Note off

#### Control change

##### Bank select

BnH	Control change status
00H	Bank select (MSB)
mm	Bank select value (MSB)
(BnH)	Control change status
20H	Bank select (LSB)
ll	Bank select value (LSB)

n: 0-F Basic channel  
 mm,ll: 00H-7FH  
 • Indicates program change bank. Used when program change mode is set to Normal mode or Technics mode.  
 • Reception of ACCOMP 1,2,3,BASS, and DRUMS bank select is possible only during COMPOSER record.

##### Modulation

BnH	Control change status
01H	Modulation
vv	Modulation depth value

n: 0-F Basic channel  
 vv: 00H-7FH  
 • Reception of ACCOMP 1,2,3 and BASS modulation is possible only during COMPOSER record.

#### Data entry

BnH	Control change status
06H	Data entry (MSB)
mm	Data entry value (MSB)
(BnH)	Control change status
26H	Data entry (LSB)
ll	Data entry value (LSB)

n: 0-F Basic channel  
 mm,ll: Values conform to the parameters specified for the RPN.

#### Volume

BnH	Control change status
07H	Part volume
vv	Part volume value

n: 0-F Basic channel  
 vv: 00H-7FH

#### Panpot

BnH	Control change status
0AH	Panpot
vv	Panpot value

n: 0-F Basic channel  
 vv: 00H-7FH  
 • Reception of ACCOMP 1,2,3 and BASS panpot is possible only during COMPOSER record.

#### Expression

BnH	Control change status
0BH	Expression
vv	Expression value

n: 0-F Basic channel  
 vv: 00H-7FH  
 • The expression for the CONTROL part is the total expression as regulated by the pedal operation.

#### Sustain

BnH	Control change status
40H	Sustain
vv	Sustain on/off

n: 0-F Basic channel  
 vv: 00H-3FH (00H) Off  
 40H-7FH (7FH) On  
 • Transmitted data is indicated by parentheses().  
 • Reception of ACCOMP 1,2,3 and BASS sustain is possible only during COMPOSER record.

### Auto Play Chord

BnH	Control change status
50H	APC message
vv	APC message value

n: 0-F Basic channel  
 vv: 00H = Off  
 01H = FINGERED  
 02H = ONE FINGER  
 03H = PIANIST

• Transmitted / received on the basic channel for the ACCOMP 1 part.

### Rhythm control

BnH	Control change status
52H	Rhythm control message
vv	Rhythm control data

n: 0-F Basic channel  
 vv: 00H = off  
 01H = FILL IN 1  
 02H = ENDING 1  
 03H = INTRO 1  
 05H = FILL IN 2  
 06H = ENDING 2  
 07H = COUNT INTRO  
 08H = INTRO 2

• Transmitted / received on the basic channel for the DRUMS part.

### Reverb

BnH	Control change status
5BH	Reverb
vv	Reverb on/off

n: 0-F Basic channel  
 vv (CONTROL part): 00H-3FH (00H) Off  
 40H-7FH (7FH) On  
 vv (Other parts): 00H-7FH

• Transmitted data is indicated by parentheses().  
 • The Reverb for the CONTROL part is the total reverb.

### Digital effect

BnH	Control change status
5EH	Digital effect
vv	Digital effect on/off

n: 0-F Basic channel  
 vv: 00H-3FH (00H) Off  
 40H-7FH (7FH) On

• Transmitted data is indicated by parentheses().  
 • Transmission/reception of the DIGITAL EFFECT for ACCOMP 1,2,3 and BASS is possible only during COMPOSER record.

### DSP effect

BnH	Control change status
5DH	DSP effect
vv	DSP effect on/off

n: 0-F Basic channel  
 vv: 00H-7FH

• Transmitted data is indicated by parentheses().

### RPN

BnH	Control change status
65H	RPN (MSB)
mm	RPN data number (MSB)
(BnH)	Control change status
64H	RPN (LSB)
ll	RPN data number (LSB)

n: 0-F Basic channel  
 mm,ll: The most significant byte (MSB) and least significant byte (LSB) of the parameter number specified for the RPN.

The RPN which can be transmitted/received are Pitch Bend Sensitivity, Fine Tuning, Coarse Tuning (corresponding respectively to the Pitch bend Range, Tuning and Key Shift of the KN3000), and RPN reset.

RPN	Data Entry			
MSB	LSB	MSB	LSB	
00H	00H	mm	---	Pitch Bend Sensitivity mm:00H-0CH (0-12semi-tones) ll:ignored •Up to 1 octave can be specified in semi-tone increments.
00H	01H	mm	ll	Fine Tuning mm,ll:00H,00H-40H,00H-7FH,7FH (-128*100/128-0-127*100/128cents) •ll:00H or 40H (lower 6 bits ignored) •Can be specified in 100/128 cent increments.
00H	02H	mm	---	Coarse Tuning mm,34H-40H-4CH(-12-0-+12semi-tones) ll:ignored •Up to 1 octave can be specified in semi-tone increments.
7FH	7FH	---	---	RPN Reset mm,ll:ignored •For when the RPN number is not specified. •The internal set value doesnot change.

### Program change

CnH	Program change status
pp	Program change value

n: 0-F Basic channel  
 pp: 00H-7FH Program change value  
 Normal mode: Numbers are correspond to the SW of the SOUND GROUP(the variation is indicated by the Bank Select).  
 Technics mode: Numbers are standardized among Technics modes(Bank Select also used).  
 GM:GM program change numbers.  
 •The Program Change for the Drums part is recognized as a change in the rhythm pattern select.  
 •Reception of ACCOMP 1,2,3,BASS and DRUMS program change is possible only during COMP-OSER record.

### Channel pressure (After Touch)

DnH	Channel pressure status
VV	Channel pressure value

n: 0-F Basic channel  
 vv: 00H-7FH

### Pitch bend change

EnH	Pitch bend status
ll	Pitch bend value (LSB)
mm	Pitch bend value (MSB)

n: 0-F Basic channel  
 ll,mm: 00H-7FH Pitch bend data  
 •The Pitch Bend Range is determined by the Pitch Bend Range(Pitch Bend Sensitivity)of each part.  
 •Reception of accomp 1,2,3 and BASS pitch bend change is possible only during COMPOSER record.

### Channel mode message

#### All sound off

BnH	Channel mode status
78H	All sound off
00H	Dummy data

n: 0-F Basic channel

#### Reset all controllers

BnH	Channel mode status
79H	Reset all controllers
00H	Dummy data

n: 0-F Basic channel

### All note off

BnH	Channel mode status
7BH	All note off
00H	Dummy data

n: 0-F Basic channel  
 Receive only

### OMNI off

BnH	Channel mode status
7CH	OMNI off
00H	Dummy data

n: 0-F Basic channel  
 •Processed in same manner as when ALL Note off is received.

### OMNI on

BnH	Channel mode status
7DH	OMNI on
00H	Dummy data

n: 0-F Basic channel  
 •Processed in same manner as when ALL Note off is received. Does not change to OMNI on.

### MONO

BnH	Channel mode status
7EH	MONO
00H	Dummy data

n: 0-F Basic channel  
 •Processed in same manner as when ALL Note off is received. Does not change to MONO.

### POLY

BnH	Channel mode status
7FH	POLY
00H	Dummy data

n: 0-F Basic channel  
 •Processed in same manner as when ALL Note off is received.

### System common message

#### Song position pointer

F2H	Song position pointer
ll	Least significant
mm	Most significant

ll,mm: 00H-7FH

#### Song select

F3H	Song select
ss	Song number

ss: 0-19

■ System real time message

Timing Clock

F8H	Timing clock
-----	--------------

Start

FAH	Start
-----	-------

Continue

FBH	Continue
-----	----------

Stop

FCH	Stop
-----	------

Active Sense

FEH	Active sense
-----	--------------

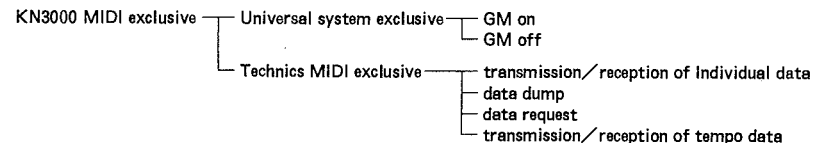
System exclusive

FOH	System exclusive status
ii	ID number
dd	data
:	:
dd	data
F7H	End of exclusive status

ii: 7EH(universal non-real time ID),  
50H(Technics ID)  
dd: 00H-7FH

About the KN3000 MIDI exclusive

Outline of KN3000 MIDI exclusive



Universal system exclusive Message format

Turn General MIDI System On:

F0H	Exclusive status
7FH	ID of target device (7F:Broadcast)
09H	sub-ID # 1 = General MIDI message
01H	sub-ID # 2 = General MIDI on
F7H	EOX

Turn General MIDI System Off:

F0H	Exclusive status
7FH	ID of target device (7F:Broadcast)
09H	sub-ID # 1 = General MIDI message
02H	sub-ID # 2 = General MIDI off
F7H	EOX

Technics MIDI exclusive Message format

■ Type of messages and their forms

SOX	Exclusive status
IDC	Technics ID number
CMD	Command ID
PC	Keyboard category ID
MD	Model differentiating ID
VER	Exclusive version ID
[data]	Body of data
EOX	End of exclusive

Messages are transmitted in order, beginning with SOX, IDC, etc. and continuing to the end. The form of the transmission message differs depending on the type of command.

■ Explanation of messages

SOX: Indicates the start of exclusive

F0H	Exclusive status
-----	------------------

IDC: Product manufacturer differentiating ID

50H	Technics ID number
-----	--------------------

CMD: Indicates type of transmission data and commands.

21H	HRQ: Hand shake request
22H	HRT: Hand shake routine
23H	ACK: Acknowledge
24H	NAK: Negative Acknowledge
25H	TMP: Tempo data
27H	EOK: End of Block
28H	END: End
29H	ERR: Error
2AH	FUL: Memory full
2BH	DRQ: Data request
2CH	ITR: Individual data
2DH	BTR: Data block
7EH	CDD: Continuing data

PC: Technics product category ID

01H	KN
7EH	DMY: Dummy data for ACK,NAK,EOK,END,ERR,FUL

MD: Model differentiating ID

20H	KN3000
-----	--------

VER: Exclusive version control ID

10H	Ver 2-0
-----	---------

[data]: Body of data

•[data] for Individual data, Data dump, and Data request.

ADR	ADR(MSB)	ADDRESS MSB (7bit)
	ADR	: (7bit)
	ADR(LSB)	ADDRESS LSB (7bit)
SIZ	SIZ(MSB)	MSB of the address length of relevant data from the above address. (7bit)
	SIZ	: (7bit)
	SIZ(LSB)	LSB of the address length of relevant data from the above address. (7bit)
DT		data
:		:
CN		Continue ID
SM		Checksum

ADR :

Indicates address length of beginning data. The type of data is recognized by this value. The 21-bit address is divided into 3bytes of 7 bits each, and is sent in order beginning with the upper end. (Refer to the address map.)

SIZ :

Indicates length of address from ADR. (Refer to the address map.) The 21-bit address length is divided into 3 bytes of 7 bytes each, and is sent in order beginning with the upper end.

If a size not consistent with the data is indicated, data request is ineffective. If the data request concerns the data dump, then dummy data is sent, although it has no significance.

DT :

Body of transmitted data. The 8-bit data is divided into 2 bytes of 4 bits each, and is sent in order beginning with the upper end.

Note that SIZ = number of bytes in DT divided by 2.

CN : Indicates data continue/discontinue

00h STP : End of data

01H CNT : More data follows

(CMD of next packet is CDD)

The number of bytes in one exclusive packet is 256. In a transmission where the number of bytes exceeds one packet, CN = CNT, and the continuing data is transmitted in the continuing data (CMD = CDD) format.

SM : Checksum

Checksum for checking data errors.

Based on EXCLUSIVE-OR operation from IDC to CN.

•[data] for Tempo.

DT1	Data LSB
DT2	Data MSB

DT2, DT1 : 02H, 08H - 12H, 0Ch

(J = 40-300)

Tempo data is 9bit Binary (= 101000 ~ 100101100)

The lower 4 bits is expressed as DT1, and the remaining upper 5 bits as DT2. DT1 is sent first followed by DT2.



■ The form of the transmission message

Function	SOX =F0H	IDC =50H	CMD	PC =01H	MD =20H	VER =10H	[data]					EOX =F7H
							ADR	SIZ	DT	CN	SM	
Hand shake request	SOX	IDC	HRQ	PC	MD	VER	--	--	--	--	--	EOX
Hand shake routine	SOX	IDC	HRT	PC	MD	VER	--	--	--	--	--	EOX
Acknowledge	SOX	IDC	ACK	DMY	--	--	--	--	--	--	--	EOX
Negative Acknowledge	SOX	IDC	NAK	DMY	--	--	--	--	--	--	--	EOX
End of Block	SOX	IDC	EOK	DMY	--	--	--	--	--	--	--	EOX
End	SOX	IDC	END	DMY	--	--	--	--	--	--	--	EOX
Error	SOX	IDC	ERR	DMY	--	--	--	--	--	--	--	EOX
Memory full	SOX	IDC	FUL	DMY	--	--	--	--	--	--	--	EOX
Tempo data	SOX	IDC	TMP	--	--	--	--	DT	--	--	--	EOX
Data request	SOX	IDC	DRQ	PC	MD	VER	ADR	SIZ	--	CN	SM	EOX
Individual data												
System data	SOX	IDC	ITR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
Part data	SOX	IDC	ITR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
Data dump												
Sound Memory												
header	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
parameter	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
Panel												
panel total data	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
panel memory	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
Composer												
location	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
header	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
performance	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
Sequencer												
location	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
header	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
performance	SOX	IDC	BTR	PC	MD	VER	ADR	SIZ	DT	CN	SM	EOX
Continuing data	SOX	IDC	CDD	--	--	--	--	DT	CN	SN		EOX

■ MIDI exclusive address map

ADDRESS (Hex)		Area	Subarea	Sub-subarea
ADR MSB~LSB	ADDRESS (21bit)			
20 00 00~	080000H~	SYSTEM		REAL TIME
20 08 00~	080400H~	PART	COMMON	REAL TIME
20 60 00~	081800H~	PART	SPECIAL	REAL TIME
30 00 00~	0C0000H~	SOUND MEMORY	HEADER	NON-REAL TIME
30 00 10~	0C0010H~		PARAMETER	NON-REAL TIME
40 00 00~	100000H~	PANEL	PANEL DATA	NON-REAL TIME
41 00 00~	104000H~		PANEL MEMORY	NON-REAL TIME
50 00 00~	140000H~	COMPOSER	LOCATION	NON-REAL TIME
50 00 60~	140060H~		HEADER	NON-REAL TIME
50 27 40~	1413C0H~		PERFORMANCE	NON-REAL TIME
60 00 00~	180000H~	SEQUENCER	LOCATION	NON-REAL TIME
60 10 00~	180800H~		HEADER	NON-REAL TIME
61 30 00~	185800H~		PERFORMANCE	NON-REAL TIME

## Classification of individual data and data dump areas

### Individual data area:

System	
Part	(Common/special)

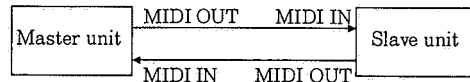
### Data dump area:

Sound Memory	(Header + Parameter)
Panel	(Panel data + Panel Memory)
Composer	(Location + Header + Performance)
Sequencer	(Location + Header + Performance)

## One-way transmission and handshake transmission

In one-way transmission, communication takes place in one direction only, that is from the master unit to the slave unit.

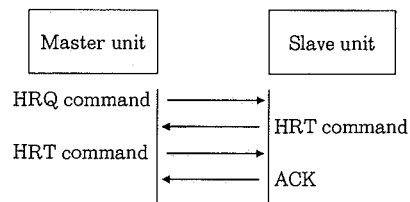
In handshake transmission, the transmission status between the master unit and slave unit is being confirmed during data transmission. For this reason, a MIDI cable connection from the slave unit to the master unit is also necessary. In comparison to one-way transmission, handshake transmission is faster.



In the KN3000, the transmission mode is switched automatically between handshake transmission and one-way transmission. Communication begins with handshake transmission, and if there is no response from the slave unit within a given time, communication switches automatically to one-way transmission.

## Communication sequence between master unit and slave unit

### ■ Communication sequence of handshake confirmation



### HRT command: handshake routine

SOX	F0H
IDC	50H
HRT	22H
PC	01H
MD	20H
VER	10H
EOX	F7H

### ACK: Acknowledge

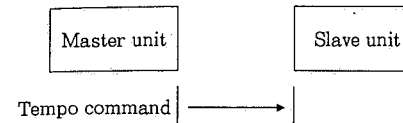
SOX	F0H
IDC	50H
ACK	23H
DMY	7EH
EOX	F7H

### HRQ command: handshake request

SOX	F0H
IDC	50H
HRQ	21H
PC	01H
MD	20H
VER	10H
EOX	F7H

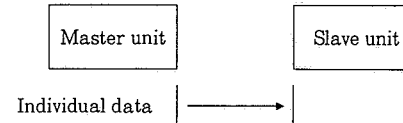
- There is no END command.
- If there is no response from the slave unit to the master unit even after the above handshake confirmation routine is performed three times, it is interpreted as inability to transmit handshake transmission data, and the transmission mode switches to one-way transmission (in the case of a MIDI sequencer, etc.).
- Handshake communication is possible only during data dump.

## ■ Sequence of tempo data communication



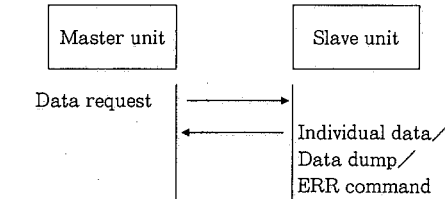
- Transmission/reception of TEMPO exclusive data can be enabled or disabled by the NOTE ONLY setting of the MIDI settings.

## ■ Sequence of individual data communication

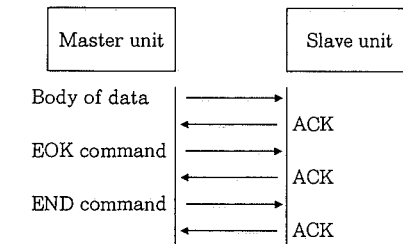


- Transmission/reception of REAL TIME exclusive data can be enabled or disabled by the COMMON SETTING setting of the MIDI settings.

## ■ Sequence of data request communication



## ■ Sequence of data dump communication



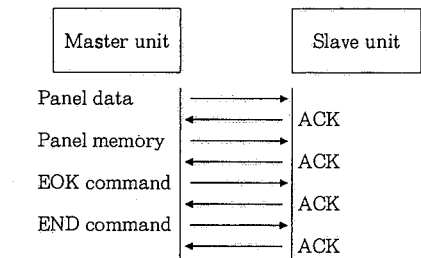
- Data dump is possible only while the SYSEX BULK DUMP display is selected during MIDI function setting.

In the KN3000, data is divided into five types: TOTAL KEYBOARD, PANEL MEMORY, SOUND MEMORY, COMPOSER, and SEQUENCER.

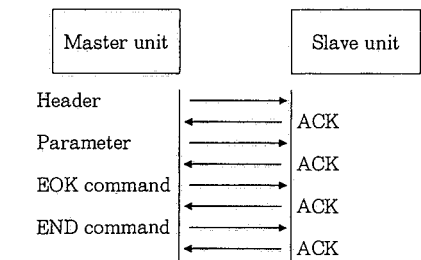
After the above handshake routine is concluded and communication link is established, the various kinds of data are respectively transmitted as described below. For one-way transmission, the transmission interval between packets is more than 50 msec.

The number of bytes in one exclusive packet is 256. In a transmission where the number of bytes exceeds one packet, the continuing data is transmitted in the continuing data (CMD=CDD) format.

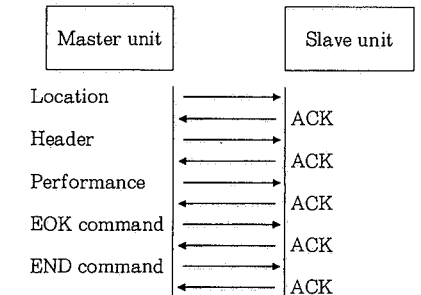
### ● Panel



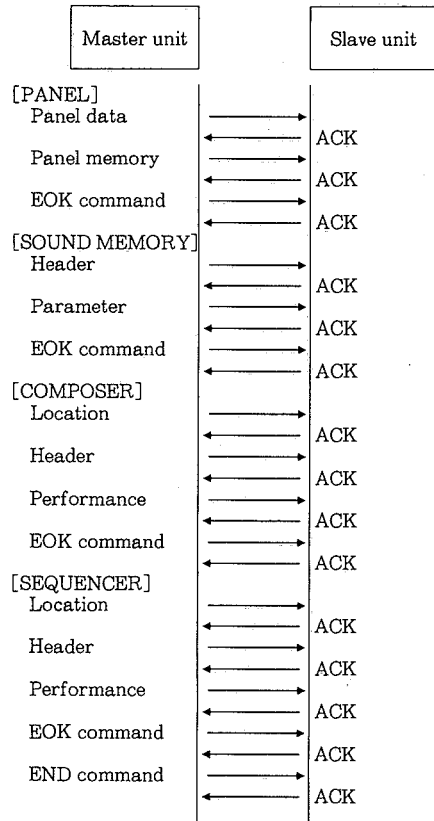
### ● Sound memory



### ● Composer data, Sequencer data



● All data



● SIZ of data dump area

SIZ		Area	Subarea
MSB	LSB		
00 00 10	01 6F 70	SOUND MEMORY	HEADER PARAMETER
00 0D 00	01 10 00	PANEL	PANEL DATA PANEL MEMORY
00 00 60	00 26 60 Variable	COMPOSER	LOCATION HEADER PERFORMANCE
00 10 00	01 20 00 Variable	SEQUENCER	LOCATION HEADER PERFORMANCE

● ADR of data request concerns the data dump

ADR		Area
MSB	LSB	
30 00 00	40 00 00	SOUND MEMORY
40 00 00	50 00 00	PANEL
50 00 00	60 00 00	COMPOSER
60 00 00		SEQUENCER

## SYSTEM AND PART PARAMETER

ADR(HEX)		SIZ(HEX)		PARAMETER	DATA(HEX)		DISCRIPTION	NOTE *1
MSB	LSB	MSB	LSB		RANGE			
<b>SYSTEM REAL TIME</b>								
20 00 00	00 00 01	20 00 01	00 00 01	MASTER TUNING	C0-00-3F	427.3-440.0-453.0		QR
20 00 01	00 00 01	20 00 02	00 00 01	SCALE TYPE	00-01	00H:Equal.Temperament, 01H:Piano Tuning		QR
20 00 02	00 00 01	20 00 03	00 00 01	TRANSPOSE	00-05-0B	G-C-F#		QRT
20 00 03	00 00 01			OVERALL TOUCH SENSITIVITY	00-09	0-9		QR
20 00 10	00 00 01	20 00 11	00 00 01	PANEL MEMORY NUMBER	00-18	Off, 1-1, 1-2, ... 3-8		QRT
20 00 11	00 00 01	20 00 12	00 00 01	PANEL MEMORY EXPAND MODE	00-01	00H:Normal, 01H:Expand		QR
20 00 12	00 00 01	20 00 13	00 00 01	MUSIC STYLE ARRANGER STYLE	00-04	00H:Off, 01H-04H:1-4		QRT
20 00 13	00 00 01			MUSIC STYLE ARRANGER MODE	01-03	01H:Rhythm 02H:Sound&Rhythm 03H:Panel Memory		QR
20 00 20	00 00 02			MANUAL SEQUENCE PADS CNG&BANK SELECT	00-7F 00-FF	00-127 00-255		RT
<b>PART COMMON REAL TIME</b>								
20 08 00	00 00 01	20 08 08	00 00 01	TOTAL EXPRESSION	00-7F	0-127		QRT
20 08 08	00 00 01	20 08 09	00 00 01	TECHNI-CHORD ON/OFF	00-01	00H:Off, 01H:On		QRT
20 08 09	00 00 01			TECHNI-CHORD TYPE	00-0C	00H:Close, 07H:Block 01H:Open1, 08H:Big Band Brass 02H:Open2, 09H:Big Band Reeds 03H:Duet, 0AH:Octave 04H:Country, 0BH:Hard Rock 05H:Theatre, 0CH:Fanfare 08H:Hymn		QR
20 08 10	00 00 01	20 08 11	00 00 01	REVERB TOTAL ON/OFF	00-7F	7FH:On		QRT
20 08 11	00 00 01			REVERB TYPE	09-1B	10H:Room Reverb1, 17H:Dark Reverb2 11H:Room Reverb2, 18H:Bright Reverb1 12H:Plate Reverb1, 19H:Bright Reverb2 13H:Plate Reverb2, 1AH:Wave Reverb1 14H:Concert Reverb1, 1BH:Wave Reverb2 15H:Concert Reverb2, 09H:Single Delay 16H:Dark Reverb1, 0AH:Multi Tap Delay		QR
20 08 21	00 00 01			DSP EFFECT TYPE	01-63	01H:Chorus, 34H:Auto Wah 02H:Modulated Chorus, 35H:Rotary Speaker 03H:Enhancer, 36H:Ring Modulator 04H:Flanger, 38H:Mix up 05H:Phaser, 40H:Single Delay * Chorus 06H:Ensemble, 41H:Single Delay * Single Delay 08H:Gated Reverb, 42H:Single Delay * Flanger 09H:Single Delay, 43H:Single Delay * Vibrato 0AH:Multi Tap Delay, 44H:Single Delay * Phaser 20H:Distortion, 46H:Auto Wah * Single Delay 21H:Overdrive, 47H:PEQ * Chorus 22H:Fuzz, 48H:PEQ * Single Delay 23H:Exciter, 49H:PEQ * Flanger 24H:Compressor, 4AH:PEQ * Vibrato 25H:Slow Attacker, 4BH:PEQ * Compressor 27H:Parametric Equalizer, 60H:PEQ * Cmptrs * Distortion 30H:Auto Pan, 61H:PEQ * Cmptrs * Overdrive 32H:Vibrato, 82H:PEQ * Distortion * Delay 63H:PEQ * Overdrive * Delay		QR
20 08 22	00 00 01			DSP EFFECT to REVERB send value	00-99			
<b>PART SPECIAL REAL TIME</b>								
20 60 00	00 00 02	20 60 02	00 00 01	RHYTHM PROG. CNG & Bank Select	00-7F 00-FF	0-127 0-255		QRT *2
20 60 02	00 00 01			APC TYPE	00-03	00H:Off 01H:One Finger 02H:Fingered 03H:Pianist 00H:Off, 01H:On		QRT *3
20 60 03	00 00 01	20 60 04	00 00 01	APC MEMORY ON/OFF	00-01	00H:Off, 01H:On		QRT *3
20 60 04	00 00 01	20 60 05	00 00 01	DYNAMIC ACMP ON/OFF	00-01	00H:Off, 01H:On		QRT
20 60 05	00 00 01	20 60 06	00 00 01	SYNCHRO/BREAK	00-01	00H:Off, 01H:On		QRT *4
20 60 06	00 00 01	20 60 07	00 00 01	VARIATION	00-03	00H:Vari1, 01H:Vari2, 02H:Vari3, 03H:Vari4		QRT *4
20 60 07	00 00 01	20 60 08	00 00 01	INTRO	00-02	00H:Off, 01H:Intro1 On, 02H:Intro2 On		RT *4
20 60 08	00 00 01	20 60 09	00 00 01	COUNT INTRO	00-01	00H:Off, 01H:On		RT *4
20 60 09	00 00 01	20 60 0A	00 00 01	FILL IN	00-02	00H:Off, 01H:Fill In1 On, 02H:Fill In2 On		RT *4
20 60 0A	00 00 01	20 60 0B	00 00 01	ENDING	00-02	00H:Off, 01H:Enging1 On, 02H:Enging2 On		RT *4

\*1 Q: When Data Request is received, the relevant data is sent.

R: Data reception possible.

T: Data transmission possible.

\*2 Corresponds to Technics numbers on the rhythm map.

\*3 Not transmitted/received when APC MODE ENABLE = 0 (disable).

\*4 Not transmitted/received when FILL IN, INTRO ENABLE = 0(disable).

## HOW TO USE MIDI PRESETS

The KN3000 can be connected to any MIDI equipped musical instrument.

To connect the KN3000 to another instrument use a standard MIDI cable and connect the MIDI OUT socket of the MASTER UNIT (the one you are playing) to the MIDI IN socket of the SLAVE UNIT.

MIDI Presets are designed to help you set up the KN3000 quickly and easily for use with various other instruments.

There are two pages of MIDI Presets, the first with the KN3000 as the master unit and the second with the KN3000 as the slave. On the appropriate page highlight the other product type that you are using and select whether or not you want to use Auto Play Chord, and press OK.

Many applications are very simple, but the following guidelines should be helpful with more complicated setups.

### ■ MIDI PRESETS FOR CONNECTING AN ORGAN TO THE KN3000 USING AUTO PLAY CHORD.

MASTER UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
ORGAN (ALL)	FINGERED	MASTER : ORGAN TYPE1	WITH APC
	ONE FINGER*	MASTER : ORGAN TYPE2	WITH APC

\* TURN ON ONE FINGER (FA/GA/EA) OR FINGERED1 (OTHERS) AND TURN DOWN APC VOLUME ON THE ORGAN.

### ■ MIDI PRESETS FOR CONNECTING AN ORGAN TO THE KN3000 WITHOUT AUTO PLAY CHORD.

MASTER UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
ORGAN (FA/GA/EA)	---	MASTER : ORGAN TYPE2	WITHOUT APC
ORGAN (OTHERS)	---	MASTER : ORGAN TYPE1	WITHOUT APC

### ■ MIDI PRESETS FOR CONNECTING THE KN3000 TO AN ORGAN USING AUTO PLAY CHORD.

SLAVE UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
ORGAN (FA/GA/EA)	---	SLAVE : ORGAN TYPE2	WITH APC
ORGAN (OTHERS)	---	SLAVE : ORGAN TYPE1	WITH APC

### ■ MIDI PRESETS FOR CONNECTING THE KN3000 TO AN ORGAN WITHOUT AUTO PLAY CHORD.

SLAVE UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
ORGAN (FA/GA/EA)	---	SLAVE : ORGAN TYPE2	WITHOUT APC
ORGAN (OTHERS)	---	SLAVE : ORGAN TYPE1	WITHOUT APC

### ■ MIDI PRESETS FOR CONNECTING A PR PIANO TO THE KN3000 USING AUTO PLAY CHORD.

MASTER UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
PR (307/305/303)	FINGERED	MASTER : PR PIANO TYPE1	WITH APC
PR (OTHERS)	FINGERED	MASTER : ORGAN TYPE1	WITH APC
PR (ALL)	ONE FINGER	MASTER : PR PIANO TYPE2	WITH APC
PR (ALL)	PIANIST	MASTER : PX PIANO	WITH APC

### ■ MIDI PRESETS FOR CONNECTING A PR PIANO TO THE KN3000 WITHOUT AUTO PLAY CHORD.

MASTER UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
PR (307/305/303)	---	MASTER : PR PIANO TYPE2	WITHOUT APC
PR (OTHERS)	---	MASTER : PR PIANO TYPE1	WITHOUT APC

### ■ MIDI PRESETS FOR CONNECTING THE KN3000 TO A PR PIANO USING AUTO PLAY CHORD.

SLAVE UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
PR (307/305/303)	---	SLAVE : PR PIANO TYPE2	WITH APC
PR (OTHERS)	---	SLAVE : PR PIANO TYPE1	WITH APC

### ■ MIDI PRESETS FOR CONNECTING THE KN3000 TO A PR PIANO WITHOUT AUTO PLAY CHORD.

SLAVE UNIT		MIDI PRESET	
EQUIPMENT	PLAY STYLE	TYPE	APC
PR (307/305/303)	---	SLAVE : PR PIANO TYPE2	WITHOUT APC
PR (OTHERS)	---	SLAVE : PR PIANO TYPE1	WITHOUT APC

### [NOTES]

- About "KEYBOARD TYPE1" and "KEYBOARD TYPE2".  
 KEYBOARD TYPE1 : Equipment which does not have MIDI presets.  
 KEYBOARD TYPE2 : Equipment which has MIDI presets.  
 = KN3000, KN2000, KN1200, KN700, KN901, KN701, KN501, etc.
- If you use a MIDI preset to connect any other instrument (except a PX piano) to the KN3000 using Auto Play Chord, the KN3000 will be set to MIDI clock. This means that the KN3000's Rhythm will start & stop from the start/stop button of the master unit and the tempo will be controlled by the master unit. It is preferable to set the Rhythm and Accompaniment balances of the master unit to zero to avoid any unpleasant clashes with the KN3000's Rhythm & Accompaniment.