
SX-KN501/SX-KN701 REFERENCE GUIDE

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DISPLAY GUIDE

■KN501

SEQUENCER

- REALTIME RECORD
- STEP RECORD

MODE SET

- 1:INITIAL
- 2:SUB BALANCE
- 3:PART SETTING
- 4:KEYBOARD SET UP
- 5:KEY SCALING
- 6:SEQUENCER CLEAR
- 7:MIDI SETTINGS
- 8:GM MODE SET

- BASIC CHANNEL
- OCTAVE SHIFT
- LOCAL CONTROL
- REALTIME COMMAND
- CLOCK
- NOTE ONLY
- TRANSPOSE OUTPUT
- PROGRAM CHANGE MODE
- PROGRAM CHANGE TO PANEL MEMORY
- RIGHT 1 INPUT
- APC INPUT
- TECHNI-CHORD OUTPUT
- DRUM PATTERN OUTPUT
- APC OUTPUT
- BLUK DUMP
- PRESETS

■KN701

SEQUENCER

- REALTIME RECORD
- STEP RECORD

COMPOSER

- BAR
- TIME SIGNATURE
- MODE
- BEND RANGE

MODE SET

- 1:INITIAL
- 2:SUB BALANCE
- 3:PART SETTING
- 4:SONG LOAD/SAVE
- 5:KEYBOARD SET UP
- 6:KEY SCALING
- 7:SEQUENCER CLEAR
- 8:MIDI SETTINGS
- 9:GM MODE SET

- BASIC CHANNEL
- OCTAVE SHIFT
- LOCAL CONTROL
- REALTIME COMMAND
- CLOCK
- NOTE ONLY
- TRANSPOSE OUTPUT
- PROGRAM CHANGE MODE
- SONG SELECT
- MIDI SETUP LOAD
- PROGRAM CHANGE TO PANEL MEMORY
- RIGHT 1 INPUT
- APC INPUT
- TECHNI-CHORD OUTPUT
- DRUM PATTERN OUTPUT
- APC OUTPUT
- BLUK DUMP
- PRESETS

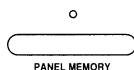
EASY SETTING (Press and hold)



TECHNI-CHORD TYPE



SPLIT POINT SETTING



PANEL MEMORY MODE

○ CHORUS
○ FLANGER



CHORUS / FLANGER SETTING

○ REVERB
○ PHASER



REVERB / PHASER SETTING

SOUND VARIATION

No.	SOUND	MIDI PROGRAM CHANGE DATA			No.	SOUND	MIDI PROGRAM CHANGE DATA		
		NORM	TECH	GM			NORM	TECH	GM
PIANO				ORCHESTRA					
001	Piano	0	0 (0)	1	041	Violin	40	96 (0)	41
002	Bright Piano	1	1 (0)	2	042	Viola	41	97 (32)	42
003	Elect.Grand	2	3 (0)	3	043	Cello	42	97 (0)	43
004	Honky Tonk	3	1 (16)	4	044	Bowed Bass	43	98 (0)	44
005	Elect.Piano	4	5 (0)	5	045	Tremolo String	44	100 (32)	45
006	Modern E.P.	5	6 (0)	6	046	Pizzicato	45	99 (0)	46
007	Harpsichord	6	16 (0)	7	047	Harp	46	32 (0)	47
008	Clavi	7	17 (0)	8	048	Timpani	47	126 (0)	48
CHROMATIC PERC				ENSEMBLE					
009	Celesta	8	12 (0)	9	049	Strings	48	100 (0)	49
010	Glockenspiel	9	9 (0)	10	050	Slow Strings	49	101 (0)	50
011	Music Box	10	7 (0)	11	051	Synth Strings 1	50	103 (0)	51
012	Vibraphone	11	8 (0)	12	052	Synth Strings 2	51	103 (16)	52
013	Marimba	12	10 (0)	13	053	Vocal Ah	52	104 (48)	53
014	Xylophone	13	11 (0)	14	054	Vocal Doo	53	109 (0)	54
015	Tubular Bells	14	14 (0)	15	055	Synth Vocal	54	107 (0)	55
016	Dulcimer	15	38 (16)	16	056	Orchestra Hit	55	127 (16)	56
ORGAN				BRASS					
017	Full Drawbars	16	89 (0)	17	057	Trumpet	56	48 (0)	57
018	Jazz Organ	17	88 (0)	18	058	Trombone	57	52 (0)	58
019	Rock Organ	18	92 (32)	19	059	Tuba	58	55 (0)	59
020	Pipe Organ	19	84 (0)	20	060	Mute Trumpet	59	50 (0)	60
021	Harmonium	20	86 (32)	21	061	Open French Horn	60	54 (16)	61
022	Bri.Accordion	21	80 (0)	22	062	Brass	61	56 (0)	62
023	Harmonica	22	83 (0)	23	063	Synth Brass Ens.	62	61 (16)	63
024	Bandoneon	23	80 (16)	24	064	Synth Brass	63	60 (0)	64
GUITAR				REED					
025	Spanish Guitar	24	20 (16)	25	065	Soprano Sax	64	76 (0)	65
026	Folk Guitar	25	22 (0)	26	066	Alto Sax	65	77 (0)	66
027	Jazz Guitar	26	25 (0)	27	067	Tenor Sax	66	78 (48)	67
028	Bright Solid	27	26 (0)	28	068	Baritone Sax	67	79 (16)	68
029	Mute Guitar	28	29 (0)	29	069	Oboe	68	66 (0)	69
030	Overdrive Gtr	29	27 (32)	30	070	English Horn	69	67 (0)	70
031	Distortion Gtr	30	30 (0)	31	071	Bassoon	70	70 (0)	71
032	Gtr Harmonics	31	27 (16)	32	072	Jazz Clarinet	71	68 (0)	72
BASS				PIPE					
033	Acoustic Bass	32	43 (0)	33	073	Piccolo	72	64 (0)	73
034	Bright E.Bass	33	40 (16)	34	074	Jazz Flute	73	65 (0)	74
035	Picked E.Bass	34	42 (0)	35	075	Recorder	74	74 (0)	75
036	Fretless Bass	35	40 (32)	36	076	Pan Flute	75	72 (0)	76
037	Slap Bass 1	36	41 (0)	37	077	Blown Bottle	76	72 (32)	77
038	Slap Bass 2	37	41 (16)	38	078	Shakuhachi	77	75 (0)	78
039	Wow Bass	38	46 (0)	39	079	Whistle	78	111 (0)	79
040	Synth Chopper	39	45 (0)	40	080	Ocarina	79	74 (16)	80

SOUND VARIATION

No.	SOUND	MIDI PROGRAM CHANGE DATA			No.	SOUND	MIDI PROGRAM CHANGE DATA		
		NORM	TECH	GM			NORM	TECH	GM
SYNTH LEAD					PERCUSSIVE				
081	Square Lead	80	117 (0)	81	113	Tinkle Bell	112	14 (32)	113
082	Saw Lead	81	118 (16)	82	114	Agogo	113	122 (0)	114
083	Synth Calliope	82	72 (48)	83	115	Steel Drum	114	15 (0)	115
084	Chiffer Lead	83	117 (32)	84	116	Wood Block	115	122 (16)	116
085	Charang	84	27 (48)	85	117	Taiko Drum	116	123 (48)	117
086	Air Vox	85	106 (16)	86	118	Melodic Tom	117	122 (32)	118
087	5th Wave	86	119 (0)	87	119	Synth Drum	118	124 (0)	119
088	Bass & Lead	87	46 (32)	88	120	Reverse Cymbal	119	122 (48)	120
SYNTH PAD					SOUND EFFECTS				
089	Fantasia	88	116 (32)	89	121	Fret Noise	120	124 (16)	121
090	Mellow Ensemble	89	107 (16)	90	122	Breath Noise	121	124 (32)	122
091	Polysynth	90	102 (32)	91	123	Seashore	122	124 (48)	123
092	Spacy pad	91	107 (32)	92	124	Bird Tweet	123	125 (32)	124
093	Crystal Ensemble	92	120 (0)	93	125	Telephone	124	123 (0)	125
094	Metal pad	93	106 (32)	94	126	Helicopter	125	123 (16)	126
095	Halo pad	94	107 (48)	95	127	Applause	126	125 (48)	127
096	Sweep pad	95	62 (32)	96	128	Gun Shot	127	123 (32)	128
SYNTH EFFECTS					KEYBOARD PERC				
097	Ice Rain	96	121 (48)	97	129	Standard Kit	128	—	—
098	Soundtrack	97	119 (16)	98	130	Room Kit *	129	—	—
099	Synth Glocken	98	9 (32)	99	131	Power Kit *	130	—	—
100	Atmosphere	99	21 (48)	100	132	Electric Kit *	131	—	—
101	Mist	100	108 (48)	101	133	Analog Kit *	132	—	—
102	Goblins	101	106 (0)	102	134	Jazz Kit *	133	—	—
103	Echo Drops	102	106 (48)	103	135	Brush Kit *	134	—	—
104	Star Theme	103	120 (16)	104	136	Orchestra Kit *	135	—	—
ETHNIC									
105	Sitar	104	38 (0)	105					
106	Banjo	105	33 (0)	106					
107	Shamisen	106	36 (0)	107					
108	Koto	107	37 (0)	108					
109	Kalimba	108	39 (0)	109					
110	Bagpipe	109	73 (0)	110					
111	Country Fiddle	110	96 (32)	111					
112	Shanai	111	73 (16)	112					

· The numbers in parentheses () are bank data.

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

(*; KN701 only)

RHYTHM

RHYTHM		MIDI PROGRAM CHANGE DATA		RHYTHM		MIDI PROGRAM CHANGE DATA	
		NORM	TECH			NORM	TECH
8BEAT				FUNK&DANCE			
001	8Bt Standard 1	0	90 (96)	034	Funk 1	33	110 (48)
002	8Bt Standard 2	1	90 (80)	035	Funk 2	34	111 (32)
003	8Bt Rock	2	90(112)	036	Swing Funk	35	65 (32)
004	8Bt Ballad 1	3	91 (48)	037	Electro Pop	36	109 (32)
005	8Bt Ballad 2	4	91 (32)	038	Disco 1	37	124 (80)
006	8Bt Soul 1	5	87 (32)	039	Disco 2	38	123 (64)
007	8Bt Soul 2	6	87 (16)	040	Disco 3	39	121 (0)
008	8Bt Pop	7	84 (64)	041	Euro Beat	40	120 (48)
009	8Bt Pop Rock	8	84 (80)	042	Dance 1	41	124 (96)
010	Hard Rock 1	9	92 (32)	043	Dance 2	42	124 (64)
011	Hard Rock 2	10	94 (32)	044	Dance 3	43	127 (64)
012	Heavy Metal	11	92 (48)	045	Rap 1	44	127 (96)
013	Country Rock	12	85 (32)	046	Rap 2	45	127 (32)
014	Rock'n'Roll 1	13	80 (80)	047	House 1	46	125 (32)
015	Rock'n'Roll 2	14	80 (64)	048	House 2	47	126 (32)
16BEAT				049	Garage	48	125 (48)
016	16Bt Standard 1	15	96 (80)	ROCK(OTHERS)			
017	16Bt Standard 2	16	96 (64)	050	Shuffle R'n'Roll	49	76(112)
018	16Bt Rock 1	17	100 (32)	051	Shuffle Boogie	50	76 (0)
019	16Bt Rock 2	18	100 (0)	052	Shuffle Hard Rock	51	79 (16)
020	16Bt Ballad 1	19	99 (16)	053	Shuffle Ballad	52	78 (32)
021	16Bt Ballad 2	20	99(112)	054	Rock Ballad 1	53	74 (80)
022	16Bt Pop 1	21	107 (80)	055	Rock Ballad 2	54	74 (32)
023	16Bt Pop 2	22	101 (32)	056	Swing Rock 1	55	72 (64)
MODERN ROCK				057	Swing Rock 2	56	73 (16)
024	Jazz Rock 1	23	113 (96)	LATIN			
025	Jazz Rock 2	24	113 (80)	058	Rhumba	57	58 (64)
026	Jazz Funk 1	25	112 (48)	059	Beguine	58	59 (32)
027	Jazz Funk 2	26	113 (64)	060	Mambo	59	56 (32)
028	Soul Rock 1	27	127 (80)	061	Cha Cha	60	57 (48)
029	Soul Rock 2	28	102 (64)	062	Salsa	61	66 (64)
030	Soul Ballad	29	103 (32)	063	Swinggy Reggae	62	71 (32)
031	Caribbean Rock	30	118 (48)	064	Modern Reggae	63	71 (48)
032	Latin Rock	31	119 (64)	065	Bossanova 1	64	48(112)
033	Samba Rock	32	117 (16)	066	Bossanova 2	65	48 (96)
				067	Samba	66	51 (80)
				068	Tango Continental	67	53 (64)
				069	Arabian	68	60 (0)

RHYTHM

RHYTHM		MIDI PROGRAM CHANGE DATA		RHYTHM		MIDI PROGRAM CHANGE DATA	
		NORM	TECH			NORM	TECH
No.				No.			
SWING				COMPOSER(MEMORY) *			
070	Standard Swing	69	25 (32)	101	Memory 1	100	0 (128)
071	Big Band 1	70	36 (64)	102	Memory 2	101	1 (128)
072	Big Band 2	71	38 (80)	103	Memory 3	102	2 (128)
073	Big Band Ballad	72	39 (32)				
074	Orchestra Swing	73	37 (32)				
JAZZ							
075	Jazz Combo	74	34 (80)				
076	Jazz Quartet	75	32 (64)				
077	Jazz Ballad	76	44 (16)				
078	Modern Jazz Fast	77	40 (80)				
079	Dixie	78	24 (96)				
080	Blues	79	38 (96)				
081	Jazz Waltz	80	46 (48)				
TRADITIONAL							
082	Standard Waltz	81	8 (96)				
083	Vienna Waltz	82	9 (32)				
084	Swingy Waltz	83	12 (16)				
085	U.S.March 2/4	84	0 (80)				
086	U.S.March 6/8	85	2 (16)				
087	Pop March	86	4 (64)				
088	Polka 2/4	87	4 (32)				
089	Polka 6/8	88	5 (32)				
090	Foxtrot	89	29 (96)				
091	Quickstep	90	28 (16)				
092	Broadway Show	91	15 (64)				
093	Soft Shoe	92	24 (80)				
094	Country 2Step	93	17(112)				
095	Modern Country	94	17 (80)				
096	Bluegrass	95	20 (48)				
097	R&B Soul	96	123 (80)				
098	R&B Ballad	97	75 (64)				
099	Gospel Shuffle	98	77 (64)				
100	Hawaiian	99	22 (16)				











































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(*; KN701 only)

ONE TOUCH PLAY STYLE NAME

RHYTHM No.	STYLE NAME	RHYTHM No.	STYLE NAME
01	EASY LISTENING	51	SHUFFLE BOOGIE BLUES
02	GENTLE GUITAR SOLO	52	HAM & ROCK
03	ROCK ORGAN	53	FIFTIES BALLAD
04	MELODIC SYNTH	54	SENTIMENTAL STRINGS
05	GUITAR BALLAD	55	ROMANTIC VOICES
06	DETROIT GROOVE	56	AL'S BAND
07	SOUL HARMONICA	57	BENSON GROOVE
08	POP LEAD GUITAR	58	LATIN AMERICAN GUITAR
09	HUEY'S BRASS	59	LATIN ACCORDION
10	HARD ROCK HARMONICS	60	LET'S MAMBO!
11	HEAVY GUITARS	61	LATIN DANCE BAND
12	METALIC ROCK	62	HOT SALSA!
13	MODERN COUNTRY ROADS	63	JAMAICAN GUITAR
14	TWISTING SAX	64	RASTA ORGAN
15	FATS' PIANO	65	IPENEMA SAX
16	POP PIPES	66	JAZZY BOSSA
17	POP SAX	67	COPACABANA BRASS
18	ROCK B THREE	68	STRICT TEMPO
19	WEST COAST GUITAR	69	ARABIAN NIGHTS
20	BALLAD ATMOSPHERE	70	STRAIGHT FOUR
21	BALLAD BELLS	71	IN THE FORTIES MOOD
22	POP VOCAL	72	TUXEDO REEDS
23	GENTLE TINES	73	MIDNIGHT SERENADE
24	FUSION SYNTH	74	HOLLYWOOD LOVE SONG
25	L.A. PIANO	75	SATCHMO'S COMBO
26	FUNKY KEYS	76	UP TEMPO JAZZ
27	WOODWIND FUSION	77	SHEER ELEGANCE
28	SUITCASE SOUL	78	GROOVIN' KEYS
29	SOULFUL TOOTS	79	NEW ORLEANS CLUB
30	KENNY'S BALLAD	80	I'VE GOT THE BLUES
31	ISLAND KEYS	81	SWINGY WHISTLE
32	BRASILIAN GROOVE	82	SWEET WALTZ
33	SAMBA STEEL	83	STRAUSS & COMPANY
34	FUNKY SYNTH	84	JAZZ WALTZ
35	FUNK LEAD	85	HIGH SCHOOL MARCHING BAND
36	GROOVY GUITAR SYNTH	86	MARINE BAND
37	TALKING SYNTH	87	PARTY TIME
38	SATURDAY NIGHT DISCO	88	ROLL OUT THE POLKA!
39	SEVENTIES ORCHESTRA	89	OKTOBERFEST
40	DISCO CLUB	90	SIMPLE BALLROOM
41	HUMAN SYNTH	91	DOLLY'S QUICKSTEP
42	CLAVI DANCE	92	CURTAIN UP!
43	SWEDISH POP	93	SLAPSTICK ROUTINE
44	HIT THE DANCE	94	TENNESSEE DANCE
45	SCRATCH & RAP	95	COUNTRY STRINGS
46	STREET RAP	96	HOE DOWN
47	HOUSE KEYS	97	R & B HORNS
48	HOUSE BELL	98	BLUES PIANO
49	GARAGE LEAD	99	SING PRAISES!
50	ROCK & ROLL PIANO	100	HAWAIIAN SUNSET

KEYBOARD PERCUSSION

		Drum kit (General MIDI)	MIDI NOTE NUMBER		Orchestral kit	MIDI NOTE NUMBER
			NORM	TECH		
		Bass Drum 2 *	—	—	—	35
		Bass Drum 1	36	36	Orchestral Bass Drum	36
		Rim Shot	37	47	Rim Shot	37
	 1	Snare Drum 1	38	38	Orchestral Snare Drum 1	38
		Hand Clap	39	31	Castanets	39
	 2	Electric Snare	40	32	Orchestral Snare Drum 2	40
	 L	Floor Tom Low	41	95	Triangle	41
		Hi Hat Close	42	24	Cymbal Soft Mallet	42
	 H	Floor Tom High	43	41	Tambourine	43
		Hi Hat Pedal	44	51	Orchestral Cymbal 1	44
	 L	Tom Low	45	43	Tam-Tam	45
		Hi Hat Open	46	25	Orchestral Cymbal 2	46
	 LM	Tom Mid	47	45	Rattle	47
	 HM	Tom High 1	48	48	Tublar Bells C	48
	 L	Crash Cymbal 1	49	49	Tublar Bells C [#]	49
	 H	Tom High 2	50	50	Tublar Bells D	50
	 L	Ride Cymbal 1	51	28	Tublar Bells D [#]	51
		Chinese Cymbal	52	52	Tublar Bells E	52
		Ride Bell	53	53	Tublar Bells F	53
		Tambourine	54	54	Tublar Bells F [#]	54
		Splash Cymbal	55	55	Tublar Bells G	55
		Cowbell	56	56	Tublar Bells G [#]	56
	 H	Crash Cymbal 2	57	57	Tublar Bells A	57
		Vibraslap	58	58	Tublar Bells A [#]	58
	 H	Ride Cymbal 2	59	99	Tublar Bells B	59
	 H	Bongo High	60	100	Tublar Bells c	60
	 L	Bongo Low	61	66	Tublar Bells c [#]	61
	 C	Conga Mute Crash	62	62	Tublar Bells d	62
	 H	Conga High	63	102	Tublar Bells d [#]	63
	 L	Conga Low	64	101	Timpani E	64
	 H	Timbales High	65	65	Timpani F	65
	 L	Timbales Low	66	66	Timpani F [#]	66
	 H	Agogo High	67	67	Timpani G	67
	 L	Agogo Low	68	68	Timpani G [#]	68
		Cabasa	69	69	Timpani A	69
		Maracas	70	74	Timpani A [#]	70
		Samba Whistle Short	71	96	Timpani B	71
		Samba Whistle Long	72	108	Timpani c	72
		Guiro Short	73	105	Timpani c [#]	73
		Guiro Long	74	107	Timpani d	74
		Claves	75	77	Timpani d [#]	75
	 H	Wood Block Mid	76	76	Timpani e	76
	 L	Wood Block Low	77	85	Timpani f	77
	H	Cuica High	78	86	Wood Block Low	78
	L	Cuica Low	79	87	Wood Block Mid	79
		Triangle Mute	80	29	Wood Block High	80
		Triangle Open	—	—	—	81

* Sounds in SEQUENCER and MIDI function

TECHNI-CHORD TYPE

<Example: C major chord>

CLOSE [1] OPEN1 [2] OPEN2 [3]

DUET [4] COUNTRY [5] THEATRE [6]

HYMN [7] BLOCK [8] BIG BAND 1 [9]

BIG BAND 2 [10] OCTAVE [11] HARD ROCK [12]

FANFARE [13]

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

MIDI Implementation Chart

Keyboard [SX-KN501 / SX-KN701]

(Transmitted)

Function	RIGHT 1, 2, LEFT, PART 4 ~ 15	PART 16	ACMP 1	ACMP 2,3	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
Messages	×	×	×	×	×	×	×	×	
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	○	○	○	○	○	○	○	-	
Note OFF	×	×	×	×	×	×	×	-	
After Key's	×	×	×	×	×	×	×	-	
Touch Ch's	×	×	×	×	×	×	×	-	
Pitch Bend	○	×	○	○	○	×	○	×	
Control Change	0,32 1 6,38 7 10 11 64 80 82 91 93 100, 101 120 121	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ × × ○ × ○ ○ × × ○ ○ × ○ ○ ○	○ ○ × ○ × ○ ○ ○ × ○ ○ × ○ ○ ○	○ ○ × ○ × ○ ○ × × ○ ○ × ○ ○ ○	○ ○ × ○ × ○ ○ × × ○ ○ × ○ ○ ○	○ ○ × ○ × ○ ○ × × ○ ○ × ○ ○ ○	○ × × × × ○ × × × ○ ○ × × × × ×	bank select MSB, LSB modulation data entry MSB, LSB volume panpot expression sustain auto play chord intro, fill in, ending reverb chorus RPN LSB, MSB all sound off reset all controllers
Prog Change True #	○	○	○	○	○	○	○	○	Changes depending on program change mode and prog. cng to p. mem.
System exclusive	○								
System common Song Pos	○×*								only for SX-KN701
Song Sel	○×* (0-3)								
Tune	×								
System Real Time Clock Commands	○ ○×*								start / stop, continue
AUX Local ON/OFF	×	×	×	×	×	×	×	-	
All notes OFF	×	×	×	×	×	×	×	-	
Messages Active Sense	○								
Reset	×								
Notes	○×* Whether or not the data for each of these items is transmitted can be set.								

Mode 1: OMNI ON, POLY

Mode 2: OMNI ON, MONO

○ : Yes

Mode 3: OMNI OFF, POLY

Mode 4: OMNI OFF, MONO

× : No

MIDI Implementation Chart

Keyboard [SX-KN501 / SX-KN701]

(Recognized)

Function	RIGHT 1, 2, LEFT, PART 4 ~ 15	PART 16	ACMP 1	ACMP 2, 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	
Messages	×	×	×	×	×	×	×	×		
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	×	×	×	×	×	×	×	-		
After Key's	×	×	×	×	×	×	×	-		
Touch Ch's	×	×	×	×	×	×	×	-		
Pitch Bend	○	×	○	○	○	×	○	×		
Control Change										
0,32	○	○	○	○	○	○	○	×	bank select MSB, LSB modulation	
1	○	×	○	○	○	×	○	×		
6,38	○	×	×	×	×	×	×	×	data entry MSB, LSB volume	
7	○	○	○	○	○	○	○	×		
10	○	×	×	×	×	×	×	×	panpot	
11	○	○	×	×	×	×	×	○		
64	○	○	○	○	○	○	×	×	sustain	
80	×	×	○	×	×	×	×	×		
82	×	×	×	×	×	○	×	×	intro, fill in, ending	
91	○	○	○	○	○	○	○	○		
93	○	○	×	×	×	×	○	×	chorus	
100, 101	○	×	×	×	×	×	×	×		
120	○	○	○	○	○	○	○	×	RPN LSB, MSB	
121	○	○	○	○	○	○	○	×		
Prog Change	0-127	0-127	0-127	0-127	0-127	0-127	0-127	0-127	Changes depending on program change mode and prog. cng to p. mem.	
True #	0-127	0-127	0-127	0-127	0-127	0-127	0-127	0-127		
System exclusive	○									
System common	○X*									only for SX-KN701
Song Pos	○X*									
Song Sel	○X* (0-3)									
Tune	×									
System Real Time	○									start / stop, continue
Clock	○X*									
AUX Messages										
Local ON/OFF	×	×	×	×	×	×	×	-		
All notes OFF	○	○	○	○	○	○	○	-		
Active Sense	○									
Reset	×									
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

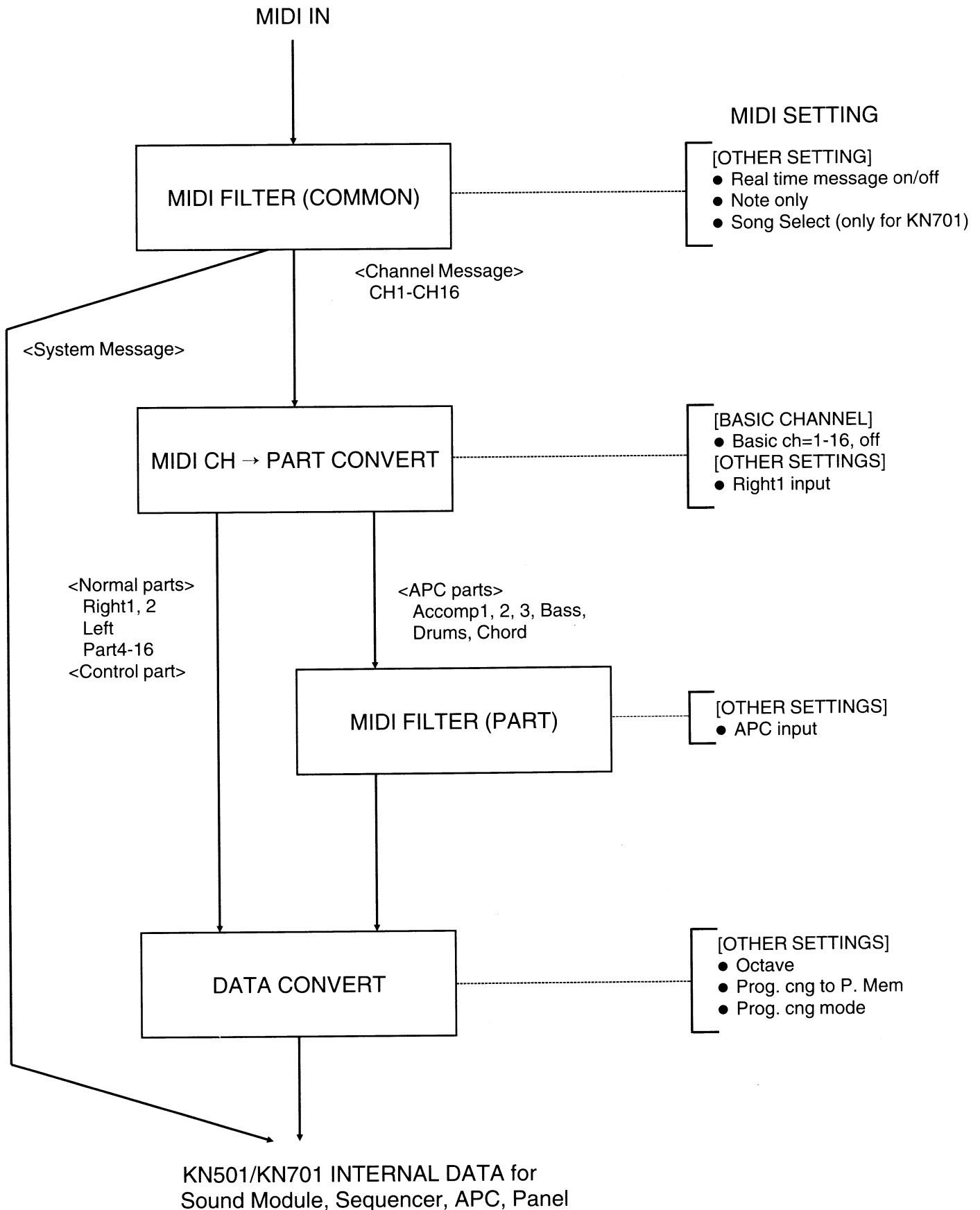
Mode 4: OMNI OFF, MONO

× : No

MIDI DATA FORMAT

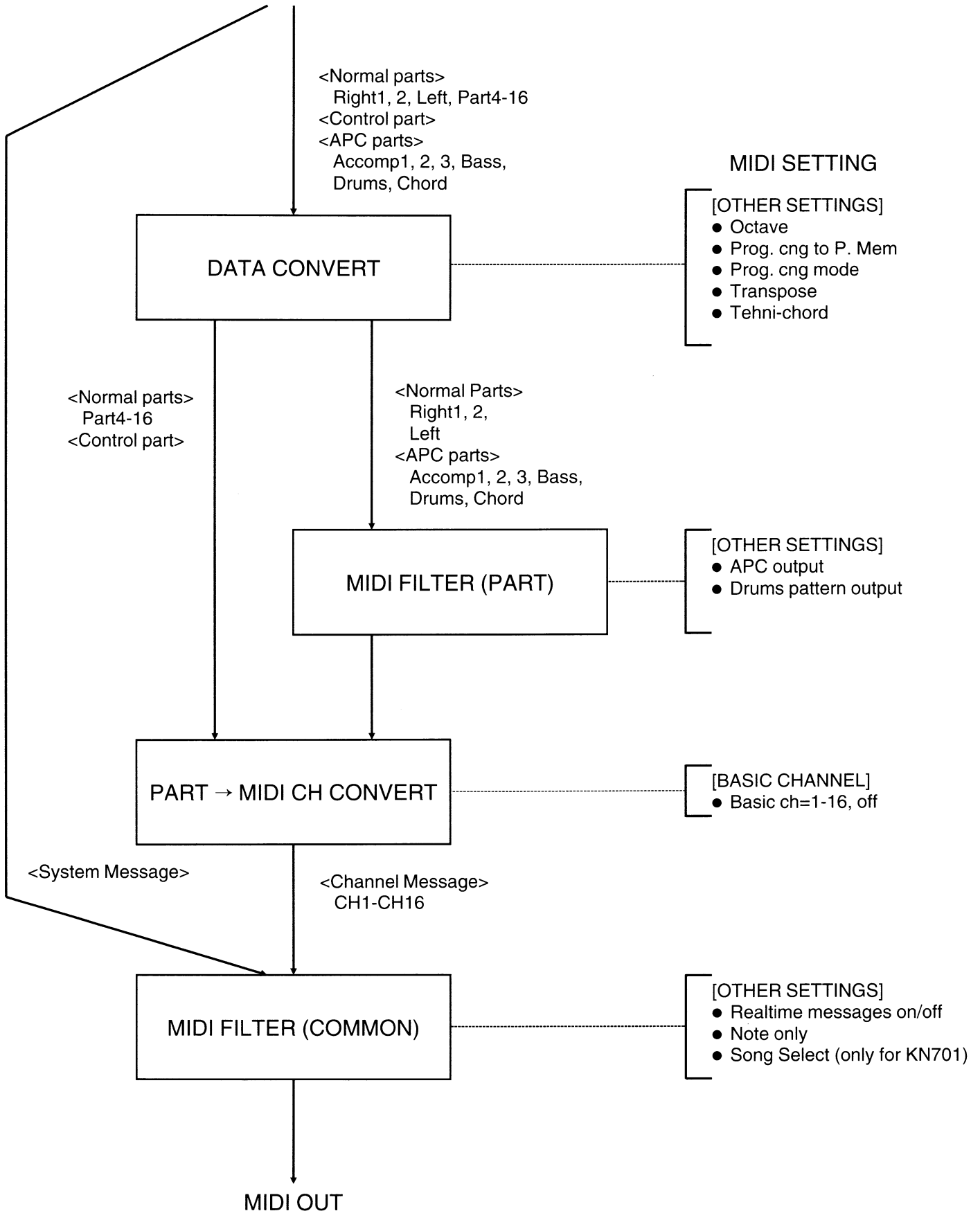
MIDI DATA FLOWCHART

<MIDI INPUT>



<MIDI OUTPUT>

KN501/KN701 INTERNAL DATA from
Keyboard, Sequencer, APC, Panel



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)
11	Bank select value (LSB)

n: 0 — F Basic channel

mm, 11: 00H — 7FH

- Indicates program change bank. Used when program Change mode is set to Normal mode or Technics mode.
- Transmission/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 ACCOMP1, 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)
11	Data entry value (LSB)

n: 0 — F Basic channel

mm, 11: 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

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
 03H = INTRO
 05H = FILL IN 2
 07H = COUNT INTRO

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

Reverb

BnH	Control change status
5BH	Reverb
vv	Reverb on/off (CONTROL), Depth (PART)

n: 0 — F Basic channel

vv (CONTROL): 00H — 3FH (00H) Off
 40H — 7FH (7FH) On

vv (PART): 00H — 7FH

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

Chorus

BnH	Control change status
5DH	Chorus
vv	Chorus on/off

n: 0 — F Basic channel

vv: 00H — 7FH

RPN

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

n: 0 — F Basic channel

mm, 11: 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 KN501/KN701), and RPN reset.

RPN		Data Entry		
MSB	LSB	MSB	LSB	
00H	00H	mm	---	Pitch Bend Sensitivity mm: 00H - 0CH (0 - 12semi-tones) 11: ignored ● Up to 1 octave can be specified in semi-tone increments.
00H	01H	mm	11	Fine Tuning mm, 11: 00H, 00H - 04H, 00H - 7FH, 7FH (-128*100/128 - 0 - 127*100/128cents) ● 11: 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) 11: ignored ● Up to 1 octave can be specified in semi-tone increments.
7FH	7FH	---	---	RPN Reset mm, 11: 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 sound numbers as shown on the panel list (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.
 - Transmission/reception of ACCOMP 1, 2, 3, BASS, and DRUMS program change is possible only during COMPOSER record.
 - When PROG.CNG TO P.MEM is ON, the PANEL MEMORY numbers are transmitted/received on the basic channel for the RIGHT 1 part.

Pitch bend change

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

- n: 0 — F Basic channel
 11, 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
11	Least significant
mm	Most significant

11, mm: 00H — 7FH

Song select

F3H	Song select
ss	Song number

ss: 0 — 2

■ System real time message

Timing Clock

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

Start

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

Continue

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

Stop

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

Active Sense

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

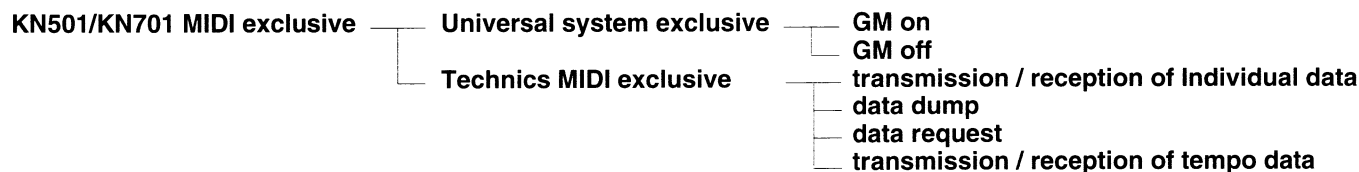
System exclusive

F0H	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 KN501/KN701 MIDI exclusive

Outline of KN501/KN701 MIDI exclusive



Universal system exclusive Message format

Turn General MIDI System On:

F0H	Exclusive status
7EH	Universal Non-Real Time SysEx
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
7EH	Universal Non-Real Time SysEx
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

02H	KN701
03H	KN501

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 3 bytes 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	IDC	CMD	PC =02H : KN701 =03H : KN501	MD	VER	[data]					EOX
	=F0H	=50H					ADR	SIZ	DT	CN	SM	=F7H
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												
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 (only for KN701)												
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)				
ADR MSB~LSB	ADDRESS (21 bit)	Area	Subarea	Sub-subarea
20 00 00~ 20 04 00~	080000H~ 080200H~	SYSTEM		REAL TIME NON-REAL TIME
20 08 00~ 20 0A 00~	080400H~ 080600H~	PART	COMMON	REAL TIME NON-REAL TIME
20 10 00~ 20 10 40~	080800H~ 080840H~	PART	INDIVIDUAL	PART 1 REAL TIME PART 1 NON-REAL TIME
20 11 00~ 20 11 40~	080880H~ 0808C0H~			PART 2 REAL TIME PART 2 NON-REAL TIME
:	:			:
20 1n 40~	:			PART n REAL TIME
20 1n 40~	:			PART n NON-REAL TIME
:	:			:
20 1F 00~ 20 1F 40~	080F80~ 080FC0~			PART 16 REAL TIME PART 16 NON-REAL TIME
20 20 00~ 20 20 40~	081000~ 081040~			ACCOMP 1 REAL TIME ACCOMP 1 NON-REAL TIME
20 21 00~ 20 21 40~	081080H~ 0810C0H~			ACCOMP 2 REAL TIME ACCOMP 2 NON-REAL TIME
20 22 00~ 20 22 40~	081100H~ 081140H~			ACCOMP 3 REAL TIME ACCOMP 3 NON-REAL TIME
20 23 00~ 20 23 40~	081180H~ 0811C0H~			BASS REAL TIME BASS NON-REAL TIME
20 24 00~ 20 24 40~	081200H~ 081240H~			DRUMS REAL TIME DRUMS NON-REAL TIME
20 25 00~ 20 25 40~	081280H~ 0812C0H~	CHORD REAL TIME CHORD NON-REAL TIME		
20 26 00~ 20 26 40~	081300H~ 081340H~	R.BASS REAL TIME R.BASS NON-REAL TIME		
20 60 00~ 20 68 00~	081800H~ 081A00H~	PART	SPECIAL	REAL TIME NON-REAL TIME
40 00 00~ 41 00 00~	100000H~ 108000H~	PANEL	PANEL DATA PANEL MEMORY	NON-REAL TIME NON-REAL TIME
50 00 00~ 50 00 60~ 50 0F 60~	140000H~ 140060H~ 1407E0h~	COMPOSER (only for KN701)	LOCATION HEADER PERFORMANCE	NON-REAL TIME NON-REAL TIME NON-REAL TIME
60 00 00~ 60 02 00~ 60 08 00~	180000H~ 180100H~ 180400H~	SEQUENCER	LOCATION HEADER PERFORMANCE	NON-REAL TIME NON-REAL TIME NON-REAL TIME

Classification of individual data and data dump areas

Individual data area:

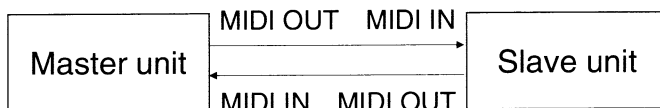
System	
Part	(Common / individual / special)

Data dump area:

Panel	(Panel data + Panel Memory)
Composer (KN701)	(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.

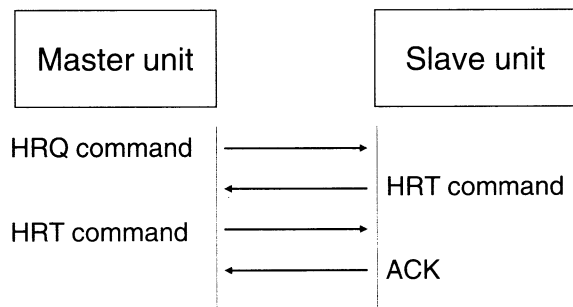


In handshake transmission, the transmission status between the master unit and slave unit is being confirmed during data transmission. For this reason, a MIDI cable connection from the slave unit to the master unit is also necessary. In comparison to one-way transmission, handshake transmission is faster.

In the KN501/KN701, 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



HRQ command: handshake request

SOX	F0H
IDC	50H
HRQ	21H
PC	01H
MD	02H: KN701 03H: KN501
VER	10H
EOX	F7H

HRT command: handshake routine

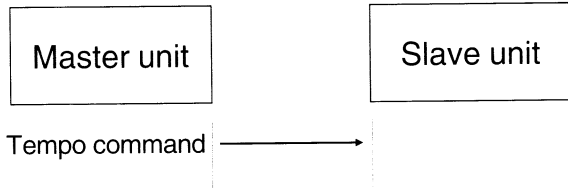
SOX	F0H
IDC	50H
HRT	22H
PC	01H
MD	02H: KN701 03H: KN501
VER	10H
EOX	F7H

ACK: Acknowledge

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

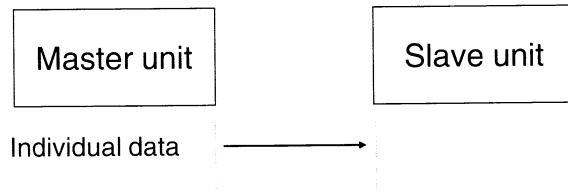
- There is no END command.
- If there is no response from the slave unit to the master unit even after the above handshake confirmation routine is performed three times, it is interpreted as inability to transmit handshake transmission data, and the transmission mode switches to one-way transmission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

■ **Sequence of tempo data communication**



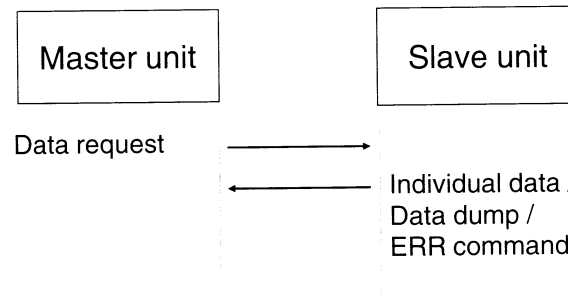
- Transmission / reception of TEMPO exclusive data can be enabled or disabled by the NOTE ONLY setting of the MIDI settings.

■ **Sequence of individual data communication**

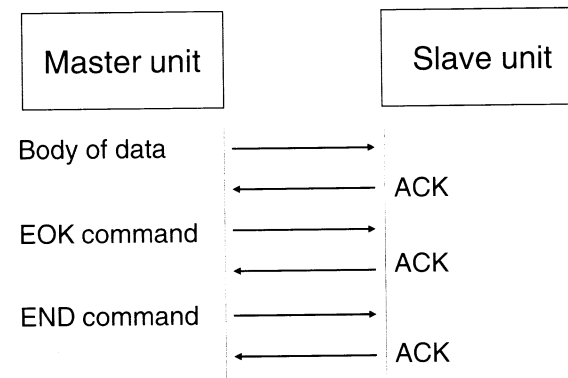


- Transmission / reception of REAL TIME and NON REAL TIME exclusive data can be enabled or disabled by the COMMON SETTING setting of the MIDI settings.

■ **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.

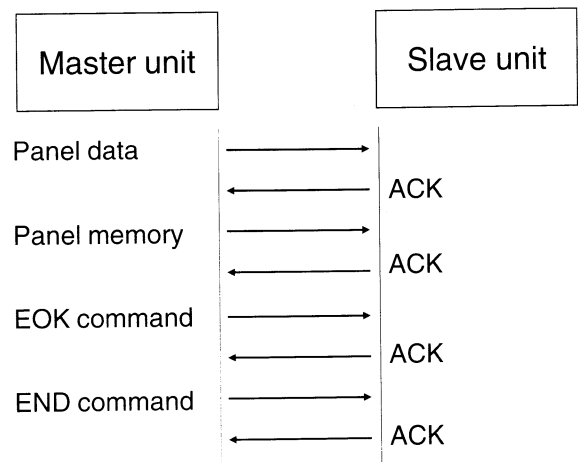
In the KN501/KN701, data is divided into next types: ALL, PANEL, COMPOSER (KN701), and SEQUENCER.

After the above handshake routine is concluded and communication link is established, the various kinds of data are respectively transmitted as described below.

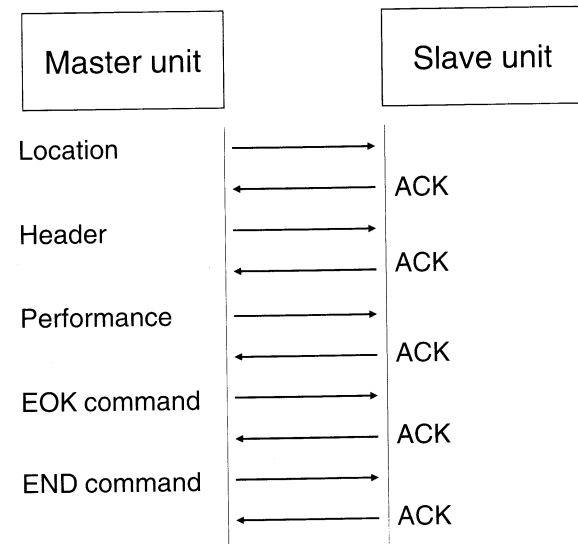
For one-way transmission, the transmission interval between packets is more than 50 msec.

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.

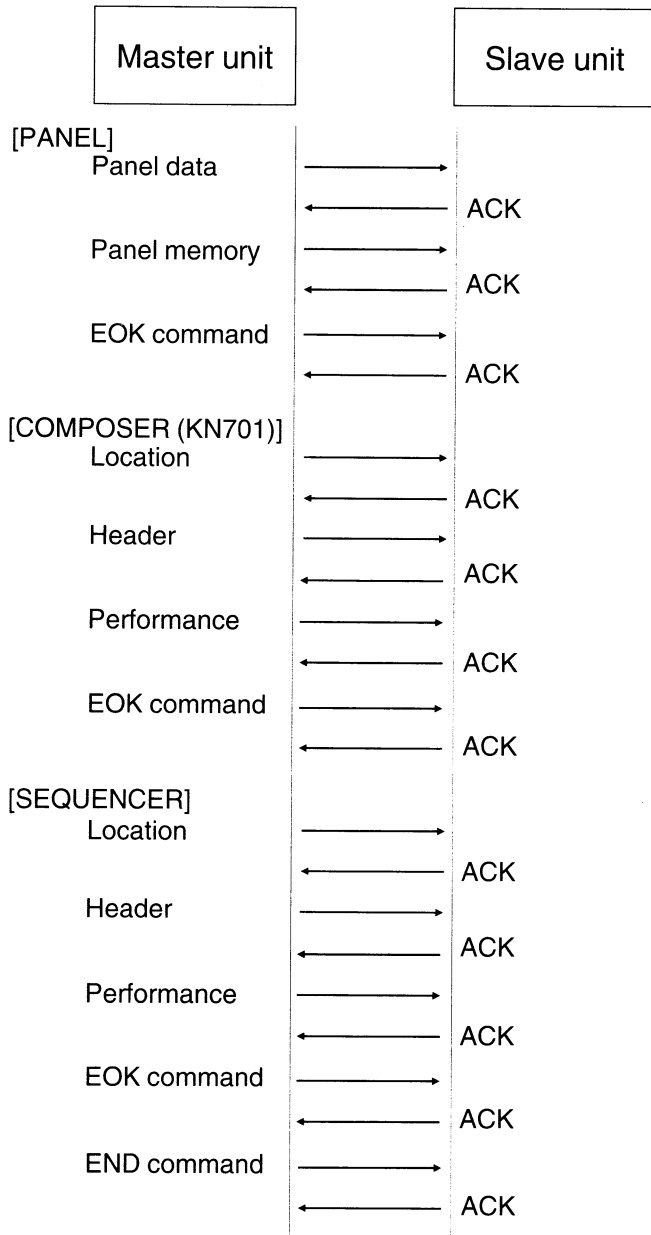
● **Panel**



● **Composer (KN701) data, Sequencer data**



● All data



● SIZ of data dump area

SIZ		Area	Subarea
MSB	LSB		
00 08 40	00 15 00	PANEL	PANEL DATA
			PANEL MEMORY
00 00 60	00 0F 00	COMPOSER (KN701)	LOCATION
	Variable		HEADER
			PERFORMANCE
00 02 00	00 06 00	SEQUENCER	LOCATION
	Variable		HEADER
			PERFORMANCE

● ADR of data request concerns the data dump

ADR		Area
MSB	LSB	
30 00 00		SOUND MEMORY
40 00 00		PANEL
50 00 00		COMPOSER (KN701)
60 00 00		SEQUENCER

SYSTEM AND PART PARAMETER

ADR (HEX)		SIZ (HEX)		PARAMETER	DATA (HEX)	DISCRIPTION	NOTE *1
MSB	LSB	MSB	LSB		RANGE		
SYSTEM REAL TIME							
20 00 00		00 00 01		MASTER TUNING	C0-00-3F	427.3-440.0-453.0	QR
20 00 01		00 00 01		SCALE TYPE	00-01	00H: Equal. Temperament, 01H: Piano Tuning	QR
20 00 02		00 00 01		TRANPOSE	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		PANEL MEMORY NUMBER	00-0A	Off, A-1 ~ 10	QRT
20 00 11		00 00 01		PANEL MEMORY EXPAND MODE	00-01	00H: Normal, 01H: Expand	QR
20 00 12		00 00 01		MUSIC STYLE ARRANGER STYLE	00-03	00H: Off, 01H-03H: 1-3	QRT
20 00 13		00 00 01		MUSIC STYLE ARRANGER MODE	00-03	00H: Sound, 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	0-127 0-255	RT
SYSTEM NON-REAL TIME							
20 04 00		00 00 01		NON-REAL TIME SYSEX ENABLE	00-01	00H: Off, 01H: On	QR *2
20 04 01		00 00 01		REAL TIME SYSEX ENABLE	00-01	00H: Off, 01H: On	QR *2
20 04 02		00 00 01		REAL TIME COMMAND ENABLE	00-01	00H: Off, 01H: On	QR
20 04 03		00 00 01		CLOCK SELECT	00-01	00H: Internal, 01H: MIDI	QR
20 04 04		00 00 01		SONG SELECT ENABLE	00-01	00H: Off, 01H: On	QR
PART COMMON REAL TIME							
20 08 00		00 00 01		TOTAL EXPRESSION	00-7F	0-127	QRT
20 08 08		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: Open 1, 08H: Big Band Brass 02H: Open 2, 09H: Big Band Reeds 03H: Duet, 0AH: Octave 04H: Country, 0BH: Hard Rock 05H: Theatre, 0CH: Fanfare 06H: Hymn	QR
20 08 10		00 00 01		REVERB TOTAL ON/OFF	00-7F	00H: Off, 7FH: On	QRT
20 08 11		00 00 01		REVERB TYPE	00-09	00H: Room1, 7FH: On 01H: Room2, 02H: Hall1, 03H: Hall2, 04H: Hall3, 06H: Echo	QR
20 08 12		00 00 01		REVERB DEPTH	00-07	1-8	QR
PART COMMON NON-REAL TIME							
20 0A 00		00 00 01		PROG. CHANGE ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 01		00 00 01		BANK SELECT ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 02		00 00 01		PITCH BEND ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 03		00 00 01		VOLUME ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 04		00 00 01		EXPRESSION ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 05		00 00 01		PAN ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 06		00 00 01		SUSTAIN ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 07		00 00 01		EFFECT & REVERB ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 08		00 00 01		MODULATION ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 09		00 00 01		TUNING ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 0A		00 00 01		BEND RANGE ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 0B		00 00 01		RESET ALL CONTROLLERS ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 0C		00 00 01		APC MODE ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 0D		00 00 01		FILL IN, INTRO, ENDING ENABLE	00-01	00H: Off, 01H: On	QR
20 0A 0E		00 00 01		NOTE ONLY	00-01	00H: Off, 01H: On	QR
20 0A 20		00 00 01		P. MEM TO PROG. CNG	00-01	00H: Off, 01H: On	QR
20 0A 21		00 00 01		TRANPOSE OUT	00-01	00H: Off, 01H: On	QR
20 0A 22		00 00 01		PROG. CHANGE MODE	00-03	00H: Norm, 01H: Technics, 03: GM	QR
20 0A 23		00 00 01		DRUMS TYPE	00-03	00H: Norm, 01H: Technics, 03: GM	QR
20 0A 24		00 00 01		RIGHT1 INPUT	00-01	00H: Conductor, 01H: Direct	QR
20 0A 25		00 00 01		AUTO PLAY CHORD INPUT	00-01	00H: Off, 01H: On	QR
20 0A 26		00 00 01		TECHNI-CHORD OUTPUT	00-01	00H: Off, 01H: On	QR
20 0A 27		00 00 01		AUTO PLAY CHORD OUTPUT	00-01	00H: Off, 01H: On	QR
20 0A 28		00 00 01		DRUMS PATTERN OUTPUT	00-01	00H: Off, 01H: On	QR

ADR (HEX)		SIZ (HEX)		PARAMETER	DATA (HEX)	DISCRIPTION	NOTE *1
MSB	LSB	MSB	LSB		RANGE		
PART INDIVIDUAL REAL TIME							
n = 0 - F: NORMAL PART NUMBER (PART1 - PART16) *PART1 = RIGHT1, PART2 = RIGHT2, PART3 = LEFT, PART16 = DRUMS							
20	1n	00	00 02	SOUND PROG. CNG & Bank select	00-7F 00-FF	0-127 0-255	QR *3
20	1n	02	00 00 01	VOLUME	00-7F	0-127	QR
20	1n	03	00 00 01	SUSTAIN DEPTH	00-07	1-8	QR
20	1n	04	00 00 01	SUSTAIN	00-7F	00H: Off, 7FH: On	QR
20	1n	07	00 00 01	REVERB	00-7F	00H: Off, 7FH: On	QR
20	1n	08	00 00 01	PAN	00-7F	0-127	QR
20	1n	09	00 00 01	BEND RANGE	00-0C	0-12	QR
20	1n	0A	00 00 01	TUNING	00-80-FF	-128-0-+127	QR
20	1n	0B	00 00 01	KEY SHIFT	34-00-4C	-12-0-+12	QR
m = 0-6: APC PART NUMBER (ACCOMP1, ACCOMP2, ACCOMP3, BASS, DRUMS, CHORD, R. BASS)							
20	2m	02	00 00 01	VOLUME	00-7F	0-127	QR
20	2m	07	00 00 01	REVERB	00-7F	00H: Off, 7FH: On	QR
PART INDIVIDUAL NON-REAL TIME							
20	1n	40	00 00 01	BASIC CHANNEL	00-0F	1-16	QR
20	1n	41	00 00 01	MIDI OCTAVE SHIFT	00-03-06	-3 - 0 - +3	QR
20	1n	42	00 00 01	LOCAL OFF SETTING	00-01	00H: Local On, 01H: Local Off	QR
20	1n	43	00 00 01	MIDI OUT DISABLE	00-01	00H: MIDI Channel On, 01H: MIDI Channel off	QR
20	2m	40	00 00 01	BASIC CHANNEL	00-0F	1-16	QR *4
20	2m	41	00 00 01	MIDI OCTAVE SHIFT	00-03-06	-3 - 0 - +3	QR *4
20	2m	42	00 00 01	LOCAL OFF SETTING	00-01	00H: Off, 01H: On	QR *4
20	2m	43	00 00 01	MIDI OUT DISABLE	00-01	00H: Off, 01H: On	QR *4
PART SPECIAL REAL TIME							
20	60	00	00 00 02	RHYTHM PROG. CNG & Bank Select	00-7F 00-FF	0-127 0-255	QRT *5
20	60	02	00 00 01	APC TYPE	00-03	00H: Off 01H: One Finger 02H: Fingered 03H: Pianist 00h: Off, 01H: On	QRT *6
20	60	03	00 00 01	APC MEMORY ON / OFF	00-01	00h: Off, 01H: On	QRT *6
20	60	08	00 00 01	SYNCHRO / BREAK	00-01	00h: Off, 01H: On	QRT *7
20	60	09	00 00 01	VARIATION	00-01	00h: Off, 01H: On	QRT *7
20	60	0A	00 00 01	INTRO 1	00-01	00h: Off, 01H: On	RT *7
20	60	0B	00 00 01	COUNT INTRO	00-01	00h: Off, 01H: On	RT *7
20	60	0C	00 00 01	FILL IN 1	00-01	00h: Off, 01H: On	RT *7
20	60	0D	00 00 01	FILL IN 2	00-01	00h: Off, 01H: On	RT *7
20	60	0E	00 00 01	ENDING 1	00-01	00h: Off, 01H: On	RT *7

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

R: Data reception possible.

T: Data transmission possible.

*2 Invariably transmitted / received, regardless of REAL TIME SYSEX ENABLE and NON-REAL TIME SYSEX ENABLE settings.

*3 Corresponds to Technics numbers on the sound map.

*4 ROOT BASS PART cannot be set.

*5 Corresponds to Technics numbers on the rhythm map.

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

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

GENERAL MIDI SETTINGS

■ SOUND

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

() = Number of Tones

* = SUB Tone is used. Depending on the sound output status of the instrument, it may be generated.

■ 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

■ Non-working Function

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

MIDI PRESET DATA

		Without APC																
Preset No.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Master ↓ Slave		KN501/KN701						Organ		Keyboard		PR Piano		PX Piano	Ext SEQ			
		Organ type1	Organ type2	Keyboard type1	Keyboard type2	PR Piano type1	PR Piano type2	type1	type2	type1	type2	type1	type2			KN501/KN701		
Basic channel	Right1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Right2	3	3	2	2	3	2	off	2	2	3	3	2	2	3	2	2	2
	Left	2	2	4	3	2	3	off	3	3	2	2	4	3	2	3	3	3
	Part4	4	4	3	4	4	4	off	4	4	4	4	3	4	4	4	4	4
	Part5	5	5	5	5	5	5	off	5	5	5	5	5	5	5	5	5	5
	Part6	6	6	6	6	6	6	off	6	6	6	6	6	6	6	6	6	6
	Part7	7	7	7	7	7	7	off	7	7	7	7	7	7	7	7	7	7
	Part8	8	8	8	8	8	8	off	8	8	8	8	8	8	8	8	8	8
	Part9	9	9	9	9	9	off	9	9	9	9	9	9	9	9	9	9	9
	Part10	10	10	10	10	10	off	10	10	10	10	10	10	10	10	10	10	10
	Part11	11	11	11	11	11	off	11	11	11	11	11	11	11	11	11	11	11
	Part12	12	12	12	12	12	off	12	12	12	12	12	12	12	12	12	12	12
	Part13	13	13	13	13	13	off	13	13	13	13	13	13	13	13	13	13	13
	Part14	14	14	14	14	14	off	14	14	14	14	14	14	14	14	14	14	14
	Part15	off	off	off	15	off	15	off	15	15	off	off	off	15	off	15	15	15
	Part16	15	16	15	16	15	16	off	16	16	15	16	15	16	15	16	16	16
	Control	16	15	16	off	16	off	off	off	off	16	15	16	off	16	off	off	off
	Accomp1	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Accomp2	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Accomp3	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Bass	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Drums	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Chord	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Octave all ch.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Local all ch.	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on
	Realtime message	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	off
	Clock	int	int	int	int	int	int	int	int	int	int	int	int	int	int	int	int	ext
	Right input mode (direct or single)	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	cnct	dir
	APC input	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Techni-chord out	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Drums out	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	APC out	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	P. cug to P. mem	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Note only	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Realtime sysex	off	off	off	on	off	off	off	on	on	off	off	off	on	off	off	off	on
	Non real sysex	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Intro / Fill	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on
	APC control	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Transpose	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
	Program cng mode	TECH	TECH	TECH	TECH	TECH	TECH	Norm	GM	TECH	TECH	TECH	TECH	TECH	TECH	TECH	Norm	TECH
	Drums type	TECH	TECH	TECH	TECH	TECH	TECH	Norm	GM	TECH	TECH	TECH	TECH	TECH	TECH	TECH	Norm	TECH
	Song select	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on

type1: Setting used when the connected equipment dose not have the MIDI PRESETS capability.

type2: Setting used when the connected equipment has the MIDI PRESETS capability, and the MIDI PRESETS are specified both on this instrument and on the connected equipment.

MIDI PRESET DATA

		With APC															
Preset No.		18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Master ↓ Slave		KN501/KN701					Organ		Keyboard		PR Piano		PX Piano		Ext SEQ		
		Organ type1	Organ type2	Keyboard type1	Keyboard type2	PR Piano type1	PR Piano type2	Sound module	Ext SEQ	Organ type1	Organ type2	Keyboard type1	Keyboard type2	PR Piano type1	PR Piano type2	PX Piano	Ext SEQ
Basic channel	Right1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	off	1
	Right2	3	3	2	2	3	2	2	2	3	3	2	2	3	2	2	2
	Left	2	2	4	3	2	3	3	3	2	2	4	3	2	3	3	3
	Part4	4	4	3	4	4	4	4	4	4	4	4	3	4	4	4	4
	Part5	off	off	off	off	off	off	5	5	5	off	off	off	off	off	5	5
	Part6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	Part7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	Part8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Part9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Part10	10	10	10	10	10	10	off	10	10	10	10	10	10	10	10	10
	Part11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	Part12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Part13	13	13	13	13	13	13	off	13	13	13	13	13	13	13	13	13
	Part14	14	14	14	14	14	14	off	14	14	14	14	14	14	14	14	14
	Part15	off	off	off	15	off	15	off	off	off	off	off	15	off	15	15	off
	Part16	off	off	off	off	off	off	off	off	off	off	off	off	off	off	16	off
	Control	16	15	16	off	16	off	off	off	16	15	16	off	16	off	off	off
	Accomp1	off	off	off	off	off	off	13	off	off	off	off	off	off	off	off	off
	Accomp2	off	off	off	off	off	off	14	off	off	off	off	off	off	off	off	off
	Accomp3	off	off	off	off	off	off	15	off	off	off	off	off	off	off	off	off
	Bass	off	off	off	off	off	off	16	off	off	off	off	off	off	off	off	off
	Drums	15	16	15	16	15	16	10	16	15	16	15	16	15	16	off	16
	Chord	5	5	5	5	5	5	off	15	2	5	5	5	5	5	1	15
Octave all ch.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Local all ch.		on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on
Realtime message		on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	off
Clock		int	int	int	int	int	int	int	int	ext	ext	ext	ext	ext	ext	int	ext
Right input mode (direct or single)		dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	dir	condct	dir
APC input		on	on	on	on	on	on	off	on	on	on	on	on	on	on	on	on
Techni-chord out		off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Drums out		off	off	off	off	off	off	on	off	off	off	off	off	off	off	off	off
APC out		on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on
P. cug to P. mem		off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Note only		off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Realtime sysex		off	off	off	on	off	off	on	on	off	off	off	on	off	off	off	on
Non real sysex		off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Intro / Fill		on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on
APC control		on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on
Transpose		off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Program cng mode		TECH	TECH	TECH	TECH	TECH	TECH	GM	TECH	TECH	TECH	TECH	TECH	TECH	TECH	Norm	TECH
Drums type		TECH	TECH	TECH	TECH	TECH	TECH	GM	TECH	TECH	TECH	TECH	TECH	TECH	TECH	Norm	TECH
Song select		on	on	on	on	on	on	on	on	on	on	on	on	on	on	on	on

type1: Setting used when the connected equipment dose not have the MIDI PRESETS capability.

type2: Setting used when the connected equipment has the MIDI PRESETS capability, and the MIDI PRESETS are specified both on this instrument and on the connected equipment.