

## F 5 - 2 MIDI FILTERING

MIDI FILTERING				CMB/PROG Change			
PROG:ENA	AFTT:DIS	CNTL:ENA	EXCL:DIS				
A	B	C	D	E	F	G	H

<b>[B]</b>	Combination/Program Change	DIS/ENA	When set to DIS, the selected MIDI data is not received or sent.
<b>[D]</b>	After Touch	DIS/ENA	
<b>[F]</b>	Control Change	DIS/ENA	
<b>[H]</b>	Exclusive	DIS/ENA	

- \* This function prevents the particular MIDI data from being sent or received. (This is called filtering.)
- \* Data is filtered when recording to the sequencer, but is not filtered during playback.
- \* Combination (or Program) change messages are not sent or received when setting Combination/Program Change to DIS.
- \* Control change messages are not sent or received when Control Change is set to DIS.
- \* After touch messages are not sent or received when setting After Touch to DIS.
- \* Parameter change messages by system exclusive are not sent or received when setting Exclusive to DIS.

NOTE: Parameter change by system exclusive is used to edit Programs with the use of a computer. When connecting 2 M1s and setting Exclusive to ENA, Program editing is done on both M1s at the same time. Set it to DIS when connecting MIDI instruments other than the M1.

## F 6 - 1 PROGRAM MEMORY PROTECT

PROGRAM MEMORY PROTECT							
Internal:OFF				Card:ON			
A	B	C	D	E	F	G	H

<b>[B]</b>	Internal	OFF/ON	Internal memory protect (prevents writing to memory)
<b>[F]</b>	Card	OFF/ON	Memory protect of memory card (prevents writing to card)

- \* This function prevents Programs and Program parameters from being written to internal memory or RAM card.
- \* When Internal is set to ON, writing to internal memory cannot be executed.
- \* When Card is set to ON, writing to RAM card cannot be executed.
- \* Writing to RAM card is also prevented by the protect switch in the top part of the card.

## F 6 - 2 COMBINATION MEMORY PROTECT

- \* This function prevents Combinations and Combination parameters from being written to internal memory or RAM card.
- \* Identical to F 6 - 1 Program Memory Protect.

## F6-3 SEQ DATA MEMORY PROTECT

- \* This function prevents sequencer data from being written to internal memory or RAM.
- \* Identical to F6-1 Program memory Protect.

## F 6 - 4 MEMORY ALLOCATION

Memory Allocation							
(100PROG/100COMBI/4400SEQ) [EXEC]							
A	B	C	D	E	F	G	H

A	100 PROG/100 COMBI/4400 SEQ	Selection of large program allocation
	50 PROG/50 COMBI/7700 SEQ	Selection of large sequence allocation
G	[EXEC]	Executing Change

Changes the structure of the internal memory of the M1. (See p.16 for more details.) Select the memory structure desired, then press [EXEC] ( **G** ).

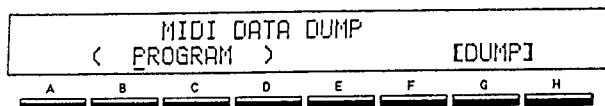
Save all data to a blank, formatted card before switching the memory allocation setting, since much of your precious data could be irretrievably lost.

- \* All sequence data will be lost if total sequence data is more than 4400 steps when switching to the 100 PROG/100COMBI/4400 SEQ (large program allocation) setting. (When there are songs you wish to keep, you can erase or initialize only the unnecessary songs before switching settings.)
- \* [YES] ( **G** ) executes, [NO] ( **H** ) cancels.
- \* Data written to numbers 0 - 49 are copied to Program numbers 50 - 99 and Combination numbers 50 - 99 after executing.

The data written to Program numbers 50 - 99 and Combination numbers 50 - 99 are lost when selecting the 50 PROG/50 COMBI/7700 SEQ (large sequence allocation) setting.

- \* [YES] ( **G** ) executes, [NO] ( **H** ) cancels.

## F 7 - 1 MIDI DATA DUMP



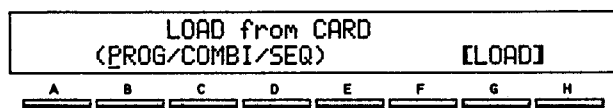
[B]	Program	Transmission of all Program parameters
	Combination	Transmission of all Combination parameters
	Global Data	Transmission of Global Mode data (F0-1 – F5-2)
	SEQ Data	Transmission of all the sequence data
	All Data	Transmission of all the Program/Combination/Sequence data/Global parameters
[G]	[DUMP]	Executing the Dump

- \* Transmits (or dumps) all parameter/sequence data to another M1 connected through MIDI.
- \* MIDI data dump can be sent and received when this page is selected regardless of the Exclusive parameter setting of F 5 -2, MIDI Filtering.
- \* For receiving, no particular operations are necessary except for setting the memory protect to OFF.
- \* Program sends all the Program parameters.
- \* Combination sends all the Combination parameters.
- \* SEQ data sends all the sequence data.
- \* All Data sends all Program parameter, Combination parameter and sequence data at the same time.
- \* Dump is executed by pressing the [DUMP] ( [G] )
- \* Program data and sequence data can be saved on external devices, providing that MIDI devices which can save system exclusive data (such as the KORG SQD - 8) are used.

Type of Data	Length of Exclusive Message
(Large Program Allocation)	
Program (100)	Approximately 16 K
Combination (100)	Approximately 14 K
Global Data	Approximately 1 K
Sequence Data	2 K ~ 22 K
All Data	33 K ~ 53 K
(Large Sequence Allocation)	
Program (50)	Approximately 8 K
Combination (50)	Approximately 7 K
Global Data	Approximately 1 K
Sequence Data	2 K ~ 37 K
All Data	18 K ~ 53 K

- \* Transmission and reception through the Dump function will not occur if the memory allocation of the M1 in reception differs from that of the device that is sending.
- \* See the end of the manual for details on system exclusive data.

## F 8 - 1 LOAD FROM CARD



[B]	PROG/COMBI	Loading of all Programs and Combinations (When PROG/COMBI Card, PROG/COMBI/SEQ Card are used)
	SEQUENCE	Loading all sequence data (songs, patterns) (When SEQ Card, PROG/COMBI/SEQ Card are used)
	PROG/COMBI/SEQ	Loading all Programs, Combinations and sequence data (When PROG/COMBI/SEQ Card are used)
[G]	[LOAD]	Executing the load

- \* This function loads (or writes in) the data in the ROM card or RAM card to internal memory.

NOTE: This function erases any and all data existing in internal memory. It is recommended that you save all internal memory data to a RAM card before loading.

- \* The display prompts for confirmation after pressing [LOAD] ( [G] ). Press [YES] ( [G] ) to save and [NO] ( [H] ) to cancel.
- \* When the format of the card differs from the structure of the internal memory, loading is executed as follows:
- \* Programs and Combinations are loaded and assigned according to the memory capacity available.
- \* No sequence data is loaded at all if the memory space of the receiving device is smaller than that of the sending device.
- \* Programs C00 - C99 used in the Combination parameters are loaded and replace I00 - I99.

(See F 9 - 2 FORMAT CARD for information on formatting.)

(See p. 16 for more about cards and the structure of the internal memory.)

## F 9 - 1 SAVE TO CARD

SAVE to CARD							
< PROG/COMBI >						[SAVE]	
A	B	C	D	E	F	G	H

<b>[B]</b>	PROG/COMBI	Saving all Programs and Combinations (When PROG/COMBI Card, PROG/COMBI/SEQ Card are used)
	SEQUENCE	Saving all sequence data (songs, patterns) (When SEQ Card, PROG/COMBI/SEQ Card are used)
	PROG/COMBI/SEQ	Saving all Programs, Combinations and sequence data (When PROG/COMBI/SEQ Card are used)
<b>[G]</b>	[SAVE]	Executing the save

- \* Saves (or writes) the data stored in the internal memory to RAM card.
- \* When saving to a new, blank card, format the card first following the instructions of F 9-2, then save.
- \* Save cannot be executed when the card memory protect is set to ON. (Cancelling the card memory protect is done in functions F 6 - 1 through F 6 - 3.)
- \* Set the Protect Switch at the top of the card to OFF beforehand.

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**NOTE:** This function erases any and all data existing in the card. It is recommended that you retain all important data and save new data to a blank RAM card.

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- \* The display prompts for confirmation after pressing [SAVE] ( **[G]** ). Press [YES] ( **[G]** ) to save and [NO] ( **[H]** ) to cancel.
- \* Global parameters (F 0 - 1 through F 5 - 2) are saved together at the same time when selecting PROG/COMBI or PROG/COMBI/SEQ.
- \* When the the format of the card differs from the structure of the internal memory, saving is executed as follows:
- \* Programs and Combinations are saved and assigned according to the memory capacity available.
- \* No sequence data is saved at all if the memory space of the receiving device is smaller than that of the sending device.

(See F 9-2 FORMAT CARD for information on formatting.)

(See p.16 for more about cards and the structure of the internal memory.)

## 9 - 2 FORMAT CARD

FORMAT CARD							
<50PROG/50COMBI/4200SEQ>							[FORMAT]
A	B	C	D	E	F	G	H

[B]	100PROG/100COMBI	Selection of PROG/COMBI Card format
	7700STEP SEQUENCE	Selection of SEQ Card format
	50PROG/50COMBI/4200SEQ	Selection of PROG/COMBI/SEQ Card format
[G]	[FORMAT]	Executing the format

- \* Sets the format of the RAM card and formats the card.

(See p. 16 in the BASIC OPERATION chapter for more information on formatting RAM cards.)

- \* Use the KORG MEMORY CARD RAM (256 KBytes) MCR-03 for the RAM card.
- \* Newly purchased blank RAM cards must be formatted before they can be used for saving or writing.

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**NOTE:** This function erases any and all data existing in the card. It is recommended that you retain all important data and format blank RAM cards only.

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- \* The display prompts for confirmation after pressing [FORMAT] ( [G] ). Press [YES] ( [G] ) to format and [NO] ( [H] ) to cancel.

# MIDI IMPLEMENTATION

## 1. TRANSMITTED DATA

### 1-1 CHANNEL MESSAGES

Status	Second	Third	Description	ENA
1000 nnnn	0kkk kkkk	0100 0000	Note Off kkk kkkk-24~108 (61Key + Transpose)	A
1001 nnnn	0kkk kkkk	0vvv vvvv	Note On kkk kkkk-24~108 (61Key + Transpose) vvv vvvv=10~127	A
1011 nnnn	0000 0001	0vvv vvvv	Pitch Modulation (Joy Stick(+))	C
1011 nnnn	0000 0010	0vvv vvvv	VDF Modulation (Joy Stick(-))	C
1011 nnnn	0000 0110	0vvv vvvv	Data Entry (MSB) (E.Slider, A. Pedal) *1	E
1011 nnnn	0000 0111	0vvv vvvv	Volume (Assignable Pedal)	C
1011 nnnn	0010 0110	0vvv vvvv	Data Entry (LSB) (E.Slider, A. Pedal) *1	E
1011 nnnn	0100 0000	0000 0000	Damper Off (Damper Pedal)	C
1011 nnnn	0100 0000	0111 1111	Damper On (Damper Pedal)	C
1011 nnnn	0110 0000	0000 0000	Data Increment (UP Switch) *1	E
1011 nnnn	0110 0001	0000 0000	Data Decrement (DOWN Switch) *1	E
1011 nnnn	0ccc cccc	0vvv vvvv	Control Data (Seq. Recorded Data) *3 ccc cccc=00~101	Q
1100 nnnn	0ppp pppp	-----	Program Change (Program or Combi) *2	P
1101 nnnn	0vvv vvvv	-----	Channel Pressure (After Touch)	C
1110 nnnn	0bbb bbbb	0bbb bbbb	Bender Change (Joy Stick(X)) *3	C

nnnn : MIDI Channel No. (0~15) Usually Global Channel. When using Sequencer, each track's channel.

ENA = A : Always Enable

C : Enable when Control is On

P : Enable when Program is On

E : Enable when Exclusive is On

Q : Enable only when Sequencer is Playing(T), Recording(R)

\*1 : Prog. E. Prog. Combi, E. Combi Mode Only

\*2 : When Memory Allocation = L. Prog ..... p2p pppp=0~99

- - - - - = L. Seq. .... ppp pppp=0~49

\*3 : Only Seq. Recorded Data use all c=0~101 area

### 1-2 SYSTEM COMMON MESSAGES

Status	Second	Third	Description
1111 0010	0111 1111	0hhh hhhh	Song Position Pointer 111 1111 : Least significant hhh hhhh : Most significant
1111 0011	000s ssss	-----	Song Select s ssss : Song No. = 0~19 (10~19: Card)

Transmits when in Sequencer Mode (Internal Clock)

### 1-3 SYSTEM REALTIME MESSAGES

Status	Description
1111 1000	Timing Clock *4
1111 1010	Start *4
1111 1011	Continue *4
1111 1100	Stop *4
1111 1110	Active Sensing

\*4 : Transmits when in Sequencer Mode (Internal Clock)

### 1-4 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (DEVICE INQUIRY)

Byte (Hex)	Description
1111 0000 (F0)	EXCLUSIVE STATUS
0111 1110 (7E)	NON REALTIME MESSAGE
0000 **** (0*)	MIDI GLOBAL CHANNEL ( DEVICE ID )
0000 0110 (06)	INQUIRY MESSAGE
0000 0010 (02)	IDENTITY REPLY
0100 0010 (42)	KORG ID
0001 1001 (19)	M1 ID
0000 0000 (00)	(MANUFACTURERS ID)
0000 0000 (00)	(FAMILY CODE(LSB))
0000 0000 (00)	( - (MSB))
0000 0000 (00)	(MEMBER CODE(LSB))
0000 0000 (00)	( - (MSB))
0*** **** (**)	ROM No. 1~
0000 0000 (00)	( Minor Ver. (LSB))
0000 0000 (00)	( - (MSB))
0*** **** (**)	SOFT VER. 1~
0000 0000 (00)	( Major Ver. (LSB))
0000 0000 (00)	( - (MSB))
1111 0111 (F7)	END OF EXCLUSIVE

Transmits when INQUIRY MESSAGE REQUEST Received

### 1-5 SYSTEM EXCLUSIVE MESSAGES

#### M1 SYSTEM EXCLUSIVE

1st Byte = 1111 0000 (F0) : Exclusive Status  
2nd Byte = 0100 0010 (42) : KORG ID  
3rd Byte = 0011 nnnn (3n) : Format ID n:Global ch.  
4th Byte = 0001 1001 (19) : M1 ID  
5th Byte = 0fff ffff (ff) : Function Code  
6th Byte = 0ddd dddd (dd) : Data  
LastByte = 1111 0111 (F7) : End of Exclusive ..... EX

EX Header

#### Function Code List

Func	Description	R	C	D	E
42	MODE DATA				
47	ALL DRUM SOUND(PCM CARD) NAME				
45	ALL MULTISOUND(PCM CARD) NAME				
4E	MODE CHANGE				
41	PARAMETER CHANGE				
40	PROGRAM PARAMETER DUMP				
4C	ALL PROGRAM PARAMETER DUMP				
49	COMBINATION PARAMETER DUMP				
4D	ALL COMBINATION PARAMETER DUMP				
48	ALL SEQUENCE DATA DUMP				
51	GLOBAL DATA DUMP				
50	ALL DATA(GLB. CMB. PRG. SEQ) DUMP				
26	RECEIVED MESSAGE FORMAT ERROR				
23	DATA LOAD COMPLETED				
24	DATA LOAD ERROR				
21	WRITE COMPLETED				
22	WRITE ERROR				

Transmit when

R : Request Message is received

C : Mode or No. is changed by SW

D : Data dump by SW

( Doesn't respond to

Exclusive On. Off)

E : EX. Message is received

## 2. RECOGNIZED RECEIVE DATA

### 2-1 CHANNEL MESSAGES

Status	Second	Third	Description	ENA
1000 nnnn	0xxx kkkk	Note Off		A
1001 nnnn	0xxx kkkk	Note Off		A
1001 nnnn	0xxx kkkk	Note On		A
		vvv vvvv=1~127		
1011 nnnn	0000 0001	Pitch Modulation		C
1011 nnnn	0000 0010	VDF Modulation		C
1011 nnnn	0000 0110	Data Entry (MSB)	*1.3	E
1011 nnnn	0000 0111	Volume		C
1011 nnnn	0010 0110	Data Entry (LSB)	*1.3	E
1011 nnnn	0100 0000	Damper Off		C
1011 nnnn	0100 0000	Damper On		C
1011 nnnn	0110 0000	DATA Increment	*1.3	E
1011 nnnn	0110 0001	DATA Decrement	*1.3	E
1011 nnnn	0110 0100	RPC Parameter No. (LSB) (M. Tune)	*3	E
1011 nnnn	0110 0101	RPC Parameter No. (MSB) (M. Tune)	*3	E
1011 nnnn	0ccc cccc	Control Data (For Seq. Recording)		Q
		ccc cccc=00~101		
1011 nnnn	0111 1010	Local Control Off		A
1011 nnnn	0111 1010	Local Control On		A
1011 nnnn	0111 1011	All Notes Off		A
1011 nnnn	0111 110x	(All Notes Off)		A
1011 nnnn	0111 1110	(All Notes Off)		A
		m mmm=0~16		
1011 nnnn	0111 1111	(All Notes Off)		A
1100 nnnn	0ppp pppp	Program Combination Change	*2.3	P
1101 nnnn	0vvv vvvv	Channel Pressure (After Touch)		C
1110 nnnn	0bbb bbbb	Bender Change		C

x : Random

ENA ..... Same as TRANSMITTED DATA

\*1 : Prog. E. Prog. Combi. E. Combi. Mode Only

\*2 : Memory Alloc. = L. Prog. .... Data beyond value of 99 are assigned a new value by subtracting 100.  
ex. 100→00, 127→27

Memory Alloc. = L. Seg. .... Data beyond value of 49 are assigned a new value by subtracting 50,  
until the value is less than 50. ex. 50→00, 127→27

\*3 : After Processing (While Exclusive On),

Transmits Exclusive Message [DATA LOAD COMPLETED] or [DATA LOAD ERROR]

### 2-2 SYSTEM COMMON MESSAGES

Status	Second	Third	Description
1111 0010	0111 1111	0hhh hhhh	Song Position Pointer 111 1111 : Least significant hhh hhhh : Most significant
1111 0011	000s ssss	-----	Song Select s ssss : Song No. = 0~19 (10~19: Card)

Receive when in Sequencer Mode (External Clock)

### 2-3 SYSTEM REALTIME MESSAGES

Status	Description	*4
1111 1000	Timing Clock	*4
1111 1010	Start	*4
1111 1011	Continue	*4
1111 1100	Stop	*4
1111 1110	Active Sensing	

\*4 : Receive when in Sequencer Mode (External Clock)

### 2-4 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (DEVICE INQUIRY)

Byte	Description
1111 0000 (F0)	EXCLUSIVE STATUS
0111 1110 (7E)	NON REALTIME MESSAGE
0*** (***)	MIDI CHANNEL (DEVICE ID)*5
0000 0110 (06)	INQUIRY MESSAGE
0000 0001 (01)	INQUIRY REQUEST
1111 0111 (F7)	END OF EXCLUSIVE

\*5 = 0~F : Receive if Global Channel

= 7F : Receive any Channel

### 2-5 SYSTEM EXCLUSIVE MESSAGES

\* Not received when Sequencer is playing, recording

Function Code List

Func	Description	G	C	P	S
12	MODE REQUEST	○	○	○	○
1F	ALL DRUM SOUND (PCM CARD) NAME DUMP REQUEST	○	○	○	○
16	ALL MULTISOUND (PCM CARD) NAME DUMP REQUEST	○	○	○	○
10	PROGRAM PARAMETER DUMP REQUEST	○	○	○	○
1C	ALL PROGRAM PARAMETER DUMP REQUEST	◎	○	○	○
19	COMBINATION PARAMETER DUMP REQUEST	○	○	○	○
1D	ALL COMBINATION PARAMETER DUMP REQUEST	◎	○	○	○
18	ALL SEQUENCE DATA DUMP REQUEST	◎	○	○	○
0E	GLOBAL DATA DUMP REQUEST	◎	○	○	○
0F	ALL DATA (GLOBAL, COMBI, PROG, SEQ.) DUMP REQUEST	◎	○	○	○
11	PROGRAM WRITE REQUEST	○	○	○	○
1A	COMBINATION WRITE REQUEST	○	○	○	○
40	PROGRAM PARAMETER DUMP	○	○	○	○
4C	ALL PROGRAM PARAMETER DUMP	◎	○	○	○
49	COMBINATION PARAMETER DUMP	○	○	○	○
4D	ALL COMBINATION PARAMETER DUMP	◎	○	○	○
48	ALL SEQUENCE DATA DUMP	◎	○	○	○
51	GLOBAL DATA DUMP	◎	○	○	○
50	ALL DATA (GLOBAL, COMBI, PROG, SEQ.) DUMP	◎	○	○	○
4E	MODE CHANGE	○	○	○	○
41	PARAMETER CHANGE	○	○	○	○

Received when in

G : GLOBAL MODE

(◎) : Does not respond to Exclusive On. Off in DATA DUMP Page

C : COMBI. E. COMBI. MODE

P : PROG. E. PROG. MODE

S : SEQUENCER MODE



### 3. MIDI EXCLUSIVE FORMAT

R : Receive, T : Transmit

#### (1) MODE REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 0010	MODE REQUEST 12H
1111 0111	EOX

Receives this message, and transmits Func=42 message.

#### (2) PROGRAM PARAMETER DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 0000	PROGRAM PARAMETER DUMP REQUEST 10H
1111 0111	EOX

Receives this message, and transmits Func=40 message. or transmits Func=24 message.

#### (3) ALL DRUM SOUND(PCM Card) NAME DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 1111	ALL DRUM SOUND(Card) NAME DUMP REQ. 1FH
1111 0111	EOX

Receives this message, and transmits Func=47 message. or transmits Func=24 message.

#### (4) ALL MULTISOUND(PCM Card) NAME DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 0110	ALL MULTISOUND(Card) NAME DUMP REQ. 16H
1111 0111	EOX

Receives this message, and transmits Func=45 message. or transmits Func=24 message.

#### (5) ALL PROGRAM PARAMETER DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 1100	ALL PROGRAM PARAMETER DUMP REQUEST 1CH
0000 000c	Bank (See NOTE 3-1)
1111 0111	EOX

Receives this message, and transmits Func=4C message. or transmits Func=24 message.

#### (6) COMBINATION PARAMETER DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 1001	COMBINATION PARAMETER DUMP REQUEST 19H
1111 0111	EOX

Receives this message, and transmits Func=49 message. or transmits Func=24 message.

#### (7) ALL COMBINATION PARAMETER DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 1101	ALL COMBI. PARAMETER DUMP REQUEST 1DH
0000 000c	Bank (See NOTE 3-1)
1111 0111	EOX

Receives this message, and transmits Func=4D message. or transmits Func=24 message.

#### (8) ALL SEQUENCE DATA DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 1000	ALL SEQUENCE DATA DUMP REQUEST 18H
0000 000c	Bank (See NOTE 3-1)
1111 0111	EOX

Receives this message, and transmits Func=48 message. or transmits Func=24 message.

#### (9) GLOBAL DATA DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0000 1110	GLOBAL DATA DUMP REQUEST 0EH
0000 000c	Bank (See NOTE 3-1)
1111 0111	EOX

Receives this message, and transmits Func=51 message. or transmits Func=24 message.

#### (10) ALL DATA(GLOBAL, COMBI, PROG, SEQ.) DUMP REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0000 1111	ALL DATA(GLB, CMB, PRG, SEQ.) DUMP REQ. 0FH
0000 000c	Bank (See NOTE 3-1)
1111 0111	EOX

Receives this message, and transmits Func=50 message. or transmits Func=24 message.

#### (11) PROGRAM WRITE REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 0001	PROGRAM WRITE REQUEST 11H
0000 000c	Bank (See NOTE 3-1)
0ppp pppp	Write Program No. (0-99 or 0-49)
1111 0111	EOX

Receives this message, and writes the data and transmits Func=21 message. or transmits Func=22 message.

#### (12) COMBINATION WRITE REQUEST R

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0001 1010	COMBINATION WRITE REQUEST 1AH
0000 000c	Bank (See NOTE 3-1)
0ppp pppp	Write Combination No. (0-99 or 0-49)
1111 0111	EOX

Receives this message, and writes the data and transmits Func=21 message. or transmits Func=22 message.

#### (13) PROGRAM PARAMETER DUMP R, T

Byte	Description
F0.42.3n.19	EXCLUSIVE HEADER
0100 0000	PROGRAM PARAMETER DUMP 40H
0ddd dddd	Data (See NOTE 6)
1111 0111	EOX

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.

Receives Func=10 message, and transmits this message & data.

When changing the program no. by SW, transmits this message & data.

(14) ALL PROGRAM PARAMETER DUMP		R. T
Byte	Description	
FO. 42. 3n. 19	EXCLUSIVE HEADER	
0100 1100	ALL PROGRAM PARAMETER DUMP	4CH
0000 000c	Mem. Allocation. Bank	(See NOTE3-1, 3-2)
00dd dddd	Data	(See NOTE 7)
...	...	
1111 0111	EOX	

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.  
Receives Func=1C message, and transmits this message & data.  
Transmits this message & data by DATA DUMP.

(15) COMBINATION PARAMETER DUMP		R. T
Byte	Description	
FO. 42. 3n. 19	EXCLUSIVE HEADER	
0100 1001	COMBINATION PARAMETER DUMP	49H
00dd dddd	Data	(See NOTE 8)
1111 0111	EOX	

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.  
Receives Func=19 message, and transmits this message & data.  
When changing the Combi no. by SW, transmits this message & data.

(16) ALL COMBINATION PARAMETER DUMP		R. T
Byte	Description	
FO. 42. 3n. 19	EXCLUSIVE HEADER	
0100 1101	ALL COMBINATION PARAMETER DUMP 4DH	
0000 00mc	Mem. Allocation. Bank (See NOTE 3-1, 3-2)	
00dd dddd	Data (See NOTE 9)	
...	...	
1111 0111	FOY	

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.  
Receives Func=1D message, and transmits this message & data.  
Transmits this message & data by DATA DUMP.

(17) ALL SEQUENCE DATA DUMP		R. T
Byte	Description	
FO. 42. 3n. 19	EXCLUSIVE HEADER	
0100 1000	ALL SEQUENCE DATA DUMP	48H
0000 000c	Bank	(See NOTE 3-1)
00ss ssss	Seq. Data Size	(See NOTE 10-1)
...	...	
00dd dddd	Control Data	(See NOTE 10-2)
...	...	
00dd dddd	Sequence Data	(See NOTE 10-3)
...	...	
1111 0111	EOX	

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.  
Receives Func=18 message, and transmits this message & data.  
Transmits this message & data by DATA DUMP.

(18) GLOBAL DATA DUMP		R. T
Byte	Description	
F0. 42. 3n. 19	EXCLUSIVE HEADER	
0101 0001	GLOBAL DATA DUMP	51H
0000 000c	Bank	(See NOTE 3-1)
00dd dddd	Data	(See NOTE 11)
1111 0111	EOX	

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.  
Receives Func=0E message, and transmits this message & data. Transmits this message & data by DATA DUMP.

(19) ALL DATA(GLOBAL, COMBI, PROG, SEQ.) DUMP		R. T
Byte	Description	
FO. 42. 3n. 19	EXCLUSIVE HEADER	
0101 0000	ALL DATA(GLBL, COMBI, PROG, SEQ.) DUMP 50H	
0000 000c	Mem. Allocation. Bank (See NOTE 3-1, 3-2)	
0sss ssss	Seq. Data Size (See NOTE 10-1)	
0ddd dddd	Data (See NOTE 12)	
1111 0111	EOX	

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.  
Receives Func=0F message, and transmits this message & data. Transmits this message & data by DATA DUMP.

20) MODE CHANGE		R. T
Byte	Description	
F0. 42. 3n. 19	EXCLUSIVE HEADER	
0100 1110	MODE CHANGE	4EH
000b 0000	Mode Data	(See NOTE 1, 2)
000b 000c	Mem. Alloc. Bank	(See NOTE 2, 3-2, 3-1)
1111 0111	EOX	

Receives this message & data, and changes the Mode, Bank and transmits Func=23 message. or transmits Func=24 message.

When changing the Mode by SW, transmits this message & data(b of Mode=0, b of Bank=1).  
When changing the Mem. Alloc by SW, transmits this message & data (b of Bank & Mode=1).  
When changing the Bank by SW, transmits this message & data(b of Mode=1, b of Bank=0).

21) PARAMETER CHANGE		R. T
Byte	Description	
FO. 42. 3n. 19	EXCLUSIVE HEADER	
0100 0001	PARAMETER CHANGE	41H
0ppp pppp	Parameter Page	(See TABLE 5, 6)
0000 pppp	Parameter Position	(See TABLE 5, 6)
0vvv vvvv	Value	(LSB bit6-0) (See NOTE 13)
0vvv vvvv	Value	(MSB bit15-7) (See NOTE 13)
1111 0111	FOY	

Receives this message & data, and transmits Func=23 message. or transmits Func=24 message.  
When changing the parameter no. by SW, and transmits this message & data.

(22) ALL DRUM SOUND(PCM Card) NAME		T
Byte	Description	
FO. 42. 3n. 19	EXCLUSIVE HEADER	
0100 0111	ALL DRUM SOUND(PCM Card) NAME	47H
0sss ssss	Sound Number	(See NOTE 14)
0ddd dddd	Data	(See NOTE 14)
...	:	
1111 0111	EOX	

Receives Func=1F message, and transmits this message & data. or transmits Func=24 message.

Receives Func=16 message, and transmits this message & data. or transmits Func=24 message.

**Receives Func=12 message, and transmits this message & data.**

**Transmits this message when there is an error in the MIDI IN message (ex. data length).**

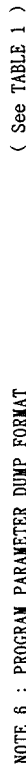
**Transmits this message when DATA LOAD, PROCESSING have been completed.**

**Transmits this message when DATA LOAD, PROCESSING have not been completed(ex. protected).**

Transmits this message when DATA WRITE BY MIDI has been completed.

Transmits this message when DATA WRITE BY MIDI Incompleted.

DUMP DATA FORMAT n=0~ for NOTE 6, 7, 8, 9, 10-2, 10-3, 11, 12, 14, 15


$$143\text{Bvte} = 7 \times 20 + 3 \rightarrow 8 \times 20 + (1+3) = 164\text{Bvte}$$

```
[Prog No 00 (143Byte)] ..... [Prog. No. 99 or 49 (143Byte)]
```

$$\begin{aligned} \text{Mem. Alloc} = \text{L. Prog} : 14300\text{Byte} &= 7 \times 2042 + 6 \rightarrow 8 \times 2042 + (1+6) = 16343\text{Byte} \quad (5.2\text{Sec}) \\ &= \text{L. Seq.} : 71508\text{Byte} = 7 \times 1021 + 3 \rightarrow 8 \times 1021 + (1+3) = 8172\text{Byte} \quad (2.6\text{Sec}) \end{aligned}$$

[Parameter No. 00] ..... [Parameter No. 123]

$$124\text{Byte} = 7 \times 17 + 5 \rightarrow 8 \times 17 + (1 + 5) = 142\text{Byte}$$

NOTE 9 : ALL COMBINATION PARAMETER DUMP FORMAT

[Combi No.00 (124Byte)],.....[Combi No.99 or 49 (124Byte)]

$$\begin{aligned} \text{Mem. Alloc} = \text{L. Prog} : 12400\text{Byte} &= 7 \times 1771 + 3 \rightarrow 8 \times 1771 + (1+3) = 14172\text{Byte} \quad (4.5\text{Sec}) \\ &= \text{I. Seq.} : 6200\text{Byte} = 7 \times 885 + 5 \rightarrow 8 \times 885 + (1+5) = 7086\text{Byte} \quad (2.3\text{Sec}) \end{aligned}$$



COMBINATION PARAMETER

(TABLE 2)

No.	PARAMETER	DATA(HEX) : VALUE
COMBINATION CONTROLLER		
00	COMBI. NAME (Head)	20~7F : ' ' ~ ' ' ←
09	COMBI. NAME (Tail)	
10	COMBINATION TYPE	00~04 *4
EFFECT PARAMETER		
11		
35		*11
TIMBRE 1 PARAMETER		
36	PROGRAM NO.	00~C7 : *12
37	OUTPUT LEVEL	00~63
38	KEY TRANSPOSE	F4~0C : -12~12
39	DETUNE	CE~32 : -50~50
40	TIMBRE. INST.	bit7~0: TIM. =1: INS.
41	PAN	bit3~0 : 0~0D *5
42	KEY WINDOW TOP	00~7F : C-1~G9
43	KEY WINDOW BOTTOM	00~7F : C-1~G9
44	VEL WINDOW TOP	01~7F
45	VEL WINDOW BOTTOM	01~7F
46	CONTROL FILTER	bit3~0
47	TIMBRE ON. OFF.	bit4=0: ON, =1: OFF.
48	MIDI CHANNEL	bit3~0 : 1~16
TIMBRE 2~8 PARAMETER		
47		
123		

\*4 : 0 : SINGLE  
1 : LAYER  
2 : SPLIT  
3 : VEL. SW  
4 : MULTI

\*5 : 00 : 10:00  
0A : 00:10  
0B : C  
0C : C+D  
0D : D

\*6 : bit0 : PROGRAM CHANGE  
bit1 : DAMPER  
bit2 : AFTER TOUCH  
bit3 : CONTROL CHANGE

=0:DIS, =1:ENA

\*7 : 0 : PROGRAM(COMBINATION) UP  
1 : - - - DOWN  
2 : SEQUENCER START/STOP  
3 : EFFECT 1 ON/OFF  
4 : - 2 -  
5 : VOLUME  
6 : VDF CUTOFF  
7 : EFFECT 1 CONTROL  
8 : - 2 -  
9 : DATA ENTRY

GLOBAL PARAMETER

(TABLE 3)

No.	PARAMETER	DATA(HEX) : VALUE
GLOBAL PARAMETER		
00	MASTER TUNE	CE~32 : -50~50
01	KEY TRANSPOSE	F4~0C : -12~12
02	DAMPER POLARITY	0, 1 : f, 2
03	ASSIGNABLE PEDAL 1	00~09 *7
04	ASSIGNABLE PEDAL 2	00~09 *7
05	SCALE TYPE	00~04 *8
06	PURE TYPE KEY	00~0B : C~B
07	USER SCALE	CE~32 : -50~50
18		
19	( NUL )	00
20	( NUL )	00
DRUM KIT1-INDEX#0		
21	INST NO.	00:OFF, 01~2C:INT, 2D~:CARD
22	KEY	0C~73 : C0~G8
23	PAN	00~0D *5
24	TUNE	88~78:-120~120
25	LEVEL	CE~32 : -50~50
26	DECAY	CE~32 : -50~50
27	( NUL )	00
DRUM KIT1-INDEX#2 ~ DRUM KIT4-INDEX#29		
28		
860		

\*8 : 0 : EQUAL TEMP 1  
1 : EQUAL TEMP 2  
2 : PURE MAJOR  
3 : PURE MINOR  
4 : USER PROGRAM

\*12 : If COMBINATION TYPE is MULTI,  
Parameter Change Format is as follows:  
00H = TIMBRE OFF  
01H = 100  
64H = 199  
65H = C00  
C8H = C99

In any other case:  
00H = 100  
63H = 199  
64H = C00  
C8H = C99

SEQUENCER CONTROL DATA

No.	PARAMETER	DATA(HEX) : VALUE
SONG 0 CONTROL DATA		
00	MIDI Channel (Tr. 1)	00~0F : 1~16
07	MIDI Channel (Tr. 8)	
08	STATUS (Tr. 1)	00~03 *9
15	STATUS (Tr. 8)	
16	BEAT	02~06 : 2 ~ 6
17	TEMPO	28~D0 : 40~208
18	PROTECT (Tr. 1)	bit0~0:ENA, =1:DIS
19	PROTECT (Tr. 8)	bit7
19	NEXT SONG NO.	00~14:11~C10, OFF
20	SONG NAME (Head)	20~77 : ' ' ~ ' ' ←
29	SONG NAME (Tail)	
30	( NUL )	
31	EFFECT PARAMETER	
55		*11
TRACK 1 CONTROL DATA		
56	PROGRAM NO.	00~C7 : 100~C99
57	OUTPUT LEVEL	00~63
58	KEY TRANSPOSE	F4~0C : -12~12
59	DETUNE	CE~32 : -50~50
60	PAN	00~0D *5
TRACK 2~8 CONTROL DATA		
61		
95		
SONG 1~9 CONTROL DATA		
96		
959		
PATTERN 0 CONTROL DATA		
960	BEAT	02~06 : 2 ~ 6
961	LENGTH	01~08 : 1 ~ 8
PATTERN 1~99 CONTROL DATA		
962		
1159		
SONG0-TRACK1 DATA ADDRESS		
1160	DATA ADDRESS(LSB)	0000 (Start Addr)
1161	(MSB)	
SONG0-TRACK2 ~ SONG9-TRACK8 DATA ADDRESS		
1162		
1319		
PATTERN 0 DATA ADDRESS		
1320	DATA ADDRESS (LSB)	
1321	(MSB)	
PATTERN 1 ~ PATTERN 99 DATA ADDRESS		
1322		
1519		

(TABLE 4)

1520	End Pattern Addr.(L)		
1521	-	-	(H)

SEQUENCE DATA			
No.	PARAMETER	DATA(Hex) : VALUE	
SEQUENCE DATA 1			
1522	DATA (1-L)		*10
1523	DATA (1-H)		*10
1524	DATA (2-L)		*10
1525	DATA (2-H)		*10
SEQUENCE DATA 2 ~			
1526	SAME AS SEQUENCE DATA 1(1522~1525)		
...			

\*9 : 0 : Off  
1 : Internal  
2 : Extern  
3 : Both

\*10 : SEQUENCE DATA FORMAT  
DATA(1-H) DATA(1-L) DATA(2-H) DATA(2-L)  
↓ ↓ ↓ ↓

\*10-1 NOTE ON/OFF  
lvvv vvv t ttt ttt kkk kkk 1 1111 1111  
Velocity Event Time Key No. Length  
t = 30 : J, t = lFE : Tie from Last Bar  
1 = 30 : J, 1 = lFE : Tie to Next Bar

\*10-2 PITCH BEND  
0001 000 t ttt ttt 0 vvv vvvv 0 vvv vvvv  
Event Time Value(H) Value(L)

\*10-3 AFTER TOUCH  
0010 000 t ttt ttt 0000 0000 0 vvv vvvv  
Event Time Value

\*10-4 PROGRAM CHANGE  
0011 000 t ttt ttt 0000 0000 pppp pppp  
Event Time Program No.

Mem. Alloc=0 : p=00~199(100~C99)  
=1 : p=00~49,100~149 (100~C49).

\*10-5 CONTROL CHANGE  
0100 000 t ttt ttt 0 vvv vvvv 0 ccc cccc  
Event Time Value Control No.

c=00~65 : Same as MIDI Control Change  
= 66 : Assignable Pedal  
= 67 : Effect 1 ON/OFF  
= 68 : - 2 -  
= 69 : Effect 1 Balance  
= 6A : Effect 2 Balance  
= 6B : Tempo

\*10-6 BAR  
0110 0000 bbbb bbbb xx 00 0000 0 ppp pppp  
Bar No. Bar Type Pattern No.

xx=00 : Don't use Pattern  
=10 : Pattern continual  
=11 : Pattern Start

\*10-7 TRACK END  
0111 000 t ttt ttt 0000 0000 0000 0000  
Event Time

# \*11 EFFECT PARAMETER

No.	PARAMETER	DATA(Hex) : VALUE
(00)	Effect 1 Pattern No.	0~20. 21:1~33. Tru
(01)	- 2 -	0~20. 21:1~33. Tru
(02)	- 1 L-Ch E. Balnc	00~64 : 00~100
(03)	- 1 R-Ch -	00~64 : 00~100
(04)	- 2 L-Ch -	00~64 : 00~100
(05)	- 2 R-Ch -	00~64 : 00~100
(06)	Output 3 Pan	00. 01~65 *11-1
(07)	- 4 -	00. 01~65 *11-1
(08)	Effect 1/0	bit4~0 *11-2
(09)	Effect 1 Parameter	*11-3
(10)	Effect 2 Parameter	*11-3
(11)	Effect 3 Parameter	*11-3
(12)	Effect 4 Parameter	*11-3
(13)	Effect 5 Parameter	*11-3
(14)	Effect 6 Parameter	*11-3
(15)	Effect 7 Parameter	*11-3
(16)	Effect 8 Parameter	*11-3
(17)	Effect 9 Parameter	*11-3
(18)	Effect 10 Parameter	*11-3
(19)	Effect 11 Parameter	*11-3
(20)	Effect 12 Parameter	*11-3
(21)	Effect 13 Parameter	*11-3
(22)	Effect 14 Parameter	*11-3
(23)	Effect 15 Parameter	*11-3
(24)	Effect 16 Parameter	*11-3

\*11-1 : 00 : Off \*11-2 :

01 : R bit0=0:Effct1 L-Ch Off.=1:0n  
02 : 01:99 bit1=0: - 1 R-Ch Off.=1:0n  
03 : 02:99 bit2=0: - 2 L-Ch Off.=1:0n  
04 : 03:99 bit3=0: - 2 R-Ch Off.=1:0n  
05 : 04:99 bit4=0:Effct2 Para.=1:Serial  
65 : L

\*11-3 : Effect Parameter (8Byte) 33 Type

offset	PARAMETER	DATA(Hex) : VALUE
1~3	Hall. ( 4.5 : Room. 6 : Live Stage )	
(00)	Reverb Time	00~61(2F):0.2~9.9(4.9)
(01)	( NUL )	00
(02)	High Damp	00~63 : 00~99
(03)	Pre Delay	00~C8 : 00~200
(04)	E/R Level	00~63 : 00~99
(05)	( NUL )	00
(06)	EQ High	F4~0C : -12~12
(07)	EQ Low	F4~0C : -12~12

Don't display NUL from here, and that must be 00

7~9 : Early Reflection 1.2.3

(00)	E/R Time	00~46 : 100~800
(01)	Pre Delay	00~C8 : 00~200
(02)	EQ High	F4~0C : -12~12
(03)	EQ Low	F4~0C : -12~12

10 : Stereo Delay. 11 : Cross Delay

(00)	Delay Time L (L)	00~1F4 : 00~500
(01)	- - - (H)	
(02)	Feed Back	9D~F3 : -99~99
(03)	High Damp	00~63 : 00~99
(04)	Delay Time R (L)	00~1F4 : 00~500
(05)	- - - (H)	
(06)	EQ High	F4~0C : -12~12
(07)	EQ Low	F4~0C : -12~12

# 12.13 : Stereo Chorus 1.2. ( 14.15 : Flanger )

(00)	Depth	00~63 : 00~99
(01)	Speed	00~D8 *11-3-2
(02)	MG Status *11-3-3	bit0=0:Sin. =1:Tri. bit1 ← 1 bit2 ← 0 (1)
(03)	( Feed Back )	(9D~F3 : -99~99)
(04)	Delay Time	0~C8(32):0~200(50)
(05)	EQ High	F4~0C : -12~12
(06)	EQ Low	F4~0C : -12~12
(07)	Phase Shifter 1. ( 17 : Phase Shifter 2 )	
(08)	Depth	00~63 : 00~99
(09)	Speed	00~D8 *11-3-2
(10)	MG Status *11-3-3	bit0=0:Sin. =1:Tri. bit1 ← 0 (1) bit2 ← 0
(11)	Feed Back	9D~F3 : -99~99
(12)	Manual	00~63 : 00~99

# 18 : Stereo Tremolo 1. ( 19 : Stereo Tremolo 2 )

(00)	Depth	00~63 : 00~99
(01)	Speed	00~D8 : *11-3-2
(02)	MG Status *11-3-3	bit0=0:Sin. =1:Tri. bit1 ← 0 (1) bit2 ← 0
(03)	Shape	9D~F3 : -99~99
(04)	EQ High	F4~0C : -12~12
(05)	EQ Low	F4~0C : -12~12
(06)	3 Band EQ	
(07)	Mid fc	0.1.2 : 0.5k.1k.2k
(08)	Mid Gain	F4~0C : -12~12
(09)	Low fc	0.1.2:0.25k.0.5k.1k
(10)	High fc	0.1.2 : 1k.2k.4k
(11)	High Gain	F4~0C : -12~12
(12)	Low Gain	F4~0C : -12~12

# 21 : Over Drive

(00)	EQ Mid fc	0.1.2 : 0.5k.1k.2k
(01)	EQ Mid Gain	F4~0C : -12~12
(02)	Drive	00~63 : 00~99
(03)	Level	00~63 : 00~99
(04)	EQ High	F4~0C : -12~12
(05)	EQ Low	F4~0C : -12~12

# 22 : Distortion

(00)	Distortion	00~63 : 00~99
(01)	Level	00~63 : 00~99
(02)	EQ Low Gain	F4~0C : -12~12
(03)	Exciter	
(04)	Blend	9D~F3 : -99~99
(05)	Emphatic Point	00~09 : 01~10
(06)	EQ High	F4~0C : -12~12
(07)	EQ Low	F4~0C : -12~12

# 24 : Sympthonic Ensemble

(00)	Depth	00~63 : 00~99
(01)	EQ High	F4~0C : -12~12
(02)	EQ Low	F4~0C : -12~12
(03)	Rotary Speaker	
(04)	Depth	00~63 : 00~99
(05)	Speed Rate	F6~0A : -10~10
(06)	Delay / Hall	
(07)	Delay Time (L)	00~1F4 : 00~500
(08)	Delay Time (H)	9D~F3 : -99~99
(09)	Feed Back	00~63 : 00~99
(10)	High Damp	00~61 : 0.2~9.9
(11)	Reverb Time	00~63 : 00~99
(12)	High Damp	00~63 : 00~99
(13)	Pre Delay	00~96 : 00~150
(14)	Delay / Room	

# 27 : Delay / Room

(00)	Delay Parameter	*11-3-1
(01)	Reverb Time	00~2F : 0.2~4.9
(02)	High Damp	00~63 : 00~99
(03)	Pre Delay	00~96 : 00~150
(04)	Delay / Early Reflection	
(05)	Delay Parameter	*11-3-1
(06)	E/R Time	00~1E : 100~400
(07)	Pre Delay	00~96 : 00~150

# 29 : Delay / Delay

(00)	Delay Time L (L)	00~1F4 : 00~500
(01)	- - - (H)	
(02)	Feed Back L	9D~F3 : -99~99
(03)	High Damp L	00~63 : 00~99
(04)	Delay Time R (L)	00~1F4 : 00~500
(05)	- - - (H)	
(06)	Feed Back R	9D~F3 : -99~99
(07)	High Damp R	00~63 : 00~99
(08)	Delay / Chorus. ( 31 : Delay / Flanger )	
(09)	Delay Parameter	*11-3-1
(10)	Depth	00~63 : 00~99
(11)	Speed	00~D8 *11-3-2
(12)	MG Status *11-3-3	bit0=0:Sin. =1:Tri. bit1 ← 0 bit2 ← 0 (1)
(13)	Feed Back	0. (9D~F3: -99~99)
(14)	Delay / Phaser	
(15)	Delay Parameter	*11-3-1
(16)	Depth	00~63 : 00~99
(17)	Speed	00~D8 *11-3-2
(18)	Feedback	9D~F3 : -99~99

# 33 : Delay / Tremolo

(00)	Delay Parameter	*11-3-1
(01)	Depth	00~63 : 00~99
(02)	Speed	00~D8 *11-3-2
(03)	Shape	9D~F3 : -99~99
(04)	Delay / Flanger	
(05)	Delay Parameter	*11-3-1
(06)	Depth	00~63 : 00~99
(07)	Speed	00~D8 *11-3-2
(08)	Shape	9D~F3 : -99~99

# \*11-3-1 : Delay Parameter

Same as 26~(00)~(03)

# \*11-3-2 : Data(Hex) Value(Hz)

00~63 0.03~3.00 (0.03step)  
64~C7 3.1~13.0 (0.1 step)  
C8~D8 14 ~30.0 (1 step)

# \*11-3-3 : MG Status

bit0 : Wave Form =0:Sin. =1:Tri  
bit1 : Phase =0:0° , =1:180°  
bit2 : Wave Shape =0: Normal  
=1: for Flanger

PROGRAM PARAMETER PAGE, POSITION → OFFSET TABLE  
( TABLE 5 )

PAGE			PARAMETER	POSITION							
SGL	DBL			A	B	C	D	E	F	G	H
PROGRAM MODE											
				(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(0)	(0)		( PERFORMANCE EDIT )	*12	*12	*12	*12	*12	*12	*12	*12
EDIT PROGRAM MODE											
				(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(0)	(0)	0-1	OSC BASIC	10		11		11			
(1)	(1)	2	OSC 1 (MULTISOUND)	12			86	13			
	(2)	3	OSC 2 (MULTISOUND)	14			126	15	16	17	18
(2)	(3)	1-1	OSC 1 PITCH EG	63	64	65	66	67	68	70	69
	(4)	2	OSC 2 PITCH EG	103	104	105	106	107	108	110	109
(3)	(5)	2-1	VDF 1 (CUTOFF/EG INT)		71			74			
(4)	(6)	2	VDF 1 EG	78	79	80	81	82	83	84	85
(5)	(7)	3	VDF 1 VELOCITY SENSE	77		76		100	100	100	100
(6)	(8)	4	VDF 1 KBD TRACK	72	73	75		99	99	99	99
	(9)	3-1	VDF 2 (CUTOFF/EG INT)		111			114			
	(10)	2	VDF 2 EG	118	119	120	121	122	123	124	125
	(11)	3	VDF 2 VELOCITY SENSE	117		116		140	140	140	140
	(12)	4	VDF 2 KBD TRACK	112	113	115		139	139	139	139
(7)	(13)	4-1	VDA 1 EG	92	93	94	95	96	97	98	
(8)	(14)	2	VDA 1 VELOCITY SENSE		89	91		102	102	102	102
(9)	(15)	3	VDA 1 KBD TRACK	87	88	90		101	101	101	101
	(16)	5-1	VDA 2 EG	132	133	134	135	136	137	138	
	(17)	2	VDA 2 VELOCITY SENSE		129	131		142	142	142	142
	(18)	3	VDA 2 KBD TRACK	127	128	130		141	141	141	141
(10)	(19)	6-1	PITCH MG	19		20	21	22	19	19	
(11)	(20)	2	VDF MG	23		24	25	26	23	23	
(12)	(21)	7-1	AFTER TOUCH	27	28		29	30		31	
(13)	(22)	2	JOY STICK	32	33		34	35		36	37
(14)	(23)	8-1	EFFECT 1 (TYPE)	38					46		
(15)	(24)	2	EFFECT 1 PARAMETER	*13	*13	*13	*13	*13	*13	*13	*13
(16)	(25)	3	EFFECT 2 (TYPE)	39					46		
(17)	(26)	4	EFFECT 2 PARAMETER	*13	*13	*13	*13	*13	*13	*13	*13
(18)	(27)	5	EFFECT PLACEMENT	46				44		45	

\*12 See P. 18

\*13 See P. 40

COMBINATION PARAMETER PAGE, POSITION → OFFSET TABLE  
( TABLE 6 )

PAGE						PARAMETER	POSITION							
SGL	LYR	SP	VS	MULT			A	B	C	D	E	F	G	H
COMBINATION MODE														
							(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1)						PROG. /LEVEL	36			37				
	(1)	(1)	(1)		1	PROG. /LEVEL	36			37	47			48
				(1)	1	PROGRAM	36	47	58	69	80	91	102	113
				(2)	2	LEVEL	37	48	59	70	81	92	103	114
EDIT COMBINATION MODE														
							(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(0)	(0)	(0)	(0)	(0)	0-1	COMBI. TYPE			10					
(1)					1-1	PROG. /PAN	36			37		40		
	(1)				1-1	PROG. /LEVEL	36			37	47			48
	(2)				2	PAN/DAMPER	40	45			51	56	49	50
		(1)			1-1	PRG. /SPLIT	36			*14		47		
		(2)			2	LVL/PAN/DAMP	37	40	45		48	51	56	
			(1)		1-1	PRG. /VELOCITY	36			*15		47		
			(2)		2	LVL/PAN/DAMP	37	40	45		48	51	56	
				(1)	1-1	PROG. SELECT	36	47	58	69	80	91	102	113
				(2)	2-1	MIDI CHANNEL	46	57	68	79	90	101	112	123
				(3)	3-1	K. WINDOW TOP	41	52	63	74	85	96	107	118
				(4)	2	K. WINDOW BTM	42	53	64	75	86	97	108	119
				(5)	3	V. WINDOW TOP	43	54	65	76	87	98	109	120
				(6)	4	V. WINDOW BTM	44	55	66	77	88	99	110	121
				(7)	4-1	OUTPUT LEVEL	37	48	59	70	81	92	103	114
				(8)	5-1	TRANSPOSE	38	49	60	71	82	93	104	115
				(9)	2	DETUNE	39	50	61	72	83	94	105	116
				(10)	6-1	PANPOT	40	51	62	73	84	95	106	117
				(11)	7-1	MIDI PRG CHG	45	56	67	78	89	100	111	122
				(12)	2	DAMPER	45	56	67	78	89	100	111	122
				(13)	3	AFTER TOUCH	45	56	67	78	89	100	111	122
				(14)	4	CONTROL CHNG	45	56	67	78	89	100	111	122
(2)	(3)	(3)	(3)	(15)	8-1	EFFECT1 TYPE	11					19		
(3)	(4)	(4)	(4)	(16)	2	EFFECT1 PARA	*13	*13	*13	*13	*13	*13	*13	*13
(4)	(5)	(5)	(5)	(17)	3	EFFECT2 TYPE	12					19		
(5)	(6)	(6)	(6)	(18)	4	EFFECT2 PARA	*13	*13	*13	*13	*13	*13	*13	*13
(6)	(7)	(7)	(7)	(19)	5	EFFECT PLACE	19				17		18	

\*14 68

\*15 70



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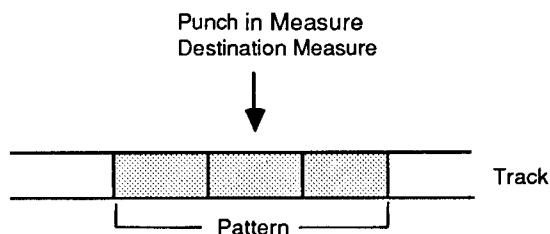
## ***ERROR MESSAGES***

---

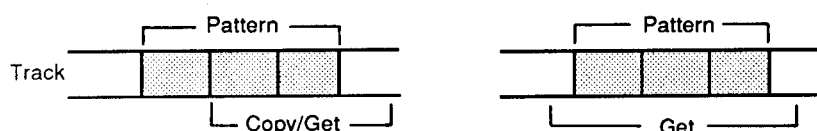
(Common to all modes)

<b>Error Message</b>	<b>Contents of Error</b>
Battery Low (Internal)	The battery for internal memory backup needs to be replaced. Call the KORG distributor nearest you or your local KORG dealer or service center and have a qualified technician replace it.
Battery Low (RAM card)	The battery for RAM card memory backup needs to be replaced. In order to save your valuable data, load all data from the card to the M1's internal memory, then change the battery in the card, and finally reload the data back to the card. Removal of the battery results in loss of all data in the card.
Card Format Mismatch	Because the format of the card differs, writing in and reading out of data cannot be executed. (When writing to this card, use Global Mode function F9-2, Format Card.)
Card Memory Full	The number of steps of the sequence data to be saved is beyond the capacity of the card. (Re-format the Sequence Card in order to save the data.)
Invalid (Unformatted) Card	Card which does not have any remaining memory space, or a card not yet readied for use with the M1 has been inserted. (When using this kind of card, use Global Mode function F9-2, Format Card.)
Memory Protected	Memory protect has been set in the Global Mode to prevent the accidental erasure of data (when writing to internal or card memory).
No Card Inserted	Reading from or writing to the card has been attempted without the card being fully inserted.
ROM Card or Protected Card	Data cannot be written to a RAM card unless the write protect switch is ON, and cannot be written to a ROM card at all.

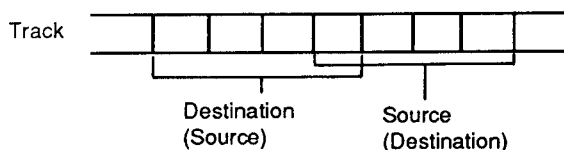
Error Message	Contents
Beat or Length Mismatch	The time signature of the play data (of track or pattern) does not match that of the track or pattern being transferred to, or the length of a pattern being bounced or copied does not match that of the destination.
Blank Pattern	An initialized pattern was used for the PUT operation.
Measure Occupied by Pattern	Part of a pattern stretches over a specified punch-in measure or a specified destination measure in measure editing.



Measure Overflow	When executing an edit, the length of the tracks extends beyond 250 measures.
Memory Full	The total of all the songs and steps has used up the available memory capacity.
Track Has No Events	In Event Editing, the specified track does not have any play data.
Pattern Across Source	In copying from a track, part of a pattern has been included in the specified range of the source.



Pattern Conflicts	While executing the bounce function, a pattern with Events inserted by PUT occupies a portion of the source track or destination track range.
Pattern Used in Song	The pattern cannot be loaded because another previously loaded pattern is being used in the song.
Source Across Destination	In the Measure Copy function (F5-2) of copying to the same track, the range of source side and the destination side overlap.



Track Protected	The protect for the specified track is set to ON.
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# *SPECIFICATIONS AND MISCELLANEOUS INFORMATION*

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## SPECIFICATIONS

Sound generation method:	AI Synthesis system (full digital sound processing)
Sound source:	16 voice, 16 oscillator (Single mode) 8 voice, 16 oscillator (Double mode)
Keyboard:	61 key (with initial and after touch)
Waveform memory:	PCM; 2 Mword (4 Mbyte)
Quantization:	16 bit
Effect section :	2-system digital multi-effects
Program memory capacity:	100 Programs <sup>*1</sup>
Combination memory capacity:	100 Combinations <sup>*1</sup>
Sequencer section:	10 songs, 100 patterns, max. 7700 notes <sup>*2</sup> 8 tracks, 8-timbre multi-timbral operation (Dynamic Voice Allocation)
Controller inputs:	Damper pedal, assignable footswitches (pedals) 1 / 2
Outputs:	1/L, 2/R, 3, 4, stereo headphones
MIDI terminals:	IN, OUT, THRU
Display:	Backlit LCD (40 characters x 2 lines)
Optional accessories:	RAM card (MCR-03), ROM card, PCM card
Power requirements:	11 W
Dimensions:	1058 (W) x 356 (D) x 110 (H) (41-11/16" x 14" x 4-5/16")
Weight:	13.5 kg (29 lbs. 11 oz.)

\*1 Memory allocation can be changed to 50 Programs and 50 Combinations.

\*2 A capacity of 4400 notes when 100 Program/100 Combination memory allocation is selected.

\* Specifications are subject to changes and improvements without notice.

# M1 MIDI IMPLEMENTATION CHART

FUNCTION		Transmitted	Recognized	Remarks
Basic Channel	Default Change	1 ~ 16 1 ~ 16	1 ~ 16 1 ~ 16	Memorized
Mode	Default Messages Altered	x *****	3 x	
Note number:	Sound range	24 ~ 108 *****	0 ~ 127 0 ~ 127	Seq. Data is 0 to 127 in transmission
Velocity	Note on Note off	○ 9n, V=10 ~ 127 x	○ 9n, V=1 ~ 127 x	Seq. Data is 2 to 126 in transmission
After Touch	Keys Ch's	x ○	x ○	[A]
Pitch bend		○	○	*1
Control Change	1 2 6 7 38 64 96 97 100 101 0-101	○ ○ ○ ○ ○ ○ ○ ○ x x ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	Pitch MG *1 VDF modulation *1 Data entry (MSB) *2 Volume *1 Data entry (LSB) *2 Sustain *1 Data increment *2 Data decrement *2 LSB of RPC for master tune *2 MSB of RPC for master tune *2 Sending and receiving Seq. Data only
Program Change	Actual No.	○ 0 ~ 99 *****	○ 0 ~ 127 0 ~ 99	[B]
System Exclusive		○	○	*2,*4
System Common	: Song pos. : Song sel. : Tune	○ ○ 0 ~ 19 x	○ ○ 0 ~ 19 x	*3 *3
System Real time	: Clock : Commands	○ ○	○ ○	*3 *3
Aux Message	: Local ON/OFF : All note off : Active sensing : Reset	x x ○ x	○ ○ 123 ~ 127 ○ x	
NOTES: *1 Transmit/receive if CONTROL is set to ENA in GLOBAL Mode. *2 Transmit/receive if EXCLUSIVE is set to ENA in GLOBAL Mode. *3 When Clock is Internal, it transmits but does not receive. When External, the opposite is true. *4 Dumps and edits the Program data. Compatible with universal exclusive (Device ID).				

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

[A]: Transmit/receive when AFTER TOUCH is set to ENA in GLOBAL Mode.

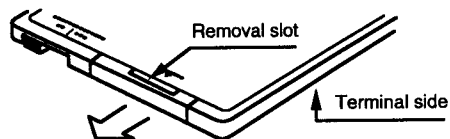
[B]: Transmit/receive when PROG/COMBI CHANGE is set to ENA in GLOBAL Mode.

## MEMORY CARD RAM

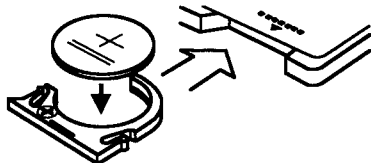
◆ The RAM card requires battery power in order to preserve data in memory. The included lithium battery (type CR2016) should be put in place before use.

### 1. Installing the battery

Turn the card over to the side without the terminal. You will find a slot in the battery holder.



Install the lithium battery in the holder with the "+" side up.



### 2. Write Protect Switch

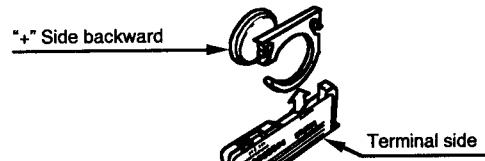
No data can be written on the card when this switch is set to "ON". To preserve data, set this switch to ON, except when writing new data.

### 3. Replacing Lithium Battery

Power from the lithium battery is used to protect data held in memory. The battery should be replaced once a year. However, battery life is shortened if kept at temperatures exceeding 40 degrees centigrade, (104 Fahrenheit)

Always use a CR2016 type lithium battery.

When replacing the battery, leave the card in the unit with unit power ON. This will preserve the contents of the memory. If the card is removed before battery replacement, memory contents will be lost.



## MULTISOUND LIST

00 Piano	25 SynMallet	50 FingerSnap	75 VoiceWvNT 1
01 E. Piano 1	26 Flute	51 Pop	76 VoiceWvNT 2
02 E. Piano 2	27 Pan Flute	52 Drop	77 DWGS E. P. 1
03 Clav	28 Bottles	53 Drop NT	78 DWGS E. P. 2
04 Harpsicord	29 Voices	54 Breath	79 DWGS E. P. 3
05 Organ 1	30 Choir	55 Breath NT	80 DWGS Piano
06 Organ 2	31 Strings	56 Pluck	81 DWGS Clav
07 MagicOrgan	32 Brass 1	57 Pluck NT	82 DWGS Vibe 1
08 Guitar 1	33 Brass 2	58 Vibe Hit	83 DWGS Bass 1
09 Guitar 2	34 Tenor Sax	59 VibeHit NT	84 DWGS Bass 2
10 E. Guitar	35 Mute TP	60 Hammer	85 DWGS Bell 1
11 Sitar 1	36 Trumpet	61 Metal Hit	86 DWGS Orgn 1
12 Sitar 2	37 TubaFlugel	62 MetalHitNT	87 DWGS Orgn 2
13 A. Bass	38 DoubleReed	63 Pick	88 DWGS Voice
14 Pick Bass	39 Koto Trem	64 Distortion	89 SquareWave
15 E. Bass	40 BambooTrem	65 Dist NT	90 Digital 1
16 Fretless	41 Rhythm	66 Bass Thumb	91 Saw Wave
17 SynthBass 1	42 Lore	67 BasThumNT1	92 Digital 2
18 SynthBass 2	43 Lore NT	68 BasThumNT2	93 25% Pulse
19 Vibes	44 Flexatone	69 Wire	94 10% Pulse
20 Bell	45 WindBells	70 Pan Wave	95 Digital 3
21 Tubular	46 Pole	71 Ping Wave	96 Digital 4
22 Bell Ring	47 Pole NT	72 Fv Wave	97 Digital 5
23 Karimba	48 Block	73 Mv Wave	98 DWGS TRI
24 KarimbaNT	49 Block NT	74 Voice Wave	99 DWGS Sine

- The "NT" designation on certain Multisounds indicates that the pitch of the sound is the same regardless of the key played.

## DRUM SOUND LIST

01 Kick 1	12 Open HH 1	23 E. Tom	34 Metal Hit
02 Kick 2	13 Closed HH 2	24 Ride	35 Pluck
03 Kick 3	14 Open HH 2	25 Rap	36 FlexaTone
04 Snare 1	15 Crash	26 Whip	37 Wind Bell
05 Snare 2	16 Conga 1	27 Shaker	38 Tubular 1
06 Snare 3	17 Conga 2	28 Pole	39 Tubular 2
07 Snare 4	18 Timbales 1	29 Block	40 Tubular 3
08 Side Stick	19 Timbales 2	30 FingerSnap	41 Tubular 4
09 Tom 1	20 Cowbell	31 Drop	42 Bell Ring
10 Tom 2	21 Claps	32 Vibe Hit	43 Metronome 1
11 Closed HH 1	22 Tambourine	33 Hammer	44 Metronome 2

### NOTICE

Korg products are manufactured under strict specifications and voltages required by each country. These products are warranted by the Korg distributor only in each country. Any Korg product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacturers's/distributor's warranty and liability. This requirement is for your own protection and safety.

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