

Thank you for purchasing the Korg M3R AI synthesis module.  
To enjoy long and trouble-free use, please read this manual carefully.

## PRECAUTIONS

### ■ENVIRONMENT

Avoid using this unit in environments where it will be exposed to the following conditions:

- Direct sunlight
- High temperature or humidity
- Dust or sand
- Excessive vibration

Using your unit in the following kinds of locations may generate noise or cause erroneous operation, so please be careful.

- Near fluorescent lights or CRTs (in TVs, etc.)

### ■POWER SUPPLY

Use this unit only with the rated AC voltage. If you intend to use this unit in areas where the voltage is different from the rated AC voltage, consult your KORG dealer about a suitable voltage transformer unit.

Do not plug the unit into the same outlet used for devices which generate noise or which have a large power consumption, such as motors or dimmers.

### ■INTERFERENCE WITH OTHER APPLIANCES

This unit uses microprocessor circuitry that may cause interference with nearby radio or TV receivers. If problems occur, use at a greater distance from the radio or TV.

### ■HANDLE GENTLY

Although this unit is designed and constructed to KORG's high standards, the use of excessive force may cause damage to its keys and knobs.

### ■CLEANING

Use only a soft, dry cloth to clean the exterior of this unit. Never use benzene, volatile cleaners or solvents, polish or cleaning compounds.

### ■OWNER'S MANUAL

The M3R is a sophisticated digital music device with many functions. Therefore, we suggest that you keep this manual handy at all times, for reference.

### The M3R backup battery

To preserve memory settings when the power is turned off, the M3R contains a backup battery. When "Battery Low" appears in the display, please contact a nearby service center to have the battery replaced.

## LITIUMPARISTO

Pariston saa vaihtaa ainoastaan huoltohenkilöstö saman valmistajan vastaavalla tyyppillä.

Virheellisestä käsittelystä syntyy räjähdysvaara.

## VARNING

Denna apparat har LITHIUM BATTERI.  
Byte av batteri får endast ske av fackman.  
Felaktig hantering kan förorsaka explosion.  
Vid byte får endast batteri av samma typ och fabrikat monteras.

## ADVARSEL

Dette produktet inneholder lithium batteri som bare må skiftes ut av kvalifisert per sonell. Ukyndig behandling kan forårsake eksplosjon. Batteriet må erstattes av samme type fra samme produsent.

## ADVARSEL

Lithiumbatteri. Eksplosionsfare.  
Udskiftning må kun foretages af en sagkyndig, og som beskrevet i servicemanualen.

## CANADA

THIS APPARATUS COMPLIES WITH THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS.

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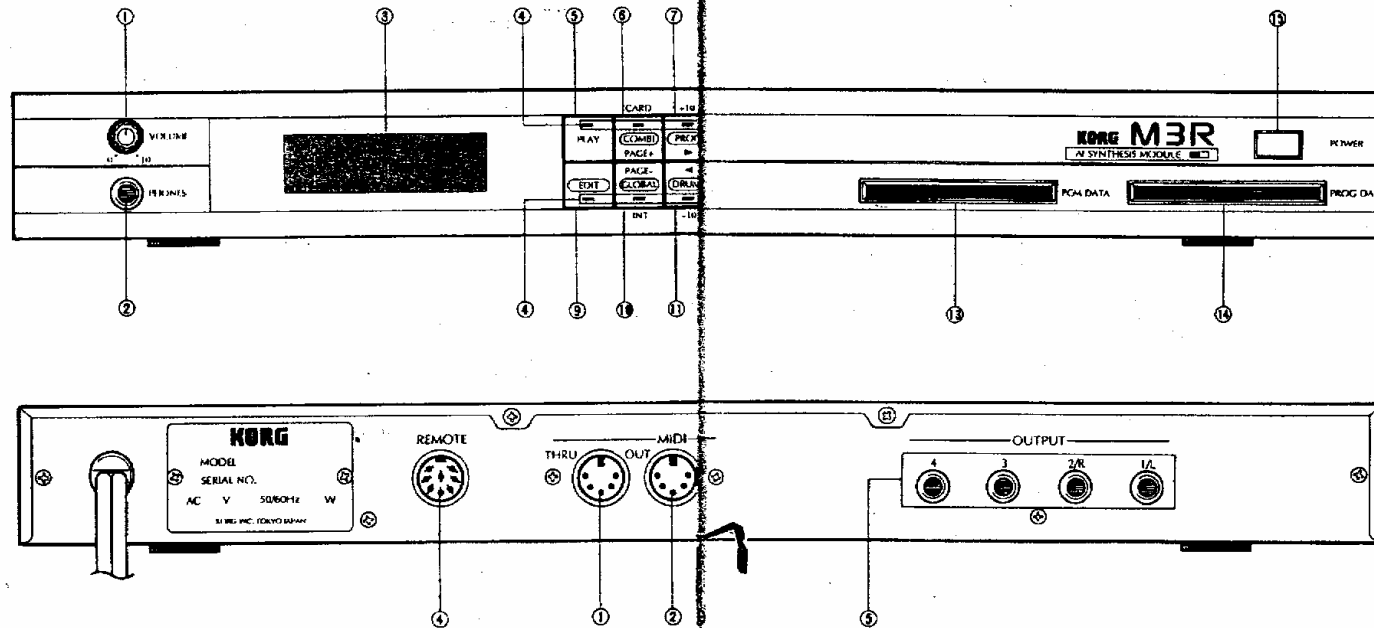
## FRONT PANEL

Page 11 explains the function of each key.

- ① MASTER VOLUME
- ② PHONES jack  
A set of stereo headphones can be connected here to monitor OUTPUT1/L and 2/R.
- ③ Display
- ④ MODE/MIDI indicators  
These light when MIDI data is received.
- ⑤ PLAY key
- ⑥ COMBL, CARD, PAGE + key
- ⑦ PROG, +10 key, ▷ key
- ⑧ EFFECT, +1, △/YES key
- ⑨ EDIT key
- ⑩ GLOBAL, INT, PAGE key
- ⑪ DRUMS, -10, ◀ key
- ⑫ -1, ▽/NO key
- ⑬ PCM data slot  
Cards containing PCM (Multisound, Drum sound) data can be inserted here. Do not insert Program cards into this slot.
- ⑭ PROG/DEMO data slot  
Cards containing Program data (or into which you will be storing Program data) can be inserted here. Do not insert PCM (Multisound) cards into this slot.
- ⑮ POWER Switch

## REAR PANEL

- ① MIDI THRU jack
- ② MIDI OUT jack
- ③ MIDI IN jack
- ④ REMOTE jack  
An RE1 remote editor can be connected to this jack.
- ⑤ OUTPUT jacks (1/L, 2/R, 3, 4)  
These are the audio outputs of the M3R. Various parameters determine how voices are assigned to each output jack.



# INTRODUCTION TO THE KORG M3R

The Korg M3R is a module employing the principles of AI Synthesis to give you stunningly clear bright sounds to add to your MIDI system. It is more than just a "synthesizer without a keyboard", since it also provides a full range of percussion sounds and a complete range of digital effects.

## MIDI connections

As the M3R is a rack-mountable module with no controls for playing notes, you will need to connect a MIDI keyboard to the M3R using a MIDI cable from the OUT of the keyboard to the IN of the M3R. If you wish to take full advantage of the multi-timbral capabilities of the M3R, you will need to connect a sequencer as well. The usual way of doing this is:



using a "THRU" or "ECHO" function on the sequencer. If you are in doubt, consult your local MIDI guru (usually your music store). The MIDI THRU connection on the back of the M3R is used for "daisy-chaining" other MIDI devices from the M3R, and the MIDI OUT is used for the M3R's "Overflow" function or transmitting System Exclusive messages (don't worry about these just yet).

## Audio connections

There are four audio output connections on the back panel. Any sound produced by the M3R may be assigned to any one of these outputs, A, B, C or D. In addition, a sound may be assigned to any position between A and B, meaning that if these two outputs are connected to two input channels of a mixer, one panned hard left and one panned hard right, the sound may be placed anywhere in the stereo image. As a further option, a sound may be assigned to be output from C and D equally. This flexibility, combined with the integral effects units, greatly reduces the number of input channels required on a mixer.

## Other connections

There is one other connection on the back of the M3R, labelled "REMOTE". This is for the RE1 remote editor, which provides a larger display and more controls than are found on the front panel of the M3R. Though all editing and program selection can be carried out from the front panel of the M3R, there are times when you may not be close enough to the unit to carry out editing operations, or you may feel the need to see

and control more parameters than are visible on the M3R's own display. The RE1, then, while not an essential accessory, is certainly an option you should consider if you intend to do a lot of editing work on the M3R. Note that there are no footswitch or other controller input sockets. This is because the M3R is designed to be controlled remotely from another MIDI device, and all performance controls are transmitted via MIDI from these devices.

The only other connections are a headphone socket on the front panel, by the volume control (which affects both headphone volume and the overall volume of the outputs on the back panel), and two card slots. These can hold Korg memory cards - the PCM DATA slot holding Multisound waveform data on ROM (Read-Only Memory) cards, and the PROG DATA slot holding your own edited data on RAM (you can write to them and read from them) cards. Of course, the M3R has its own internal memory, so these slots do not have to be used - but they are a convenient way of expanding the capabilities of the M3R and storing your work.

## Synthesizer sound production - a little history

In older analog synthesizers, the heart of the sound-generation section was a bank of one or more voltage-controlled oscillators (VCOs) which produced a simple waveform such as a sine wave, sawtooth or square wave. These waveforms were mixed together and fed through a voltage-controlled filter (VCF) which modified the basic sounds produced from the VCOs to produce a richer, less "mechanical" sound. The amount of filter applied to the basic VCO sound was controllable with regard to time using an Envelope Generator (EG), so a note could, for instance, be filtered sharply at the beginning of a note, and less towards the end, producing a "wow" or "wah" effect. The amount of filtering, pitch and volume could also be controlled by a low-frequency oscillator (LFO), sometimes called a modulation generator (MG), (resulting in vibrato, tremolo, and "wah-wah") before the sound was sent through an EG to the voltage-controlled amplifier (VCA). The EG enabled you to vary the attack and decay times, the sustain level and release time of a sound. Some analog synthesizers had more features than this, others may have had slightly fewer, but the principle was the same in all cases.

## Synthesizer sound production - up-to-date with the M3R

You'll be relieved to know that the M3R uses exactly the same principles as the analog synthesizers described above. Of course, since the M3R uses newer technology, there are bound to be a few differences. Here they are.

Firstly, the "oscillators" in the M3R are called "Multisounds". This is because they are not simple sine-, triangle- or square-wave oscillators, but digitally-recorded and created complex waveforms simulating real acoustic instruments. However, if you feel the need for "vintage" synth sounds, the M3R provides you with Multisounds containing the older sine, sawtooth and square waveforms as well. The pitch is controlled by the note played from the controlling keyboard, as well as by other factors, such as the MG and by an EG.

Next, the filters and amplifiers. Since the M3R has its own microprocessor "brain", capable of controlling digital devices, these filters and amplifiers are digitally-controlled. In the M3R they are called VDFs and VDAs (Variable Digital Filter, Variable Digital Amplifier). These are much more reliable and stable than their voltage-controlled equivalents, while providing the same level of flexibility and sound quality. Both the filters and amplifiers can be controlled by EGs as well as by the note played on the keyboard and by an MG.

Older synthesizers had very few expressive controls available to the player - usually a pitch bend control and a device for increasing the amount of modulation. Only expensive synthesizers featured velocity sensitivity and a very few featured aftertouch. (Velocity sensitivity refers to the speed or force with which a key is initially struck, and aftertouch refers to the pressure exerted on a key after it has been struck.) These controllers, as well as some others which vary from machine to machine are now much more common (microprocessors again!), and the M3R is fully equipped to make use of these to modify the sound as you wish.

In addition to these synthesizer voices (or "Programs"), the M3R can also use special kinds of programs called "Drum Kits". In these programs, Multisounds are not used, but each MIDI note is assigned to a different drum sound (taken from the M3R's internal memory). With a Drum Kit, you cannot alter so many parameters as with other types of program, but you can still customize the sounds to make your own personal settings.

The M3R can play 16 notes at a time (including drums). These do not all have to be the same program, as these are combined into (logically enough) "Combinations". Up to eight different programs may be assigned to a Combination in various ways. It is possible to play one program at a time, two programs together, arrange things so that one program plays when a key is hit softly, and another when the same key is played hard, or so that different programs are played by different parts of the keyboard. Different programs may also be selected on different MIDI channels (multi-timbral capability), which is especially useful for work with a sequencer.

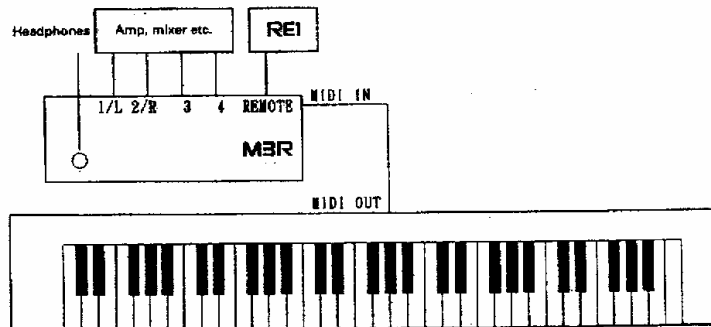
## Effects

The effects rack of a recording studio used to be a large space filled with bulky, difficult-to-use equipment, which was expensive! Once again, microprocessors have come to the rescue and digital effects which used to be completely out of the price range of smaller studios and individual musicians are now commonplace. The M3R includes two such built-in digital effects units. These effects units can be used as part of a combination to modify the basic program sounds by adding reverb, echo, chorus, flange, delay, etc. There's even a rotary speaker simulation for organ sounds. These effects are not preset types, but allow you as much control as you would expect on a stand-alone digital effects unit.

# BASIC OPERATION

## SETUP

- (1) Make sure that the power of all MIDI devices and other equipment (amps, mixers, etc.) connected to the M3R is turned off. Turn the volume of all equipment completely down.
- (2) Connect the power cable to an AC outlet. Connect the power cables of your other equipment and MIDI devices.
- (3) Turn the M3R power on.
- (4) After turning the power of the other connected devices on, raise the volume of the M3R and other devices to an appropriate volume level. Unless the MIDI channel of the M3R matches the MIDI channel of your other MIDI equipment, there will be no sound when you play the MIDI keyboard. To set MIDI channels, refer to the following section below "Set the MIDI channel to match the keyboard".



- All notes C-1 - G9 (note numbers 0-127) received at MIDI IN will be sounded. (Some programs may not sound when played in higher ranges.)

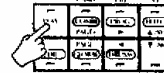
Key name	C-1	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	G9
Note number	0	12	24	36	48	60	72	84	96	108	120	127

### Set the MIDI channel to match the keyboard

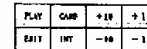
- (1) While holding the EDIT key, press the GLOBAL key.
- (2) Press the PAGE+ key twice.
- (3) Check that the blinking area is located at "CH= \_\_\_". If it is at a different location, continue pressing the < key.
- (4) Press Δ/YES and ∇/NO to select the desired MIDI channel.
  - In combination mode when the Type is Multi, MIDI data of other channels will be received in addition to the channel set here.
  - For some Combinations, there may be no sound even though the GLOBAL MIDI channel matches.

## HOW TO PLAY COMBINATIONS (GROUPS OF VOICES)

- (1) Press the PLAY key. (COMBINATION PLAY mode)



- (2) Use the +10/+1/-10/-1 keys to select the Combination you want to play (00-99).



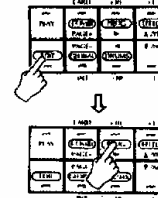
- (3) Play the keyboard to hear the selected Combination. (When a multi-type Combination is selected, only the sounds which match its MIDI channel will be heard.)

- \* You can insert a PROG/DEMO card and press the CARD (COMBI/PAGE+) key to play card voices.

100 Krypton  
129 174 135 127

## HOW TO PLAY PROGRAMS (INDIVIDUAL VOICES)

- (1) Press the EDIT key followed by the COMBI key (COMBINATION EDIT mode)

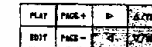


- (2) Press the PAGE+ key so that "1A TYPE SELECT" is displayed at the top of the screen and the cursor is on the Combination Type parameter (either MULTI, VEL.SW, SPLIT, LAYER, or SINGLE is displayed and flashing). If this is not displayed, use the PAGE+ and < and > keys so that this display appears.

- (3) Use the -1/NO key to select SINGLE and then move the cursor to the OK? field using the > key. Confirm by pressing +1/YES. The SINGLE field will begin flashing again.

- (4) Now press the PAGE+ key so that "2A SINGLE" is displayed at the top of the screen, and a voice number (eg "184" is flashing). Use the 1/YES and -1/NO keys to select the Program to be played (00-99).

- \* The effect will not be applied. (When effect interlock is Off.) \* If a PROG/DEMO card is inserted, you can press CARD and select sounds from the card as well.

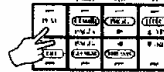


- (5) Now play the selected program from your keyboard.

0A PROG SELECT  
100 :Piano 16'

## HOW TO HEAR A DEMO SONG

- (1) Simultaneously press the PLAY and EDIT keys.



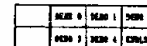
- (2) The memory contains five demo songs, with a song number corresponding to each key. If you press ∇/NO, songs 1-5 will continue playing endlessly. If songs are played individually, playback will stop at the end of the song.

- (3) Press the PLAY or EDIT key to return to the previous display. To exit, press any key.

- If a ROM card containing demo data is inserted into the PROG DATA slot, the demo from that card will play.
- During demo playback, data is not transmitted from display.

SONG0: Lady Amazon

Note:  
Making changes in sound-related data will affect the playback of the songs.



## SOUND CREATION PROCEDURE

**1** Select a sound to be the basic element of your new sound (use the Oscillator parameter).

- The basic element of a sound is called a Multisound (tone generator waveform).
- An Oscillator (OSC) is the basic sound-source of a synthesizer.

**2** In PROGRAM EDIT mode, modify the Multisound you selected in step 1.

- Use the VDF (Variable Digital Filter) to modify the tone. This can be used to make the tone softer, or to make the tone change over time. For example this could be used to make a sound be bright when first played, become softer as you continue holding the key, and then become bright again when you release the key.
- Use the VDA (Variable Digital Amplifier) to modify volume. This can be used to make the volume change over time. For example, a violin can be made to begin sounding gradually as you continue to hold a key down, and an organ can be made to sound continuously as long as a key is depressed.

- Sounds created in this way are called Programs. The M3R can store 100 Programs (00-99). Programs in internal memory can also be stored on a card.

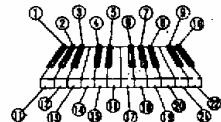
**3** In COMBINATION EDIT mode, combine the programs you created in step 2.

- In the first page of COMBINATION EDIT mode, select the COMBI NO. to use.
- Next select the COMBINATION TYPE.
- When LAYER is selected, two programs will sound when a single key is pressed.
- When SPLIT is selected, the right and left areas of the keyboard will play different programs.
- When VELOCITY SWITCH is selected different programs will sound depending on how strongly you play.
- When MULTI is selected, up to 8 programs can be freely combined as using Layer, Split, and Velocity Switch. Since a different MIDI channel can be assigned for each timbre (an instrument to which a program is assigned), select MULTI mode when using the M3R as a multi-timbral tone generator for a sequencer.
- When SINGLE is selected, only one program will be played in this combination.

■ Assign the internal drum tone generators to each key in DRUMS mode.

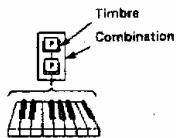
- Pressing a note will play a drum sound.
- This is also where you make settings for pan (the position of the sound in the stereo mix) and pitch.
- An assignment of up to 30 drum sounds is called a Drum Kit.
- A single M3R can remember 4 different drum kits.
- In the same way as for Multisounds, drum kits can be selected as oscillators. This allows you to use PROGRAM EDIT and COMBINATION EDIT to modify the sound of a drum kit.

☆ Example

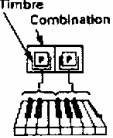


- |                  |                    |                     |
|------------------|--------------------|---------------------|
| 1 BASS DRUM 1    | 8 HAND CLAPS       | 15 CLOSED HI HAT    |
| 2 SNARE 1        | 9 HI CONGA (MUTED) | 16 PICCOLO SNARE 1  |
| 3 HI TOM         | 10 LO BONGO        | 17 PICCOLO SNARE 2  |
| 4 CLOSED HI HAT  | 11 BASS DRUM 2     | 18 CRASH CYMBAL 2   |
| 5 OPEN HI HAT    | 12 SNARE 2         | 19 RIDE CYMBAL 2    |
| 6 CRASH CYMBAL 1 | 13 MID TOM         | 20 HI CONGA (OPEN)  |
| 7 RIDE CYMBAL 1  | 14 LO TOM          | 21 LO CONGA (MUTED) |
|                  |                    | 22 HI BONGO         |

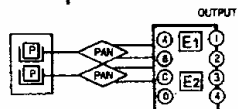
☆ Layer/Velocity Switch



☆ Split

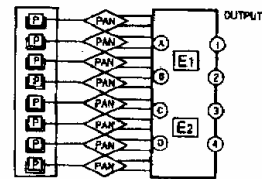


☆ Panning for Layer/Split/Velocity Switch



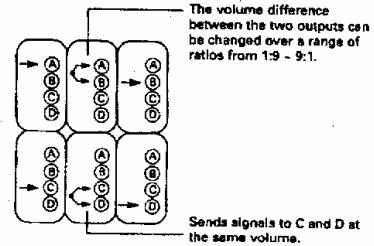
- The result of these settings is called a Combination. The M3R can store 100 Combinations (00-99). Combinations in internal memory can also be stored on a card.
- When the M3R is in COMBINATION PLAY mode, an incoming MIDI program change on the MIDI channel set in GLOBAL MODE will select a new Combination.
- If a Combination consists of timbres that are each receiving a different MIDI channel, incoming MIDI program changes for each Timbre will operate on the assigned MIDI channel.
- By making pan settings for the two effects outputs for each timbre, you can use effects creatively.
- The pan setting here is only the pan to the effect. To pan the sound to outputs 1-4, make settings in EFFECT mode.
- Drum kit pan settings made in DRUMS mode have priority. (These settings cannot be set in COMBINATION EDIT mode.)

☆ Panning for Multi



■ Panning (PANPOT)

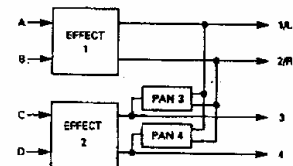
- This determines the assignments to outputs A-D.
- Adjust the volume balance between A:B over the range of 1:9 to 9:1 (A + B = 10).
- For C + D, C and D will be assigned the same volume level.



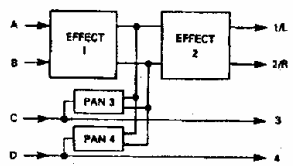
**4** Finally, use EFFECT EDIT mode to add an effect to the completed Combination. (One set of effects can be used for each Combination.)

- PAN3 and PAN4 determine panning between EFFECT 1/2.

☆ When parallel is selected



☆ When serial is selected



- In GLOBAL mode, you can make settings that determine the overall pitch, transpose, user scale, memory protect, and MIDI settings of the M3R. You can also transmit/receive data, and save/load data to/from a card and format a card.

## MODES AND KEY FUNCTIONS

(1) and (2) indicate the order in which keys should be pressed to enter each mode. The shaded boxes indicate keys whose indicators will light while in that mode.

**PROGRAM EDIT mode**

To enter this mode

		②	
①			

Key functions in this mode

PLAY	PAGE+		Δ/YES
	PAGE-	◀	▽/NO

**EFFECT mode**

To enter this mode

			②
①			

Key functions in this mode

PLAY	PAGE+	▶	
	PAGE-	◀	▽/NO

**COMBINATION PLAY mode**

To enter this mode

①			

Key functions in this mode

	CARD	+10	+1
EDIT	INT	-10	-1

**DRUMS mode**

To enter this mode

①		②	

Key functions in this mode

PLAY	PAGE+	▶	Δ/YES
	PAGE-		▽/NO

**COMBINATION EDIT mode**

To enter this mode

	②		
①			

Key functions in this mode

PLAY		▶	Δ/YES
	PAGE-	◀	▽/NO

**GLOBAL mode**

To enter this mode

①	②		

Key functions in this mode

PLAY	PAGE+	▶	Δ/YES
		◀	▽/NO

### Note

- When entering modes other than COMBINATION PLAY mode, first press the EDIT key (1), and then press the key for that mode (2).
- In all modes entered after pressing the EDIT key (all modes other than COMBINATION PLAY) the keys will function in the same way.

### Key functions

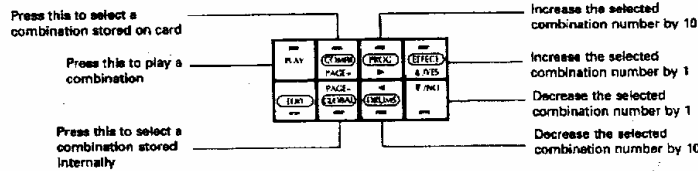
- |       |  |
|-------|--|
| PLAY  | Enter COMBINATION PLAY mode.   |
| EDIT  | Press when entering a mode other than combination play.  |
| PAGE+ | Move to the next parameter page of each mode.  |
| PAGE- | Move to the previous parameter page of each mode.  |
| ▶     | Move the cursor to the right.  |
| ◀     | Move the cursor to the left.   |
| Δ/YES | Increase the value of the parameter above the cursor, or answer a "OK?" prompt in the display. |
| ▽/NO  | Decrease the value of the parameter above the cursor, or answer a "OK?" prompt in the display. |
| CARD  | Press when you want to play card sounds.   |
| INT   | Press when you want to play internal sounds.   |
| +10   | Increase the combination number by 10.   |
| -10   | Decrease the combination number by 10.   |
| +1    | Increase the combination number by 1.  |
| -1    | Decrease the combination number by 1.  |

## ABOUT THE DISPLAY

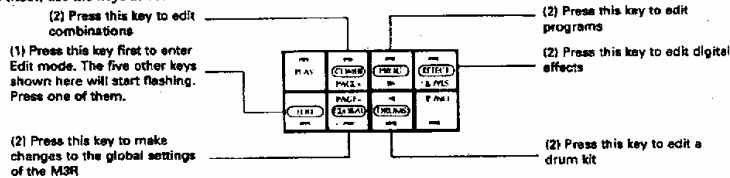
- ◆ The parameters of each mode are divided into pages. Use the PAGE +/- keys to move through the pages.
- ◆ Some pages are divided into 2-5 screens.

Whereas the control panel of older analog synthesizers used to be covered with an intimidating mass of knobs and patch leads, each dedicated to a particular function, the M3R (in common with other modern synthesizers) has only a few controls with a display to tell you what's going on. Of course, each control (key) has more than one function, depending on what you're doing at the time. Here's a brief guide to what each key does in various modes.

When you're playing combinations:



When you want to edit either a combination, a program, the digital effects, a drum kit, or to make changes to the global settings of the M3R, use the keys as follows:



When you have selected what you want to edit, the keys will change function again. When you are editing, the display is not big enough to display all the parameters you may wish to change. For instance, the whole of the page dealing with selecting a Multisound ("Program edit") looks like this:

Sub-page A	Sub-page B	Sub-page C	Sub-page D	Sub-page E
1A OSC M.SOUND	1B OSC	1C OSC	1D OSC	1E OSC
23: Dig1. Bell 2	Level 70 OCT 8'	Type: M.SOUND	Ass: POLY HLD: OFF	Delay=00

Accordingly, the display is divided into pages and "sub-pages". The current page number is displayed as a number in the upper left corner of the screen, thus:

0

and the current sub-page number is displayed as a letter immediately following the page number, thus:

0A

Further sub-pages may follow the current sub-page, and this is indicated by a flashing arrow at the upper right corner of the display:

0A PROG SELECT  
I21: Dig1Bell 2

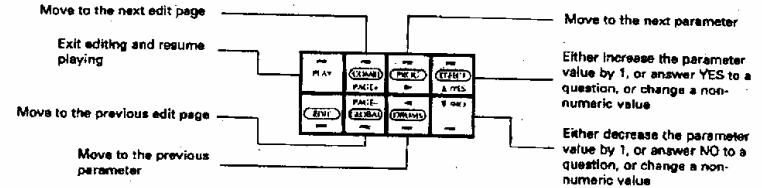
If there are sub-pages which precede the current sub-page, a flashing left-hand arrow is shown at the upper right corner of the display:

0C RENAME  
I21: Dig1Bell 2

If there are sub-pages before and after the current sub-page, then the arrow at the upper right corner will flash alternately from a left-hand to a right-hand arrow:

0B PROG WRITE  
Write->I21

The parameter being edited will blink. Sometimes there will be more than one parameter in a sub-page, so it is necessary to press either the left or right arrow key to move to a different parameter.



Though the theory may seem a little complex, the practice is easy, and you will soon find yourself pressing the right buttons without too much thought.

- ▷ This key moves the cursor to the right. When the upper line shows ▷ (or when ▷ and ◁ are alternately blinking), and the cursor is at the far right of the display, press this key to display the next screen to the right.
- ◁ This key moves the cursor to the left. When the upper line shows ◁ (or when ▷ and ◁ are alternately blinking), and the cursor is at the far left of the display, press this key to display the next screen to the left.
- △/YES These two keys modify the value (numerical data, etc.) above the cursor. △ increases the value, and ▽ decreases the value. When making a selection such as combination type, the types will change successively.
- ▽/NO When executing operations such as Write, a "YES/NO" display will appear, asking you to confirm. If you really want to execute the operation, press YES. If not, press NO.

## EFFECT INTERLOCK FUNCTION

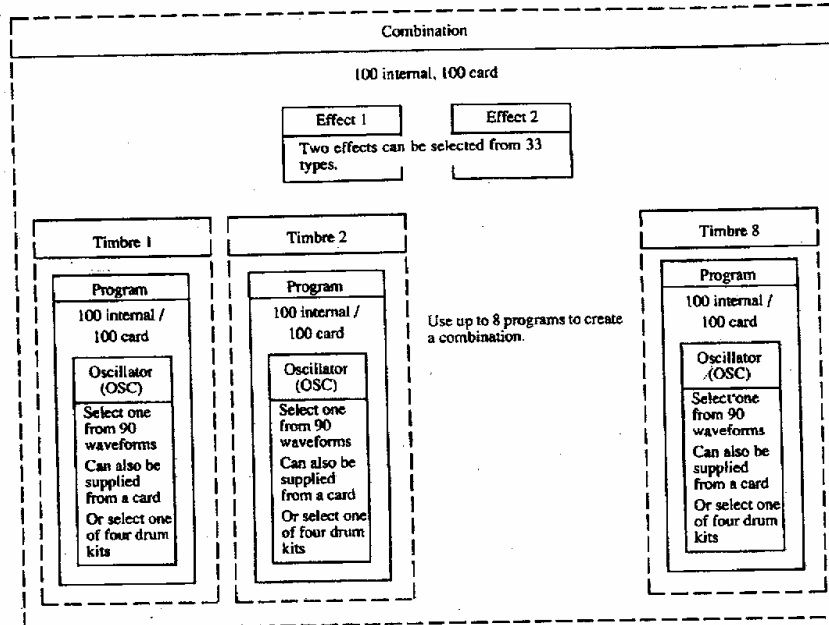
The effects units built into the M3R can be set for each Combination. They cannot be set independently for each Program or Drum. However, when the Effect Interlock function is On, the Combination effect(s) selected before entering that mode (PROGRAM EDIT, DRUM, etc.) will be applied to the Program or Drum. Use GLOBAL mode [3C] EFFECT INTERLOCK to turn this function On/Off.

For Drum Kit pan settings of C, C+D, D, you will be able to monitor the sound of the Drum Kit by turning the effect placement setting for 3/4 On, and also turn effect interlock On so that you will hear the sound from 1/L, 2/R and the PHONES OUT.

## PAGE MEMORY FUNCTION

- Even if after editing a parameter in a mode, you move to another mode and then come back again to the parameter you were editing, the M3R allows you to return to the parameter you were editing (before you left the mode). Use GLOBAL mode [3D] PAGE MEMORY to turn this function On/Off. This setting is remembered even when the power is turned off.
- In modes other than GLOBAL and DRUMS, this function is effective within a single combination/program. If you select another combination/program number when in a different mode, the Page Memory function will no longer work. (However it will be preserved if a Write operation changes the combination/program number.)
- When editing in COMBINATION EDIT mode or PROGRAM EDIT mode, if you go to another mode and then return, the first screen in the mode will appear. Press the PAGE + key to get back the parameter you were previously editing.
- In DRUMS mode, you will return to screen A of each page. (The index is memorized.)

## HOW THE M3R IS ORGANIZED



## MEMORY IN THE M3R

### Internal memory

RAM	100 combinations	100 programs	1 global	4 drum kits
-----	------------------	--------------	----------	-------------

ROM	5 demo songs
-----	--------------

### Program card memory

RAM	100 combinations	100 programs	1 global	4 drum kits
-----	------------------	--------------	----------	-------------

ROM	100 combinations	100 programs	1 global	4 drum kits	demo songs
-----	------------------	--------------	----------	-------------	------------

☆PCM cards are not included in this classification.

☆Use only Korg MCR-03 RAM cards.

☆Use the following functions to write to and read from cards.

	Read	Write
All programs / combinations	GLOBAL mode 5A	GLOBAL mode 5B
1 combination	COMBI PLAY, EDIT. mode 0A	EDIT COMBI mode 0B
1 program	EDIT PROG. mode 0A	EDIT PROG. mode 0B

## MODES AND FUNCTIONS

### HOW TO READ A DISPLAY PAGE CHART

2A—2C OSC PITCH EG (oscillator pitch EG) — ①

2A PITCH EG SL+00 AT00 AL+00	2B PITCH EG DT00 RT00 RL+00	2C P. VEL. SENS EGint+00 EGtm+00	②
---------------------------------	--------------------------------	-------------------------------------	---

2A	SL	Start Level	-99 - +99	Determine how OSC pitch changes over time
	AT	Attack Time	0 - 99	
	AL	Attack Level	-99 - +99	
2B	DT	Decay Time	0 - 99	
	RT	Release Time	0 - 99	
	RL	Release Level	-99 - +99	
2C	EGint	EG Level Vel. Sens.	-99 - +99	Determine how key velocity affects the pitch EG range
	EGtm	EG Time Vel. Sens.	-99 - +99	Determine how key velocity affects the pitch EG speed

③ ④ ⑤ ⑥ ⑦

① 2A—2C OSC PITCH EG (oscillator pitch EG) : Indicates that screens A—C of the second page contain parameters affecting the oscillator pitch EG.

② The screens of that page

③ The screen for each parameter

④ Parameter abbreviation shown in the display

⑤ Parameter name

⑥ Contents or value (number) range of parameter

As the  $\nabla$ /NO key is pressed, the value shown will approach the minimum (left-hand) value in this column, and as the  $\Delta$ /YES key is pressed, the value shown will increase towards the maximum (right-hand) value.

⑦ Description of parameter function



# 1. PROGRAM EDIT MODE


To enter this mode,

		②	
①			

Press the keys in this order: ① ②

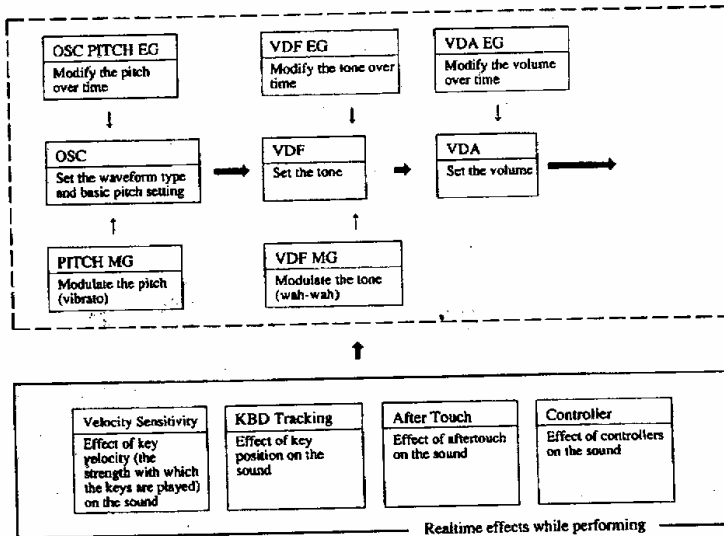
Key functions

PLAY	PAGE+		Δ/YES
	PAGE-	◀	∇/NO

 = Keys whose indicators will light in this mode

- In this mode, you can make settings for sound program parameters (settings for waveform type, filter EG, etc.).
- When you finish editing the program, use [OB] Write Program to write your settings into memory. (If you use [0A]:PROGRAM SELECT to select another program, the program settings you have modified and not stored will be lost.)

## Structure of the M3R's program parameters



## Functions in Edit Program mode

- When you press the PAGE+ or PAGE- keys, the first screen of each page ([DA]) will be selected (however for [0D] pages, [OB] WRITE instead of [0A] PAGE SELECT will be selected when you enter from other pages). Use the ▶ and ◀ keys to select a parameter to edit.

Page		Parameter to be edited	Page reference
0A - 0C	PROG SELECT WRITE/RENAME	Select a program Write or rename a program	18
1A - 1E	OSC	Oscillator waveform, level, octave mode, oscillator type, assign mode, hold Off/On, delay start	18
2A - 2C	OSC PITCH EG	Change in oscillator pitch over time	19
3A - 3D	VDF VDF EG	VDF cutoff, EG intensity Change in VDF cutoff over time	20
4A - 4D	VDF VEL SENS VDF KBD TRK	How key velocity affects VDF How key position affects VDF	21 22
5A - 5C	VDA EG	Change in VDA over time	23
6A - 6D	VDA VEL SENS VDA KBD TRK	How key velocity affects VDA How key position affects VDA	24
7A - 7D	PITCH MG VDF MG	Pitch modulation (vibrato) VDF modulation (wah-wah)	25
8A - 8C	AFTER TOUCH	How aftertouch affects the tone	26
9A - 9C	CONTROLLER	How controllers affect the tone	27

- The total pitch change resulting from pitch bend, pitch EG, pitch modulation, aftertouch, etc. is limited to one octave, (some Multisounds have an even smaller range in certain pitch ranges).
- Tonal changes caused by the VDF parameters, VDF-EG and VDF-MG are limited to the controllable range of the VDF.
- Volume changes caused by oscillator level, VDA and VDA-EG are limited to the controllable range of the VDA.
- When you first enter this mode, the [0A] Program Select display will appear. If the Page Memory function is On, pressing the PAGE+ button will return to the parameter you last selected in this mode before moving to another mode.
- When the Effect Interlock function is Off, no effect will be used in this mode. When it is On, an effect will be used, but will not be written into memory when you execute Program Write.

**EDIT PROGRAM****0A — 0C PROG SELECT / WRITE / RENAME**

0A PROG SELECT 100:Piano 16'	0B PROG WRITE Write=100 OK?	0C RENAME 100:Piano 16'
---------------------------------	--------------------------------	----------------------------

0A		Program Select	100-199 C00-C99	Select a program to edit
0B	Write	Destination Prog. No.	100-199 C00-C99	Program number to write
	OK?			Execute write
0C		Rename		Rename

▼ These functions write an edited program into internal memory or into a RAM card.

- (1) Use the < ▷ Δ /YES ▽ /NO keys to set the program name. (+) /YES and (-) /NO step through the character table, and < ▷ are used to position the cursor.
- You can enter a ten-character name using characters and symbols.
  - If program memory protect is on, you will not be able to write. (Turn off memory protect using GLOBAL mode [3A].)

```
!"#$%&'()*+,-./0123456789:;<=?
@ABCDEFGHIJKLMNopqrstuvwxyz{|}~_
`abcdefghijklmnopqrstuvwxyz{|}~+
```

- (2) Select the program number ([0B]) of the program you wish to write to.
- If a RAM card formatted to COMBI/PROG is inserted, you will also be able to select card memories (C00—C99) (turn the card protect switch off before writing to a card).
- (3) Move the cursor to "OK?" and press the Δ /YES key.
- (4) The display will ask "Are You Sure?", so if you want to write the data into memory, press Δ /YES.
- The program that was previously in that memory number will be overwritten.
  - If you press ▽ /NO, writing will be canceled.
- (5) When writing is completed, the display will show "Completed".
- ☆ The writing operation in this page can be used to copy a program to another program number.

**1A — 1E OSC (oscillator)**

1A OSC M. SOUND 00:Piano	1B OSC Level 80 OCT16'	1C OSC Type:M. SOUND	1D OSC Ass:POLY HLD:OFF	1E OSC Delay=00
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1A		Multisound Drums	(Multisound) 00-89 <small>Drumkit 1 - Drumkit 4 Drumkit C1 - Drumkit C4</small>	Select an OSC multisound (waveform) Select a drum kit (when OSC is set to DRUMS)
1B	Level	OSC Level	0-99	Oscillator volume
	OCT	Octave	16' 8' 4'	Octave setting of oscillator One octave below standard pitch Standard pitch One octave above standard pitch
1C	Type	OSC Type	M.SOUND DRUMS	Type of tone generator Multisound type Drum kit type
1D	Ass	Assign	POLY MONO	Maximum number of voices sounded Play polyphonically up to maximum number of notes Play monophonically
	HLD	Hold	OFF/ON	Hold sound even after key is released
1E	Delay	Delay Start	0-99	Delay from when key is pressed to when oscillator is sounded

▼ When M.SOUND is selected for [1C] OSC Type, select the oscillator type in [1A] Multisound (the back cover has a list of multisounds).

- Each multisound has an upper pitch limit, and playing notes above this limit will produce no sound.
- If an optional PCM card is inserted into the PCM slot, multisounds can be selected from the card as well. If you continue pressing the Δ /YES key after "189", card multisounds beginning with 'C' will be displayed.

## ☆ About PCM cards

- Only insert and remove PCM cards when no sound is being produced.
- Multisounds with a name including "NT" will produce the same pitch, regardless of which key is pressed.

▼ When DRUMS is selected for OSC Type, select from Drumkit 1-4 and Drumkit C1-C4 (when a PROG card is inserted).

- In DRUMS mode you can assign drum sounds to a drum kit (Drumkit 1-4).

▼ OSC Level (oscillator level) sets the volume level of the oscillator. 99 is maximum.

- For some voices, setting the oscillator level to the maximum value will result in distorted sound when chords are played. In such case, lower the oscillator level.

▼ Octave sets the basic pitch of the oscillator in steps of an octave.

- ▼ OSC Type (oscillator type) selects the type of sound source for the program you are creating.
- After changing the OSC Type setting, make settings for [1A] OSC multisound (drum kit) once again.
  - This mode allows you to use a drum kit consisting of a set of drum sounds as the sound source.

▼ Assign determines whether this program will be used for chords or for monophonic playing.

▼ If Hold is ON, sound will continue even after a key is released (just as though you had continued pressing the key). This is useful mainly for drum kit sounds.

- If you turn Hold ON for a sustained sound, the sound will continue indefinitely.

▼ Delay Start is the time delay (0-99) from when the key is pressed to when the oscillator begins sounding (if you don't want a delay, set this to 0).

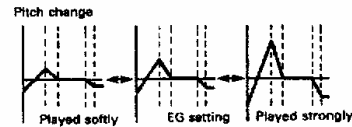
2A — 2C OSC PITCH EG (oscillator pitch EG)

2A PITCH EG SL+00 AT00 AL+00	2B PITCH EG DT00 RT00 RL+00	2C P. VEL. SENS EGint+00 EGtm+00
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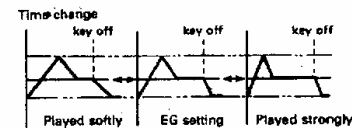
2A	SL	Start Level	-99 - +99	These parameters affect the Shape of the OSC Pitch EG  
	AT	Attack Time	0 - 99	
	AL	Attack Level	-99 - +99	
2B	DT	Decay Time	0 - 99	
	RT	Release Time	0 - 99	How key velocity affects EG level
	RL	Release Level	-99 - +99	
2C	EGint	EG Level Vel. Sens.	-99 - +99	How key velocity affects EG time
	EGtm	EG Time Vel. Sens.	-99 - +99	

- An EG (envelope generator) affects the sound over time. For example, a pitch EG controls the change in pitch over time.
- ▼ This determines the change in oscillator pitch over time.
  - If the EG levels are reversed (+ and -), the EG shape will be inverted.

- ▼ When EG Level Vel. Sens. (EG level velocity sensitivity) is set to a positive "+" value, the pitch change will increase as you play more strongly (when set to negative "-" values, the opposite will be the case). However the pitch change produced by the EG is limited to ±1 octave.
  - For positive "+" settings:



- ▼ When EG Time Vel. Sens. (EG time velocity sensitivity) is set to a positive "+" value, the time will be shorter as you play more strongly. (When set to negative "-" values, the opposite will be the case.)
  - For positive "+" settings:



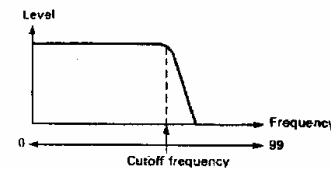
3A — 3D VDF / VDF EG

3A VDF Fc38 EGint49	3B VDF EG AT00 AL+94 DT94	3C VDF EG BP+01 ST80 SL+00	3D VDF EG RT99 RL+99
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3A	Fc	Cutoff	0 - 99	VDF cutoff (adjusts the brightness of the tone)
	EGint	EG Intensity	0 - 99	
	AT	Attack Time	0 - 99	These parameters affect the shape of the VDF EG.  
3B	AL	Attack Level	-99 - +99	
	DT	Decay Time	0 - 99	
3C	BP	Break Point	-99 - +99	
	ST	Slope Time	0 - 99	How key velocity affects VDF EG level
	SL	Sustain Level	-99 - +99	
3D	RT	Release Time	0 - 99	How key velocity affects VDF EG time
	RL	Release Level	-99 - +99	

- The VDF (Variable Digital Filter) regulates the tone by decreasing (cutting off) the overtones of the high frequency range.
- ▼ Cutoff sets the cutoff frequency of the VDF. Lower settings will result in a softer tone.
- ▼ EG Intensity determines the amount of change (cutoff) produced by the VDF EG explained in the following item. A setting of 99 allows the cutoff EG to have maximum effect.

- The VDF EG determines the change over time of the VDF cutoff.
  - If the EG levels are reversed (+ and -), the EG shape will be inverted.
  - All EG levels are adjusted equally by the VDF EG intensity.



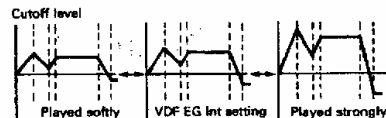
4A — 4D VDF VEL SENS / KBD TRACK (VDF velocity sensitivity / keyboard tracking)

4A VDF V. SENS EGInt+84 EGtm03	4B VDF V. SENS ATO DT+ STO RT0	4C VDF K. TRK F#3 F-58 EGtm00	4D VDF K. TRK ATO DT0 STO RT0
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4A	EGInt	EG Intensity	-99 — +99	How key velocity affects VDF EG intensity
	EGtm	EG Time	0 — 99	How key velocity affects VDF EG time
4B	AT	Attack Time	-, 0, +	The EG time velocity sensitivity setting can be applied to each of these parameters (Attack Time, etc.) in a different way; negative (-), positive (+), or not applied (0).
	DT	Decay Time	-, 0, +	
	ST	Slope Time	-, 0, +	
	RT	Release Time	-, 0, +	
4C		Center Key	C-1 — G9	The key which will be the center of VDF keyboard tracking (the ± 0 key)
	F	Cutoff	-99 — +99	How key position affects VDF cutoff (brightness)
	EGtm	EG Time	0 — 99	How key position affects VDF EG speed
4D	AT	Attack Time	-, 0, +	The EG time keyboard tracking setting can be applied to each of these parameters (Attack Time, etc.) in a different way; negative (-), positive (+), or not applied (0).
	DT	Decay Time	-, 0, +	
	ST	Slope Time	-, 0, +	
	RT	Release Time	-, 0, +	

▼ EG Intensity (EG intensity velocity sensitivity) determines the effect which key velocity will have on the tone.

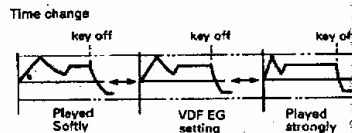
- For positive "+" settings, stronger playing will increase the effect of the VDF EG on the cutoff.
- For negative "-" settings, stronger playing will decrease the effect of the VDF EG on the cutoff. The setting for EG Intensity is the standard value (0).
- When set to a positive value:



☆ For most acoustic instruments, softer notes have fewer high-frequency components. To simulate this, set a low cutoff for the VDF, and set positive values for all parameters for VDF EG sustain levels, VDF EG intensity, and VDF EG intensity velocity sensitivity.

▼ EG Time (EG time velocity sensitivity) determines the effect which key velocity will have on the VDF EG speed. For positive "+" settings, stronger playing will shorten the time of the EG (Attack / Decay / Slope / Release Time). (Negative "-" settings will have the opposite effect.)

- When all are set to a positive "+" value:

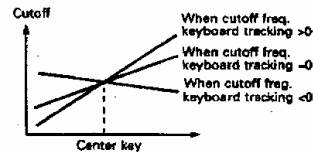


☆ VDF keyboard tracking determines how key position (the number of the played key) will affect the VDF cutoff and the various times of the EG.

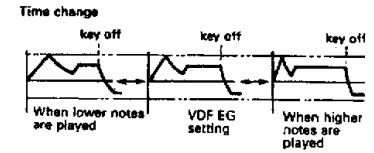
▼ Center Key sets the central key (the key for which cutoff/EG time does not change) for VDF keyboard tracking.

▼ Positive "+" settings of Cutoff will result in a brighter sound as higher notes are played. Negative "-" settings will have the opposite effect. As the setting approaches -99 or +99, the effect will become greater. For a setting of 0, the change in cutoff will be equal to the change in pitch.

- A setting of -50 results in a horizontal curve (key position will have no effect on the VDF).



▼ For positive "+" settings of EG Time (EG time keyboard tracking), notes higher than the center key will have an increasingly shorter VDF EG time (Attack / Decay / Slope / Release Time). Negative "-" settings will have the opposite effect.



5A — 5C VDA EG

5A VDA EG AT90 AL75 DT22	5B VDA EG BP99 ST93 SL00	5C VDA EG RT28
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5A	AT	Attack Time	0 — 99	VDA volume change over time
	AL	Attack Level	0 — 99	
	DT	Decay Time	0 — 99	
	ST	Slope Time	0 — 99	
5B	BP	Break Point	0 — 99	
	SL	Sustain Level	0 — 99	
5C	RT	Release Time	0 — 99	

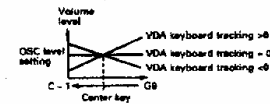
☆ The VDA (variable digital amplifier) changes the volume of the waveform over time.

▼ The VDA EG determines how the volume changes over time.

6A — 6D VDA VEL SENS / KBD TRK (VDA velocity sensitivity / keyboard tracking)

6A VDA V. SENS Amp↑76 EGtm00	6B VDA V. SENS ATO DTO STO RTO	6C VDA K. TRK F#4 A+00 EGtm00	6D VDA K. TRK ATO DTO STO RTO
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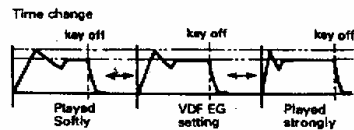
6A	Amp	Amplitude	-99 - +99	How key velocity affects VDA EG intensity
	EGtm	EG Time	0 - 99	How key velocity affects VDA EG time
6B	AT	Attack Time	- , 0, +	The EG time velocity sensitivity setting can be applied to each of these parameters (Attack Time, etc.) in a different way: negative (-), positive (+), or not applied (0).
	DT	Decay Time	- , 0, +	
	ST	Slope Time	- , 0, +	
	RT	Release Time	- , 0, +	
6C		Center Key	C-1 - G9	The center key for VDA keyboard tracking (± 0 key)
	A	Amplitude (amplitude keyboard tracking)	-99 - +99	How key position affects VDA volume change
	EGtm	EG Time (EG time keyboard tracking)	0 - 99	How key position affects VDA EG speed
6D	AT	Attack Time	- , 0, +	The EG time keyboard tracking setting can be applied to each of these parameters (Attack Time, etc.) in a different way: negative (-), positive (+), or not applied (0).
	DT	Decay Time	- , 0, +	
	ST	Slope Time	- , 0, +	
	RT	Release Time	- , 0, +	



▼ Amplitude (amplitude velocity sensitivity) determines how the key velocity will affect the volume. Positive "+" settings will result in a louder volume as you play more strongly. Negative "-" settings will result in a softer volume as you play more strongly. As the setting approaches -99 or +99, key velocity will have a greater effect on the volume.

▼ EG Time (EG time velocity sensitivity) determines how the key velocity will affect the speed of the VDA EG. Positive "+" settings will result in a shorter VDA EG time (Attack / Decay / Slope / Release Time) as you play more strongly. Negative "-" settings will result in a longer VDA EG time as you play more strongly.

- When all are set to a positive "+" value:



☆ For sounds such as strings, setting a positive "+" attack time will result in a sharp attack for strongly played notes, and a slow attack for softly played notes.

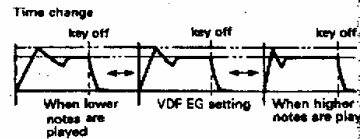
• VDA keyboard tracking determines how the key position will affect the VDA volume and the various times of the EG.

▼ Center Key sets the central key (the key for which volume / EG time does not change) for VDA keyboard tracking.

▼ Positive "+" settings of Amplitude will result in a louder volume for higher notes. Negative "-" settings will result in a softer volume for higher notes.

- The volume resulting from the keyboard tracking setting will remain in the range of 0-99 (the maximum value of OSC level).

▼ Positive "+" settings of EG Time (EG time keyboard tracking) will result in an increasingly shorter VDA EG time (Attack / Decay / Slope / Release Time) for notes above the center key. Negative "-" settings will result in the opposite effect.



7A — 7D PITCH MG / VDF MG (pitch modulation / VDF modulation)

7A PITCH MG TRI Frq64 Dly00	7B PITCH MG Int00 K.Sync:OFF	7C VDF MG TRI Frq64 Dly00	7D VDF MG Int00 K.Sync:OFF
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7A		Waveform	TRI SAW ↑ SAW ↓ SQR	Select the modulation waveform Triangle wave Sawtooth wave 1 Sawtooth wave 2 (reversed polarity) Square wave
	Frq	Frequency	0 - 99	The speed of the modulation effect
	Dly	Delay	0 - 99	The delay from when the note is played to when the modulation begins
7B	Int	Intensity	0 - 99	The intensity of the modulation effect
	K.Sync	Key Sync	OFF ON	Modulation affects each note in the same way
7C		Waveform	The same as for 7A	
	Frq	Frequency		
	Dly	Delay		
7D	Int	Intensity	The same as for 7B	
	K.Sync	Key Sync		

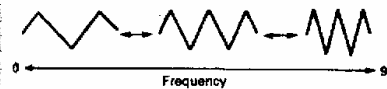
• Pitch MG (pitch modulation) periodically changes (adds vibrato to) the pitch.

▼ Waveform selects the modulation waveform (shape of change).

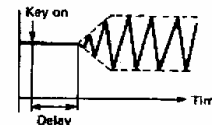
- TRI Triangle wave (most frequently used)
- SAW ↑ Sawtooth wave 1
- SAW ↓ Sawtooth wave 2 (reversed polarity)
- SQR Square wave

▼ Frequency determines the speed of the modulation. 99 is the fastest.

• When triangle wave modulation is selected:

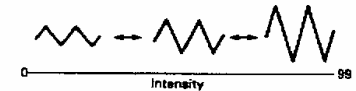


▼ Delay is the time from when the note is played to when the modulation begins.



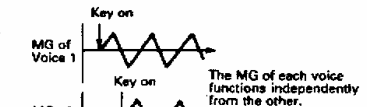
▼ Intensity is the depth of modulation

- When triangle wave modulation is selected:

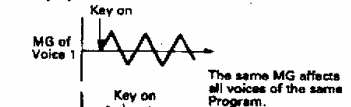


▼ When Key Sync is set ON, the modulation waveform will begin again as each note is played.

• Key Sync ON



• Key Sync OFF



• VDF MG (VDF modulation) periodically modulates the cutoff frequency (wah-wah effect).

- Details are the same as for [7A] — [7B] Pitch MG.
- If the VDF MG waveform is SQR, there will be no effect when the VDF cutoff is raised.

## 8A — 8C AFTERTOUCH

8A APTER TOUCH Pitch+00 P. MG00	8B APTER TOUCH Pct+00 VDF. MG00	8C APTER TOUCH Amp+00
------------------------------------	------------------------------------	--------------------------

8A	Pitch	PITCH	-12 - +12	How aftertouch affects pitch (within $\pm 1$ octave)
	P.MG	Pitch MG	0 - 99	How aftertouch affects pitch modulation
8B	Fc	VDF Cutoff	-99 - +99	How aftertouch affects cutoff (tone)
	VDF.MG	VDF MG	0 - 99	How aftertouch affects VDF modulation
8C	Amp	VDA Amplitude	-99 - +99	How aftertouch affects volume

\* Aftertouch allows you to modify the sound by pressing down on the keyboard after playing a note.

▼ Pitch determines the amount and direction in which aftertouch will affect pitch, over a range of -12 to +12 ( $\pm 1$  octave in semitone steps).

▼ Higher settings of Pitch MG (pitch modulation) will result in a greater pitch MG effect as you press harder on the keyboard. At a setting of 0, aftertouch will have no effect.

☆ The settings of [7A] [7B] Pitch MG (pitch MG waveform and key sync) will be used.

▼ Positive "+" settings of VDF Cutoff will make the cutoff value increase (the sound becomes brighter) as you press harder on the keyboard. Negative "-" settings will have the opposite effect.

▼ Higher settings of VDF MG (VDF modulation) will result in a greater VDF MG effect as you press harder on the keyboard. At a setting of 0, aftertouch will have no effect.

☆ The settings of [7C] [7D] VDF MG will be used.

▼ Positive "+" settings of VDA Amplitude will result in an increased volume as you press harder on the keyboard. Negative "-" settings will have the opposite effect.

## 9A — 9C CONTROLLER BEND/SWEEP

9A BEND/SWEEP P. Bend+02 VDF+00	9B PITCH CTRL MGInt05 MGfreq0	9C VDF CTRL MGInt10 MGfreq0
------------------------------------	----------------------------------	--------------------------------

9A	P.Bend	Pitch Bend	-12 - +12	Maximum amount of pitch change
	VDF	VDF Sweep Intensity	-99 - +99	How pitch bend affects VDF cutoff
9B	MGInt	Pitch MG Intensity	-99 - +99	How controllers affect the pitch modulation intensity
	MGfreq	Pitch MG Frequency	0 - 3	How controllers affect the pitch modulation frequency
9C	MGInt	VDF MG Intensity	0 - 99	How controllers affect the VDF modulation intensity
	MGfreq	VDF MG Frequency	0 - 3	How controllers affect the VDF modulation frequency

\* These functions determine how the joysticks, modulation wheels, etc. of external MIDI keyboards will affect the sound of the M3R. The M3R receives pitch bender messages to control pitch bend and VDF sweep, control change 1 to control pitch modulation, and control change 2 to control VDF modulation.

• When the M3R is connected to an M1, DS-8, DSS1, etc., left/right movement of the joystick will control pitch bend, upward movement will control pitch modulation, and downward movement will control VDF modulation.

▼ Pitch Bend determines the range in semitones over which pitch can be changed by a pitch bend wheel or other controller. For the maximum setting of 12, the range of pitch change will be 1 octave.

▼ VDF Sweep Intensity determines how the pitch bender will affect VDF cutoff.

▼ Higher settings of Pitch MG Intensity will make a joystick etc. have a greater effect on pitch modulation.

▼ Pitch MG Frequency determines how a joystick etc. will affect the speed of pitch modulation.

☆ At a setting of 0, the speed that was set in [7A] will be used. For settings of 1-3, the joystick etc. will increase the speed that was set in [7A].

☆ The settings of [7A] [7B] Pitch MG will determine the pitch modulation waveform and key sync.

▼ Higher settings of VDF MG Intensity will make a joystick etc. have a greater effect on VDF modulation intensity.

▼ VDF MG Frequency determines how a joystick etc. will affect the speed of VDF MG.

☆ The settings of [7C] [7D] VDF MG will determine the waveform and key sync of the VDF MG.

## 2. COMBINATION PLAY MODE


To enter this mode

①			

①=press this key

Key functions

	CARD	+10	+1
EDIT	INT	-10	-1

 = Keys whose indicators light when in this mode

In this mode, you can select and play a Combination (a combination of two or more programs). Combinations can be selected using the +10, +1, -1, and -10 keys or by MIDI program changes.

- When "INT" is selected, combinations will be selected from internal memory, and when "CARD" is selected, from a card.
- When selecting a combination via MIDI, use GLOBAL mode [2A] to set the MIDI channel of the M3R to match the channel of the transmitting device, and set [2B] to activate the function.
- ☆ In multi mode, program changes are received independently by each timbre on its own MIDI channel, but when a program change is received on the global MIDI channel, it will change Combinations.
- ☆ There is no restriction on the number of simultaneous notes that can be produced by an individual Program. (Notes will be produced until the total number of oscillators used by all voices reaches 16.)
- The display in COMBINATION mode will differ according to the type of each combination.

The page memory function can be used when the RE1 is connected (when On).

### SINGLE

COMBINATION NO.  
COMBINATION NAME  
101 GrandPiano

	Combination	100 - 199 C00 - C99	Select a combination
--	-------------	------------------------	----------------------

### LAYER

COMBINATION NO.  
COMBINATION NAME  
103 String Pad  
P1:137 P2:138

LAYER 2 PROGRAM

LAYER 1 PROGRAM

	Combination	100 - 199 C00 - C99	Select a combination
--	-------------	------------------------	----------------------

### SPLIT

COMBINATION NO.  
COMBINATION NAME  
C01 Combi 001  
Low:C02 Up:C98

UPPER PROGRAM

LOWER PROGRAM

	Combination	100 - 199 C00 - C99	Select a combination
--	-------------	------------------------	----------------------

### VELOCITY SW

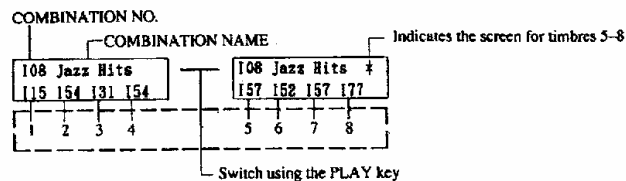
COMBINATION NO.  
COMBINATION NAME  
C02 Combi 002  
Soft:102 Loud:197

LOUD PROGRAM

SOFT PROGRAM

	Combination	100 - 199 C00 - C99	Select a combination
--	-------------	------------------------	----------------------

### MULTI



	Combination	100 - 199 C00 - C99	Select a combination
--	-------------	------------------------	----------------------

When MIDI data is received by timbres 1 - 8, the corresponding front panel LED for each timbre will blink on. (The keys correspond to timbres 1 - 8 as shown in the diagram at right.) Keys whose LED is already lit to indicate the selected mode will blink off.

T1	T2	T3	T4
T5	T6	T7	T8

- When in Single mode, T1 will light. When in Layer, Split, or Vel.SW modes T1 and T2 will light (or go out) simultaneously.
- When receiving exclusive data, the LEDs currently on (for mode indication) will go off.

## 3. COMBINATION EDIT MODE

To enter this mode

	②		
①			

① ② = press this key

Key functions

PLAY		▷	△/YES
EDIT	PAGE-	◁	▽/NO

= Keys whose indicators light when in this mode

- In this mode you can create a Combination of two or more programs.
- (There are five types of M3R Combinations; SINGLE, LAYER, SPLIT, VELOCITY SPLIT, and MULTI. Each Combination consists of 1-8 timbres. Each timbre consists of a program, and performance and output parameters (pan, level, MIDI channel, etc.). Each Combination also has a set of effect parameters which affect the entire combination.)
- Use [0A] COMB SELECT to select the combination to edit.
  - When you have finished editing a Combination, use [0B] Combination Write to write the data into memory. (If you use [0A] to select another Combination before writing your edited settings into memory, your edits will be lost.)
  - If a memory card containing program data is inserted into the front panel slot, you will be able to select programs from the card. (When using a Combination which uses card programs, be sure that the appropriate card is inserted. If a card is not inserted, there will be no sound when the card number is selected. If an inserted card is removed, the internal program of the same number will be used instead.)

Parameters will differ according to the type of combination, so the following explanation is divided by combination type. Refer to the explanation for the selected type of combination.

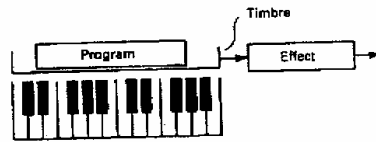


**About combination types**

**Single**

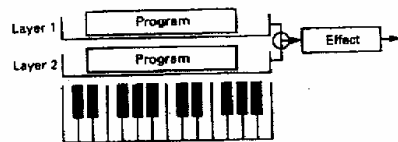
This combination type consists of a single program.

★ If you write an unmodified program into memory as a single combination, you will be able to change sounds without having to switch between program and combination modes.



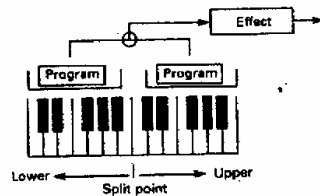
**Layer**

This combination type allows you to play two timbres mixed together.



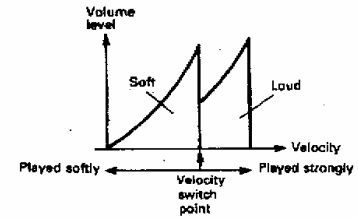
**Split**

This combination type allows you to play two timbres from different ranges of the keyboard.



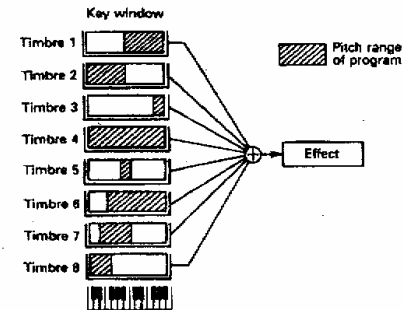
**Velocity switch**

This combination type allows you to select between two timbres by the force of your playing (key velocity).



**Multi**

A multi combination allows you to use up to 8 timbres, each with its own independent program, MIDI channel, keyboard range, and velocity range. This allows you to use the MSR as a multi-timbral tone generator, or to create complex split and layering effects that would not be possible with other combination types.



**Functions common to all combination types**

- When you first enter COMBINATION EDIT mode, the [0A] COMBINATION SELECT page will appear. Pressing the PAGE+ button when the Page Memory function is on will jump to the parameter last selected in this mode before moving to another mode. Use the PAGE + and PAGE - keys to select the page that contains the parameters you want to edit. (However if you enter page 0 [] from another page, 0B Comb Write will be selected instead of 0A Comb Select.)
- The functions of page 2 and later pages will differ according to the Combination type. Refer to the explanation for the appropriate Combination type.
- Effect settings can be made in EFFECT EDIT mode, and stored for each Combination number.

Page		Parameter to edit	Page reference
0A-0C	COMBINATION SELECT	Select a Combination	34
	WRITE/RENAME	Write / rename a combination	
1A	TYPE SELECT	Select a combination type	35

**0A — 0C SELECT / WRITE / RENAME**

0A COMB SELECT	0B COMB WRITE	0C RENAME
100 :Krypton	Write=100 OK?	100:Krypton

0A		COMBINATION SELECT	100 - 199 C00 - C99	Select a combination
0B		Destination Prog. No.	100 - 199 C00 - C99	Combination number to write
	[OK?]			Execute writing
0C				Rename

- ▼ This function is used to write an edited Combination into internal memory or into a RAM card.
- Writing is not possible if combination memory protect is "ON". Turn memory protect off in GLOBAL mode [3B].

- (1) In [0C], use the >, <, Δ/YES, and ∇/NO keys to enter a combination name.
- You may assign a 10-character name using characters and symbols.

- (2) In [0B], select the combination number for the writing destination.
- If a RAM card formatted to COMBI/PROG is inserted, you will also be able to select card memories (C00 - C99). Before writing data into a card, turn the card protect switch to "OFF".

(3) Move the cursor to "OK?" and press Δ/YES.

- (4) The display will ask "Are You Sure?", so if you want to write the data into memory, press Δ/YES again.
- The Combination data previously in that memory will be lost.
  - If you press ∇/NO, writing will be canceled.

(5) When writing ends, the display will show "Write Completed".

☆ Use this writing function when copying a Combination to another combination number.

**1A TYPE SELECT**

1A TYPE SELECT		MULTI OK?	
1A		TYPE SELECT	SINGLE LAYER SPLIT VEL. SW MULTI
			Select a combination type Single Layer Split Velocity switch Multi
	OK?	[OK?]	Confirm selection

- ▼ Use TYPE SELECT to select the type of combination.
- Select a new type, move the cursor to "OK?" and press Δ/YES, and the specified combination type will be selected. If you move to another page without pressing Δ/YES, your choice will be canceled.

**1A SINGLE type functions**

Page		Parameter to edit	Page reference
1A		PROGRAM	35
1A		LEVEL/PANPOT	35

**1A PROGRAM**

1A SINGLE		100: Piano 16'	
1A		Program	100 - 199 C00 - C99
			Select a program number

**1A LEVEL / PANPOT**

1A SINGLE		Level=99 Pan=5:5	
1A	Level	Level	0 - 99
			Level (volume) setting
	Pan	Panpot	A, 9:1 - 1:9, B, C, C+D, D
			Output destination setting

- ▼ Level determines the volume. For a setting of 99 the volume will be the full volume as set by the Program parameter. A setting of 0 completely mutes the Program.

- ▼ Panpot determines the output destination. Select from A, A:B (9:1 to 1:9), B, C, C+D, and D.
- When a drum kit program is selected, the display will indicate "SND", and the pan settings of DRUMS mode will be used (This setting cannot be made here.)

**LAYER type functions**

Page		Parameter to edit	Page reference
2A - 2C	LAYER1 PROG/LEVEL/ PANPOT/DAMPER FILTER	Layer 1 program number, output level, pan (output destination), and damper	36
3A - 3D	LAYER2 PROG/LEVEL/ PANPOT/INTERVAL/ DETUNE/DAMPER FILTER	Layer 2 program number, output level, pan (output destination), and damper	37

**2A — 2C LAYER1 PROGRAM / LEVEL / PANPOT / DAMPER FILTER**

2A LAYER 1 137:Analog 1	2B LAYER 1 Level=99 Pan=5 :5	2C LAYER 1 Damper=ENA
----------------------------	---------------------------------	--------------------------

2A		Layer 1 Program	100 - 199 C00 - C99	Layer 1 program number
2B	Level	Layer 1 Level	0 - 99	Layer 1 level adjustment
	Pan	Layer 1 Panpot	A, 9:1 - 1:9, B, C, C+D, D	Layer 1 output destination
2C	Damper	Layer 1 Damper Filter	DIS/ENA (Disable/Enable)	Layer 1 damper disable/enable

- ▼ Layer 1 Program sets the program number for layer 1.
- ▼ Layer 1 Level sets the volume for layer 1. For a setting of 99 the volume will be the full volume as set by the Program parameter. A setting of 0 completely mutes the program.
- ▼ Layer 1 Panpot determines the output destination of layer 1. Select from A, A:B (9:1 to 1:9), B, C, C+D, and D.
  - When a drum kit program is selected, the display will indicate "SND", and the pan settings of DRUMS mode will be used. (This setting cannot be made here.)
- ▼ When Layer 1 Damper Filter is set to "DIS" (disable) the damper pedal will not affect the sound of layer 1.

**3A — 3D LAYER2 PROGRAM / LEVEL / PANPOT / INTERVAL / DETUNE / DAMPER FILTER**

3A LAYER 2 336:Strings	3B LAYER 2 Level=42 Pan=C+D	3C LAYER 2 INT=-12 Tune=+100	3D LAYER 2 Damper=ENA
---------------------------	--------------------------------	---------------------------------	--------------------------

3A		Layer 2 Program	100 - 199 C00 - C99	Layer 2 program number
3B	Level	Layer 2 Level	0 - 99	Layer 2 level adjustment
	Pan	Layer 2 Panpot	A, 9:1 - 1:9, B, C, C + D, D	Layer 2 output destination
3C	INT	Layer 2 Interval	-24 - +24	Pitch difference between layer 1 and layer 2 (semitones steps)
	Tune	Layer 2 Detune	-50 - +50	Pitch difference between layer 1 and layer 2 (1 cent steps)
3D	Damper	Layer 2 Damper Filter	DIS / ENA	Layer 2 damper disable/enable

- ▼ Layer 2 Program sets the program number for layer 2.
- ▼ Layer 2 Level sets the volume for layer 2. For a setting of 99 the volume will be the full volume as set by the Program parameter. A setting of 0 completely mutes the program.
- ▼ Layer 2 Panpot determines the output destination of layer 2. Details are the same as for Layer 1 Panpot.
- ▼ Layer 2 Interval is the pitch difference of layer 2 relative to layer 1 in semitones (±2 octaves).
- ▼ Layer 2 Detune is the pitch difference of layer 2 relative to layer 1 in steps of 1 cent (±50 cents). (100 cents is a semitone, and 1200 cents is one octave.)
- ▼ Layer 2 Damper Filter has the same effect as explained for Layer 1 Damper Filter.

**SPLIT type functions**

Page		Editing parameter	Page reference
2A	SPLIT POINT	Split point	38
3A - 3C	LOWER PROG / LEVEL / PANPOT / DAMPER FILTER	Lower program number, output level, pan (output destination), and damper	38
4A - 4C	UPPER PROG / LEVEL / PANPOT / DAMPER FILTER	Upper program number, output level, pan (output destination), and damper	39

**2A SPLIT POINT**

2A SPLIT  
Point=C4

2A	SP	Split Point	C#-1 - G9	Split point setting
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▼ The Split Point determines the key which separates the two programs.

**3A - 3C LOWER PROGRAM / LEVEL / PANPOT / DAMPER FILTER**

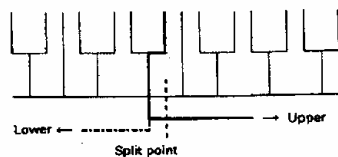
3A LOWER  
100:Piano 16'

3B LOWER  
Level=89 Pan=5:5

3C LOWER  
Damper=BNA

3A		Lower Program	100 - 199 C00 - C99	The Program which will sound below the split point
3B	Level	Lower Level	0 - 99	Lower program level adjustment
	Pan	Lower Panpot	A, 9:1-1:9, B, C, C+D, D	Lower program output destination
3C	Damper	Lower Damper Filter	DIS/ENA	Lower program damper disable/enable

▼ Lower Program selects the program which will sound when a key lower than the split point is played.



• The split point will be the lowest note of the upper side.

▼ Lower Level sets the level (volume) of the lower program. For a setting of 99 the volume will be the full volume as set by the Program parameter.

▼ Lower Panpot determines the output destination of the lower program. Select from A, A:B (9:1 to 1:9), B, C, C+D, and D.  
• When a drum kit program is selected, the display will indicate "SND", and the pan settings of DRUM mode will be used. (This setting cannot be made here.)

▼ When Lower Damper Filter is set to "DIS" (disable), the damper pedal will not affect the lower program.

**4A - 4C UPPER PROGRAM / LEVEL / PANPOT / DAMPER FILTER**

4A UPPER  
101:E.Piano 1

4B UPPER  
Level=89 Pan=5:5

4C UPPER  
Damper=ENA

4A		Upper Program	100 - 199 C00 - C99	The Program which will sound above (or at) the split point
4B	Level	Upper Level	0 - 99	Upper program level adjustment
	Pan	Upper Panpot	A, 9:1-1:9, B, C, C+D, D	Upper program output destination
4C	Damper	Upper Damper Filter	DIS/ENA	Upper program damper disable/enable

▼ Upper Program selects the program which will sound when a key above (or at) the split point is played.

▼ Upper Level sets the level (volume) of the upper program. Details are the same as for Lower Level.

▼ Upper Panpot determines the output destination of the upper program. Details are the same as for Lower Panpot.

▼ Upper Damper Filter: details are the same as for Lower Damper Filter.

**Velocity Switch type functions**

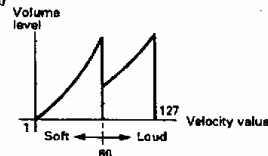
Page		Editing parameter	Page reference
2A	VELOCITY SW POINT	Velocity switch point	40
3A-3C	SOFT PROG / LEVEL / PANPOT / DAMPER FILTER	Number, output level, output destination (pan), and damper for soft program.	40
4A-4C	LOUD PROG / LEVEL / PANPOT / DAMPER FILTER	Number, output level, output destination (pan), and damper for loud program.	41

**2A VELOCITY SWITCH POINT**

2A VEL. SW  
Point=063

2A	Point	Vel. SW Point	2-127	Velocity value of velocity switch
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- ▼ Vel. SW Point determines the velocity value which separates the two programs.  
Example: a velocity switch point setting of 60



**3A — 3C SOFT PROGRAM / LEVEL / PANPOT / DAMPER FILTER**

3A SOFT  
100:Piano 10'

3B SOFT  
Level=99 Pan=5:5

3C SOFT  
Damper=ENA

3A		Soft Program	100-199 C00-C99	The Program which will sound for notes played softer than the velocity switch point
3B	Level	Soft Level	0-99	Level adjustment of soft program
	Pan	Soft Panpot	A, 9:1-1:9, B, C, C+D, D	Output destination of soft program
3C	Damper	Soft Damper Filter	DIS/ENA	Disable/enable damper pedal for soft program

- ▼ Soft Program selects the program which will sound when the velocity value is less than (played softer than) the velocity switch point.
- ▼ Soft Level determines the level (volume) of the soft program. For a setting of 99 the volume will be the full volume as set by the Program parameter.
- ▼ Soft Panpot determines the output destination of the soft program. Select from A, A:B (9:1 to 1:9), B, C, C+D, and D.
  - When a drum kit program is selected, the display will indicate "SND", and the pan settings of DRUMS mode will be used. (This setting cannot be made here.)
- ▼ When Soft Damper Filter is set to "DIS" (disable), the damper pedal will not affect the soft program.

**4A — 4C LOUD PROGRAM / LEVEL / PANPOT / DAMPER FILTER**

4A LOUD  
101:E Piano 1

4B LOUD  
Level=99 Pan=5:5

4C LOUD  
Damper=ENA

4A		Loud Program	100-199 C00-C99	The Program which will sound for notes played stronger than the velocity switch point
4B	Level	Loud Level	0-99	Level adjustment of loud program
	Pan	Loud Panpot	A, 9:1-1:9, B, C, C+D, D	Output destination of loud program
4C	Damper	Loud Damper Filter	DIS/ENA	Disable/enable damper pedal for loud program

- ▼ Loud Program selects the program which will sound when the velocity value is greater (played more strongly) than the velocity switch point.
- ▼ Loud Level determines the level (volume) of the loud program. Details are the same as for Soft Level.
- ▼ Loud Panpot determines the output destination of the loud program. Details are the same as for Soft Panpot.
- ▼ Loud Damper Filter: details are the same as for Soft Damper Filter.

**Multi type functions**

Page		Parameter to edit	Page reference
2A – 2B	PROGRAM SELECT	Program assigned to each timbre Level / pan (output destination)	42
3A – 3B	OUTPUT LEVEL	Output level of each timbre	43
4A – 4B	MIDI-CH	MIDI reception channel of each timbre	43
5A – 5D	KEY WINDOW TOP KEY WINDOW BOTTOM	Top key of each timbre's range Bottom key of each timbre's range	44
6A – 6D	VEL WINDOW TOP VEL WINDOW BOTTOM	Top velocity value of each timbre's velocity switch Bottom velocity value of each timbre's velocity switch	45
7A – 7D	KEY TRANSPOSE DETUNE	Key Transpose setting of each timbre Detune setting of each timbre	45
8A – 8D	MIDI PROG CHG DAMPER FILTER AFTERTOUCH CONTROL CHANGE	Program change receive filter for each timbre Damper receive filter for each timbre Aftersustain receive filter for each timbre Control change receive filter for each timbre	46
9A – 9B	PANPOT	Output destination of each timbre	47

**2A — 2B PROGRAM SELECT**

2A PROGRAM 1-4	2B PROGRAM 5-8
OFF OFF OFF OFF	OFF OFF OFF OFF

2A		Timbre 1 Program	OFF / 100 – 199, C00 – C99	Program selection for each timbre
		Timbre 2 Program	OFF / 100 – 199, C00 – C99	
		Timbre 3 Program	OFF / 100 – 199, C00 – C99	
		Timbre 4 Program	OFF / 100 – 199, C00 – C99	
2B		Timbre 5 Program	OFF / 100 – 199, C00 – C99	
		Timbre 6 Program	OFF / 100 – 199, C00 – C99	
		Timbre 7 Program	OFF / 100 – 199, C00 – C99	
		Timbre 8 Program	OFF / 100 – 199, C00 – C99	

▼ Select the Program used by each Timbre. Timbres set to "OFF" will not sound.

**3A — 3B OUTPUT LEVEL**

3A LEVEL 1-4	3B LEVEL 5-8
99 99 99 99	99 99 99 99

3A		Timbre 1 Level	0 – 99	Output level adjustment for each timbre
		Timbre 2 Level	0 – 99	
		Timbre 3 Level	0 – 99	
		Timbre 4 Level	0 – 99	
3B		Timbre 5 Level	0 – 99	
		Timbre 6 Level	0 – 99	
		Timbre 7 Level	0 – 99	
		Timbre 8 Level	0 – 99	

▼ OUTPUT LEVEL adjusts the output level of each timbre. At a setting of 99, the timbre will be at the full volume set by the program parameter. At a setting of 0, that timbre will not sound.

**4A — 4B MIDI-CH (MIDI channel)**

4A MIDI CH 1-4	4B MIDI CH 5-8
1G 1G 1G 1G	1G 1G 1G 1G

4A		Timbre 1 Channel	1 – 16	MIDI receive channel of each timbre
		Timbre 2 Channel	1 – 16	
		Timbre 3 Channel	1 – 16	
		Timbre 4 Channel	1 – 16	
4B		Timbre 5 Channel	1 – 16	
		Timbre 6 Channel	1 – 16	
		Timbre 7 Channel	1 – 16	
		Timbre 8 Channel	1 – 16	

▼ This determines the MIDI receive channel of each timbre. By setting a different MIDI receive channel for each timbre, multi-channel MIDI data received at MIDI IN can make the M3R play up to 8 sounds independently.

• MIDI program change, pitch bend, aftersustain, and control data will be received on the MIDI channel specified for each timbre. (It is also possible to set [5A] – [8D] so that these messages are not received.)

• When the reception channel specified for the timbre is the same as the global channel (the MIDI channel set in GLOBAL mode that controls the entire M3R), a "G" will be displayed after the channel number.

• Programs will be changed according to the MIDI channel set for each timbre, but when a program change arrives on the global channel, it will select a new combination. If you don't want MIDI program change messages to select a new combination, set the global channel to a MIDI channel not used by a timbre.

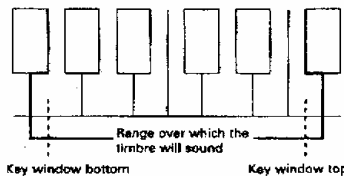
**5A — 5D KEY WINDOW TOP / BOTTOM**

<b>5A KW TOP 1-4</b> G8 G8 G8 G8	<b>5B KW TOP 5-8</b> G8 G8 G8 G8	<b>5C KW BTM 1-4</b> C4 C4 C4 C4	<b>5D KW BTM 5-8</b> C4 C4 C4 C4
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5A	Timbre 1 Top	C-1 - G9	Top key of the range sounded by each timbre
	Timbre 2 Top	C-1 - G9	
	Timbre 3 Top	C-1 - G9	
	Timbre 4 Top	C-1 - G9	
5B	Timbre 5 Top	C-1 - G9	
	Timbre 6 Top	C-1 - G9	
	Timbre 7 Top	C-1 - G9	
	Timbre 8 Top	C-1 - G9	
5C	Timbre 1 Bottom	C-1 - G9	Bottom key of the range sounded by each timbre
	Timbre 2 Bottom	C-1 - G9	
	Timbre 3 Bottom	C-1 - G9	
	Timbre 4 Bottom	C-1 - G9	
5D	Timbre 5 Bottom	C-1 - G9	
	Timbre 6 Bottom	C-1 - G9	
	Timbre 7 Bottom	C-1 - G9	
	Timbre 8 Bottom	C-1 - G9	

▼ Key Window determines the key area (key window) for which a timbre will sound. Notes outside this area will not be sounded by this timbre. This allows you to create a program which will sound different timbres for different areas of the keyboard.

- It is not possible to set a top key lower than the bottom key for a particular timbre. (If you set the top key lower than the bottom key, the bottom key will be adjusted to equal the top key, and vice versa.)



**6A — 6D VEL WINDOW TOP / VEL WINDOW BOTTOM**

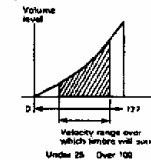
<b>6A VV TOP 1-4</b> 127 127 127 127	<b>6B VV TOP 5-8</b> 127 127 127 127	<b>6C VV BTM 1-4</b> 001 001 001 001	<b>6D VV BTM 5-8</b> 001 001 001 001
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6A	Timbre 1 Top	1 - 127	Top value of velocity range sounded by each timbre
	Timbre 2 Top	1 - 127	
	Timbre 3 Top	1 - 127	
	Timbre 4 Top	1 - 127	
6B	Timbre 5 Top	1 - 127	
	Timbre 6 Top	1 - 127	
	Timbre 7 Top	1 - 127	
	Timbre 8 Top	1 - 127	
6C	Timbre 1 Bottom	1 - 127	Bottom value of velocity range sounded by each timbre
	Timbre 2 Bottom	1 - 127	
	Timbre 3 Bottom	1 - 127	
	Timbre 4 Bottom	1 - 127	
6D	Timbre 5 Bottom	1 - 127	
	Timbre 6 Bottom	1 - 127	
	Timbre 7 Bottom	1 - 127	
	Timbre 8 Bottom	1 - 127	

▼ Velocity Window determines the velocity (playing strength) range for which a timbre will sound. This allows you to create a program which will sound different timbres for notes played with differing velocities.

- It is not possible to set a top value lower than the bottom value.

• Example: velocity window bottom = 25, velocity window top = 100



**7A — 7D KEY TRANSPOSE / DETUNE**

<b>7A TRANS 1-4</b> +00 +00 +00 +00	<b>7B TRANS 5-8</b> +00 +00 +00 +00	<b>7C DETUNE 1-4</b> +00 +00 +00 +00	<b>7D DETUNE 5-8</b> +00 +00 +00 +00
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7A	Timbre 1 Transpose	-24 - +24	Transpose setting of each timbre in semitones (± 2 octaves)
	Timbre 2 Transpose	-24 - +24	
	Timbre 3 Transpose	-24 - +24	
	Timbre 4 Transpose	-24 - +24	
7B	Timbre 5 Transpose	-24 - +24	
	Timbre 6 Transpose	-24 - +24	
	Timbre 7 Transpose	-24 - +24	
	Timbre 8 Transpose	-24 - +24	
7C	Timbre 1 Detune	-50 - +50	Detune setting of each timbre in 1 cent steps (± 50 cents)
	Timbre 2 Detune	-50 - +50	
	Timbre 3 Detune	-50 - +50	
	Timbre 4 Detune	-50 - +50	
7D	Timbre 5 Detune	-50 - +50	
	Timbre 6 Detune	-50 - +50	
	Timbre 7 Detune	-50 - +50	
	Timbre 8 Detune	-50 - +50	

▼ Key Transpose adjusts the pitch of each timbre in semitones over a range of -24 to +24 (12 is one octave).

▼ Detune adjusts the pitch of each timbre in fine steps of one cent, over a range of -50 to +50 (100 cents is a semitone).

**8A — 8D MIDI FILTER**

<b>8A PROG CHANGE</b> E E E E E E E E	<b>8B DAMPER</b> E E E E E E E E	<b>8C AFTER TOUCH</b> E E E E E E E E	<b>8D CONTROL CHG</b> E E E E E E E E
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8A	Timbre 1 Prog change	D/E	Determine whether or not each timbre will receive MIDI program changes ("D" disables reception)
	Timbre 2 Prog change	D/E	
	Timbre 3 Prog change	D/E	
	Timbre 4 Prog change	D/E	
	Timbre 5 Prog change	D/E	
	Timbre 6 Prog change	D/E	
	Timbre 7 Prog change	D/E	
	Timbre 8 Prog change	D/E	
8B	Timbre 1 Damper	D/E	Determine whether or not each timbre will receive MIDI damper pedal ("D" disables reception)
	Timbre 2 Damper	D/E	
	Timbre 3 Damper	D/E	
	Timbre 4 Damper	D/E	
	Timbre 5 Damper	D/E	
	Timbre 6 Damper	D/E	
	Timbre 7 Damper	D/E	
	Timbre 8 Damper	D/E	
8C	Timbre 1 After Touch	D/E	Determine whether or not each timbre will receive MIDI aftertouch ("D" disables reception)
	Timbre 2 After Touch	D/E	
	Timbre 3 After Touch	D/E	
	Timbre 4 After Touch	D/E	
	Timbre 5 After Touch	D/E	
	Timbre 6 After Touch	D/E	
	Timbre 7 After Touch	D/E	
	Timbre 8 After Touch	D/E	
8D	Timbre 1 Control CHG	D/E	Determine whether or not each timbre will receive MIDI control changes ("D" disables reception)
	Timbre 2 Control CHG	D/E	
	Timbre 3 Control CHG	D/E	
	Timbre 4 Control CHG	D/E	
	Timbre 5 Control CHG	D/E	
	Timbre 6 Control CHG	D/E	
	Timbre 7 Control CHG	D/E	
	Timbre 8 Control CHG	D/E	

▼ Timbres whose MIDI Prog Change is set to "D" will not switch programs when a MIDI program change is received.

- If a program change is received on the global channel, the Combination will change regardless of this setting.

▼ Timbres whose Damper is set to "D" will not be affected by the damper pedal.

▼ Timbres whose Aftertouch is set to "D" will not be affected by aftertouch.

▼ Timbres whose Control Change is set to "D" will not be affected by control changes (bender, pitch modulation, VDF modulation, volume).

**9A — 9B PANPOT**

<b>9A PANPOT 1-4</b> 5:5 5:5 5:5	<b>9B PANPOT 5-8</b> 5:5 5:5 5:5 5:5
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	Timbre 1 Panpot	A, 9:1-1:9, B, C, C+D, D	Output destination for each timbre
	Timbre 2 Panpot	A, 9:1-1:9, B, C, C+D, D	
	Timbre 3 Panpot	A, 9:1-1:9, B, C, C+D, D	
	Timbre 4 Panpot	A, 9:1-1:9, B, C, C+D, D	
	Timbre 5 Panpot	A, 9:1-1:9, B, C, C+D, D	
	Timbre 6 Panpot	A, 9:1-1:9, B, C, C+D, D	
	Timbre 7 Panpot	A, 9:1-1:9, B, C, C+D, D	
	Timbre 8 Panpot	A, 9:1-1:9, B, C, C+D, D	

▼ Panpot 4 assigns the output of each timbre to outputs A – D. Select the output for each timbre from A, A:B (9:1 – 1:9), B, C, C+D, D.

• If a drum kit program is assigned, the display will show "SND", and the pin settings of DRUMS mode will be used. (This setting cannot be made here.)



## 4. EFFECT MODE

To enter this mode

			<b>2</b>
<b>1</b>			

**1****2**—press the keys in this order.

Key functions

PLAY	PAGE+	▷	▲/B
EDIT	PAGE-	◁	▽/NO

= Keys whose indicators light when in this mode

The M3R has two built-in digital effects devices, each with two outputs. Each effects device can produce effects such as reverb, delay, chorus, flanger, phase shifter, distortion, exciter, etc. Individual parameters can also be adjusted for each effect. Effect settings can also be made for each combination.

- Since each combination has its own effect settings, effects settings will change when you select a different combination.

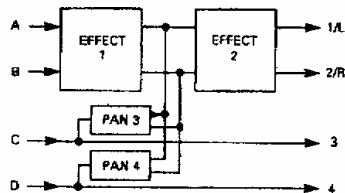
- It is also possible to make settings so that a different effect is used only by a specific sound in a combination or drum kit program.

The effects section consists of four inputs (A, B, C, D), and outputs (1/L, 2/R, 3, 4), with two effects and two panpots. The two effects can be placed in series or in parallel. Signals are converted from digital to analog only after passing through the effects section.

- If the GLOBAL mode Page Memory function is On, the parameter you last selected before exiting this mode will automatically appear.
- In this mode, you will always hear the sound with the effect applied, even if the GLOBAL mode Effect Interlock function is Off.

### Effect placement

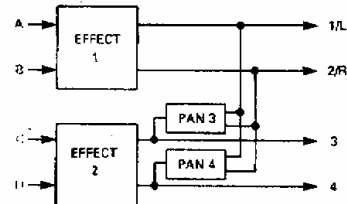
#### Serial placement



When the two effects are placed in series, inputs A and B will be processed through effect 1 and effect 2, and sent from outputs 1/L and 2/R. Outputs 3 and 4 carry the unmodified signal from C and D. The output signals 3 and 4 can also be assigned to the two inputs of effect 2.

- ☆ It is possible to use inputs C and D so that only specified programs are processed through effect 1, while all programs are processed through effect 2.

#### Parallel placement



There are two types of effect; stereo effects (1–25) and dual effects in which each channel has a different effect (26–33).

The input to A–D is determined by the pan settings in COMBINATION EDIT mode. However if a drum kit is used, the settings made in DRUMS mode will have priority.

Output 3 pan and output 4 pan can be used in the following ways;

When the two effects are placed in parallel, inputs A, B and C, D will be processed through different effects, and sent from outputs 1/L, 2/R and 3, 4. The outputs 3, 4 can also be mixed into the outputs 1/L, 2/R.

- When different sounds are input at C and D, output 3 pan and output 4 pan can mix these sounds into the stereo output.
- When effects are placed in parallel and stereo-type effects are selected for effects 1/2, by sending output 3 to L and output 4 to R, you can get a stereo mix of effects 1 and 2.
- If an external mixer or effects device is connected, you can set output 3 pan and output 4 pan to "OFF", and use outputs 3/4 as separate outputs.

### 00 EFFECT 1

EFFECT1=01	0B Hall	0C Delay
OFF	DRY:EFF=60:40	DRY:EFF=60:40

EFFECT TYPE	01 – 33 34: No Effect	Select the type of effect No effect is used
SWITCH	OFF / ON	Effect ON/OFF
DRY:EFF Balance	DRY, 99:1 – 1:99, EFF	The output balance of the direct sound and processed sound.
DRY:EFF Balance	DRY, 99:1 – 1:99, EFF	The output balance of the direct sound and the processed sound (used for types 26 and above)

- ▼ Select the type of effect.
- ★ When you select the effect type, the effect parameters will be set to their initial setting (see page 67).
- ★ Dual-type effect #24 Symphonic Ensemble or #25 Dry Speaker has been selected for one of the two effects devices, there will be some effect types which cannot be selected for the other effects device.
- ★ Effect number of "—" will be displayed for such types. If these effect types are already selected for effects device, effect types 24 and 25 cannot be used for the other effects device. (See page 67.)

- ▼ When you select a combination, settings will be set to match the effect parameter settings of that combination.
- ★ For effects other than Reverb (01–06), Early Reflection (07–09), Overdrive (21, 22), and Ensemble (24), the equalizer settings (LOW EQ and HIGH EQ) will be effective even when the effect switch is "OFF". To turn off an effect (including its equalizer settings) for example while editing a sound, select "34: No Effect" as the effect type.

**1A - 1C EFFECT 1 PARAMETERS**

- These set the parameters for effect 1.
- Parameter details will differ according to the parameter type. Refer to the explanation of parameter types.

These settings will be initialized whenever the effect type of effect 1 is changed.

**2A - 2C EFFECT 2**

- Select the effect type for effect 2.
- Details are the same as [0A] - [0C] EFFECT 1.

**3A - 3C EFFECT 2 PARAMETERS**

- These set the parameters for effect 2.
- Details are the same as for [1A] - [1D] EFFECT 1 PARAMETERS.

**4A - 4B EFFECT PLACEMENT**

<b>4A PLACEMENT</b>	<b>4B EFF2 PANPOT</b>
Serial	3 = L 4 = R

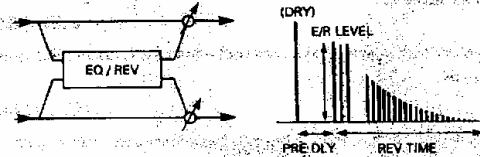
4A	Effect Placement	Parallel Serial	Select effect placement: Effects placed in parallel Effects placed in series
4B 3	Out3 Panpot	OFF: R: 01-99 99-01: L	Output 3 pan is not used (OFF), output 3 pan setting (L:R)
4	Out4 Panpot	OFF: R: 01-99 99-01: L	Output 4 pan is not used (OFF), output 4 pan setting (L:R)

These parameters determine how the two effects devices are placed, and the pan setting of outputs 3 and 4.

Parameters 1A - 1D, 2A - 2D will differ according to the effect type. Refer to the explanation for the selected type of effect. The displays show the initial settings for each type of effect.

**Reverb group**

These effects simulate reverberation, adding ambience to a sound.



**1. HALL**

The effect of a natural-sounding hall.

**2. ENSEMBLE HALL**

Hall-type reverb suitable for an ensemble of string or brass sounds.

**3. CONCERT HALL**

The ambience of a fairly large hall, with emphasis on the early reflections.

**4. ROOM**

The ambience of a fairly small room.

**5. LARGE ROOM**

Room-type reverb with emphasis on the sound density. Setting a REVERB TIME of 0.5 seconds will produce a gated-type effect.

**6. LIVE STAGE**

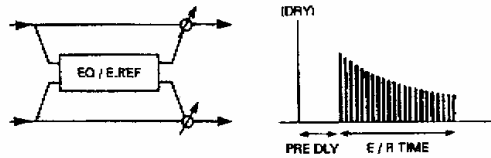
The reverberation characteristic of a fairly large room.

<b>1A Hall</b>	<b>1B Hall</b>	<b>1C Hall</b>
1 sec, 5s, H. Dmp40	P. Dly055ms E/R48	EQ L-05dB, H+00dB

1A	Time	Reverb Time	0.2 - 9.9 [sec] (HALL-type) 0.2 - 4.9 [sec] (ROOM-type)	Time required for reverberation to decay
H. Dmp	High Damp	0 - 99 [%]		Higher settings will result in more rapid high-frequency damping
P. Dly	Pre-delay	0 - 200 [ms]		Time delay between the direct sound and the first reverberant sound
E/R	Early Ref	0 - 99		Level of early reflections
EQ L	EQ Low	-12 - +12 [dB]		Low frequency cut or boost
H	EQ High	-12 - +12 [dB]		High frequency cut or boost

### Early Reflection group

Early reflections are the acoustic reflections that precede the reverberant "wash", and are an important psychoacoustic cue in determining the shape and size of the reverberant space. Adjusting the E/R time lets you achieve a wide range of effects, such as thickening the sound, or adding echo-like reflections.



#### 7. EARLY REFLECTION I

This is effective for strengthening the low frequency range, or as a general-purpose gating effect for drums.

#### 8. EARLY REFLECTION II

The early reflection time affects the level in a different way than E/R I, and provides an effect useful on various sounds.

#### 9. EARLY REFLECTION III

This has an early reflection envelope that is the reverse of E/R I and E/R II. When used on sounds with a pronounced attack, such as cymbals, it provides a reverse effect.

1A 3A	Early Ref 1 Time: 170ms D: 030ms	1B 3B	Early Ref 1 EQ: L+00dB H+00dB
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1A 3A	Time	E/R Time	100 - 800 [mS]	Early reflection time
	D	Pre Delay	2 - 200 [mS]	Time delay between the direct sound and the first early reflection
1B 3B	EQ.L	EQ Low	-12 - +12 [dB]	Low frequency cut or boost
	H	EQ High	-12 - +12 [dB]	High frequency cut or boost

### Delay group

These effects can be given independent delay times for L and R outputs, for a stereo delay. The high damp setting can be used to damp the high frequencies, creating a more natural simulation of actual acoustic decay.

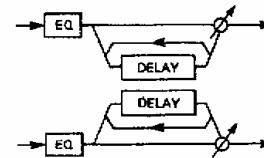
#### 10. STEREO DELAY

This stereo effect consists of two delays. Parameters other than delay time are common to both delays.

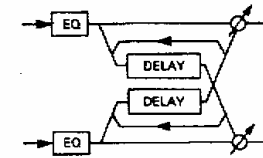
#### 11. CROSS DELAY

A stereo delay in which the delayed signal of each delay crosses over and is fed back to the other delay.

##### • STEREO DELAY



##### • CROSS DELAY



1A 3A	Stereo DLY DT: L250ms R280ms	1B 3B	Stereo DLY FB+50 H.Dmp10	1C 3C	Stereo DLY EQ: L+00dB H+00dB
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1A 3A	DT.L	Delay Time Left	0 - 500 [mS]	Delay between direct and processed sound of the left channel (input A or C)
	R	Delay Time Right	0 - 500 [mS]	Delay between direct and processed sound of the right channel (input B or D)
1B 3B	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
	H.Dmp	High Damp	0 - 99 [%]	Higher settings result in more rapid high frequency damping
1C 3C	EQ.L	EQ Low	-12 - +12 [dB]	Low frequency cut or boost
	H	EQ High	-12 - +12 [dB]	High frequency cut or boost

### Chorus group

These stereo effects combine two chorus circuits, to provide natural spaciousness and depth for piano, strings, brass, or any other sound.

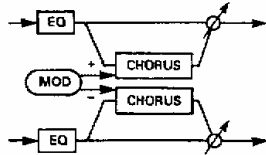
#### 12. STEREO CHORUS I

Modulation is applied to two chorus units so that they are in reversed phase, resulting in an effect of swirling stereo movement.

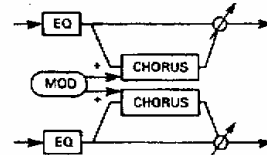
#### 13. STEREO CHORUS II

Modulation of the same phase is applied to the two chorus circuits.

• STEREO CHORUS I



• STEREO CHORUS II



1A Chorus I  
Mod60 0.30Hz TRI

1B Chorus I  
Time010ms

1C Chorus I  
EQ L+00dB H+00dB

1A 3A	Mod	Mod Depth	0 - 99	Modulation depth
		Mod Speed	0.03 - 30[Hz]	Modulation speed (frequency)
		Mod Waveform	SIN TRI	Modulation waveform Sine wave Triangle wave
1B 3B	Time	Delay Time	0 - 200[mS]	Delay between direct sound and processed sound
1C 3C	EQ.L	EQ Low	-12 - +12[dB]	Low frequency cut or boost
	H	EQ High	-12 - +12[dB]	High frequency cut or boost

### Flanger group

This adds feedback to the chorus effect. When used on sounds that have many harmonics, such as cymbals, it adds a swirling sound with a feeling of pitched tone color.

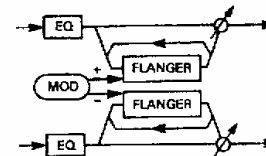
#### 14. STEREO FLANGER

This stereo effect uses two flanging circuits, modulated to be in opposite phase for a swirling stereo movement.

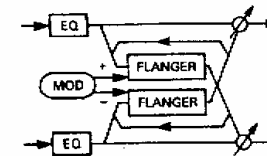
#### 15. CROSS FLANGER

This is an effect which is used to cross-feed the feedback of two flanger blocks to each other.

• STEREO FLANGER



• CROSS FLANGER



1A Flanger  
Mod70 0.18Hz SIN

1B Flanger  
Time00ms FB-75

1C Flanger  
EQ L+00dB H+00dB

1A 3A	Mod	Mod Depth	0 - 99	Depth of flanging effect
		Mod Speed	0.03 - 30[Hz]	Modulation speed (frequency)
		Mod Waveform	SIN TRI	Modulation waveform Sine wave Triangle wave
1B 3B	Time	Delay Time	0 - 50[mS]	Delay between direct sound and processed sound
	FB	Feedback	-99 - +99[%]	Amount of feedback (negative settings produce inverted phase)
1C 3C	EQ.L	EQ Low	-12 - +12[dB]	Low frequency cut or boost
	H	EQ High	-12 - +12[dB]	High frequency cut or boost

M3r56\_57.gif (1700x2240x2.gif)

**Phase Shifter group**

In contrast to the chorus and flanger, which modulate the time delay to create a swirling effect, a phaser modulates the phase of the input signal to produce an effect differing from chorus or flanging. It is especially effective when used on electric piano or guitar sounds.

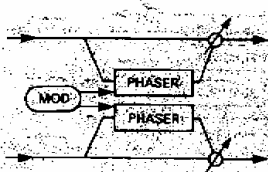
**16. PHASER I**

This stereo effect uses two phaser circuits, modulated in opposite phase to produce a swirling effect of stereo movement.

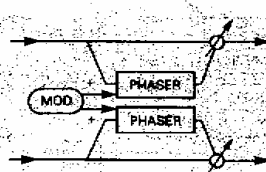
**17. PHASER II**

The two phaser circuits are modulated in phase.

• PHASER I



• PHASER II



1A Phaser I  
Manual 199 - FB-75

1B Phaser I  
Mod 60.0 - 80Hz SIN

1A 3A	Manual	Manual	0 - 99	Center frequency affected by the phase shift
	FB	Feedback	-99 - +99(%)	Amount of feedback (negative settings produce inverted phase)
1B 3B	Mod	Mod Depth	0 - 99	Depth of phase shift effect
		Mod Speed	0.03 - 30[Hz]	Modulation speed (frequency)
		Mod Waveform	SIN TRI	Modulation waveform Sine wave Triangle wave

**Tremolo group**

This effect periodically varies the volume.

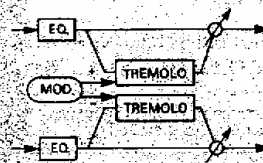
**18. STEREO TREMOLO I**

This stereo effect uses two tremolo circuits, modulated in reverse phase to produce an effect of stereo panning.

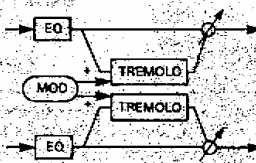
**19. STEREO TREMOLO II**

In contrast to the above Stereo-Tremolo I, this effect modulates the two tremolo circuits in phase.

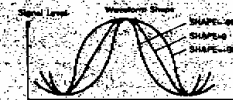
• STEREO TREMOLO I



• STEREO TREMOLO II



• Shape



1A Tremolo I  
Mod 90.1 - 50Hz SIN

1B Tremolo I  
Shape 98

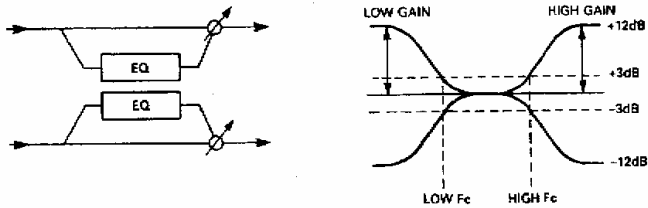
1C Tremolo I  
EQ L:100dB H:00dB

1A 3A	Mod	Mod Depth	0 - 99	Depth of tremolo effect
		Mod Speed	0.03 - 30[Hz]	Modulation speed (frequency)
		Mod Waveform	SIN TRI	Modulation waveform Sine wave: Triangle wave:
1B 3B	Shape	Shape	-99 - +99	Modify the shape of the modulation waveform
1C 3C	EQ L	EQ Low	-12 - +12[dB]	Low frequency cut or boost
	H	EQ High	-12 - +12[dB]	High frequency cut or boost

**Equalizer group**

**20. EQUALIZER**

This is a two-band equalizer with adjustable cutoff frequency and gain for high and low bands.



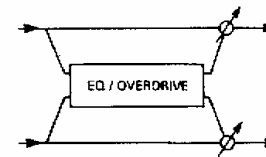
1A Equalizer	1B Equalizer
Low+00dB 500Hz	High+00dB 2KHz

1A 3A	Low	Low Gain	-12 - +12[dB]	Cut or boost for low frequency band
		Low Fc	250/500/1K[Hz]	Cutoff frequency for low frequency band
1B 3B	High	High Gain	-12 - +12[dB]	Cut or boost for high frequency band
		High Fc	1K/2K/4K[Hz]	Cutoff frequency for high frequency band

**Overdrive group**

**21. OVER DRIVE**

This effect simulates the overdrive often used by electric guitars. It is especially effective when playing guitar-like lines and solos, or rock organ sounds.

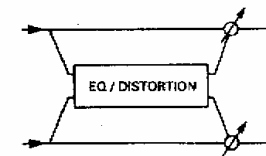


1A Over Drive	1B Over Drive
Drive080 Lev015	EQ. L+00dB H+00dB

1A 3A	Drive	Drive	0 - 100	Overdrive of input signal
	Lev	Level	0 - 100	Output level of processed sound
1B 3B	EQ.L	EQ Low	-12 - +12[dB]	Low frequency range cut or boost
	H	EQ High	-12 - +12[dB]	High frequency range cut or boost

**22. DISTORTION**

This has a more distorted sound than overdrive, and simulates a fuzz-type distortion device. It is especially effective for solos.



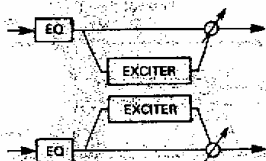
1A Distortion	1B Distortion
Dist080 Lev020	EQ. Low+00dB

1A 3A	Dist	Distortion	0 - 100	Distortion of input signal
	Lev	Level	0 - 100	Output level of processed sound
1B 3B	EQ.Low	EQ Low	-12 - +12[dB]	Low frequency range cut or boost

**Exciter group**

**23. EXCITER**

This effect increases the clarity of the sound, gives it greater definition and presence, and helps bring the sound to the forefront.



1A Exciter  
Blend: 80 Point: 05

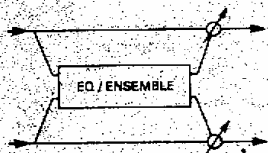
1B Exciter  
EQ: L: 00dB H: 00dB

1A 3A	Blend	Blend	-99 - +99	Depth of the exciter effect
	Point	Emphatic Point	1 - 10	Center frequency to which exciter effect is applied
1B 3B	EQ: L	EQ Low	-12 - +12[dB]	Low frequency range cut or boost
	H	EQ High	-12 - +12[dB]	High frequency range cut or boost

**Ensemble group**

**24. SYMPHONIC ENSEMBLE**

This effect uses multi-level chorusing, and is especially effective for string ensemble sounds.



1A Sympho Ens  
Mod: 80

1B Sympho Ens  
EQ: L: 00dB H: 00dB

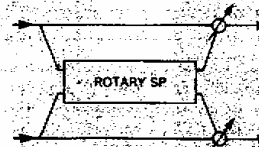
1A 3A	Mod	Mod Depth	0 - 99	Depth of the ensemble effect
1B 3B	EQ: L	EQ Low	-12 - +12[dB]	Low frequency cut or boost
	H	EQ High	-12 - +12[dB]	High frequency cut or boost

**Rotary effect group**

**25. ROTARY SPEAKER**

This simulates the effect of a rotary speaker often used with electric organs, and is very effective when used on organ sounds. The rotational speed of the speaker can be controlled using a MIDI control change (Bn.50.dd).

- \* In this case the control change acts as a switch (dd=0-3F is low, 40H-7F is fast), and the speed has no relation to how fast the MIDI data changes. (Even if you advance the pedal slowly, this will not affect how the speed changes.)
- \* The volume pedal control for the M1/M1R rotary effect is not transmitted via MIDI.



1A Rotary SP  
Mod: 82 FAST

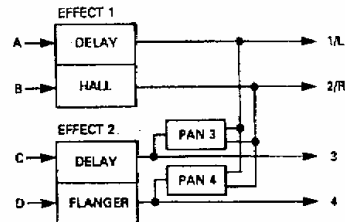
1B Rotary SP  
Ratio: 05

1A 3A	Mod	Mod Depth	0 - 99	Depth of the effect
		Speed	Slow/Fast	Rotation speed of the low frequency speaker
1B 3B	Ratio	Speed Ratio	-20 - +20	Ratio of the high frequency speaker rotation speed in relation to the low frequency speaker rotation speed

### Combination type effect group

Effect types 26 through 33 are combinations in which two different effects are available on one effect generator. This allows you to use each of effects 1/2 as two independent effects.

- Example: Parallel placement with 26: DELAY/HALL selected for effect 1, and 31: DELAY/FLANGER selected for effect 2.



- Consult the explanations for 1 to 19 for details of each effect.
- Effect balance is set by [0B] for the (L) effect and by [0C] for the (R) effect.
- Parameters [1A], [1B] ([3A], [3B]) apply to the (L) effect. Parameters [1C], [1D] ([3C], [3D]) apply to the (R) effect.

### 26. DELAY / HALL

1A Delay(L) Time250ms FB+50	1B Delay(L) H. Dmp10	1C Hall(R) Time3.5s H. Dmp40	1D Hall(R) P. Dly055ms
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#### DELAY

1A 3A	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	H.Dmp	High Damp	0 - +99 [%]	Higher settings make the high frequencies decay faster

#### HALL

1C 3C	Time	Reverb Time	0.2 - 9.9 [sec]	Time required for reverb to decay
	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster
1D 3D	P.Dly	Pre Delay	0 - 150 [mS]	Time delay between direct sound and reverberant sound

### 27. DELAY / ROOM

1A Delay(L) Time250ms FB+50	1B Delay(L) H. Dmp10	1C Room(R) Time1.5s H. Dmp30	1D Room(R) P. Dly030ms
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#### DELAY

1A 3A	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster

#### ROOM

1C 3C	Time	Reverb Time	0.2 - 4.9 [sec]	Time required for reverb to decay
	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster
1D 3D	P.Dly	Pre Delay	0 - 150 [mS]	Time delay between direct sound and reverberant sound

### 28. DELAY / EARLY REFLECTION

1A Delay(L) Time250ms FB+50	1B Delay(L) H. Dmp10	1C E. Ref(R) Time200ms D030ms
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#### DELAY

1A 3A	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster

#### EARLY REFLECTION

1C 3C	Time	E/R Time	100 - 400 [mS]	Early reflection time
	D	Pre Delay	0 - 100 [mS]	Time delay between direct sound and early reflections



29. DELAY / DELAY

1A Delay(L) Time250ms FB+50	1B Delay(L) H.Dmp10	1C Delay(R) Time280ms FB+50	1D Delay(R) H.Dmp10
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DELAY

1A 3A	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster

DELAY

1C 3C	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1D 3D	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster



30. DELAY / CHORUS

1A Delay(L) Time250ms FB+50	1B Delay(L) H.Dmp10	1C Chorus(R) Mod60 0.30Hz	1D Chorus(R) TRI
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DELAY

1A 3A	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster

CHORUS

1C 3C	Mod	Mod Depth	0 - 99	Depth of chorus effect
		Mod Speed	0.03 - 30 [Hz]	Modulation speed (frequency)
1D 3D		Mod Waveform	SIN TRI	Waveform selection Sine wave  Triangle wave 

31. DELAY / FLANGER

1A Delay(L) Time250ms FB+50	1B Delay(L) H.Dmp10	1C Flanger(R) Mod70 0.18Hz	1D Flanger(R) FB-75
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DELAY

1A 3A	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster

FLANGER

1C 3C	Mod	Mod Depth	0 - 99	Depth of flanging effect
		Mod Speed	0.03 - 30 [Hz]	Modulation speed (frequency)
1D 3D	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)

32. DELAY / PHASER

1A Delay(L) Time250ms FB+50	1B Delay(L) H.Dmp10	1C Phaser(R) Mod80 0.69Hz	1D Phaser(R) FB-75
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DELAY

1A 3A	Time	Delay Time	0 - 500 [mS]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	H.Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster

PHASER

1C 3C	Mod	Mod Depth	0 - 99	Depth of phase shift effect
		Mod Speed	0.03 - 30 [Hz]	Modulation speed (frequency)
1D 3D	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)

### 33. DELAY/TREMOLO

1A Delay(L) Time: 250ms FB: 50	1B Delay(L) H. Damp: 0	1C Tremolo(R) Mod: 0 Freq: 59Hz	1D Tremolo(R) Shape: 00
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#### DELAY

1A 3A	Time	Delay Time	0 - 500 [ms]	Time between direct sound and delayed sound
	FB	Feedback	-99 - +99 [%]	Amount of feedback (negative settings produce inverted phase)
1B 3B	HL Dmp	High Damp	0 - 99 [%]	Higher settings make the high frequencies decay faster

#### TREMOLO

1C 3C	Mod	Mod Depth	0 - 99	Depth of tremolo effect
		Mod Speed	0.01 - 30 [Hz]	Modulation speed (frequency)
1D 3D	Shape	Shape	-99 - +99 [%]	Change in shape of modulating wave (sine wave)

### EFFECT PARAMETERS DEFAULT VALUES CHART

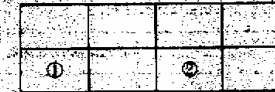
NO	EFFECT	OB	OC	1A/3A	D	D	4	1B/3B	D
01	HALL	80:40		3.5S		40%			55ms
02	ENSEMBLE HALL	80:40		2.8S		40%			30ms
03	CONCERT HALL	80:40		3.8S		40%			120ms
04	ROOM	40:60		0.5S		10%			22ms
05	LARGE ROOM	80:40		1.6S		30%			30ms
06	LIVE STAGE	80:40		2.8S		20%			20ms
07	EARLY REF 1	80:40		170ms		30%			0dB
08	EARLY REF 2	80:40		200ms		20%			0dB
09	EARLY REF 3	80:40		190ms		10%			0dB
10	STEREO DELAY	70:30		250ms		20%			+50%
11	CROSS DELAY	70:30		180ms		35%			+80%
12	STEREO CHO 1 *	80:40		80		0.30Hz	TBF		10ms
13	STEREO CHO 2 *	80:40		20		2.40Hz	SIN		5ms
14	STEREO FLNG *	40:60		70		0.18Hz	SIN		0ms
15	CROSS FLNG *	25:75		37		0.21Hz	SIN		25ms
16	PHASER 1 *	25:75		99		-75%			80
17	PHASER 2 *	60:40		88		+87%			89
18	STEREO TREM 1 *	EFF		80		1.59Hz	SIN		+99
19	STEREO TREM 2 *	EFF		63		4.00Hz	TRI		0
20	EQUALIZER	EFF		0dB		500Hz			0dB
21	OVER DRIVE	EFF		80		15			0dB
22	DISTORTION	EFF		80		20			0dB
23	EXCITER	EFF		+99		5			0dB
24	SYMPHONIC ENS *	50:50		80					0dB
25	ROTARY SP *	EFF		82		FAST			+5
26	DELAY/HALL	70:30	80:40	250ms		+50%			10%
27	DELAY/ROOM	70:30	80:40	250ms		+50%			10%
28	DELAY/E REF	70:30	80:40	250ms		+50%			10%
29	DELAY/DELAY	70:30	70:30	250ms		+50%			10%
30	DELAY/CHORUS *	70:30	80:40	250ms		+50%			10%
31	DELAY/FLANGER *	70:30	40:60	250ms		+50%			10%
32	DELAY/PHASER *	10:30	25:75	250ms		+50%			10%
33	DELAY/TREMOLO *	70:30	EFF	250ms		+50%			10%

When using an effect marked with an asterisk (\*) for one of the effects, neither #24 SYMPHONIC ENS nor #25 ROTARY SPEAKER can be selected for the other one.

	IC/3C	ID/3D	NO	NOTES	
4B	5dB	0dB	01		
4B	5dB	0dB	02		
4B	0dB	2dB	03		
7B	+1dB	0dB	04		
7B	+2dB	+4dB	05		
60	3dB	0dB	06		
0dB			07		
0dB			08		
0dB			09		
10X	0dB	0dB	10		
10X	0dB	0dB	11		
	0dB	0dB	12	*	
	0dB	0dB	13	*	
75X	0dB	0dB	14	*	
180X	0dB	0dB	15	*	
0.89Hz	S1F		16	*	
0.57Hz	TR1		17	*	
	0dB	0dB	18	*	
	0dB	0dB	19	*	
2Hz			20		
0dB			21		
			22		
0dB			23		
0dB			24	*	
			25	*	
	9.5S	40%	55ms	26	
	1.5S	30%	30ms	27	
	200ms	30ms		28	
	260ms	+50%	10%	29	
	60	0.30Hz	TR1	30	*
	70	0.18Hz		31	*
	80	0.89Hz		32	*
	80	1.59Hz		33	*

## 5. DRUMS MODE


To enter this mode



press the keys in this order: ① ②

Key functions



 = Keys whose indicators light when in this mode

In this mode you will make settings for drum kits 1 - 4. To make settings for drum kits C1 - C4 (PROG card), you must first use GLOBAL mode [5A] to load the data from card into internal memory. The sound you will hear in this mode is determined by the settings of the program last selected in Program Edit mode. Before you enter this mode, use Program Edit mode to select the program which uses the Drum Kit you want to edit. If you enter this mode when an ordinary program is selected, the drum sounds may be somewhat unnatural.

- Settings made in this mode will be remembered even when the power is turned off. There is no need to write them into memory.

### Functions in DRUMS mode

- When you first enter DRUMS mode, [0A] DRUM KIT 1 will be selected if the Page Memory function is Off. If the Page Memory function is On, you will jump to the parameter that was selected when you last exited this mode. Use the PAGE + and PAGE - keys to select the drum kit you wish to edit.
- If the Effect Interlock function is Off, the effect will not be heard in this mode. If On, the effect will be heard. If pan has been set to C, C+D, or D, and effect interlock is On, there will be no sound from L/L, 2/R, or the PHONES OUT unless the effect placement setting for output 5/4 has been turned On.

Page		Editing parameter	Page reference
0A - 0C	DRUM KIT1	Index, instrument, key, tune, level, decay, and pan for drum kit 1	70
1A - 1C	DRUM KIT2	Index, instrument, key, tune, level, decay, and pan for drum kit 2	71
2A - 2C	DRUM KIT3	Index, instrument, key, tune, level, decay, and pan for drum kit 3	71
3A - 3C	DRUM KIT4	Index, instrument, key, tune, level, decay, and pan for drum kit 4	71

**DRUMS****0A — 0C DRUM KIT 1**

0A DRUM1 #00	0B KEY/TUNE/L	0C DECAY/PAN
0B:Tom	CO T+00 L+00	Decay+00 Pan+ A

0A	#	Index	0 - 29	Drum index to edit
		Inst	---, 01-45	Select drum sound
0B		Key	CO - G8	Key assigned to drum sound
	T	Tune	-120 - +120	Pitch adjustment within $\pm 1$ octave
	L	Level	-99 - +99	Level adjustment for each sound
0C	Decay	Decay	-99 - +99	Decay time adjustment for each sound
	Pan	Pan	A, 9:1 - 1:9, B, C, C + D, D	Output selection

\* This is where you edit the drum kit used as a sound source by a drum-type Program. Up to 30 types of drum index can be assigned to each of 4 drum kits (1-4). (An index is a reference number for each drum or percussion sound in a drum kit.)

▼ Index: This is where you select the drum index to edit.

- An index for which no drum sound is assigned will be indicated by the display "No Assign". (When assigning a new sound, select an index which displays "No Assign".)

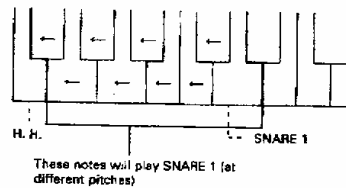
▼ Inst is where you select the drum sound used by that index. (The back cover has a list of the drum sounds.)

- If an optional PCM card containing drum sounds has been inserted, card sounds can also be selected using the  $\Delta$ /YES and  $\nabla$ /NO keys. (When playing programs which use PCM card drum sounds, be sure that the appropriate card is inserted.)
- Select "No Assign" for each index which you don't need to assign, and set key ([OB]) to an unused key.

▼ Key determines the key (CO-G8) assigned to that index. (The note name for an octave setting of # will be displayed.)

- You will not be able to select keys which have already been assigned to another index.
- Keys which have not been assigned to an index are automatically assigned to the index of the following key. (However the pitch will change according to the scale.)
- By using more than one index, you can assign a single sound to be played by more than one key at the same pitch.

Example:



▼ Tune, Level, and Decay are parameters which determine the pitch, volume, and VDA decay time for each drum index.

- When the corresponding program parameter is modified, the volume etc. of the entire drum kit will be affected.
- Other program parameters will also affect the entire drum kit.\*

▼ Tune adjusts the pitch of an assigned key over a range of -120 - +120 (in steps of 10 cents,  $\pm 1$  octave).

▼ Level is an adjustment relative to the oscillator level setting in PROGRAM mode, over a range of -99 - +99.

▼ Decay is an adjustment relative to the VDA EO decay setting in PROGRAM mode, over a range of -99 - +99.

▼ Pan specifies the output: A, A:B (9:1 - 1:9), B, C, C+D, D.

\* When effect inter lock is Off, you will not be able to monitor C, C+D, or D through headphones.

**1A - 3C DRUM KIT 2-4**

Details are the same as for [0A] - [0C] DRUM KIT 1.

**M3R PRELOAD DRUM KITS (IN ORDER OF KEYS) \* PANIC-D see P.70**

**Drum Kit 1**

Key Index	Inst	Key Index	Inst	Key Index	Inst
C2	00	01 Kick 1	F3	10	11 Closed HH2 *
D2	01	02 Kick 2	G3	11	12 Open HH2 *
E2	02	03 Kick 3 *	A3	12	12 Open HH2 *
F#2	03	04 Snare 1 *	B3	13	21 Ride
G#2	04	05 Snare 2	C4	14	13 Crash
A#2	05	06 Snare 3	D4	15	14 Conga 1
B2	06	07 Side Stick	E4	16	15 Conga 2
C3	07	08 Tom	F4	17	15 Conga 2
D3	08	08 Tom	G4	18	16 Timbales
E3	09	08 Tom	A4	20	17 Cowbell
			B4	23	18 Claps
			P#5	21	22 Rap
			G#5	22	23 Whip
			C5	24	19 Tambourine
			D5	25	34 Perc. VaveH *
			E5	26	34 Perc. VaveH *
			B5	27	35 Lore 1
			C6	28	38 Pole
			D8	28	37 Wind Bells
			C7	19	20 E. Tom

**Drum Kit 2**

Key Index	Inst	Key Index	Inst	Key Index	Inst
C2	00	01 Kick 1	F3	10	13 Crash
D2	01	03 Kick 3	G3	11	13 Crash
F2	02	06 Snare 3	A3	12	21 Ride
E2	03	05 Snare 2 *	B3	13	17 Cowbell
G2	04	20 E. Tom	D4	14	14 Conga 1
A2	05	20 E. Tom	E4	15	15 Conga 2
B2	06	20 E. Tom	F4	16	15 Conga 2
C3	07	09 Closed HH1 *	G4	17	14 Conga 1
D3	08	10 Open HH1 *	A4	18	19 Tambourine *
E3	09	10 Open HH1 *	B4	19	31 Vibe Hit
			C5	21	30 Clicker 2
			D5	22	28 Gamelan 2
			E5	23	28 Gamelan 2
			G5	24	43 Spectrum3H
			B5	25	42 Spectrum3L
			C6	26	18 Claps
			D6	27	09 Closed HH1
			E6	28	10 Open HH1
			G8	29	35 Lore 1

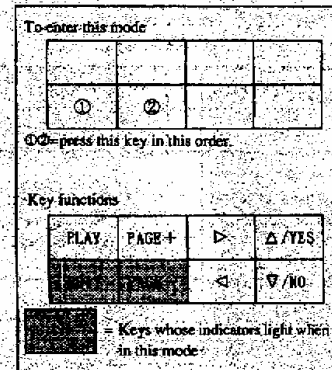
**Drum Kit 3**

Key Index	Inst	Key Index	Inst	Key Index	Inst
C2	00	03 Kick 3	F3	10	13 Crash
D2	01	03 Kick 3 *	G3	11	21 Ride
E2	02	01 Kick 1	A#3	12	21 Ride
F2	03	14 Conga 1	B3	13	21 Ride *
G2	04	04 Snare 1 *	C4	14	14 Conga 1
A2	05	04 Snare 1 *	D4	15	15 Conga 2
B2	06	05 Snare 2 *	E4	16	19 Tambourine *
C3	07	09 Closed HH1 *	F4	17	23 Whip *
D3	08	10 Open HH1 *	G4	18	37 Wind Bells
E3	09	10 Open HH1 *	A#4	19	20 E. Tom
			B4	20	20 E. Tom
			C5	21	42 Spectrum3L
			B5	22	43 Spectrum3H *
			P#5	23	38 Perc. VaveH
			G#5	24	33 Perc. VaveL
			C6	25	45 Spectrum4H
			F#6	26	43 Spectrum3H
			G6	27	44 Spectrum4L
			A#6	28	07 Side Stick *
			G8	29	10 Open HH1

**Drum Kit 4**

Key Index	Inst	Key Index	Inst	Key Index	Inst
D0	12	-- No Assign	C1	22	-- No Assign
D#0	13	-- No Assign	C#1	23	-- No Assign
E0	14	-- No Assign	D1	24	-- No Assign
F0	15	-- No Assign	D#1	25	-- No Assign
F#0	16	-- No Assign	E1	26	-- No Assign
G0	17	-- No Assign	F1	27	-- No Assign
G#0	18	-- No Assign	F#1	28	-- No Assign
A0	18	-- No Assign	G1	28	-- No Assign
A#0	20	-- No Assign	D2	02	17 Cowbell
B0	21	-- No Assign	G#2	03	42 Spectrum3L
			F3	00	14 Conga 1
			D4	01	15 Conga 2
			C5	04	17 Cowbell
			P#5	05	18 Timbales
			C6	06	46 Spectrum4H
			F6	07	34 Perc. VaveH
			A#6	08	25 Bell Ring
			D#7	09	30 Clicker 2
			G7	11	25 Bell Ring
			C8	10	38 Pole

**6. GLOBAL MODE**



In global mode you can make settings for parameters which affect the entire M3R (overall tunings and MIDI settings).

- With the exception of some MIDI parameters, the settings made in this mode are remembered even when the power is turned off. There is no need to write them into memory.

**Functions in GLOBAL mode**

- If the Page Memory function is On when you enter GLOBAL mode, you will jump to the parameter that was selected when you last exited GLOBAL mode. If the Page Memory function is OFF, [0A] MASTER TUNE will be selected. Use the PAGE + and PAGE - keys to select the page that contains the parameters you wish to edit.

Page	Editing parameter	Page-reference
0A	MASTER TUNE/ KEY TRANSPOSE	Overall pitch adjustment Overall transpose 74
1A - 1B 1B - 1E	SCALE TYPE (USER SCALE)	Select type of scale (equal tempered, just, etc.) (User scale settings) 75
2A - 2C	MIDI GLOBAL/ FILTERING	Settings for MIDI global channel, MIDI overflow, Transmission/reception switch for various MIDI messages 76
3A - 3B	MEMORY PROTECT	Protection ON/OFF for writing into parameter memory 76
3C	EFFECT INTERLOCK	Effect Interlock function setting
3D	PAGE MEMORY	Page Memory function setting
4A	MIDI DATA DUMP	Transmit various parameters as a MIDI system exclusive message 77
5A - 5D	LOAD FROM CARD/ SAVE TO CARD/ FORMAT CARD PRESET DATA LOAD	Load preset data 78

**GLOBAL**

**0A MASTER TUNE / KEY TRANSPOSE**

0A TUNE/TRANS  
Tune+00 Trans+00

0A	Tune	Master Tune	-50 - +50	Overall tuning of the M3R (steps of 1 cent)
	Trans	Key Transpose	-12 - +12	Overall transposition of the M3R (chromatic steps)

▼ Master Tune adjusts the tuning of the entire M3R over a range of ±50 cents. Use this when tuning the M3R to other instruments.

▼ Key Transpose adjusts the pitch of the entire M3R over a range of ±12 octave, in chromatic steps. This can be used to play songs of a difficult key signature in an easier key.

• When the GLOBAL mode setting 2A overflows its "ON", note on/off messages sent from MIDI OUT will be transposed to match this setting.

**1A -- 1E SCALE TYPE**

1A SCALE TYPE  
Equal Temp

1B Pure Major  
Key=C

1B User Scale  
C100 C#100 D100

1C User Scale  
D#100 E#00 F#00

1D User Scale  
F#100 G#00 G#100

1E User Scale  
A#00 A#100 B#00

1A	Equal Temp		Equal temperament
	Equal Temp 2		Equal temperament with a randomized pitch for each note
	Pure Major		Just intonation for the major scale
	Pure Minor		Just intonation for the minor scale
	User Scale		A scale of pitches set by the user
1E	Key	Key	C-B Tonic for the just intonation scale

1B	C	C	-50 - +50	User scale, specified as pitch deviation (in cents) from equal temperament for each note.
	C#	C#	-50 - +50	
	D	D	-50 - +50	
1C	D#	D#	-50 - +50	
	E	E	-50 - +50	
	F	F	-50 - +50	
1D	F#	F#	-50 - +50	
	G	G	-50 - +50	
	G#	G#	-50 - +50	
1E	A	A	-50 - +50	
	A#	A#	-50 - +50	
	B	B	-50 - +50	

• This is where you select a scale (temperament). The specified scale type will apply to all voices.

▼ Equal Temp.: This temperament is widely used in keyboard instruments, since chords will sound the same at any transposition.

▼ Equal Temp.2: Each time you play a note, the pitch will randomly deviate from equal temperament. This is useful when simulating instruments that have a somewhat unstable pitch.

▼ Pure Major: Just intonation temperaments are designed so that chords played in the key of the tonic will sound good. Select a tonic of C-B in [1B].

▼ Pure Minor: Select a tonic of C-B in [1B].

▼ User scale: For each note of the equal tempered scale, you can specify an offset of ±50 cents to create your own scale. This can be used to play unique temperaments other than the preset temperaments. Use [1B] - [1E] to specify the scale degree.

• Even if [0A] key transpose is used, the "Pure Major, Pure Minor, User Scale" settings will define the pitch which is actually sounded.

• Example: If the User Scale defines C as +10 and Transpose is set to +1, when a MIDI note of C arrives, C# will be sounded, and when a MIDI note of B arrives, C+10 cents will be sounded.



### 2A — 2C MIDI GLOBAL / FILTER

2A MIDI GLOBAL CH= 1 OVFL:OFF	2B MIDI FILTER PRG:ENA AFT:ENA	2C MIDI FILTER CTRL:ENA EX:DIS
----------------------------------	-----------------------------------	-----------------------------------

2A	CH	Channel	1 - 16	Channel on which musical data will be received
	OVFL	Overflow	OFF/ON	MIDI overflow switch
2B	PRG	Combination/Program Change Filter	DIS/ENA	When "DIS" is selected, the corresponding type of MIDI data will neither be transmitted nor received.
	AFT	After Touch Filter	DIS/ENA	
2C	CTRL	Control Change Filter	DIS/ENA	
	EX	Exclusive Filter	DIS/ENA	

▼ Channel determines the MIDI transmission/reception channel.

- In COMBINATION mode when type is set to Multi, MIDI data arriving on channels other than the channel specified here may be received.

▼ When Overflow is set "ON", incoming MIDI data which exceeds the maximum simultaneous note capacity will be re-transmitted from MIDI OUT. If you have connected another M3R to MIDI OUT, this allows you to increase the simultaneous note capacity.

- Be sure that both M3Rs are set to the same program/combination.
- If MIDI OUT is connected to a device other than another M3R, set this "OFF".
- When the power is turned on, this setting will be "OFF".
- When this setting is On, data received at MIDI IN (program change, aftertouch, control change, etc.) will always be transmitted from MIDI OUT.

- [2B] - [2C] allow you to disable (filter) reception and transmission of specified types of MIDI data.

▼ When Combination / Program Change is set to "DIS", combination (program) changes will neither be transmitted nor received.

▼ When Control Change is set to "DIS", control change messages (damper, modulation 1 and 2, pitch bender, volume, rotary speaker speed) will neither be transmitted nor received.

▼ When After Touch is set to "DIS", aftertouch data will not be received.

▼ When Exclusive is set to "DIS", system exclusive messages for parameter changes or data will neither be transmitted nor received.

☆ System exclusive parameter changes are used by personal computer voice editing programs. When two M3Rs are connected and Exclusive is set to "ENA", you can simultaneously edit the voice data of both units.

- When the M3R is connected to other types of MIDI devices, set this to "DIS".

### 3A — 3D MEMORY PROTECT / EFFECT INTERLOCK / PAGE MEMORY

3A PROTECT PROGRAM:OFF	3B PROTECT COMBINATION:OFF	3C EFFECT Interlock:OFF	3D PAGE MEMORY OFF
---------------------------	-------------------------------	----------------------------	-----------------------

3A	PROGRAM	Program	OFF/INT/CARD/ALL	Memory protect (write protection) for internal and card programs
3B	COMBINATION	Combination	OFF/INT/CARD/ALL	Memory protect (write protection) for internal and card combinations
3C	INTERLOCK	EFFECT Interlock	OFF/ON	Enables/disables Effect Interlock (see below)
3D		Page Memory	OFF/ON	Enables/disables Page Memory (see below)

• These settings prohibit writing data into internal memory or RAM card.

▼ "INT" prohibits writing data into internal memory. "CARD" prohibits writing data into a RAM card. "ALL" prohibits both.

- The protect switch on the upper part of a RAM card also lets you prohibit writing.

▼ When Effect Interlock is On, the last selected effect will be applied in all modes. When Off, the effect will not be heard in PROG EDIT and DRUMS modes. When this is Off, a drum sound whose pan has been set to C, C+D, or D will not be heard through headphones.

▼ When Page Memory is On, the Page Memory function

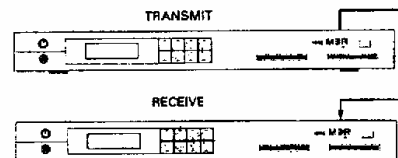
will operate. When entering a mode, this function allows you to automatically jump to the page (parameter) that was last selected when you exited that mode. However in COMBI EDIT and PROG EDIT modes, the [0A] SELECT page for COMBI or PROG will appear first, and pressing the PAGE+ button will jump to the previously selected parameter. The page memory will be cleared if you use [0A] to change the COMBI or PROG number. This also applies to Combination Play mode parameters when the REL is connected.

### 4A MIDI DATA DUMP

4A MIDI DUMP PROGRAM OK?
-----------------------------

4A		PROGRAM	Transmit all program parameters
		COMBINATION	Transmit all combination parameters
		GLOBAL	Transmit global parameters ([0A] - [1E])
		DRUM KIT	Transmit all drum data
		ALL DATA	Transmit all program/combination/global/drum parameters
	OK?	[OK?]	Execute dump

▼ Internal data parameters can be transmitted (dumped) via MIDI.



• When this page is selected, MIDI data dumps can be transmitted and received regardless of the MIDI exclusive filtering setting.

• In order for data to be received, the MIDI global channel must match that of the transmitting device, and memory protect must be turned "OFF". No other special measures are necessary when receiving data.

• PROGRAM transmits all program parameters. Transmission time is 2.7 seconds.

• COMBINATION transmits all combination data. Transmission time is 4.5 seconds.

• GLOBAL DATA transmits global parameters ([0A] - [1E], [3C]). Transmission time is nearly instantaneous.

• DRUM KIT transmits all drum data. Transmission time is nearly instantaneous.

• ALL DATA transmits program parameters, combination parameters, drum data, and global parameters at once. Transmission time is 7.7 seconds.

• Move the cursor to "OK" and press the  $\Delta$  /YES key, and the data dump will be executed.

☆ MIDI devices such as the SQD-8 which can save exclusive data allow you to store voice data using an external device.

Data type	Length of exclusive message
Program (100)	approximately 8.6 Kbytes
Combination (100)	approximately 14.4 Kbytes
Global data	31 bytes
Drum data	approximately 1.0 Kbyte
All data	approximately 24.0 Kbytes

☆ For details of the exclusive message data format, see the end of this manual. You may also refer to the separate volume MIDI MINI TEXT.

### 5A LOAD FROM CARD / SAVE TO CARD / FORMAT CARD / PRESET DATA LOAD

<b>5A LOAD</b> CARD Load OK?	<b>5B SAVE</b> Save to CARD OK?	<b>5C FORMAT</b> Format CARD OK?	<b>5D PRESET DATA</b> LOAD OK?
---------------------------------	------------------------------------	-------------------------------------	-----------------------------------

5A	LOAD FROM CARD	Load all program / combination / drum data / global data from card
	[OK]	Execute loading
5B	SAVE TO CARD	Save all program / combination / drum data / global data to card
	[OK]	Execute saving
5C	FORMAT CARD	Format a RAM card
	[OK]	Execute formatting
5D	PRESET DATA LOAD	Load the preset data (program/combination/drum data)
	[OK?]	Execute formatting (initialization)

▼ **LOAD FROM CARD** loads (writes) data saved in a ROM card or RAM card into internal memory.

The previous data in internal memory will be lost when you load, so be sure to save the internal memory data to another card first.

- Loading will not be possible if memory protect is set. (Use [3A] [3B] to defeat memory protect.)
- Move the cursor to "OK?" and press  $\Delta$  /YES to execute loading.
- ☆ Programs C00 – C99 specified by combination parameters will be replaced with I00 – I99 when they are loaded from card into internal memory.
- ☆ The demo performance data in a card cannot be loaded into memory.

▼ **SAVE TO CARD** saves (writes) data from internal memory to a RAM card.

- Before saving data into a new card, you must first format (initialize) it using the steps explained in the following section [5C].
- Saving will not be possible if the card memory protect is set. (Use [3A] [3B] to defeat memory protect.)

• The protect slider located on the upper part of the card must be set to "OFF".

When you save data into a card, the previous data in the card will be lost. To avoid accidentally losing important card data, leave the card protect switch on.

- Move the cursor to "OK?" and press  $\Delta$  /YES to execute saving.
- ☆ Programs I00 – I99 specified by combination parameters will be replaced with C00 – C99 when they are saved from internal memory to a card.

▼ **FORMAT CARD** determines the format of a RAM card, and initializes it to accept data.

- ☆ When purchasing a card, specify the Korg Memory Card RAM (256K Bits) "MCR-03".
- Newly purchased RAM cards must be formatted before they can be used to save or write data.

Formatting a card which already contains data will erase all the data in the card. To avoid accidentally losing important card data, leave the card protect switch on.

• Move the cursor to "OK?" and press  $\Delta$  /YES to execute formatting.

- ▼ **PRESET DATA LOAD** will load the preset data (factory settings) from internal ROM into the internal memory.
- Move the cursor to "OK?", and if you are sure you want to load the preset data, press  $\Delta$  /YES. The preset data will overwrite the data previously in internal memory. (Be sure to save your important data to a card before using this function.)

## THE DISPLAY

The cursor pointed here indicates the parameter which will flash on the display.

### COMBINATION PLAY MODE

- In this mode you can select and play Combinations. You can also edit the Program numbers used by each Combination, and select the protect levels in real time. (However, these changes will not be written, so if you want to keep your data, enter Combination Edit mode and write them into memory.)
- Even while editing the program number or the output level, you can press the F1 key to return to the same condition as when you first selected that combination.
- Displays will differ depending on the combination type.

#### SINGLE

COMB [01] Grand Piano  
100: P100 18: Levels: 88

Key and slider A will select programs. (Keys and sliders B and C will have the same effect.)  
Key and slider D will adjust the output level. (Keys and sliders E–H will have the same effect.)

#### LAYER

COMB [03] Str for Ped  
123: L100 L 1 LSH 138: Str Lines L42

Key and slider A will select the program of layer 1. (B and C will have the same effect.)  
Key and slider D will adjust the level of layer 1.  
Key and slider E will select the program of layer 2. (F and G will have the same effect.)  
Key and slider H will adjust the level of layer 2.

#### SPLIT

COMB [01] Comb 002  
123: B1 123: R1 123: L1 123: R1 123: L1

Upper or lower program will blink

Key and slider A will select the program of the lower layer. (B and C will have the same effect.)  
Key and slider D will adjust the split point. (E will have the same effect.)  
Key and slider F will select the program of the upper layer. (G and H will have the same effect.)

#### VELACITY SWITCH

COMB [03] Comb 002  
123: V10000 123: V10000 123: V10000 123: V10000

Soft or loud program will blink

Key and slider A will select the program of the soft layer. (B and C will have the same effect.)  
Key and slider D will adjust the velocity switch point. (E will have the same effect.)  
Key and slider F will select the program of the loud layer. (G and H will have the same effect.)

## CONNECTION TO THE REI

Connecting the separately sold REI Remote Editor will speed up editing and other operations.

### CONNECTIONS

First, turn off the power of the M3R.  
(1) Connect the M3R to the REI Remote Editor with the M3R cable.  
(2) Turn the M3R power on. Power will be applied to the REI in no time limit, and the REI will be able to control the M3R.

### REI OPERATION

#### Function key operations

After the REI is started, the M3R will be in the REI mode. The function key corresponding to each mode will light (except for Demo Play). Please refer to the accessory card to the M3R.

M3R  
COMBINATION PLAY MODE F1  
COMBINATION EDIT MODE F2  
PROGRAM EDIT MODE F3  
EFFECT MODE F4  
GLOBAL MODE F5  
DRUMS MODE F6  
DEMO PLAY F1–F2

#### To select combinations

- (1) Use the function key 1 (F1, 2) to select COMBINATION PLAY mode.
- (2) Use the 0 – 9 and the UP/DOWN keys to select the COMBINATION NO. Press any key to stop playback.
- If a program card is inserted into the M3R, you will also be able to use the CARD key to select combinations from a card (C00–C99).

#### To hear the demo songs

- (1) Simultaneously press function keys 1 and 2 (F1, 2) and you will hear demo songs.
- (2) If you want to hear a demo song, use the corresponding demo song number to select the demo song.
- If a program card is inserted into the M3R, you will also be able to use the CARD key to select combinations from a card (C00–C99).
- (3) When you press function key 1 (or 2) (F1, 2) once again, you will stop demo play mode.

- To edit parameters:  
(1) Use the PAGE, PAGE keys to select the mode you wish to edit.  
(2) Use the PAGE, PAGE and 0–9 keys to set the page to edit. (These work in the same way as the PAGE, and PAGE keys of the M3R.)

- (3) Use the 0 – 9 keys to select the page number.  
(4) Use the A – H keys and the sliders to edit the parameter.  
(5) When you press a key A – H, the parameter displayed in the LCD above the key will be changed, and you will see the display. Press the UP/DOWN keys to edit the parameter. Press the DEL key to clear the parameter.  
(6) When you press a slider A – H, the parameter displayed in the LCD above the slider will be modified.  
(7) There is no need to press a key A – H.

#### To edit parameters

- (1) Use the PAGE, PAGE keys to select the mode you wish to edit.
- (2) Use the PAGE, PAGE and 0–9 keys to set the page to edit. (These work in the same way as the PAGE, and PAGE keys of the M3R.)

- (3) Use the 0 – 9 keys to select the page number.
- (4) Use the A – H keys and the sliders to edit the parameter.
- (5) When you press a key A – H, the parameter displayed in the LCD above the key will be changed, and you will see the display. Press the UP/DOWN keys to edit the parameter. Press the DEL key to clear the parameter.
- (6) When you press a slider A – H, the parameter displayed in the LCD above the slider will be modified.
- (7) There is no need to press a key A – H.





5-1	VF EXTENDED TRACK PRG 100 VOF END TRK Center Key P-53 BE1L=00 ATO S70 S70 M-115 M75 S85 S75 S75 L-00	4 C, 4 D	M3R 0 A~0 C
6	VDA BG PRG 100 VDA BG M-115 M75 S85 S75 S75 L-00	5 A~5 C	
7	VDA VELOCITY SENSE PRG 100 VDA VEL SENS Amplitude M-115 M75 S85 S75 S75 L-00	6 A, 6 B	
7-1	VDA REFRESH TRACK PRG 100 VDA END TRK Center Key P-53 BE1L=00 ATO S70 S70 M-115 M75 S85 S75 S75 L-00	6 C, 6 D	
8	PITCH NG PRG 100 PITCH NG Reverbors P-53 BE1L=00 ATO S70 S70 M-115 M75 S85 S75 S75 L-00	7 A, 7 B	
8-1	VF NG PRG 100 VOF NG Reverbors P-53 BE1L=00 ATO S70 S70 M-115 M75 S85 S75 S75 L-00	7 C, 7 D	
9	AFTER TOUCH PRG 100 AFTER TOUCH Pitch P-53 BE1L=00 ATO S70 S70 M-115 M75 S85 S75 S75 L-00	8 A, 8 C	
9-1	CONTROL CHANGE PRG 100 CONTROL CHANGE Pitch Bend P-53 BE1L=00 ATO S70 S70 M-115 M75 S85 S75 S75 L-00	9 A~9 C	

0	EFFECT 1 Select EFFECT 1 Hall OFF EFFECT 2 Select	1 A~1 D	
1	EFFECT Parameter Use A-E to select an effect, and F to the sum it OFF/ON.	2 A~2 C	
2	EFFECT 3 Use A-E to select an effect, and F to the sum it OFF/ON.	3 A~3 D	
3	EFFECT Parameter Use A-E to select an effect, and F to the sum it OFF/ON.	4 A, 4 B	
4	PLACEMENT/OUT 344 PAN/OT EFFECT 1 Hall OFF EFFECT 2 Select		

1-5 LIVE SW6

1-5 CROSS FLANGER

EFFECT 1 Live Stage Reverb Time (s)  
Time0 0000 1:00 R:00 00:10

7-1 EARLY REFLECTION 1 (common to 7-9)  
EFFECT 1 Early Ref 1 E/R Time (ms)  
Time0 0000 1:00 R:00 00:10

8-1 EARLY REFLECTION 2  
EFFECT 1 Early Ref 2 E/R Time (ms)  
Time0 0000 1:00 R:00 00:10

9-1 EARLY REFLECTION 3 (common to 10, 11)  
EFFECT 1 Early Ref 3 E/R Time (ms)  
Time0 0000 1:00 R:00 00:10

DELAY  
EFFECT 1 Stereo Delay Time L (ms)  
Time0 0000 1:00 R:00 00:10

10-1 STEREO DELAY (common to 10, 11)  
EFFECT 1 Stereo Delay Time L (ms)  
Time0 0000 1:00 R:00 00:10

11-1 CROSS DELAY  
EFFECT 1 Cross Delay Time L (ms)  
Time0 0000 1:00 R:00 00:10

CHORUS  
EFFECT 1 Chorus 1 Mod Depth  
Time0 0000 1:00 R:00 00:10

12-1 STEREO CHORUS 1  
EFFECT 1 Chorus 1 Mod Depth  
Time0 0000 1:00 R:00 00:10

13-1 STEREO CHORUS 2  
EFFECT 1 Chorus 2 Mod Depth  
Time0 0000 1:00 R:00 00:10

FLANGER  
EFFECT 1 Flanger Mod Depth  
Time0 0000 1:00 R:00 00:10

16-17 LIVE SW6

16-17 CROSS FLANGER

EFFECT 1 V. Flanger Mod Depth  
Time0 0000 1:00 R:00 00:10

18-1 PHASER 1 (common to 16, 17)  
EFFECT 1 Phaser 1 Manual  
Time0 0000 1:00 R:00 00:10

17-1 PHASER 2  
EFFECT 1 Phaser 2 Manual  
Time0 0000 1:00 R:00 00:10

TREMOLO  
EFFECT 1 Tremolo 1 Mod Depth  
Time0 0000 1:00 R:00 00:10

14-1 STEREO TREMOLO 1  
EFFECT 1 Tremolo 1 Mod Depth  
Time0 0000 1:00 R:00 00:10

15-1 STEREO TREMOLO 2  
EFFECT 1 Tremolo 2 Mod Depth  
Time0 0000 1:00 R:00 00:10

EQUALIZER  
EFFECT 1 Equalizer Low Gain (dB)  
Time0 0000 1:00 R:00 00:10

OVER DRIVE  
EFFECT 1 Over Drive Drive  
Time0 0000 1:00 R:00 00:10

21-1 OVER DRIVE  
EFFECT 1 Over Drive Drive  
Time0 0000 1:00 R:00 00:10

22-1 DISTORTION  
EFFECT 1 Distortion Distortion  
Time0 0000 1:00 R:00 00:10

18-20 LIVE SW6

18-20 CROSS FLANGER

EFFECT 1 V. Flanger Mod Depth  
Time0 0000 1:00 R:00 00:10

19-1 PHASER 1 (common to 18, 17)  
EFFECT 1 Phaser 1 Manual  
Time0 0000 1:00 R:00 00:10

17-1 PHASER 2  
EFFECT 1 Phaser 2 Manual  
Time0 0000 1:00 R:00 00:10

TREMOLO  
EFFECT 1 Tremolo 1 Mod Depth  
Time0 0000 1:00 R:00 00:10

14-1 STEREO TREMOLO 1  
EFFECT 1 Tremolo 1 Mod Depth  
Time0 0000 1:00 R:00 00:10

15-1 STEREO TREMOLO 2  
EFFECT 1 Tremolo 2 Mod Depth  
Time0 0000 1:00 R:00 00:10

EQUALIZER  
EFFECT 1 Equalizer Low Gain (dB)  
Time0 0000 1:00 R:00 00:10

OVER DRIVE  
EFFECT 1 Over Drive Drive  
Time0 0000 1:00 R:00 00:10

21-1 OVER DRIVE  
EFFECT 1 Over Drive Drive  
Time0 0000 1:00 R:00 00:10

22-1 DISTORTION  
EFFECT 1 Distortion Distortion  
Time0 0000 1:00 R:00 00:10



**MIDI CHANNEL MESSAGES**

0	DRUM KIT 1 [00] [01] [02] [03] [04] [05] [06] [07] [08] [09] [10] [11] [12] [13] [14] [15]	0A~0C
1	DRUM KIT 2 [00] [01] [02] [03] [04] [05] [06] [07] [08] [09] [10] [11] [12] [13] [14] [15]	1A~1C
2	DRUM KIT 3 [00] [01] [02] [03] [04] [05] [06] [07] [08] [09] [10] [11] [12] [13] [14] [15]	2A~2C
3	DRUM KIT 4 [00] [01] [02] [03] [04] [05] [06] [07] [08] [09] [10] [11] [12] [13] [14] [15]	3A~3C
<b>DEMO mode</b> [00] [01] [02] [03] [04] [05] [06] [07] [08] [09] [10] [11] [12] [13] [14] [15]		

**TRANSMITTED DATA ( DEMO PLAYING DATA in not transmitted)**

STATUS	Second	Third	Description	EM
1000 0000	0000 0000	0100 0000	Notes Off	0
1001 0000	0000 0000	0100 0000	Notes On	0
1011 0000	0000 0000	0100 0000	Volume	0
1011 0000	0000 0000	0100 0000	Pitch Modulation	0
1011 0000	0000 0000	0100 0000	VPF Modulation	0
1011 0000	0000 0000	0100 0000	Data Entry (MSB) ( & Editor Slider ) #1	0
1011 0000	0000 0000	0100 0000	Volume	0
1011 0000	0000 0000	0100 0000	Data Entry (LSB) ( & Editor Slider ) #1	0
1011 0000	0000 0000	0100 0000	Damper Off	0
1011 0000	0000 0000	0100 0000	Damper On	0
1011 0000	0000 0000	0100 0000	Rotary SP Effect Speed Slow	0
1011 0000	0000 0000	0100 0000	Rotary SP Effect Speed Fast	0
1011 0000	0000 0000	0100 0000	Data Increment ( △/RES Switch ) #1	0
1011 0000	0000 0000	0100 0000	Data Decrement ( ▽/MS Switch ) #1	0
1100 0000	0000 0000	0000 0000	Program Change (Program of Chan)	0
1101 0000	0000 0000	0000 0000	Channel Pressure	0
1110 0000	0000 0000	0000 0000	Bank Change	0

EM : MIDI Channel No. (0~15) Usually Global Channel. When using MIDI Overflow, each MIDI channel #EM : MIDI Channel No. (0~15) Always Global Channel.

- EM : Always Enabled
- P : Enabled when Program Change EM
- O : Enabled when Overflow is On
- C : Enabled when Control Change EM
- E : Enabled when Exclusive EM
- X : Enabled when Remote Editor is connected
- CO : C AND O
- EO : E AND O
- EX : E AND X

#1 : Except GLOBAL DEMO Mode

**1-2 SYSTEM REALTIME MESSAGES**

STATUS	Second	Third	Description
1111 1110	Active Sensing		

**1-4 SYSTEM EXCLUSIVE MESSAGES**

Byte List	Description
1111 0000 (FF)	EXCLUSIVE STATUS
0111 1110 (00)	NON REALTIME MESSAGE
0000 0110 (00)	MIDI GLOBAL CHANNEL ( DEVICE ID )
0000 0110 (00)	IDENTITY MESSAGE
0000 0110 (02)	IDENTITY REPLY
0100 0100 (12)	ORG ID
0100 0100 (24)	MSG ID
0000 0000 (00)	MANUFACTURER (ID)
0000 0000 (00)	( FAMILY CODE (LSB) )
0000 0000 (00)	( MAKE CODE (LSB) )
0000 0000 (00)	( MODEL No. (LSB) )
0000 0000 (00)	( Minor Ver. (LSB) )
0000 0000 (00)	( Major Ver. (LSB) )
0000 0000 (00)	( Major Ver. (LSB) )
0000 0000 (00)	( Minor Ver. (LSB) )
1111 0111 (FF)	END OF EXCLUSIVE

Transmitted when an INQUIRY MESSAGE REQUEST is received.

**1-4 SYSTEM EXCLUSIVE MESSAGES ( Both Transmitted and Received )**

Byte	Meaning
1st Byte : 1111 0000 (FD)	Exclusive Status
2nd Byte : 0100 0100 (12)	ORG ID
3rd Byte : 0011 0000 (30)	Forward ID of Global Ch
4th Byte : 0010 0100 (24)	MSG ID
5th Byte : 0111 1111 (FF)	Function Code
6th Byte : 0000 0000 (00)	Data
Last Byte : 1111 0111 (FD)	End of Exclusive

**Function Code List**

Func.	Description	R	L	C	D	E
02	MIDI DATA					
03	MIDI SUBPROGRAM CHG NAME					
04	MIDI SUBPROGRAM END NAME					
05	PARAMETER CHANGE					
06	PROGRAM PARAMETER DUMP					
07	ALL PROGRAM PARAMETER DUMP					
08	COMBINATION PARAMETER DUMP					
09	ALL COMBINATION PARAMETER DUMP					
10	GLOBAL DATA DUMP					
11	ALL PARAMETER DUMP (MIDI, CH, PROG, DUMP)					
12	RECEIVED MESSAGE FORMAT ERROR					
13	DATA LOAD COMPLETED					
14	DATA LOAD ERROR					
15	WRITE COMPLETED					
16	WRITE ERROR					

Transmitted when  
 R : Request Message is received  
 C : Code or No. is changed by SF  
 D : Data dump by SF  
 E : Does not respond to Exclusive On/Off  
 S : EI Message is received

**2-1 CHANNEL MESSAGES**

STATUS	Second	Third	Description	EM
1000 0000	0000 0000	0100 0000	Notes Off	A
1001 0000	0000 0000	0100 0000	Notes On	A
1011 0000	0000 0000	0100 0000	Volume	A
1011 0000	0000 0000	0100 0000	Pitch Modulation	C
1011 0000	0000 0000	0100 0000	VPF Modulation	C
1011 0000	0000 0000	0100 0000	Data Entry (MSB)	E, 2.3
1011 0000	0000 0000	0100 0000	Volume	C
1011 0000	0000 0000	0100 0000	Data Entry (LSB)	E, 2.3
1011 0000	0000 0000	0100 0000	Damper Off	C
1011 0000	0000 0000	0100 0000	Damper On	C
1011 0000	0000 0000	0100 0000	Rotary Effect Speed Slow	C
1011 0000	0000 0000	0100 0000	Rotary Effect Speed Fast	C
1011 0000	0000 0000	0100 0000	Data Increment	E, 2.3
1011 0000	0000 0000	0100 0000	Data Decrement	E, 2.3
1011 0000	0000 0000	0100 0000	RPC Parameter No. (LSB) ( & Tune ) #3	E
1011 0000	0000 0000	0100 0000	RPC Parameter No. (MSB) ( & Tune ) #3	E
1011 0000	0000 0000	0100 0000	All Notes Off	A
1011 0000	0000 0000	0100 0000	All Notes On	A
1011 0000	0000 0000	0100 0000	All Notes Off (All Notes Off)	A
1011 0000	0000 0000	0100 0000	All Notes On (All Notes On)	A
1100 0000	0000 0000	0000 0000	Combination Program Change	E, 3.1
1101 0000	0000 0000	0000 0000	Program Change	E, 3
1110 0000	0000 0000	0000 0000	Channel Pressure	C
1110 0000	0000 0000	0000 0000	Bank Change	C

EM : MIDI Channel No. (0~15) Usually Global Channel. In MULTI Mode, MIDI channel for each #EM : MIDI Channel No. (0~15) Global Channel only.

E, 3 : Same as TRANSMITTED DATA

E, 2.3 : Except is GLOBALLY Active at MASTER TIME 3. DEMO Mode

E, 3.1 : After a received message has been processed (While Exclusive On).

#3 : Transmits Exclusive Message (DATA LOAD COMPLETED) (DATA LOAD ERROR).

#4 : Usually selects a Combination when in PROGRAM EDIT Mode, selects a Program

2-2 SYSTEM REALTIME MESSAGES

Status	Description
1111 1110	Active Station

2-3 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (OFFICE INQUIRY REQUEST)

Byte	Description
1111 0000 (70)	EXCLUSIVE STATION
0111 1110 (78)	NON REALTIME MESSAGE
0000 0010 (84)	1101 CALL MESSAGE (SERVICE ID #5)
0000 0011 (85)	1102 CALL MESSAGE
0000 0010 (81)	INQUIRY REQUEST
1111 0111 (72)	END OF EXCLUSIVE

\* 5 - P - T : Received on the Global Channel.  
 \* 7F : Received on any Channel

2-4 SYSTEM EXCLUSIVE MESSAGES

Function Code List

Func.	Byte	Description	G	C	P	No.
12	1111 0000 (70)	MODE REQUEST	0	0	0	42
13	0000 0000	DRUMS SOUND(PCB CARD) NAME DUMP REQUEST	0	0	0	47
14	0001 0010	MULTISOUND(PCB CARD) NAME DUMP REQUEST	0	0	0	45
15	0000 0000	PROGRAM PARAMETER DUMP REQUEST	0	0	0	40
16	0001 0000	ALL PROGRAM PARAMETER DUMP REQUEST	0	0	0	40
17	0000 0000	COMBINATION PARAMETER DUMP REQUEST	0	0	0	40
18	0001 0000	ALL COMBINATION PARAMETER DUMP REQUEST	0	0	0	40
19	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
20	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
21	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
22	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
23	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
24	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
25	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
26	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
27	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
28	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
29	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
30	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
31	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
32	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
33	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
34	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
35	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
36	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
37	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
38	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
39	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
40	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
41	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
42	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
43	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
44	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
45	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
46	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
47	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
48	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
49	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
50	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
51	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
52	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
53	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
54	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
55	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
56	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
57	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
58	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
59	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
60	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
61	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
62	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
63	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
64	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
65	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
66	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
67	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
68	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
69	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
70	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
71	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
72	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
73	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
74	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
75	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
76	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
77	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
78	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
79	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
80	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
81	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
82	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
83	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
84	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
85	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
86	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
87	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
88	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
89	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
90	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
91	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
92	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
93	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
94	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
95	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
96	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
97	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
98	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
99	0000 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40
100	0001 0000	GLOBAL DATA DUMP REQUEST	0	0	0	40

Received when:  
 G : GLOBAL DRUMS MODE  
 C : COMB. CARD E. LEFT MODE  
 P : PROG E. MODE

No. : MIDI Out Function No.  
 transmitted after the message has been received.

3. MIDI EXCLUSIVE MESSAGE FORMAT

R : Received, T : Transmitted

(1) MODE REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 0010	MODE REQUEST
1111 0111	EOX

Receives this message, and transmits Func-42 message.

(2) DRUMS SOUND(PCB CARD) NAME DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 1111	DRUMS SOUND(PCB CARD) NAME DUMP REQ. 18h
1111 0111	EOX

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

(3) MULTISOUND(PCB CARD) NAME DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 0110	MULTISOUND(PCB CARD) NAME DUMP REQ. 18h
1111 0111	EOX

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

(4) PROGRAM PARAMETER DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 0000	PROGRAM PARAMETER DUMP REQUEST 10h
1111 0111	EOX

Receives this message, and transmits Func-10 or Func-24 message.

(5) ALL PROGRAM PARAMETER DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 0000	ALL PROGRAM PARAMETER DUMP REQUEST 10h
0000 0000	Bank
1111 0111	EOX

Receives this message, and transmits Func-10 or Func-24 message.

(6) COMBINATION PARAMETER DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 1001	COMBINATION PARAMETER DUMP REQUEST 10h
1111 0111	EOX

Receives this message, and transmits Func-10 or Func-24 message.

(7) ALL COMBINATION PARAMETER DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 1101	ALL COMB. PARAMETER DUMP REQUEST 10h
0000 0000	Bank
1111 0111	EOX

Receives this message, and transmits Func-10 or Func-24 message.

(8) GLOBAL DATA DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0000 1110	GLOBAL DATA DUMP REQUEST (See NOTE 3)
0000 0000	Bank
1111 0111	EOX

Receives this message, and transmits Func-21 or Func-24 message.

(9) DRUMS DATA DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0000 1101	DRUMS DATA DUMP REQUEST (See NOTE 3)
0000 0000	Bank
1111 0111	EOX

Receives this message, and transmits Func-52 or Func-24 message.

(10) ALL DATA GLOBAL DRUMS COMB. PROG. DUMP REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0000 1111	ALL DATA GLOBAL DRUMS COMB. PROG. DUMP REQ. 07h
0000 0000	Bank
1111 0111	EOX

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

(11) PROGRAM WRITE REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 0001	PROGRAM WRITE REQUEST (See NOTE 3)
0000 0000	Bank
1111 0111	EOX

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

(12) COMBINATION WRITE REQUEST

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0001 1010	COMBINATION WRITE REQUEST (See NOTE 3)
0000 0000	Bank
0ppp pppp	Write Combination No. (0-99)
1111 0111	EOX

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

(13) PROGRAM PARAMETER DUMP

Byte	Description
70.42.3h.24	EXCLUSIVE HEADER
0100 0000	PROGRAM PARAMETER DUMP 40h
0000 0000	Bank
0000 0000	Data (24byte)
1111 0111	EOX

Receives this message & data, and transmits Func-23 or Func-24 message.  
 Receives Func-10 message, and transmits this message & data.  
 When the Program is selected No. by SW, this message & data is transmitted.

(18) DRUMS DATA DUMP

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0100 0110	DRUMS DATA DUMP
0000 0000	Bank (See NOTE 3)
0000 0000	Drum Sound Number (See NOTE 1)
0000 0000	Data (See NOTE 1)
1111 0111	EOF

Receives this message & data, and transmits Func-23 or Func-24 message.  
Receives Func-20 message, and transmits this message & data.  
Transmits this message & data when DATA DUMP is executed.

(19) ALL DATA GLOBAL DRUMS COMB. PROG. DUMP

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0101 0000	ALL DATA GLOBAL DRUMS COMB. PROG. DUMP
0000 0000	Bank (See NOTE 3)
0000 0000	Data (32358byte) (See NOTE 12)
1111 0111	EOF

Receives this message & data, and transmits Func-23 or Func-24 message.  
Receives Func-20 message, and transmits this message & data.  
Transmits this message & data when DATA DUMP is executed.

(20) MODE CHANGE

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0108 1110	MODE CHANGE
0000 0000	Mode Data (See NOTE 1, 2)
0000 0000	Bank (See NOTE 2, 3)
1111 0111	EOF

Receives this message & data, and changes the Mode, Bank and transmits Func-23 or Func-24 message.  
Then the Mode is changed by SF, transmits this message & data (a of Mode-1).  
Then the Controller (MR or RE) is changed, transmits this message & data (b of Bank & Mode-1).  
Then the Bank is changed by SF, transmits this message & data (c of Bank-c).

(21) PARAMETER CHANGE

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0100 0001	PARAMETER CHANGE
0000 0000	Parameter No. (See TABLE 3)
0000 0000	Value (0-15) (See NOTE 1)
0000 0000	Value (0-15) (See NOTE 15)
1111 0111	EOF

Receives this message & data, and transmits Func-23 or Func-24 message.  
Then the Parameter No. is changed by SF, and transmits this message & data.

(22) MODE DATA

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0100 0010	MODE DATA
0000 0000	Mode Data (See NOTE 1)
0011 0000	Card Variation (See NOTE 4)
0000 0000	PCS Card Variation (See NOTE 5)
1111 0111	EOF

Receives Func-19 message, and transmits this message & data.

NOTE 1 : a : COMBINATION PLAY    b : GLOBAL  
 1 : COMBINATION EDIT    4 : PROGRAM EDIT  
 2 : EFFECT    5 : DRUMS  
 3 : DRUM PLAY (Not received)    8 : DRUM PLAY (Not received)

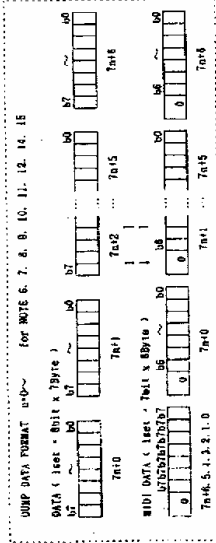
r : 0 : None  
 1 : Remote Controlled

NOTE 2 : b : 0 : Change the Mode, Bank  
 1 : Don't change the Mode, Bank

NOTE 3 : c : 0 : Interval  
 1 : Card

NOTE 4 : 1 : 0 : Card Off  
 0 : 1 : IC Card (ROM)  
 0 : 2 : - : (RAM)  
 1 : 0 : ROM Card  
 2 : 0 : RAM Card (Protect Off)  
 3 : 0 : - : ( - : Off)

NOTE 5 : a : 0 : Card Off  
 1 : IC Card  
 2 : PCS Card in



NOTE 6 : PROGRAM PARAMETER DUMP FORMAT  
 (Parameter No. 00) ..... (Parameter No. 71)  
 75Byte \* 7x10 = 810(1115) \* 88Byte

NOTE 7 : ALL PROGRAM PARAMETER DUMP FORMAT  
 (Prog. No. 00 (75Byte)) ..... (Prog. No. 99 (75Byte))  
 7500Byte \* 7x1071 = 81071(1113) \* 85728Byte (2.75sec)

NOTE 8 : COMBINATION PARAMETER DUMP FORMAT  
 (Parameter No. 00) ..... (Parameter No. 105)  
 126Byte \* 7x10 = 918 \* 1440Byte

(23) MULTI-SOUND (CARD) NAME

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0100 0111	MULTI-SOUND (CARD) NAME
0000 0000	Drum Sound Number (See NOTE 1)
0000 0000	Data (See NOTE 1)
1111 0111	EOF

Receives Func-17 message, and transmits this message & data, or transmits Func-24 message.

(24) MULTI-SOUND (CARD) NAME

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0100 0101	MULTI-SOUND (CARD) NAME
0000 0000	Drum Sound Number (See NOTE 15)
0000 0000	Data (See NOTE 15)
1111 0111	EOF

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

(25) END OF DATA FORMAT ERROR

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0100 0110	END OF DATA FORMAT ERROR
1111 0111	EOF

Transmits this message when there is an error in the END OF message (on data length).

(26) DATA LOAD COMPLETED

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0010 0011	DATA LOAD COMPLETED
1111 0111	EOF

Transmits this message when DATA LOAD PROCESSING have been completed.

(27) DATA LOAD ERROR

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0010 0100	DATA LOAD ERROR
1111 0111	EOF

Transmits this message when DATA LOAD PROCESSING have failed (on protected).

(28) WHITE COMPLETED

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0010 0001	WHITE COMPLETED
1111 0111	EOF

Transmits this message when DATA WHITE EIDI has been completed.

(29) WHITE ERROR

Byte	Description
FR.42.36.24	EXCLUSIVE HEADER
0010 0010	WHITE ERROR
1111 0111	EOF

Transmits this message when DATA WHITE EIDI has failed.

NOTE 9 : ALL COMBINATION PARAMETER DUMP FORMAT

{Comb. No. 00 (188Byte)} ..... {Comb. No. 91 (188Byte)}  
 12600Byte \* 7x10010 = 81010 \* 14400Byte (4.55sec)  
 (See TABLE 3)

NOTE 10 : GLOBAL DATA DUMP FORMAT

{Global Data (318Byte)}  
 218Byte \* 7x10 = 818 \* 240Byte  
 (See TABLE 4)

NOTE 11 : DRUMS DATA DUMP FORMAT

{Drum Data (7330x818Byte)}  
 8100Byte \* 7x12610 = 81210 \* 8400Byte (0.35sec)

NOTE 12 : ALL DATA (GLOBAL DRUMS COMB. PROG.) DUMP FORMAT

{Global Data} (See NOTE 10),  
 {Drum Data} (See NOTE 11),  
 {All Combination Parameter Data} (See NOTE 9),  
 {All Program Parameter Data} (See NOTE 7)  
 21880(12600+7300)Byte \* 7x81910 = 828910 \* 21058Byte (7.75sec)

NOTE 13 : VALUE DATA FORMAT (Use at Func-4) PARAMETER CHANGE

810Byte \* 7x10 = 810 \* 88Byte



NOTE 14 : DRUM SOUND (CARD) NAME DATA FORMAT  
 {Drum Sound Name (108Byte)} ..... {Drum Sound Name (108Byte)}  
 0 : Drum Sound Number

NOTE 15 : MULTI-SOUND (CARD) NAME DATA FORMAT  
 {MultiSound Name (108Byte)} ..... {MultiSound Name (108Byte)}  
 0 : MultiSound Number

M3r92\_93.gif (1700x2240x2 gif)

M3R PROGRAM PARAMETERS (TABLE 1)

Table with 3 columns: No., PARAMETER, DATA(Bits) VALUE. Rows include PROFORM NAME (Head), OSCILLATOR, MODULATOR, MULTISOUND/AMBIENT, DELAY TIME, WAVE FORM, (DRUMS), LET TIME, FREQUENCY, INTENSITY, CUTOFF, WAVE FORM, (DRUMS), LET TIME, FREQUENCY, INTENSITY, CUTOFF, WAVE FORM, (DRUMS), LET TIME, FREQUENCY, INTENSITY, CUTOFF.

#1: bit0 : ATTACK TIME ST 0:OFF, 1:ON
bit1 : DECAY TIME ST 0:OFF, 1:ON
bit2 : RELEASE TIME ST 0:OFF, 1:ON
bit3 : ATTACK TIME POLARITY 0:+, 1:-
bit4 : ATTACK TIME POLARITY 0:+, 1:-
bit5 : DECAY TIME POLARITY 0:+, 1:-
bit6 : RELEASE TIME POLARITY 0:+, 1:-
bit7 : MULTI SOUND 0:0, 1:1
#2: 0 : MULTI SOUND
2 : DRUM

#2-2 : When MULTISOUND 0~59 : into-01, 60~ then DRUM KIT 0~3 : into-4, 4~7 : Card1~4

#3 : 00 : OFF #10 : bit0:Effect L-Ch Off, 1:On
01 : L bit1:0 - 1-Ch Off, 1:On
02 : 99 01 bit2:0 - 2-Ch Off, 1:On
03 : 01 01 bit3:0 - 3-Ch Off, 1:On
84 : 01 01 bit4:0-Effect Para-1Serial
85 : k bit5:0-Effect Para-1Serial

EFFECT PARAMETERS

Table with 3 columns: #1: Effect Parameter (8Bit), DATA(Bits) VALUE. Rows include 001: Effect Parameter (8Bit), 002: Effect Parameter (8Bit), 003: Effect Parameter (8Bit), 004: Effect Parameter (8Bit), 005: Effect Parameter (8Bit), 006: Effect Parameter (8Bit), 007: Effect Parameter (8Bit), 008: Effect Parameter (8Bit), 009: Effect Parameter (8Bit), 010: Effect Parameter (8Bit), 011: Effect Parameter (8Bit), 012: Effect Parameter (8Bit), 013: Effect Parameter (8Bit), 014: Effect Parameter (8Bit), 015: Effect Parameter (8Bit), 016: Effect Parameter (8Bit), 017: Effect Parameter (8Bit), 018: Effect Parameter (8Bit), 019: Effect Parameter (8Bit), 020: Effect Parameter (8Bit), 021: Effect Parameter (8Bit), 022: Effect Parameter (8Bit), 023: Effect Parameter (8Bit), 024: Effect Parameter (8Bit), 025: Effect Parameter (8Bit), 026: Effect Parameter (8Bit), 027: Effect Parameter (8Bit), 028: Effect Parameter (8Bit), 029: Effect Parameter (8Bit), 030: Effect Parameter (8Bit), 031: Effect Parameter (8Bit), 032: Effect Parameter (8Bit), 033: Effect Parameter (8Bit), 034: Effect Parameter (8Bit), 035: Effect Parameter (8Bit), 036: Effect Parameter (8Bit), 037: Effect Parameter (8Bit), 038: Effect Parameter (8Bit), 039: Effect Parameter (8Bit), 040: Effect Parameter (8Bit), 041: Effect Parameter (8Bit), 042: Effect Parameter (8Bit), 043: Effect Parameter (8Bit), 044: Effect Parameter (8Bit), 045: Effect Parameter (8Bit), 046: Effect Parameter (8Bit), 047: Effect Parameter (8Bit), 048: Effect Parameter (8Bit), 049: Effect Parameter (8Bit), 050: Effect Parameter (8Bit), 051: Effect Parameter (8Bit), 052: Effect Parameter (8Bit), 053: Effect Parameter (8Bit), 054: Effect Parameter (8Bit), 055: Effect Parameter (8Bit), 056: Effect Parameter (8Bit), 057: Effect Parameter (8Bit), 058: Effect Parameter (8Bit), 059: Effect Parameter (8Bit), 060: Effect Parameter (8Bit), 061: Effect Parameter (8Bit), 062: Effect Parameter (8Bit), 063: Effect Parameter (8Bit), 064: Effect Parameter (8Bit), 065: Effect Parameter (8Bit), 066: Effect Parameter (8Bit), 067: Effect Parameter (8Bit), 068: Effect Parameter (8Bit), 069: Effect Parameter (8Bit), 070: Effect Parameter (8Bit), 071: Effect Parameter (8Bit), 072: Effect Parameter (8Bit), 073: Effect Parameter (8Bit), 074: Effect Parameter (8Bit), 075: Effect Parameter (8Bit), 076: Effect Parameter (8Bit), 077: Effect Parameter (8Bit), 078: Effect Parameter (8Bit), 079: Effect Parameter (8Bit), 080: Effect Parameter (8Bit), 081: Effect Parameter (8Bit), 082: Effect Parameter (8Bit), 083: Effect Parameter (8Bit), 084: Effect Parameter (8Bit), 085: Effect Parameter (8Bit), 086: Effect Parameter (8Bit), 087: Effect Parameter (8Bit), 088: Effect Parameter (8Bit), 089: Effect Parameter (8Bit), 090: Effect Parameter (8Bit), 091: Effect Parameter (8Bit), 092: Effect Parameter (8Bit), 093: Effect Parameter (8Bit), 094: Effect Parameter (8Bit), 095: Effect Parameter (8Bit), 096: Effect Parameter (8Bit), 097: Effect Parameter (8Bit), 098: Effect Parameter (8Bit), 099: Effect Parameter (8Bit), 100: Effect Parameter (8Bit).

COMBINATION PARAMETER (TABLE 2)

Table with 3 columns: No., PARAMETER, DATA(Bits) VALUE. Rows include COMBINATION CONTROLLER, COMB RATE (Head), COMB RATE (Tail), COMBINATION TYPE, EFFECT PARAMETER, EFFECT PARAMETER No, L-CH BALANCE, L-CH, R-CH, OUTPUT 3 PH, EFFECT ON, EFFECT 1 PARAMETER, EFFECT 2 PARAMETER, TAMBRE 1 PARAMETER, EFFECT LEVEL, EFFECT RESPONSE, EFFECT, PAN, KEY WINDOW TOP, KEY WINDOW BOTTOM, KEY WINDOW TOP, KEY WINDOW BOTTOM, CONTROL FILTER, KID CHANNEL, TAMBRE 2-3 PARAMETER, SANS AS TAMBRE (2E~4E) X 7.

#1 : 0 : EQUAL
1 : RANDOM
2 : PANS MAJOR
3 : PANS MINOR
4 : USER SCALE
#2 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#3 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#4 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

GLOBAL PARAMETER (TABLE 3)

Table with 3 columns: No., PARAMETER, DATA(Bits) VALUE. Rows include GLOBAL PARAMETER, MASTER TUNE, KEY TRANSPOSE, (MUL), EFFECT LINKAGE, SOLY TYPE, USER SCALE, (MUL), (MUL).

DRUMS DATA (TABLE 4)

Table with 3 columns: No., PARAMETER, DATA(Bits) VALUE. Rows include DRUM KIT1-INDX0, INSTRUMENT NO., PAN, TUNE, LEVEL, DRUM KIT1-INDEX1, SANS AS DRUM KIT1-000~007 X(001~1).

#5 : 0 : EQUAL
1 : RANDOM
2 : PANS MAJOR
3 : PANS MINOR
4 : USER SCALE
#6 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#7 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#8 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

COMBINATION PARAMETER (TABLE 2)

Table with 3 columns: No., PARAMETER, DATA(Bits) VALUE. Rows include COMBINATION CONTROLLER, COMB RATE (Head), COMB RATE (Tail), COMBINATION TYPE, EFFECT PARAMETER, EFFECT PARAMETER No, L-CH BALANCE, L-CH, R-CH, OUTPUT 3 PH, EFFECT ON, EFFECT 1 PARAMETER, EFFECT 2 PARAMETER, TAMBRE 1 PARAMETER, EFFECT LEVEL, EFFECT RESPONSE, EFFECT, PAN, KEY WINDOW TOP, KEY WINDOW BOTTOM, KEY WINDOW TOP, KEY WINDOW BOTTOM, CONTROL FILTER, KID CHANNEL, TAMBRE 2-3 PARAMETER, SANS AS TAMBRE (2E~4E) X 7.

#1 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#2 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#3 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#4 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#5 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#6 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#7 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#8 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#9 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#10 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#11 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#12 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#13 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#14 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#15 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#16 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#17 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#18 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#19 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#20 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#21 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#22 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#23 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#24 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA

#25 : 0 : SINGLE
1 : LAYER
2 : SPATIAL
3 : VEL SW
4 : RDT1
00 : 0

#26 : bit0 : PROGRAM CHANGE 0:DIS, 1:ENA
bit1 : AFTER TOUCH 0:DIS, 1:ENA
bit2 : CONTROL CHANGE 0:DIS, 1:ENA
bit3 : DAMPER 0:DIS, 1:ENA



MAR PARAMETER No. — OFFSBT (TABLE)

No. Higher used for a MASTER CHINA (Page 111)  
 OTHER NUMBER INDICATED IN TABLE 111  
 PROGRAM PARAMETER

NO.	PARAMETER	MIN.	MAX.	UNIT	OFFSBT
1	ADJUST VOLT	0	10	V	15
2	ADJUST CURR	0	10	mA	15
3	ADJUST TIME	0	10	min	15
4	ADJUST TEMP	0	10	°C	15
5	ADJUST PRESS	0	10	MPa	15
6	ADJUST HUMID	0	10	%	15
7	ADJUST SPEED	0	10	rpm	15
8	ADJUST TORQUE	0	10	Nm	15
9	ADJUST POWER	0	10	W	15
10	ADJUST EFFICIENCY	0	10	%	15
11	ADJUST VIBRATION	0	10	mm/s	15
12	ADJUST NOISE	0	10	dB	15
13	ADJUST ACIDITY	0	10	pH	15
14	ADJUST SALINITY	0	10	g/L	15
15	ADJUST CONDUCTIVITY	0	10	µS/cm	15
16	ADJUST OXYGEN	0	10	mg/L	15
17	ADJUST PHOSPHORUS	0	10	mg/L	15
18	ADJUST NITROGEN	0	10	mg/L	15
19	ADJUST AMMONIUM	0	10	mg/L	15
20	ADJUST NITRATE	0	10	mg/L	15
21	ADJUST NITRATES	0	10	mg/L	15
22	ADJUST NITRATES	0	10	mg/L	15
23	ADJUST NITRATES	0	10	mg/L	15
24	ADJUST NITRATES	0	10	mg/L	15
25	ADJUST NITRATES	0	10	mg/L	15
26	ADJUST NITRATES	0	10	mg/L	15
27	ADJUST NITRATES	0	10	mg/L	15
28	ADJUST NITRATES	0	10	mg/L	15
29	ADJUST NITRATES	0	10	mg/L	15
30	ADJUST NITRATES	0	10	mg/L	15
31	ADJUST NITRATES	0	10	mg/L	15
32	ADJUST NITRATES	0	10	mg/L	15
33	ADJUST NITRATES	0	10	mg/L	15
34	ADJUST NITRATES	0	10	mg/L	15
35	ADJUST NITRATES	0	10	mg/L	15
36	ADJUST NITRATES	0	10	mg/L	15
37	ADJUST NITRATES	0	10	mg/L	15
38	ADJUST NITRATES	0	10	mg/L	15
39	ADJUST NITRATES	0	10	mg/L	15
40	ADJUST NITRATES	0	10	mg/L	15
41	ADJUST NITRATES	0	10	mg/L	15
42	ADJUST NITRATES	0	10	mg/L	15
43	ADJUST NITRATES	0	10	mg/L	15
44	ADJUST NITRATES	0	10	mg/L	15
45	ADJUST NITRATES	0	10	mg/L	15
46	ADJUST NITRATES	0	10	mg/L	15
47	ADJUST NITRATES	0	10	mg/L	15
48	ADJUST NITRATES	0	10	mg/L	15
49	ADJUST NITRATES	0	10	mg/L	15
50	ADJUST NITRATES	0	10	mg/L	15
51	ADJUST NITRATES	0	10	mg/L	15
52	ADJUST NITRATES	0	10	mg/L	15
53	ADJUST NITRATES	0	10	mg/L	15
54	ADJUST NITRATES	0	10	mg/L	15
55	ADJUST NITRATES	0	10	mg/L	15
56	ADJUST NITRATES	0	10	mg/L	15
57	ADJUST NITRATES	0	10	mg/L	15
58	ADJUST NITRATES	0	10	mg/L	15
59	ADJUST NITRATES	0	10	mg/L	15
60	ADJUST NITRATES	0	10	mg/L	15
61	ADJUST NITRATES	0	10	mg/L	15
62	ADJUST NITRATES	0	10	mg/L	15
63	ADJUST NITRATES	0	10	mg/L	15
64	ADJUST NITRATES	0	10	mg/L	15
65	ADJUST NITRATES	0	10	mg/L	15
66	ADJUST NITRATES	0	10	mg/L	15
67	ADJUST NITRATES	0	10	mg/L	15
68	ADJUST NITRATES	0	10	mg/L	15
69	ADJUST NITRATES	0	10	mg/L	15
70	ADJUST NITRATES	0	10	mg/L	15
71	ADJUST NITRATES	0	10	mg/L	15
72	ADJUST NITRATES	0	10	mg/L	15
73	ADJUST NITRATES	0	10	mg/L	15
74	ADJUST NITRATES	0	10	mg/L	15
75	ADJUST NITRATES	0	10	mg/L	15
76	ADJUST NITRATES	0	10	mg/L	15
77	ADJUST NITRATES	0	10	mg/L	15
78	ADJUST NITRATES	0	10	mg/L	15
79	ADJUST NITRATES	0	10	mg/L	15
80	ADJUST NITRATES	0	10	mg/L	15
81	ADJUST NITRATES	0	10	mg/L	15
82	ADJUST NITRATES	0	10	mg/L	15
83	ADJUST NITRATES	0	10	mg/L	15
84	ADJUST NITRATES	0	10	mg/L	15
85	ADJUST NITRATES	0	10	mg/L	15
86	ADJUST NITRATES	0	10	mg/L	15
87	ADJUST NITRATES	0	10	mg/L	15
88	ADJUST NITRATES	0	10	mg/L	15
89	ADJUST NITRATES	0	10	mg/L	15
90	ADJUST NITRATES	0	10	mg/L	15
91	ADJUST NITRATES	0	10	mg/L	15
92	ADJUST NITRATES	0	10	mg/L	15
93	ADJUST NITRATES	0	10	mg/L	15
94	ADJUST NITRATES	0	10	mg/L	15
95	ADJUST NITRATES	0	10	mg/L	15
96	ADJUST NITRATES	0	10	mg/L	15
97	ADJUST NITRATES	0	10	mg/L	15
98	ADJUST NITRATES	0	10	mg/L	15
99	ADJUST NITRATES	0	10	mg/L	15
100	ADJUST NITRATES	0	10	mg/L	15

EFFECT PARAMETERS

NO.	PARAMETER	MIN.	MAX.	UNIT	OFFSBT
1	ADJUST VOLT	0	10	V	15
2	ADJUST CURR	0	10	mA	15
3	ADJUST TIME	0	10	min	15
4	ADJUST TEMP	0	10	°C	15
5	ADJUST PRESS	0	10	MPa	15
6	ADJUST HUMID	0	10	%	15
7	ADJUST SPEED	0	10	rpm	15
8	ADJUST TORQUE	0	10	Nm	15
9	ADJUST POWER	0	10	W	15
10	ADJUST EFFICIENCY	0	10	%	15
11	ADJUST VIBRATION	0	10	mm/s	15
12	ADJUST NOISE	0	10	dB	15
13	ADJUST ACIDITY	0	10	pH	15
14	ADJUST SALINITY	0	10	g/L	15
15	ADJUST CONDUCTIVITY	0	10	µS/cm	15
16	ADJUST OXYGEN	0	10	mg/L	15
17	ADJUST PHOSPHORUS	0	10	mg/L	15
18	ADJUST NITROGEN	0	10	mg/L	15
19	ADJUST AMMONIUM	0	10	mg/L	15
20	ADJUST NITRATE	0	10	mg/L	15
21	ADJUST NITRATES	0	10	mg/L	15
22	ADJUST NITRATES	0	10	mg/L	15
23	ADJUST NITRATES	0	10	mg/L	15
24	ADJUST NITRATES	0	10	mg/L	15
25	ADJUST NITRATES	0	10	mg/L	15
26	ADJUST NITRATES	0	10	mg/L	15
27	ADJUST NITRATES	0	10	mg/L	15
28	ADJUST NITRATES	0	10	mg/L	15
29	ADJUST NITRATES	0	10	mg/L	15
30	ADJUST NITRATES	0	10	mg/L	15
31	ADJUST NITRATES	0	10	mg/L	15
32	ADJUST NITRATES	0	10	mg/L	15
33	ADJUST NITRATES	0	10	mg/L	15
34	ADJUST NITRATES	0	10	mg/L	15
35	ADJUST NITRATES	0	10	mg/L	15
36	ADJUST NITRATES	0	10	mg/L	15
37	ADJUST NITRATES	0	10	mg/L	15
38	ADJUST NITRATES	0	10	mg/L	15
39	ADJUST NITRATES	0	10	mg/L	15
40	ADJUST NITRATES	0	10	mg/L	15
41	ADJUST NITRATES	0	10	mg/L	15
42	ADJUST NITRATES	0	10	mg/L	15
43	ADJUST NITRATES	0	10	mg/L	15
44	ADJUST NITRATES	0	10	mg/L	15
45	ADJUST NITRATES	0	10	mg/L	15
46	ADJUST NITRATES	0	10	mg/L	15
47	ADJUST NITRATES	0	10	mg/L	15
48	ADJUST NITRATES	0	10	mg/L	15
49	ADJUST NITRATES	0	10	mg/L	15
50	ADJUST NITRATES	0	10	mg/L	15

DRUMS PARAMETERS

NO.	PARAMETER	MIN.	MAX.	UNIT	OFFSBT
1	ADJUST VOLT	0	10	V	15
2	ADJUST CURR	0	10	mA	15
3	ADJUST TIME	0	10	min	15
4	ADJUST TEMP	0	10	°C	15
5	ADJUST PRESS	0	10	MPa	15
6	ADJUST HUMID	0	10	%	15
7	ADJUST SPEED	0	10	rpm	15
8	ADJUST TORQUE	0	10	Nm	15
9	ADJUST POWER	0	10	W	15
10	ADJUST EFFICIENCY	0	10	%	15
11	ADJUST VIBRATION	0	10	mm/s	15
12	ADJUST NOISE	0	10	dB	15
13	ADJUST ACIDITY	0	10	pH	15
14	ADJUST SALINITY	0	10	g/L	15
15	ADJUST CONDUCTIVITY	0	10	µS/cm	15
16	ADJUST OXYGEN	0	10	mg/L	15
17	ADJUST PHOSPHORUS	0	10	mg/L	15
18	ADJUST NITROGEN	0	10	mg/L	15
19	ADJUST AMMONIUM	0	10	mg/L	15
20	ADJUST NITRATE	0	10	mg/L	15
21	ADJUST NITRATES	0	10	mg/L	15
22	ADJUST NITRATES	0	10	mg/L	15
23	ADJUST NITRATES	0	10	mg/L	15
24	ADJUST NITRATES	0	10	mg/L	15
25	ADJUST NITRATES	0	10	mg/L	15
26	ADJUST NITRATES	0	10	mg/L	15
27	ADJUST NITRATES	0	10	mg/L	15
28	ADJUST NITRATES	0	10	mg/L	15
29	ADJUST NITRATES	0	10	mg/L	15
30	ADJUST NITRATES	0	10	mg/L	15
31	ADJUST NITRATES	0	10	mg/L	15
32	ADJUST NITRATES	0	10	mg/L	15
33	ADJUST NITRATES	0	10	mg/L	15
34	ADJUST NITRATES	0	10	mg/L	15
35	ADJUST NITRATES	0	10	mg/L	15
36	ADJUST NITRATES	0	10	mg/L	15
37	ADJUST NITRATES	0	10	mg/L	15
38	ADJUST NITRATES	0	10	mg/L	15
39	ADJUST NITRATES	0	10	mg/L	15
40	ADJUST NITRATES	0	10	mg/L	15
41	ADJUST NITRATES	0	10	mg/L	15
42	ADJUST NITRATES	0	10	mg/L	15
43	ADJUST NITRATES	0	10	mg/L	15
44	ADJUST NITRATES	0	10	mg/L	15
45	ADJUST NITRATES	0	10	mg/L	15
46	ADJUST NITRATES	0	10	mg/L	15
47	ADJUST NITRATES	0	10	mg/L	15
48	ADJUST NITRATES	0	10	mg/L	15
49	ADJUST NITRATES	0	10	mg/L	15
50	ADJUST NITRATES	0	10	mg/L	15

SYSTEM EXCLUSIVE MESSAGE APPLICATIONS

MIDI Exclusive messages can be used in the following ways:

1. Preset or recall data for All Controls, All Programs, or Global (recall).
2. Recall MIDI data during performance of Global banks.
3. Recall MIDI data for a bank.
4. Recall MIDI data for a program.
5. Recall MIDI data for a parameter.
6. Recall MIDI data for a MIDI channel.
7. Recall MIDI data for a MIDI note.
8. Recall MIDI data for a MIDI velocity.
9. Recall MIDI data for a MIDI pitch.
10. Recall MIDI data for a MIDI duration.
11. Recall MIDI data for a MIDI channel number.
12. Recall MIDI data for a MIDI note number.
13. Recall MIDI data for a MIDI velocity number.
14. Recall MIDI data for a MIDI pitch number.
15. Recall MIDI data for a MIDI duration number.
16. Recall MIDI data for a MIDI channel name.
17. Recall MIDI data for a MIDI note name.
18. Recall MIDI data for a MIDI velocity name.
19. Recall MIDI data for a MIDI pitch name.
20. Recall MIDI data for a MIDI duration name.
21. Recall MIDI data for a MIDI channel color.
22. Recall MIDI data for a MIDI note color.
23. Recall MIDI data for a MIDI velocity color.
24. Recall MIDI data for a MIDI pitch color.
25. Recall MIDI data for a MIDI duration color.
26. Recall MIDI data for a MIDI channel logo.
27. Recall MIDI data for a MIDI note logo.
28. Recall MIDI data for a MIDI velocity logo.
29. Recall MIDI data for a MIDI pitch logo.
30. Recall MIDI data for a MIDI duration logo.
31. Recall MIDI data for a MIDI channel font.
32. Recall MIDI data for a MIDI note font.
33. Recall MIDI data for a MIDI velocity font.
34. Recall MIDI data for a MIDI pitch font.
35. Recall MIDI data for a MIDI duration font.
36. Recall MIDI data for a MIDI channel background.
37. Recall MIDI data for a MIDI note background.
38. Recall MIDI data for a MIDI velocity background.
39. Recall MIDI data for a MIDI pitch background.
40. Recall MIDI data for a MIDI duration background.
41. Recall MIDI data for a MIDI channel border.
42. Recall MIDI data for a MIDI note border.
43. Recall MIDI data for a MIDI velocity border.
44. Recall MIDI data for a MIDI pitch border.
45. Recall MIDI data for a MIDI duration border.
46. Recall MIDI data for a MIDI channel icon.
47. Recall MIDI data for a MIDI note icon.
48. Recall MIDI data for a MIDI velocity icon.
49. Recall MIDI data for a MIDI pitch icon.
50. Recall MIDI data for a MIDI duration icon.
51. Recall MIDI data for a MIDI channel cursor.
52. Recall MIDI data for a MIDI note cursor.
53. Recall MIDI data for a MIDI velocity cursor.
54. Recall MIDI data for a MIDI pitch cursor.
55. Recall MIDI data for a MIDI duration cursor.
56. Recall MIDI data for a MIDI channel scroll.
57. Recall MIDI data for a MIDI note scroll.
58. Recall MIDI data for a MIDI velocity scroll.
59. Recall MIDI data for a MIDI pitch scroll.
60. Recall MIDI data for a MIDI duration scroll.
61. Recall MIDI data for a MIDI channel zoom.
62. Recall MIDI data for a MIDI note zoom.
63. Recall MIDI data for a MIDI velocity zoom.
64. Recall MIDI data for a MIDI pitch zoom.
65. Recall MIDI data for a MIDI duration zoom.
66. Recall MIDI data for a MIDI channel pan.
67. Recall MIDI data for a MIDI note pan.
68. Recall MIDI data for a MIDI velocity pan.
69. Recall MIDI data for a MIDI pitch pan.
70. Recall MIDI data for a MIDI duration pan.
71. Recall MIDI data for a MIDI channel mute.
72. Recall MIDI data for a MIDI note mute.
73. Recall MIDI data for a MIDI velocity mute.
74. Recall MIDI data for a MIDI pitch mute.
75. Recall MIDI data for a MIDI duration mute.
76. Recall MIDI data for a MIDI channel solo.
77. Recall MIDI data for a MIDI note solo.
78. Recall MIDI data for a MIDI velocity solo.
79. Recall MIDI data for a MIDI pitch solo.
80. Recall MIDI data for a MIDI duration solo.
81. Recall MIDI data for a MIDI channel lock.
82. Recall MIDI data for a MIDI note lock.
83. Recall MIDI data for a MIDI velocity lock.
84. Recall MIDI data for a MIDI pitch lock.
85. Recall MIDI data for a MIDI duration lock.
86. Recall MIDI data for a MIDI channel unlock.
87. Recall MIDI data for a MIDI note unlock.
88. Recall MIDI data for a MIDI velocity unlock.
89. Recall MIDI data for a MIDI pitch unlock.
90. Recall MIDI data for a MIDI duration unlock.
91. Recall MIDI data for a MIDI channel reset.
92. Recall MIDI data for a MIDI note reset.
93. Recall MIDI data for a MIDI velocity reset.
94. Recall MIDI data for a MIDI pitch reset.
95. Recall MIDI data for a MIDI duration reset.
96. Recall MIDI data for a MIDI channel save.
97. Recall MIDI data for a MIDI note save.
98. Recall MIDI data for a MIDI velocity save.
99. Recall MIDI data for a MIDI pitch save.
100. Recall MIDI data for a MIDI duration save.
101. Recall MIDI data for a MIDI channel load.
102. Recall MIDI data for a MIDI note load.
103. Recall MIDI data for a MIDI velocity load.
104. Recall MIDI data for a MIDI pitch load.
105. Recall MIDI data for a MIDI duration load.
106. Recall MIDI data for a MIDI channel delete.
107. Recall MIDI data for a MIDI note delete.
108. Recall MIDI data for a MIDI velocity delete.
109. Recall MIDI data for a MIDI pitch delete.
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## ERROR MESSAGES

Error message	Explanation
Battery Low	The voltage of the internal memory backup battery is low. (Contact your nearby service representative or dealer.)
CARD Battery Low	The voltage of the card backup battery is low. (Temporarily save the card data into internal memory, replace the card battery, and save the data from internal memory back into the card. When you remove the card battery, all card data will be lost.)
Invalid CARD	The inserted card does not contain data or is not formatted for the M3R. (To use this card, you must execute GLOBAL mode [5C] Format Cartridge.)
Memory Protected	The memory into which you attempted to write (internal or card) is protected by the GLOBAL mode protect setting.
No CARD Inserted	You tried to read or write card data when no card was inserted.
ROM/Protected	You tried to write data into a ROM card or into a RAM card whose protect switch was ON.
Unformatted CARD	The inserted card has not been formatted (initialized) for use with the M3R. (To use this card, execute GLOBAL mode [5C] Format Card.)

## SPECIFICATIONS AND OPTIONS

System	: AI synthesis system (full digital processing)
Tone generator	: 16 voice, 16 oscillator
Wave memory	: PCM 16 Mbit
Effect section	: 2 systems of digital multi-effects
Number of program	: 100 programs
Number of combinations	: 100 combinations
Demo	: 5 songs
Outputs	: L/L, 2/R, 3, 4, headphones
Card slot	: PCM data, programs
MIDI	: IN, OUT, THRU REMOTE jack
Display	: 16 character x 2 line backlit LCD
Options	: RAM card (MCR-03), ROM cards, PCM cards
Power supply	: 100 V
Power consumption	: 11 W nominal
External dimensions	: 430 (W) x 405 (D) x 88 (H) mm
Weight	: 5.9 Kg (not including rack-mount adapter)

\* Specifications and appearance are subject to change without notice for product improvement.

## TROUBLESHOOTING

Problem	Possible reason
No LCD display even though the POWER switch is on	• Is the power cable connected to an AC outlet?
No sound	• Is an amp or headphone connected to the correct socket? • Is the master volume raised? • Are any of the level parameters in each mode set to 0? • Are you playing a key which the split or pitch range produces no sound? • Are MIDI connections between the keyboard and the M3R correct? • Do the MIDI channels of the keyboard and the M3R match?
Cannot format a card	• Is the card protect switch set to ON?
Cannot save data to card	• Are you using an unformatted card? • Is the card protect switch set to ON? • Are you using a ROM card? • Is the card correctly inserted?
Cannot load data from card	• Is the card correctly inserted? • Does the card contain data?
The sound is wrong	• Is the same PCM card inserted as when you created the sound? • Is the same PROG data card inserted as when you created the combination data?

**M3R MIDI IMPLEMENTATION CHART**

Function . . .		Transmitted	Recognized	Remarks
Basic Channel	Default Change	1 - 16 1 - 16	1 - 16 1 - 16	Memorized
Mode	Default Messages Altered	× *****	3 ×	
Note number:	Sound range	0 - 127 *****	0 - 127 0 - 127	*4
Velocity	Note on Note off	○ 9n, V=1 - 127 ×	○ 9n, V=1 - 127 ×	
After Touch	Keys Ch's	× ○	× ○	Transmit/receive when AFTER TOUCH is set to ENA in GLOBAL mode *4
Pitch bend		○	○	*1, 4
Control Change	1 2 6 7 38 64 80 96 97 100 101 0-101	× × × × × × × ○ ○ × × ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	Pitch MG *1 VDF modulation *1 Data entry (MSB) *5 Volume *1 Data entry (LSB) *5 Damper pedal *1 Rotary speaker speed *1 Data increment *2 Data decrement *2 LSB of RPC for master tune *6 MSB of RPC for master tune *6 *4
Program Change	Actual No.	○ 0 - 99 *****	○ 0 - 127 0 - 99	Transmit/receive when PROG/ COMBI CHANGE is set to ENA in GLOBAL Mode.
System Exclusive		○	○	*2, 3
System	: Song pos. Common : Song sel. : Tune	× × ×	× × ×	
System	: Clock Real time: Commands	× ×	× ×	
Aux Message	: Local ON/OFF : All note off : Active sensig : Reset	× × ○ ×	× ○ ○ ×	○ 123 - 127
<p>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 Dumps and edits the Program data. Compatible with universal exclusive (Device ID).                  *4 Transmit when OVERFLOW is set to ON in GLOBAL mode.                  *5 Receive when EXCLUSIVE is set to ENA in GLOBAL mode. Transmit/receive when RE1 is connected.                  *6 Receive when EXCLUSIVE is set to ENA in GLOBAL mode.</p>				

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

## MULTISOUND LIST

00	Piano	23	Digi. Bell12	46	Hard Sax	69	Wire 2
01	E. Piano 1	24	Tubular	47	Mute Tp	70	S&H Wave
02	Soft E.P.	25	Bell Ring	48	Tromb&Tp	71	Digital 1
03	Hard E.P.	26	Vibe	49	Clarinet	72	Digital 2
04	Clav	27	Kalimba	50	Koto Trea	73	Digital 3
05	Harpicord	28	Marimba	51	Lore	74	Digital 6
06	Perc. Organ	29	Music Box	52	Wind Bells	75	Digital 7
07	MagicOrgan	30	Gamelan	53	Pole	76	Sine
08	Guitar 1	31	Clicker	54	Pluck	77	SquareWave
09	Guitar 2	32	SynMallet	55	Hammer	78	Saw Wave
10	ElecGuitar	33	Flute	56	Metal Hit	79	10% Pulse
11	JazzGuitar	34	Pan Flute	57	Pop	80	20% Pulse
12	MuteGuitar	35	Bottles	58	Vibe Hit	81	DWGS Clav
13	Harmonics	36	Voices	59	Block	82	DWGSOrgan1
14	Sitar	37	Choir	60	Spectrum 1	83	DWGSOrgan2
15	A. Bass	38	Strings	61	Spectrum 2	84	DWGS E.P. 1
16	Slap Bass	39	Analog	62	Spectrum 3	85	DWGS Voice
17	Round Bass	40	SoloString	63	Spectrum 4	86	DWGS Vibe
18	Fletless	41	TubaFlugel	64	Voice Wave	87	DWGS Bell1
19	Pick Bass	42	DoubleReed	65	Fv Wave	88	DWGS Bass1
20	SynthBass1	43	Brass 1	66	Perc. Wave	89	DWGS Bass2
21	SynthBass2	44	Brass 2	67	Ep Wave		
22	Digi. Bell1	45	Tenor Sax	68	Wire 1		

## DRUM SOUND LIST

01	Kick 1	13	Crash	25	Bell Ring	37	Wind Bells
02	Kick 2	14	Conga 1	26	Kalimba	38	Pole
03	Kick 3	15	Conga 2	27	Gamelan 1	39	Pluck
04	Snare 1	16	Timbales	28	Gamelan 2	40	Hammer
05	Snare 2	17	Cowbell	29	Clicker 1	41	Metal Hit
06	Snare 3	18	Claps	30	Clicker 2	42	Spectrum3L
07	Side Stick	19	Tambourine	31	Vibe Hit	43	Spectrum3H
08	Tom	20	E. Tom	32	Block	44	Spectrum4L
09	Closed HH1	21	Ride	33	Perc. WaveL	45	Spectrum4H
10	Open HH1	22	Rap	34	Perc. WaveH		
11	Closed HH2	23	Whip	35	Lore 1		
12	Open HH2	24	Tubular	36	Lore 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 manufacturer's/distributor's warranty and liability. This requirement is for your own protection and safety.

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