OWNER'S MANUAL

DIGITAL MULTI-DIMENSIONAL

SYNTHESIZER MODULE

K1 rII

KAWAI

WARNING: This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it can cause interference to radio communications. The rules with which it must comply afford reasonable protection against interference when used in most locations. However, there can be no guarantee that such interference will not occur in a particular installation. If this equipment does cause interference to radio or related equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

— reorient the receiving antenna.
— move the receiver away from the instrument.
— plug the instrument into a different outlet so that it and receiver are on different branch circuits.
— consult the dealer or a qualified service personnel.

"This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications."

"Le présent appareil numérique n'émet pas de bluits radioeléctriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada."

Introduction

The Kawai K1rII rack-mount digital synthesizer module offers 16-voice (max.) polyphonic output from Kawai's VM additive synthesis tone generator.

Features

★ **VM tone generator**
The K1rII built-in sound generator offers a selection of 256 basic waveforms using the two most advanced approaches to sound synthesis: 204 formed by the additive synthesis of the first 128 harmonics; 52 recorded with PCM sampling. You can freely mix up to four of these waveforms to produce an entirely new sound: a crisp digital sound, a rich analog sound, or any combination in between.

★ **AM (Ring modulation)**
The addition of ring modulation expands the K1rII range to include overloaded sounds of the type that digital waves alone cannot reproduce.

★ **Rich selection of tone patches**
The K1rII leaves the factory with 64 SINGLE patches and 32 MULTI patches already stored in its internal memory bank. The K1rII's full editing capabilities and DC-8 memory cards (available as extra cost options) allow you to build up your own library of original sounds.

★ **Separate drum section**
This track, which offers a selection of 32 percussion instruments, is completely separate from the eight multi-timbre patches. This independent rhythm section may be assigned its own MIDI channel which is not affected by the OMNI ON mode.

★ **Superb touch response**
The K1rII module's touch response acts on two types of information from the external MIDI keyboard: velocity, the force with which you hit the key, and aftertouch, the pressure that you apply as you hold the key down.

★ **Multi-tone patch LINKs**
The K1rII LINK function allows you to link up to eight tone patches — SINGLE or MULTI, INTERNAL or EXTERNAL —from the 192 available and then step through the series during a performance simply by pressing the LINK switches.

★ **MULTI patches**
The K1rII's MULTI patches go far beyond the DUAL or SPLIT functions of other synthesizers in that they allow you to assign up to eight different SINGLE patches to different ranges on the keyboard and divide the key velocity as well.

★ **Variable multi-timbre operation**
This function helps maximize the use of the K1rII's 16-voice polyphonic capabilities by automatically redistributing unused capacity from one section to another.

★ **Full MIDI implementation**
Since each sound, source can be assigned a different MIDI channel, each K1rII MULTI patch can simultaneously serve as up to eight (+DRUM) different MIDI sound sources.

★ **Interchangeability of tone data with K1, K1m, K1II and K1r**
The K1rII tone patches (SINGLE, MULTI) are compatible with those of other K1 series instruments, K1, K1m, K1II and K1r. Sound Cards and MIDI Exclusive Data can be exchanged between the K1rII and other K1 models. Computer software designed for the K1 can be used on the K1rII.

★ **Individual output**
The K1rII allows you to assign each selected SINGLE patch to one of the four discrete outputs (OUTPUTs 1 through 4). This enables different SINGLE patches within your MULTI patch can be routed to different channels of a mixing board for separate external signal processing (EQ, reverb, etc.).

Care and Maintenance

☐ **Proper Care**
Your K1rII synthesizer is a delicate musical instrument. To prevent breakdowns and ensure years of reliable, trouble-free service, shield it from:
- Direct sunlight and exposure to the elements
- Extremes in temperature or humidity
- Dusty environments
- Vibration — especially during transport

☐ **Power Supply**
- Use only the AC adapter shipped with the K1rII and connect it only to a power supply with a voltage within the limits stated on the ratings plate on the back.
- Make sure that all power switches are off before changing equipment connections.
- Check all equipment connections before applying the power.
- Do not connect to the same circuit as a heavy load or equipment that generates line noise.

☐ **Line Noise Reset**
- The high-speed microprocessor at the core of the K1rII is extremely sensitive to line noise and sudden fluctuations in the supply voltage. Should it "lock up" under such conditions, simply turn it off for a few seconds and then reapply the power.

☐ **Cleaning**
- Clean the instrument with a soft cloth, a mild detergent, and lukewarm water.
- Never use harsh or abrasive cleansers or organic solvents.

☐ **Battery Backup**
- The lithium battery that protects the memory contents while the power to the unit is off is good for more than five years of normal use. We recommend, however, that you have your nearest authorized service representative replace it promptly after five years.

☐ **Repairs**
- Always save the INTERNAL tone patches to a memory card before taking the unit in for repairs or servicing. Otherwise, they may be lost in the course of testing.

☐ **Memory Cards**
- The K1rII uses Kawai DC-8 memory cards for external data storage. These cards are available from your nearest authorized Kawai dealer. Kawai DC-16 or DC-32 cards can also be used.

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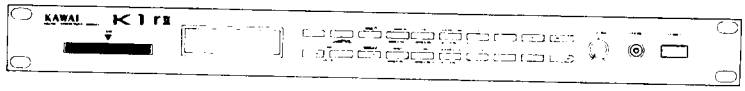
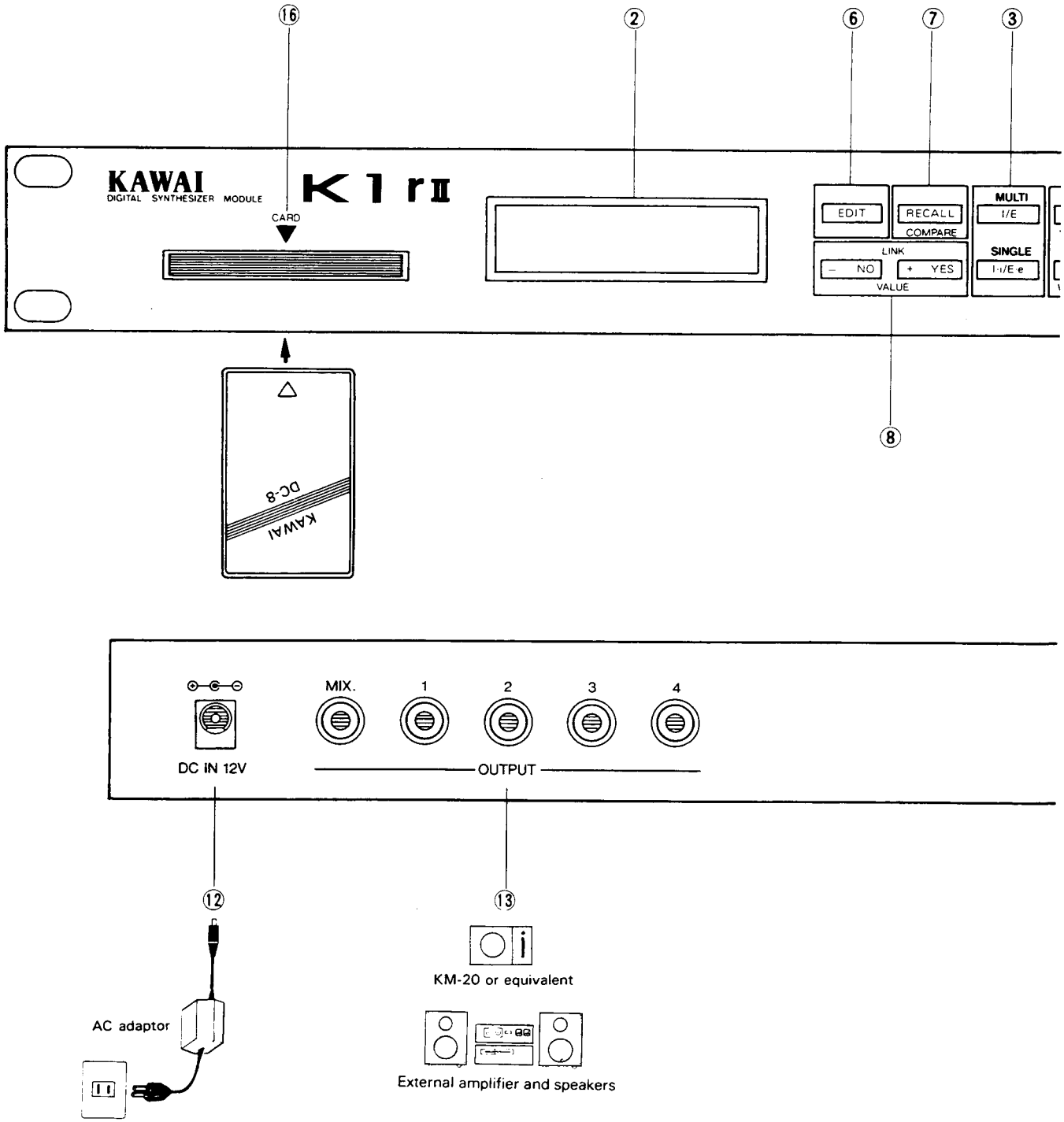
VI. See the AUX Parameter Chart for a summary of the SYSTEM and MIDI function.

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②
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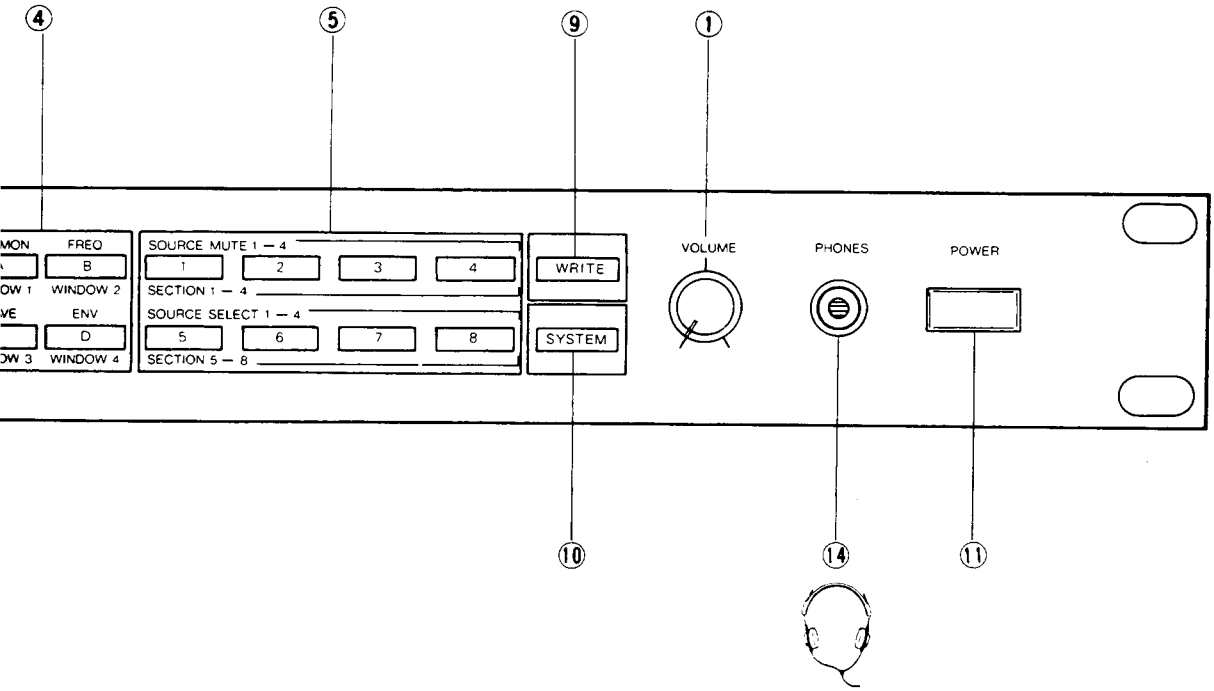
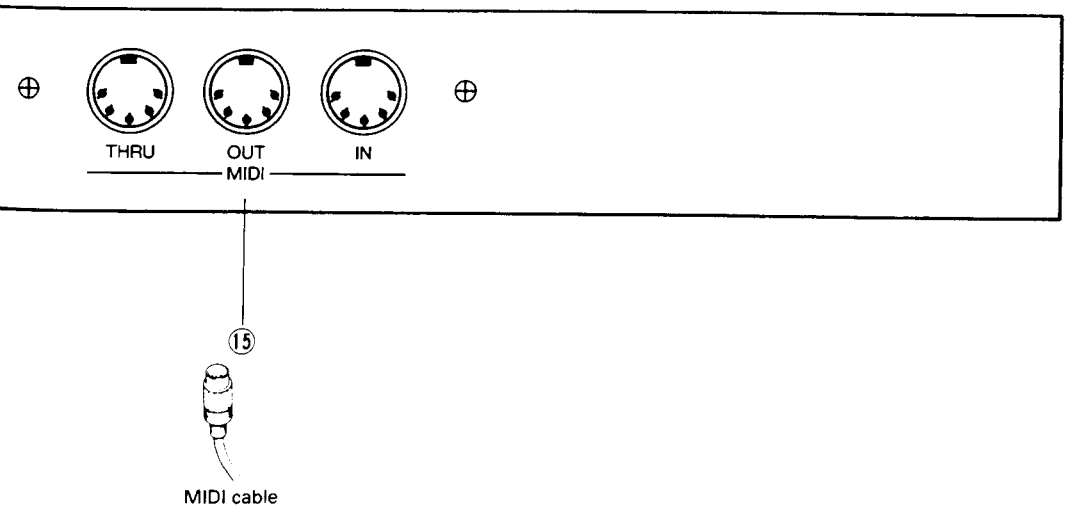
KAWAI
DIGITAL SYNTHESIZER MODULE
K1 rII
CARD
EDIT
RECALL
COMPARE
MULTI
I/E
LINK
– NO
+ YES
VALUE
SINGLE
I·i/E·e
⑧
DC-8
KAWAI
MIX.
1
2
3
4
DC IN 12V
OUTPUT
⑫
⑬
KM-20 or equivalent
AC adaptor
External amplifier and speakers



[Front Panel]



[Rear Panel]

Names of Parts

① VOLUME control
Controls the output levels for the PHONES jack as well as the OUTPUT (MIX, 1 ~ 4) jacks.

② Display
Performance: Indicates the number and name of the tone patch in use.
Editing: Indicates parameter name and current value.

③ Tone patch selector switches, I.Block (MULTI & SINGLE)
Switch between the SINGLE and MULTI sets of tone patches.

④ Tone patch selector switches, II.Bank (A, B, C, & D)
Performance: Select the tone patch bank.
Editing: Select parameters for editing. (See p.15.)

⑤ Tone patch selector switches, III.Number (1-8)
Performance: Select the tone patch number.
Editing: Switch SOURCEs on and off (SOURCE MUTE/SOURCE SELECT) for SINGLE patches and select SECTIONs for MULTI patches.
(See p.15/31.)

⑥ EDIT switch
Activates the tone patch editing functions.

⑦ RECALL/COMPARE switch
Performance: Switches to (RECALLs) the tone patch last edited.
Editing: Switches between (COMPAREs) the current state of the tone patch and the state that it was in at the beginning of the editing session. (See p.14.)

⑧ LINK/VALUE switches
Performance: Switch to the next tone patch in the linked series.
Editing: Change the value of the current parameter.

⑨ WRITE/LINK switch
Editing: Overwrites the original tone patch with the edited version.
Linking: Adds the current tone patch to the chain. (Max. 8 per chain)

⑩ SYSTEM/MIDI switch
SYSTEM: Changes the unit's pitch (TUNE or TRANSPOSE). (See p.38, 39.)
MIDI: Changes the MIDI receive (RCV) or transmit (TRS) parameters. (See p.40-42.)
DRUM: Changes the parameters of DRUM SECTION. (See p. 43, 44.)

⑪ POWER switch
Controls the power to the unit.

Note: Check all connections BEFORE turning on the power.

⑫ DC IN jack
Accepts the plug from the adapter.

⑬ OUTPUT jacks
MULTI & DRUM SECTION:
The jacks marked 1 ~ 4 and MIX each provide a line-level output for connection with a KM-20 keyboard amplifier (Such as a Kawai KM-20), P.A. system or other audio system. Each section in a K1rII MULTI patch and each sound of the DRUM SECTION can be assigned to one of the four numbered outputs (for details, see p. 35). The MIX jack outputs a composite signal that sums the signals of the OUTPUTs 1 ~ 4.
SINGLE:
A SINGLE patch sound goes to the MIX output and the OUTPUT 2 (other OUTPUTs are closed).

Note: The K1rII contains no amplifier or speakers. Either use headphones or connect it to an external amplifier.

⑭ PHONES jack
Use this jack for stereo headphones.
The headphone's stereo image is related to the OUTPUT 1 ~ 4 as below:
1 = R, 3 = L, 2 . 4 = L + R

⑮ MIDI connectors
Accept standard cables for connecting the unit to other MIDI instruments.

⑯ CARD slot
Accepts DC-8 memory cards (optional).

Note: Insert the card so that the arrow on it lines up with the one on the unit.

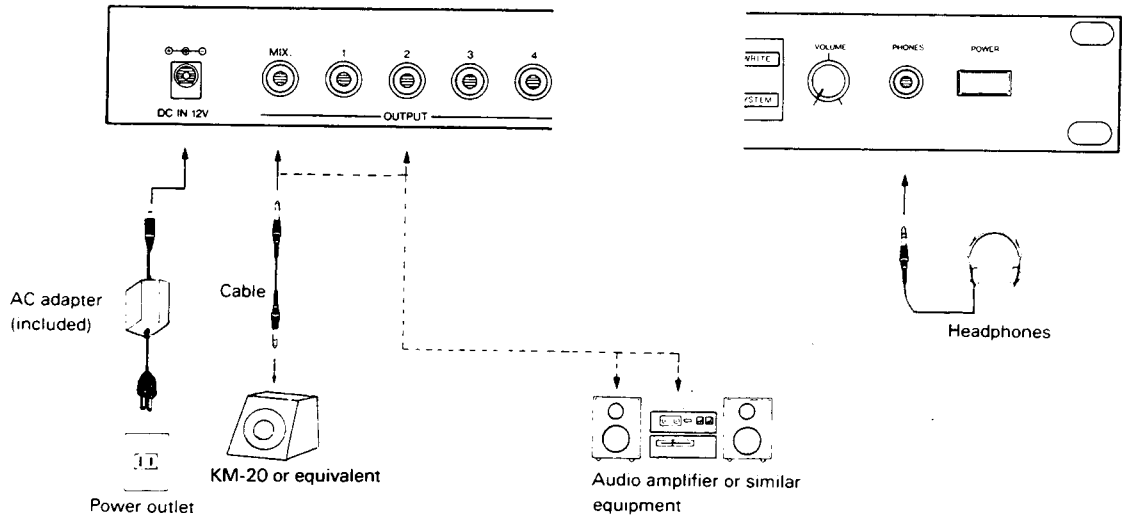
I. Playing the Factory Tone Patches

The K1rII comes with a complete set of built-in tone patches. The best way to familiarize yourself with the instrument's capabilities is to experiment with these tone patches and examine the contents of their parameters.

1. Get sound

(1) Connect the instrument using the diagram below as your guide.

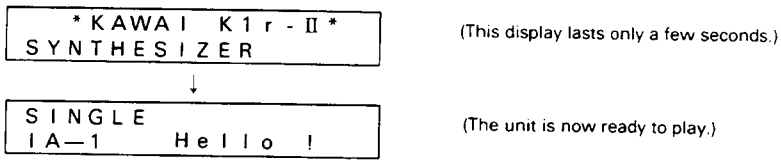
Note: Add a MIDI keyboard.



Note: The K1rII contains no amplifier or speakers. Either use headphones or connect it to an external amplifier — a keyboard amplifier, radio-cassette player, or audio amplifier, for example.

(2) Press the POWER switch (located on the front panel) to its ON position.

(3) Wait for the tone patch display.

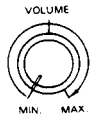


(This display lasts only a few seconds.)

(The unit is now ready to play.)

Note: The tone patch names and numbers used in this manual are not necessarily the same as those on your K1rII or later versions.

(4) Press a key and gradually raise the volume to a comfortable listening level.



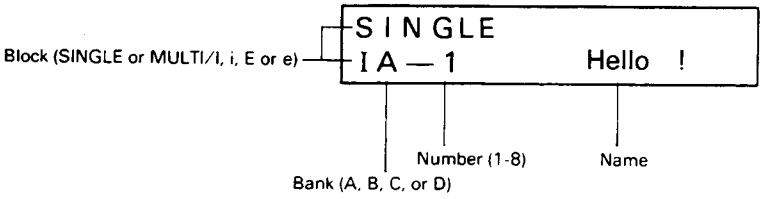
(5) Play.

Note: If raising the volume to its maximum fails to produce any output, check all connections and amplifier settings.

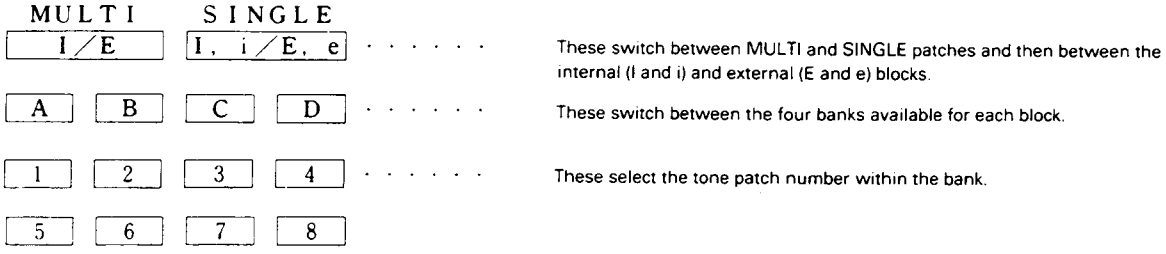
2. Choose a tone patch.

The K1rII offers a selection of 64 SINGLE patches and 32 MULTI patches based on them.
The two-line display indicates which tone patch is currently in effect. The first line tells whether it is a SINGLE or MULTI patch; the second gives its tone patch number and name.

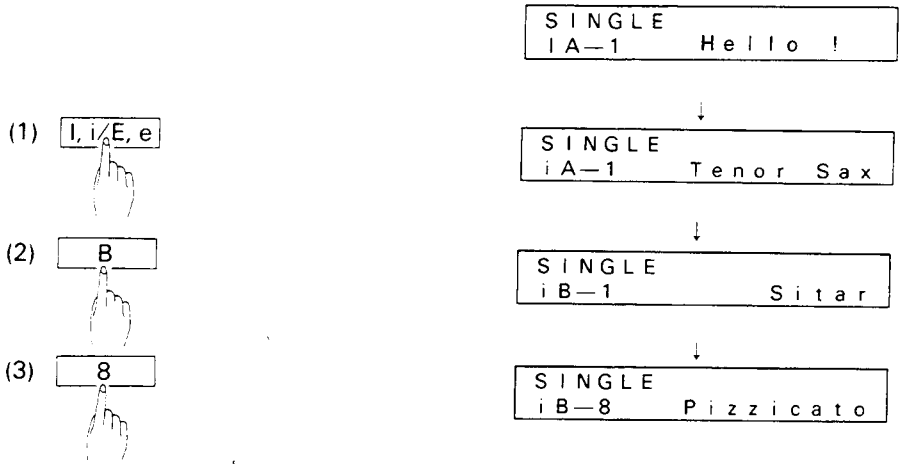
The tone patch number consists of three fields: I Block (SINGLE or MULTI/I, i, E, or e), II Bank (A, B, C, or D), and III Number (1~8).



The tone patch selector switches Groups I-III change these three fields.



Example: Changing to SINGLE patch iB-8



Note: The above three steps can be in any order.

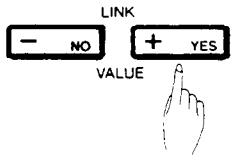
Note: The unit will not allow you to change the block to E or e unless there is a card firmly in place in the slot.

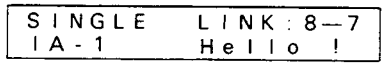
3. Try the extra features.

The K1rII provides a wide range of additional features that you can exploit to enhance your performance.

(1) LINK function

The K1rII LINK function allows you to link up to eight tone patches — SINGLE or MULTI, INTERNAL or EXTERNAL — from the 192 available and then step through the series simply by pressing the LINK switches. This function saves valuable time during a live performance. (See p. 37.)

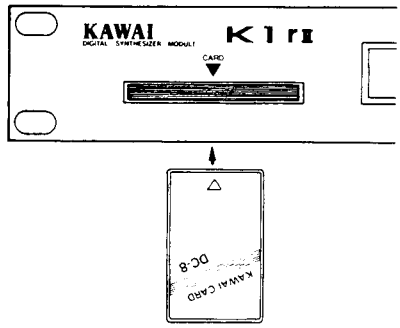




Note: The upper right corner of the LCD screen keeps track of the position in the series. For example, **LINK:8-7** indicates that the synthesizer is currently using the seventh tone patch of an eight-member series

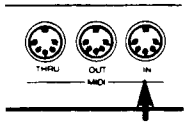
(2) CARD slot

In addition to the 96 internal tone patches, each optional DC-8 memory card provides storage for 64 SINGLE patches and 32 MULTI patches & 1 DRUM SECTION in blocks E and e (for external).



Note: Before storing data on the card, you must first format it for use with the K1rII. (See p. 38, 39.)

(3) MIDI jacks

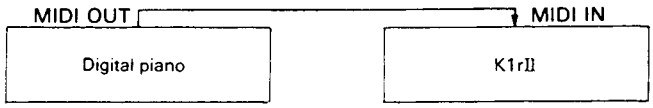


The three MIDI jacks on the rear panel are your gateway to the world of MIDI music. You can, for example, play your K1rII from another keyboard, a Kawai Q-80, or other sequencer, or even the K1II.

Note: The K1rII comes with one MIDI cable.

Sample Setups

(a) Playing the K1rII from a digital piano



(b) Playing the K1rII from a sequencer

(c) Playing the K1rII from the K1II

4. Look over the construction of SINGLE or MULTI patch.

The K1rII contains a total of 96 built-in tone patches — sets of complex waveform/parameter combinations. Two-thirds (64) of these are SINGLE patches. Each SINGLE patch is divided into four (or two) SOURCEs. Each SOURCE consists of a waveform chosen from the 256 basic waveforms available plus pitch, volume, and various other parameters for modifying it.

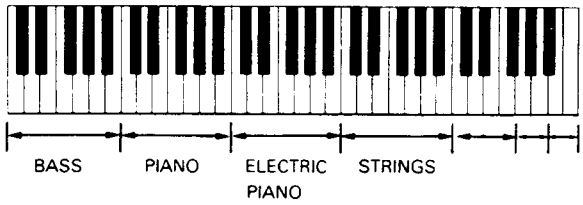
The remaining 32 tone patches are MULTI patches. Each MULTI patch is divided into eight SECTIONs. Each SECTION consists of a SINGLE patch plus various parameters that tie sound generation to key velocity and keyboard range.

In other words, the synthesizer merges four waveforms to produce a SINGLE patch and then merges eight SINGLE patches to form a MULTI patch. Certain built-in tone patches illustrate some of the ways in which you can exploit this capability.

(1) Splitting the keyboard.

One application would be to split the entire keyboard into various zones, assigning a different SINGLE patch to each zone: BASS to the lower third, PIANO to the middle, and STRINGS to the upper third, for example. The only limit is on the number of zones (max.8). The K1rII otherwise gives you complete freedom to divide the keyboard as you wish.

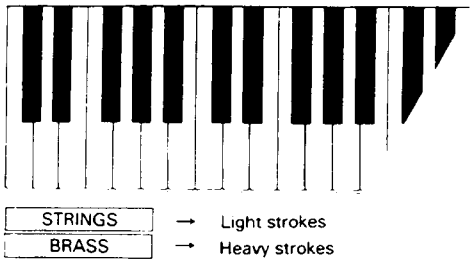
Example:



(2) Linking sound to velocity.

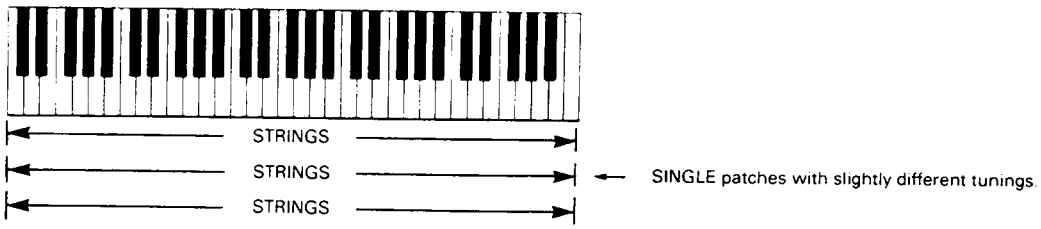
Another way to divide SINGLE patches would be to make the SINGLE patch dependent on the key velocity, the force with which you strike the key: STRINGS for light strokes and BRASS for heavier strokes, for example.

Example:



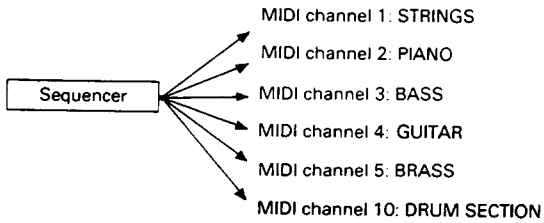
(3) Layering sounds.
Overlapping SINGLE patches with slightly different tunings or with complementary tones produces a richer, fuller sound.

Example:



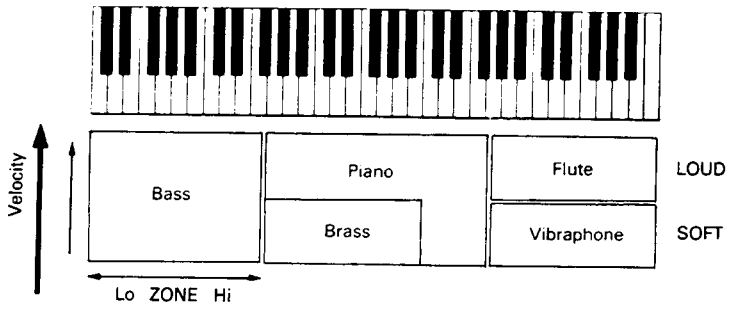
(4) Using the K1rII as eight MIDI sound sources.
If you assign a different MIDI receive channel to each SINGLE patch in the MULTI patch, the K1rII simultaneously performs as eight (or nine, using DRUM SECTION) different MIDI sound sources. Since these can include the K1rII's built-in DRUM SECTION and percussion sounds, a sequencer or other external controller can use a single K1rII for everything from rhythm to harmony.

Example:



(5) Combinations of the above
The K1rII gives you complete freedom to combine SINGLE patches any way you wish.

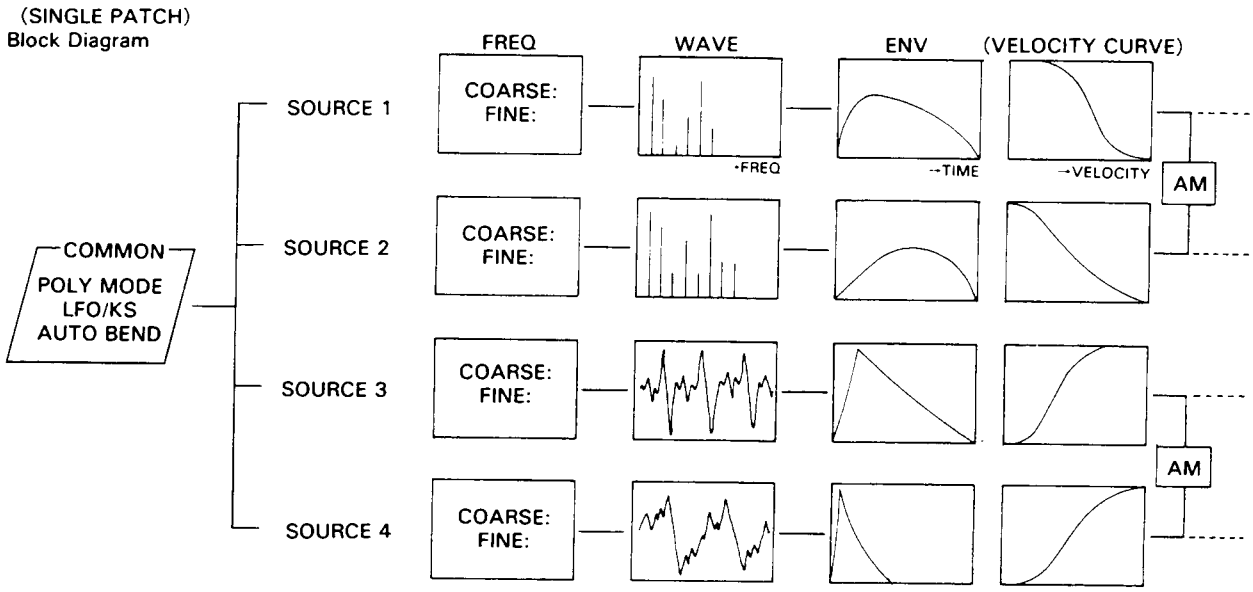
Example:



II. K1rII Sound Sources

1. VM Tone Generator

The K1rII allows you to combine up to four different SOURCEs, each with its own frequency, waveform, and envelope. The K1rII also supports AM (Ring modulation), allowing you to use the output from one SOURCE to modulate the output from another.



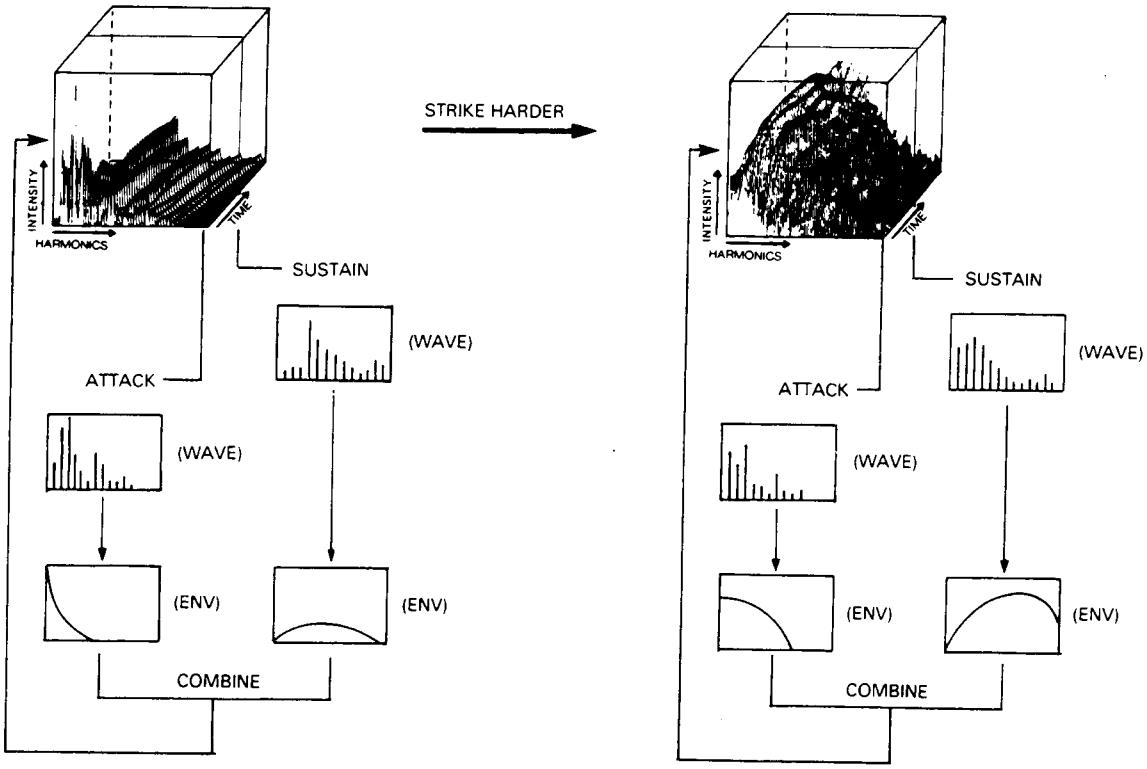
2. Digital Sound vs. Natural Sounds

If you listen carefully to a singer or a musical instrument, you will notice that each note exhibits at least three distinct phases: (1) a rapid rise in volume (ATTACK), (2) a relatively long constant phase (SUSTAIN), and (3) a gradual fading out (DECAY). You will also notice that blowing harder into a horn, plucking a string harder, or shouting changes the tonal quality, making the result brighter or distorted.

The ATTACK phase is particularly difficult to duplicate because it has a complicated harmonic distribution that changes rapidly with time. The K1rII therefore uses PCM recordings of actual instruments to provide the most faithful reproduction.

A SINGLE patch on the K1rII consists of up to four SOURCEs drawn from the 52 PCM waveforms and 204 VM waveforms available — a total of 256 — with a separate frequency and envelope for each.

The result is a combination that accurately reproduces the complex changes in tonal quality with time and velocity.

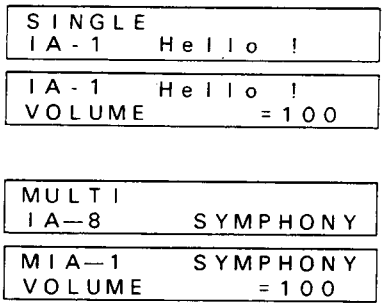

STRIKE HARDER
INTENSITY
HARMONICS
TIME
SUSTAIN
ATTACK
(WAVE)
(WAVE)
(ENV)
(ENV)
COMBINE
INTENSITY
HARMONICS
TIME
SUSTAIN
ATTACK
(WAVE)
(WAVE)
(ENV)
(ENV)
COMBINE

III. Editing Tone Patches

1. Basics

(1) EDIT mode

Besides its PLAY mode, the K1rII features an EDIT mode which allows you to modify SINGLE and MULTI patches. To enter this mode, use the normal procedure to select the tone patch and then press the EDIT switch. To return to the PLAY mode, simply press either the MULTI or SINGLE switch.



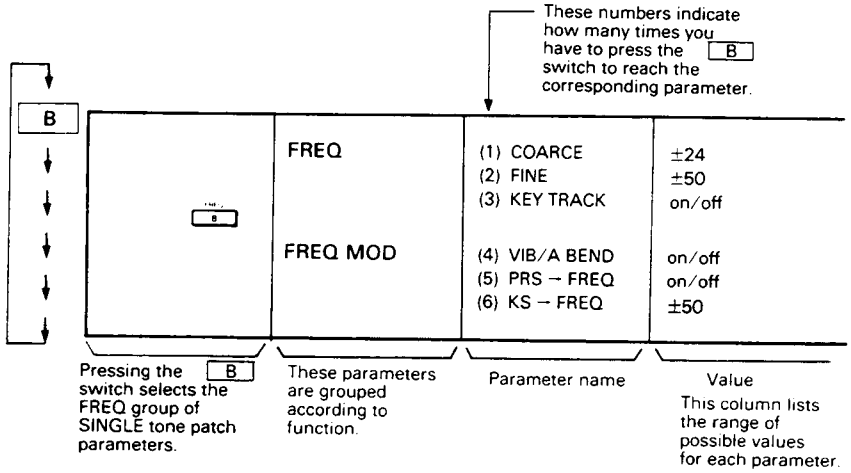
(2) Parameters and values

In the EDIT mode, the display gives two types of information: the name of the current parameter and its value. SINGLE patches list these pairs in four parameter groups; MULTI patches divide among four windows. Although the names differ, the basic procedure is the same: Select the group (SINGLE) or window (MULTI) with one of the four switches marked with the letters A, B, C, and D.

Note: The labels above these switches — COMMON, FREQ, WAVE, and ENV — give the group names for SINGLE patches; the ones below, the window names for MULTI patches.

Once you have selected a particular group or window, further presses on the same switch cycle through the list of parameters for that group or window.

Example:



After you have selected a particular parameter, change its value with the -NO / +YES switches.

(3) Storing the new tone patch

When you edit a tone patch, you work with a temporary copy that disappears when you turn off the power. If you wish to save the tone patch for later use, you must store it in the K1rII's internal memory or on a memory card using the WRITE function. (See p. 36.)

Note: If you want to keep the factory patches, save the internal patches to a card (DC-8).

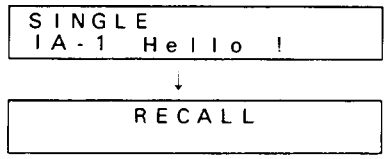
(4) RECALL and COMPARE functions

* **RECALL**

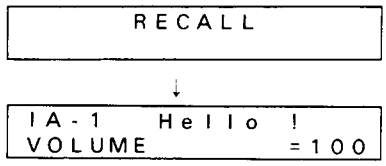
This function returns you to the last SINGLE or MULTI patch that you edited so that you can continue editing. It is most useful when you have accidentally left the EDIT mode by pressing the wrong switch and or turning the power off before saving an edited version of a SINGLE patch.

Note: When you turn off the power, RECALL function is not available.

This function actually remembers two tone patch numbers: one for SINGLE and one for MULTI. Pressing the switch selects the one matching the tone patch currently in use — in other words, the most recently edited SINGLE patch if the word SINGLE is on the first line of the display and the most recently edited MULTI patch otherwise.



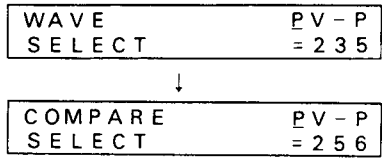
To resume editing, press the EDIT switch.



EDIT mode

* **COMPARE**

This function allows you to compare the temporary copy that you are working on with the original tone patch. Pressing the COMPARE switch redisplays the original tone patch.



Value before editing

Pressing it a second time returns you to the edited version.

Note: You cannot edit while using the compare function.

2. Editing a SINGLE Patch

(1) Basic approach

The K1rII SINGLE patch uses either two or four SOURCEs.
Because it would take too much time to construct a tone patch completely from scratch, the usual approach is to select the closest tone patch and then edit it.

(2) Procedure

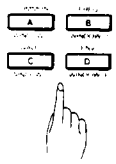
① In the PLAY mode, select the SINGLE patch that best approximates the desired sound.

```
SINGLE
IA-1   Hello !
```

② Press the [EDIT] key.

```
SIA-1 Hello !
-VOLUME          =100
```

③ Select the parameter to be edited.

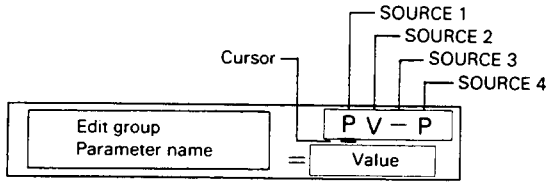


or [EDIT]

```
WAVE              PV-P
SELECT =           256
```

(3) EDIT display

The EDIT display provides four different types of information.



* Edit parameter name: This indicates the parameter being edited. Change with the letter switches (A, B, C, or D).
* Parameter value: This gives the current value for the parameter. Change with the [+YES] / [-NO] switches.
* SOURCEs: These indicate, from left to right, the current statuses of SOURCEs 1-4.

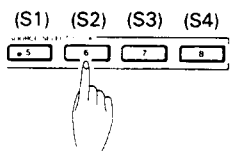
Status	Source
P	PCM waveform
V	VM waveform
—	Mute

Note: Use the SOURCE MUTE (numbers 1-4) switches to turn the individual SOURCEs on and off.

* Cursor This underline tells which SOURCE is being edited.

(4) Selecting a SOURCE to be edited

Press the corresponding SOURCE SELECT (numbers 5-8) switch. The cursor shifts to the appropriate symbol.




```
WAVE              PV-P
SELECT            =256
```

3. SINGLE Patch Parameters

(1) EDIT switch

There are two parameters that you can edit before proceeding to the ones grouped under the letter switches (A, B, C, and D):

EDIT -1 VOLUME

Determines the volume for the SINGLE patch.
Normally, this should be the maximum (100), but it may be necessary to adjust the balance between tone patches with this parameter.

```
SIA—1  Hello !
VOLUME          =100
```

Note: The parameter D -1 LEVEL adjusts the relative balance between the SOURCEs used in the tone patch.

Value	Effect
1	Minimum
/	/
100	Maximum

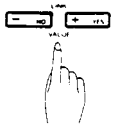
EDIT -2 NAME

Assigns a 10-character name for the tone patch.
This name may mix any of the following 96 characters.

Procedure:

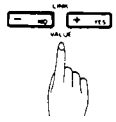
① Use the +YES / -NO switches to modify the current character.

```
SIA—1  Hello !
NAME   1ST = H
```



② Press the EDIT key to move from character to character.

```
SIA—1  Hello !
NAME   2ND = e
```



③ Repeat the above steps as often as necessary.

Valid name characters

```
■ ! " # $ % & ' ( ) * + , — . /
0 1 2 3 4 5 6 7 8 9
: ; < = > ? @
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
[ ¥ ] ^ — `
a b c d e f g h i j k l m n o p q r s t u v w x y z
{ | } → ←
```

(2) Group A — COMMON

The parameters in this group affect all four SOURCEs equally.

A -1 SOURCE

Determines whether the tone patch uses all four SOURCEs or only two. Choosing the former makes the K1rII an eight-voice polyphonic instrument — that is, limited to sounding a maximum of eight notes at a time; the latter makes it sixteen-voice polyphonic.

```
COMMON          PV-P
SOURCES  2/4 =   4
```

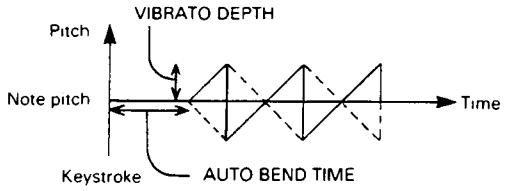
Note: Sources 3 and 4 are not available when this parameter is set to 2.

Muting Sources 3 and 4 is not the same as changing this parameter to 2. The unit remains eight-voice polyphonic.

Value	Effect
2	The unit uses only SOURCES 1 and 2.
4	The unit uses all four SOURCEs.

A -2 VIBRATO DEPTH

Determines the amount by which the vibrato effect alters the pitch above and below the note pitch.



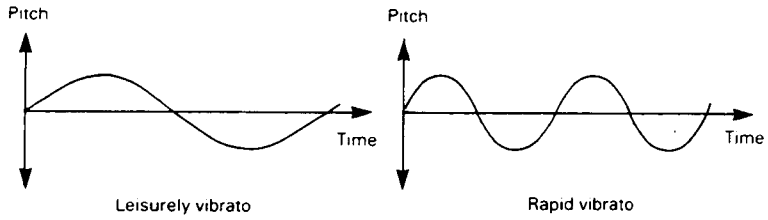
VIBRATO SPEED	PV-P = ±50

Value	Effect
+50	Maximum vibrato with normal waveform
≀	≀
0	No vibrato
≀	≀
-50	Maximum vibrato with inverted waveform

Note: B -4 VIBRATO/AUTO BEND determines whether the individual SOURCEs use the vibrato effect. A -8 VIBRATO/AUTO BEND TIME determines the delay before the start of the vibrato effect.

A -3 VIBRATO SPEED

Determines the vibrato rate.

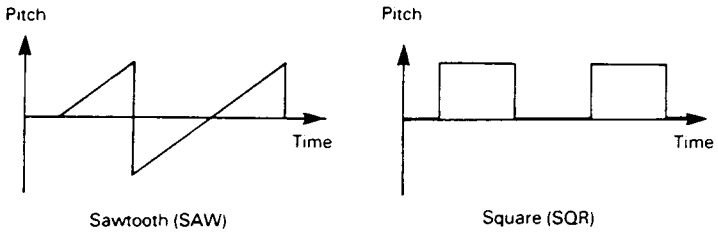


VIBRATO SPEED	PV-P = 100

Value	Effect
0	Leisurely vibrato
≀	≀
100	Rapid vibrato

A -4 VIBRATO SHAPE

Determines the waveform for the vibrato effect.



VIBRATO SHAPE	PV-P = SAW

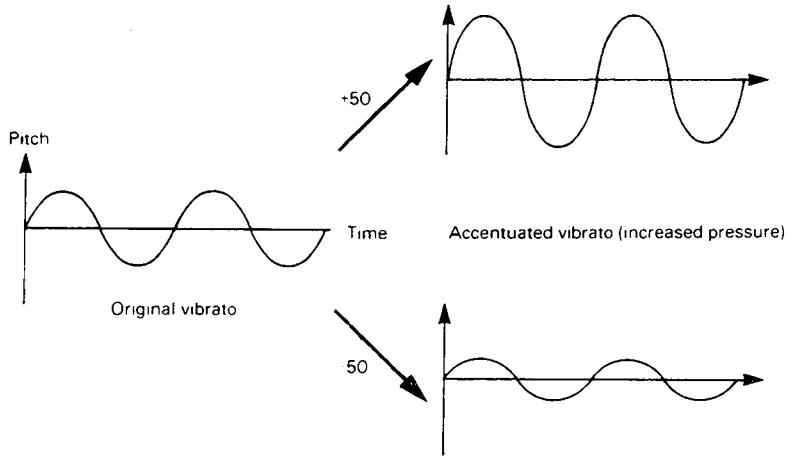
Value	SHAPE	
TRI		Triangle
SAW		Sawtooth
SQR		Square
RND	Random variation	

A -5 PRS VIBRATO

Links the amount of vibrato to aftertouch, the amount of pressure on the key.

VIBRATO PRS→DEPTH	PV-P =±50

Value	Effect of increasing pressure
+50	Increased vibrato
0	No effect
-50	Decreased vibrato



Note: This effect is only available with keyboards that transmit aftertouch data.

A -6 WHEEL VIBRATO ASSIGN

Determines whether the MODULATION wheel controls vibrato depth or speed.

VIBRATO WHEEL	PV-P =DEP

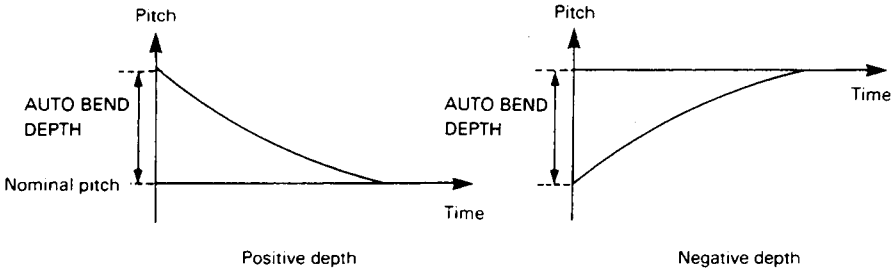
Value	Effect
DEP	Depth (amplitude)
SPD	Speed (rate)

A -7 AUTO BEND DEPTH

Determines how the pitch alters as each key is struck — the AUTO BEND effect.

AUTO BEND DEPTH	PV-P =±50

Value	Effect
+50	Pitch drops to nominal value
0	No effect
-50	Pitch rises to nominal value



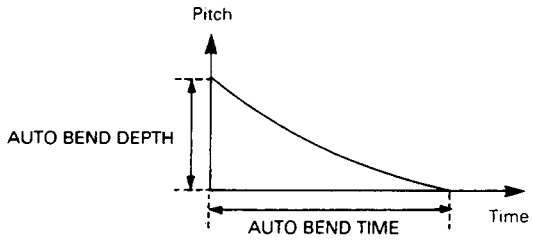
Note: B -4 VIBRATO/AUTO BEND determines whether the individual SOURCEs use this effect.

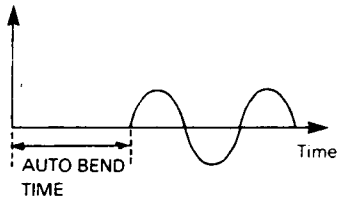
A -8 AUTO BEND TIME

Determines the time for the automatic bend function (A -7 above) and the delay before the start of the vibrato effect (A -2 above).

AUTO BEND TIME	PV-P = 100

Value	Effect
0	No effect
/	/
100	Maximum period



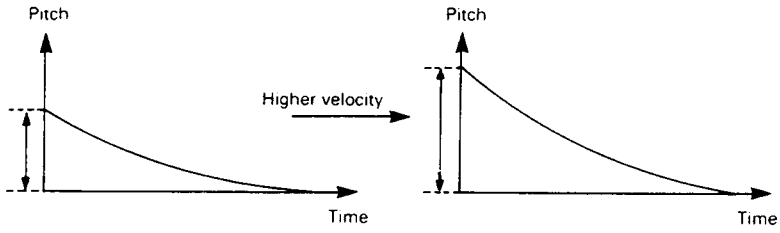


A -9 AUTO BEND VEL DEP

Uses D -7 VEL CURVE to link the depth of the AUTO BEND effect to key velocity.

AUTO BEND VEL-DEPTH	PV-P = ±50

Value	Effect
+50	Depth increases with velocity
/	/
0	No effect
/	/
-50	Depth decreases with velocity



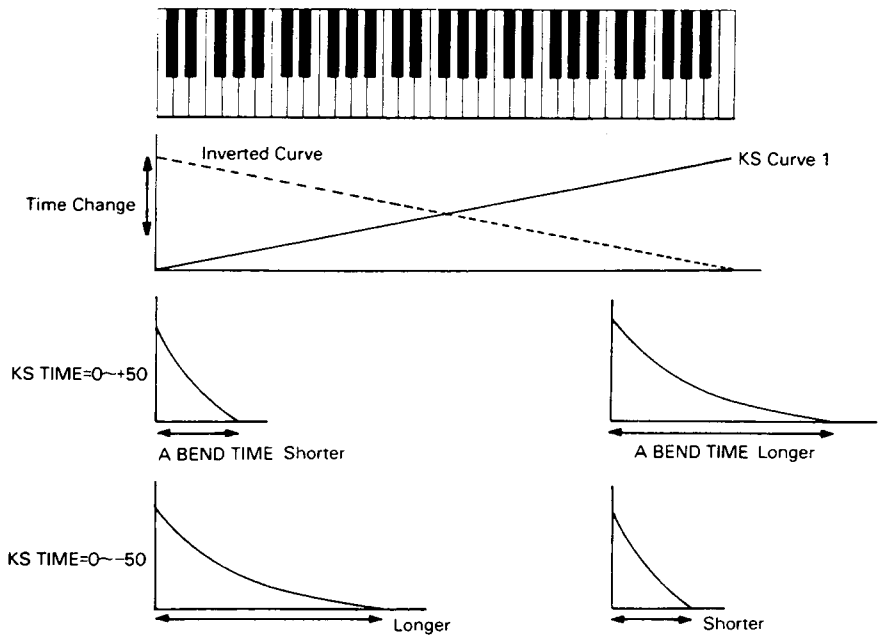
(For positive depth)

A -10 AUTO BEND KS-TIME

Uses A -13 KS CURVE to link the AUTO BEND time to key position.

AUTO BEND KS→TIME	P V - P = ±50

Value	Effect
+50	Maximum effect with normal KS curve
⌇	⌇
0	No effect
⌇	⌇
-50	Maximum effect with inverted KS curve



A -11 PRS FREQ

Links key frequency (pitch) to aftertouch, the amount of pressure on the key.

Note: This effect is only available with keyboards that transmit aftertouch data, such as the K1II.

B -5 PRS FREQ determines whether the individual SOURCEs use this effect.

COMMON PRS→FREQ	P V - P = ±50

Value	Effect
+50	Pitch increases with pressure.
⌇	⌇
0	No effect
⌇	⌇
-50	Pitch decreases with pressure.

A -12 PITCH BEND

Determines the PITCH BEND wheel range in semitones.

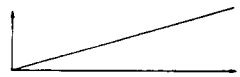
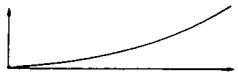
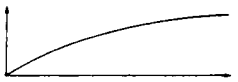
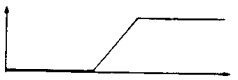
COMMON PITCH BEND	P V - P = 12

Value	Effect
0	No effect
⌇	⌇
12	Range of one octave

A -13 KS CURVE

Determines the shape of the keyboard scaling curve, a curve that other parameters use to make volume, note length, pitch, and other variables a function of key position.

COMMON	PV-P
KS CURVE	= 5

Value	Effect
1	
2	
3	
4	
5	

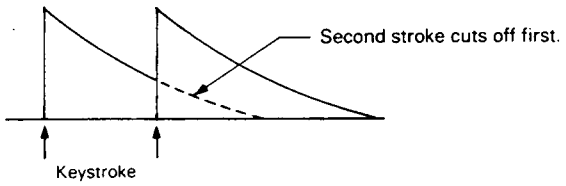
A -14 POLY MODE

Selects the voice assignment mode.

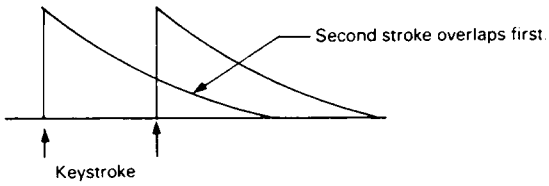
COMMON	PV-P
POLY MODE	= PL2

Value	Effect
PL1	Second stroke cancels first.
PL2	Second stroke overlaps first.
SOLO	One note at a time

POLY 1 — Striking the key a second time cuts off the previous note.



POLY 2 — The first note continues to die out even after the key is struck a second time.



SOLO — The keyboard sounds only one note at a time.

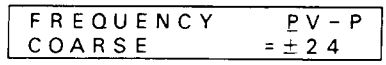
Note: If you hold down one key and strike another, the second note will replace the first, but the first note will reappear when you release the second key.

(3) Group B — FREQUENCY

The parameters in this group determine the pitch.

B -1 COARSE

Determines the relative pitch of the SOURCE in semitones when B -3 KEY TRACK is ON.



Value	Effect
+24	Two octaves higher
0	Normal pitch
-24	Two octaves lower

B -1 FIXED KEY

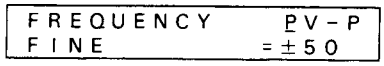
Determines the pitch used when B -3 KEY TRACK is OFF.

Note: When B -3 KEY TRACK is ON, COARSE appears; when it is OFF, FIXED KEY appears.

Value	C-4 ~ G6

B -2 FINE

Provides precise pitch adjustment.



Value	Effect
+50	1 semitone higher
0	Normal pitch
-50	1 semitone lower

B -3 KEY TRACK

Switches tracking function on and off. When tracking is ON, each key produces a note of a different pitch. When it is OFF, all keys produce the same note, the one selected by B -1 FIXED KEY.

Value	Effect
ON	Normal keyboard pitch
OFF	Monotone pitch

B -4 VIBRATO/AUTO BEND

Switches the vibrato and AUTO-BEND functions defined with parameters A -2 through A -10 on and off for the individual SOURCEs.

```
FREQ MOD        PV-P
VIB/A.BEND      =OFF
```

Value	Effect
ON	Vibrato and AUTO-BEND on
OFF	Vibrato and AUTO-BEND off

B -5 PRS-FREQ

Switches the pressure-frequency link defined with parameter A -11 on and off for the individual SOURCEs.

```
FREQ MOD        PV-P
PRS→FREQ        = ON
```

Value	Effect
ON	Pressure-frequency on
OFF	Pressure-frequency off

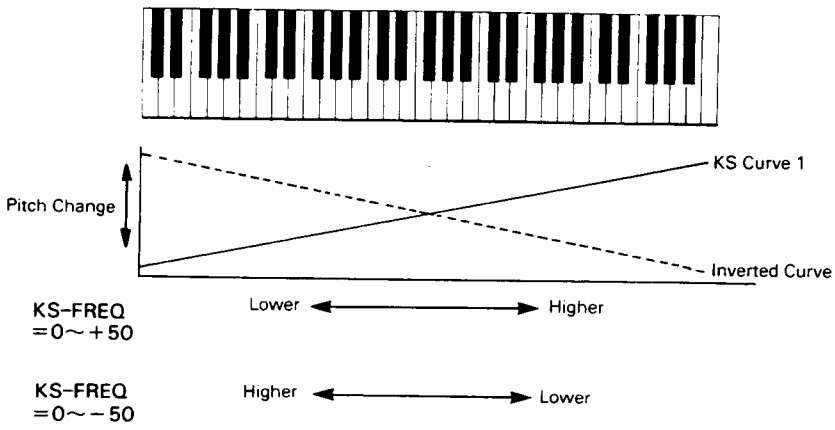
B -6 KS-FREQ

Adjusts the pitch according to the keyboard scaling curve selected by A -13.

```
FREQ MOD        PV-P
KS→FREQ         =±50
```

Value	Effect
+50	Maximum effect with normal KS curve
⌇	⌇
0	No effect
⌇	⌇
-50	Maximum effect with inverted KS curve

Example



(4) Group C — WAVE

The parameters in this group determine the waveform.

WAVE SELECT	PV-P = 256

Value	Waveform
1~204	VM waveform
205~256	PCM waveform

C -1 WAVE SELECT

Determines the waveforms for the individual SOURCEs.

Note: You may select any four from the 52 PCM waveforms and 204 VM waveforms available on the K1rII. (See the Wave List)

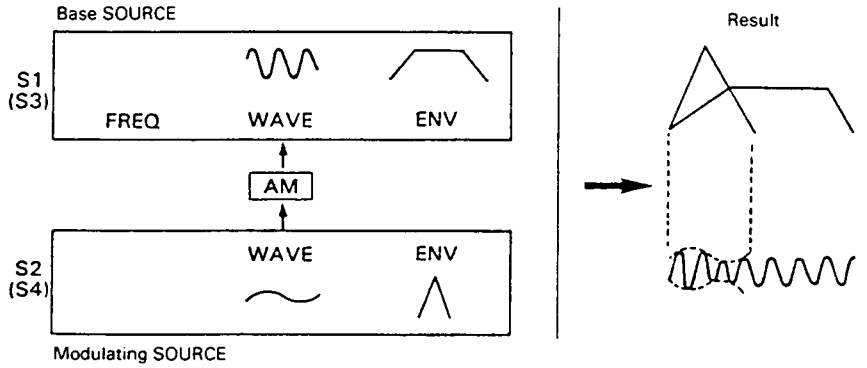
C -2/ C -3 AM (Ring Modulation)

Uses one SOURCE to modulate the output from another. (See illustration.) This type of modulation produces overloaded sounds that are difficult to produce with harmonic synthesis alone.

Note: The size of the effect depends on the ENV LEVEL for the modulating SOURCE.

AM S1 . S2	PV-P = 2>1

Value	Effect
OFF	No AM. (Both SOURCEs sound.)
2>1	SOURCE 2 modulates SOURCE 1
REV	SOURCE 1 modulates SOURCE 2



AM S3 . S4	PV-P = 4>3

Value	Effect
OFF	No AM. (Both SOURCEs sound.)
4>3	SOURCE 4 modulates SOURCE 3
REV	SOURCE 3 modulates SOURCE 4

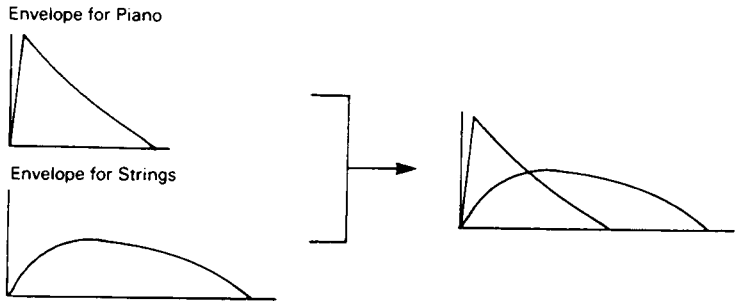
Note: Even if the base SOURCE is muted, it will still sound if the envelope for the modulating SOURCE is large enough.

C -4 COPY FROM

```
COPY              PV-P
FROM SINGLE=1A—8
```

Copies a block of data (FREQ, WAVE, or ENV) for a SOURCE in the current tone patch to a SOURCE in another tone patch.

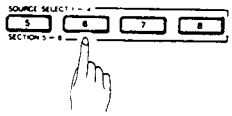
Note: This function is useful for mixing parameters from, for example, a PIANO tone patch and a STRINGS tone patch.



Procedure:

① Use the number switches (5-8) to select the SOURCE number for the destination.

```
COPY              PV-P
FROM SINGLE=1A—8
```



② Use the [+YES] / [-NO] switches to select the tone patch number for the SOURCE to be copied.

```
COPY              PV-P
FROM SINGLE=eA—6
```

③ Press the [C] switch to change to the SOURCE display.

```
COPY              PV-P
FROM SOURCE=S4
```

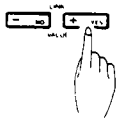
④ Use the [+YES] / [-NO] switches to select the SOURCE to be copied.

```
COPY              PV-P
FROM SOURCE=S1
```

⑤ Press the [C] switch to change to the confirmation display.

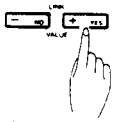
```
COPY
FROM   EXEC?=←  →
```

⑥ Press the [+YES] switch to proceed.



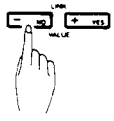
```
COPY
FROM   SURE?=←  →
```

⑦ Press the [+YES] switch to complete.



```
          COMPLETED!
```

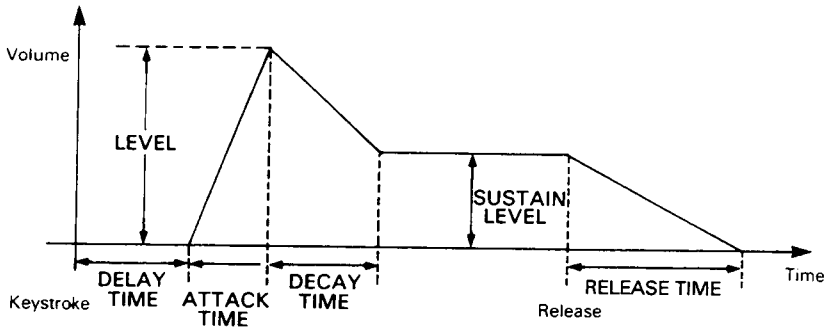
Press the [-NO] switch to cancel.



```
          CANCELED!
```

(5) Group D — ENVELOPE

The parameters in this group determine the envelope, the way the volume of a sound changes with time. For example, a note on a piano begins to fade immediately after you strike it, but one on an organ stays at the same volume until you release the key. The graph below defines the five phases of the envelope.



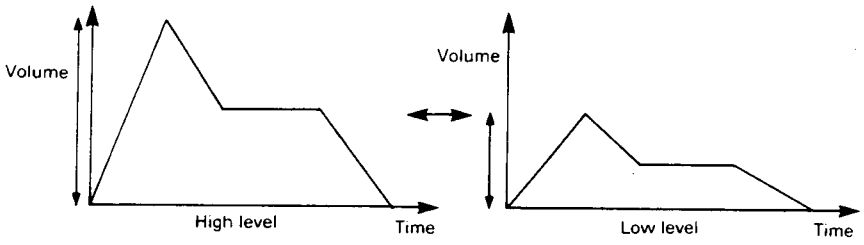
D -1 LEVEL

Determines the overall envelope volume.

Note: These settings affect the balance between individual SOURCEs and the size of the amplitude modulation effect.

ENVELOPE LEVEL	PV-P = 100

Value	Effect
0	No output (mute)
/	/
100	Maximum level

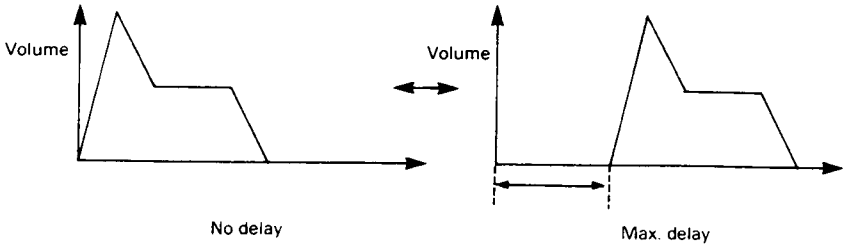


D -2 DELAY

Determines the time that elapses before the keystroke begins producing a sound.

ENVELOPE DELAY	PV-P = 100

Value	Effect
0	0
/	/
100	Max. delay

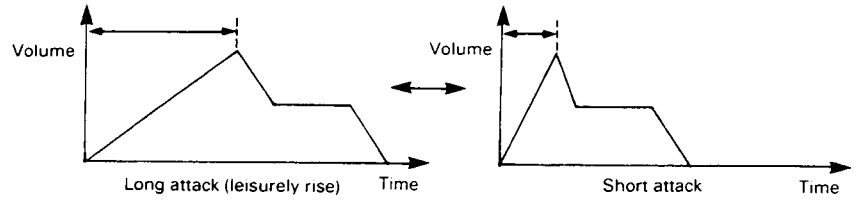


D -3 ATTACK

Determines the time that the sound takes to peak.

ENVELOPE ATTACK	PV-P = 100

Value	Effect
0	Short attack (instantaneous rise)
↓	↓
100	Long attack (leisurely rise)

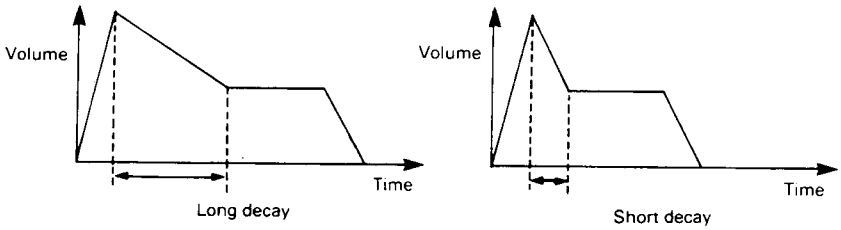


D -4 DECAY

Determines the time that the sound takes to fall from the peak to the SUSTAIN level.

ENVELOPE DECAY	PV-P = 100

Value	Effect
0	Instantaneous drop
↓	↓
100	Gradual drop

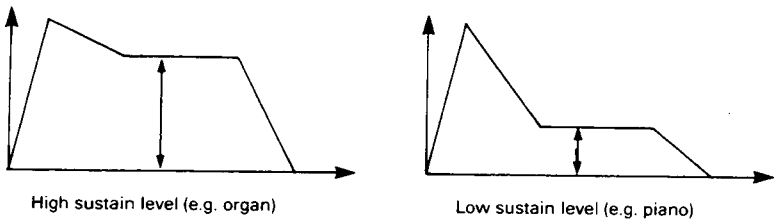


D -5 SUSTAIN

Determines, relative to the peak, the volume when the key is held down.

ENVELOPE SUSTAIN	PV-P = 100

Value	Volume
0	No sustain (mute)
↓	↓
100	Max. sustain

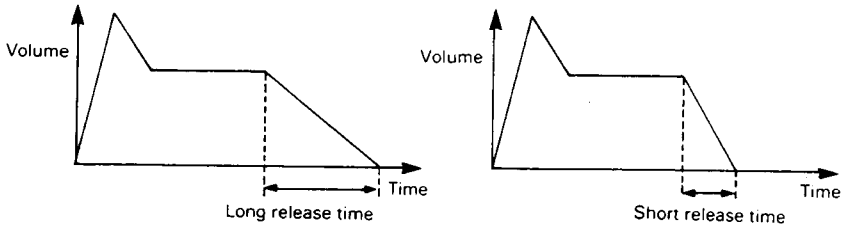


D -6 RELEASE

Determines the time the sound takes to die out after the key is released.

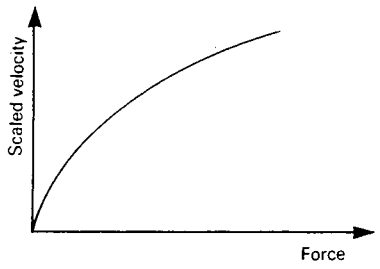
ENVELOPE RELEASE	PV-P = 100

Value	Effect
0	Sound dies instantly after release.
↓	↓
100	Sound gradually dies out.



D -7 VEL CURVE

Determines the curve that D -8 VEL ENV LEVEL and D -11 VEL ENV TIME use to adjust the overall volume and length, respectively, of the envelope for velocity, the initial force on the key.



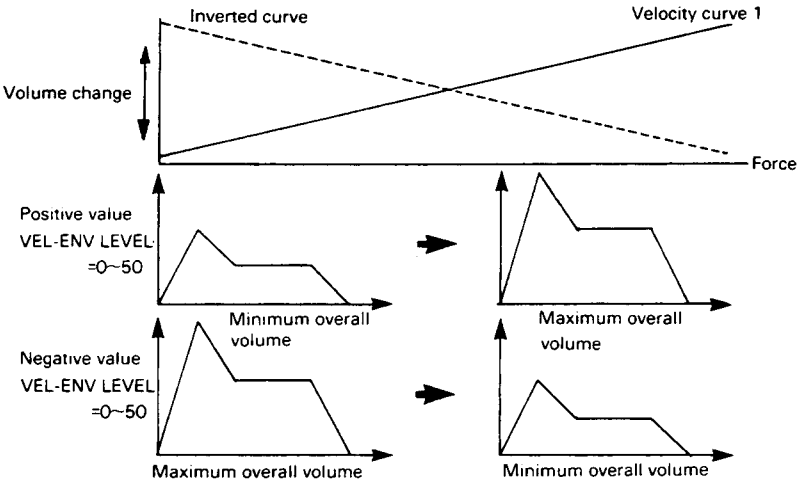
VELOCITY CURVE	PV-P = 8

Value	Curve	Value	Curve
1		5	
2		6	
3		7	
4		8	

D -8 VEL-ENV LEVEL

Uses D -7 VEL CURVE to adjust the overall volume of the envelope.

Example: Velocity curve 1



LEVEL MOD VEL	PV-P = ±50

Value	Effect
+50	Maximum effect
/	/
0	No effect
/	/
-50	Maximum effect with inverted velocity curve

D -9 PRS ENV LEVEL

Links the overall volume to aftertouch, the amount of pressure on the key.

Note: This effect is only available with keyboards that transmit aftertouch data, such as K1II.

LEVEL MOD PRS	PV-P = ±50

Value	Effect
+50	Maximum effect
/	/
0	No effect
/	/
-50	Maximum effect, but volume decreases with aftertouch

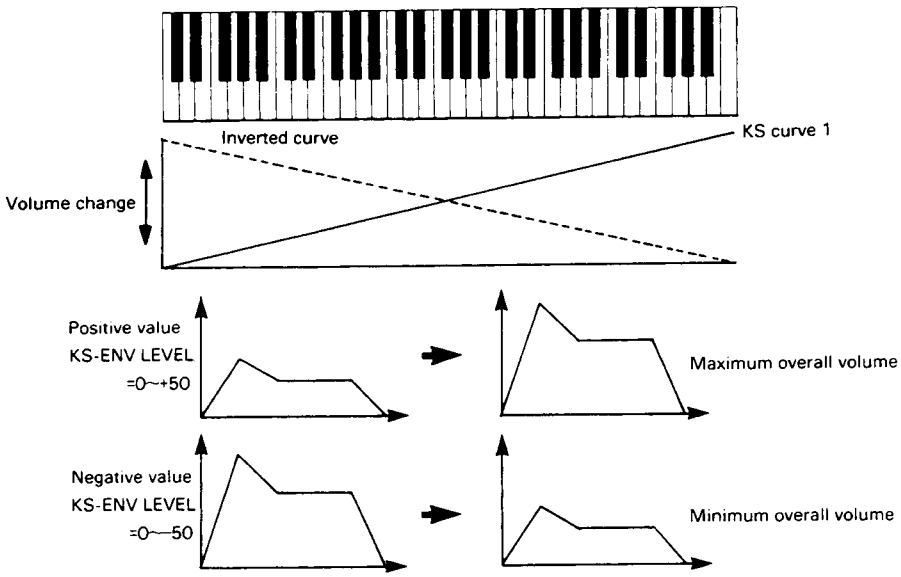
D -10 KS-ENV LEVEL

Uses A -13 KS CURVE to link the overall volume to key position.

L E V E L M O D P V - P K S = ± 5 0

Value	Effect
+50	Maximum effect with normal KS curve
0	No effect
-50	Maximum effect with inverted KS curve

Example: KS curve 1



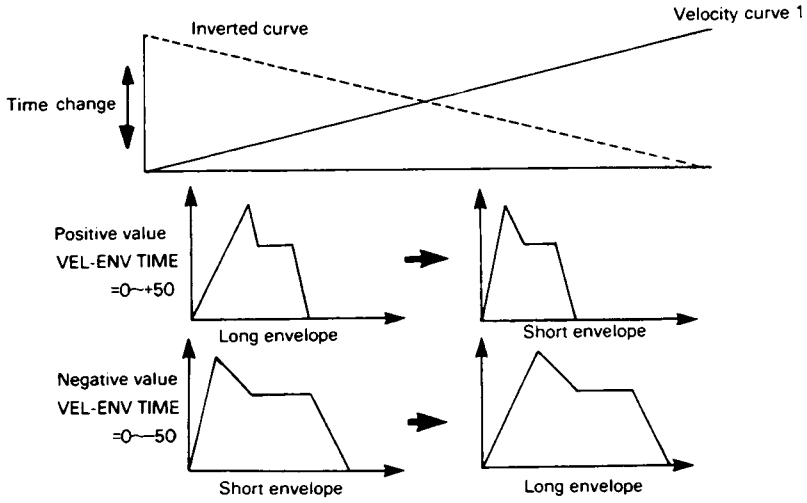
D -11 VEL-ENV TIME

Uses D -7 VEL CURVE to link the attack time to velocity.

T I M E M O D P V - P V E L = ± 5 0

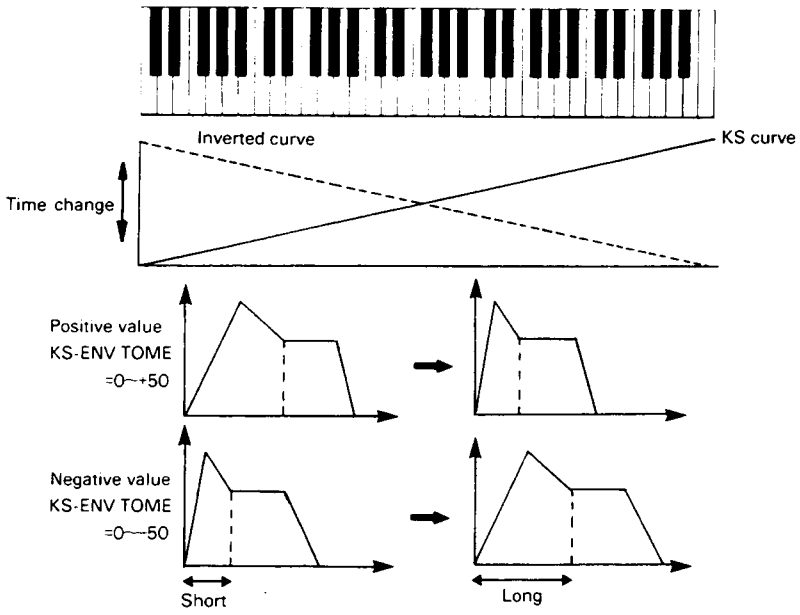
Value	Effect
+50	Maximum effect with normal velocity curve
0	No effect
-50	Maximum effect with inverted velocity curve

Example: Velocity curve 1



D -12 KS-ENV TIME

Uses A -13 KS CURVE to link the attack and decay time to key position.



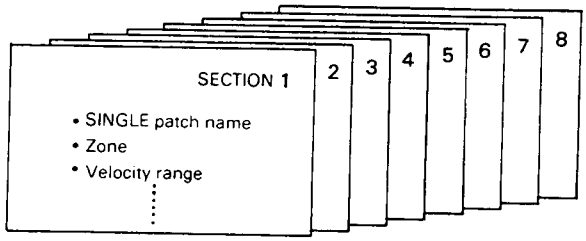
TIME MOD	P V - P
K S	= ± 5 0

Value	Effect
+50	Maximum effect with normal KS curve
0	No effect
-50	Maximum effect with inverted KS curve

4. Editing MULTI Patches

(1) Basic approach

Each K1rII MULTI patch consists of from one to eight SECTIONs, each consisting of a SINGLE patch with additional control information. Because it would take too much time to construct a tone patch completely from scratch, the usual approach is to select the closest MULTI patch and then edit it.



(2) Procedure

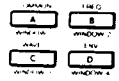
① In the PLAY mode, select the MULTI patch that best approximates the desired sound.

MULTI
I A—1 SYMPHONY

② Press the [EDIT] switch.

M I A—1 SYMPHONY
VOLUME = 100

③ Select the parameter to be edited.

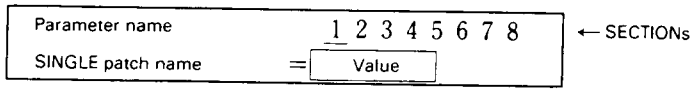


or [EDIT]

TRANS 2165 4 - 3 8 15
= ± 2 4

(3) Edit display

The EDIT display provides five different types of information.



* Parameter name — This indicates the parameter being edited. Change with the letter switches (A, B, C, or D).

* Parameter value — This gives the parameter value for the SECTION indicated by the cursor. Change with the [+YES] / [-NO] switches.

* Sections — These indicate the current status of the eight possible SECTIONs. A number (1-16) indicates the SECTION's MIDI receive channel and "—" tells that the number of the SECTION's polyphonic voices is 0.

* Cursor — This underline tells which SECTION is being edited. Use the SOURCE SELECT switches (numbers 1-8) to change SECTIONs.

* SINGLE patch name — This gives the name of the SINGLE patch currently assigned to this SECTION.

5. MULTI Patch Parameters

(1) [EDIT] switch

There are two parameters that you can edit before proceeding to the ones grouped under the letter switches (A, B, C, and D):

[EDIT] -1 VOLUME

Determines the volume for the MULTI patch.
Normally, this should be the maximum (100), but it may be necessary to adjust the balance between MULTI patches with this parameter.

Note: The parameter [D] -3 LEVEL adjusts the relative balance between the SECTIONs used in the tone patch.

```
M I A—1      SYMPHONY
V O L U M E      = 1 0 0
```

Value	Effect
1	Minimum
/	/
100	Maximum

[EDIT] -2 NAME

Assigns a 10-character name for the tone patch.
This name may mix any of the 96 characters.

```
M I A—1      S Y M P H O N Y
N A M E      1 S T = S
```

The procedure is the same as that for SINGLE patch. (See p.16.)

(2) Group [A] — WINDOW 1

This group assigns the SINGLE patches to SECTIONs.

[A] -1 SINGLE ASSIGN

Determines the SINGLE patches for each SECTION.

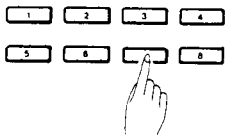
```
S I N G L E    2 1 6 5 4 - 3 8 1 5
S t r  E n s       = I A—8
```

Note: The K1rII will not allow you to mix internal (I/i) and external (E/e) tone patches. You cannot use an internal SINGLE patch in an external MULTI patch or an external SINGLE patch in an internal MULTI patch, for example.

The MULTI patch remembers only the tone patch number and not tone patch contents. Editing a SINGLE patch will therefore automatically affect all MULTI patches using it as well.

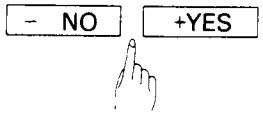
Procedure:

① Select SECTION



```
S I N G L E    2 1 6 5 4 - 3 8 1 5
S t r  E n s       = I A—1
```

② Select the SINGLE patch to be assigned.




```
S I N G L E    2 1 6 5 4 - 3 8 1 5
O r c h e s t r a  = I A—5
```

Group [B] — WINDOW 2

The parameters in this group determine the keyboard zone for the SECTION.

[B] -1 ZONE LO

Determines the lower limit (between C-2 and G8) for the SECTION.

```
Z O N E  L O   2 1 6 5 4 - 3 8 1 5
V o i c e  A h h    = C #— 2
```

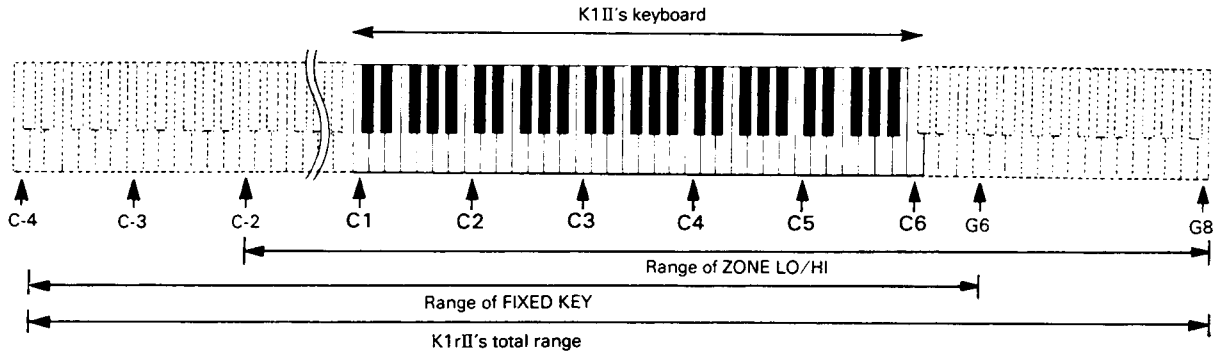
B -2 ZONE HI

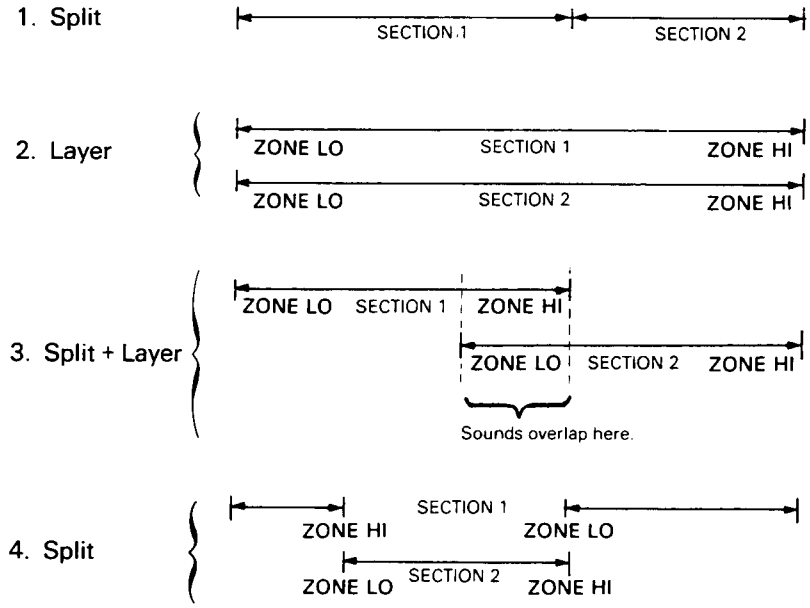
Determines the upper limit (between C-2 and G8) for the SECTION.

```
ZONE HI  2165 4 - 3 8 15
Voice Ahh    =G 3
```

Note: The above two parameters serve to divide the K1rII's effective keyboard range into zones.

Examples:

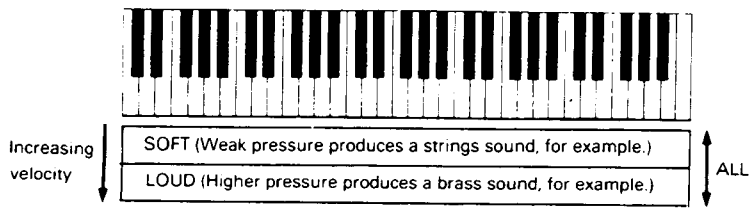




B -3 VELOCITY SW

Determines how the SECTION reacts to changes in key velocity.

```
VEL SW   2164 - 4 1 8 15
Mellow EP    = LOUD
```



Value	Effect
ALL	All strikes produce a sound.
SOFT	Only weak strike produces a sound.
LOUD	Only hard strike produces a sound.

(4) Group C — WINDOW 3

The parameters in this group determine the number of polyphonic voices and the MIDI channel assignments.

C -1 POLY

Determines the maximum number of polyphonic voices available for each SECTION. This can be a number, 0-8, or VR (variable). In the latter case, the K1rII automatically redistributes voices that are not in use.

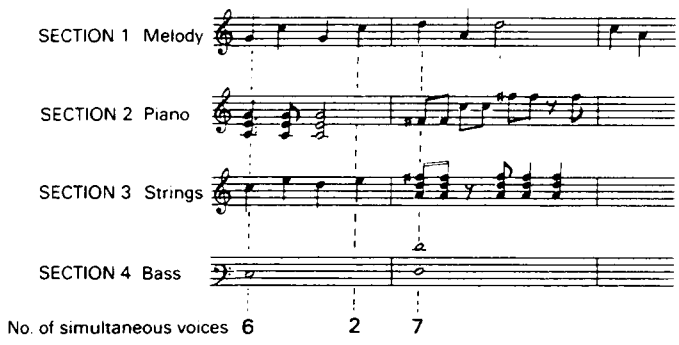
Note: The K1rII assigns priority to the most recently struck keys.

The VR setting introduces greater flexibility when the K1rII is driven by a sequencer, computer, or similar device.

```
POLY        2165 4 - 3 8 15
Str  Ens      =  VR
```

Value	Effect
0	None (mute)
1~8	Limit
VR	Variable (All available)

Example:



Consider the following four-part segment. Taken separately, the SECTIONs seem to require 1+3+3+2=9 voices, one more than the eight available. A closer look, however, reveals that the maximum number of notes at any given time is only seven.
Since the second and third SECTIONs do not simultaneously require three voices each, they can share. (Alternatively, since the maximum is within the limit, all four SECTIONs can be made variable.)

SECTION	Max.	Option 1	Option 2
1	1	1	VR
2	3	VR	VR
3	3	VR	VR
4	2	2	VR

C -2 RCV CH

Assigns MIDI receive channels to SECTIONs so that a sequencer or other external device can use the K1rII as up to eight different MIDI sound sources.

Note: The channel numbers appear in the upper right corner of the display.

MIDI receive channel of DRUM SECTION is assignable separately from SECTIONs of Multi Patch. (See p. 43.)

```
RCV  CH     2165 4 - 3 8 15
Str  Ens       =     5
```

Value	Effect
1	MIDI receive channel number 1
/	/
16	MIDI receive channel number 16

(5) Group [D] — WINDOW 4

The parameters in this group affect SECTION pitch and level.

[D]-1 TRANSPOSE

Shifts SECTION pitch up or down in increments of a semitone. Combining a SECTION with normal pitch (value=0) with one transposed up 7 or 12 semitones, for example, creates a perfect fifth or octave, respectively.

```
TRNS        2165 4 - 3 815
Str Ens          =±24
```

Value	Effect
+24	Two octaves higher
⌇	⌇
0	Standard pitch
⌇	⌇
-24	Two octaves lower

[D]-2 TUNE

Shifts SECTION pitch up or down by small amounts.
Combining SECTIONs with slightly different pitches adds depth to the sound.

```
TUNE        2165 4 - 3 815
Str Ens          =±24
```

Value	Effect
+50	Semitone higher
⌇	⌇
0	Standard pitch
⌇	⌇
-50	Semitone lower

[D]-3 LEVEL

Determines the relative volume for each SECTION.

Note: If the value is zero, the SECTION's portion of the upper right corner of the display changes to a dash (–).

```
LEVEL       2165 4 - 3 815
Str Ens          =100
```

Value	Effect
0	Min. (mute)
⌇	⌇
100	Max.

[D]-4 OUTPUT

Determines whether the SECTION goes to OUTPUT 1 ~ 4. This function allows the routing of specific SECTIONs to a reverberation or other effect.

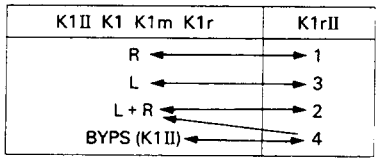
- ALL SECTIONs go to the MIX OUTPUT.
- The headphone stereo image is related to the OUTPUT 1 ~ 4 as below.

```
OUTPUT      2165 4 - 3 815
Str Ens          =  4
```

Value	Effect
1	OUTPUT 1
2	2
3	3
4	4

Headphone	OUTPUT
R	1
L	3
L + R	2, 4

- Interchangeability of output data with K1II, K1, K1m, K1r



IV. WRITE — Storing Edited Tone Patches

1. Definition

When you edit a tone patch, you work with a temporary copy that disappears when you turn off the power. If you wish to save the tone patch for later use, you must store it in the K1rII's internal memory or on a DC-8 memory card with the WRITE function.
It is also possible to copy a tone patch from one location to another and to copy all tone patches from the internal memory to a card (SAVE) or in the opposite direction (LOAD). (See p.39.)

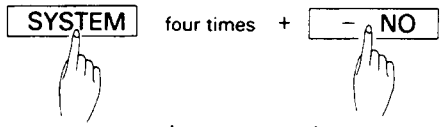
Note: Copying data from one location to another involves erasing all data that was formerly at the destination. One way to avoid accidentally erasing valuable data is to keep backup copies on cards.

2. Procedure

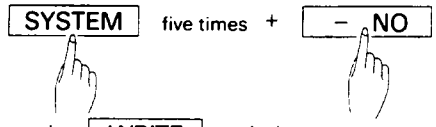
To store the tone patch that you are currently editing:

① Disable the WRITE PROTECT function.

For an internal tone patch, press the [SYSTEM] switch four times and the [–NO] switch once. (See p.38.)

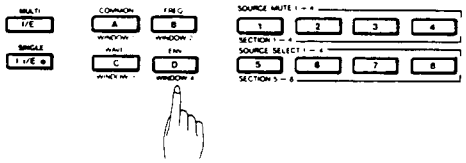


For an external tone patch, press the [SYSTEM] switch five times and the [–NO] switch once. (See p.38.)

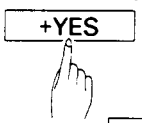


② Press the [WRITE] switch.

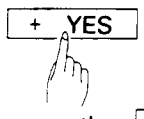
③ Select the destination.



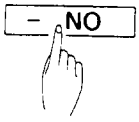
④ Press the [+YES] switch to display the **SURE?** prompt.



⑤ Press the [+YES] switch to complete.



Or press the [–NO] to cancel.




```
SYSTEM
INT  PROTECT=ON
```

```
SYSTEM
INT  PROTECT=OFF
```

```
CARD
     PROTECT=ON
```

```
CARD
     PROTECT=OFF
```

```
WRITE   MEA—8
TO      EXEC?  =←  →
```

```
WRITE   MIB—1
TO      EXEC?  =←  →
```

```
WRITE   MIB—1
TO      SURE?  =←  →
```

```
          COMPLETED!
```

```
          CANCELED!
```

V. LINK Function

1. Definition

The LINK function allows you to link up to eight tone patches — SINGLE or MULTI, INTERNAL or EXTERNAL — from the 192 available and then step through the series during a performance simply by pressing the LINK switches.

2. Procedure

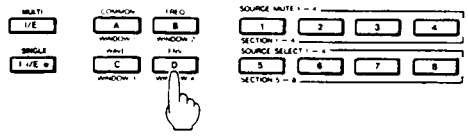
① Press the [WRITE] switch twice.

Two times

LINK 1ST	SIA—8

② Select a tone patch of the series.

LINK 1ST	SID—7



③ Press the [WRITE] switch and go back to Step2 to select the next tone patch in the series.

LINK 2ND	MIB—2

④ Repeat steps ② and ③ another seven times.

LINK 5TH	OFF

Note: If there are fewer than eight tone patches in the series, press the [– NO] switch at step 2 to terminate.

VI. SYSTEM — System and MIDI Parameters

1. SYSTEM Parameters

Pressing the [SYSTEM] switch activates the K1rII's [SYSTEM] mode. Subsequent presses then cycle through the parameters, the values of which may be changed with the [+YES] / [-NO] switches.

```
SYSTEM/MIDI
          =SYS
```

[SYSTEM]-2 TUNE

Adjusts the K1rII's master tuning.

```
SYSTEM
TUNE          =±50
```

Value	Effect
+50	Semitone higher
↕	↕
0	Normal pitch
↕	↕
-50	Semitone lower

[SYSTEM]-3 TRANSPOSE

Shifts the pitch of all notes up or down in increments of a semitone.

```
SYSTEM
TRANSPOSE     =±12
```

Value	Effect
+12	One octave higher
↕	↕
0	Normal pitch
↕	↕
-12	One octave lower

[SYSTEM]-4 INT PROTECT

Controls the WRITE PROTECT function for the K1rII's internal memory. It must be OFF for a LOAD operation.

```
SYSTEM
INT PROTECT= ON
```

[SYSTEM]-5 CARD PROTECT

Controls the WRITE PROTECT function for the memory card.

Note: You should normally keep the preceding two parameters ON to prevent accidental erasure of valuable data.

```
CARD
     PROTECT= ON
```

[SYSTEM]-6 CARD FORMAT

Prepares a DC-8 memory card (option) for the first use with the K1rII.

Note: Proceed with caution. This procedure erases any data that may be on the card.

Procedure:

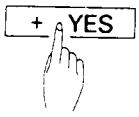
① Insert the card in the slot.

② Press the [+YES] switch to proceed to the **SURE?** prompt


```
CARD FORMAT
      EXEC?=←  →
```

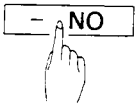
```
CARD FORMAT
      SURE?=←  →
```

③ Press the [+YES] switch to complete the operation.



COMPLETED!

Or press the [–NO] to cancel.



CANCELED!

[SYSTEM] -7 SAVE

Copies all data from the internal memory (including DRUM SECTION) to a card.

Set [SYSTEM] -5 CARD PROTECT to OFF beforehand.

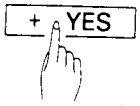
Note: Proceed with caution. This procedure erases any data that may be on the card.

Procedure:

① Insert the card in the slot.

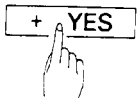
② Press the [+YES] switch to proceed from the EXEC? prompt to the SURE?

SAVE
EXEC? ← →



SAVE
SURE? ← →

③ Press the [+YES] switch to complete the operation.



COMPLETED!

Or press the [–NO] switch to cancel.

CANCELED!

[SYSTEM] -8 LOAD

Copies all data from a card to the internal memory (including DRUM SECTION).

Set [SYSTEM] -4 INT PROTECT to OFF beforehand.

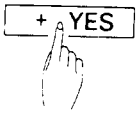
Note: Proceed with caution. This procedure erases any internal data.

Procedure:

① Insert the card in the slot.

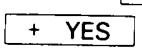
② Press the [+YES] switch to proceed from the EXEC? prompt to the SURE?

LOAD
EXEC? ← →



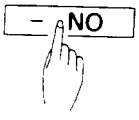
LOAD
SURE? ← →

③ Press the [+YES] switch to complete the operation.



COMPLETED!

Or press the [–NO] switch to cancel.



CANCELED!

2. MIDI Transmission Parameters

Press the [SYSTEM] switch and then use the [+YES] / [-NO] switches to change from SYS to TRS. Subsequent presses of the [SYSTEM] switch then cycle through the parameters, the value of which may be changed with the [+YES] / [-NO] switches.

SYSTEM/MIDI
=SYS

[SYSTEM] TRS-2 TRS CH

Determines the MIDI channel (1-16) on which the K1rII transmits MIDI data.

SYSTEM/MIDI
=TRS

MIDI
TRS CH = 16

[SYSTEM] TRS-3 PGM

Determines whether the K1rII transmits program change data.

MIDI
TRS PGM = ON

[SYSTEM] TRS-4 DATA DUMP

Transmits tone patch data from the K1rII to another K1/K1m/K1r/K1II/K1rII — either one tone patch at a time or as one block consisting of 32 tone patches.

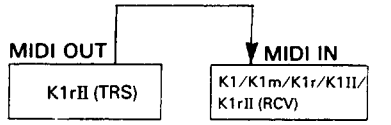
MIDI DUMP MIA-8
EXEC? =- -

Value	Effect
PACH	One tone patch is transmitted at a time.
BLOK	One block is transmitted at a time

Procedure:

① Connect the two units as shown.

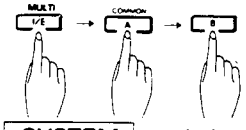
On the receiving unit, set [SYS] -4 INT PROTECT to OFF and [RCV] -11 EXCL to ON beforehand.



INT/CARD PROTECT = OFF RCV EXCL = ON

② Select the tone patch or block to send.

Example

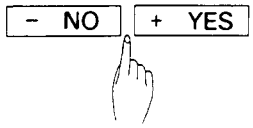


MULTI
IA-8 MARCH BAND

③ Press the [SYSTEM] switch and shift to the DATA DUMP display.

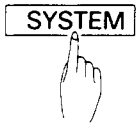
MIDI DATA MIA-8
DUMP =BLOK

④ Use the [+YES] / [-NO] switches to select PACH or BLOCK.



MIDI DATA MIA-8
DUMP =PACH

⑤ Press the [SYSTEM] switch to display the **EXEC?** prompt.

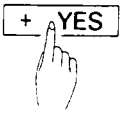


MIDI DATA MIA-8
EXEC? =- -

⑥ Press the [+YES] switch to proceed to the **SURE?** prompt.

MIDI DATA MIA-8
SURE? =- -

⑦ Press the [+YES] switch to complete the dump.



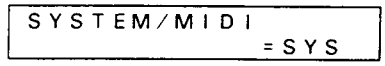
COMPLETED!

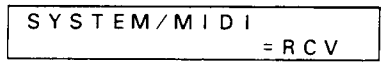
Or pres the [-NO] switch to cancel.

CANCELED!

3. MIDI Receive Parameters

Press the [SYSTEM] switch and then use the [+YES] / [-NO] switches to change from SYS to RCV. Subsequent presses of the [SYSTEM] switch then cycle through the parameters, the value of which may be changed with the [+YES] / [-NO] switches.

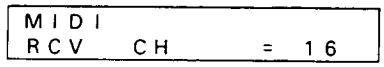




[SYSTEM] RCV-2 RCV CH

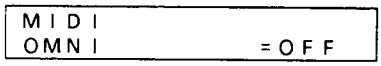
Determines the MIDI channel (1-16) on which the K1rII receives.

Note: The SECTIONs in a MULTI patch receive on independent channels.



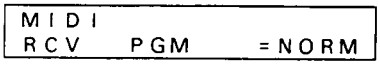
[SYSTEM] RCV-3 OMNI ON/OFF

Determines whether the K1rII monitors all MIDI channels.



[SYSTEM] RCV-4 PGM

Determines how the K1rII acts on program change data.



There are four possibilities: (See accompanying chart.)

OFF	The K1rII ignores all incoming program change commands.
NORM (Normal)	A program change command between 0 and 63 changes the K1rII to a SINGLE patch; one between 64 and 127, to a MULTI patch.
SECT (Section)	A program change command between 0 and 63 changes the SINGLE patch for the SECTION with the same MIDI channel; one between 64 and 127, changes to a MULTI patch.
LINK	A program change command changes the tone patch in the LINK series.

Note:
- For NORM and SECT, the K1rII chooses the same bank (INT/EXT) as the patch currently on the display.
- MIDI receive channel of DRUM SECTION is assignable separately from SECTIONs of MULTI and SINGLE patch.

Value PGM No.	OFF	NORM		SECT		LINK	Transmitting	
		INT	EXT	INT	EXT	LINK	INT	EXT
0—31	Nothing recognized	SIA-1 ~SID-8	SEA-1 ~SED-8	SIA-1 ~SID-8	SEA-1 ~SED-8	No.1—No.8	SIA-1 ~SID-8	SEA-1 ~SED-8
32—63	Nothing recognized	SiA-1 ~SiD-8	SeA-1 ~SeD-8	SiA-1 ~SiD-8	SeA-1 ~SeD-8	No.1—No.8	SiA-1 ~SiD-8	SeA-1 ~SeD-8
64—95	Nothing recognized	MIA-1 ~MID-8	MEA-1 ~MED-8	MIA-1 ~MID-8	MEA-1 ~MED-8	No.1—No.8	MIA-1 ~MID-8	MEA-1 ~MED-8
96—127	Nothing recognized	MIA-1 ~MID-8	MEA-1 ~MED-8	MIA-1 ~MID-8	MEA-1 ~MED-8	No.1—No.8	Nothing transmitted	Nothing transmitted

SYSTEM **RCV-5 PRS**

Determines whether the K1rII acts on pressure (aftertouch) data.

```
MIDI
RCV   PRS     =OFF
```

SYSTEM **RCV-6 BEND**

Determines whether the K1rII acts on PITCH BEND data.

```
MIDI
RCV   BEND    = ON
```

SYSTEM **RCV-7 MOD**

Determines whether the K1rII acts on MODULATION data.

```
MIDI
RCV   MOD     =OFF
```

SYSTEM **RCV-8 VOL**

Determines whether the K1rII acts on VOLUME data.

```
MIDI
RCV   VOL     = ON
```

SYSTEM **RCV-9 HOLD**

Determines whether the K1rII acts on HOLD pedal data.

```
MIDI
RCV   HOLD    =OFF
```

SYSTEM **RCV-10 VEL**

Determines whether the K1rII acts on VELOCITY data.

```
MIDI
RCV   VEL     = ON
```

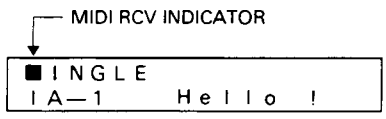
SYSTEM **RCV-11 EXCL**

Determines whether the K1rII acts on SYSTEM EXCLUSIVE data.

```
MIDI
RCV   EXCL    =OFF
```

Note: MIDI RCV INDICATOR

Every time the K1rII receives MIDI data, the sign appears at the upper left corner.



VII. DRUM SECTION

The Drum Section is a separate programmable section of the K1rII, independent from any Single or Multi patch. Drum sounds are programmed for each note on most keyboard's two lowest octaves (C1-C3). These sounds can be played from a connected MIDI keyboard, sequencer or other MIDI device, on their own independent MIDI channel.

Any of the 32 drum sounds can be programmed to any key in the C1-C3 range, with independent settings for Tuning, and OUTPUT for each key. These are set using the parameters below.

Procedure:
Press the [SYSTEM] switch and then use the [+YES] / [-NO] switches to change from SYS to DRUM. Subsequent passes of the [SYSTEM] switch then cycle through the parameters, the values of which may be changed with the [+YES] / [-NO] switches.

```
SYSTEM/MIDI
                    =SYS
```

```
SYSTEM/MIDI.
                    =DRUM
```

[SYSTEM] DRUM-2 RCV CH

Determines the MIDI channel (1-16) on which the drum section receives. Be sure to match the transmit cahnnel.

Note: This setting is totally independent of the MIDI channel settings for the system and individual patch sections and is not overridden by the OMNI ON setting.

```
DRUM
RCV CH          =16
```

Note: It is only C1 to C3 that can assign the DRUM sound.

[SYSTEM] DRUM-3 VOLUME

Determines the volume of the drum section relative to those of SINGLE and MULTI patches.

Note: The parameter [SYSTEM] DRUM-8 LEVEL determines the individual output levels for the instruments on the drum section.

```
DRUM
VOLUME          =100
```

Value	Effect
1	Minimum
⌇	
100	Maximum

[SYSTEM] DRUM-4 VELO DEPTH

Determines what effect key velocity has on volume and the sustain time for all instruments on the drum section.

```
DRUM
VELO DEPTH  =-50
```

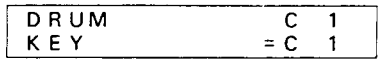
Value	Effect
-50	Volume decreases with velocity
⌇	
0	No effect
⌇	
+50	Volume increases with velocity

Parameters DRUM-5 through 9 control the individual percussion instruments assigned to MIDI note numbers C1 through C3. Use [SYSTEM] DRUM-5 KEY to select a key — its name (note number) then appears in the upper right corner — [SYSTEM] DRUM-6 INST to select an instrument, and the others to complete or modify the assignment.

[SYSTEM] DRUM-5 KEY

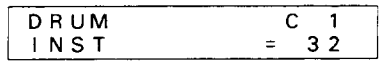
Selects the key to be assigned.

Note:
- The key name (note number) appears in the upper right corner.
- You can select the desired key directly from a connected keyboard.



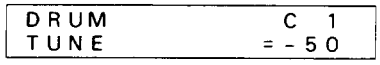
[SYSTEM] DRUM-6 INST

Selects the number (1-32) of the percussion instrument to be assigned to the key. (See the DRUM SECTION Instrument chart p.48, which lists the instruments' numbers and factory assignments.)



[SYSTEM] DRUM-7 TUNE

Adjusts the pitch, up to approximately an octave on either side of the standard value.

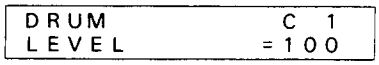


Value	Effect
-50	Approx. an octave lower
⌇	
0	Standard pitch
⌇	
+50	Approx. an octave higher

[SYSTEM] DRUM-8 LEVEL

Adjusts the output level for the selected instrument.

Note: The parameter [SYSTEM] DRUM-3 VOLUME determines the output level of the drum section relative to those of SINGLE and MULTI patches.



Value	Effect
0	No sound
⌇	
100	Maximum level

[SYSTEM] DRUM-9 OUTPUT

Determines whether the output goes to the OUTPUT 1 ~ 4.

Value	Effect
1	OUTPUT 1
2	2
3	3
4	4

Note: To return to the factory-set parameters, turn the POWER switch on while pressing "WRITE" switch. This resets the K1rII's DRUM SECTION to its original parameter setting.

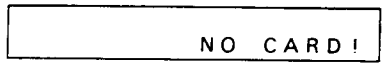
VIII. Error Messages

(1) PROTECTED

The WRITE PROTECT parameter for the destination (internal memory or card) is ON. Turn it OFF. (See p. 38.)

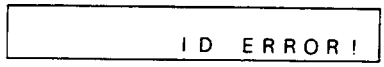
(2) NO CARD

The card is not correctly inserted.
Insert it firmly.



(3) ID ERROR

The card is not ready for use with the K1rII/K1II/K1/K1m/K1r. Format it. (See p. 38, 39.)



■ DRUM SECTION and card

There are separate DRUM section settings stored in the K1rII's internal memory and on the card. When a card is inserted into the K1rII and an external patch (E,e) selected, the DRUM section settings programmed on the card will also be selected. If the card was created using a K1, K1m or K1r, a DRUM section program will not be present on the card, since these models have no DRUM section. In this case, the K1rII will utilize the factory preset assignments for the DRUM section.

When an external patch is selected, the external DRUM section settings can be changed by shifting the values of the DRUM section. If a ROM card is used, any changes will not be saved. The DRUM SECTIONs of the K1rII and the K1II are almost the same and interchangeable. (Only the OUTPUT assignment is slightly different.)

When an internal patch (I,i) is selected the Internal DRUM Section settings will also be selected.

IX. Appendices

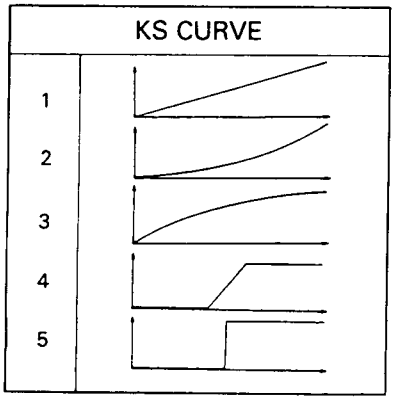
1. SINGLE Patch Parameters

K1rII SINGLE PARAMETERS

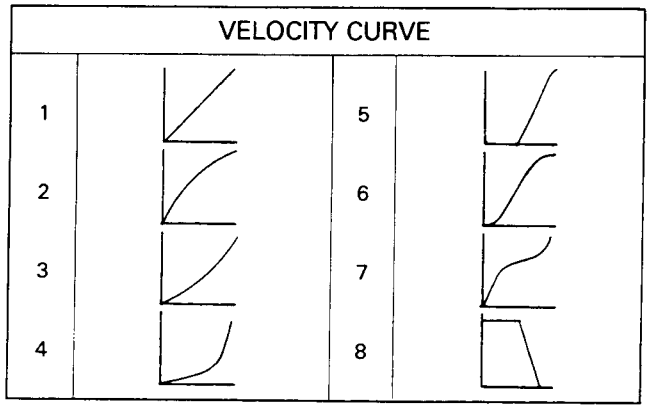
EDIT	1 VOLUME	1-100	2-11 NAME	10 characters		
COMMON A	1 SOURCES -VIBRATO- 2 DEPTH 3 SPEED 4 SHAPE 5 PRS→DEPTH 6 WHEEL	2/4 ±50 0-100 TRI/SAW/SQR/ RND ±50 DEP/SPD	-AUTO BEND- 7 DEPTH 8 TIME 9 VEL→DEPTH 10 KS-TIME	±50 0-100 ±50 ±50	11 PRS→FREQ 12 PITCH BEND 13 KS CURVE 14 POLY MODE	±50 0-12 1-5 PL1/PL2/SOLO

SW	PARAMETER		S1	S2	S3	S4
FREQ B	FREQ FREQ MOD	1 COARSE (FIXED KEY) 2 FINE 3 KEY TRACK 4 VIBRATO/AUTO BEND 5 PRS-FREQ 6 KS-FREQ	±24 C-4~G6 ±50 on/off on/off on/off ±50	KEY TRACK=ON KEY TRACK=OFF		
WAVE C	WAVE AM COPY	1 WAVE SELECT 2 AM S1.S2 3 AM S3.S4 4 COPY FROM	1-256 off/1→2/2→1 off/3→4/4→3 1A-8~eD-8 S1~S4			
ENV D	ENVELOPE VEL CURVE LEVEL MOD TIME MOD	1 LEVEL 2 DELAY 3 ATTACK 4 DECAY 5 SUSTAIN 6 RELEASE 7 VELOCITY CURVE 8 VEL→ENV LEVEL 9 PRS→ENV LEVEL 10 KS→ENV LEVEL 11 VEL→ENV TIME 12 KS→ENV TIME	0-100 0-100 0-100 0-100 0-100 0-100 1-8 ±50 ±50 ±50 ±50 ±50			

KS CURVE



VELOCITY CURVE



2. MULTI Patch Parameters

K1rII MULTI PARAMETERS

EDIT	1 VOLUME 2-11 NAME	1~100 10 characters						
SW	PARAMETER	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8
WINDOW 1	1 SINGLE (assign)	IA-1~iD-8 (name)							
WINDOW 2	1 ZONE LO 2 ZONE HI 3 VEL SW	C-2~G8 C-2~G8 ALL/SOFT/LOUD							
WINDOW 3	1 POLY 2 RCV CH	VR.0~8 1~16							
WINDOW 4	1 TRANSPOSE 2 TUNE 3 LEVEL 4 OUTPUT	±24 ±50 0~100 1, 2, 3, 4							

AUX Parameters

K1rII AUX PARAMETERS

SW	PARAMETER	VALUE
WRITE	1 WRITE 2 LINK 1ST 3 LINK 2ND 〈 . 〉 9 LINK 8TH	select with panel sw select with panel sw select with panel sw 〈 select with panel sw
SYSTEM	1 SYSTEM/MIDI/DRUM SECTION	SYS/TRS/RCV/DRUM

SYS		TRS		RCV	
2 SYSTEM TUNE	±50	2 MIDI TRS CH	1~16	2 MIDI RCV CH	1~16
3 TRANSPOSE	±12	3 PGM	on/off	3 OMNI	on/off
4 INT PROTECT	on/off	4 MIDI DATA DUMP EXEC	BLOCK/PATCH	4 PGM	OFF/NORM /SECT/LINK
5 CARD PROTECT	on/off			5 PRS	on/off
6 CARD FORMAT EXEC				6 BEND	on/off
7 SAVE EXEC				7 MOD	on/off
8 LOAD EXEC				8 VOL	on/off
				9 HOLD	on/off
				10 VEL	on/off
				11 EXCL	on/off

DRUM	
2 DRUM RCV CH	1~16
3 VOLUME	1~100
4 VELO DEPTH	±50
5 KEY NO.	C1~C3
6 INST	1~32
7 TUNE	±50
8 LEVEL	0~100
9 OUTPUT	1, 2, 3, 4

3. DRUM SECTION Instrument Chart

(1) Instrument's Numbers

INST #	INSTRUMENTS
1	BASS DRUM 1
2	BASS DRUM 2
3	BASS DRUM 3
4	BASS DRUM 4 (Old Rhythm - Box)
5	SNARE 1
6	SNARE 2
7	SNARE 3
8	SNARE 4
9	SNARE 5 (Old Rhythm - Box)
10	X'stick
11	RIM SHOT (Old Rhythm - Box)
12	TOM 1
13	TOM 2
14	TOM 3
15	TOM 4 (Old Rhythm - Box)
16	HH Closed 1
17	HH Open
18	HH Closed 2 (Old Rhythm - Box)
19	CRASH CYMBAL 1 (NORMAL)
20	CRASH CYMBAL 2 (Muted)
21	RIDE CYMBAL
22	COWBELL
23	HAND CLAPS
24	TAMBOURINE
25	CONGA
26	BONGO
27	AGOGO
28	TRIANGLE
29	Jazz BRUSH 1 (Long)
30	Jazz BRUSH 2 (Short)
31	CASTANET
32	SHAKER

(2) Factory Assignment

NOTE NUMBER	KEY #	INST #	INST NAME	TUNE	LEVEL	OUTPUT
36	C1	1	BASS DRUM 1	0	77	BYPS
37	C#1	10	X'STICK	0	50	L + R
38	D1	6	SNARE 2	0	93	L + R
39	D#1	23	HAND CLAPS	0	80	L + R
40	E1	8	SNARE 4	0	60	L + R
41	F1	13	TOM 2	-19	92	L
42	F#1	16	HH CLOSED 1	0	50	L
43	G1	12	TOM 1	-20	90	L
44	G#1	18	HH CLOSED 2	0	50	L
45	A1	13	TOM 2	0	80	L + R
46	A#1	17	HH OPEN	0	50	L
47	B1	12	TOM 1	-8	80	L + R
48	C2	13	TOM 2	17	80	R
49	C#2	19	CRASH CYMBAL 1	0	80	L
50	D2	12	TOM 1	16	80	R
51	D#2	21	RIDE CYMBAL	0	71	R
52	E2	19	CRASH CYMBAL 1	-10	69	R
53	F2	28	TRIANGLE	0	54	L + R
54	F#2	24	TAMBOURINE	0	80	L + R
55	G2	19	CRASH CYMBAL 1	28	80	L
56	G#2	22	COWBELL	0	80	L + R
57	A2	20	CRASH CYMBAL 2	0	80	L + R
58	A#2	5	SNARE 1	1	80	L + R
59	B2	27	AGOGO	28	47	L + R
60	C3	25	CONGA	0	65	L + R

* RCV CH = 10, VOLUME = 100, Vel — Depth = 27

(3) Blank Chart for User's Assignment

NOTE NUMBER	KEY #	INST #	INST NAME	TUNE	LEVEL	OUTPUT
36	C1					
37	C#1					
38	D1					
39	D#1					
40	E1					
41	F1					
42	F#1					
43	G1					
44	G#1					
45	A1					
46	A#1					
47	B1					
48	C2					
49	C#2					
50	D2					
51	D#2					
52	E2					
53	F2					
54	F#2					
55	G2					
56	G#2					
57	A2					
58	A#2					
59	B2					
60	C3					

Synthesizer Module
MODEL K1rII

MIDI Implementation Chart

Date: Jul. 1989
Version: 1.0

Function ...		Transmistted	Recognized	Remarks
Basic Channel	Default	1—16	1—16	Memorized
	Changed	1—16	1—16	
Mode	Default	—	1, 3	Memorized
	Messages	×	OMNI on/off	MONO ignored
	Altered	* * *		
Note Number	: True voice	×	0—127	
		* * *	0—127	
Velocity	Note ON	×	*	
	Note OFF	×	×	
After Touch	Key's	×	×	
	Ch's	×	*	
Pitch Bender		×	*	
Control Change	1	×	*	Modulation
	7	×	*	Volume
	64	×	*	Hold
	100, 101	* (0, 1)	* (0, 1)	RPC
	6	*	*	Data entry
Prog Change	: True #	*	*	
		* * *	0—95	96—127 → 65—95
SystemExclusive		*	*	
System Common	: Song Pos	×	×	
	: Song Sel	×	×	
	: Tune	×	×	
System Real Time	: Clock	×	×	
	: Commands	×	×	
Aux Messages	: Local ON/OFF	×	×	
	: All Notes OFF	×	○ (123 ~ 127)	
	: Active Sense	○	○	
	: Reset	×	×	
Notes		* Can be set to ○ or × Memorized even after turning off the power RPC #0=Pitch Bender sensitivity #1=Master fine tuning Values are given by Data entry		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO

○ : Y
× : N

4. Specifications

K1rII

Description Voices Tone patches	1U rack-mounted digital synthesizer module 16 max. (32 SOURCES) 96 internal (64 SINGLE, 32 MULTI) + DRUM SECTION 96 external (64 SINGLE, 32 MULTI) + DRUM SECTION per DC-8 card (available separately)
SINGLE EDIT	[EDIT] : VOLUME, NAME [A] COMMON : SOURCE 2/4 (Shared by all SOURCEs) VIBRATO DEPTH·SPEED·SHAPE·PRS→DEPTH, WHEEL ASSIGN, AUTO BEND DEPTH·TIME·VEL→DEPTH·KS→TIME, PRS→FREQ, PITCH BEND, KS CURVE, POLY MODE [B] FREQ : COARSE (FIXED KEY), FINE, KEY TRACK, (For each SOURCE) VIBRATO/AUTO BEND on off, PRS→FREQ on off, KS→FREQ on off [C] WAVE : WAVE SELECT, AM S1.S2 AM S3.S4, COPY FROM (For each SOURCE) [D] ENV : LEVEL, DELAY, ATTACK, DECAY, SUSTAIN RELEASE, (For each SOURCE) VEL CURVE, LEVEL MOD VEL·PRS·KS, TIME MOD VEL·KS
MULTI EDIT	[EDIT] : VOLUME, NAME [A] WINDOW1 : SINGLE ASSIGN [B] WINDOW2 : ZONE LO·HI, VEL SW [C] WINDOW3 : POLY, RCV CH [D] WINDOW4 : TRANSPOSE, TUNE, LEVEL, OUTPUT
WRITE	WRITE LINK 1ST~8TH
SYSTEM	[SYS] : TUNE, TRANSPOSE, INT PROTECT, CARD PROTECT, CARD FORMAT, SAVE, LOAD [TRS] : CH, PGM, DATA DUMP [RCV] : CH, OMNI, PGM, PRS, BEND, MOD, VOL, HOLD, VEL, EXCLUSIVE [DRUM] : (COMMON) RCV CH, VOLUME, VELO DEPTH (EACH KEY) KEY NO., INST, TUNE, LEVEL, OUTPUT
Controls	VOLUME, PATCH SELECT SW, WRITE SW, POWER SW, DC IN, OUTPUT MIX, 1 ~ 4, PHONES JACK, CARD SLOT, MIDI IN, OUT, THRU
Display Dimensions (W × D × H) Weight Power consumption	16 × 2 LCD backlit 483 mm (19.1") × 242 mm (9.6") × 44 mm (1.8") 2.9 kg (6.4 lbs) 6w
Accessories	AC adapter Owner's Manual Data format MIDI cable

Note: Appearance and specifications subject to change without prior notice.

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