

Technics

KEYBOARD

SX-KN2000





FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY. (for UNITED KINGDOM)

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.

A 5 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic/Technics Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT-OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.


IMPORTANT: —The wires in this mains lead are coloured in accordance with the following code:—

Blue:	Neutral
Brown:	Live

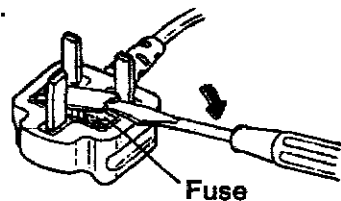
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three-pin plug, marked with the letter E or the Earth Symbol .

How to replace the fuse. Open the fuse compartment with a screwdriver and replace the fuse and fuse cover.



Technics

OWNER'S MANUAL

Caution

Voltage (except North America, Mexico, New Zealand and Europe)



Be sure the voltage adjuster located on the rear panel is in accordance with local voltage in your area before using this unit. Use a screwdriver to set the voltage adjuster to the local voltage.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

BEFORE YOU PLAY, PLEASE READ THE CAUTIONARY COPY APPEARING ON PAGE 2.

FOR CANADA

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.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Before you play

For long and pleasurable use of this instrument, and to gain a thorough understanding of your KN2000 Keyboard, it is strongly recommended that you read through this Owner's Manual once.

The Owner's Manual is comprised of the following parts.

BASIC FUNCTIONS

This part includes an explanation of basic procedures and points you should be aware of for proper operation of your instrument.

PRACTICAL APPLICATIONS

This part comprises a detailed explanation of sound, effect, rhythm, **SEQUENCER, COMPOSER**, Disk Drive and MIDI.

REFERENCE GUIDE (separate booklet)

Reference guide for the contents of the **SOUND GROUP, RHYTHM GROUP**, MIDI data, etc.

Cautions for safest use of this unit

Installation location

1. A well-ventilated place.
Take care not to use this unit in a place where it will not receive sufficient ventilation, and not to permit the ventilation holes to be covered by curtains, or any similar materials.
2. Place away from direct sunlight and excessive heat from heating equipment.
3. A place where humidity, vibration and dust are minimized.

Power source

1. Be sure the line voltage selector is in accordance with local voltage in your area before connecting the plug to the socket.
2. DC power cannot be used.

Handling the power cord

1. Never touch the power cord, or its plug, with wet hands.
2. Don't pull the power cord.

Metal items inside the unit may result in electric shock or damage.

Do not permit metal articles to get inside the unit.

Be especially careful with regard to this point if children are near this unit. They should be warned never to try to put anything inside.

If, nevertheless, some such article does get inside, disconnect the power cord plug from the electrical outlet, and contact the store where the unit was purchased.

If water gets into the unit

Disconnect the power cord plug from the electrical outlet, and contact the store where it was purchased.

As a precaution, it is suggested that flower vases and other containers which hold liquids not be placed on the top of this unit.

If operation seems abnormal

Immediately turn off the power, disconnect the power cord plug from the electrical outlet, and contact the store where it was purchased.

Discontinue using the unit at once. Failure to do so may result in additional damage or some other unexpected damage or accident.

- Because the power source is located inside the unit, it is normal for the cabinet to become warm.

A word about the power cord

If the power cord is scarred, is partially cut or broken, or has a bad contact, it may cause a fire or serious electrical shock if used. NEVER use a damaged power cord for any appliance. Moreover, the power cord should never be forcibly bent.

Don't touch the inside parts of this unit.

Some places inside this unit have high voltage potential. Never try to remove the top or back panels of this unit, or to touch inside parts by hand or with tools.

Contact someone who is qualified in order to inspect the inside, or to replace a fuse, if such becomes necessary. Never attempt to do these things yourself.

Maintenance

The following suggestions will assist you in keeping the unit in top condition.

- Be sure to switch the instrument off after use, and do not switch the unit on and off in quick succession, as this places an undue load on the electronic components.
- To keep the luster of the surface and buttons, simply use a clean, damp cloth; polish with a soft, dry cloth. Polish may be used but do not use thinners or petro-chemical-based polishes.
- A wax-based polish may be used on the cabinet, although you will find that rubbing with a soft cloth will suffice.

**SERVICE MUST BE CARRIED OUT BY DEALER
OR OTHER QUALIFIED PERSON**

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Controls and functions

TRANSCOPE

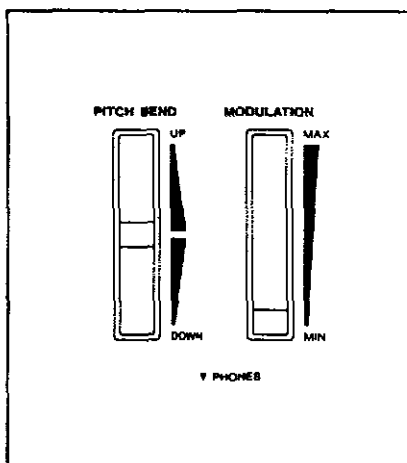
Raise or lower the key of the entire keyboard. (Refer to page 30.)

AUTO PLAY CHORD

Add an automatic accompaniment to your selected rhythm. (Refer to pages 16, 35.)

BGS BACKGROUND SOUND

You can add background sounds, such as the chirping of birds and the sound of waves on the beach, to your performance. (Refer to page 31.)

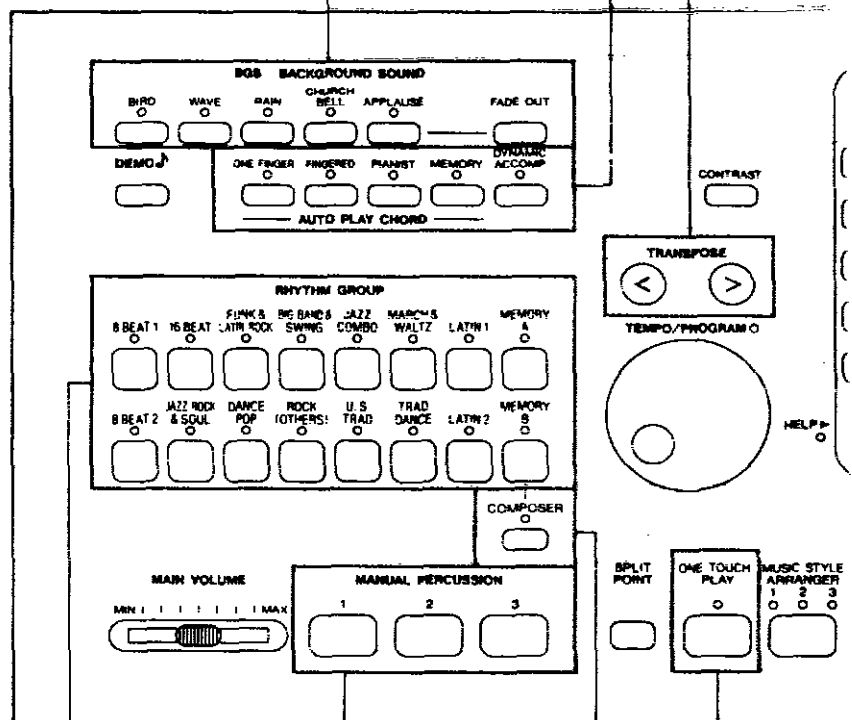


RHYTHM GROUP

Various rhythm patterns are available for each rhythm group. (Refer to pages 14, 32.)

PITCH BEND/MODULATION

The **PITCH BEND** wheel allows a "sliding" change in the pitch. The **MODULATION** wheel is used to add vibrato to the sound. (Refer to page 29.)



COMPOSER

Create and store original rhythm patterns. (Refer to page 62.)

MANUAL PERCUSSION

Add percussion instrument sounds to your performance with the pad buttons. (Refer to page 35.)

DISPLAY (LCD screen)

Displays performance information, function settings and other messages. (Refer to page 20.)

- Use the **DISPLAY ANGLE** wheel to set it to the angle at which it is easiest to read.
- Use the **CONTRAST** button to adjust the display so that it is easy to read. (Refer to page 23.)

CONDUCTOR

Assign a different sound to each part, then assign the desired parts to sections of the keyboard. (Refer to page 26.)

SOUND GROUP

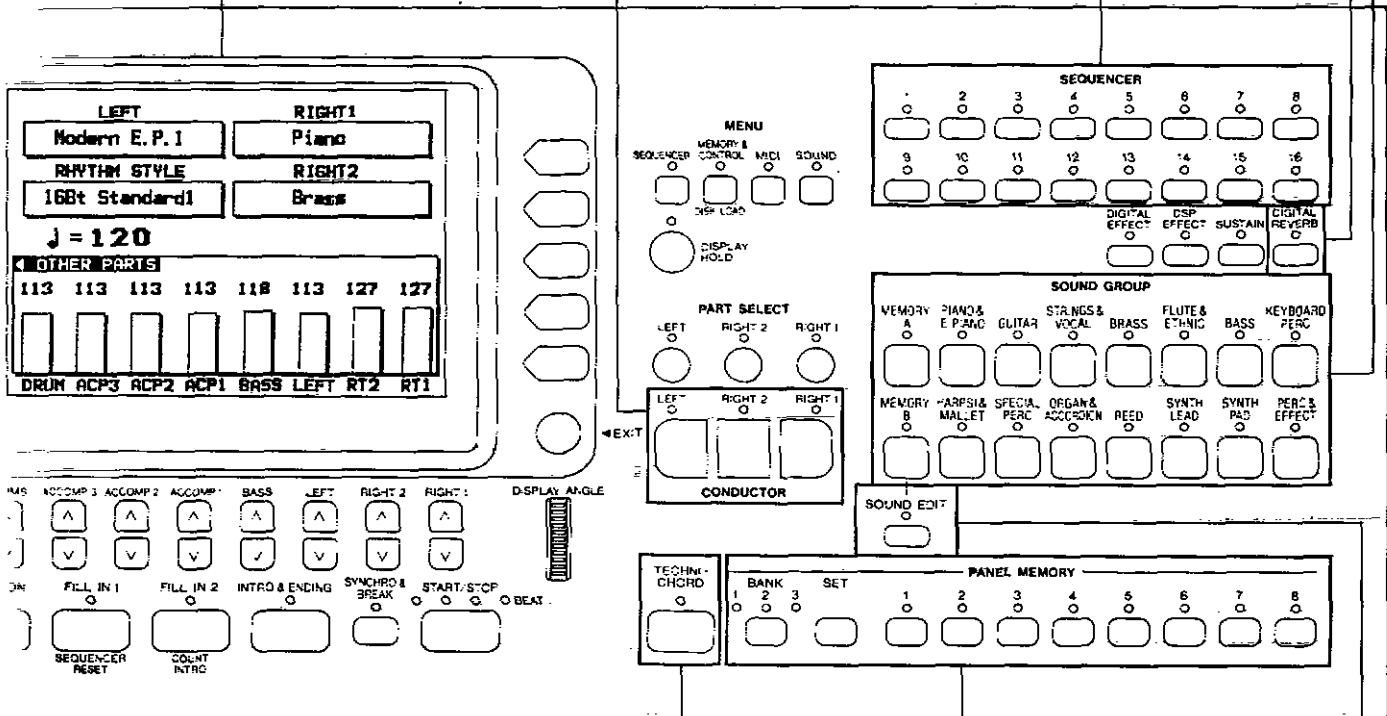
Various sounds are available for each sound group. (Refer to pages 12, 25.)

DIGITAL REVERB

Add reverberation to the sound. (Refer to pages 13, 29.)

SEQUENCER

Record and play back your performance. (Refer to pages 18, 43.)



TECHNI-CHORD

Block chords are automatically added to the melody. (Refer to page 31.)

PANEL MEMORY

Store the panel settings, then recall them instantaneously just by pressing a button or two. (Refer to page 41.)

ONE TOUCH PLAY

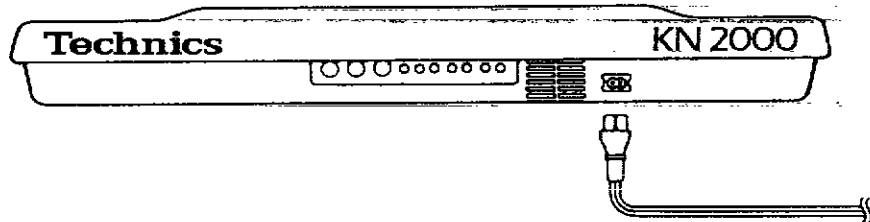
Sounds and effects matching the selected rhythm are automatically set. (Refer to pages 16, 38.)

SOUND EDIT

Modify preset sounds to create new and unique sounds. (Refer to page 89.)

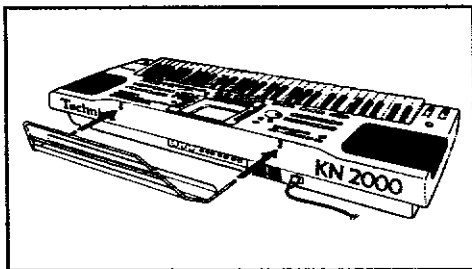
Getting started

Before you play

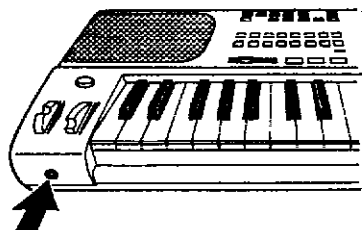


- 1 Plug the power cord into an outlet.

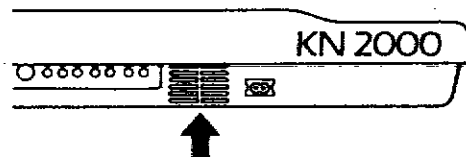
- 2 Affix the music stand as shown.



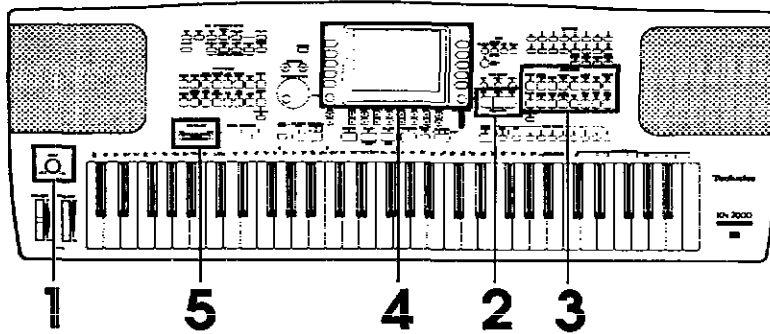
- Headphones (sold separately) may be plugged into the headphones terminal. This will automatically switch off the speaker system, and sound is heard only through the headphones.



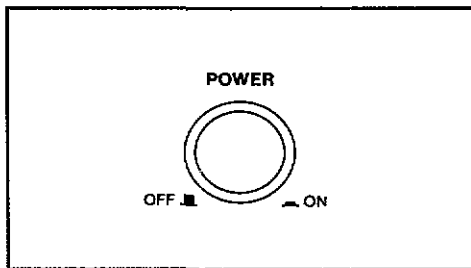
- The pitch of this instrument can be adjusted for when playing with other instruments. (Refer to page 84.)
- Make sure that the ventilation holes, on the rear of the instrument, are unobstructed.
- The cooling fan begins operating only when the internal temperature rises above a given level.



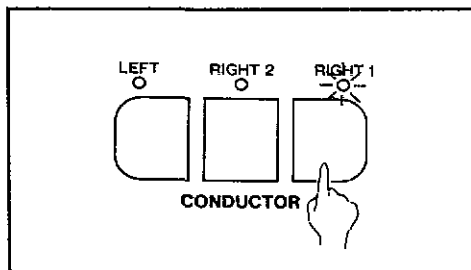
Playing



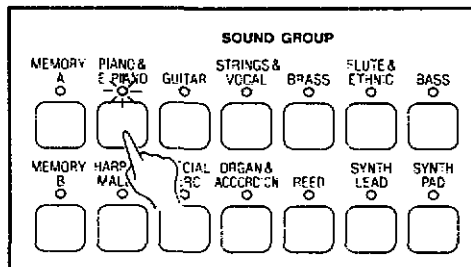
1 Press the **POWER** button to turn it on.



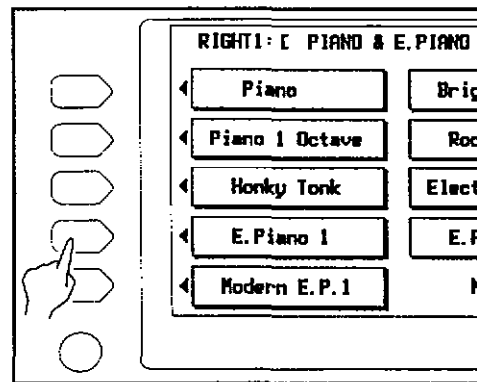
2 In the **CONDUCTOR** section on the panel, press the **RIGHT 1** button to turn it on.



3 In the **SOUND GROUP** section, press the **PIANO & E.PIANO** button.

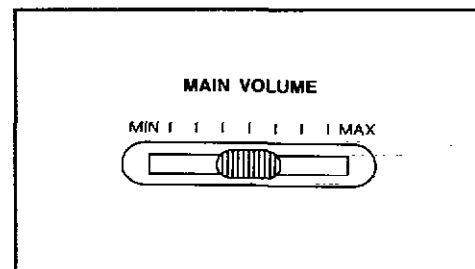


4 Select **E. Piano 1** from the list of sounds shown on the display.



- Touch any note on the keyboard. You will hear the E. Piano 1 sound.

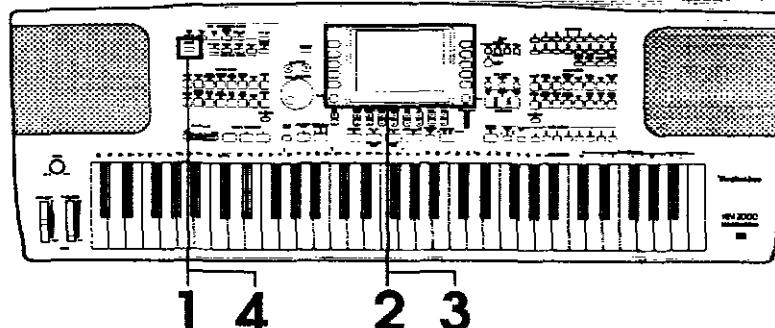
5 Set the **MAIN VOLUME** to an appropriate level with the sliding control.



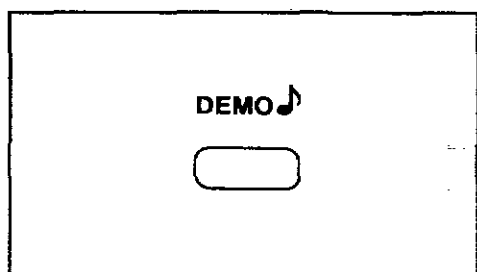
- Your Keyboard features Touch Response. You control the volume by playing the keys harder or softer.

Listen to the demonstration

Listen to a particular sound or rhythm demonstration.

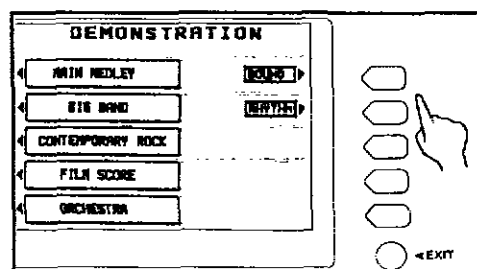


1 Press the **DEMO**  button.



- The display changes to the DEMONSTRATION display.

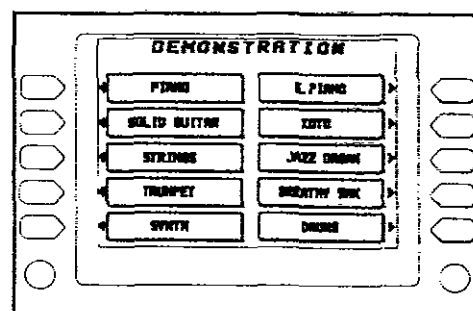
2 Select **SOUND** or **RHYTHM** from the display.




- The display changes.

3 Press the button for the sound or rhythm demonstration performance you wish to hear.

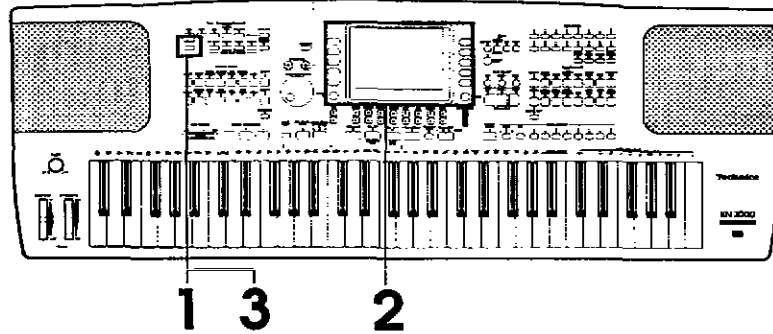
<Example: SOUND>




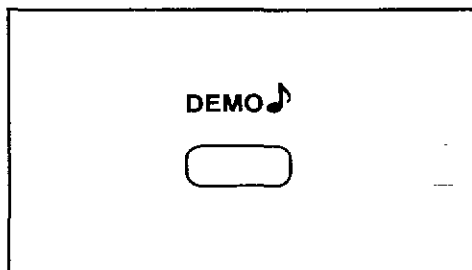
- The demonstration performance corresponding to your selection will begin.
- Repeat this procedure to listen to other sounds and rhythms.
- To change from the SOUND demonstration to the RHYTHM demonstration, or vice versa, press the **EXIT** button and repeat the procedure from step 2.
- To end the demonstration before it has finished, again press the button for the selected sound or rhythm.


4 When you are finished listening to the demonstration tunes, press the **DEMO**  button again.

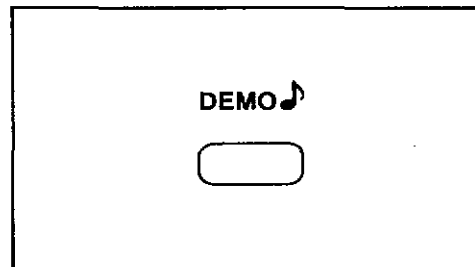
Listen to the style demonstration performance.



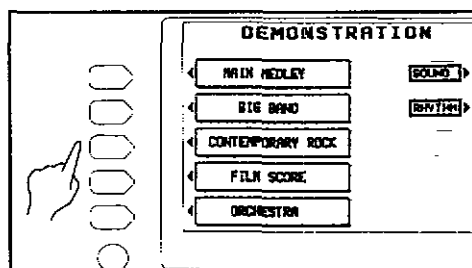
1 Press the **DEMO**  button.






3 When you are finished listening to the demonstration tunes, press the **DEMO**  button again.



2 Press the button at the left side of the display for the style demonstration performance you wish to hear.

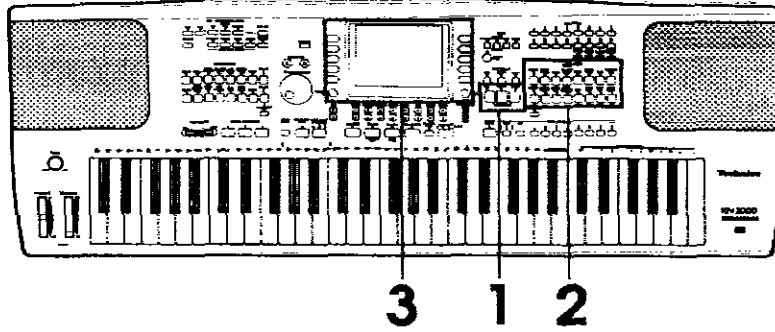


- The demonstration performance corresponding to your selection will begin.
- Repeat this procedure to listen to other styles.

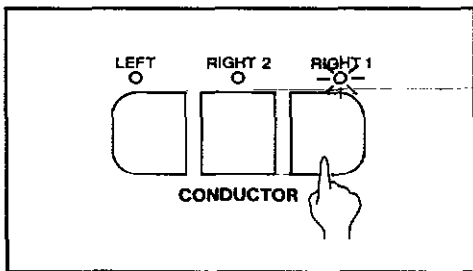
- If you press and hold the **DEMO**  button for a few seconds, or if you press first the **DEMO**  button and then the **START/STOP** button, the rhythms, sounds and styles are demonstrated in order in a medley performance. The medley performance continues until the **START/STOP** button or the **DEMO**  button is pressed again.

- Some of the buttons do not function while the demonstration performances are being played.

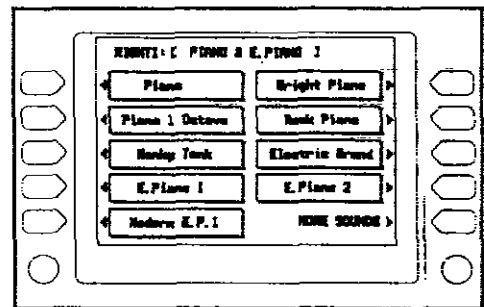
Selecting other sounds



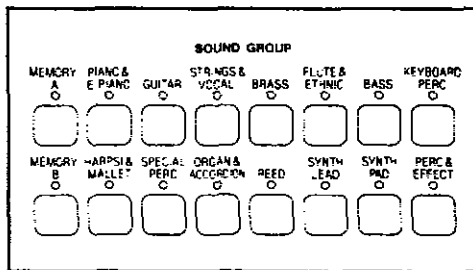
1 In the **CONDUCTOR** section, press the **RIGHT 1** button.



3 Select a sound from the display.
<Example: **PIANO & E PIANO**>



2 In the **SOUND GROUP** section, select a sound group.

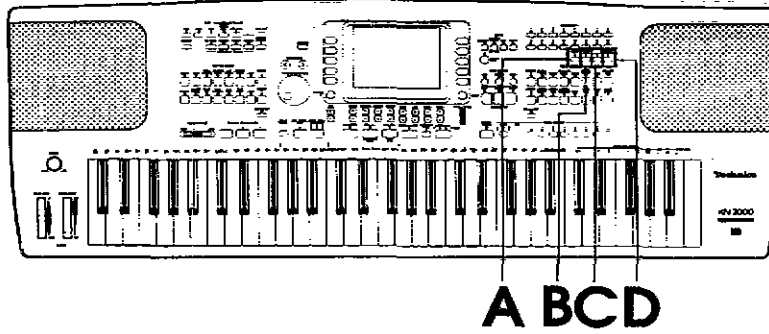


- The display changes.

- To see a different part of the list, press the **MORE SOUNDS** button.
- The display returns to the previous display after a few seconds.

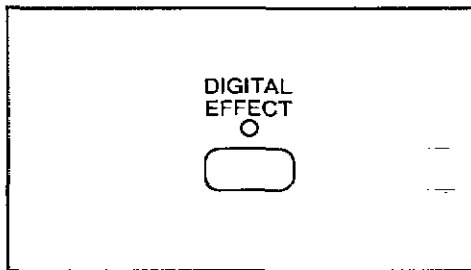
- Other things you can do are mixing sounds and playing different sounds on the left and right areas of the keyboard. (Refer to page 26.)

Add effects



Add a feeling of spaciousness to the sound.

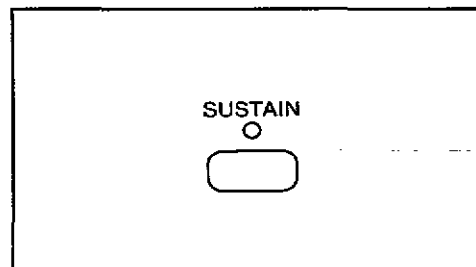
A Press the **DIGITAL EFFECT** button to turn it on.



- The sound is broader and deeper.

Add sustain.

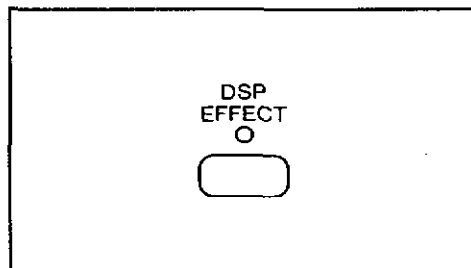
C Press the **SUSTAIN** button to turn it on.



- Play and release a key. The tones fade out gradually after the key is released.

Change the quality of the sound.

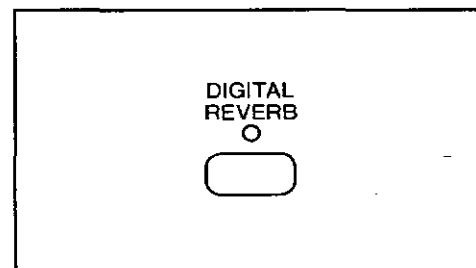
B Press the **DSP EFFECT** button to turn it on.



- Various effects are added to the sounds.

Add reverberation.

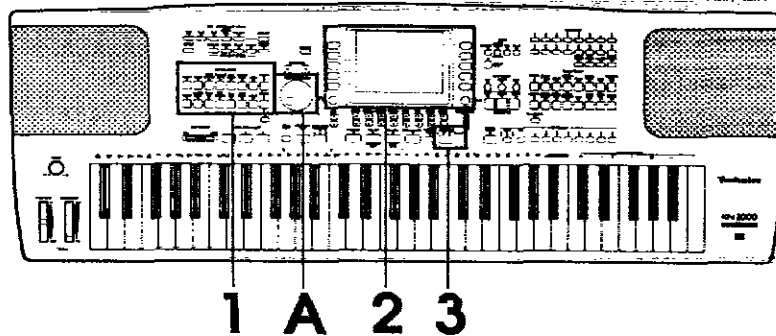
D Press the **DIGITAL REVERB** button to turn it on.



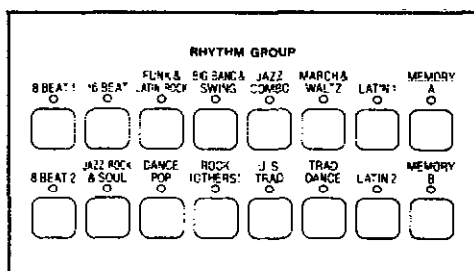
- The reverberation effect is applied to all sounds.



Playing automatic rhythms

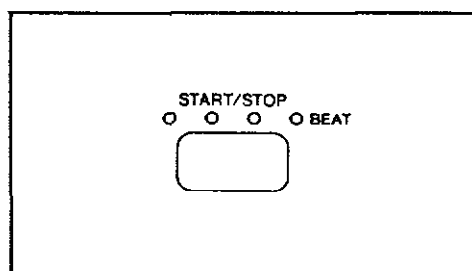


1 In the **RHYTHM GROUP** section, select a rhythm group.



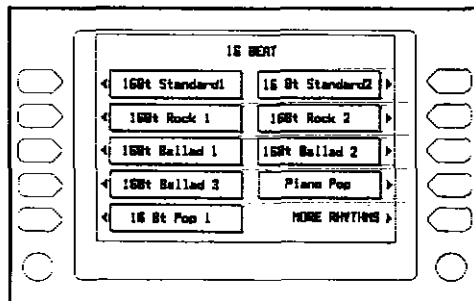
- The display changes.

3 Start the rhythm by pressing the **START/STOP** button.



- Stop the rhythm by pressing the **START/STOP** button again.

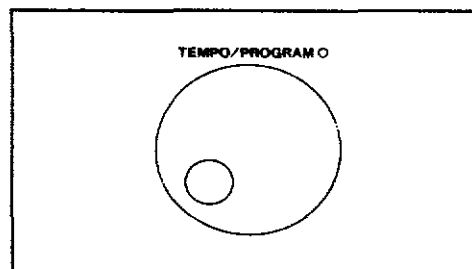
2 Select a rhythm from the display.



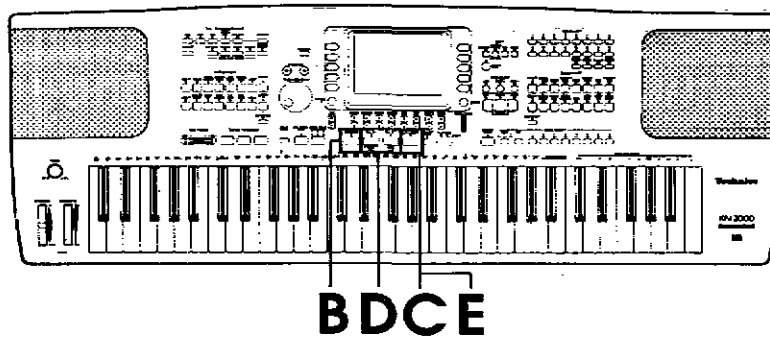
- To see a different part of the list, press the **MORE RHYTHMS** button.
- The display returns to the previous display after a few seconds.

Adjust the tempo.

A Adjust the tempo with the **TEMPO/PROGRAM** dial.

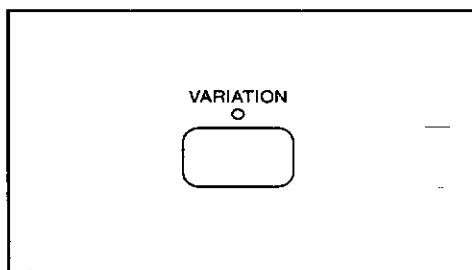


- The tempo is shown in the display as "♩ = ".



Select a variation pattern.

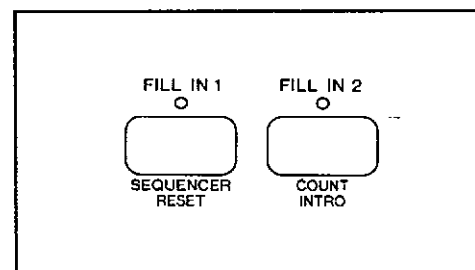
B During the rhythm performance, press the **VARIATION** button to turn it on.



- The rhythm pattern changes to a flashier pattern.

Insert a fill-in pattern.

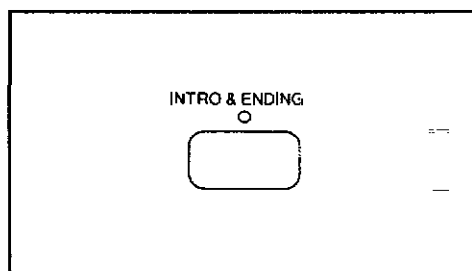
D While the preset rhythm pattern is playing, press either the **FILL IN 1** or **FILL IN 2** button.



- A fill-in pattern immediately starts to play.

Insert an intro pattern.

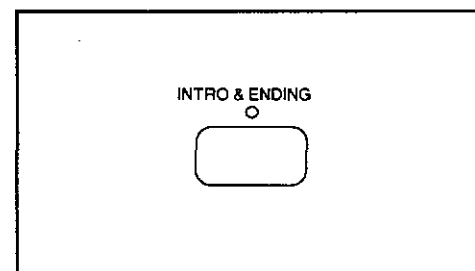
C To start your performance with an introduction, press the **INTRO & ENDING** button before starting the rhythm.



- An intro is played, after which the regular rhythm starts.

Insert an ending pattern.

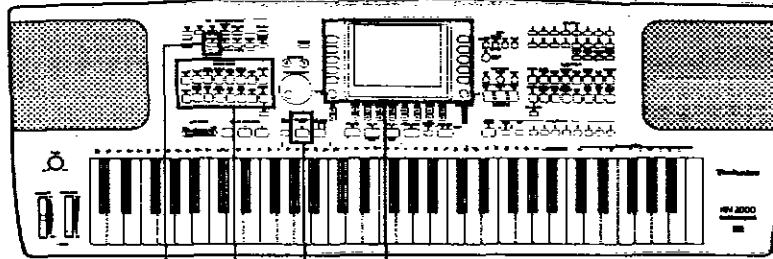
E While the rhythm is playing, press the **INTRO & ENDING** button.



- You will hear an ending pattern, and then the rhythm stops.

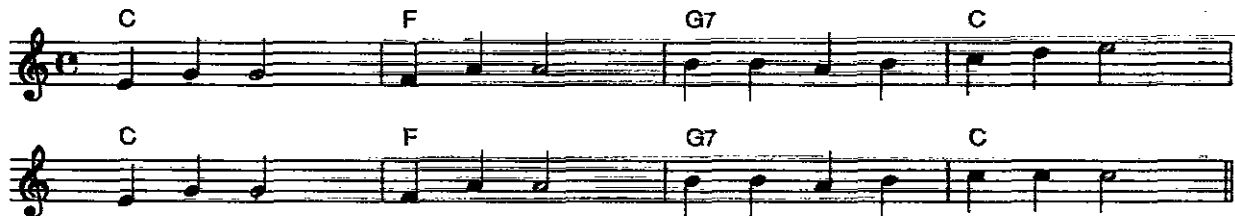
Automatic accompaniment

Use the AUTO PLAY CHORD

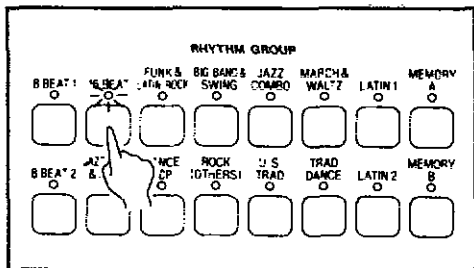


3 1 4 2

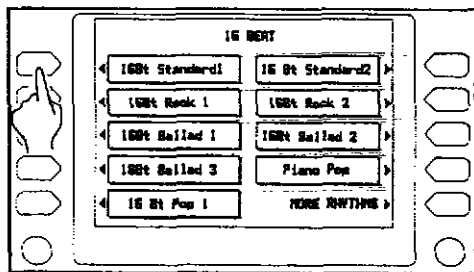
Use the AUTO PLAY CHORD with the following tune.



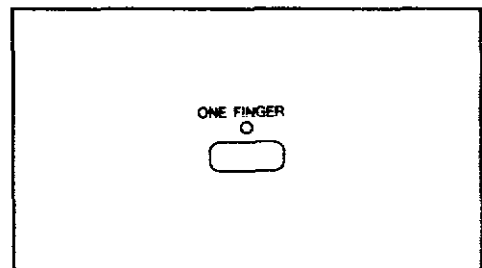
1 In the **RHYTHM GROUP** section, press the **16 BEAT** button.



2 Select 16Bt Standard 1 from the list of rhythms shown on the display.

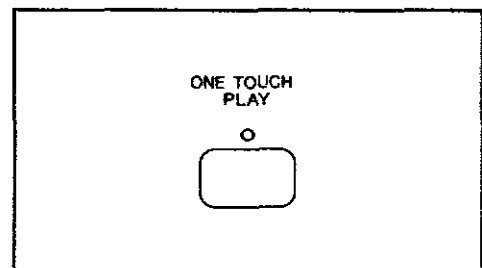


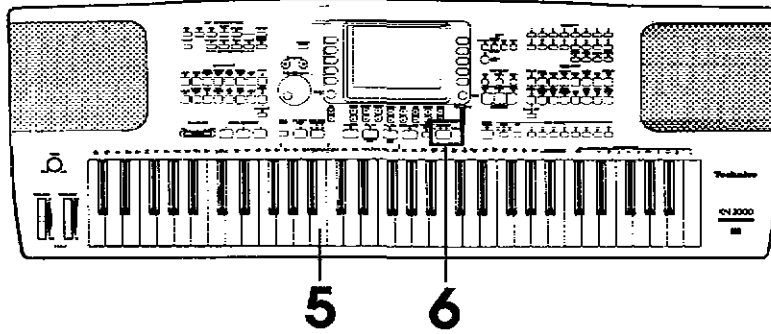
3 Press the **ONE FINGER** button to turn it on.



- The keyboard automatically divides into left and right playing areas.

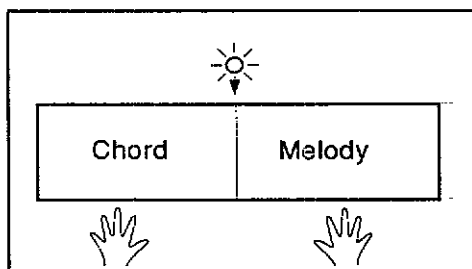
4 Press and hold the **ONE TOUCH PLAY** button until the indicator (LED) goes out.





5

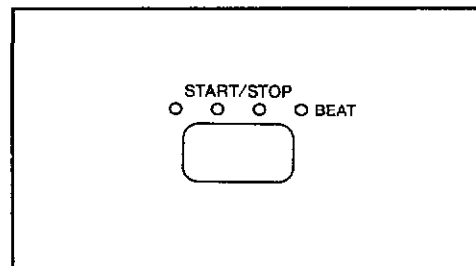
Use your left hand to play the chords and your right hand to play the melody.



- Pressing a key on the left area of the keyboard will cause the automatic rhythm pattern to start playing (synchro start).
- When the C key is pressed on the left area of the keyboard, an accompaniment begins to play in the C major key.
- Playing the chord key (root note) and the white key to its left will produce a 7th chord.

6

At the end of your performance, press the **START/STOP** button.



- The automatic accompaniment stops.

C chord



G7 chord



F chord

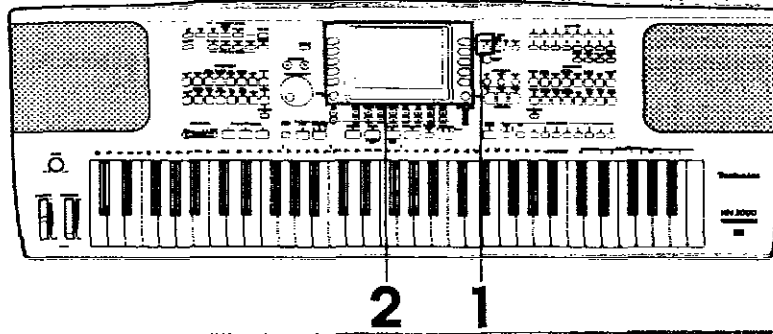


- In this example you played chords by pressing the keys for the "root notes" (**ONE FINGER** chords). But you can also specify the chord by playing all the notes in the chord. (Refer to page 36.)

You can automatically change the panel settings to those which are ideal for the music style you selected. (Refer to page 39.)

Record your performance

Use the **SEQUENCER** to record your performance.

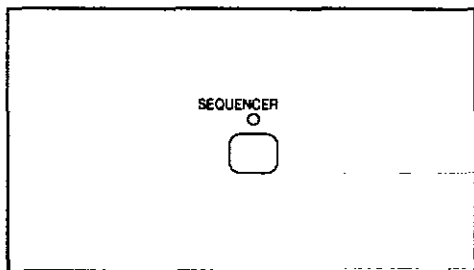


Sonatina

Sound: Piano 1 (**RIGHT 1** part)

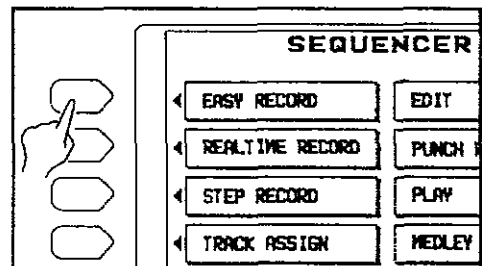


1 Press the **SEQUENCER** button to turn it on.

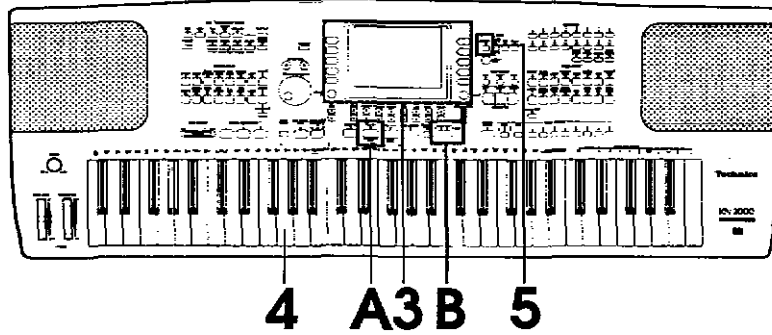


- The display changes to the **SE-QUENCER** menu display.

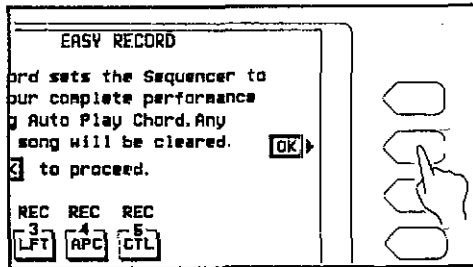
2 Select **EASY RECORD**.



- The display changes to the **EASY RECORD** display.

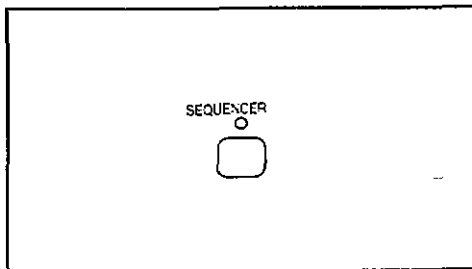


3 Press the OK button.



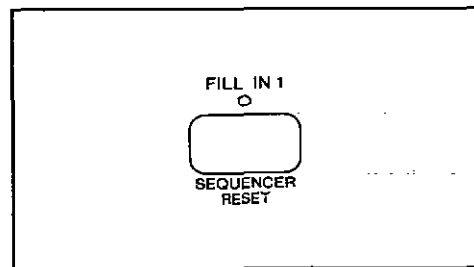
4 Play the song on the keyboard.

5 When you have finished playing, press the **SEQUENCER** button again to turn it off.

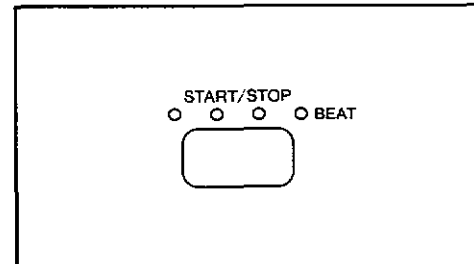


Playing back your recorded performance

A Press the **SEQUENCER RESET (FILL IN 1)** button.



B Press the **START/STOP** button.



• Your performance is played back just as you recorded it.

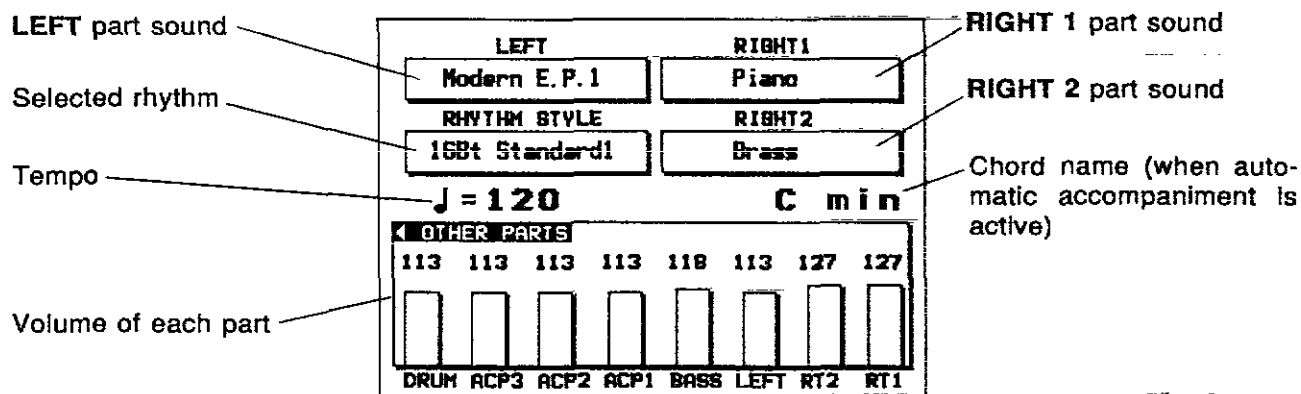
- You can also record several parts individually and then have them played back together for an ensemble performance. (Refer to page 47.)

About the display (LCD screen)

The display shows various information and is used for most of the Keyboard's operations.

Normal display

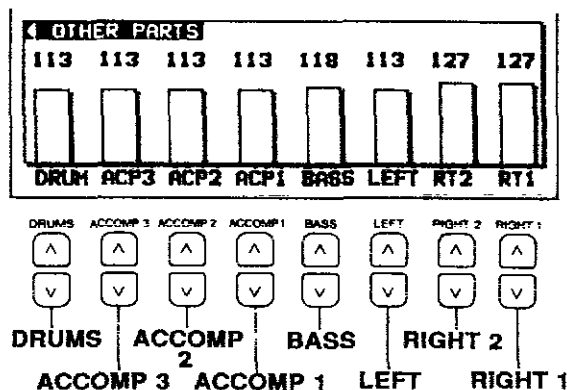
This illustration shows the kind of information you see on the display during a normal performance.



Volume balance

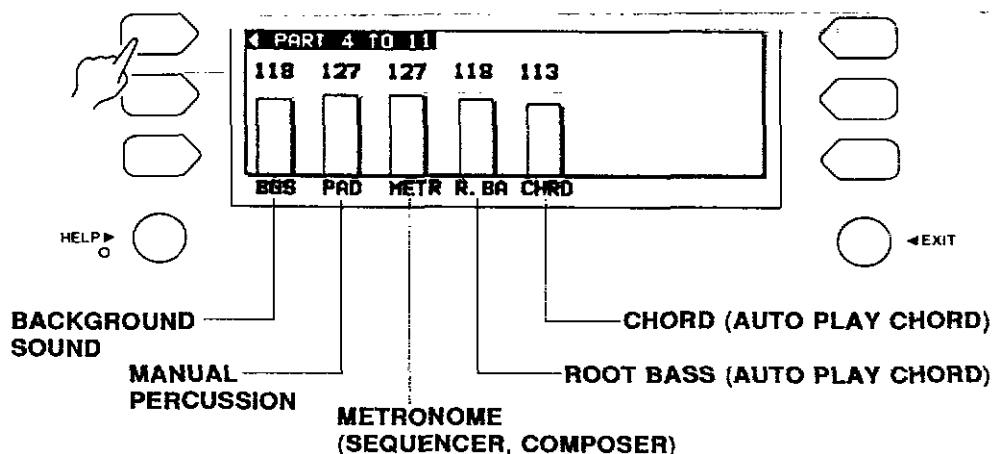
At the bottom half of the normal display, the volume balance of each part is shown as a bar graph and a number (0 to 127).

Use the \wedge and \vee buttons directly below the display to adjust the volume of each part.



OTHER PARTS

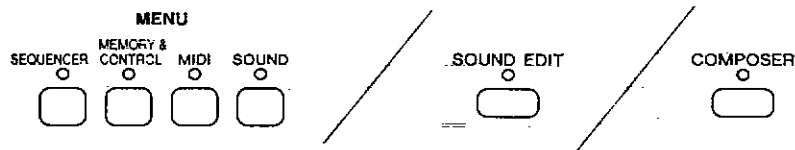
If you press the button for OTHER PARTS, the display changes to show the volumes of other parts.



- Press the **EXIT** button to return to the normal volume display.
- This button is also used to access the **PART 4 to 11** volume display and the **PART 12 to 16** volume display. These parts are used in conjunction with **SEQUENCER** and **MIDI** functions.

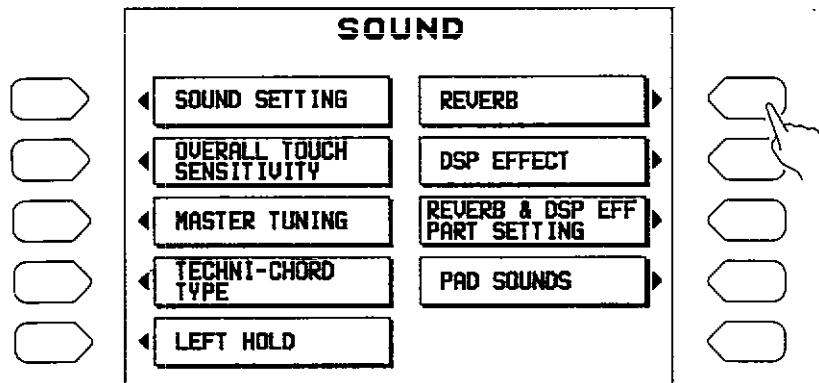
Menu display

The buttons shown in the illustration below control multiple functions. Pressing one of the buttons will access the corresponding menu display.



■ Example of menu display: SOUND

Select a function from the menu display by pressing the corresponding button to the left or right of the display indicated by the ◀ and ▶ arrows.

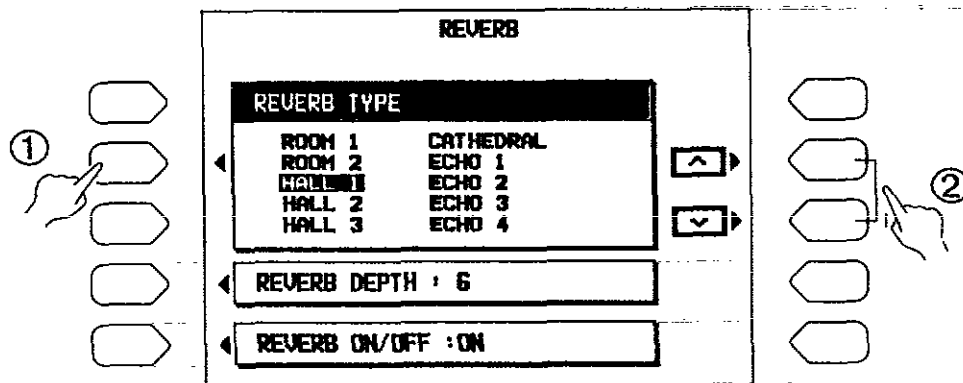


- In this manual, the steps describing how to select a function from a menu display are generally abbreviated as follows, for example: "On the **SOUND** menu display, select REVERB." (See illustration above.)

Setting display

When setting various functions, the available options are shown on the display. The buttons to the right, left and/or directly below the display are used to select and adjust the settings.

■ Example of setting display: REVERB



<Example of procedure to set a function>

- ① In the illustration above, three functions are shown on the setting display: REVERB TYPE, REVERB DEPTH and REVERB ON/OFF. First, select one of the functions by pressing the corresponding button indicated by the ◀ arrow. (The currently selected function is highlighted.)
- In this manual, the procedure to indicate that you should press a button to select an item from the display is generally written simply as follows: "Select REVERB TYPE."

- ② The ^ and v buttons on the display are operated by pressing the corresponding buttons indicated by the ▶ arrows. These buttons are used, when appropriate, to change the setting for the selected function.
- In this manual, this procedure is written as follows: "Use the ^ and v buttons to select the reverb type."

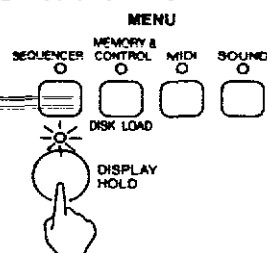
EXIT button

While the setting display is shown, press this button to go back to the previous display.



DISPLAY HOLD button

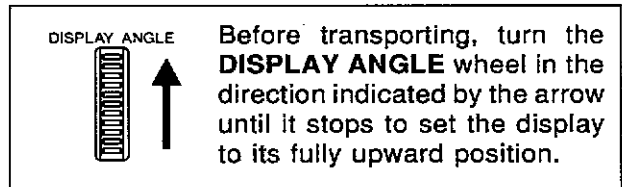
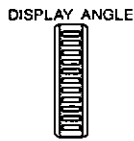
Press this button to turn it on when you wish to maintain the current display. For example, even during a performance, you can monitor information which is not shown on the normal display.



- If any of the **MENU** buttons is pressed, the **DISPLAY HOLD** mode is canceled.

DISPLAY ANGLE

Use the **DISPLAY ANGLE** wheel to adjust the angle of the display so that it is easy to read.



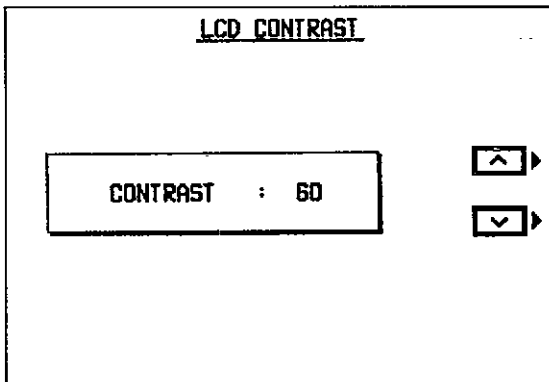
CONTRAST

Adjust the contrast of the display.

1. Press the **CONTRAST** button.



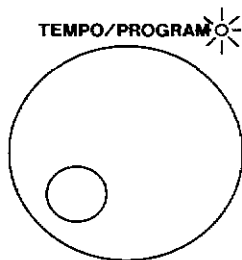
- The LCD **CONTRAST** display appears.



2. Use the **^** and **v** buttons to adjust the setting (1 to 100).
 - The higher the number the lighter the display characters.
 - Each time the **CONTRAST** button is pressed, the number is incremented by 10, allowing you to speedily set the desired contrast.
3. When you have finished making the settings, press the **EXIT** button.

TEMPO/PROGRAM dial

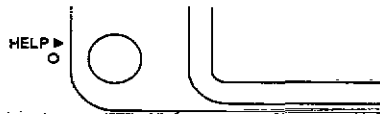
If the green **TEMPO/PROGRAM** indicator is lit while you are using the display to adjust a setting, it indicates that the dial may be used to change the displayed value or setting.



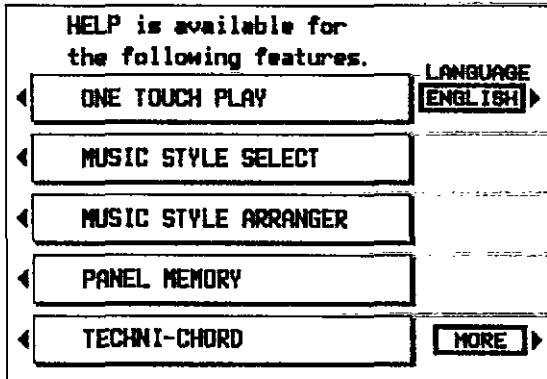
HELP display

You can find an explanation of most of the Keyboard functions right on the display.

1. Press the **HELP** button (at the lower left of the display) to turn it on.



- The following display appears.

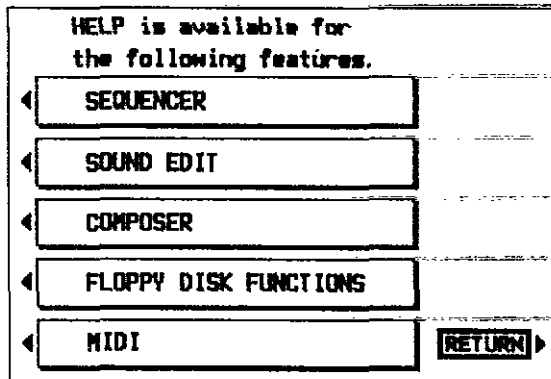


2. Select a function.

- Information about the selected function will appear on the display. There may be several "pages" of information, which you can get by following the instructions on the display.
- If you press the **HELP** button while you are in the process of setting a function, the display may change directly to the **HELP** mode.
- For a detailed explanation of each function, please refer to the relevant pages in this manual.

ONE TOUCH PLAY	page 38
MUSIC STYLE SELECT	page 39
MUSIC STYLE ARRANGER	page 40
PANEL MEMORY	page 41
TECHNI-CHORD	page 31
SEQUENCER	page 43
SOUND EDIT	page 89
COMPOSER	page 62
FLOPPY DISK FUNCTIONS	page 72
MIDI	page 101

- Press the **MORE** button to display other functions.



Use the **LANGUAGE** button to select the language in which the messages are displayed.

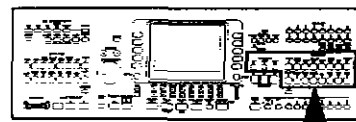
- The **HELP** display messages and error messages are shown in the selected language.
- The appearance of the display on your instrument and the illustrated display in this manual may differ depending on the region in which your instrument was purchased and the selected display language.

3. When you have finished reading the message, press the **HELP** button again to turn it off.

- Press the **RETURN** button to go back to the previous display.

Part I Sounds and effects

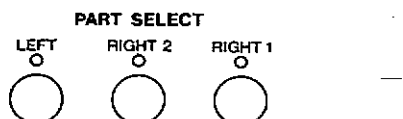
Selecting sounds



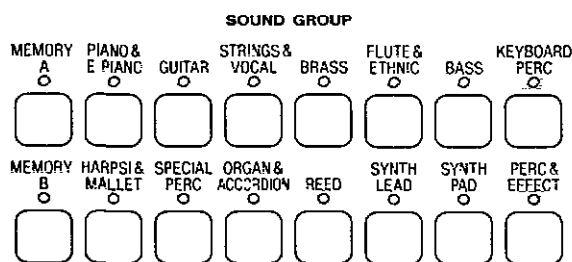
Select the sounds for the three parts you can play on the keyboard—**RIGHT 1**, **RIGHT 2** and **LEFT**. After first selecting a part and a **SOUND GROUP**, choose the desired sound from the display (LCD screen).

Select a sound

- In the **PART SELECT** section, choose **RIGHT 1**, **RIGHT 2** or **LEFT**.

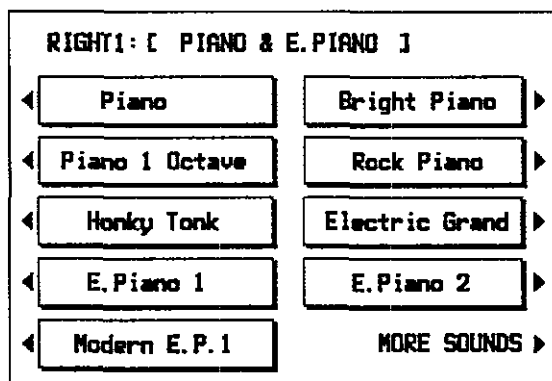


- The **CONDUCTOR** buttons are used to specify which part is heard. (See the following page.)
- In the **SOUND GROUP** section, select a sound group.



- A list of sounds available for each sound group can be found in the separate "REFERENCE GUIDE" provided.
- MEMORY A** and **MEMORY B** are reserved for storing sounds you modify. (Refer to page 89.)
- Most of the sounds in the **KEYBOARD PERC** and **PERC & EFFECT** sound groups do not have scaled pitches.

- Select the desired sound from the list on the display.



- To see a different part of the list, press the **MORE SOUNDS** button.
- When you select a sound for the part you specified in step 1, the display returns to the normal display.
- The selected sound is memorized independently for each sound group, so that whenever a **SOUND GROUP** button is pressed, the sound you chose is automatically available.

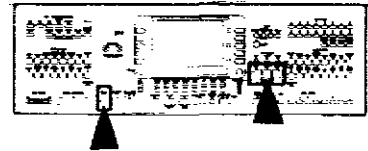
- Repeat steps 1 to 3 for each of the other parts.

■ Percussion sounds

You can create a percussion performance on your keyboard.

- In the **SOUND GROUP** section, press the **KEYBOARD PERC** button.
- Select the **KIT** of percussion instrument from the list on the display.
- Play the keyboard.
 - Percussion instrument sounds are produced by the keyboard keys as indicated by the picture code above each key. (For further explanation, refer to the separate "REFERENCE GUIDE" provided.)
 - In the **Orchestral KIT** and **Sound Effect KIT**, the arrangement of percussion instruments is different.

Assigning parts to the keyboard



The **CONDUCTOR** buttons are used to assign sounds to the keyboard in many different ways. For example, you can assign two sounds to the entire keyboard so that playing one key will produce two sounds. You can even split the keyboard into right and left sections (**SPLIT**), and assign a different sound to each section.

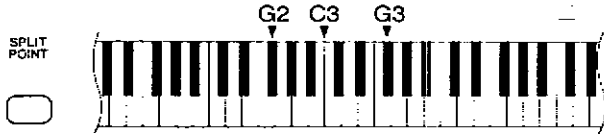
CONDUCTOR

CONDUCTOR settings	How sounds are assigned to the keyboard		
<p>CONDUCTOR</p>	<p>All keys produce the RIGHT 1 sound.</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>RIGHT 1</p> </div>		
<p>CONDUCTOR</p>	<p>All keys produce the RIGHT 2 sound.</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>RIGHT 2</p> </div>		
<p>CONDUCTOR</p>	<p>All keys produce both the RIGHT 1 sound and the RIGHT 2 sound.</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>RIGHT 1 + RIGHT 2</p> </div>		
<p>CONDUCTOR</p>	<p>The left keys produce the LEFT sound and the right keys produce the RIGHT 1 sound and the RIGHT 2 sound.</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 50%; padding: 10px;">LEFT</td> <td style="width: 50%; padding: 10px;">RIGHT 1 + RIGHT 2</td> </tr> </table>	LEFT	RIGHT 1 + RIGHT 2
LEFT	RIGHT 1 + RIGHT 2		
<p>CONDUCTOR</p>	<p>The left keys produce the LEFT sound and the right keys produce the RIGHT 1 sound.</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 50%; padding: 10px;">LEFT</td> <td style="width: 50%; padding: 10px;">RIGHT 1</td> </tr> </table>	LEFT	RIGHT 1
LEFT	RIGHT 1		
<p>CONDUCTOR</p>	<p>The left keys produce the LEFT sound and the right keys produce the RIGHT 2 sound.</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 50%; padding: 10px;">LEFT</td> <td style="width: 50%; padding: 10px;">RIGHT 2</td> </tr> </table>	LEFT	RIGHT 2
LEFT	RIGHT 2		

- The volume for each part can be adjusted independently. (Refer to page 20.)
- The following conditions are in effect when the **AUTO PLAY CHORD** is used.
 - ONE FINGER, FINGERED** mode: You cannot assign sounds to all the keys.
 - PIANIST** mode: The keyboard cannot be split.

SPLIT POINT

When the keyboard is divided into left and right sections, the split point is indicated by the lit indicator. You can change the location of the split point.



Each time the **SPLIT POINT** button is pressed, the indication moves to the next split point in the following order. G2 → C3 → G3 → customized split point (all indicators off) (see below).

■ Customized split point

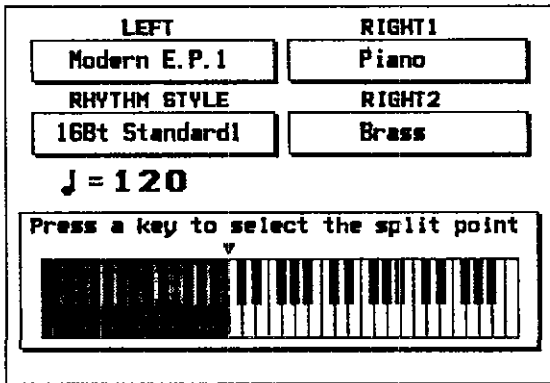
Use the following procedure if you wish to store a split point at a location other than G2, C3 or G3.

1. Press and hold the **SPLIT POINT** button for a few seconds.

SPLIT POINT

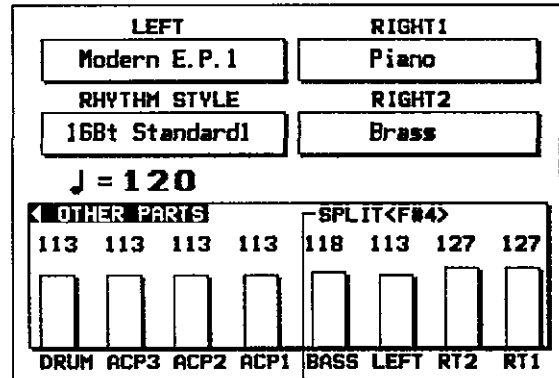


- The following display appears.



2. Press a key on the keyboard to specify the desired split point.
 - A split point is set at the location of the pressed key, and is indicated by an arrow on the keyboard illustration on the display.
 - The key at the split point is the lowest note of the right keyboard section.
 - After a few seconds, the display exits the setting mode.

- Whenever the keyboard is split, you can select your customized split point by pressing the **SPLIT POINT** button until none of the split point indicators (LED) is lit. In this case, the customized split point is indicated on the display.



Customized split point

Effects



You can achieve even fuller and stirring sounds by adding various effects.

DIGITAL EFFECT

DIGITAL EFFECT gives the sound richness and enhances your performance.

1. In the **PART SELECT** section, turn on the part to which this effect will be applied.
 2. Press the **DIGITAL EFFECT** button to turn it on.
- The on or off status of the **DIGITAL EFFECT** is set automatically for each sound.
 - This effect differs depending on the selected sound.
 - This effect does not work for the sounds in the **KEYBOARD PERC** sound group.
 - The display can also be used to set this effect to on or off for each part. (Refer to page 81.)



DSP EFFECT

You can change the quality of the sound.

1. In the **PART SELECT** section, turn on the part to which this effect will be applied.
 2. Press the **DSP EFFECT** button to turn it on.
- The **DSP EFFECT** can be set to on or off for each part.
 - If you press and hold this button, the display can be used to select the type of **DSP EFFECT** and to make fine adjustments. (Refer to page 86.)
 - The display can also be used to set this effect to on or off for each part. (Refer to page 88.)



SUSTAIN

SUSTAIN is the gradual fading out of musical tones after the key is released.

1. In the **PART SELECT** section, turn on the part to which this effect will be applied.
 2. Press the **SUSTAIN** button to turn it on.
- The **SUSTAIN** can be set to on or off for each part.
 - This effect does not work for the sounds in the **KEYBOARD PERC** sound group.
 - The display can also be used to set this effect to on or off for each part and to adjust the length of sustain. (Refer to page 81.)
 - The sustain can also be turned on and off with the optional Foot Switch (sold separately). (Refer to page 42.)



DIGITAL REVERB

DIGITAL REVERB applies a reverberation effect to the sound.

Press the **DIGITAL REVERB** button to turn it on.

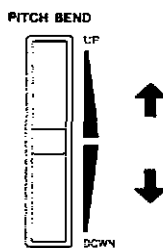


- This effect is applied to all the sounds of the keyboard.
- If you press and hold this button, the display can also be used to select the type of **DIGITAL REVERB** and to make related fine adjustments. (Refer to page 86.)
- The display can also be used to set this effect to on or off for each part. (Refer to page 88.)

PITCH BEND

The pitch of the instrument can be continuously changed with the **PITCH BEND** wheel at the left end of the keyboard. Using this control, you can produce the effect of bending the strings on a guitar.

While pressing a key on the keyboard, move the wheel up and down to control the pitch.

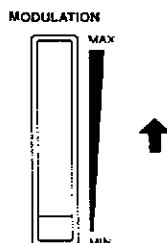


- When you release your hand from the wheel, it returns automatically to the center position and the pitch bend effect is turned off.
- The pitch bend effect does not function for the **AUTO PLAY CHORD** accompaniment pattern and for the sounds of the **LEFT** part.
- The amount of pitch bend can be set. (Refer to page 82.)

MODULATION

The **MODULATION** wheel is used to apply a vibrato effect to the sound. Vibrato is a slight waver in the pitch which can add a rich quality to the sound.

While pressing a key on the keyboard, move the wheel up to add vibrato.



- When vibrato is not needed, set the **MODULATION** wheel to the **MIN** position.
- This effect differs depending on the selected sound.
- The vibrato effect does not function for the **AUTO PLAY CHORD** accompaniment pattern and for the sounds of the **LEFT** part.

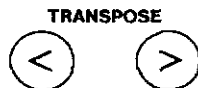
Transpose



The **TRANSPOSE** buttons are used to change the key of the entire instrument in semi-tone steps across an entire octave.

Suppose you learn to play a song—in the key of C, for example—and decide you want to sing it, only to find that it's either too high or too low for your voice. Your choice is to either learn the song all over again in a different key, or to use the **TRANSPOSE** feature.

Adjust the key with the < and > buttons.



- Each press of the > button changes the key as follows: D^b → D → E^b → E → F → F[#]. Each press of the < button changes the key as follows: B → B^b → A → A^b → G.
- If the two buttons are pressed at the same time, the key returns to C.
- When the **TRANSPOSE** function is active, the transposed key is shown on the display.

<Example: transposed to D>

Played keys



C major

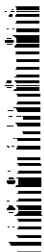
Notes that sound



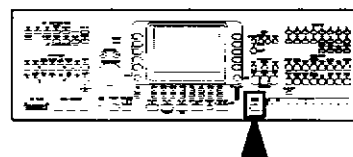
D major

LEFT	RIGHT1
Modern E.P.1	Piano
RHYTHM STYLE	RIGHT2
16Bt Standard1	Brass
J = 120 < A b >	
OTHER PARTS	
113 113 113 113	118 113 127 127
DRUM ACP3 ACP2 ACP1	BASS LEFT RT2 RT1

Actual key



Techni-chord



TECHNI-CHORD turns your single note melodies into full chords and offers you a choice of 13 different types from a simple duet which adds one harmony note to your melody note, to big band reeds which adds four harmony notes to your melody note. If **TECHNI-CHORD** is part of a **ONE TOUCH PLAY** or **MUSIC STYLE SELECT** registration, a suitable **TECHNI-CHORD** type will be selected automatically.

1. Split the keyboard into left and right sections.
(Refer to page 26.)
2. Press the **TECHNI-CHORD** button to turn it on.



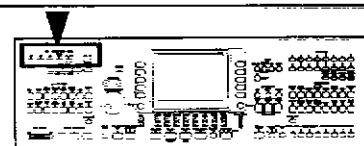
3. Play the keyboard.
 - The melody you play with your right hand is automatically played in chords which are based on the chords you play with your left hand.
 - This feature is very effective when used with the **ONE FINGER** mode or **FINGERED** mode of the **AUTO PLAY CHORD**.
 - If you press and hold this button, the display can be used to select the desired harmony style. (Refer to page 84.)

Example:
Left hand (chord)

Right hand (melody)

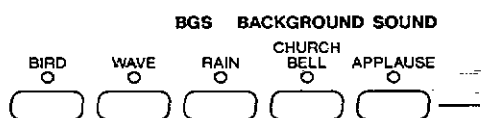


BGS Background Sound



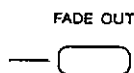
Various preset background sounds such as the chirping of birds and the sound of waves are available. Use the background sounds to give your music that special atmosphere.

1. Press any **BACKGROUND SOUND** button to immediately hear the special sound.



- The background sounds can be mixed when two buttons are pressed at the same time.

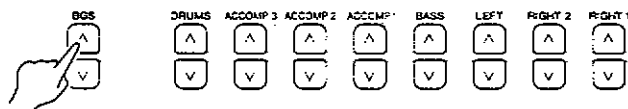
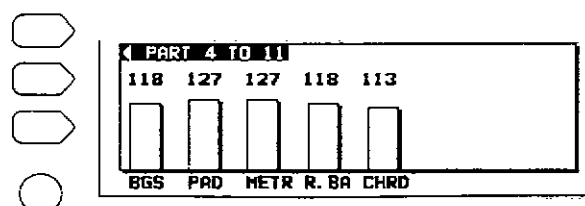
2. To turn off the background sound, press the **FADE OUT** button.



- The background sound dies out slowly.
- Press the **FADE OUT** button twice to turn off the background sound immediately.

Volume

The volume of the background sound is adjusted with the **BGS** button below the display to the left. When you adjust the volume, the **BGS** volume is shown on the display.



- Press the **EXIT** button to go to the normal volume display.

Part II Playing the rhythm

The rhythm section enhances the capabilities of your Keyboard with features such as automatic performance of the preset rhythm patterns and accompaniment patterns.

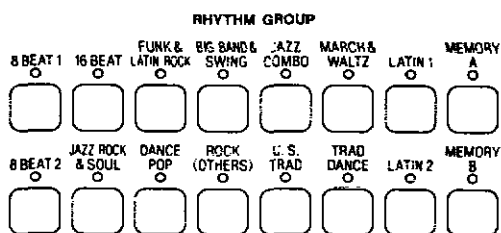
Selecting rhythms



After first selecting a **RHYTHM GROUP**, choose the desired rhythm from the display (LCD screen).

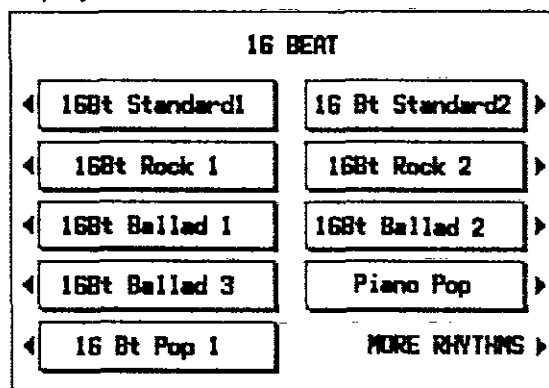
Select a rhythm

1. In the **RHYTHM GROUP** section, select a rhythm group.



- A list of rhythms available for each rhythm group can be found in the separate "REFERENCE GUIDE" provided.
- **MEMORY A** and **MEMORY B** are reserved for storing rhythms you create yourself. (Refer to page 62.)

2. Select the desired rhythm from the list on the display.



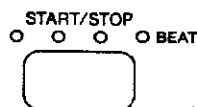
- To see a different part of the list, press the **MORE RHYTHMS** button.
- When you select a rhythm, the display returns to the normal display, and the rhythm you selected is shown in the **RHYTHM STYLE** box.
- The selected rhythm is memorized independently for each rhythm group, so that whenever a **RHYTHM GROUP** button is pressed, the rhythm you chose is automatically available.

Start the rhythm

There are two ways to start the rhythm.

■ Immediate rhythm start

1. Select a rhythm.
2. Press the **START/STOP** button to turn it on.



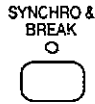
- The selected rhythm pattern immediately begins to play.

- You can stop the rhythm by pressing the **START/STOP** button again to turn it off.
- The **BEAT** indicators (LED) above the **START/STOP** button light to indicate the beat. On the first beat of the measure, the red indicator lights. On the second and succeeding beats of the measure, the green indicators light in order.

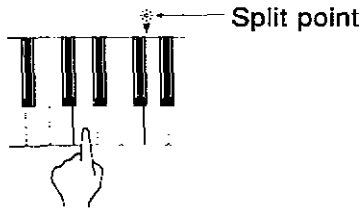
■ **Synchronized start**

With the synchronized start feature, the rhythm pattern starts when you play a key on the keyboard.

1. Select a rhythm.
2. Press the **SYNCHRO & BREAK** button to turn it on.



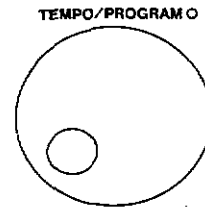
3. Play a key to the left of the keyboard split point.



- The rhythm pattern begins to play.
- You can use the synchronized start feature even when the keyboard is not divided into left and right sections. To start the rhythm, press a key to the left of the specified split point.

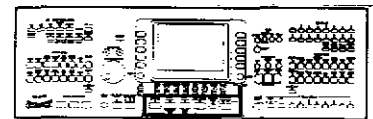
■ **Adjust the tempo**

The tempo of the rhythm pattern is adjusted with the **TEMPO/PROGRAM** dial.



- The tempo is shown on the display as a numerical value (♩ = 40 to 300).
- When the **TEMPO/PROGRAM** indicator is lit, the **TEMPO/PROGRAM** dial cannot be used to adjust the tempo.

Playing the rhythm



Intro, fill-in and ending patterns fitting each different rhythm pattern are permanently recorded in your Keyboard, thus allowing a versatile rhythm performance.

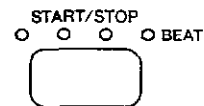
INTRO

Begin the rhythm performance with an intro pattern.

1. Press the **INTRO & ENDING** button to turn it on.



2. Press the **START/STOP** button to start the rhythm.

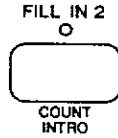


- An intro pattern is played, after which the normal rhythm pattern begins.

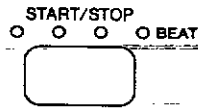
COUNT INTRO

You can begin the rhythm performance with a one-measure count.

1. Press the **COUNT INTRO (FILL IN 2)** button to turn it on.



2. Press the **START/STOP** button to start the rhythm.

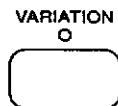


- A one-measure count is played, after which the normal rhythm pattern begins.

VARIATION

Each rhythm pattern also has a variation pattern. Add drama to your performance by switching to the variation pattern at climactic points in the melody.

1. Select a rhythm and press the **START/STOP** button.
2. Press the **VARIATION** button to turn it on.

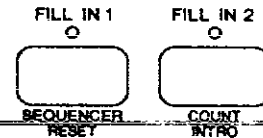


- The rhythm changes to a flashier pattern.
- Press the **VARIATION** button again to turn it off and go back to the normal rhythm pattern.

FILL IN

You can insert a fill-in pattern any time during the rhythm performance. Choose from two different fill-in patterns.

1. Select a rhythm and press the **START/STOP** button.
2. Press the **FILL IN 1** or **FILL IN 2** button.



- A fill-in pattern is heard immediately for the remainder of the measure.
- When a **FILL IN** button is pressed on the last beat of the measure, the fill-in pattern continues to the end of the following measure.

ENDING

Finish the rhythm performance with an ending pattern.

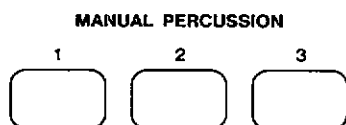
1. Select a rhythm and press the **START/STOP** button.
2. Press the **INTRO & ENDING** button to turn it on.



- An ending pattern is produced, and then the rhythm performance stops.
- If you accidentally press the **INTRO & ENDING** button in the middle of the tune, you can press the **FILL IN 1** or **FILL IN 2** button. The ending pattern stops, and a fill-in pattern is produced, after which the normal rhythm performance continues.

MANUAL PERCUSSION

You can add percussion sounds to your performance at any time by tapping **MANUAL PERCUSSION** pad buttons 1, 2 and 3.

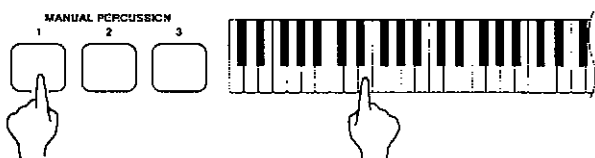


- A different percussion sound has been preset in each of the pad buttons.
- The volume of the **MANUAL PERCUSSION** can be adjusted. (Refer to page 20.)

■ To assign different sounds to the pad buttons

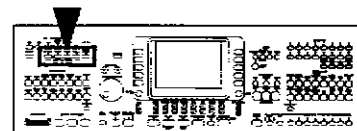
Follow this procedure to assign a different sound to each of the pad buttons.

1. In the **SOUND GROUP** section, press the **KEYBOARD PERC** button, and then select the **KIT** of percussion instruments.
2. While pressing one of the **MANUAL PERCUSSION** pad buttons, select the desired percussion sound by pressing the appropriate key on the keyboard for about 2 seconds.



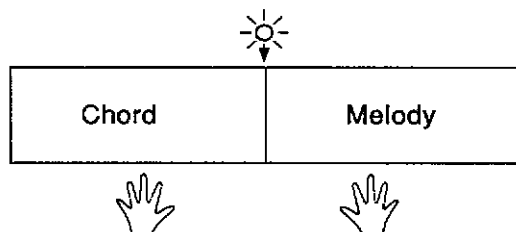
- When you hear the percussion sound of the pressed key, it means the sound has been assigned to the selected **MANUAL PERCUSSION** pad button.
- Two more percussion sounds can be assigned to the remaining two **MANUAL PERCUSSION** pad buttons in the same way.
- Only one drum **KIT** can be specified at a time, and it is common to all the pad buttons.
- The display can also be used to assign sounds to the **MANUAL PERCUSSION** pad buttons. (Refer to page 88.)
- You can assign other functions to the pad buttons. (Refer to page 42.)

Auto Play Chord



Simply by playing a chord on the keyboard, the **AUTO PLAY CHORD** function automatically plays an accompaniment pattern which matches perfectly the selected rhythm. With a real accompaniment as a background, you can concentrate on playing the melody.

How the **AUTO PLAY CHORD** works



When an **AUTO PLAY CHORD** mode is selected, an automatic accompaniment which matches the rhythm you have chosen is played in the chord which you specify with your left hand. The melody is played with your right hand.

- The accompaniment pattern of the **AUTO PLAY CHORD** is composed of five parts: **DRUMS**, **BASS**, **ACCOMP 1**, **ACCOMP 2** and **ACCOMP 3**.
- The volume of each part can be adjusted with the buttons below the display. (Refer to page 20.)

Playing chords

Choose from three ways of playing chords.

■ **ONE FINGER mode**

In the **ONE FINGER** mode, a major chord can be played just by pressing the key for its root note.

Example: C chord



Minor, seventh and minor seventh chords are also easily produced.

minor chord	seventh chord	minor seventh chord
Play the root note plus a black key to the left of it.	Play the root note plus a white key to the left of it.	Play the root note plus a black key and a white key to the left of it. (Within five notes of the chord key.)
Example: Cm 	Example: C7 	Example: Cm7 Within 5 keys

■ **FINGERED mode**

In the **FINGERED** mode, you specify the chord by playing all the notes in the chord.



- The Keyboard can distinguish the following played chords for each key (C is given as an example): C, C7, CM7, Caug, Caug7, Cm, Cm7, Cdim, Cm7^{b5}, CmM7, Csus4, C7sus4, C^{b5}, C7^{b5}, Cm^{b5}, C6, Cm6, CM7^{b5}, CM7^{#5}, CmM7^{b5}.

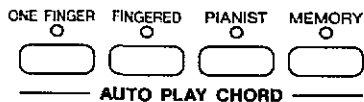
■ **PIANIST mode**

In the **PIANIST** mode, the entire keyboard can be used to specify chords (**FINGERED** mode) for the automatic accompaniment; a **RIGHT** part is assigned to all the keys, and the keyboard does not split. In addition to the chords in the **FINGERED** mode, the Keyboard also recognizes 9th and 13th chords.

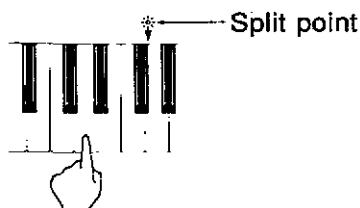
- When specifying chords, if you press a key a perfect 5th or more below the lowest note of the chord, the **BASS** part becomes a pattern based on that note.

How to use the AUTO PLAY CHORD

1. Select the desired rhythm and sound(s), and set the tempo.
2. Select an **AUTO PLAY CHORD** mode (**ONE FINGER**, **FINGERED** or **PIANIST**).



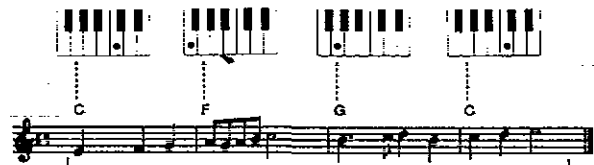
- If the **ONE FINGER** or **FINGERED** mode was selected, the keyboard automatically splits into right and left sections.
3. Press the **START/STOP** button to begin the rhythm.
 - You can start the rhythm by playing a key on the keyboard. (Refer to page 33.)
 4. Specify a chord.
 - If the **ONE FINGER** or **FINGERED** mode was selected, specify the chord on the keyboard section to the left of the split point.



- An accompaniment pattern in the specified chord is automatically played. Play the melody with your right hand.

■ Example of how to play a ONE FINGER accompaniment

Left hand



Play the melody with your right hand.

- When the **MEMORY** button is on, even when the keys are released, the chord is memorized and the accompaniment continues to play until you specify another chord.
 - When you use **VARIATION**, **FILL IN**, **INTRO** and **ENDING**, the automatic accompaniment is also used in these patterns.
 - In the **ONE FINGER** mode, the sound assigned to the left section of the keyboard (**LEFT** part) does not sound in the initialized condition.
 - You can set the mode which determines how the **LEFT** part sounds during an **AUTO PLAY CHORD** performance. (Refer to page 85.)
5. To stop the automatic accompaniment, press the **START/STOP** button.
 - In the initialized condition, when the rhythm is off, if an **AUTO PLAY CHORD** mode is on and a chord is specified, the specified root note (R. BASS part) and chord notes (CHORD part) are produced. The volumes of these notes can be adjusted. (Refer to page 20.)

DYNAMIC ACCOMP

DYNAMIC ACCOMP is a function which changes each accompaniment pattern of the **AUTO PLAY CHORD**.

1. Press the **DYNAMIC ACCOMP** button to turn it on.

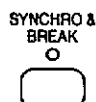


2. Play the keyboard in one of the **AUTO PLAY CHORD** modes.
 - Depending on the condition of the performance, each **ACCOMP** part changes.

BREAK function

With the break function, the rhythm starts when the left keyboard is played and stops when the fingers are removed from the keys.

1. Select an **AUTO PLAY CHORD** mode.
 - At this time, the **MEMORY** button should be off.
2. Press the **SYNCHRO & BREAK** button to turn it on.
3. Specify a chord with your left hand.
 - The automatic accompaniment begins to play (synchronized start).
4. Release the left-hand keys.
 - The automatic accompaniment stops. When the keys are pressed again, the rhythm starts from the first beat.

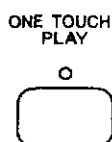


One Touch Play

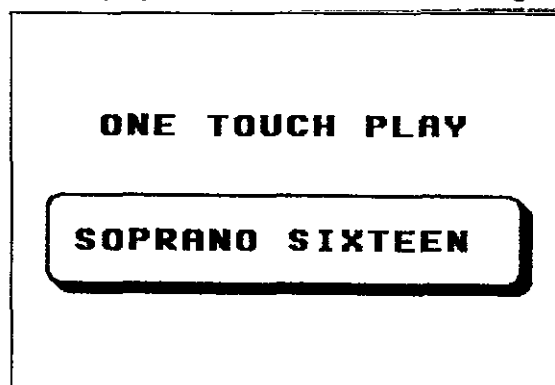


ONE TOUCH PLAY sets up the KN2000 with a suitable registration for your chosen rhythm style so that you can make a great sound straight away, even if you are playing the KN2000 for the first time. Using **ONE TOUCH PLAY** sets a suggested combination of sounds and balances and an appropriate tempo for each of the 200 rhythm styles at the push of a button.

1. Select a rhythm pattern.
 - Do not select a rhythm from the **MEMORY A** or **MEMORY B** group.
 - The **AUTO PLAY CHORD** and the **SYNCHRO & BREAK** button are automatically turned on. When a key on the left section of the keyboard is pressed, the automatic rhythm begins to play immediately.
2. Press the **ONE TOUCH PLAY** button until its indicator goes out.



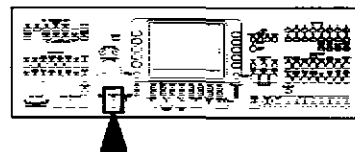
- The display looks similar to the following.



Suggestions for using ONE TOUCH PLAY

Press the **INTRO & ENDING** button before you play for a professional sounding introduction. Use the **ONE TOUCH PLAY** registration as a starting point for your own registration. Alter the sounds, balance and tempo to your own taste and store your new registration in the **PANEL MEMORY** for future use.

Music Style Select



MUSIC STYLE SELECT sets up the KN2000 with a suitable registration for a specific style of music. Select from the KN2000's list of style names and **MUSIC STYLE SELECT** does the rest for you, setting suitable sounds and volume balances, along with the appropriate rhythm, accompaniment and tempo for your chosen style.

1. Press the **ONE TOUCH PLAY** button momentarily.
- The display looks similar to the following.



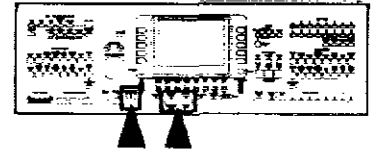
2. In the **RHYTHM GROUP** section, select a rhythm group.

3. Use the \wedge and \vee buttons to select a music style.
 - The **AUTO PLAY CHORD** and the **SYNCHRO & BREAK** button turn on, and the sounds, effects, rhythm and tempo which are best suited for the selected music style are automatically selected. When a key on the left section of the keyboard is pressed, the automatic rhythm begins to play immediately.

Suggestions for using MUSIC STYLE SELECT

Press the **INTRO & ENDING** button before you play for a professional sounding introduction. Use the **MUSIC STYLE SELECT** registration as a starting point for your own registration. Alter the sounds, volume balance and tempo to your own taste and store your new registration in the **PANEL MEMORY** for future use.

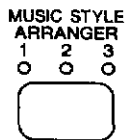
Music Style Arranger



The **MUSIC STYLE ARRANGER** helps you to make professional registration changes during your performance. Select between three contrasting registrations at the push of a button, or let the KN2000 change registration automatically for you when you use **FILL IN 1** or **2**. The **MUSIC STYLE ARRANGER** will also alter the accompaniment in character with the registration change creating a polished sounding arrangement.

How to use the MUSIC STYLE ARRANGER

1. Select a rhythm pattern.
2. Press the **MUSIC STYLE ARRANGER** button to select the style (1, 2 or 3) you want at the beginning of your performance.
 - Each time the **MUSIC STYLE ARRANGER** button is pressed, the style indication changes as follows: 1 → 2 → 3 → off.
 - The panel settings change according to the selected rhythm and music style. The **AUTO PLAY CHORD** and the **SYNCHRO & BREAK** button are automatically turned on. When a key on the left section of the keyboard is pressed, the automatic rhythm begins to play immediately.

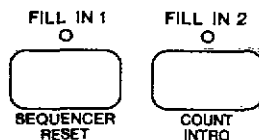


- 1: Simple pattern
- 2: Normal pattern
- 3: Flashy pattern

How to change the music style during your performance

While you are playing the keyboard with the **MUSIC STYLE ARRANGER** on, press the **FILL IN 1** or **FILL IN 2** button.

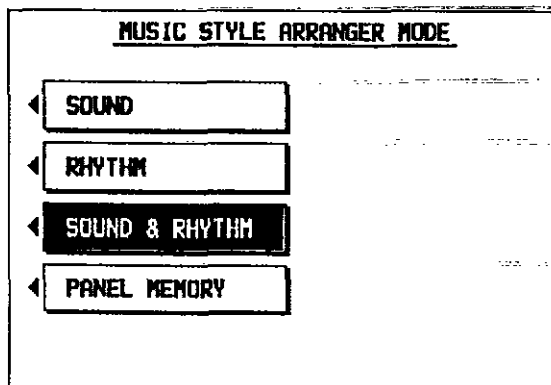
- Each time the **FILL IN 1** button is pressed, the **FILL IN 1** pattern plays, and then the music style changes in the 3 → 2 → 1 order. And each time the **FILL IN 2** button is pressed, the **FILL IN 2** pattern plays, and then the style changes in the 1 → 2 → 3 order.



■ MUSIC STYLE ARRANGER mode

You can define which panel settings change by pressing a **FILL IN** button when the **MUSIC STYLE ARRANGER** is used.

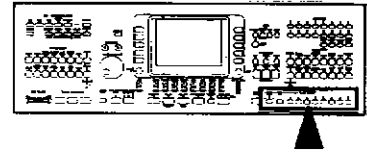
1. Press and hold the **MUSIC STYLE ARRANGER** button for a few seconds.
 - The display changes to the following.



SOUND: Only the sound changes.
RHYTHM: Only the rhythm changes.
SOUND & RHYTHM: Both the sound and rhythm change.
PANEL MEMORY: The **PANEL MEMORY** number changes. (Refer to page 41.)

- After a few seconds, the display exits the setting mode.

Panel Memory



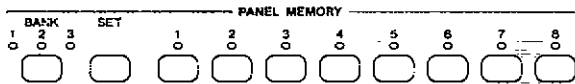
PANEL MEMORY stores the panel set up of the KN2000 allowing you to make complex changes at the push of a single button. **PANEL MEMORY** has two modes:

NORMAL MODE: Stores sound and volume balance settings only

EXPAND MODE: Stores the total setting including rhythm, **TRANSPOSE** and tempo

How to store the panel settings

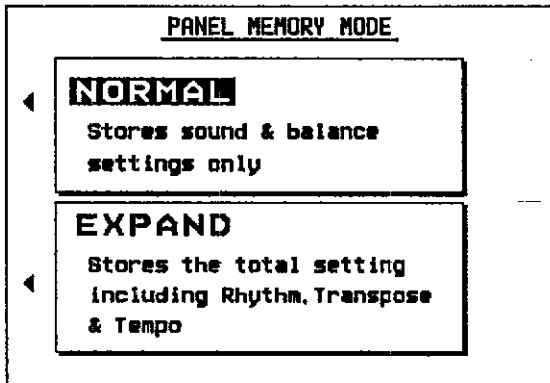
1. Set up the desired panel settings (sounds, volumes, etc.)
 2. Press the **BANK** button to select a bank (1, 2 or 3).
 3. With the **SET** button held down, press one of the numbered buttons of the **PANEL MEMORY** (1 to 8).
- The panel settings are now stored in the specified bank and number.
 - To recall the stored settings, just select the **BANK** and press the desired **PANEL MEMORY** number button. (You can then change the sound settings, etc. manually; however, the memory contents of the **PANEL MEMORY** remain unchanged until you store them again.)
 - The **PANEL MEMORY** settings can be saved on a disk for recall at a later time. (Refer to page 76.)



■ **PANEL MEMORY** mode

You can define which panel settings are stored when the **PANEL MEMORY** is used.

1. Press and hold the **SET** button for a few seconds.
 - The display changes to the following.
2. Select the mode.
 - After a few seconds, the display exits the setting mode.

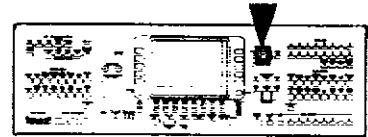


Suggestions for using **PANEL MEMORY**

The initial factory setting of **PANEL MEMORY** contains professional settings which you may choose to use or to alter to your own taste. These can be restored at any time by initializing the **PANEL MEMORY**. You can change from one **PANEL MEMORY** to another by using a Foot Switch. Press **MEMORY & CONTROL** and select **FOOT SWITCH & PAD SETTING** in the LCD screen to assign this function.

- For the initial factory setting of **PANEL MEMORY**, refer to the separate "REFERENCE GUIDE" provided.
- Selecting the **EXPAND** mode will allow you to make full use of the initial factory settings of the **PANEL MEMORY**.

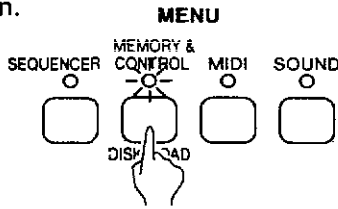
Foot switch and pad settings



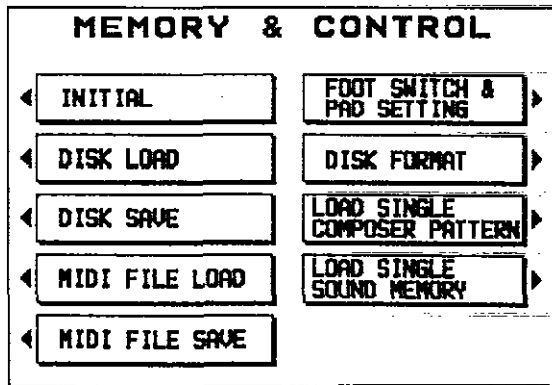
If an optional Foot Switch (sold separately) is connected, you can assign it one of several functions. The assigned function can then be controlled with the Foot Switch. Different functions can be assigned to the **MANUAL PERCUSSION** pad buttons in the same way.

Assigning functions

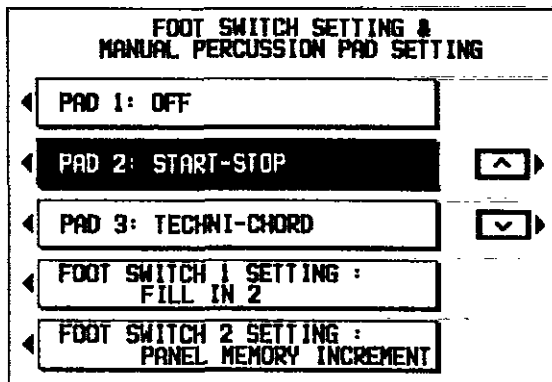
1. Press the **MEMORY & CONTROL** button to turn it on.



- The display changes to the following.



2. Select **FOOT SWITCH & PAD SETTING**.
- The display changes to the following.



3. Select **PAD 1, PAD 2, PAD 3, FOOT SWITCH 1 SETTING** or **FOOT SWITCH 2 SETTING**.

4. Use the **^** and **v** buttons to select a desired function.

PANEL MEMORY A1 to C8: The specified **PANEL MEMORY** bank and number are turned on.

PANEL MEMORY INCREMENT: Increment the **PANEL MEMORY** selection by 1.

START/STOP: **START/STOP** button on/off

VARIATION: **VARIATION** button on/off

FILL IN 1: **FILL IN 1** button on

FILL IN 2: **FILL IN 2** button on

ENDING: **INTRO & ENDING** button on

SUSTAIN: **SUSTAIN** button on/off

DIGITAL EFFECT: **DIGITAL EFFECT** button on/off

DSP EFFECT: **DSP EFFECT** button on/off

GLIDE: Glide on/off (The glide effect "bends" the pitch down by about one semi-tone.)

TECHNI-CHORD: **TECHNI-CHORD** button on/off

PUNCH: Punch in/punch out (Refer to page 59.)

OFF: The **MANUAL PERCUSSION** pad button works normally (pad buttons only).

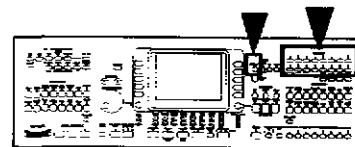
PAD 1 (2, 3): **MANUAL PERCUSSION** pad button 1 (2, 3) on (Foot Switch only)

5. Repeat steps 3 and 4 to assign functions to the pad buttons and Foot Switches as desired.
6. When you have completed making the settings, press the **MEMORY & CONTROL** button to turn it off.

- For details about connecting the Foot Switches, please refer to page 112.

Part III Sequencer

Outline of the Sequencer



A sequencer records your performance in a similar way to a tape recorder. The KN2000's **SEQUENCER** allows you to record in a variety of ways. You may want to record your entire performance in one go (especially if you are using **AUTO PLAY CHORD** to provide the accompaniment), or to build up a complex arrangement with several different parts playing together, like an orchestral score. The KN2000's **SEQUENCER** has 16 tracks. This means that you can record 16 different parts. However, you don't have to use all 16 tracks. For some uses you may only need to use one or two tracks. The KN2000's **SEQUENCER** enables you to edit your recorded performance. Unlike a tape recorder you can change the sound or the tempo during playback, or correct wrong notes or timing errors.

SEQUENCER features

■ You can change the tempo without changing the pitch

When you record your performance at a slow tempo and play it back at a faster tempo, the pitch stays the same.

■ Consistent sound

Your performance is reproduced by a sound module as it reads digital data. So, unlike a recorded tape, the sound never deteriorates no matter how many times you play back your performance.

■ Edit your recorded performance

Comprehensive editing functions allow you to modify your recorded performance. Data can easily be erased, corrected or copied, providing an especially convenient tool for creating your original tunes.

■ Instant search

A recorded tape has to be rewound, but digital action means you can return to the beginning of your performance, or find any measure, instantly.

■ Save your performances on disks

All the data of your recorded performances can be stored on disks. The built-in Disk Drive also allows you to play commercially sold disks on your own Keyboard.

- Features and operation of the built-in Disk Drive are explained in Part V: Disk Drive function.

Popular features

■ Simplified recording method

EASY RECORD is a feature that allows you to bypass the more complex recording procedures so you can record and play back your performance quickly and easily.

- You can also record an accompaniment from the **AUTO PLAY CHORD**.

■ Create a one-man ensemble

Use the **REALTIME RECORD** function to record your performance in up to 16 tracks and create your own orchestra or band.

■ Store individual data to create your song

For repeating patterns or those especially complicated phrases, the **STEP RECORD** feature is convenient for recording the notes one-by-one.

- This method can be used to store both the chord progression for the automatic accompaniment and the rhythm changes.

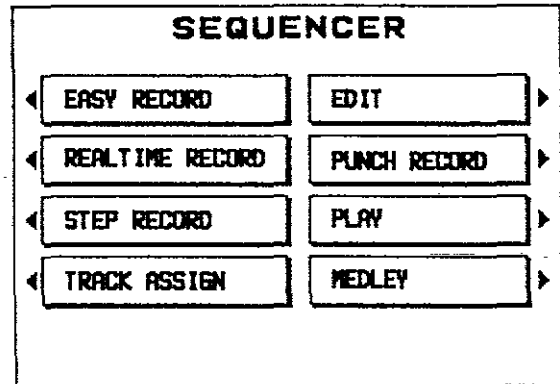
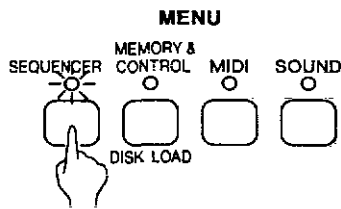
Memory capacity

Expressed in terms of notes, the total number of notes which can be stored in all the **SEQUENCER** tracks is about 19,000. The remaining memory available for recording is shown on the display (LCD screen) as a percentage (**MEMORY= %**).

- When "Memory full!" appears on the display, no more data can be stored in the **SEQUENCER**.
- The recorded contents can be saved on a disk for recall at a later time. (Refer to page 76.)

SEQUENCER menu

When you press the **SEQUENCER** button to turn it on, the display changes to the following.



Summary of the SEQUENCER menu Items

EASY RECORD (page 45)

This mode allows you to begin recording quickly without complicated set-up procedures.

REALTIME RECORD (page 47)

Record your performance just as you play it on the keyboard.

STEP RECORD (page 49)

Store the sounds note-by-note on the display.

TRACK ASSIGN (page 54)

Assign parts to up to 16 different tracks.

EDIT (page 55)

Full-scale editing features are available.

SONG CLEAR: Erase the recorded contents of all tracks.

TRACK CLEAR: Erase the contents of a specific track.

VELOCITY CHANGE: Modify the recorded velocity (how hard the keyboard was played).

QUANTIZE: Correct the timing of the recorded performance.

TRACK MERGE: Merge the recorded contents of two tracks and store in a third track.

MEASURE ERASE: Erase the contents of specific measures.

MEASURE COPY: Copy the contents of specific measures.

PUNCH RECORD (page 59)

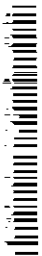
Correct a selected portion of your recorded performance.

PLAY (page 60)

Adjust the settings related to playback operation.

MEDLEY (page 61)

Specify medley playback of songs recorded on a disk.

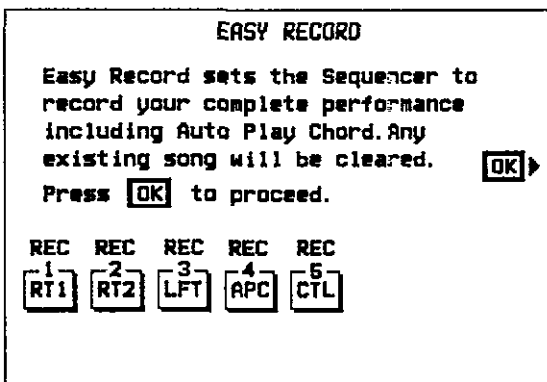


Easy Record

Suppose you are playing the Keyboard and you wish to record and play back your performance to hear how it sounds. You can bypass the set-up procedures of the full-scale sequencer and begin recording quickly and easily.

Recording procedure

1. Set the desired sounds, effects, rhythms, etc.
2. Press the **SEQUENCER** button to turn it on.
3. On the **SEQUENCER** menu display, select **EASY RECORD**.
 - The display changes to the following.
4. Press the **OK** button.
 - The display changes to the **REALTIME RECORD** display.
5. Play the keyboard.
 - Recording begins as soon as you start the rhythm or play the keyboard.
6. When you have finished recording, press the **SEQUENCER** button to turn it off.

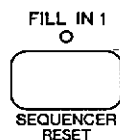


Here is what happens when you select the **EASY RECORD** mode.

- The contents of all **SEQUENCER** tracks are erased (**SONG CLEAR**).
- Tracks available for recording are selected as follows.
 - 1: RIGHT 1 part
 - 2: RIGHT 2 part
 - 3: LEFT part
 - 4: APC part
 - 5: CONTROL part

Playback

1. Press the **SEQUENCER RESET (FILL IN 1)** button.
 - Your recorded performance is played back automatically.
2. Press the **START/STOP** button.



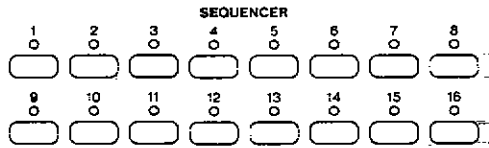
Sequencer parts

The following summary explains what is stored in each **SEQUENCER** part.

Part name [name on display]	Used for	Recorded contents
RIGHT1 [RT1] RIGHT2 [RT2] LEFT [LFT] PART4 [P 4] ⋮ PART15 [P15]	Recording the performance of each part (REALTIME/STEP)	<ul style="list-style-type: none"> • Sound and volume settings • DIGITAL EFFECT, DSP EFFECT, SUSTAIN on/off • FILL IN 1, 2, INTRO & ENDING on • PITCH BEND wheel operation • MODULATION wheel operation
DRUMS [DRM]	Recording the drums performance with the KEYBOARD PERC group sounds, and the MANUAL PERCUSSION performance (REALTIME/STEP)	<ul style="list-style-type: none"> • Sound (drum KIT) and volume settings • FILL IN 1, 2, INTRO & ENDING on • MANUAL PERCUSSION volume
CONTROL [CTL]	Recording changes in the panel button status (REALTIME/STEP)	<ul style="list-style-type: none"> • Sound and rhythm changes, volume settings • DIGITAL EFFECT, SUSTAIN on/off • DSP EFFECT on/off, type and depth setting • DIGITAL REVERB on/off • AUTO PLAY CHORD status • DYNAMIC ACCOMP on/off • MUSIC STYLE ARRANGER status • VARIATION, FILL IN 1, 2, INTRO & ENDING on • SPLIT status • PANEL MEMORY selection changes • TRANPOSE status • BACKGROUND SOUND selection changes and volume setting • TEMPO setting • CONDUCTOR, PART SELECT status • Expression Pedal operation (separately sold option)
AUTO PLAY CHORD [APC]	Recording chords for the AUTO PLAY CHORD (REALTIME)	<ul style="list-style-type: none"> • Sound and volume settings • DIGITAL EFFECT, DSP EFFECT, SUSTAIN on/off • AUTO PLAY CHORD status • FILL IN 1, 2, INTRO & ENDING on • PITCH BEND wheel operation • MODULATION wheel operation
CHORD [CHD]	Recording chord progression for the AUTO PLAY CHORD (STEP)	<ul style="list-style-type: none"> • FILL IN 1, 2, INTRO & ENDING on
RHYTHM [RHY]	Settings related to rhythm (STEP)	<ul style="list-style-type: none"> • Rhythm settings and selection changes • VARIATION, FILL IN 1, 2, INTRO & ENDING on • TEMPO setting

- You can use the TRACK ASSIGN function to assign parts to tracks as you wish. (Refer to page 54.)
- During recording, the measure count on the display corresponds to the time signature of the selected rhythm. However, if rhythm data is stored in the RHYTHM part and that part is played back, the measure count on the display corresponds to the stored rhythm data.

■ Default part settings



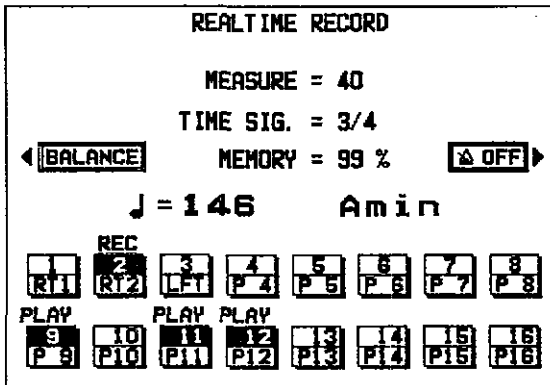
- | | |
|--------------|------------|
| 1: RIGHT1 | 9: PART5 |
| 2: RIGHT2 | 10: PART6 |
| 3: LEFT | 11: PART7 |
| 4: APC/CHORD | 12: PART8 |
| 5: CONTROL | 13: PART9 |
| 6: RHYTHM | 14: PART10 |
| 7: DRUMS | 15: PART11 |
| 8: PART4 | 16: PART12 |

Realtime Record

With REALTIME RECORD, your performance is recorded with the timing exactly as you played it on the keyboard. This mode lets you store a tune with all the subtle nuances just as you play them.

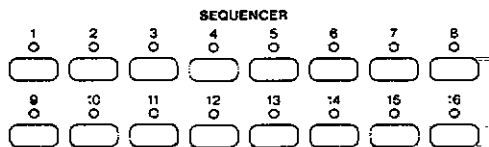
Recording procedure

1. Set the sounds, effects, volumes, etc. for the parts you are going to record.
2. On the SEQUENCER menu display, select REALTIME RECORD.
- The display looks similar to the following.



- You can select two or more tracks to record at one time.
 - When you select a track, the panel settings you selected in step 1 are stored.
4. Use the TEMPO/PROGRAM dial to adjust the tempo.
 - The tempo is shown on the display as a numerical value (♩=).
 - If you wish to record the tempo setting and tempo changes, use the STEP RECORD: RHYTHM. (Refer to page 53.)
 5. Turn the metronome on or off as desired with the ON or OFF button.
 - The metronome selection alternates between ON and OFF each time the button is pressed.
 - The metronome sound is not recorded.
 - The volume of the metronome can be adjusted. (Refer to page 20.)

3. Use the SEQUENCER track buttons (1 to 16) to specify the track for the part you are going to record.



- The indicator (LED) for the selected track button flashes slowly.

<continued on next page>

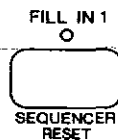
6. Play the keyboard.
 - Recording begins.
 - You can also press the **START/STOP** button to start the rhythm and begin recording.
 - If the metronome is on, when you press the **START/STOP** button, a two-measure count plays, after which recording automatically begins. In this case, the rhythm does not start.
 - The recording status is continuously updated on the display: "MEASURE=" indicates the current measure number; "TIME SIG.=" indicates the current time signature; and "MEMORY=" indicates the remaining memory (%) available for recording.
 - If you wish to adjust the volume of each track or part during recording, press the **BALANCE** button to recall the **PART BALANCE** display. You can then adjust the volumes.
 - If you make a mistake in recording, you can correct a specific portion of your performance without having to redo the whole part. (Refer to page 59.)
7. When you have finished recording, press the **SEQUENCER** button to turn it off.

Playback

1. Turn on the track buttons for the parts you wish to play back.
 - Tracks whose indicators are not lit will not be played back.
2. Press the **SEQUENCER RESET (FILL IN 1)** button.
3. Press the **START/STOP** button.



- The recorded performance is played back automatically.



- The **SEQUENCER** returns to the beginning of the song and the beginning panel settings are recalled.

Multi-track recording

When recording several tracks, you can record one track while listening to the track or tracks already recorded.

1. Follow the procedure to record the first track.
 - When you turn the **SEQUENCER** button off, confirm that the indicator for the track you recorded is lit. Turn on the buttons for the tracks you wish to have played back.
2. Follow the procedure to record the next track.
 - When the **START/STOP** button is turned on, the track recorded in step 1 is played back. You can record the next track in time with this.
 - On the display "REC" indicates tracks which are being recorded, and "PLAY" indicates tracks which are being played back.
3. Repeat steps 1 and 2 to record all the desired parts.

9. Specify the pitch and velocity of the note by playing the keyboard.
 - The dot on the display where the note is stored changes to a * mark.
 - When recording chords, you can store multiple notes at one position.
 - Any panel setting changes—for example changes in the sound selection, button operation, wheel operation, etc.—are recorded at the cursor position.
 - When a wheel is operated, the input value is indicated on the display. Confirm that this is the correct value and press the YES button to record the value or the NO button to cancel it.

REST: To store a rest, after specifying the note LENGTH, press the REST button.

- Positions at which nothing is stored are read as rests.

ERS: If you make a mistake, move the cursor to the error, and after displaying the data you wish to erase, press the ERS button.

BAL: To specify the volume at the cursor position, after pressing the BAL button, use the VALUE buttons to set the volume (0 to 127).

10. Repeat steps 6 through 9 to continue storing notes.
 - To input data on another track, press the button for the desired track and repeat the procedure from step 3.

11. When you have finished recording, press the **SEQUENCER** button to turn it off.

■ Correcting the data

1. In the STEP RECORD mode, specify the track you wish to correct.
2. Use the MEAS buttons to go to the measure you wish to modify. Use the CURSOR buttons to move the cursor to the point (*) you wish to edit.
 - The data stored at that point is shown on the display.
 - When multiple data is stored at one point, different data is displayed in order each time a CURSOR button is pressed. When a chord is recorded, a different note in the chord is displayed each time a CURSOR button is pressed.
3. Correct the data.

There are three types of data:

Performance data

NOTE data (note pitch) and VEL data (how hard the key was played), etc. are displayed. Use the relevant buttons to correct the data as desired.

Sound data

The name of the sound is displayed. Change the sound as desired (the sound setting display is interposed on the current display).

Control data

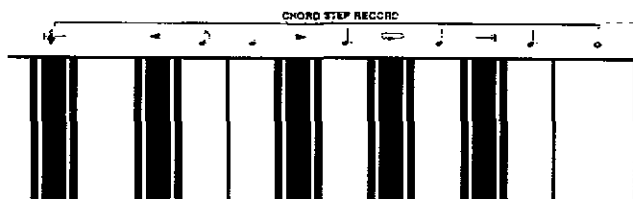
The name of the function is displayed. Change the data as desired.

- Press the ERS button to erase the data which is displayed.

Store a chord progression

Store the chord progression for the **AUTO PLAY CHORD** in the track for the CHORD part. Then, when the **AUTO PLAY CHORD** is used during playback, even if you do not specify the chords with your left hand, the chords change automatically.

- The chord length is specified with the **CHORD STEP RECORD** keys on the keyboard.



Note value keys

- Whole note
- ◡ Dotted half-note
- ◡ Half-note
- ◡ Dotted quarter-note
- ◡ Quarter-note
- ◡ Eighth-note

Reset key

♩— Press to begin storing from the beginning.

Correction keys

- ◀ Move back one chord.
- ▶ Move forward one chord.

Repeat key

↶ Press to end the chord-storing procedure and to specify automatic repeat playback of the stored progression.

End key

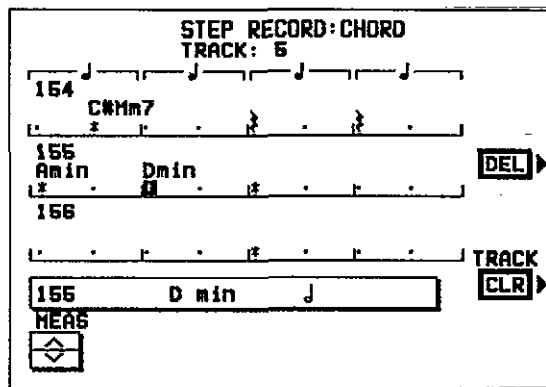
→ Press after the whole chord progression has been stored.

■ Example of storing a chord progression

C	C	F	G7	C	Am
◦	◦	◡	◡	◡	◡

1. Press the **SEQUENCER** button to turn it on.
2. On the **SEQUENCER** menu display, select **STEP RECORD**.
 - The display changes to the **PART SELECT** display.
3. Using the **SEQUENCER** track buttons, select the track to which the CHORD part has been assigned.
 - On the display, the track for the CHORD part (CHD) is highlighted. Confirm that this is the correct track.

4. Press the OK button.
 - The display changes to the **STEP RECORD: CHORD** input display similar to the following.



5. Use the **MEAS** ^ and v buttons to go to the measure you wish to record.
 - This step is not necessary if you are recording from measure 1 of a blank track.

<continued on next page>

6. Store the chords.

<Measure 1, measure 2>

While playing a C chord with your left hand, press the * key one time with your right hand.



- A "beep" tone indicates that the chord has been successfully stored.
- The dot on the display where the chord is stored changes to a * mark and the cursor automatically moves forward, in accordance with the specified note value, to the next un-recorded position. The chord name is shown on the display.

<Measure 3>

(1) While playing an F chord, press the ↓ key one time.



(2) While playing a G7 chord, press the ↓ key one time.



<Measure 4>

(1) While playing a C chord, press the ↓ key one time.

(2) While playing an Am chord, press the ↓ key one time.

- You can press the **INTRO & ENDING** button or a **FILL IN** button on the panel to store the desired pattern at the cursor position. (An Intro can be stored only at the beginning.)
- Store a rest by pressing a note value key without specifying a chord.

7. At the end of the chord progression, press the End key (—H).

- The Keyboard exits the recording mode.
- During playback, playback of the recorded chord progression stops at this point. For automatic repeat playback of the chord progression, press the Repeat key (◁) instead of the End key (—H).

- When you play back the track for the CHORD part, the chords of the automatic accompaniment change in accordance with the stored chord progression.
- Chords can also be specified in the **ONE FINGER** mode.

■ Correct the recorded chord progression

1. Follow the procedure to select the STEP RECORD: CHORD display.
 2. Use the MEAS buttons to go to the measure you wish to modify. Use the ◀ and ▶ Correction keys to move the cursor to the point (*) you wish to edit.
- The lengths of rests are indicated by the respective rest value x its multiplier.

Example:

- ‡ 1-beat rest (quarter rest)
- γ 1/2-beat rest (eighth rest)
- ‡ × 1 + γ . . . 1-1/2-beat rest (dotted quarter rest)
- ‡ × 10 10-beat rest

3. Correct the chord data.

Chord data

When the chord name is displayed at the cursor position, you can press the DEL button to erase the data and then store a new chord.

- If you do not erase the displayed data before entering new chord data, the new data is inserted at this point, and the displayed data is merely shifted by the note value of the new chord.
- Rests can also be erased. Each time the DEL button is pressed, the rest is erased in units of $\frac{1}{2} \times 1$. The $\frac{1}{2}$ rest is erased last.

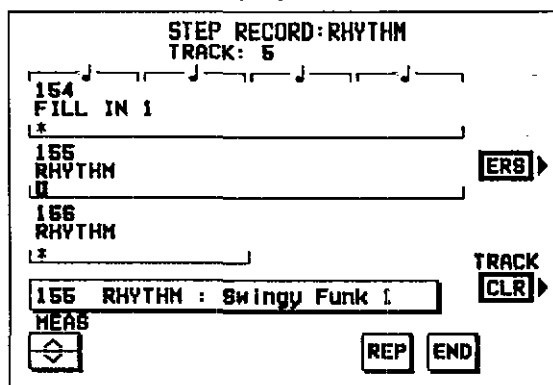
Control data

The name of the stored function (INTRO, FILL, etc.) is displayed. You can press the DEL button to erase the data which is displayed.

Store a rhythm progression

Changes in the rhythm selection and tempo, as well as the intro, fill-ins and the ending, can be stored by measures with the step recording method.

1. Press the **SEQUENCER** button to turn it on.
2. On the **SEQUENCER** menu display, select **STEP RECORD**.
 - The display changes to the **PART SELECT** display.
3. Using the **SEQUENCER** track buttons, select the track to which the RHYTHM part has been assigned.
 - On the display, the track for the RHYTHM part (RHY) is highlighted. Confirm that this is the correct track.
4. Press the OK button.
 - The display changes to the **STEP RECORD: RHYTHM** RHYTHM input display similar to the following.

**TRACK CLEAR**

To erase all data from the current track, press the CLR button, and then press the YES button on the confirmation display.

- If you wish to cancel the clear procedure, press the NO button.

5. Use the MEAS \wedge and \vee buttons to go to the measure you wish to record.
 - This step is not necessary if you are recording from measure 1 of a blank track.
6. Store the rhythm data.
 - Data which can be stored:
 - START/STOP**
Changes in the rhythm selection
 - COUNT INTRO, INTRO, FILL IN, VARIATION, ENDING**
Tempo changes
 - Be sure to store the **START/STOP** data in the measure in which the rhythm starts.
 - If you are storing a **COUNT INTRO** or **INTRO**, store this data before the **START/STOP** data.
7. Repeat steps 5 and 6 to continue storing the rhythm progression.
8. At the end of the rhythm progression, press the REP button or the END button.
 - REP: During playback, the recorded rhythm progression is repeated.
 - END: During playback, playback of the recorded rhythm progression stops at this point.
 - The Keyboard exits the recording mode.

■ **Correct the recorded rhythm progression**

1. Follow the procedure to select the STEP RECORD: RHYTHM display.
2. Use the MEAS buttons to go to the measure you wish to modify. (The * is highlighted.)
3. Correct the rhythm data.
 - Press the ERS button to erase data at the cursor position.

- To erase all data from the current track, press the CLR button, and then press the YES button on the confirmation display.
- If you wish to cancel the clear procedure, press the NO button.
- If you select a rhythm with a different time signature, the time signature of all subsequent measures will also change.
- If data has already been recorded in other tracks, you cannot select a rhythm with a different time signature.

Track Assign

Each **SEQUENCER** part is already assigned to a track number. However, you can use the TRACK ASSIGN function to assign parts to tracks as you wish. This function is also used to designate the tracks used for the rhythm data and chord progression data.

1. On the **SEQUENCER** menu display, select TRACK ASSIGN.
- The display looks similar to the following.

TRACK ASSIGN			
	TRACK ASSIGN	LOCAL CONTROL	MIDI-OUT CHANNEL
TRACK	TR 1 RIGHT1	ON	1 CH
	TR 2 RIGHT2	ON	2 CH
	TR 3 BASS	ON	5 CH
	TR 4 CHORD	ON	7 CH
	TR 5 PART6	ON	10 CH
	TR 6 PART8	ON	8 CH
	TR 7 PART7	ON	9 CH
	TR 8 CONTROL	ON	3 CH

Navigation: TRACK ^, TRACK v, 1-8, 9-16, ASSIGN ^, LOCAL ^, CHANNEL ^, OK

- The RHYTHM, CONTROL and APC/CHORD parts cannot be assigned to more than one track.
- You can use the LOCAL ^ and v buttons to turn the LOCAL CONTROL on or off, and the CHANNEL ^ and v buttons to assign the MIDI-OUT CHANNEL. For a detailed explanation of these MIDI functions, refer to pages 103 and 104.

2. Use the TRACK ^ and v buttons to select the track.
 - You can switch between the setting display for tracks 1 to 8 and the display for tracks 9 to 16 with the 1-8 and 9-16 buttons.
3. Use the ASSIGN ^ and v buttons to select the part for the specified track.
 - Select one of the following parts: RIGHT1, RIGHT2, LEFT, PART4 to PART15, DRUMS, CONTROL, APC, CHORD, RHYTHM. (For an explanation of each **SEQUENCER** part, refer to page 46.)
 - When a part other than the CONTROL, APC/CHORD or RHYTHM part is assigned, the track assign procedure is completed at this point.
 - Either the CHORD part or APC part can be assigned to a track, but not both.

4. When assigning the CONTROL, APC/CHORD or RHYTHM part, press the OK button.
 - The following confirmation display appears to warn you that currently stored data in the tracks concerned will be erased. Press the YES button to confirm that you wish to execute the specified track assignment. Or press NO to stop the track assignment.

TRACK ASSIGN CHANGE

ATTENTION!

Changing the assignment of Track 4 from Right 1 -> CHORD will erase all the current data

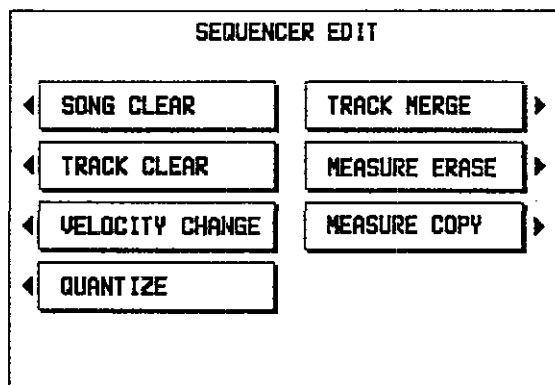
Are You Sure?

Editing the recorded performance

The edit feature allows you to erase or change portions of your performance after it has been recorded.

Select the edit function

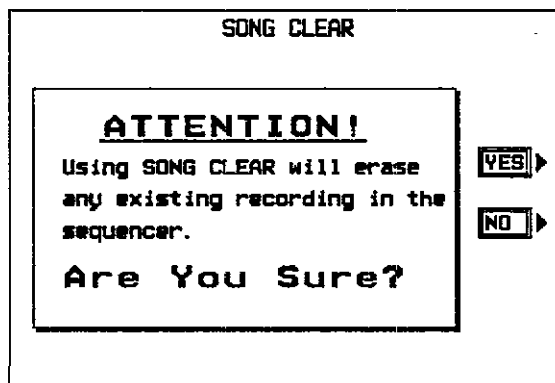
1. On the **SEQUENCER** menu display, select **EDIT**.
 - The **SEQUENCER EDIT** display appears.



2. Select the edit function.
 - The display changes in accordance with your selection.
3. Perform the editing procedures.
 - During the editing procedure, you can press the **EXIT** button to go back to the **SEQUENCER EDIT** display.
 - During the editing procedure, if the indicator for the **TEMPO/PROGRAM** dial is lit, you can use the dial for the editing function.

SONG CLEAR

Erase the recorded contents of all tracks.

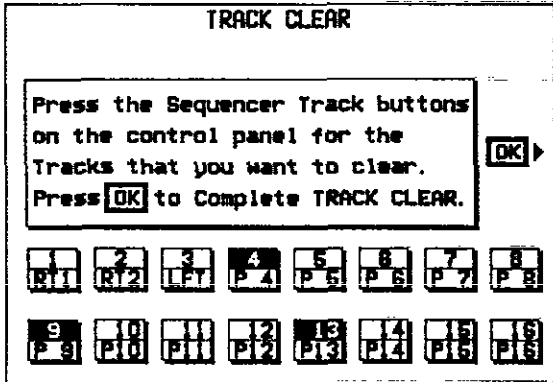


Press the **YES** button to execute the function, or press the **NO** button to cancel the function.

- When the data has been erased, "COMPLETED!" appears on the display, and the keyboard returns to the normal performance mode.

TRACK CLEAR

Erase the contents of a specific track.



1. Select the track or tracks you wish to clear.
 - On the display, the selected tracks are highlighted.

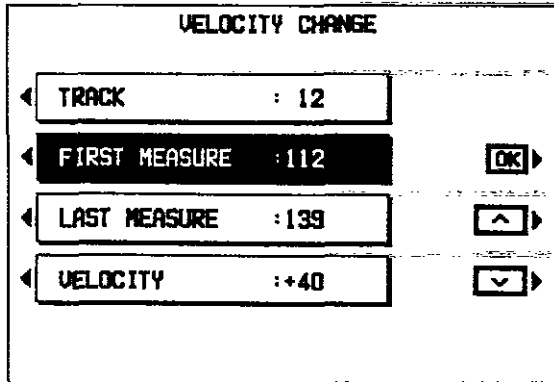
2. Press the OK button.
 - The following confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.



- When the data has been erased, "COMPLETED!" appears on the display.

VELOCITY CHANGE

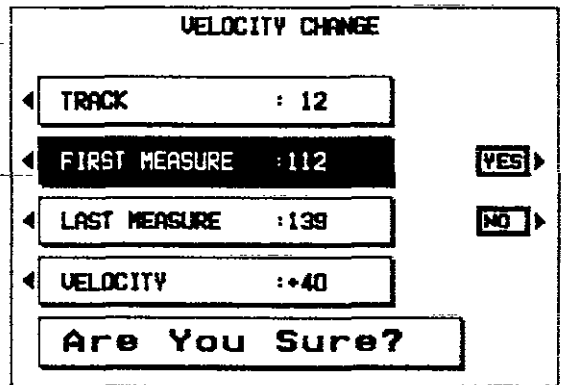
Modify the recorded velocity in specific measures of specific tracks.



1. Select TRACK. Use the ^ and v buttons to specify the track number.
2. Select FIRST MEASURE. Use the ^ and v buttons to specify the start point (measure number) of the velocity change.
3. Select LAST MEASURE. Use the ^ and v buttons to specify the end point (measure number) of the velocity change.

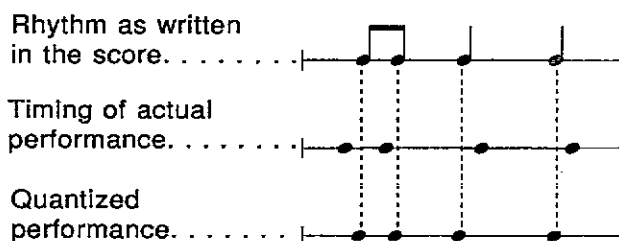
4. Select VELOCITY. Use the ^ and v buttons to specify the change in velocity (-127 to +127).
 - The value you select will be added to or deleted from the current velocity.

5. Press the OK button.
 - The following confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.

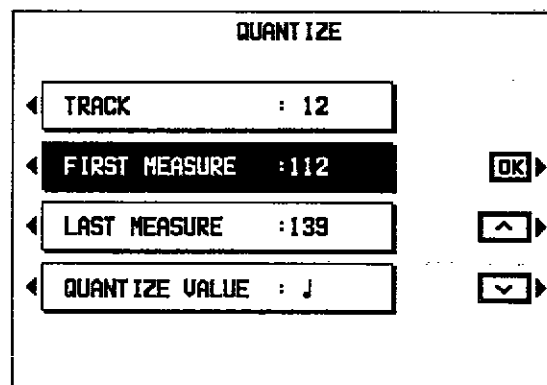


QUANTIZE

The QUANTIZE function can correct the timing of your performance after it has been recorded. If the rhythm is slightly out of sync or inexact, it will automatically be corrected to the specified quantize level.



1. Select TRACK. Use the \wedge and \vee buttons to specify the track number.
 - You cannot select the track for the CONTROL, RHYTHM or CHORD part.
2. Select FIRST MEASURE. Use the \wedge and \vee buttons to specify the start point (measure number).
3. Select LAST MEASURE. Use the \wedge and \vee buttons to specify the end point (measure number).

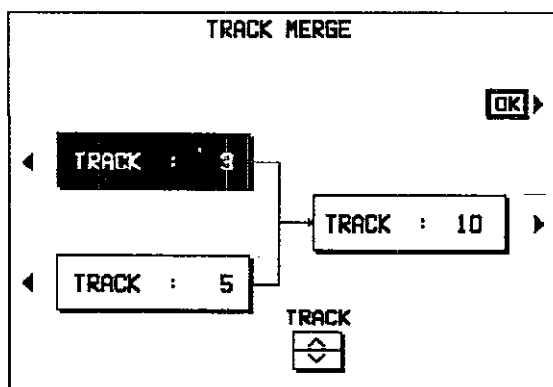


4. Select QUANTIZE VALUE. Use the \wedge and \vee buttons to specify the quantize level.
 - Select from ♩_3 , ♩ , ♩_3 , ♩ , ♩_3 , ♩ , ♩ . (A 3 denotes a triplet-type note.)
5. Press the OK button.
 - The confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.

TRACK MERGE

Merge the recorded contents of two tracks (source tracks) and store the merged contents in a third track (destination track).

- When the TRACK MERGE function is executed, the data is erased from the two source tracks.



1. Select the two source tracks (left half of the display).
 - Use the buttons on the left side of the display to select one of the source tracks, and use the TRACK \wedge and \vee buttons to specify the track number. Repeat for the other source track.

- You cannot select the track to which the CONTROL, RHYTHM or CHORD part has been assigned.
 - If the part assigned to the upper source track ("upper" meaning its position on the TRACK MERGE display) is different from the part assigned to the lower source track, when the parts are merged in the destination track, the new track is assigned the same part as the upper track.
2. Select the destination track (right half of the display).
 - Press the button on the right side of the display to select the destination track, and use the TRACK \wedge and \vee buttons to specify the track number.
 3. Press the OK button.
 - The confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.

MEASURE ERASE

Erase the recorded contents of specific measures. You can also specify which type of data is to be erased.

MEASURE ERASE

TRACK : 12

FIRST MEASURE : 112

LAST MEASURE : 139

ERASE DATA : NOTE

1. Select TRACK. Use the ^ and v buttons to specify the track number.
 - You cannot select the track for the RHYTHM part or CHORD part in which a repeat command has been stored.
 - If ALL is selected, data is erased from the specified measures of all the tracks at one time.

2. Select FIRST MEASURE. Use the ^ and v buttons to specify the start point (measure number).
3. Select LAST MEASURE. Use the ^ and v buttons to specify the end point (measure number).
4. Select ERASE DATA. Use the ^ and v buttons to specify the type of data to be erased.

ALL: All data is erased.
 NOTE: Only note data (pitch, velocity, etc.) is erased.
 CONTROL (CTL): Only control data (volume, effect and other panel settings) is erased.

5. Press the OK button.
 - The confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.

MEASURE COPY

Copy measures from one track (source track) to another track (destination track).

- On the destination track, the new data replaces the current measure contents.

MEASURE COPY

FROM TRACK : 12

TO TRACK : 5

FIRST MEASURE : 112

LAST MEASURE : 116

START MEASURE : 45

MEASURE

OK

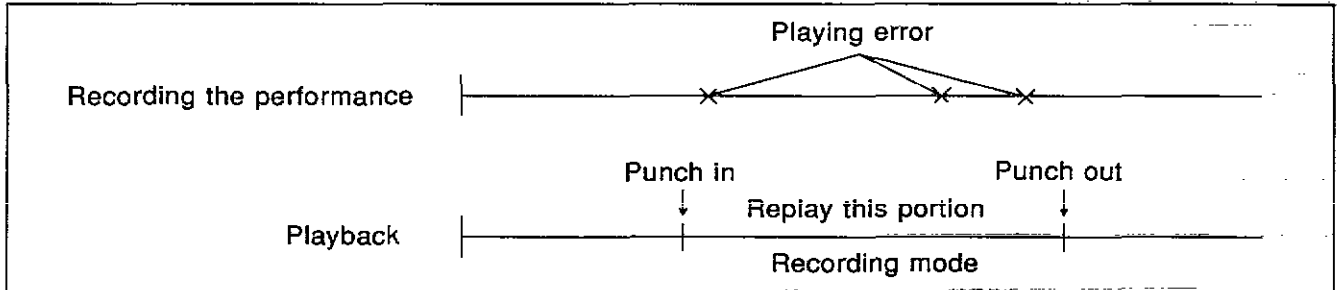
1. Select FROM TRACK. Use the TRACK ^ and v buttons to specify the source track.
 - You cannot select the track for the RHYTHM part or CHORD part in which a repeat command has been stored.
 - If ALL is selected, the specified measures are copied to all tracks at the same time.

2. Select FIRST MEASURE. Use the MEASURE ^ and v buttons to specify the start point (measure number) on the source track.
3. Select LAST MEASURE. Use the MEASURE ^ and v buttons to specify the end point (measure number) on the source track.
4. Select TO TRACK. Use the TRACK ^ and v buttons to specify the destination track.
 - Measures in a track for the CONTROL, RHYTHM or CHORD part can be copied only to the same track.
5. Select START MEASURE. Use the MEASURE ^ and v buttons to specify the start point (measure number) on the destination track.

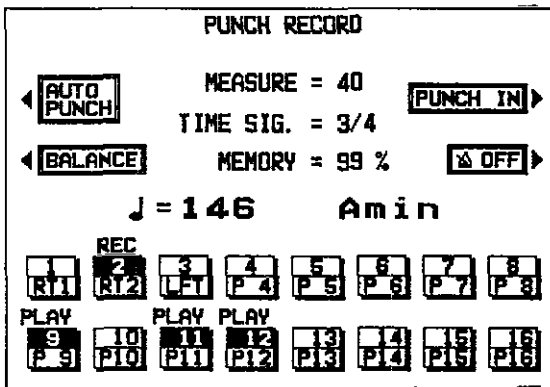
6. Press the OK button.
 - The confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.

Punch Record

If you make a playing error during REALTIME RECORD or would like to change the recording for some other reason, you can use the punch recording feature to correct a selected portion of the performance without having to redo the whole part.



1. In addition to the part(s) you are going to correct, you can also listen to other parts during punch recording. Turn on the track buttons for the parts you wish to play back.
2. On the **SEQUENCER** menu display, select **PUNCH RECORD**.
 - The display looks similar to the following.



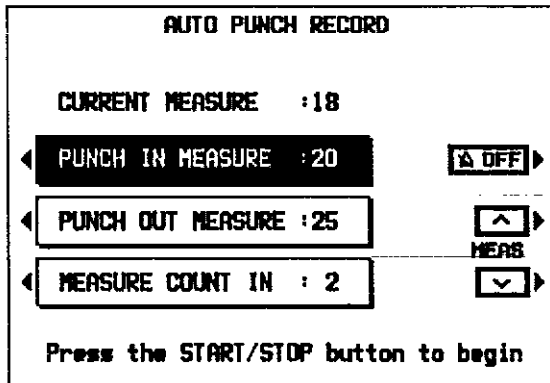
3. Select the track which contains the portion you want to correct.
 - On the display "REC" indicates tracks which are being recorded, and "PLAY" indicates tracks which are being played back.
4. Press the **START/STOP** button to begin playback of the specified track.
5. During playback, press the **PUNCH IN** button at the point you want to begin recording.
 - Recording begins as soon as the **PUNCH IN** button is pressed. Begin playing at this point.
 - The **PUNCH IN** button switches to the **PUNCH OUT** button.

6. Press the **PUNCH OUT** button at the point you want to stop recording.
 - Recording stops immediately.
7. When you have finished correcting the performance, press the **SEQUENCER** button to turn it off.
 - You can also begin punch-in recording by playing the keyboard.
 - You can specify the punch-in/punch-out points with the optional Foot Switch (sold separately). (Refer to page 42.)
 - Even when the punch-in measure has been specified on the **AUTO PUNCH RECORD** display, you can begin punch-in before the specified punch-in measure by pressing the **PUNCH IN** button or by playing the keyboard.

■ AUTO PUNCH RECORD

You can also set the punch-in and punch-out points beforehand, so that recording automatically begins and ends at the specified points.

1. On the **SEQUENCER** menu display, select **PUNCH RECORD**. Specify the track you wish to correct.
 - The display looks similar to the following.



3. Select **PUNCH IN MEASURE**. Use the **MEAS** \wedge and \vee buttons to specify the number of the punch-in measure.

4. Select **PUNCH OUT MEASURE**. Use the **MEAS** \wedge and \vee buttons to specify the number of the punch-out measure.
 - The number of the punch-out measure must be higher than the number of the punch-in measure.
 - The specified punch-out measure is not recorded.
5. Select **MEASURE COUNT IN**. Use the \wedge and \vee buttons to specify the number of lead-in measures you wish to have played back before the punch-in measure.
 - Set the metronome to on or off with the **ON** or **OFF** button.

6. Press the **START/STOP** button. Playback begins from the measure indicated by **CURRENT MEASURE** on the display.

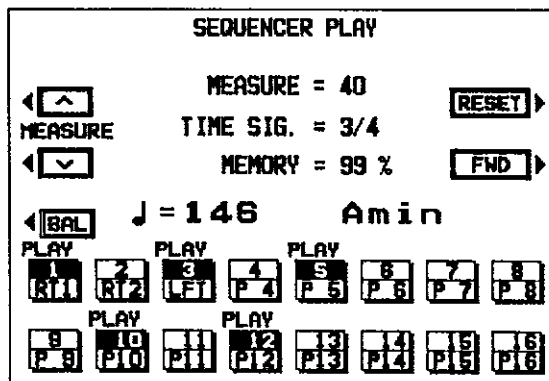
7. Correct the performance.
 - The mode changes automatically to the recording mode at the specified punch-in measure. Begin playing at this point. The mode automatically changes back to the playback mode at the specified punch-out measure.

8. When you have finished correcting the performance, press the **SEQUENCER** button to turn it off.

Playback

You can specify the measure from which you wish playback to begin.

1. On the **SEQUENCER** menu display, select **PLAY**.
 - The display looks similar to the following.



2. Use the **MEASURE** \wedge and \vee buttons to specify the beginning measure of playback.
 - "MEASURE=" indicates the current measure number.
 - If you do not know the measure number, you can quick-search for the desired measure while listening to the recorded performance by holding down the **FWD** button. (This button does not work during normal playback.)
 - You can press the **RESET** button to return to the beginning of the first measure and recall the panel status which was in effect at the beginning of recording. (This button does not work during playback.)
 - You can adjust the volume of each track with the corresponding **BAL** buttons.

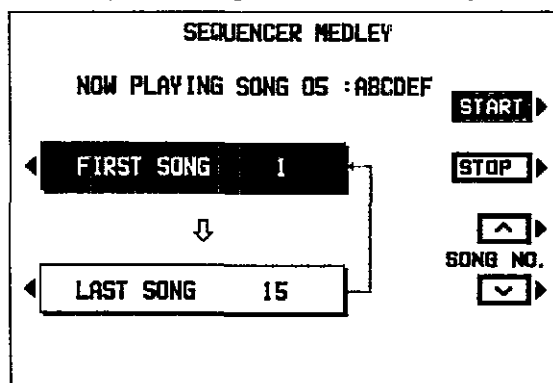
3. Press the **START/STOP** button.
 - The recorded performance is played back from the specified measure.
 - When playback is begun from a measure in which an **INTRO**, **COUNT INTRO**, **FILL IN** or **ENDING** is recorded, the corresponding function does not work.
4. To stop playback, press the **START/STOP** button again.
 - If the **START/STOP** button is pressed again, playback will continue from the point it was interrupted.

Sequencer Medley

You can have the songs on a disk played back continuously in order.

- Performances which have been saved in the Standard MIDI File format are not played back in this mode.
- The procedure for saving your **SEQUENCER** performances on a disk is explained in Part V: Disk Drive function (page 72).

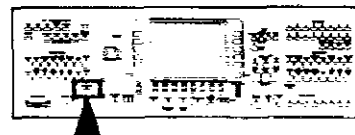
1. Insert the disk into the Disk Drive.
2. On the **SEQUENCER** menu display, select **MEDLEY**.
 - The display changes to the following.



3. Select **FIRST SONG**. Use the **SONG NO.** \wedge and \vee buttons to specify the number of the first song you wish to have played.
4. Select **LAST SONG**. Use the **SONG NO.** \wedge and \vee buttons to specify the number of the last song you wish to have played.
5. Press the **START** button.
 - The songs from the specified range are repeatedly played back in order.
 - If you press the **START/STOP** button during medley play, the song currently playing will stop, and playback continues from the next recorded song on the disk.
6. To stop medley play, press the **STOP** button again.
7. Press the **SEQUENCER** button to turn it off.

Part IV Composer

Outline of the Composer



The **COMPOSER** enables you to create your own accompaniment patterns or to edit preset accompaniment patterns. A pattern is comprised of five parts: **DRUMS**, **BASS** and 3 **ACCOMP** parts. These parts would form the backing of a song, for example: Drums, Acoustic Bass, Piano, Jazz Guitar and Vibes. You may find it useful at first to copy and edit a preset pattern.

Rhythm components which can be stored

The **MEMORY A** and **MEMORY B** buttons in the **RHYTHM GROUP** section are memory banks reserved for the rhythms you create with the **COMPOSER**. In the **NORMAL MODE**, you can store up to 12 different rhythms (6 in each memory bank).

- When you set the **COMPOSER MODE** to the **EXPAND MODE** (default setting), you can also create **INTRO**, **FILL IN** and **ENDING** patterns.

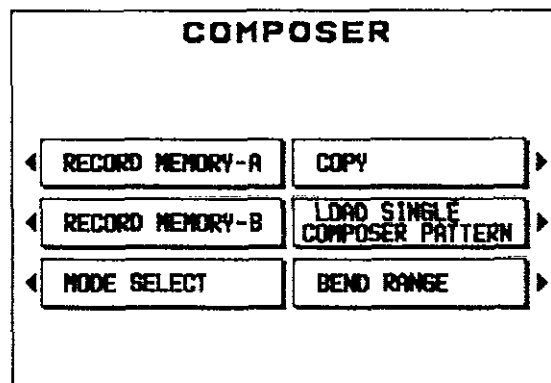
Memory capacity

Expressed in terms of notes, the total number of notes which can be stored in all the **COMPOSER** memories is about 8600. The remaining memory available for recording is shown on the **RECORD** display as a percentage (**MEMORY= %**).

- When "Memory full!" appears on the display no more data can be stored in the **COMPOSER**.
- The recorded contents can be saved on a disk for recall at a later time. (Refer to page 76.)

COMPOSER menu

When you press the **COMPOSER** button to turn it on, the display (LCD screen) changes to the following.



Summary of the COMPOSER menu items

RECORD MEMORY-A (pages 64, 65)
Create a memory in the **MEMORY A** bank.

RECORD MEMORY-B (pages 64, 65)
Create a memory in the **MEMORY B** bank.

MODE SELECT (page 70)
Specify whether or not you are making your own **INTRO** and **FILL IN** patterns.

COPY (page 63)
Copy a preset rhythm pattern into a memory.

LOAD SINGLE COMPOSER PATTERN
Recall the desired **COMPOSER** data from data saved on a disk. The items on this menu are also on the **MEMORY & CONTROL** menu, and the procedures are the same. (page 78)

BEND RANGE (page 71)
Set the **PITCH BEND** range effective during recording for the **ACCOMP** and **BASS** parts.

Two ways to record in the COMPOSER

There are two ways to create and record a rhythm.

■ Edit a preset rhythm

Use the COPY function to copy a preset rhythm to a **MEMORY**, change parts of it, and then store it as a new rhythm.

■ Create a completely new rhythm

Clear the memories and compose a completely new rhythm from scratch.

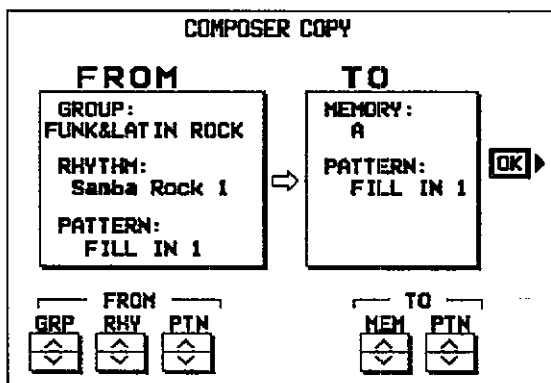
- You can use either or both of two recording methods. Realtime recording allows you to store your rhythm exactly as you play it on the keyboard. But for difficult phrases, you may want to use the STEP RECORD mode to store the notes one by one, just as you might write a music score.

Edit a preset rhythm pattern: preparation

These are step-by-step instructions for preparing to create a new rhythm pattern by modifying a part of a preset rhythm pattern. First you copy one of the preset **RHYTHM GROUP** rhythm patterns to a location in the **MEMORY A** or **MEMORY B** bank.

1. On the **COMPOSER** menu display, select **COPY**.

- The display looks similar to the following.



2. Select a rhythm group, name and pattern to copy (FROM).

- Use the **GRP** \wedge and \vee buttons to specify the **RHYTHM GROUP**.
- Use the **RHY** \wedge and \vee buttons to specify the rhythm name.
- Use the **PTN** \wedge and \vee buttons to specify the rhythm pattern (NORMAL, INTRO, FILL IN 1, FILL IN 2, ENDING, VARIATION, FILL IN 1 VARI or FILL IN 2 VARI).
- You can also select the **RHYTHM GROUP** and pattern with the panel buttons.

3. Select a memory bank and pattern to copy to (TO).

- Use the **MEM** \wedge and \vee buttons to specify the memory bank (A or B).
- Use the **PTN** \wedge and \vee buttons to specify the pattern (BANK A: MEMORY 1 to 6, BANK B: MEMORY 7 to 12, FILL IN 1 or 2, INTRO, or ENDING).

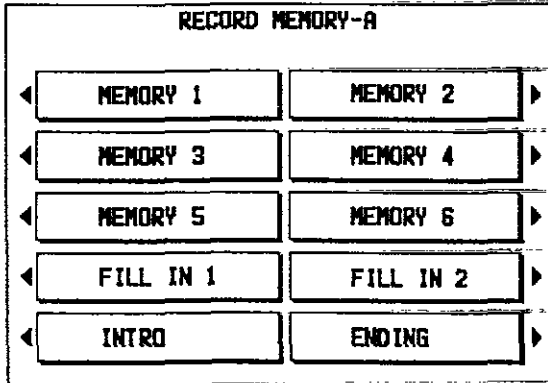
4. Press the **OK** button.

- When copying has been successfully completed, "COPY COMPLETED!" appears on the display.

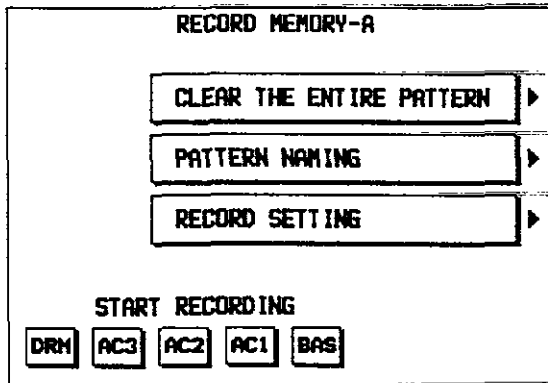
5. Press the **EXIT** button.

<continued on next page>

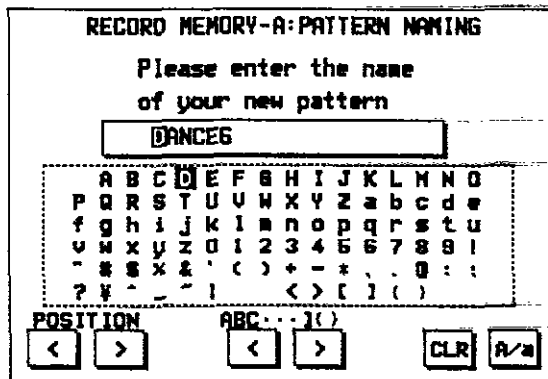
6. On the **COMPOSER** menu display, select the bank to which you copied the rhythm pattern (the memory bank you selected in step 3: RECORD MEMORY-A or RECORD MEMORY-B).
- The display looks similar to the following.



7. Select the pattern name to which you copied the pattern (the pattern name you selected in step 3).
- The display looks similar to the following.



8. If you wish to name your new rhythm pattern (except for FILL IN, INTRO and ENDING), select **PATTERN NAMING**.
- If you do not input a name for your rhythm pattern, the name becomes the same as the original rhythm from which you copied.
- The display looks similar to the following.



9. Type a new name for your rhythm pattern (up to 16 characters).
 - Use the **POSITION** < and > buttons to highlight the character position in the name box. Use the **ABC** ... [] < and > buttons to select the alphanumeric character. Repeat these steps to type the whole name.
 - To erase the name, press the **CLR** button.
 - Use the **A/a** button to switch between upper case and lower case characters.
10. Press the **EXIT** button.
 - The display returns to the previous display.
11. In the **START RECORDING** area on the display, select the rhythm part you want to record first.

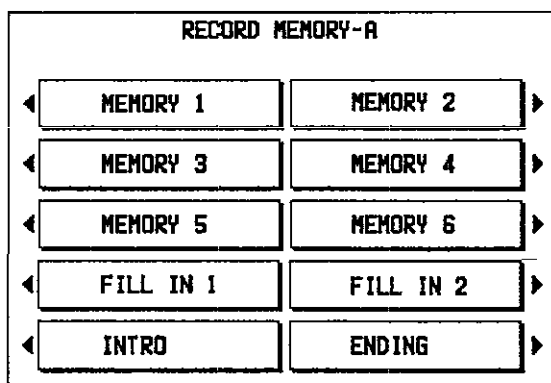
BAS: BASS
AC1: ACCOMP 1
AC2: ACCOMP 2
AC3: ACCOMP 3
DRM: DRUMS

- The pattern you copied and the metronome sound start, and recording begins. (Refer to page 66.)

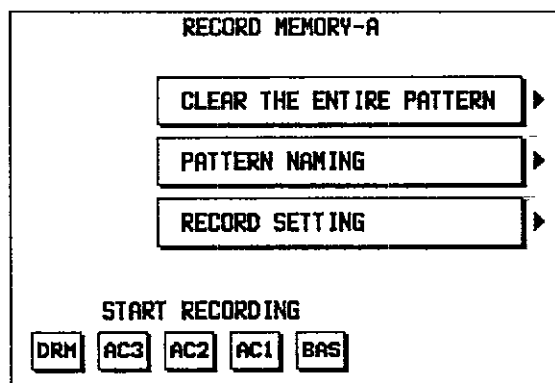
Create a completely new rhythm: preparation

Here are the preparatory steps to compose a completely new rhythm from scratch.

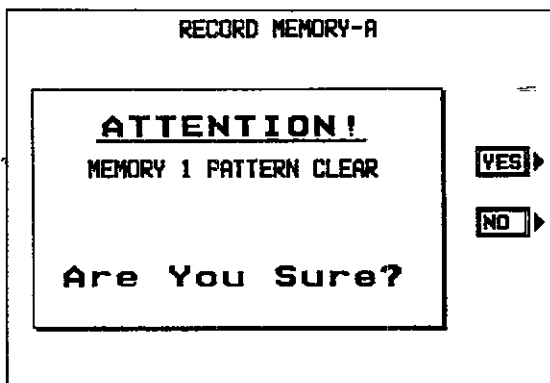
1. On the **COMPOSER** menu display, select a bank in which to record the rhythm (RECORD MEMORY-A or RECORD MEMORY-B).
 - The display looks similar to the following.



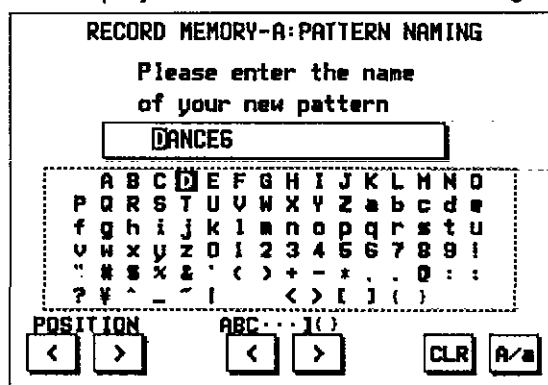
2. Specify the pattern you are going to create.
 - The display looks similar to the following.



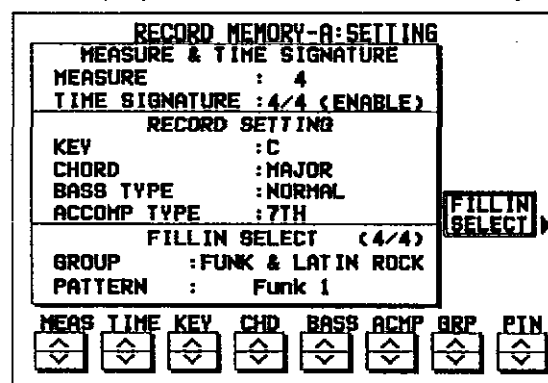
3. Press the CLEAR THE ENTIRE PATTERN button.
 - The following confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.



4. Select PATTERN NAMING (except for FILL IN, INTRO and ENDING).
 - The display looks similar to the following.



5. Type a name for your rhythm pattern (up to 16 characters).
 - Use the POSITION < and > buttons to highlight the character position in the name box. Use the ABC...] { } < and > buttons to select the alphanumeric character. Repeat these steps to type the whole name.
 - To erase the name, press the CLR button.
 - Use the A/a button to switch between upper case and lower case characters.
6. Press the EXIT button.
 - The display returns to the previous display.
7. Select RECORD SETTING.
 - The display looks similar to the following.



<continued on next page>

8. Adjust the various recording settings.

- See the box below.

9. When all the settings have been completed, press the **EXIT** button.

- The display returns to the previous display.

10. In the **START RECORDING** area on the display, select the rhythm part you want to record first.

BAS: **BASS**
 AC1: **ACCOMP 1**
 AC2: **ACCOMP 2**
 AC3: **ACCOMP 3**
 DRM: **DRUMS**

- The metronome sound starts and recording begins.

Recording settings

MEASURE & TIME SIGNATURE

These settings can be adjusted only when the pattern has been cleared by the **CLEAR THE ENTIRE PATTERN** function.

MEASURE: Use the **MEAS** \wedge and \vee buttons to specify the number of measures in your repeating rhythm pattern.

TIME SIGNATURE: Use the **TIME** \wedge and \vee buttons to specify the time signature.

RECORD SETTING

KEY: Use the **KEY** \wedge and \vee buttons to specify the root note of the chords you wish to record.

CHORD: Use the **CHD** \wedge and \vee buttons to specify the type of chord you wish to record (**MINOR** or **MAJOR**).

BASS TYPE: Use the **BASS** \wedge and \vee buttons to specify the type of phrase progression for the **BASS** part (**NORMAL** or **7TH**).

ACCOMP TYPE: Use the **ACMP** \wedge and \vee buttons to specify the type of phrase progression for the **ACCOMP** parts (**NORMAL** or **7TH**).

FILL IN SELECT

You can select fill-in, intro and ending patterns from a preset rhythm pattern. These preset patterns are produced when a **FILL IN** button or the **INTRO & ENDING** button is pressed during playback of your new rhythm pattern.

- This setting is effective only when the **COMPOSER MODE** is set to **NORMAL MODE**.
- GROUP:** Use the **GRP** \wedge and \vee buttons to specify the **RHYTHM GROUP**.
- PATTERN:** Use the **PTN** \wedge and \vee buttons to specify the rhythm name.
- If you changed the settings in the **FILL IN SELECT** area on the display, press the **FILL IN SELECT** button. When the settings have been successfully stored, "COPY COMPLETED!" appears on the display.
- You cannot select a rhythm with a time signature different from that of the time signature you specified.

Record your rhythm pattern

Store each part of the rhythm pattern as you perform it on the keyboard.

Recording procedure

RECORD MEMORY-A

◀ BAL	PATTERN = FILLIN 1 TEMPO = 146 QUANTIZE= ♪ MEASURE = 2 MEMORY = 35 %	PART CLR ▶										
◀ STEP		ALL ERAS ▶										
		INST ERS ▶										
		QUANTIZE ▶										
<table style="display: inline-table; border: none;"> <tr> <td style="border: 1px solid black; padding: 2px;">REC</td> <td style="border: 1px solid black; padding: 2px;">MUTE</td> <td style="border: 1px solid black; padding: 2px;">MUTE</td> <td style="border: 1px solid black; padding: 2px;">MUTE</td> <td style="border: 1px solid black; padding: 2px;">MUTE</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">DRM</td> <td style="border: 1px solid black; padding: 2px;">AC3</td> <td style="border: 1px solid black; padding: 2px;">AC2</td> <td style="border: 1px solid black; padding: 2px;">AC1</td> <td style="border: 1px solid black; padding: 2px;">BAS</td> </tr> </table>	REC	MUTE	MUTE	MUTE	MUTE	DRM	AC3	AC2	AC1	BAS		SOLO ▶
REC	MUTE	MUTE	MUTE	MUTE								
DRM	AC3	AC2	AC1	BAS								

1. Adjust the tempo.

- The tempo can be freely adjusted when you play back the rhythm pattern, so record at the tempo which is easiest for you to play.

2. Select the sound.

- For the **DRM** part, select sounds from the **KEYBOARD PERC** sound group.
- For the **AC1**, **AC2**, **AC3** and **BAS** parts, select sounds from groups other than the **KEYBOARD PERC** sound group.

3. Record the part.



- The specified number of measures are repeatedly played back, during which time any newly played notes are added to those already recorded. The current measure number is shown on the display as "MEASURE=".
- Record the performance in C major for correct chord progressions during playback. To record the performance in a different scale, follow the RECORD SETTING procedure to specify a KEY and CHORD.
- **PITCH BEND** and **MODULATION** effects and the **SUSTAIN** on/off are also recorded (except for the DRM part).
- You can also specify the range of the pitch bend when the **PITCH BEND** wheel is operated during recording. (Refer to page 71.)

4. When you have finished recording one part, use the buttons below the display to select the next part to record.

5. Repeat steps 1 through 4 to record all the parts of the rhythm.

6. When you have finished recording the rhythm, press the **COMPOSER** button to turn it off.

- If you wish to continue creating other patterns, press the **EXIT** button to go back to the pattern selection display.

The display during recording

BAL

If you wish to adjust the volume of each part during recording, press the BAL button. The PART BALANCE display appears. Adjust the volume of each part.

- If you press the **EXIT** button, the display returns to the previous display.
- These settings are not stored.

STEP

When you press this button, the display changes to the STEP RECORD display, on which you can store the notes one by one. (Refer to page 68.)

PART CLR

Press this button if you wish to erase all recorded contents of the currently selected part.

ALL ERAS

The performance recorded in the selected part is erased for as long as this button is pressed.

INST ERAS

When the DRM part is selected, the DRM part can be cleared instrument by instrument. Hold down this button and specify the instrument sound to be deleted by pressing the corresponding instrument key on the keyboard, after which only the specified instrument will be erased for as long as this button is kept pressed.

QUANTIZE

Set the desired quantize level to smooth out any unevenness in the timing of your performance. Each time this button is pressed, the indicated level changes. The quantize level is shown in the center of the display as "QUANTIZE=". Select from $\frac{3}{4}$, $\frac{2}{4}$, $\frac{3}{8}$, OFF, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$. (A 3 denotes a triplet-type note.)

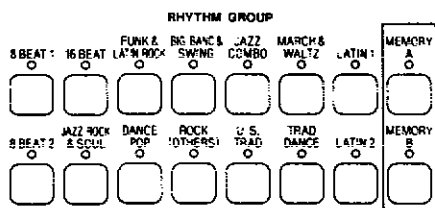
SOLO

When you press this button while you are recording, only the part which is currently being recorded is played back. When SOLO is on, a MUTE mark is shown above the other part names on the display.

- To turn off the SOLO function, press this button again.

Playback

1. In the **RHYTHM GROUP** section, select the bank in which the desired rhythm is stored (**MEMORY A** or **MEMORY B**).



2. Select the desired rhythm from the list on the display.
3. Press the **START/STOP** button.
 - The **DRUMS** part begins to play back.
 - The **BASS** and **ACCOMP** parts are played back when you use the **AUTO PLAY CHORD**.

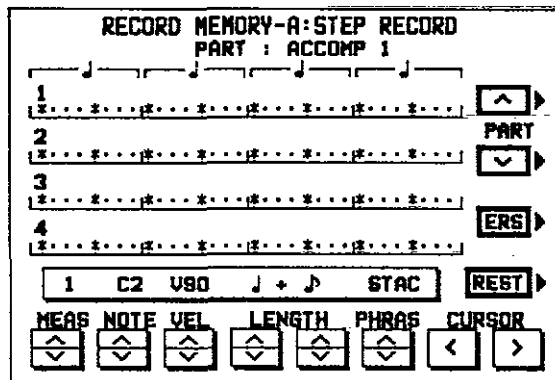
- The list of available rhythms is shown on the display.

Step Record

Use **STEP RECORD** to store the notes one-by-one on the display. This is a convenient way to store complicated patterns that are difficult to play.

Recording procedure

1. While you are recording, press the **STEP** button.
- The display changes to the **STEP RECORD** display similar to the following.



2. Use the **MEAS** buttons to select the measure you wish to record.
- This step is not necessary if you are recording from measure 1 of a blank part.

3. Use the **CURSOR <** and **>** buttons to move the cursor to the note position (dot) you are going to store.
 - Each dot represents one-eighth of a quarter-note (a thirty-second note).
 - When storing triplets, it may not be possible to match the timing exactly with the 1/32-note steps. However, if you select triplet-type notes for the note length (**LENGTH**) in step 4 below, the timing is automatically corrected.
4. Use the left **LENGTH** buttons to specify the note value. Select from ♩_3 , ♩ , ♩_3 , ♩ , ♩_3 , ♩ , ♩_3 , ♩ , ♩ , ♩ , $\text{♩} \times 2$ to 4. (A 3 denotes a triplet-type note.)
 - For note values other than these, use the right **LENGTH** buttons to specify the note value to be added to that which you specified with the left buttons.

Example: To record a dotted quarter-note ($\text{♩}.$)

$\text{♩} + \text{♩}$

5. Use the PHRAS \wedge and \vee buttons to specify the actual length of the produced sound for the desired legato or staccato effect.

TENU (tenuto):	Sound is produced for 100% of the note length.
NORM (normal):	80%
STAC (staccato):	50%
CUTT (cutting):	25%

6. Specify the pitch and velocity of the note by playing the keyboard.
- The dot on the display where the note is stored changes to a * mark.
 - When recording chords, you can store multiple notes at one position.

REST: To store a rest, after specifying the note LENGTH, press the REST button.

- Positions at which nothing is stored are read as rests.

ERS: If you make a mistake, move the cursor to the error, and after displaying the data you wish to erase, press the ERS button.

7. Repeat steps 3 through 6 to continue storing notes.

- To record a different part, use the PART \wedge and \vee buttons to select another part.
- You may decide to record one part in realtime and another part in the STEP RECORD mode. You can easily switch between the two modes any time during recording. To return to the realtime recording display during the STEP RECORD mode, press the EXIT button.

■ Correcting the data

1. In the STEP RECORD mode, specify the part you wish to correct.
2. Use to MEAS buttons to go to the measure you wish to modify. Use the CURSOR buttons to move the cursor to the point (*) you wish to edit.
 - The data stored at that point is shown on the display.
 - When a chord is stored at one point, a different note of the chord is displayed in order each time a CURSOR button is pressed.

3. Correct the data.

Performance data

NOTE data (note pitch) and VEL data (how hard the key was played), etc. are displayed. Use the relevant buttons to correct the data as desired.

Sound data

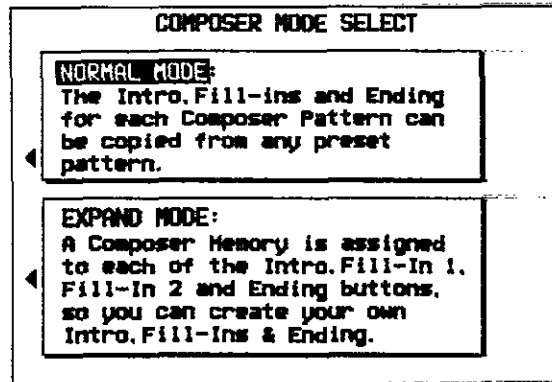
The name of the sound is displayed. Change the sound as desired (the sound setting display is interposed on the current display).

- Press the ERS button to erase the data which is displayed.

Composer mode

Two playback modes are available for you to choose from. If you wish to use the intro, fill-in and ending patterns from a preset rhythm when you play back your new rhythm pattern, select NORMAL MODE. For creating and playing back your original intro, fill-in and ending patterns, select EXPAND MODE.

1. On the **COMPOSER** menu display, select **MODE SELECT**.
 - The display changes to the following.



2. Select the mode.

■ NORMAL MODE

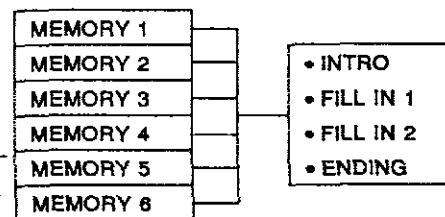
When a **FILL IN** button or the **INTRO & ENDING** button is pressed during playback, the corresponding pattern for a preset rhythm is played back. The rhythm which is played back is the one you specified for **FILL IN SELECT** on the **RECORD SETTING** display. (Refer to page 66.)

■ EXPAND MODE

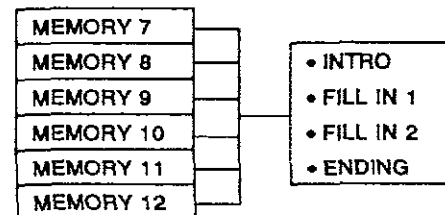
When a **FILL IN** button or the **INTRO & ENDING** button is pressed during playback, the corresponding pattern you created is played back.

- Only one each **FILL IN 1**, **FILL IN 2**, **INTRO** and **ENDING** pattern can be created for each of the two banks (**MEMORY A** and **MEMORY B**). The fill-in patterns, etc. for each bank are used for all the basic rhythms in the same bank.

<MEMORY A>



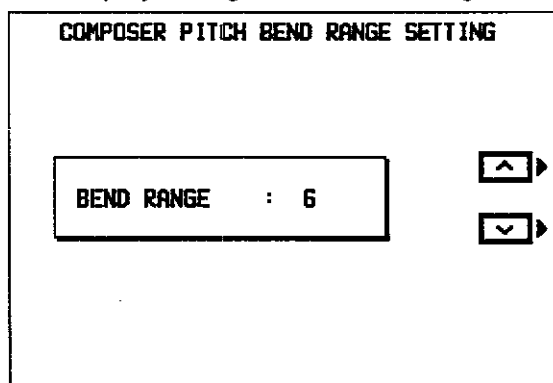
<MEMORY B>



Bend Range

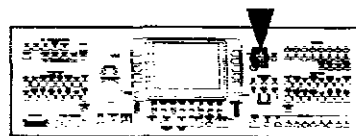
Adjust the amount of pitch change applied to the **ACCOMP** parts and the **BASS** part when the **PITCH BEND** wheel is operated during **COMPOSER** recording.

1. On the **COMPOSER** menu display, select **BEND RANGE**.
 - The display changes to the following.
2. Use the \wedge and \vee buttons to specify the range (0 to 12).
 - Increments are in semi-tones.



Part V Disk Drive function

Outline of the Disk Drive function



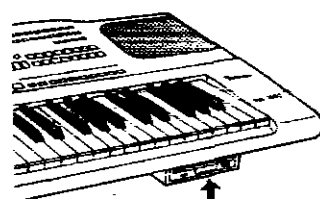
The KN2000's Disk Drive enables you to store function settings, sound and **COMPOSER** memories, **SEQUENCER** data etc. for future use. You can save (and load) the entire setup of the keyboard or individual sections. You can also save and load in Standard MIDI File format which is the international standard format for **SEQUENCER** data. Disk functions are found in the **MEMORY & CONTROL** menu. You can load pre-recorded software such as **COMPOSER** patterns and **SOUND EDIT** settings and if desired select just one pattern or sound from a disk to combine with your existing settings. Standard MIDI File software can also be loaded by the KN2000. When saving data remember that the Standard MIDI File format only applies to the KN2000's **SEQUENCER**.

About Standard MIDI Files

"Standard MIDI File" is a standardized data format which makes it possible for music data to be exchanged among different sequencers.

Data stored in this format on sequencers of different models can be played back on this Keyboard, and vice versa.

- Only 3.5 inch 2DD (9-sector format) disks can be used.
- Only files with the ".MID" extension can be loaded.
- No more than 128 KB of data can be loaded into the Keyboard.
- Specific formats are handled as follows.



Internal memory
 • **SEQUENCER**
 • **COMPOSER**
 • **SOUND**
 • **PANEL MEMORY**

SAVE LOAD

		SAVE	LOAD
Standard MIDI File	FORMAT 0	○	○
	FORMAT 1	×	○
TECHNICS File FORMAT		○	○

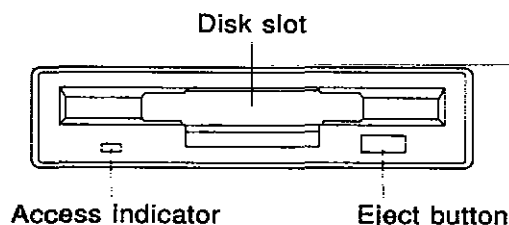


Max. 20 memory contents

FORMAT 0: There is one track on the disk, and it contains the 16 MIDI channels.

FORMAT 1: There is an unlimited number of tracks on the disk, each of which can contain the 16 MIDI channels.

Main parts of the Disk Drive



Eject button

Press to remove the disk from the Disk Drive.

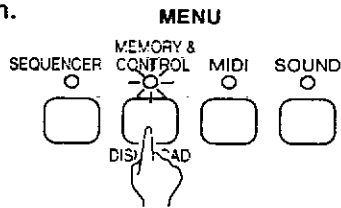
Access indicator

Lights when data is being loaded from or saved to disk.

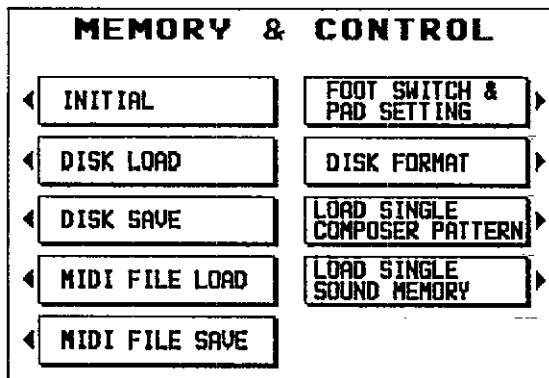
- To prevent data loss, do not remove the disk from the Disk Drive or turn off the power when the access indicator is lit.

MEMORY & CONTROL menu

1. Press the **MEMORY & CONTROL** button to turn it on.



- The display changes to the following.



2. Select the desired menu and follow the procedures on the corresponding setting display.

- When the current display is a setting display, you can press the **EXIT** button to go back to the previous display. To show other menus, use the **EXIT** button to return to the **MEMORY & CONTROL** menu display and make another selection.
- When the **TEMPO/PROGRAM** indicator is lit, it indicates that the dial is available for setting the current function.

3. When you have finished setting the functions, press the **MEMORY & CONTROL** button to turn it off.

Summary of the MEMORY & CONTROL menu items

DISK LOAD (page 74)

Load data from a disk into the Keyboard memory.

DISK SAVE (page 76)

Save data from the Keyboard memory to a disk.

MIDI FILE LOAD (page 74)

Load song data which was stored in the Standard MIDI File format into the Keyboard memory.

MIDI FILE SAVE (page 77)

Save data from the Keyboard memory in the Standard MIDI File format to a disk.

DISK FORMAT (page 75)

Format new disks or erase the contents of recorded disks so they can be used by this Keyboard.

LOAD SINGLE COMPOSER PATTERN (page 78)

Load **COMPOSER** data from a disk into a specified MEMORY number.

LOAD SINGLE SOUND MEMORY (page 78)

Load **SOUND** data from a disk into a specified MEMORY number.

- The INITIAL selection is explained on page 111.
- The FOOT SWITCH & PAD SETTING selection is explained on page 42.

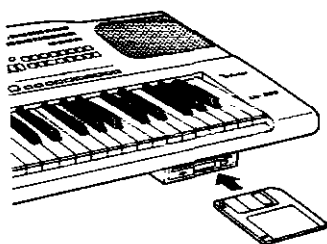
Loading data

Recall (load) the data from the disk to the Keyboard's memories.

WARNING: The load procedure causes any data which is currently stored in the relevant memories to be erased.

DISK LOAD

1. Insert the disk with the stored data into the Disk Drive.



2. On the **MEMORY & CONTROL** menu display, select **DISK LOAD**.
 - The display looks similar to the following.

DISK LOAD	
LOAD FILE	
01 : ABC01... ALL	11 : CDE01... CMP
02 : ABC02... ALL	12 : CDE02... CMP
03 : ABC03... ALL	13 : CDE03... CMP
04 : ABC04... ALL	14 : CDE04... CMP
05 : BCD01... ALL	15 :
06 : BCD02... ALL	16 : DEF02... PNL
07 : BCD03... ALL	17 : DEF03... PNL
08 :	18 :
09 : BCD05... SEQ	19 :
10 : BCD06... SEQ	20 :
	LOAD ▶
	▲
LOAD OPTION	
ALL / SEQUENCER / COMPOSER /	
SOUND MEMORY / PANEL MEMORY	
	▼

3. Select the **LOAD FILE** box. Use the **^** and **v** buttons to select the file number with the desired data (01 to 20).
 - Files in which data is currently stored are indicated by the file name following the file number.
4. Select the **LOAD OPTION** box. Use the **^** and **v** buttons to specify the kind of data you wish to load from the disk to the Keyboard.
 - The **OPTION** which was specified during the **SAVE** procedure is automatically selected. Skip this step if you do not wish to change the selection.
5. Press the **LOAD** button.
 - The **DISK LOAD** operation begins.
 - When the operation has been successfully completed, "COMPLETED!" is shown on the display.
 - If song data was loaded, you can press the **START/STOP** button to begin playback.

You can also access the **DISK LOAD** display quickly by pressing and holding the **MEMORY & CONTROL (DISK LOAD)** button for a few seconds.

MIDI FILE LOAD

Data which has been saved in the Standard MIDI File format can be loaded into this Keyboard's **SEQUENCER**.

1. Insert the disk on which data is saved in Standard MIDI File format into the Disk Drive.

2. On the **MEMORY & CONTROL** menu display, select **MIDI FILE LOAD**.
 - The display looks similar to the following.

MIDI FILE LOAD	
ABC01000.MID	DEFGH...MID
ABC02...MID	EFGH1000.MID
ABC03000.MID	FHIJK...MID
ABC04000.MID	GHIJK...MID
BCD01000.MID	
BCD02...MID	
BCD03...MID	
BCD05000.MID	
BCD06000.MID	
CDEF0000.MID	
	LOAD ▶
	▲
	▼

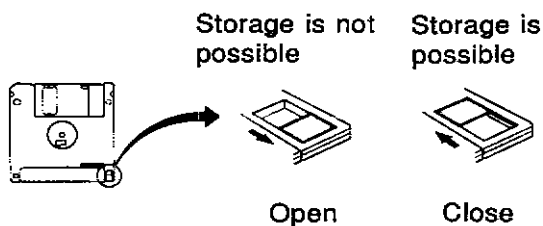
3. Use the \wedge and \vee buttons to select the name of the file with the desired data.
4. Press the LOAD button.
 - The MIDI FILE LOAD operation begins.
 - When the operation has been successfully completed, "COMPLETED!" is shown on the display.

Formatting a disk

New disks can be used only after they have been formatted. Follow the procedure below to format a new disk or erase the contents of a recorded disk.

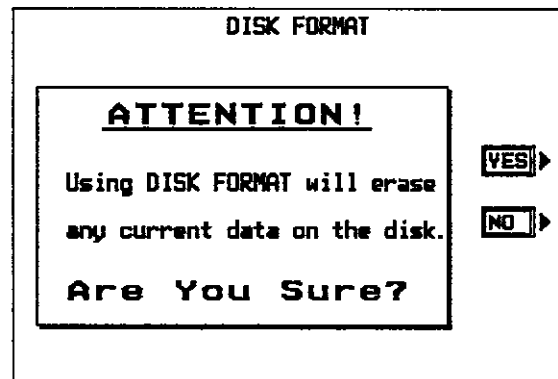
DISK FORMAT

- This procedure clears the entire contents of the disk.
- Reformat a disk if it cannot be saved to or loaded from properly because of exposure to a magnetic field.
- Be sure to use 3.5 inch 2DD (double-sided, double-density, double-track) disks.
- To format the disk, the write-protect window must be closed, as illustrated.



1. Insert the disk into the Disk Drive slot. Push it all the way in until you hear a click.

2. On the **MEMORY & CONTROL** menu display, select DISK FORMAT.
 - The display changes to the following.



3. Press the YES button to format the disk, or press the NO button to cancel the format.
 - When you press the YES button, disk formatting begins. While the disk is being formatted, "DISK FORMATTING PLEASE WAIT!" is shown on the display.
 - After about one minute, formatting is completed and "COMPLETED!" is shown on the display.

Saving data

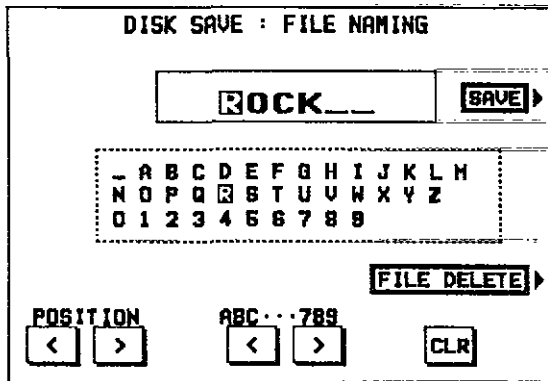
Use the Disk Drive to save the recorded data and panel settings on a disk.

DISK SAVE

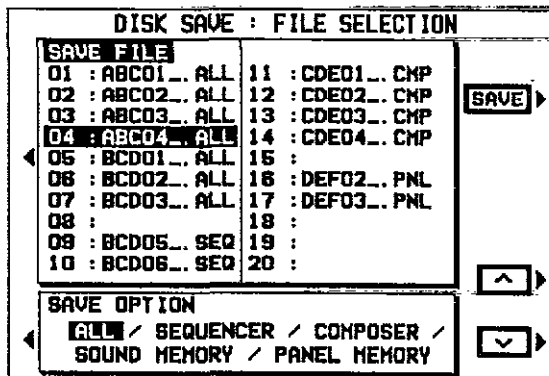
Save the data from the Keyboard to a disk.

- A formatted disk should be in place in the Disk Drive.

1. On the **MEMORY & CONTROL** menu display, select **DISK SAVE**.
 - The display changes to the following.



2. Type a name for the new data file (up to 6 characters).
 - Use the **POSITION** < and > buttons to highlight the character position in the name box. Use the **ABC...789** < and > buttons to select the alphanumeric character. Repeat these steps to type the whole name.
 - To erase the name, press the **CLR** button.
3. Press the **SAVE** button.
 - The display looks similar to the following.



4. Select the **SAVE FILE** box. Use the **^** and **v** buttons to select the file number in which to save the data (01 to 20).
 - Files in which data is currently stored are indicated by the file name following the file number.
 - The maximum number of songs which can be saved may be less than 20 if you are saving many songs which use a lot of memory.
 - The maximum number of songs which can be saved is 10 if you are saving only songs with the **SAVE OPTION** set to **ALL**.
5. Select the **SAVE OPTION** box. Use the **^** and **v** buttons to specify the kind of data you wish to store in the data file on the disk.

ALL: <ALL>
 All the Keyboard data

SEQUENCER: <SEQ>
 Only **SEQUENCER** data

COMPOSER: <CMP>
 Only **COMPOSER** data

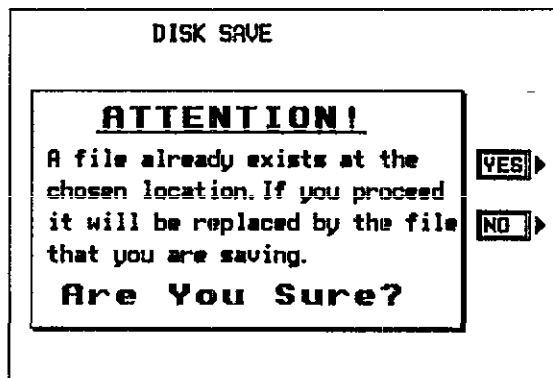
SOUND MEMORY: <SND>
 Data stored in the **MEMORY** of the **SOUND GROUP**

PANEL MEMORY: <PNL>
 Panel status and data stored in the **PANEL MEMORY**

- The abbreviated indication (in < > brackets) for the selected item appears after the file name.

6. Press the SAVE button.

- When the operation has been successfully completed, "COMPLETED!" is shown on the display.
- If you attempt to save data to a file number in which data is currently saved, the display changes to the confirmation display.



- Press the NO button if you wish to cancel the procedure.
- When the YES button is pressed, the DISK SAVE operation begins.

■ FILE delete

To erase a song from a disk, on the DISK SAVE: FILE NAMING display, press the FILE DELETE button. On the DISK SAVE: FILE SELECTION display, after selecting the number of the song you wish to erase, press the DEL button. The display changes to the confirmation display. Press the YES button to erase the song, or press the NO button to cancel the procedure.

MIDI FILE SAVE

The data from this Keyboard can be saved in the Standard MIDI File format.

- Data such as **PANEL MEMORY** and **COMPOSER** data is not saved when the MIDI FILE SAVE procedure is used.

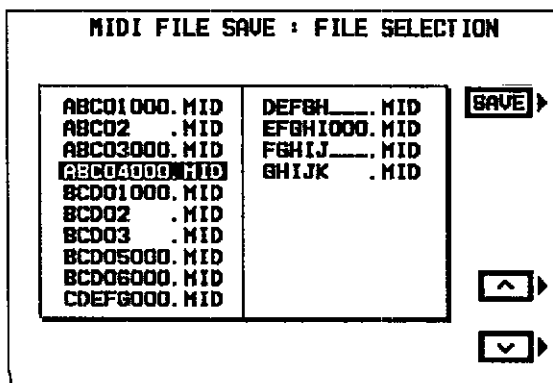
1. On the **MEMORY & CONTROL** menu display, select MIDI FILE SAVE.
 - The display changes to the FILE NAMING display.

2. Type a name for the new data file (up to 8 characters).

- Use the POSITION < and > buttons to highlight the character position in the name box. Use the ABC ... 789 < and > buttons to select the alphanumeric character. Repeat these steps to type the whole name.
- To erase the name, press the CLR button.

3. Press the SAVE button.

- The display looks similar to the following.



4. Use the ^ and v buttons to select the name of the file in which to save the data.
 - To save in a new file, select a blank line.

5. Press the SAVE button.

- When the operation has been successfully completed, "COMPLETED!" is shown on the display.
- If you attempt to save data to a name of the file in which data is currently saved, the display changes to the confirmation display. Press the NO button if you wish to cancel the procedure. When the YES button is pressed, the MIDI FILE SAVE operation begins.

■ FILE delete

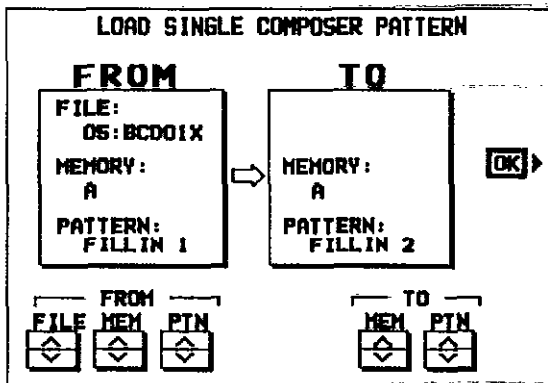
To erase a song from a disk, on the MIDI FILE SAVE: FILE NAMING display, press the FILE DELETE button. On the MIDI FILE SAVE: FILE SELECTION display, after selecting the name of the file you wish to erase, press the DEL button. The display changes to the confirmation display. Press the YES button to erase the song, or press the NO button to cancel the procedure.

Single data type load

LOAD SINGLE COMPOSER PATTERN

Load the desired **COMPOSER** data from a disk into a specific **COMPOSER** memory.

1. Insert the disk with the stored **COMPOSER** data into the Disk Drive.
2. On the **MEMORY & CONTROL** menu display, select **LOAD SINGLE COMPOSER PATTERN**.
 - The display looks similar to the following.



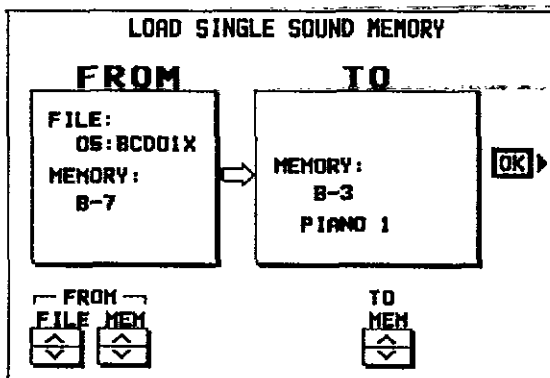
3. Select a file, memory name and pattern to load from the disk (**FROM**).
 - Use the **FILE** \wedge and \vee buttons to specify the file number on the disk.
 - Use the **MEM** \wedge and \vee buttons to specify the **MEMORY** bank (**A** or **B**).
 - Use the **PTN** \wedge and \vee buttons to specify the rhythm pattern.
4. Select a **MEMORY** bank and pattern to load to (**TO**).
 - Use the **MEM** \wedge and \vee buttons to specify the **MEMORY** bank (**A** or **B**).
 - Use the **PTN** \wedge and \vee buttons to specify the pattern.
5. Press the **OK** button.
 - When the operation has been successfully completed, "**COMPLETED!**" is shown on the display.

- The **LOAD SINGLE COMPOSER PATTERN** procedure can also be begun from the **COMPOSER** menu display. (Refer to page 62.)

LOAD SINGLE SOUND MEMORY

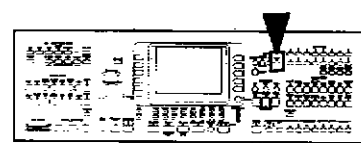
Load the desired **SOUND** data from a disk into a specific **SOUND** memory.

1. Insert the disk with the stored **SOUND** data into the Disk Drive.
2. On the **MEMORY & CONTROL** menu display, select **LOAD SINGLE SOUND MEMORY**.
 - The display looks similar to the following.



3. Select a file and memory name to load from the disk (**FROM**).
 - Use the **FILE** \wedge and \vee buttons to specify the file number on the disk.
 - Use the **MEM** \wedge and \vee buttons to specify the **MEMORY** bank (**A** or **B**).
4. Select the **MEMORY** to load to (**TO**).
 - Use the **MEM** \wedge and \vee buttons to specify the **MEMORY** number.
5. Press the **OK** button.
 - When the operation has been successfully completed, "**COMPLETED!**" is shown on the display.

Part VI Adjusting the sounds

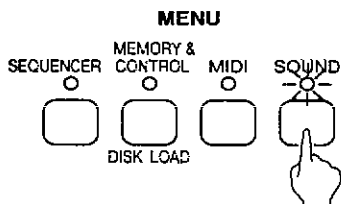


Sound mode

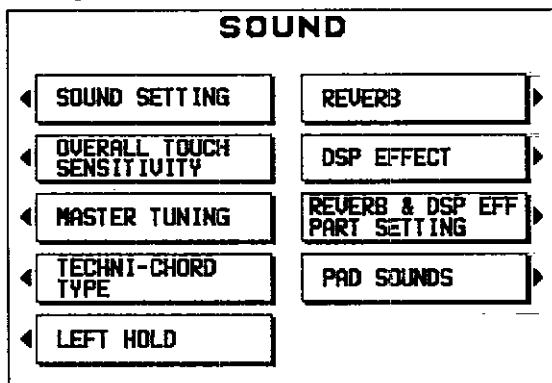
The **SOUND** mode is used for making fine adjustments to the functions related to sound, such as tone, volume and effects.

SOUND menu

1. Press the **SOUND** button to turn it on.



- The display (LCD screen) changes to the following.



2. Select the desired menu and follow the procedures on the corresponding setting display.

- When the current display is a setting display, you can press the **EXIT** button to go back to the previous display. To show other menus, use the **EXIT** button to return to the **SOUND** menu display and make another selection.
- When the **TEMPO/PROGRAM** indicator (LED) is lit, it indicates that the dial is available for setting the current function.

3. When you have finished setting the functions, press the **SOUND** button to turn it off.

■ A word about parts

The organization of the sound parts is as follows. Normal parts: **RIGHT 1**, **RIGHT 2**, **LEFT**, **PART 4** to **16** (**PART 16** is reserved for **DRUMS**).

AUTO PLAY CHORD parts: **ACCOMP 1**, **ACCOMP 2**, **ACCOMP 3**, **BASS**, **DRUMS**, **CHORD**, **R.BASS**.

Special parts: **MANUAL PERCUSSION**, **BGS**, **METRONOME**.

Summary of the SOUND menu items

SOUND SETTING (page 80)

Set the various sound attributes for each part.

VOLUME: Adjust the volume for each part.

SUSTAIN: Turn the sustain on or off for each part.

DIGITAL EFFECT: Turn the **DIGITAL EFFECT** on or off for each part.

PAN: Adjust the stereo balance of each part.

KEY SHIFT: Adjust the key of each part in half-tone increments.

TUNING: Fine-tune the pitch of each part.

PITCH BEND RANGE: Set the amount of pitch change when the **PITCH BEND** wheel is used.

PEDAL SETTING: Turn the glide function of the Foot Switch to on or off.

OVERALL TOUCH SENSITIVITY (page 83)

Adjust the amount of keyboard touch response.

MASTER TUNING (page 84)

Select the type of tuning for the instrument.

TECHNI-CHORD TYPE (page 84)

Select the **TECHNI-CHORD** harmony style.

LEFT HOLD (page 85)

Set the mode which determines how the **LEFT** part sounds during an **AUTO PLAY CHORD** performance.

REVERB (page 86)

Select the type and depth of the **DIGITAL REVERB**.

DSP EFFECT (page 86)

Select the type and degree of the **DSP EFFECT**.

REVERB & DSP EFF PART SETTING (page 88)

Set the **DIGITAL REVERB** and **DSP EFFECT** to on or off for each part.

PAD SOUNDS (page 88)

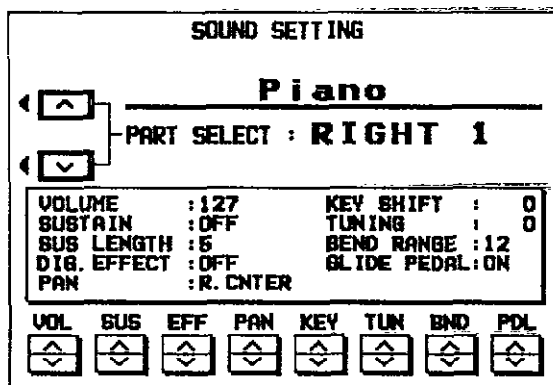
Assign sounds to each **MANUAL PERCUSSION** pad button.

Sound Setting

Set the various sound attributes for each part.

Selecting an attribute

1. On the **SOUND** menu display, select **SOUND SETTING**.
 - The display looks similar to the following.



2. Use the \wedge and \vee buttons to select the part.
 - Select from **RIGHT 1**, **RIGHT 2**, **LEFT**, **PART 4** to **16**, **CHORD**, and **R.BASS**.
 - **PART 4** to **16** are used in **SEQUENCER** and **MIDI** functions. **PART 16** is reserved for the **DRUMS** part.
 - For information concerning **CHORD** and **R.BASS**, refer to the section on the **AUTO PLAY CHORD** (page 37).
 - If necessary, assign a sound to the selected part at this time. (Only sounds from the **KEYBOARD PERC** group can be selected for **PART 16**.)
 - The upper portion of the display shows the name of the selected part and the sound assigned to that part. The box in the lower portion of the display shows the status of each attribute for the selected part.

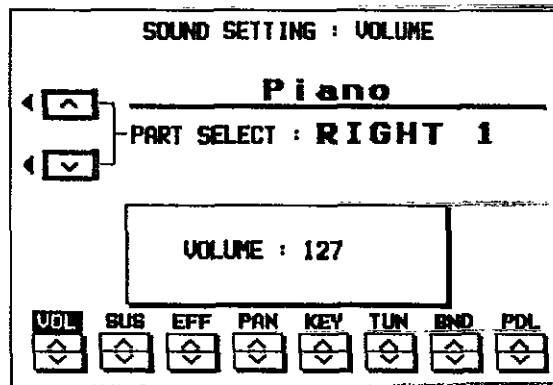
3. Use the buttons along the bottom of the display to select the attribute you wish to adjust.

VOL: VOLUME
 SUS: SUSTAIN
 EFF: DIGITAL EFFECT
 PAN: PAN
 KEY: KEY SHIFT
 TUN: TUNING
 BND: PITCH BEND RANGE
 PDL: PEDAL SETTING

- The display changes to the setting display for the selected attribute.
 - Only **VOLUME** setting can be adjusted for **PART 16**.
 - Only the **VOLUME** setting can be adjusted for parts for which sounds from **KEYBOARD PERC** have been selected.
 - The **PAN**, **KEY SHIFT**, **TUNING** and **PITCH BEND RANGE** settings cannot be changed for the **CHORD** and **R.BASS** parts.
4. Adjust each attribute (explained in detail following).
 - When you have completed adjustment of an attribute, use the buttons along the bottom of the display to select the next attribute you wish to adjust.
 5. When you have completed adjusting all of the settings for one part, select another part and repeat the adjustment procedure as desired.

VOLUME

Adjust the volume of each part.

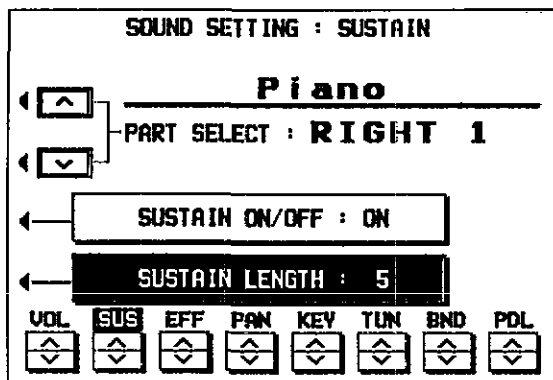


Use the **VOL** \wedge and \vee buttons to adjust the volume (0 to 127).

- If you wish to adjust this effect for other parts, use the **PART SELECT** \wedge and \vee buttons to select another part.

SUSTAIN

Turn the sustain on or off for each part, and specify the length of the sustain.



■ Sustain on/off

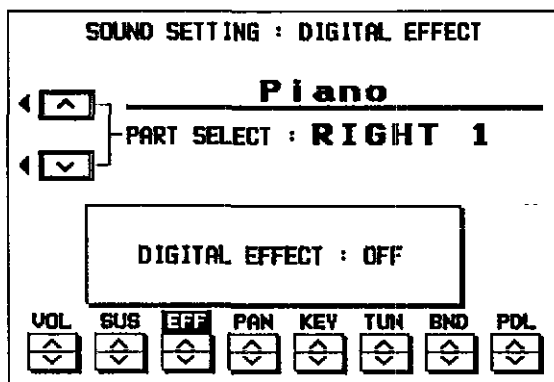
1. Select SUSTAIN ON/OFF.
2. Use the SUS \wedge and \vee buttons to set the sustain to on or off.

■ Sustain length

1. Select SUSTAIN LENGTH.
2. Use the SUS \wedge and \vee buttons to adjust the length of the sustain (1 to 8).
 - For some sounds, the length of the sustain does not change even if the number is changed.
 - If you wish to adjust this effect for other parts, use the PART SELECT \wedge and \vee buttons to select another part.

DIGITAL EFFECT

Turn the DIGITAL EFFECT on or off for each part.

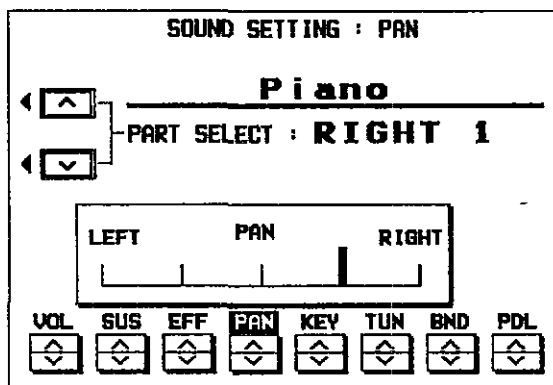


Use the EFF \wedge and \vee buttons to set the DIGITAL EFFECT to on or off.

- If you wish to adjust this effect for other parts, use the PART SELECT \wedge and \vee buttons to select another part.

PAN

Adjust the stereo balance of each part.

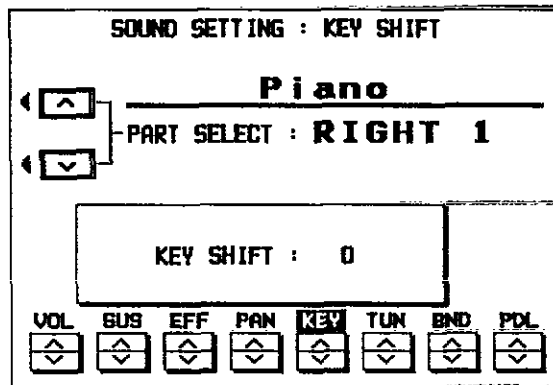


Use the PAN \wedge and \vee buttons to adjust the stereo balance.

- The stereo balance can be set to one of 5 positions, indicated by a thick line on the display.
- If you wish to adjust this effect for other parts, use the PART SELECT \wedge and \vee buttons to select another part.

KEY SHIFT

The pitch of the part can be shifted up or down.

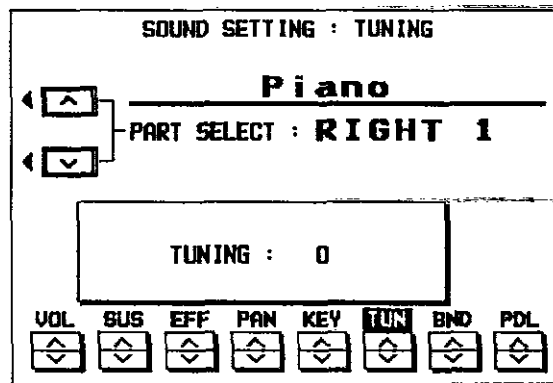


Use the KEY \wedge and \vee buttons to specify the amount of key shift (-12 to +12).

- A value of 1 means a shift of one semi-tone. To raise (or lower) the pitch one octave, set the value to +12 (or -12).
- The \vee button is used to lower the pitch, and the \wedge button to raise the pitch.
- If you wish to adjust this effect for other parts, use the PART SELECT \wedge and \vee buttons to select another part.

TUNING

Fine-tune the pitch of each part.

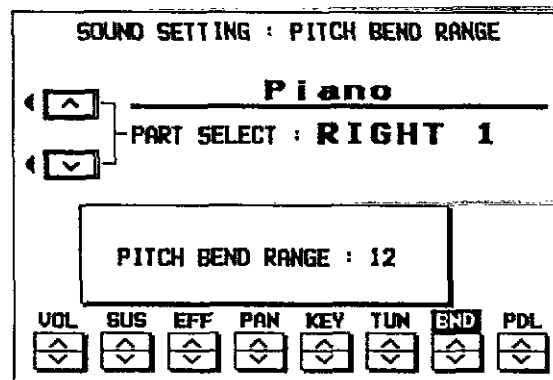


Use the TUN \wedge and \vee buttons to adjust the tuning (-128 to +127).

- The \vee button is used to lower the pitch, and the \wedge button to raise the pitch.
- If you wish to adjust this effect for other parts, use the PART SELECT \wedge and \vee buttons to select another part.

PITCH BEND RANGE

Set the pitch range of the PITCH BEND wheel.

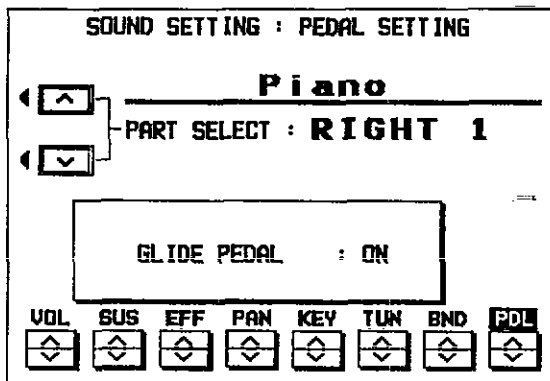


Use the BND \wedge and \vee buttons to specify the range (0 to 12). Increments are in semi-tones.

- The higher the number, the greater the change in pitch when the PITCH BEND wheel is operated.
- If you wish to adjust this effect for other parts, use the PART SELECT \wedge and \vee buttons to select another part.

PEDAL SETTING

When the GLIDE PEDAL function has been assigned to a Foot Switch (sold separately), set the effect to on or off for each part.



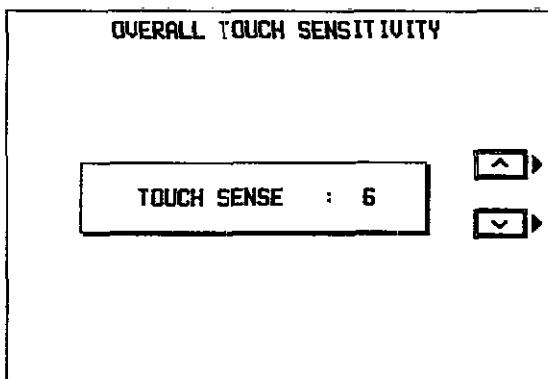
Use the PDL \wedge and \vee buttons to set the glide to on or off.

- When set to OFF, the glide effect is not applied to the part by the Foot Switch.
- You can assign different functions to the Foot Switches. (Refer to page 42.)
- If you wish to adjust these effects for other parts, use the PART SELECT \wedge and \vee buttons to select another part.

Overall Touch Sensitivity

Adjust the amount of keyboard touch response.

1. On the **SOUND** menu display, select **OVERALL TOUCH SENSITIVITY**.
 - The display changes to the following.

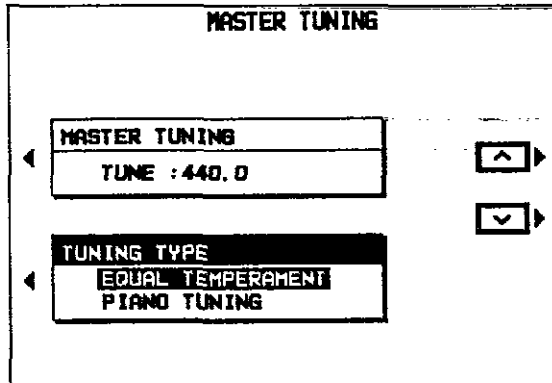


2. Use the \wedge and \vee buttons to adjust the degree of touch sensitivity (0 to 9).
 - The larger the number, the greater the degree of touch sensitivity.
 - When set to 0, the volume is the same no matter how hard or softly the keyboard is played.

Master Tuning

This setting is used to fine-tune the pitch of the entire instrument. This is convenient when the Keyboard is played with other instruments or with a recorded performance. You can also select from two types of tuning.

1. On the **SOUND** menu display, select **MASTER TUNING**.
 - The display changes to the following.



3. Use the \wedge and \vee buttons to adjust the pitch within a range of 427.3 to 453.0 Hz.
 - The decimal can be set to 0, 3 or 6.

4. Select **TUNING TYPE**.

5. Use the \wedge and \vee buttons to select the type of tuning.

EQUAL TEMPERAMENT: One octave is divided into pitches of 12 equally spaced intervals.

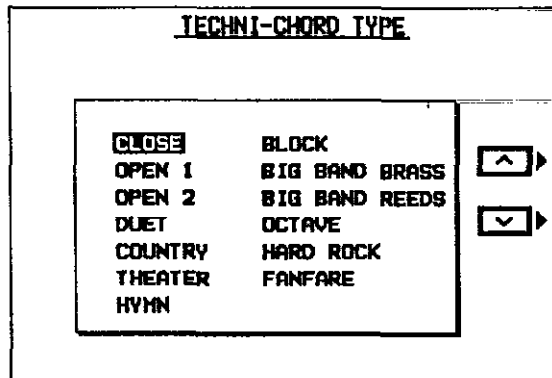
PIANO TUNING: Standard acoustic piano tuning, in which the lower pitches are tuned slightly lower and the higher pitches are tuned slightly higher.

2. Select **MASTER TUNING**.

Techni-chord Type

Select the desired harmony style for the **TECHNI-CHORD**.

1. On the **SOUND** menu display, select **TECHNI-CHORD TYPE**.
 - The display changes to the following.



2. Use the \wedge and \vee buttons to select the harmony style.
 - When the **OCTAVE**, **HARD ROCK** or **FANFARE** style is selected, the **TECHNI-CHORD** functions even when the keyboard is not split.
 - For a detailed explanation of the different harmony styles, refer to the separate "REFERENCE GUIDE" provided.

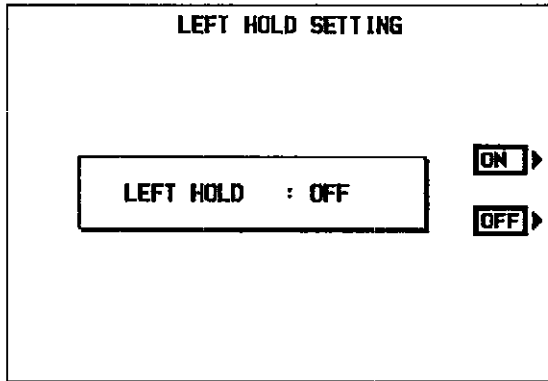
You can also access this display by pressing and holding the **TECHNI-CHORD** button.

- In this case, the display exits the setting mode a few seconds after you make the setting.

Left Hold

Select the mode to specify how the left section of the keyboard sounds during an **AUTO PLAY CHORD** performance.

- On the **SOUND** menu display, select **LEFT HOLD**.
- The display changes to the following.



- Use the **ON** and **OFF** buttons to set the mode to on or off.

■ OFF

	ONE FINGER	FINGERED	PIANIST
When rhythm is off	The chord note specified by the pressed key is heard (CHORD part).	The LEFT part sound and chord note specified by the pressed keys are heard.	The LEFT part notes and the chord note are not heard (the RIGHT part sound is heard for the entire keyboard).
When rhythm is on	The LEFT part notes and the chord note are not heard.	The LEFT part sound of the pressed keys is heard.	

- The **LEFT** part can be heard only when the **LEFT** button in the **CONDUCTOR** section is on.
- When you select the **ONE FINGER** mode, the **LEFT** button in the **CONDUCTOR** section turns off automatically.

■ ON

	ONE FINGER	FINGERED	PIANIST
When rhythm is on/off	The specified chord note is produced in the LEFT part sound.	The LEFT part sound of the pressed keys is heard.	The LEFT part notes and the chord note are not heard (the RIGHT part sound is heard for the entire keyboard).

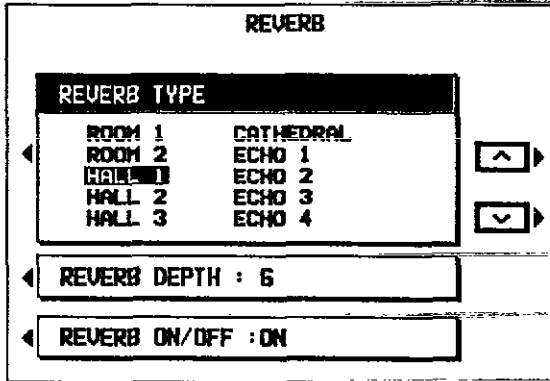
- The **LEFT** part can be heard only when the **LEFT** button in the **CONDUCTOR** section is on.
- When the **MEMORY** button is on, even when the keys are released, the **LEFT** part sound continues to play.

Reverb

Select the type and depth of the **DIGITAL REVERB**.

On the **SOUND** menu display, select REVERB.

- The display changes to the following.



■ **Reverb depth**

1. Select REVERB DEPTH.

2. Use the ^ and v buttons to adjust the depth of the reverb (1 to 8).

■ **DIGITAL REVERB on/off**

While adjusting the reverb attributes, you can use the display to turn the **DIGITAL REVERB** button on or off to check the adjustment.

1. Select REVERB ON/OFF.

2. Use the ON and OFF buttons to set the **DIGITAL REVERB** to on or off.

■ **Reverb type**

1. Select REVERB TYPE.
 2. Use the ^ and v buttons to select the type.
- The selected type is highlighted.

You can also access this display by pressing and holding the **DIGITAL REVERB** button.

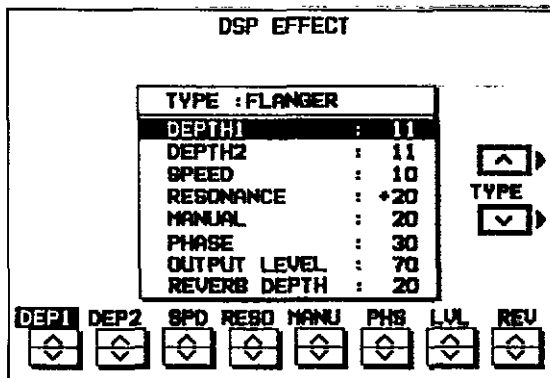
- In this case, the display exits the setting mode a few seconds after you make the setting.

DSP Effect

Select the type of **DSP EFFECT** and make fine adjustments.

1. On the **SOUND** menu display, select DSP EFFECT.

- The display changes to the following.



2. Use the TYPE ^ and v buttons to select the type of effect.

- Select from CHORUS, DISTORTION, OVER DRIVE, EXCITER, DELAY, STEREO DELAY, FLANGER, PHASER.

3. Use the buttons along the bottom of the display to adjust the effect attributes.

- When a type of effect is selected, the parameters automatically revert to the factory defaults.

You can also access this display by pressing and holding the **DSP EFFECT** button.

- In this case, the display exits the setting mode a few seconds after you make the setting.

Parameters of each DSP EFFECT

■ CHORUS

A natural fullness and richness is achieved by adding a sound of a slightly different pitch to the original sound.

- DEPTH: Depth of the modulation.
- SPEED: Velocity of the modulation.
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

■ DISTORTION

The sound is very distorted. A powerful effect when applied to a sound which is played solo.

- DEPTH: Slope of the distortion curve.
- DRIVE: Degree of distortion.
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

■ OVER DRIVE

A more natural distortion than the above effect, similar to that achieved with a vacuum tube amplifier.

- DEPTH: Slope of the distortion curve.
- DRIVE: Degree of distortion.
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

■ EXCITER

Modulation gives a clear outline to the sound.

- DEPTH: Slope of the distortion curve.
- DRIVE: Degree of distortion.
- BOOST LEVEL: Volume emphasis in the upper pitch range.
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

■ DELAY

An echo effect, in which the original sound is repeated after a delay.

- DELAY: Time difference between original sound and the repeat (ms).
- FEEDBACK: Feedback volume (inverted when a minus value).
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

■ STEREO DELAY

A stereo-type delay effect obtained by separating the left and right channels.

- DELAY R1•2: Delay time for the R (right) channel (ms).
- DELAY L1•2: Delay time for the L (left) channel (ms).
- FEEDBACK R: Right feedback volume (inverted when a minus value).
- FEEDBACK L: Left feedback volume (inverted when a minus value).
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

■ FLANGER

An undulation is added, giving an intensity to sounds having many overtones (harmonics).

- DEPTH 1•2: Depth of the modulation.
- SPEED: Velocity of the modulation.
- RESONANCE: Feedback volume (inverted when a minus value).
- MANUAL: Center frequency to which the effect is applied.
- PHASE: Phase difference between left and right modulation.
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

■ PHASER

A more distinct undulation effect than FLANGER. Ideal for electric piano type sounds.

- DEPTH: Depth of the modulation.
- SPEED: Velocity of the modulation.
- RESONANCE: Feedback volume (inverted when a minus value).
- MANUAL: Center frequency to which the effect is applied.
- OUTPUT LEVEL: Volume of the part to which the effect is applied.
- REVERB DEPTH: Output to the reverb.

Reverb & DSP EFF Part Setting

Set the **DIGITAL REVERB** and **DSP EFFECT** to on or off for each part.

- On the **SOUND** menu display, select **REVERB & DSP EFF PART SETTING**.
 - The display changes to the following.

REVERB & DSP EFFECT PART SETTING		
PART	SETTING	BET
RIGHT 1	REVERB	
RIGHT 2	REVERB	
LEFT	REVERB	
PART 4	REVERB	
PART 5	REVERB	
PART 6	REVERB	
PART 7	REVERB	
PART 8	REVERB	

REVERB: The **DIGITAL REVERB** is set to on for the part.
REV+EFF (except for the APC part): Both the **DIGITAL REVERB** and **DSP EFFECT** are set to on.
OFF: Both the **DIGITAL REVERB** and **DSP EFFECT** are set to off.

- Use the **PART** \wedge and \vee buttons to select a part.
 - Press the 1-8 button to show the **RIGHT 1**, **RIGHT 2**, **LEFT**, **PART 4** to **PART 8** display.
 - Press the 9-16 button to show the **PART 9** to **PART 16** display.
 - The **PART 16** setting is also effective for the **MANUAL PERCUSSION** sounds.
 - Press the **APC** button to show the **AUTO PLAY CHORD** parts and **BGS** part.

- Use the **SET** \wedge and \vee buttons to make the settings.

- Repeat steps 2 and 3 for each part as necessary.

- When **REV+EFF** is selected, the reverb depth can be adjusted with the **REVERB DEPTH** item on the **DSP EFFECT** setting display.

Pad Sounds

Assign percussion instrument sounds to each of the three **MANUAL PERCUSSION** pad buttons.

- On the **SOUND** menu display, select **PAD SOUNDS**.
 - The display changes to the following.

PAD SOUNDS	
PAD 1 :	Hand Clap
PAD 2 :	Windchime
PAD 3 :	Crash Cymbal L
KIT :	Rock Kit 1

- Select **KIT**.

- Use the \wedge and \vee buttons to select the type of **KIT**.

- Select a **PAD** number (**PAD 1**, **PAD 2** or **PAD 3**).

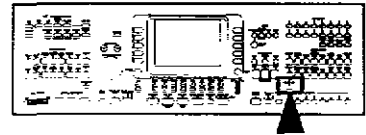
- Use the \wedge and \vee buttons to select a percussion instrument sound to assign to the pad button.

- Repeat steps 4 and 5 to assign sounds to the other pad buttons.

- Detailed information about the percussion sounds can be found in the separate "REFERENCE GUIDE" provided.
- Only one drum **KIT** can be specified at a time, and it is common to all the pad buttons.
- You can also assign sounds to the pad buttons directly from the panel and keyboard. (Refer to page 35.)

Part VII Creating sounds

Outline of the Sound Edit



SOUND EDIT enables you to create your own new sound by altering one of the KN2000's preset sounds. Your new sound can be stored in one of the sound memory locations. **SOUND EDIT** has two methods of use. You can edit in detail using functions more commonly associated with a synthesizer, or you can use **EASY EDIT** which allows you to change some basic parameters on one page.

Summary of the SOUND EDIT menu items

EASY EDIT (page 90)

The most often used edit functions—such as brightness and attack speed—are assembled on one display for easy sound modification.

GENERAL EDIT (page 91)

Editing functions which apply to the entire sound.

OCTAVE SHIFT: Place the sound in the optimum octave range.

VIBRATO: Set the vibrato effect for the sound.

AUTOBEND & TRILL: Adjust the pitch change during the attack.

MODULATION: Adjust the amount of modulation effect.

DISTORTION: Specify the distortion attributes of the sound.

CONTROLLERS: Select how wheel or Foot Switch operation affects the sound.

SOUND REVERB: Adjust the degree of reverb applied to the sound.

TONE EDIT (page 95)

Modify the tones which make up the sound.

TONE: Set the sound and pitch of each tone.

LEVEL: Adjust the volume of each tone.

ENVELOPE: Adjust the change in volume over time for each tone.

ENVELOPE KEY FOLLOW: Adjust the change in volume over time based on pitch.

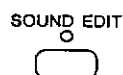
FILTER: Adjust the amount of frequency cut in specific frequency ranges.

EFFECT EDIT (page 99)

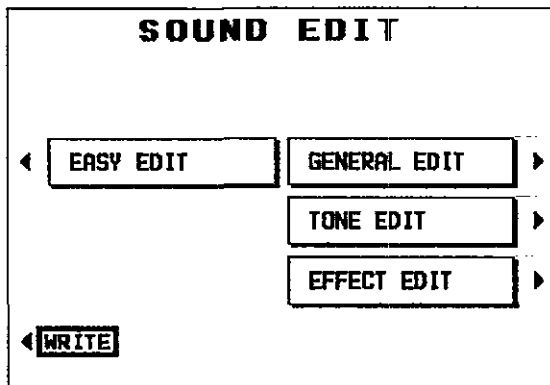
Select the type and degree of **DIGITAL EFFECT** for the sound.

1. Select a preset sound on which to build your new sound.
 - Sounds in the **KEYBOARD PERC** sound group cannot be edited.

2. Press the **SOUND EDIT** button to turn it on.

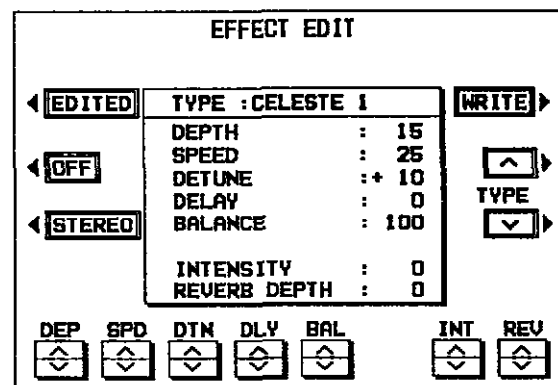


- The display (LCD screen) changes to the following.



3. Select the desired menu and follow the procedures on the corresponding setting display.

<Example: EFFECT EDIT>



- Press the **EDITED** (or **ORIGNL**) button to switch between the modified sound (**EDITED**) and the original sound (**ORIGNL**). This allows you to compare the edited sound to the original sound as you are modifying it. The button alternates between **EDITED** and **ORIGNL** each time it is pressed.

<continued on next page>

- When the current display is a setting display, you can press the **EXIT** button to go back to the previous display. To show other menus, use the **EXIT** button to return to the **SOUND EDIT** menu display and make another selection.
- When the **TEMPO/PROGRAM** indicator (LED) is lit, it indicates that the dial is available for setting the current function.
- 4. When the sound is just the way you like it, press the **WRITE** button to store your new sound. (Refer to page 99.)
- The **WRITE** button appears on all the editing displays and may be pressed whenever you wish to store the new sound.
- While editing a sound, if you change to a different sound, a confirmation display appears. Press the **YES** button if you wish to change the sound, or press the **NO** button if you wish to cancel the change.

Easy Edit

The most commonly used edit functions are consolidated on one display, providing convenient and quick editing operation.

1. On the **SOUND EDIT** menu display, select **EASY EDIT**.
 - The display changes to the following.

EASY EDIT	
◀ BRILLIANCE : 0 ▶	OCTAVE SHIFT : 0 ▶
◀ VIBRATO DEPTH: OFF ▶	ATTACK TIME : 0 ▶
◀ VIBRATO SPEED: 0 ▶	RELEASE TIME: 0 ▶
◀ VIBRATO DELAY: 0 ▶	DIGITAL EFFECT: OFF ▶
◀ WRITE	VALUE ▲ ▼

2. Select a sound attribute to modify.
 - See the box below.
3. Use the **VALUE** ▲ and ▼ buttons to specify the value of the attribute.
 - Selecting the type of **DIGITAL EFFECT** is explained in the section on **EFFECT EDIT** (page 99).
 - An effect may remain unchanged when **EASY EDIT** is used to set the value, if **GENERAL EDIT** or **TONE EDIT** was first used to set the value to its upper or lower limit.
4. Repeat steps 2 and 3 to modify other sound attributes as desired.
5. Press the **WRITE** button to store your new sound.
 - Storing your new sound is explained on page 99.
 - If a sound is stored in the **EASY EDIT** mode, and is later selected in the **EASY EDIT** mode, the displayed value of an attribute may be different from the value when it was stored. The sound itself, however, is exactly as it was stored.

BRILLIANCE: Adjust the brightness of the sound.
VIBRATO DEPTH: Set vibrato depth.
VIBRATO SPEED: Set vibrato speed.
VIBRATO DELAY: Set time delay between key played and vibrato start.

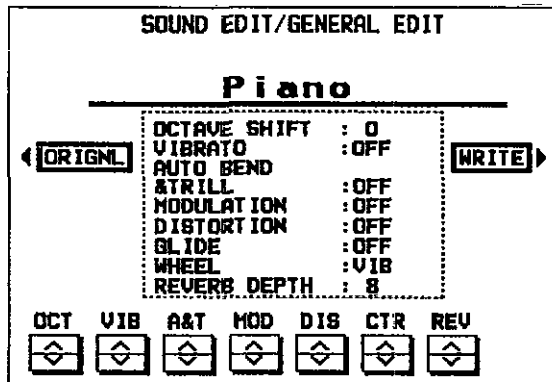
OCTAVE SHIFT: Shift the octave range.
ATTACK TIME: Adjust attack time.
RELEASE TIME: Adjust time of sound fade-out after key is released.
DIGITAL EFFECT: Select type of effect.

General Edit

These editing functions pertain to the entire sound.

Selecting attributes

1. On the **SOUND EDIT** menu, select **GENERAL EDIT**.
- The display looks similar to the following. The current status of all attributes is shown.

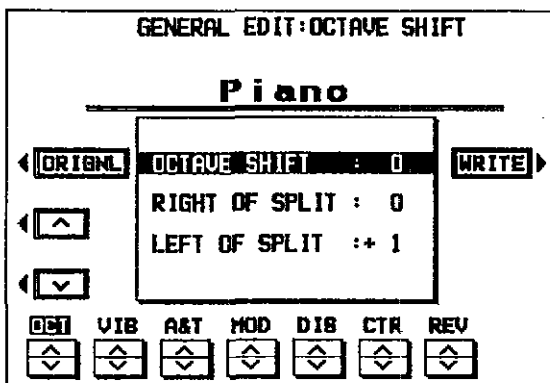


2. Use the buttons along the bottom of the display to select the attribute you wish to modify.
 - OCT: OCTAVE SHIFT
 - VIB: VIBRATO
 - A&T: AUTOBEND & TRILL
 - MOD: MODULATION
 - DIS: DISTORTION
 - CTR: CONTROLLERS (GLIDE, WHEEL, SUSTAIN PEDAL)
 - REV: SOUND REVERB
- The display changes to the setting display for the selected attribute.

3. Modify each attribute (explained below).
- The buttons along the bottom of the display are present in each setting display of the GENERAL EDIT mode. When you have finished modifying an attribute, use the buttons to select another attribute and continue modifying the sound.

OCTAVE SHIFT

Set the pitch of the sound by octaves.



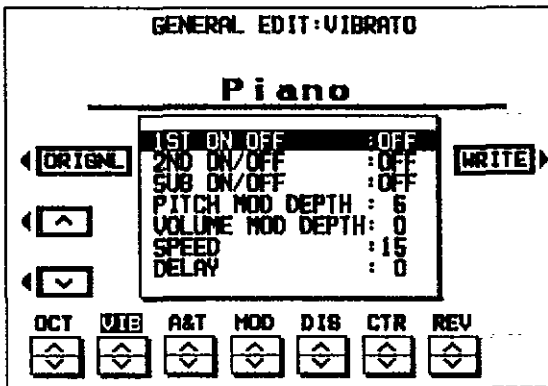
1. Use the \wedge and \vee buttons to select the item.

OCTAVE SHIFT: Set the octave of the entire sound.
RIGHT OF SPLIT: Set the octave of the sound when it is assigned to the right section of a split keyboard.
LEFT OF SPLIT: Set the octave of the sound when it is assigned to the left section of a split keyboard.

2. Use the OCT \wedge and \vee buttons to raise or lower the pitch by octaves (-1 to +2).
 - To lower the pitch one octave, set the value to -1. To raise the pitch one octave (or two octaves), set the value to +1 (or +2).
3. Repeat steps 1 and 2 for each item as desired.

VIBRATO

Modify the vibrato attributes of the sound.



1ST ON/OFF: Set the vibrato for the 1st tone to on or off. (For an explanation of tones, refer to page 95.)

2ND ON/OFF: Set the vibrato for the 2nd tone to on or off.

SUB ON/OFF: Set the vibrato for the SUB tone to on or off.

PITCH MOD DEPTH: Set the frequency change (pitch) of the vibrato (0 to 30).

VOLUME MOD DEPTH: Set the depth of the volume change (0 to 30).

SPEED: Set the vibrato speed (0 to 30).

- When WHEEL SELECT is set to VIB on the GENERAL EDIT: CONTROLLERS display, this setting also affects the speed of the vibrato applied by the **MODULATION** wheel.

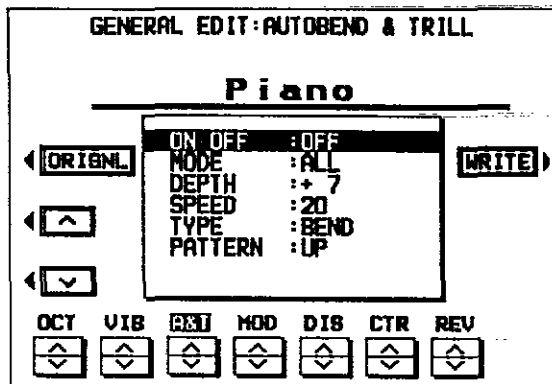
DELAY: Set the delay time (0 to 30).

- Delay time is the time elapsed from when the keyboard key is pressed until the vibrato effect begins.

- Use the ^ and v buttons to select the item.
 - See the box on the right.
- Use the VIB ^ and v buttons to adjust the values.
- Repeat steps 1 and 2 to modify other attributes as desired.

AUTOBEND & TRILL

The AUTOBEND & TRILL causes a change in pitch during the attack period.



- Use the ^ and v buttons to select the item.
 - See the box on the following page.
- Use the A&T ^ and v buttons to adjust the attributes.
- Repeat steps 1 and 2 to modify other attributes as desired.

ON/OFF
ON: This effect is on for the sound.
OFF: This effect is off for the sound.
TOUCH: This effect is applied only when the keyboard is played hard.

MODE
1ST: The effect is applied only to the 1st tone.
2ND: The effect is applied only to the 2nd tone.
ALL: The effect is applied to all the tones.
INVERSE: The effect is applied to all the tones, but is inverted for the 2nd tone.
DEPTH: Specify the amount of pitch bend (-30 to +30).

SPEED: Specify the time it takes for the altered pitch (auto bend pitch) to become the normal pitch (key pitch) (0 to 30).

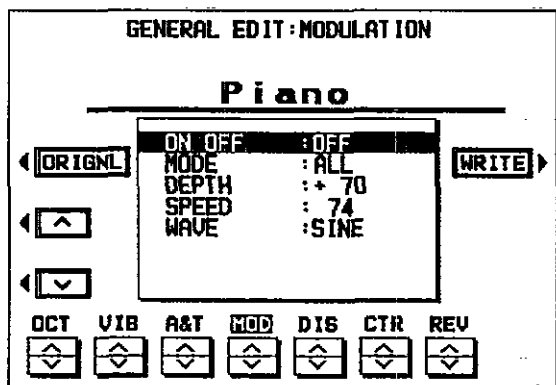
TYPE
BEND: The pitch change is continuous.
TRILL: The pitch changes in steps.

PATTERN: BEND types (UP, UP-DOWN, UP-DROP, DELAY-UP)
 TRILL types (DOWN-UP, UP-DOWN, MELODY, 5-UP)

- A list of AUTOBEND & TRILL patterns (PATTERN) can be found in the separate "REFERENCE GUIDE" provided.

MODULATION

Modify the modulation.



1. Use the ^ and v buttons to select the item.
 - See the box on the right.
2. Use the MOD ^ and v buttons to adjust the attributes.
3. Repeat steps 1 and 2 to modify other attributes as desired.

ON/OFF
ON: The effect is applied to the sound.
OFF: The effect is not applied to the sound.

- This setting may not be effective in some cases.

MODE
1ST: The effect is applied to the 1st tone.
2ND: The effect is applied to the 2nd tone.
ALL: The effect is applied to all the tones.
INVERSE: The effect is applied to all the tones, but is inverted for the 2nd tone.

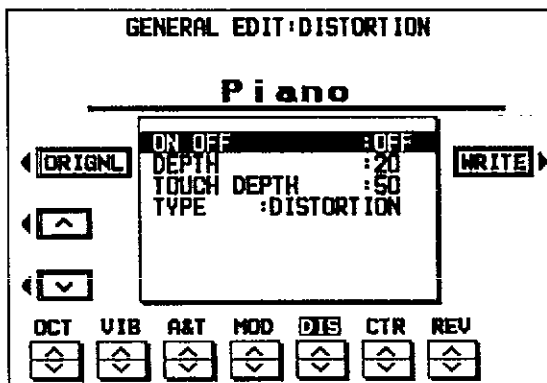
DEPTH: Set the frequency change (pitch) of the vibrato (-127 to +127).
SPEED: Set the vibrato speed (0 to 127).
WAVE: Modulate the waveform.

SINE: Sine wave
TRIANGLE: Triangle wave
SQUARE: Square wave
SAW: Saw tooth wave

- When WHEEL SELECT is set to MOD on the GENERAL EDIT: CONTROLLERS display, the above settings also influence the effect applied by the **MODULATION** wheel.

DISTORTION

Modify the distortion attributes of the sound.



ON/OFF

ON: This effect is on for the sound.
 OFF: This effect is off for the sound.

- This setting may not be effective in some cases.

DEPTH: Set the amount of change (0 to 50).
 TOUCH DEPTH: Set the degree of depth change in proportion to key velocity (0 to 50).
 TYPE

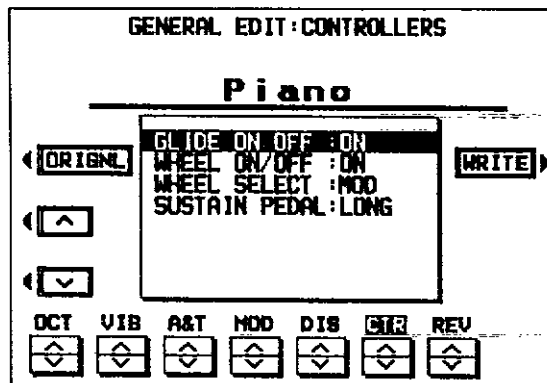
DISTORTION: The distortion is applied to the whole sound.

GROWL: The distortion is applied only to the attack period of the sound.

1. Use the ^ and v buttons to select the item.
 - See the box on the right.
2. Use the DIS ^ and v buttons to adjust the attributes.
3. Repeat steps 1 and 2 to modify other attributes as desired.

CONTROLLERS

Select how wheel or Foot Switch operation affects the sound.



GLIDE ON/OFF

ON: The glide effect is applied with the Foot Switch or a pad button.

OFF: The glide effect is not applied with the Foot Switch or a pad button.

WHEEL ON/OFF

ON: The effect is applied with the **MODULATION** wheel.

OFF: The effect is not applied with the **MODULATION** wheel.

WHEEL SELECT

MOD: The modulation depth is changed by the **MODULATION** wheel operation.

VIB: The vibrato depth is changed by the **MODULATION** wheel operation.

SUSTAIN PEDAL

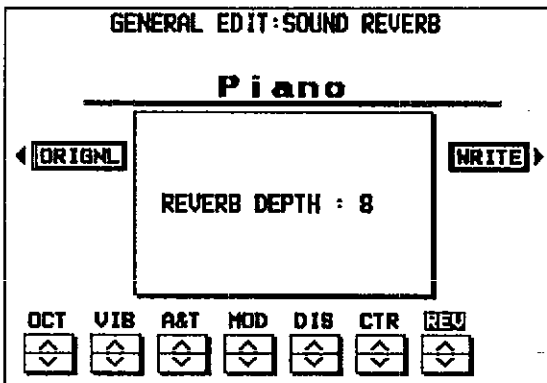
LONG: When SUSTAIN is on, the RELEASE time of the sound is extended.

HOLD: When SUSTAIN is on, the key-pressed condition is maintained.

1. Use the ^ and v buttons to select the item.
 - See the box on the right.
2. Use the CTR ^ and v buttons to adjust the attributes.
3. Repeat steps 1 and 2 to modify other attributes as desired.

SOUND REVERB

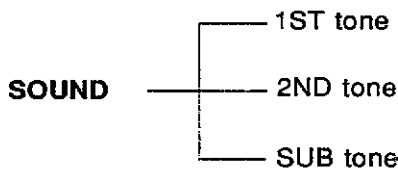
Adjust the amount of **DIGITAL REVERB** effect on the sound.



Use the REV ^ and v buttons to set the amount of reverb applied to the sound when the **DIGITAL REVERB** button is on (0 to 31).

Tone Edit

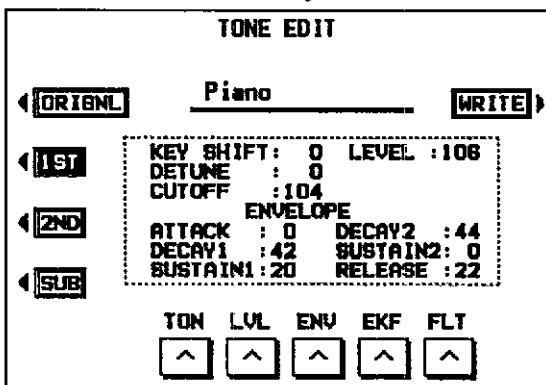
Modify the separate tones which comprise the sound. A sound may be made up of at most three tones.



- The essence of the sound is created by the combination of the 1ST tone and 2ND tone.
- Depending on the sound output status of the instrument, the SUB tone may not be generated.

Selecting attributes

1. On the **SOUND EDIT** menu, select **TONE EDIT**.
- The display looks similar to the following. The current status of the major attributes is shown.



2. Use the buttons along the bottom of the display to select the attribute you wish to modify.
 - TON: TONE
 - LVL: LEVEL
 - ENV: ENVELOPE
 - EKF: ENVELOPE KEY FOLLOW
 - FLT: FILTER
- The display changes to the setting display for the selected attribute.
3. Modify each attribute (explained below).
- When you have finished modifying an attribute, press the **EXIT** button to go back to the **TONE EDIT** display, select another attribute and continue modifying the sound.

- The attributes are modified for each tone. Use the 1ST, 2ND and SUB buttons to switch among the tones.

TO NE

Set the sound and pitch of each tone.

TONE EDIT				
TONE				
ORIGNL	ON	GROUP & TONE SELECT	KEY	TUNE
1ST	ON	A - Piano	0	0
2ND	OFF	A - Piano	0	+ 4
SUB	OFF	A - Piano	0	0

1. Select the tone to modify (1ST, 2ND or SUB).
2. Use the ^ and v buttons at the bottom of each column to change the setting in the column.
 - See the box on the right.
3. Repeat steps 1 and 2 for the other tones as desired.

ON/OFF

ON: The tone is generated.
 OFF: The tone is not generated.

GROUP & TONE SELECT: Select the kind of tone.

- Tones are classified in groups named A to N. A list of tones can be found in the separate "REFERENCE GUIDE" provided.

KEY: Specify the amount of key-shift in semi-tone increments (-24 to +24).

TUNE: Fine-adjustment of the pitch (-50 to +50).

- Slight differences in the TUNE values between the tones add a slight fullness to the sound.

LEVEL

Adjust the volume and key touch attributes of each tone.

TONE EDIT					
LEVEL					
ORIGNL	VOLUME	TOUCH	CURVE	SLOPE	KEY LIM
1ST	106	+20	+3	-10	F#5-G 8
2ND	114	+15	0	-10	F#5-G 8
SUB	114	+15	0	-10	F#5-G 8

1. Select the tone to modify (1ST, 2ND or SUB).
2. Use the ^ and v buttons at the bottom of each column to change the setting in the column.
 - See the box on the right.
3. Repeat steps 1 and 2 for the other tones as desired.

VOLUME: Adjust the volume of the tone (0 to 127).

TOUCH: Set the degree of volume change in proportion to key velocity (-50 to +50).

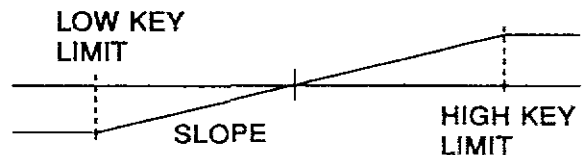
- At - settings, the softer the keyboard is played, the louder the sound. At + settings, the harder the keyboard is played, the louder the sound.

CURVE: Select the type (curve) of volume increase when the keyboard is played harder (-3 to +3).

- For details about CURVE types, refer to the separate "REFERENCE GUIDE" provided.

SLOPE: Specify the slope of the volume change (-50 to +50).

KEY LIM: Specify the range of the keyboard which is affected by the volume change settings (C0 to G8).



ENVELOPE

Specify how the volume changes over time, from the time the key is played to the time the sound dies out.

TONE EDIT
ENVELOPE

◀ [ORIGNL] [WRITE] ▶

	ATK	DCY1	SUS1	DCY2	SUS2	RLS	TCH
1ST	0	42	20	26	0	22	+ 4
2ND	0	42	20	44	0	22	+ 4
SUB	0	42	25	44	0	22	+ 4

▲ ▼ ▲ ▼ ▲ ▼ ▲ ▼ ▲ ▼ ▲ ▼ ▲ ▼

1. Select the tone to modify (1ST, 2ND or SUB).
2. Use the ^ and v buttons at the bottom of each column to change the setting in the column (0 to 50).
 - For details about the envelope, refer to the separate "REFERENCE GUIDE" provided.
 - The TCH setting changes the attack curve according to how hard the keyboard is played (-50 to +50). At a - value, the softer the keyboard is played, the faster the attack. At a + value, the harder the keyboard is played, the faster the attack.

- If the leftmost button below the display is pressed, the current envelope is illustrated on the display.

TONE EDIT
ENVELOPE

◀ [1ST] [2ND] [SUB] ▶

	ATK	DCY1	SUS1	DCY2	SUS2	RLS
[SUB]	0	42	20	26	0	22

[SCALE] [RETURN]

▲ ▼ ▲ ▼ ▲ ▼ ▲ ▼ ▲ ▼ ▲ ▼

- Use the ^ and v buttons at the bottom to change the corresponding setting.
 - You can use the 1ST, 2ND and SUB buttons to change the TONE.
 - The size of the diagram can be changed with the SCALE button.
 - Press the RETURN button to go back to the previous display.
3. Repeat steps 1 and 2 for the other tones as desired.

ENVELOPE KEY FOLLOW

Specify how the envelope changes in relation to pitch.

TONE EDIT
ENVELOPE KEY FOLLOW

◀ [ORIGNL] [WRITE] ▶

	SLOPE	KEY LIM
1ST	0	C 0-G 8
2ND	0	C 0-G 8
SUB	0	C 0-G 8

ATTACK
DECAY
RELEASE

▲ ▼ ▲ ▼ ▲ ▼

1. Use the buttons on the right side of the display to select the component of the envelope subject to modification (ATTACK, DECAY, RELEASE).
 - The selected component is highlighted.
2. Select the tone to modify (1ST, 2ND or SUB).

3. Use the ^ and v buttons at the bottom of each column to change the setting in the column.
 - See the box below.
4. Repeat steps 1 through 3 for the other components as desired.

SLOPE: Specify the slope of the volume change (-50 to +50).
KEY LIM: Specify the range of the keyboard which is affected by the volume change settings (C0 to G8).

LOW KEY LIMIT

SLOPE

HIGH KEY LIMIT

FILTER

Make major changes to the sound by eliminating specific frequency ranges.

1. Select the tone to modify (1ST, 2ND or SUB).

2. Use the \wedge and \vee buttons at the bottom of each column to change the setting in the column.
 • See the box below.

TONE EDIT FILTER						
← ORIGINAL						WRITE →
	TYPE	CUT	TCH	CURV	SLOPE	KEY LIM
1ST	0	104	44	26	0	C 0-6 8
2ND	0	112	45	26	0	C 0-6 8
SUB	0	102	34	26	+ 4	C 0-6 8

TYPE (0 to 6, THRU)

0: Low-pass filter

Low-range signals are unchanged. High-range signals are cut according to the CUT value.

1 to 4: Low-pass filter + high-boost filter

A low-pass filter which emphasizes high-range signals when the CUT value is large.

- With this type of filter, the higher the number, the lower the range that is emphasized.

5 to 6: Low-pass filter + resonance

A low-pass filter which emphasizes the harmonic components of frequencies close to the CUT value.

- There is little emphasis when the CUT value is small.
- With this type of filter, the higher the number, the greater the amount of emphasis.

THRU: No filter effect is applied.

CUT: Set the frequency range which is cut by the filter (0 to 127).

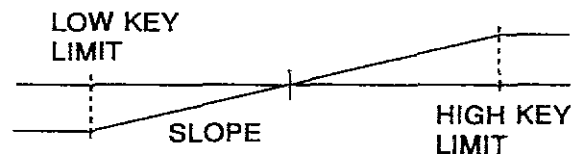
TCH: Set the filter strength in proportion to key velocity (0 to 50).

CURV: Set the cut-off frequency in relation to key velocity (-3 to +3).

- For details about CURVE types, refer to the separate "REFERENCE GUIDE" provided.

SLOPE: Set the slope of the filter effect (-50 to +50).

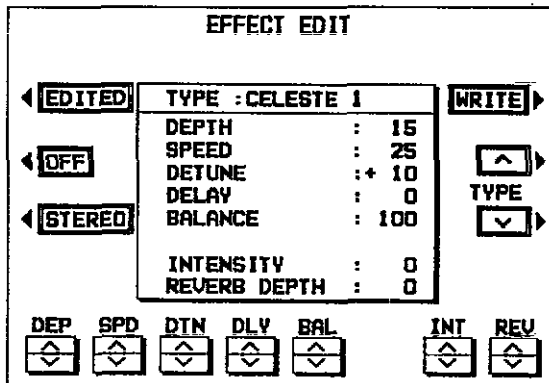
KEY LIM: Specify the range of the keyboard which is affected by the filter (C0 to G8).



Effect Edit

Select the type of effect which is applied to your new sound when the **DIGITAL EFFECT** button is on, and modify the effect.

1. On the **SOUND EDIT** menu, select **EFFECT EDIT**.
 - The display looks similar to the following.
 - The display for the effect type which is best-suited for the sound currently being edited is selected.



2. Use the **TYPE** \wedge and \vee buttons to select the type of effect.
 - Select from the following types: CELESTE 1, 2, CHORUS 1, 2, ENSEMBLE 1, 2, TREMOLO, ORGAN TREMOLO, SINGLE DELAY, REPEAT DELAY, SOLO EFFECT 1, 2.

ON/OFF button

Specify whether the **DIGITAL EFFECT** button turns on or off when the sound is selected. When set to **ON**, the **DIGITAL EFFECT** button turns on automatically when the sound is selected. The button alternates between **ON** and **OFF** each time it is pressed.

STEREO/MONO button

Select stereo (**STEREO**) or monaural (**MONO**) output of the effect. The button alternates between **STEREO** and **MONO** each time it is pressed.

- **MONO** is the fixed setting for **SOLO EFFECT 1** and **2**.
3. Use the buttons along the bottom of the display to select the attribute you wish to adjust.

- When the type is changed, the parameters revert to the factory defaults.
- For a detailed explanation of the parameters of each type of effect, refer to the separate "REFERENCE GUIDE" provided.

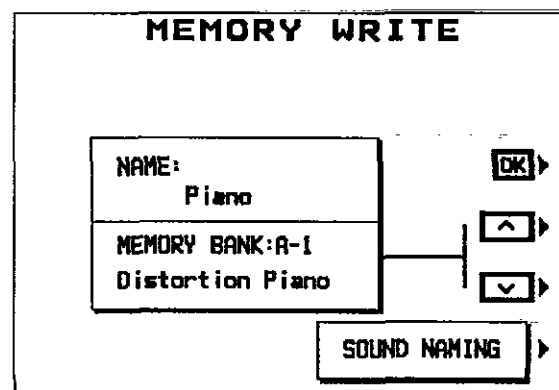
Store the new sound

The **MEMORY A** and **MEMORY B** buttons in the **SOUND GROUP** section are memory banks reserved for the sounds you create with the **SOUND EDIT**. You can store up to 36 original sounds—18 in each bank—then select the sounds just like the other sounds in the **SOUND GROUP**.

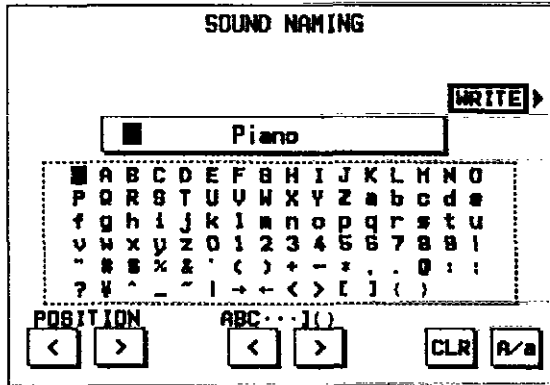
WARNING: Your new sound will be erased if you exit the **SOUND EDIT** mode without first storing it in a memory.

Procedure

1. When you have edited the sound to just the way you like it, press the **WRITE** button.
 - The **WRITE** button appears on all the editing displays and may be pressed whenever you wish to store the new sound.
 - The display changes to the **MEMORY WRITE** display.



- To assign a name to your new sound, press the SOUND NAMING button.
 - If you do not assign a name to your sound, the name becomes the same as the original sound from which you started. In this case, skip to step 5.
 - The display changes to the SOUND NAMING display.

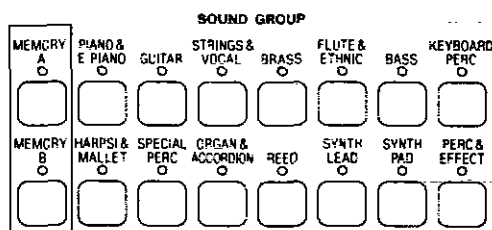


- Type a new name for your sound (up to 16 characters).
 - Use the POSITION < and > buttons to highlight the character position in the name box. Use the ABC ...] { } < and > buttons to select the alphanumeric character. Repeat these steps to type the whole name.
 - Use the A/a button to switch between upper case and lower case characters.
 - To erase the name, press the CLR button.
- When you have finished typing the name, press the WRITE button.
 - The display returns to the MEMORY WRITE display.
- Use the ^ and v buttons to select the MEMORY number in which to store the new sound.
 - Select BANK A or BANK B, and number 1 through 18.
- Press the OK button.
 - The new sound is stored, and "WRITE COMPLETED!" is shown on the display.
 - The SOUND EDIT mode is turned off.
 - The stored sound memories can be saved on a disk for recall at a later time. (Refer to page 76.)

Select a new sound

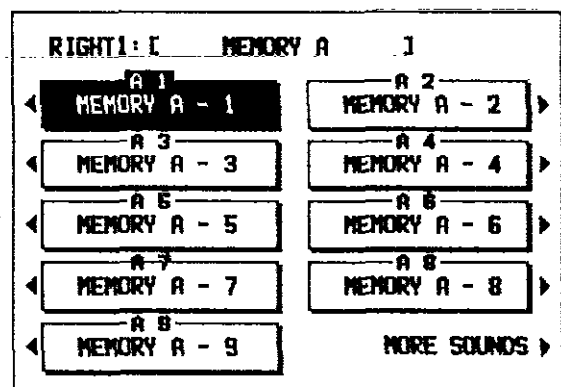
You can select your original sound just like the other sounds in the SOUND GROUP.

- In the SOUND GROUP section, press the MEMORY A or MEMORY B button.



- Select the bank (A/B) in which you stored the sound during the MEMORY WRITE procedure.
- The list of sounds in the selected bank is shown on the display.

- Select the desired sound from the list on the display.

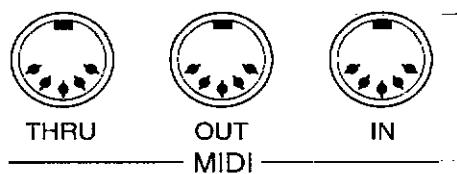


Part VIII MIDI

What is MIDI?

MIDI stands for "Musical Instrument Digital Interface" and is a standard system for linking musical instruments together. This means that you could play two instruments from the keyboard of one. You could add the sounds of a MIDI module to those of the KN2000 or play the sounds and accompaniment patterns of the KN2000 from a Digital Piano or Organ. There are many applications for MIDI depending on the type of product that you decide to use with the KN2000. The KN2000 has several preset MIDI set-ups to help you get started. The KN2000 can be set to GENERAL MIDI mode. In this mode the program change numbers, drum map and various controllers are standardized between all GENERAL MIDI instruments.

About the MIDI terminals



IN: The terminal by which this instrument receives data from other equipment.

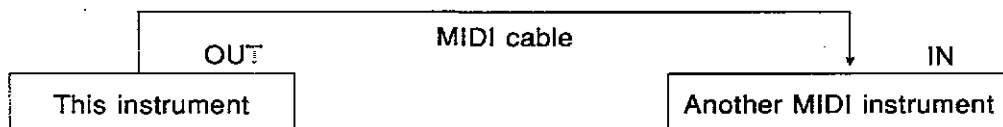
OUT: The terminal that transmits data from this instrument to other equipment.

THRU: The terminal that transfers data from the **IN** terminal directly to other equipment.

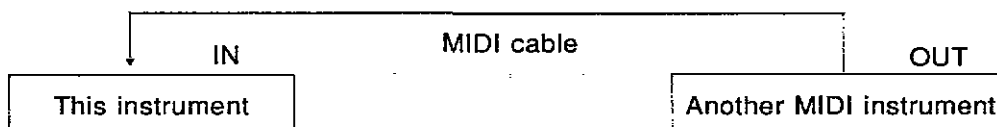
- For these connections, use a commercially available MIDI cable. Contact your Technics dealer for more information.

Connection examples

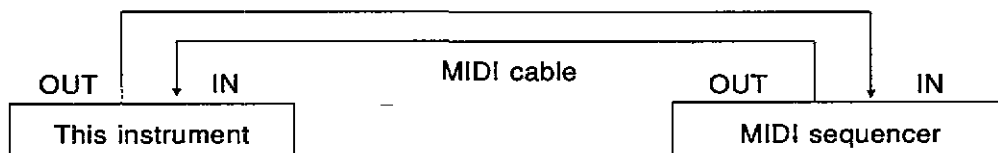
- To generate sound from a connected instrument by playing this instrument



- To generate sound from this instrument by operating a connected instrument



- To record your performance in a connected MIDI sequencer, or to generate sound from this instrument by operating a connected MIDI sequencer



About GENERAL MIDI

GENERAL MIDI means that sound changes, the drum map and various important controllers will correspond on all GENERAL MIDI instruments from any manufacturer. Standard MIDI File software which conforms to GENERAL MIDI will use the sounds and functions intended by the software manufacturer.

Outline of MIDI functions



Select the various settings which are used for MIDI operation of this instrument.

Summary of the MIDI menu items

BASIC CHANNEL (page 103)

Assign a MIDI channel to each part.

CONTROL MESSAGE (page 104)

Enable or disable the exchange of various control data.

PART SETTING (page 104)

Make the OCTAVE and LOCAL CONTROL settings for each part.

REALTIME MESSAGES (page 105)

Make the REALTIME COMMAND and CLOCK settings.

COMMON SETTING & P. MEM OUTPUT (page 105)

Set the following functions which are common to all parts.

COMMON SETTING 1:

- PROG. CHANGE TO P. MEM NOTE ONLY
- REALTIME SYSEX
- NON REALTIME SYSEX

COMMON SETTING 2:

- INTRO, FILL-IN, ENDING
- APC CONTROL

COMMON SETTING 3:

- TRANPOSE
- PROGRAM CHANGE MODE
- DRUMS TYPE
- SONG SELECT
- MIDI SETUP LOAD

PANEL MEMORY LOCAL CONTROL:

Settings related to LOCAL CONTROL by PANEL MEMORY operation

PANEL MEMORY PROGRAM CHANGE:

Settings related to PROGRAM CHANGE by PANEL MEMORY operation

MIDI PRESETS (page 109)

Optimum MIDI settings according to the connected equipment

INPUT/OUTPUT SETTING (page 109)

Various settings related to transmission and reception of data

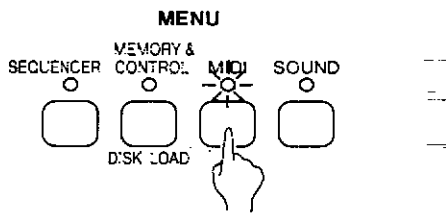
SYSEX BULK DUMP (page 110)

Settings related to SYSTEM EXCLUSIVE data exchange

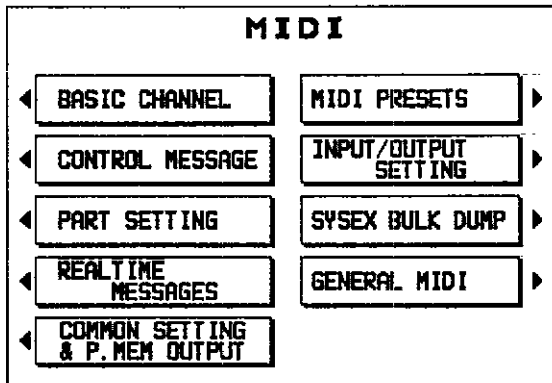
GENERAL MIDI (page 110)

General MIDI settings

1. Press the **MIDI** button to turn it on.



The display (LCD screen) changes to the following.



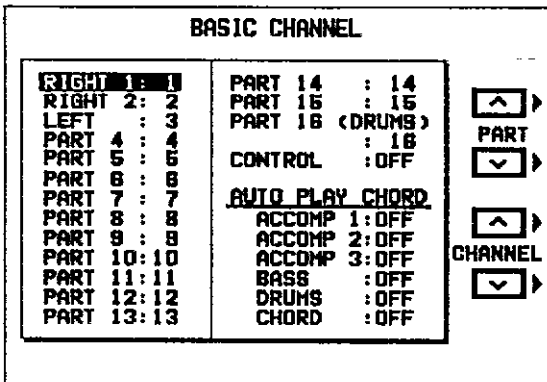
2. Select the desired menu and follow the procedures on the corresponding setting display.
 - During the setting display, you can press the **EXIT** button to go back to the previous display. To show other menus, use the **EXIT** button to return to the **MIDI** menu display and make another selection.
 - When the **TEMPO/PROGRAM** indicator (LED) is lit, it indicates that the dial is available for setting the current function.
3. When you have finished setting the functions, press the **MIDI** button to turn it off.

Setting the functions

BASIC CHANNEL

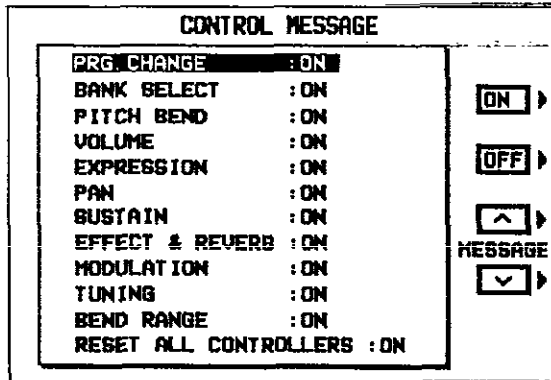
Many different kinds of performance data are sent using just one MIDI cable. This is possible because MIDI signals are sent and received through 16 different "basic channels" (numbered 1 to 16). In order for the exchange of data to take place, the channels on the transmission side must match the channels on the receiving side. Channel numbers have already been assigned to parts (default settings) but you can reassign channel number to parts as follows.

1. Use the **PART** \wedge and \vee buttons to select the part.
2. Use the **CHANNEL** \wedge and \vee buttons to select a basic channel for the part (OFF, 1 to 16).
 - A part which has been set to OFF cannot be used to transmit or receive MIDI data.
3. Repeat steps 1 and 2 for each part as desired.



CONTROL MESSAGE

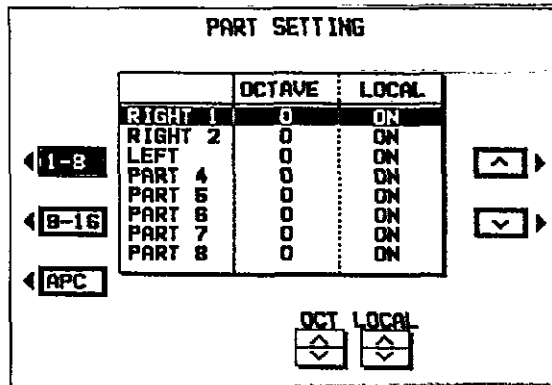
Enable or disable the exchange of various control data.



1. Use the MESSAGE \wedge and \vee buttons to select the control message.
2. Use the ON and OFF buttons to specify on or off for the control message.
 - ON: Data for the control operation is exchanged.
 - OFF: Data for the control operation is not exchanged.
 - The BANK SELECT setting is effective only when PRG. CHANGE is set to ON.
 - The EFFECT & REVERB setting controls the DIGITAL EFFECT, DSP EFFECT and DIGITAL REVERB on/off.
 - The TUNING setting is the on/off setting for the TUNING and KEY SHIFT settings. (Refer to page 82.)
3. Repeat steps 1 and 2 for each control as desired.

PART SETTING

Set the octave shift value for key notes transmitted from this instrument (OCTAVE), and specify whether this instrument's sound generator is enabled when MIDI data is transmitted (LOCAL CONTROL).



2. Use the \wedge and \vee buttons to select the part.
 - OCTAVE: Use the OCT \wedge and \vee buttons to set the octave shift value (-3 to +3).
 - Octave shift is set for transmitted data only; however the transmitted and received octave shifts are linked. For example, if the transmitted octave shift is set to +1, the received octave shift is automatically set to -1.
 - LOCAL: Use the LOCAL \wedge and \vee buttons to enable or disable this instrument's sound generator.
 - When set to ON, the performance from this instrument is transmitted as MIDI data and also sounds from this instrument. When set to OFF, the performance from this instrument is transmitted as MIDI data but does not sound from this instrument.

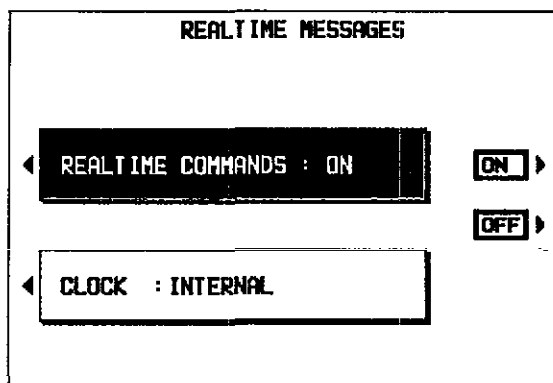
1. Use the buttons on the left side of the display to select the corresponding group of the part you wish to set.

3. Repeat steps 1 and 2 for each part as desired.

1-8:	RIGHT 1, RIGHT 2, LEFT, PART 4 to PART 8 group
9-16:	PART 9 to PART 16 group
APC:	ACCOMP 1 to 3, BASS, DRUMS, CHORD group

REALTIME MESSAGES

Enable or disable the exchange of **START/STOP** data (**REALTIME COMMANDS**), and select the **CLOCK** mode.



1. Use the buttons on the left side of the display to select a function.

2. Use the \wedge and \vee buttons, or the **ON** and **OFF** buttons, to change the setting.

REALTIME COMMANDS

ON: Rhythm and **SEQUENCER** start/stop, continue, and song position pointer data can be transmitted/received.

OFF: This data cannot be transmitted/received.

CLOCK

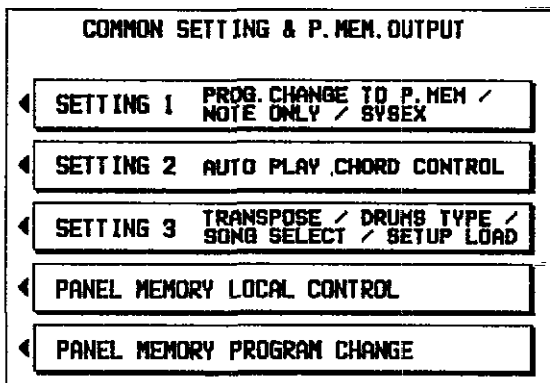
INTERNAL: This instrument's internal clock is used to control the performance. The clock of the connected equipment is disabled.

MIDI: The clock of the connected equipment is used to control the performance. This instrument's clock is disabled. (The tempo is displayed as "j = - - -.")

3. Repeat steps 1 and 2 for the other function if desired.

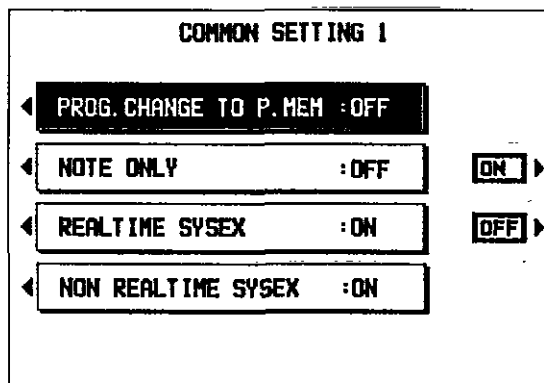
COMMON SETTING & P. MEM OUTPUT

Set the functions which are common to all parts, and the **PANEL MEMORY** settings.



■ COMMON SETTING 1

1. On the **COMMON SETTING** menu display, select **SETTING 1**.
- The display changes to the following.



<continued on next page>

2. Use the buttons on the left side of the display to select the item.
 - See the box on the right.
3. Use the ON and OFF buttons to select on or off.
 - ON: Data exchange is enabled.
 - OFF: Data exchange is disabled.
4. Repeat steps 2 and 3 for the other settings as desired.

PROG. CHANGE TO P. MEM: Enable or disable the exchange of program change numbers for the **RIGHT 1** part by operation of the **PANEL MEMORY** buttons.

- For this setting, the **PANEL MEMORY 1 to 8** program change numbers correspond to the bank numbers as follows: **BANK 1 = 0 to 7; BANK 2 = 8 to 15; BANK 3 = 16 to 23.**

NOTE ONLY: Of the performance data, specify whether or not only note data is exchanged.

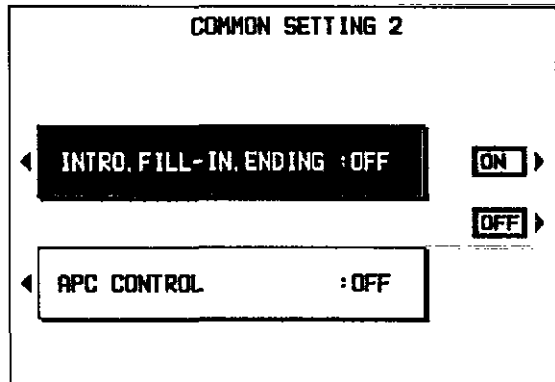
REALTIME SYSEX: Specify whether or not MIDI data is exchanged as system exclusive data during the performance.

NON REALTIME SYSEX: Specify whether or not MIDI data is exchanged as system exclusive data before the performance.

- For details about **REALTIME SYSEX** and **NON REALTIME SYSEX**, refer to the pages on MIDI in the separate "REFERENCE GUIDE" provided.

■ **COMMON SETTING 2**

1. On the **COMMON SETTING** menu display, select **SETTING 2**.
 - The display changes to the following.



2. Use the buttons on the left side of the display to select the item.

INTRO, FILL-IN, ENDING: Enable or disable the exchange of intro, fill-in and ending data.

- Data is exchanged on the channel for the **DRUMS** part.

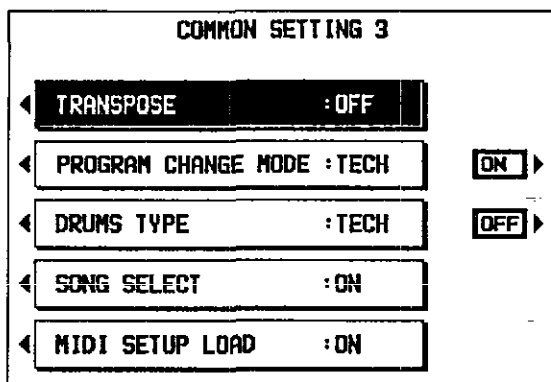
APC CONTROL: Enable the exchange of data for the on/off status of the **AUTO PLAY CHORD's ONE FINGER, FIN-GERED** and **PIANIST** buttons.

- Data is exchanged on the channel for the **ACCOMP 1** part.

3. Use the ON and OFF buttons to select on or off.
 - ON: Data exchange is enabled.
 - OFF: Data exchange is disabled.
4. Repeat steps 2 and 3 for the other settings as desired.

■ COMMON SETTING 3

1. On the COMMON SETTING menu display, select SETTING 3.
- The display changes to the following.



2. Use the buttons on the left side of the display to select the item.
 - See the box below.
3. Use the \wedge and \vee buttons, or the ON and OFF buttons, to change the setting.
4. Repeat steps 2 and 3 for the other items as desired.

TRANSPOSE

ON: The note number of the transposed note is transmitted/received.

OFF: The note number of the played key is transmitted/received.

PROGRAM CHANGE MODE

NORMAL: The program change numbers are as indicated in the "REFERENCE GUIDE."

TECH: Program change numbers are standardized among all Technics models which are set to this mode. The program change number assigned to a give sound on one model is assigned to the same sound on all models which are set to the same mode.

GM: Program change numbers follow the GM standard.

- The program change numbers for each mode can be found in the separate "REFERENCE GUIDE" provided.

DRUMS TYPE

NORMAL: Keyboard percussion instrument sounds correspond to this instrument's key note numbers

TECH: Keyboard percussion instrument sounds correspond to the same key note numbers for connect Technics models set to this type.

GM: Keyboard percussion instrument sounds follow the GM standard.

SONG SELECT

ON: Song number data can be exchanged.

OFF: Song number data cannot be exchanged.

MIDI SETUP LOAD

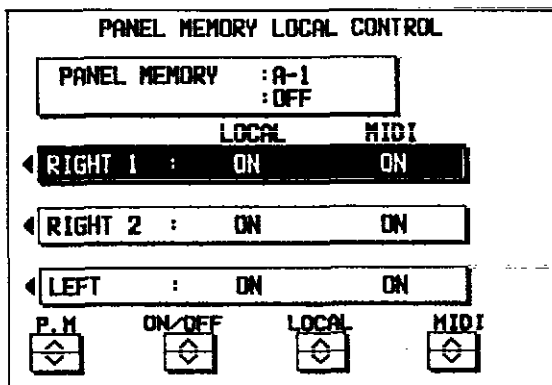
ON: When disk data is loaded, the MIDI settings stored on the disk are automatically recalled.

OFF: MIDI settings stored on the disk are not recalled.

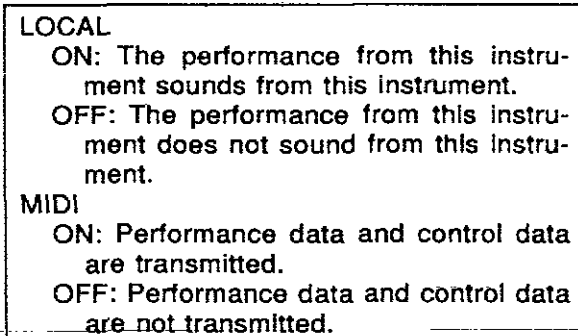
■ PANEL MEMORY LOCAL CONTROL

During a performance, you can change the sound generator setting and MIDI mode setting by changing the **PANEL MEMORY** selection.

1. On the COMMON SETTING menu display, select **PANEL MEMORY LOCAL CONTROL**.
- The display changes to the following.



4. Use the buttons on the left side of the display to select a part (**RIGHT 1**, **RIGHT 2** or **LEFT**).
5. Use the **LOCAL** and **MIDI** \wedge and \vee buttons to select the mode for the part.



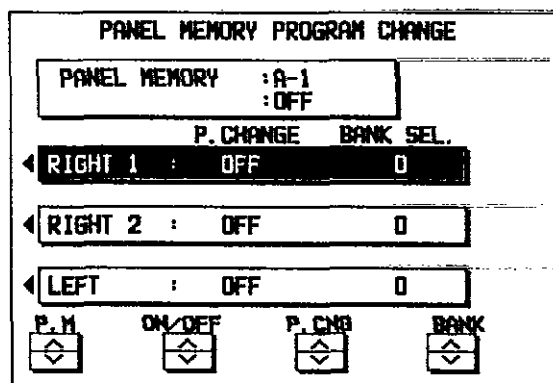
2. Use the **P.M.** \wedge and \vee buttons to specify a **PANEL MEMORY** number.
3. Use the **ON/OFF** \wedge and \vee buttons to turn the specified **PANEL MEMORY** local control on or off.

6. Repeat steps 4 and 5 for each part as desired.
7. Repeat steps 2 through 6 for each **PANEL MEMORY** number as desired.

■ PANEL MEMORY PROGRAM CHANGE

Specify how **PANEL MEMORY** operation affects transmission of program change data for the **RIGHT 1**, **RIGHT 2** and **LEFT** parts.

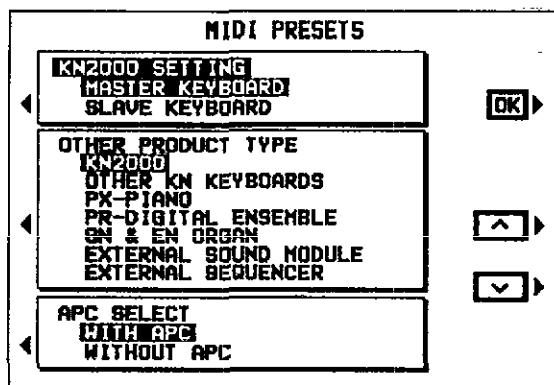
1. On the COMMON SETTING menu display, select **PANEL MEMORY PROGRAM CHANGE**.
- The display changes to the following.



2. Use the **P.M.** \wedge and \vee buttons to specify a **PANEL MEMORY** number.
3. Use the **ON/OFF** \wedge and \vee buttons to turn the specified **PANEL MEMORY** program change output to on or off.
4. Use the buttons on the left side of the display to select a part (**RIGHT 1**, **RIGHT 2** or **LEFT**).
5. Use the **P.CNG** \wedge and \vee buttons to specify a **PROGRAM CHANGE** number (0 to 127, **OFF**) and the **BANK** \wedge and \vee buttons to specify a **BANK SELECT** number (0 to 255).
6. Repeat steps 4 and 5 for each part as desired.
7. Repeat steps 2 through 6 for each **PANEL MEMORY** number as desired.

MIDI PRESETS

Establish the optimum settings depending on how this Keyboard is connected to other equipment, and on whether this Keyboard is used as the master or the slave.



1. Use the buttons on the left side of the display to select the item (KN2000 SETTING, OTHER PRODUCT TYPE or APC SELECT).

2. Use the \wedge and \vee buttons to change the setting.

KN2000 SETTING
MASTER KEYBOARD: This Keyboard is used as the master (transmit data side).
SLAVE KEYBOARD: This Keyboard is used as the slave (receive data side).
OTHER PRODUCT TYPE: Select the type of connected equipment.
APC SELECT
WITH APC: Performance includes **AUTO PLAY CHORD** performance.
WITHOUT APC: **AUTO PLAY CHORD** is not used.

3. Repeat steps 1 and 2 for the other items as desired.

4. Press the OK button.

- When the settings have been successfully stored, "COMPLETED!" appears on the display.

INPUT/OUTPUT SETTING

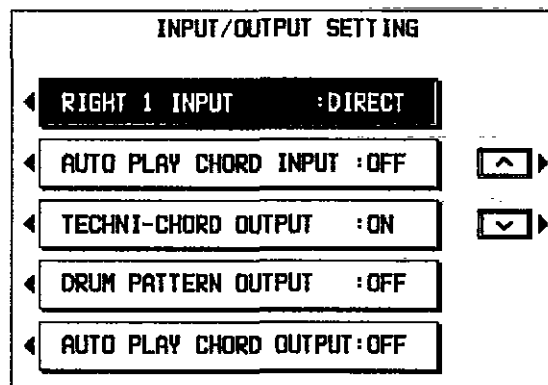
Make the settings which determine how various performance data is treated during data transmission and reception.

1. Use the buttons on the left side of the display to select the item.

- See the box below.

2. Use the \wedge and \vee buttons, or the ON and OFF buttons, to select the setting.

3. Repeat steps 1 and 2 for each item as desired.



RIGHT 1 INPUT

CONDUCTOR: When data for the **RIGHT 1** part is received, the **CONDUCTOR** determines which part it is used for.

DIRECT: When data for the **RIGHT 1** part is received, it is treated as **RIGHT 1** data, and performance data for all parts is received on their respective basic channels.

AUTO PLAY CHORD INPUT

ON: Input data for the **ACCOMP 1, 2, 3, BASS, DRUMS** and **CHORD** parts is received.

OFF: Data for the above parts is not received.

TECHNI-CHORD OUTPUT

ON: Keyboard notes generated by the **TECHNI-CHORD** function are also transmitted.

OFF: Only key note data of the pressed keys is transmitted.

DRUM PATTERN OUTPUT

ON: Data from the **DRUMS** part is transmitted.
OFF: Data from the **DRUMS** part is not transmitted.

AUTO PLAY CHORD OUTPUT

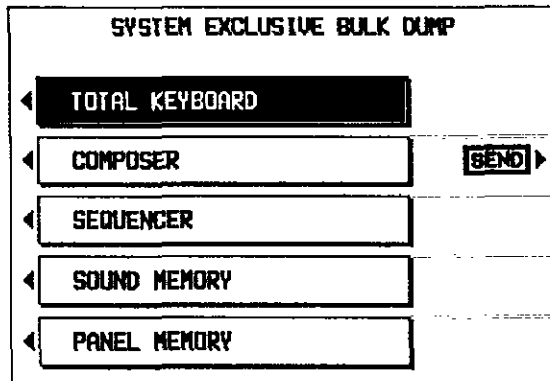
ON: The data for the **ACCOMP 1, 2, 3, BASS** and **CHORD** parts is transmitted.

OFF: The data for the above parts is not transmitted.

SYSEX BULK DUMP

This instrument's internal data such as panel settings, performance data, etc. can be transmitted to and received from another KN2000 or other MIDI equipment as SYSTEM EXCLUSIVE data.

- Sound is not generated from this instrument during this procedure.
- The operations on this display are executed, even if REALTIME SYSEX and NON REALTIME SYSEX is set to off on the COMMON SETTING 1 display.

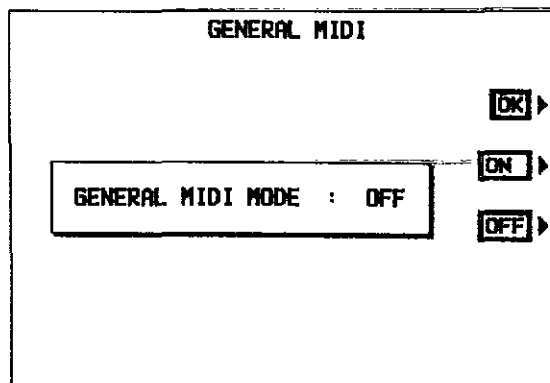


■ Transmitting

1. Follow the procedure necessary to prepare the receiving instrument for data reception.
2. Use the buttons on the left side of the display to select the type of data to transmit (TOTAL KEYBOARD, COMPOSER, SEQUENCER, SOUND MEMORY or PANEL MEMORY).
3. Press the SEND button.
 - During transmission, the transmitting status is shown on the display.
 - You can also receive data with this instrument. After accessing this display on this keyboard, follow the transmission procedure on the transmission side. During reception, the receiving status is shown on the display.
 - If data transmission/reception is unsuccessful, an error message appears on the display. In this case, repeat the procedure from the beginning.

GENERAL MIDI

GENERAL MIDI (GM) is the standard which enables MIDI data exchange between different models or equipment of different manufacture. Program change numbers and their corresponding sounds, percussion instrument sounds, note numbers, etc. are data compatible between equipment using this standard.



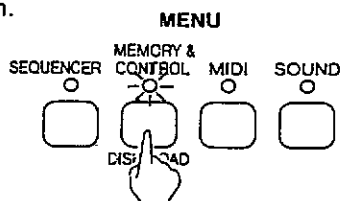
1. Use the ON and OFF buttons to specify whether or not this Keyboard should be compatible with GENERAL MIDI standard instruments.
 - This setting is automatically set to OFF when the power is turned on.
 - If ON is selected, the status of this Keyboard changes to the GENERAL MIDI status, and the sounds and operations which can be selected are limited. In addition, the arrangement of percussion sounds on the keyboard changes. (Refer to the separate "REFERENCE GUIDE" provided.)
 - If GENERAL MIDI on/off data is received from connected MIDI instrument, the received data has priority.
 - This setting is automatically set to ON if disk data other than Technics data is loaded.
2. Press the OK button.
 - The confirmation display appears. Press the YES button to execute the function, or press the NO button to cancel the function.

Initialize

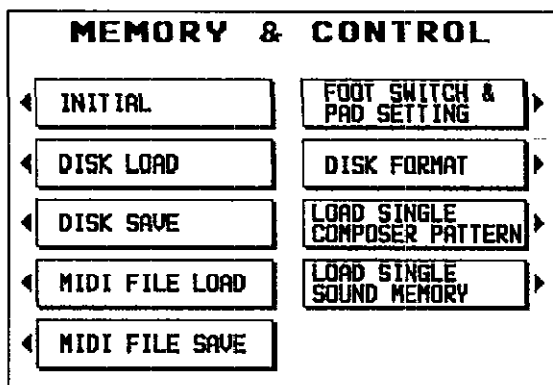
This Keyboard has many settable functions and storable memories. However, you can return the settings and memory to the factory-preset status.

INITIAL

1. Press the **MEMORY & CONTROL** button to turn it on.

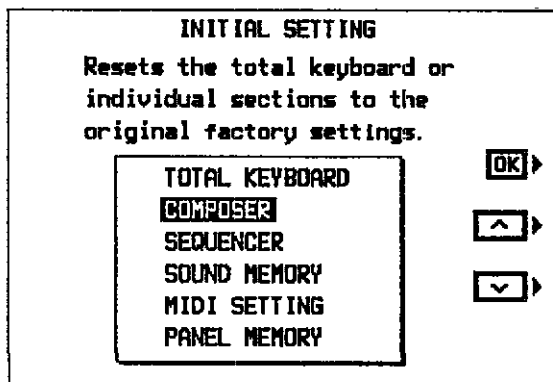


- The display changes to the following.



2. Select **INITIAL**.

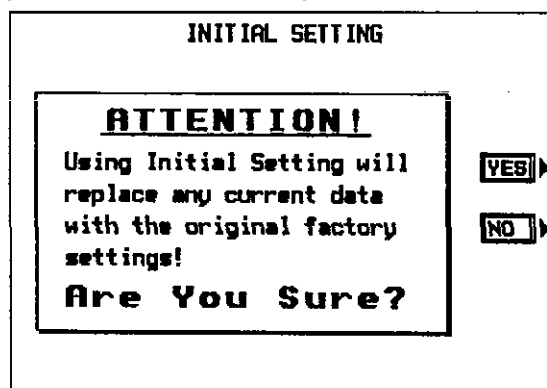
- This display changes to the following.



3. Use the **^** and **v** buttons to select the desired type of initialization (TOTAL KEYBOARD, COMPOSER, SEQUENCER, SOUND MEMORY, MIDI SETTING or PANEL MEMORY).

4. Press the **OK** button.

- The display changes to the confirmation display. Press the **YES** button if you wish to execute the initialization. Press the **NO** button if you wish to cancel the procedure.



- When you press the **YES** button, initialization begins. When initialization is completed, "COMPLETED!" is shown on the display and the Keyboard returns to the normal performance mode.

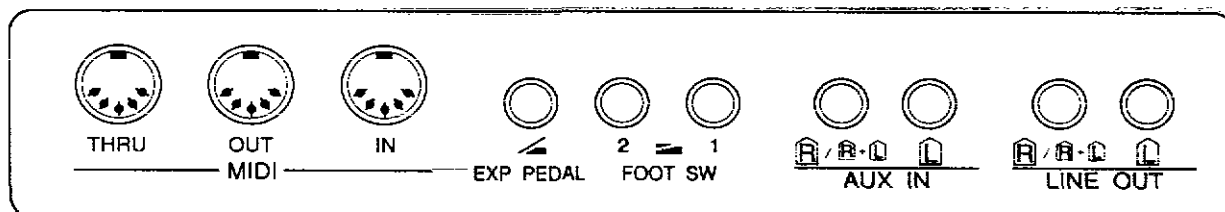
- You can also reset all the Keyboard settings with the following procedure: Turn off the **POWER** button once. Then, while pressing the three lower left buttons in the **RHYTHM GROUP** section (**8 BEAT 2**, **JAZZ ROCK & SOUL** and **DANCE POP**) at the same time, turn the **POWER** button on again.

Options and connections

This page shows the optional accessories that are available for your Technics Keyboard. These can make your instrument more versatile and fun to play than it already is. Also indicated are the many possible connections to the rear accessory panel.

Connections

(on the rear panel)



EXP PEDAL

The optional SZ-E2 Expression Pedal (sold separately) can be connected to this terminal to control the volume.

FOOT SW 1, 2

An optional SZ-P1 Foot Switch (sold separately) can be connected to each terminal to control various functions. (Refer to page 42.)

AUX IN (input level 0.5 Vrms, 6 k Ω)

Other instruments such as a sound generator can be connected to this terminal, and the sound will be output from the Keyboard's speakers. To receive monaural sound, connect the other instrument to the R/R+L terminal. (Do not connect the L terminal.)

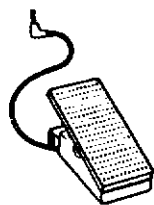
LINE OUT (output level 1.0 Vrms, 600 Ω)

By connecting an external high-power amplifier, the sound can be reproduced at a high volume. To output monaural sound, connect the external equipment to the R/R+L terminal. (Do not connect the L terminal.)

MIDI

These terminals are for connection to another MIDI instrument. (Refer to page 101.)

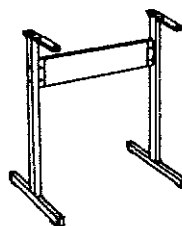
Separately sold options



SZ-E2
Expression
Pedal



SZ-P1
Foot Switch



SZ-S61
Stand



SZ-B7
Carrying Bag

Error messages

No.	Contents
00	The data on the disk that you are using is for a different product.
01	An error has occurred while the disk was loading. Please try again!
02	There is no disk in the Disk Drive.
03	The file that you tried to load is empty.
05	An error has occurred while the disk was saving. Please try again!
06	The disk that you are using is write protected. Please remove the write protection and try again.
07	The disk that you are using is full. Please use another disk.
08	An error has occurred while the disk was formatting. The disk that you are using may be faulty. Please try formatting another disk.
10	The data is already copy protected.
11	The password that you entered is incorrect.
20	A problem has occurred with your SEQUENCER Data. This might be due to a damaged or faulty disk.
21	Memory full
22	It is necessary to press PUNCH OUT to complete this procedure.
23	It is impossible to change the time signature because it has already been set in the existing tracks.
24	A rhythm track already exists. It is impossible to assign two tracks to rhythm.
25	It is only possible to change the velocity on a melody track.
26	It is only possible to merge melody tracks. Tracks such as rhythm, chord and control cannot be merged.

No.	Contents
27	It is only possible to copy melody tracks. Tracks such as rhythm, chord and control cannot be copied.
28	This song is too long to be saved as a MIDI file.
29	The MIDI file that you have tried to load exceeds the memory capacity of the KN2000 and cannot be played. The SEQUENCER memory has been cleared.
30	It is not possible to change the time signature or measure length of a COMPOSER pattern after it has been recorded. If you want to proceed, you must first clear the entire COMPOSER pattern.
31	The time signature of the pattern from which you are copying is different from the COMPOSER memory that you are using. Either: Change the time signature of the COMPOSER memory or: Copy from a pattern that has the same time signature
32	Memory full
40	The Identification (ID) code of the system exclusive data received by the KN2000 is for a different product.
41	An error has occurred during system exclusive data reception. The data from the transmitting device may be incomplete. Please try again.
42	An error has occurred during system exclusive transmission. The data has not been received correctly. Please try again.
43	The file that you are trying to load was saved on a previous KN keyboard. It is only possible to load using the "ALL" option.
44	It is impossible to edit a Drum Kit. Please select a different sound from any group except Keyboard Percussion.

Symptoms which appear to be signs of trouble

The following changes in performance may occur in the Technics Keyboard but do not indicate trouble.

	Phenomenon	Remedy
Sounds and effects	The buttons, keys, etc. malfunction.	<ul style="list-style-type: none"> • Turn off the POWER button once, then turn it on again. If this procedure is not successful, turn off the POWER button once. Then, while pressing the three lower left buttons in the RHYTHM GROUP section (8 BEAT 2, JAZZ ROCK & SOUL and DANCE POP) at the same time, turn the POWER button on again. (Note that, in this case, all programmable settings, functions and memories return to their factory-preset status.)
	No sound is produced when the keys are pressed.	<ul style="list-style-type: none"> • The MAIN VOLUME is at the minimum setting. Adjust the volume with the MAIN VOLUME control. • The volumes for the selected parts are set to the minimum levels. Use the balance buttons to set the volumes of the relevant parts to appropriate levels. (Refer to page 20.) • The local control for a part performed on the keyboard is set to OFF. Set the local control to ON. (Refer to page 104.)
	Only percussive instrument sounds are produced when the keyboard is played.	<ul style="list-style-type: none"> • In the SOUND GROUP section, the KEYBOARD PERC button is on.
Rhythm	The rhythm does not start.	<ul style="list-style-type: none"> • The DRUMS volume is set to the minimum level. Use the balance buttons to set the DRUMS volume to an appropriate level. • In the RHYTHM GROUP section, a rhythm in MEMORY A or MEMORY B with no stored pattern was selected. Select a different rhythm. • A SEQUENCER track button is on. When you are not playing back the SEQUENCER performance, turn off the track buttons. • CLOCK is set to MIDI. Set CLOCK to INTERNAL. (Refer to page 105.)
SEQUENCER	Storage is not possible.	<ul style="list-style-type: none"> • The remaining memory capacity of the SEQUENCER is 0. Follow the SONG CLEAR or TRACK CLEAR procedure to erase the memory. (Refer to pages 55 and 56.)
	Multi-track storage is not possible.	<ul style="list-style-type: none"> • The playback track has been selected, but the START/STOP button has not been pressed. A flashing track indicator shows the track which is ready for recording, and a lit track indicator shows a track which is ready for playback. To record one track while listening to another (playback) track, press the START/STOP button to begin playback. (Refer to page 48.)
	The playback measure indication is different from when the performance was recorded.	<ul style="list-style-type: none"> • The number of measures corresponds to the time signature of the rhythm selected at the start of recording. To change the rhythm in the middle of the song, record the rhythm change in the RHYTHM part. (Refer to page 53.)

Phenomenon		Remedy
AUTO PLAY CHORD	No sound is produced for the automatic accompaniment.	• In the RHYTHM GROUP section, a rhythm in MEMORY A or MEMORY B with no stored pattern was selected. Select a different rhythm.
	No sound is produced for the automatic accompaniment, or only the sounds of some parts are produced.	• An ACCOMP part does not sound if its corresponding volume is set to the minimum level. Use the respective balance buttons to set the ACCOMP 1, 2 and 3 volumes to appropriate levels.
COMPOSER	Storage is not possible.	• The remaining memory capacity of the COMPOSER is 0.
	Setting the time signature and number of measures is not possible.	• The time signature and number of measures cannot be changed for a pattern which is currently recorded in the COMPOSER . If you wish to change the time signature and/or measure data, first follow the procedure to clear the memory. (Refer to page 65.)
	The playback timing of the rhythm pattern is different from the timing with which it was recorded.	• The QUANTIZE function was on when the pattern was recorded and the timing was automatically corrected. Set the quantize level to a smaller note unit or to OFF when recording. (Refer to page 67.)
Disk Drive	The Disk Drive produces a noise during recording or playback.	• This occurs when the Disk Drive is reading a disk. It does not indicate a problem.
	When the procedure to load from a disk is performed, the contents of the keyboard memory are erased.	• When performing the load operation from a disk, the keyboard memory changes to that of the data loaded from the disk. If you wish to preserve a song which is stored in the keyboard memory, save it on a disk before performing the load procedure. (Refer to page 76.)
Other	Noise from a radio or TV can be heard.	• This sometimes occurs when electrical equipment such as a radio or TV is used near the instrument. Try moving such electrical equipment further away from the instrument. • The sound may be coming from a nearby broadcast station or amateur radio station. If the sound is bothersome, consult your dealer or service center.
	The cabinet becomes warm during use.	• This instrument has a built-in power source that heats the cabinet to some degree. This is not an indication of trouble.

■ About the Keyboard memories

The panel settings are maintained in a back-up memory for about one week after the power to this instrument is turned off. Other stored memories, such as the **SEQUENCER** and **COMPOSER**, are maintained for about 80 minutes. If you wish to keep the memory contents, before you turn off the Keyboard, use the **SAVE** procedure to store the desired data on a disk for recall at a later time. (Refer to page 76.)

- When you quit the operating mode, a warning display may appear to remind you to save the data. If this occurs, after checking the reminder, press the **OK** button.
- The back-up memory does not function unless the power has been on for about 10 minutes.

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Specifications

	SX-KN2000
KEYBOARD	61 KEYS (WITH INITIAL TOUCH)
SOUND GENERATOR	PCM
MAXIMUM NUMBER OF NOTES PRODUCED SIMULTANEOUSLY	64 NOTES
SOUNDS	250 SOUNDS GROUP: PIANO & E PIANO, HARPSI & Mallet, GUITAR, SPECIAL PERC, STRINGS & VOCAL, ORGAN & ACCORDION, BRASS, REED, FLUTE & ETHNIC, SYNTH LEAD, BASS, SYNTH PAD, KEYBOARD PERC, PERC & EFFECT
EFFECTS	DIGITAL EFFECT, DSP EFFECT, SUSTAIN, DIGITAL REVERB
PART SELECT	RIGHT 1, RIGHT 2, LEFT
TRANPOSE	G-C-F#
RHYTHM	200 RHYTHMS GROUP: 8 BEAT 1, 8 BEAT 2, 16 BEAT, JAZZ ROCK & SOUL, FUNK & LATIN ROCK, DANCE POP, BIG BAND & SWING, ROCK (OTHERS), JAZZ COMBO, U.S. TRAD, MARCH & WALTZ, TRAD DANCE, LATIN 1, LATIN 2
CONTROLS	MAIN VOLUME, BALANCE, CONDUCTOR, START/STOP, INTRO & ENDING, FILL IN 1, FILL IN 2, VARIATION, COUNT INTRO, SYNCHRO & BREAK, TEMPO/PROGRAM, SPLIT POINT
MANUAL PERCUSSION	1, 2, 3
BACKGROUND SOUND	BIRD, WAVE, RAIN, CHURCH BELL, APPLAUSE, FADE OUT
AUTO PLAY CHORD	ONE FINGER, FINGERED, PIANIST, MEMORY, DYNAMIC ACCOMP, MUSIC STYLE ARRANGER
ONE TOUCH PLAY	<input type="radio"/> (ONE TOUCH PLAY/MUSIC STYLE SELECT)
TECHNI-CHORD	<input type="radio"/>
PANEL MEMORY	3 BANKS x 8, SET
SEQUENCER	16 TRACKS STORAGE CAPACITY: APPROX. 19000 NOTES INPUT MODES: EASY RECORD, REALTIME RECORD, STEP RECORD FUNCTIONS: TRACK ASSIGN, EDIT (SONG CLEAR, TRACK CLEAR, VELOCITY CHANGE, QUANTIZE, TRACK MERGE, MEASURE ERASE, MEASURE COPY), PUNCH RECORD, PLAY, MEDLEY
COMPOSER	5 TRACKS: BASS, ACCOMP 1, ACCOMP 2, ACCOMP 3, DRUMS STORAGE CAPACITY: APPROX. 8600 NOTES INPUT MODES: REALTIME RECORD, STEP RECORD FUNCTIONS: MODE SELECT, COPY, LOAD SINGLE COMPOSER PATTERN, BEND RANGE MEMORY: 2 BANKS x 6
MEMORY & CONTROL	INITIAL, DISK LOAD, DISK SAVE, MIDI FILE LOAD, MIDI FILE SAVE, FOOT SWITCH & PAD SETTING, DISK FORMAT, LOAD SINGLE COMPOSER PATTERN, LOAD SINGLE SOUND MEMORY
SOUND SETTING	SOUND SETTING (VOLUME, SUSTAIN, DIGITAL EFFECT, PAN, KEY SHIFT, TUNING, PITCH BEND RANGE, PEDAL SETTING), OVERALL TOUCH SENSITIVITY, MASTER TUNING, TECHNI-CHORD TYPE, LEFT HOLD, REVERB, DSP EFFECT, REVERB & DSP EFF PART SETTING, PAD SOUNDS
SOUND EDIT	EASY EDIT, GENERAL EDIT (OCTAVE SHIFT, VIBRATO, AUTOBEND & TRILL, MODULATION, DISTORTION, CONTROLLERS, SOUND REVERB), TONE EDIT (TONE, LEVEL, ENVELOPE, ENVELOPE KEY FOLLOW, FILTER), EFFECT EDIT MEMORY: 2 BANKS x 18

SX-KN2000	
MIDI	BASIC CHANNEL, CONTROL MESSAGE, PART SETTING, REALTIME MESSAGES, COMMON SETTING & P.MEM OUTPUT, MIDI PRESETS, INPUT/OUTPUT SETTING, SYSEX BULK DUMP, GENERAL MIDI
EXTERNAL MEMORY	DISK DRIVE
DISPLAY	LCD (320 x 240 DOTS) DISPLAY ANGLE, CONTRAST, EXIT, DISPLAY HOLD
HELP	○
DEMO	○
TERMINALS	PHONES, LINE OUT (R/R+L, L), AUX IN (R/R+L, L), FOOT SW 1, 2, EXP PEDAL, MIDI (IN, OUT, THRU)
OUTPUT	18 W x 2
SPEAKERS	14 cm x 2, 6.5 cm x 2
POWER REQUIREMENT	110 W, 100 W (CANADA), 80 W (U.S.A. AND MEXICO)
	AC120/220/240V 50/60 Hz AC120V 60 Hz (NORTH AMERICA AND MEXICO) AC230V 50/60 Hz (NEW ZEALAND AND EUROPE) AC230-240V 50/60 Hz (UNITED KINGDOM)
DIMENSIONS (WxHxD)	104.4 cm x 14.6 cm x 37.6 cm (41-3/32" x 5-3/4" x 14-13/16")
NET WEIGHT	13.2 kg (29.1lbs.)
ACCESSORIES	MUSIC STAND, AC CORD, DUST COVER

Design and specifications are subject to change without notice.

MEMO