

# Technics

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## SM-AC1200





## Caution (SY-AD8)

Voltage (except North America and Mexico)  
Be sure the voltage adjuster located on the 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 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

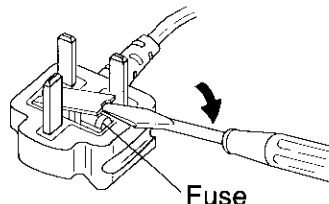
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

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

### **Before you play**

For long and pleasurable use of this instrument, and to gain a thorough understanding of your AC1200 MIDI ORCHESTRA, 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, SONG MEMORY** and MIDI.

#### **REFERENCE GUIDE** (separate booklet)

Reference guide for the contents of the **SOUND/VARIATION SELECT, RHYTHM SELECT**, MIDI data, etc.

### **If operation seems abnormal**

Immediately turn off the power, 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 amp is located inside the unit, it is normal for the cabinet to become warm.

(For U.S.A.)

Note: This equipment has tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The model number and serial number are found underneath the instrument.

Please note the model and serial numbers in the space provided below and retain this sheet as a permanent record of your purchase to aid identification in the event of theft.

MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

# Important Safety Instructions

(Cautions for safest use of this unit)

## WARNING!

When using this unit, basic precautions should always be followed, including the following:

1. Children using this unit should be supervised.
2. Do not use this unit near water—for example, in a wet basement, near a swimming pool, or the like.

## Installation location

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

## 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.

## Protect your hearing

This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause a permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

## About the AC adaptor

### Power source

1. Be sure the line voltage setting is in accordance with local voltage in your area before connecting the plug to the socket.
  - In NORTH AMERICA and MEXICO, use only a 120V AC power source.
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.

## If water gets into the unit...

Case should be taken so that liquids are not spilled in the unit. As a precaution, it is suggested that flower vases and other containers which hold liquids not be placed on the top of this unit.

## When to request service

The product must be serviced by qualified service personnel when:

- A. The power cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the unit; or
- C. The product has been exposed to rain; or
- D. The product does not appear to operate normally or exhibits a marked change in performance; or
- E. The product has been dropped, or the enclosure damaged.

## Service and repair

Never try to remove the top or back panels of this unit, or to touch inside parts by hand or with tools. All servicing beyond that described in the Maintenance section below should be referred to your dealer or qualified service personnel.

## Maintenance

1. Be sure to switch this unit 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.
2. To maintain the luster of the keys and buttons, wipe with a clean, damp cloth, and polish with a soft, dry cloth. Polish may be used, but do not use thinners or petro-chemical-based polishes.
3. In NORTH AMERICA and MEXICO, this product may be equipped with a polarized line plug (one blade wider than the other). This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
4. The power cord of this unit should be unplugged from the outlet when the unit is left unused for a long period of time.

**SAVE THESE INSTRUCTIONS**

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

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# Controls and functions

## DISPLAY

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

## AUTO PLAY CHORD

Add an automatic accompaniment to your selected rhythm. (Refer to pages 16, 33.)

## MAIN VOLUME

Adjust the volume of the entire instrument.

## COMPOSER

Create and store original rhythm patterns. (Refer to page 61.)

## ONE TOUCH PLAY

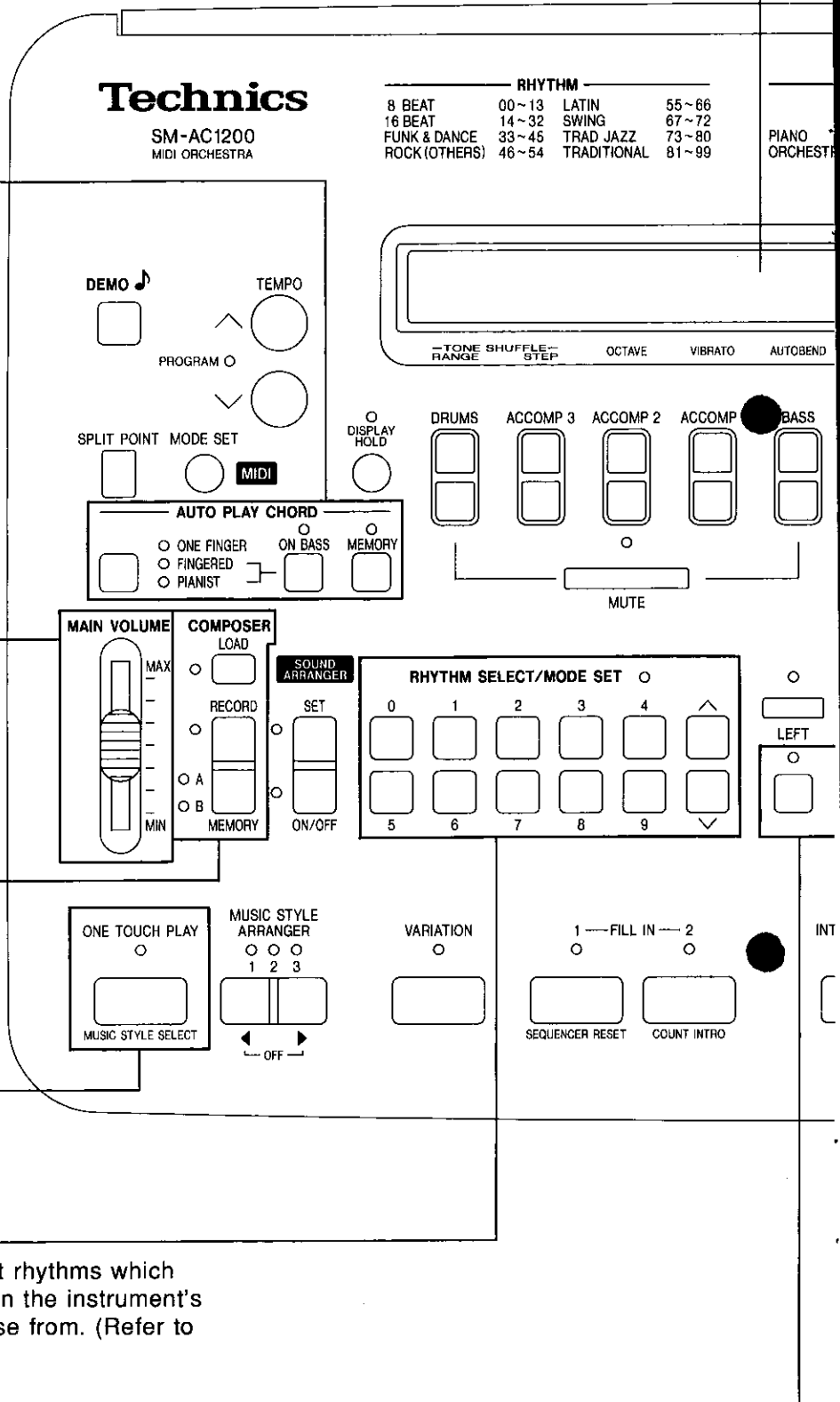
Sounds and effects matching the selected rhythm are automatically set. (Refer to pages 17, 37.)

## RHYTHM SELECT

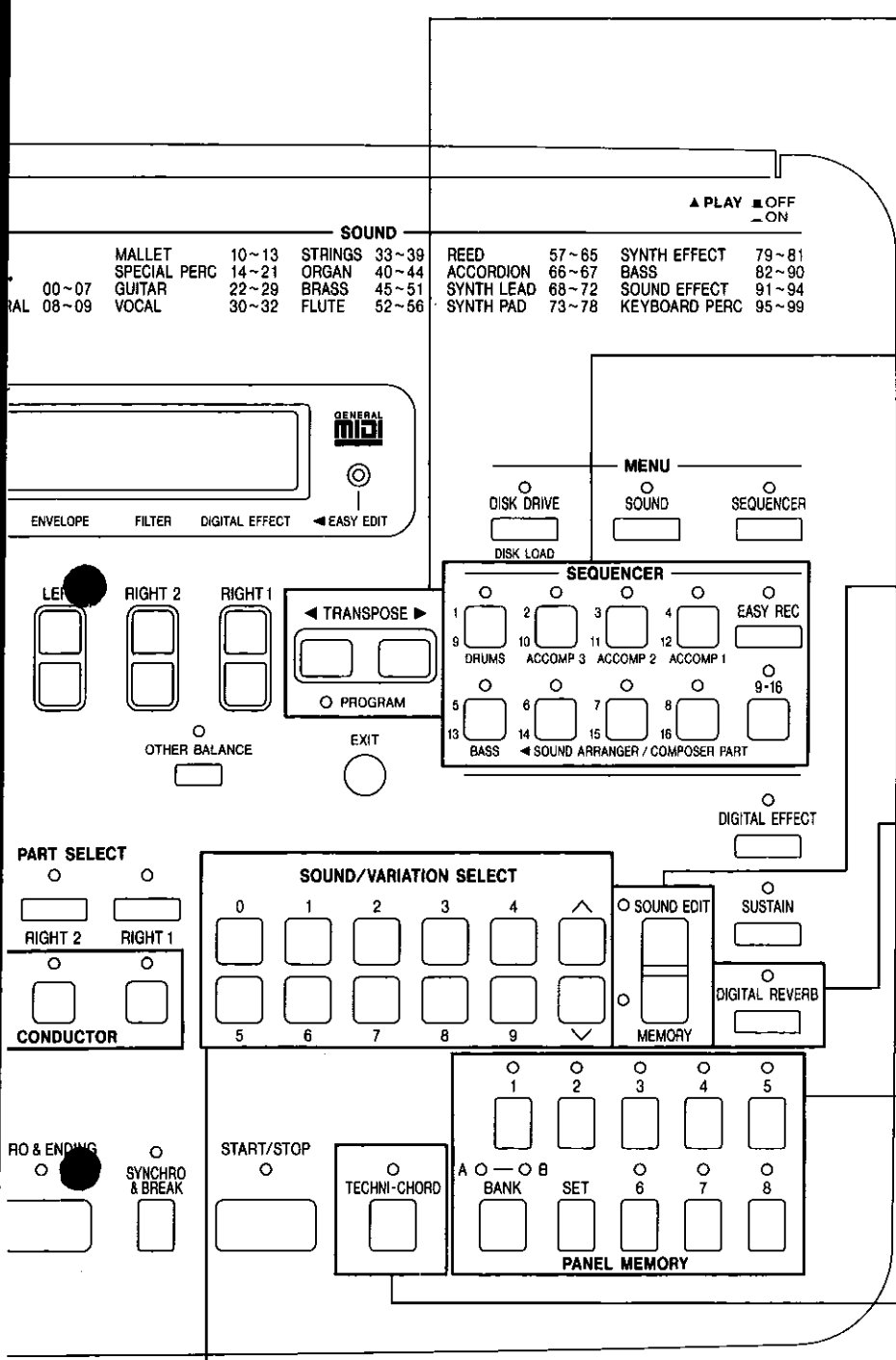
There are many different rhythms which are permanently stored in the instrument's memory for you to choose from. (Refer to pages 14, 29.)

## CONDUCTOR

Assign a different sound to each part, then assign the desired parts to sections of the keyboard. (Refer to page 24.)







**TRANSPOSE**  
Raise or lower the key of the entire keyboard. (Refer to page 27.)

**SEQUENCER**  
Record and play back your performance. (Refer to pages 18, 41.)

**SOUND EDIT**  
Modify preset sounds to create new and unique sounds. (Refer to page 82.)

**DIGITAL REVERB**  
Add reverberation to the sound. (Refer to pages 13, 26.)

**PANEL MEMORY**  
Store the panel settings, then recall them instantaneously just by pressing a button or two. (Refer to page 39.)

**TECHNI-CHORD**  
Block chords are automatically added to the melody. (Refer to page 28.)

**SOUND/VARIATION SELECT**  
You can choose from the many different sounds which are permanently stored in the instrument's memory. (Refer to pages 12, 23.)

**Backup memory**

The panel settings are maintained in a backup 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 instrument, use the **SAVE** procedure to store the desired data on a disk for recall at a later time.

- The back-up memory does not function unless the power has been on for about 10 minutes.

# Getting started

## How to use this instrument

The SM-AC1200 MIDI ORCHESTRA is an electronic instrument which is controlled by the signal from an external MIDI instrument. When connected to, for example, your digital piano or MIDI keyboard, it multiplies the capabilities of your instrument many times over.

### ■ Upgrade your current instrument

Upgrade your current electronic instrument by adding sounds and rhythms, plus the latest recording and editing capabilities.

### ■ Add automatic accompaniment to your digital piano etc.

By connecting this instrument to a digital piano or MIDI accordion, for example, without accompaniment capability, you can enjoy automatic accompaniment with your performances.

### ■ Play commercial music software

Now you can enjoy the broad variety of music software that is available. Not only Technics format software, but also Standard MIDI File format disks can be played on the built-in Disk Drive.

### ■ Use as a sound module

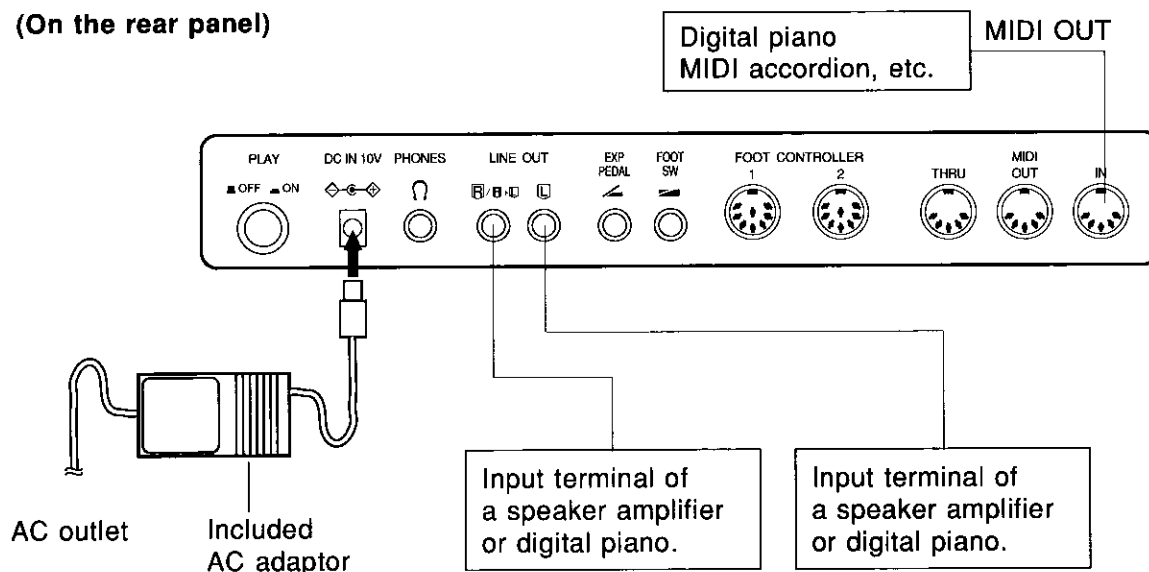
Add this instrument to a MIDI system which uses a personal computer and a simple external sequencer, and use it as a 16-part sound module (for General MIDI).

## Connections

Because this instrument is not equipped with speakers, it does not produce sound. Before using, you should complete the connections to the necessary equipment, for example, as shown below.

- Before you proceed with the connections, be sure to turn off the power to this instrument and to all equipment that will be connected.

(On the rear panel)



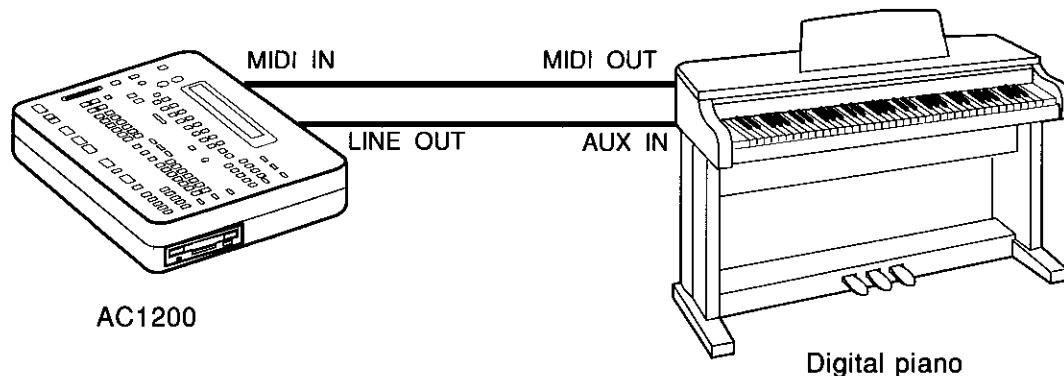
- When all the connections are completed, press the **PLAY** button to turn it on.

- Use only the included SY-AD8 AC adaptor (10V, 1A). Use of a different adaptor may damage your instrument.
- Use only a standard MIDI cable for the MIDI connections to external equipment.
- To output monaural sound, use the **R/R+L** terminals.
- You can also use this instrument by connecting headphones to the **PHONES** terminal.
- Additional information about the terminals is found on page 100.

## Connection examples and playing

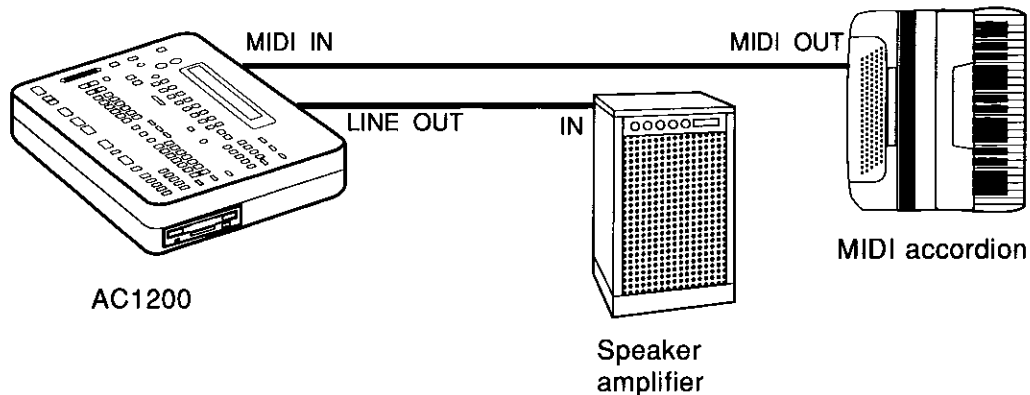
Given below are two typical ways to connect and use your MIDI ORCHESTRA. After connecting, play on the keyboard of the connected instrument.

### [1] Connect to a digital piano



- For this type of connection, the RIGHT 1 INPUT setting for the MIDI INPUT/OUTPUT SETTING should be set to the CONDUCTOR mode. (Refer to page 95.)

### [2] Connect to a MIDI accordion

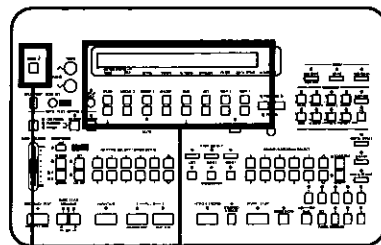


- For this type of connection, the RIGHT 1 INPUT setting for the MIDI INPUT/OUTPUT SETTING should be set to the DIRECT mode. (Refer to page 95.)

- You may not get any sound if the MIDI channels of the connected instrument do not match the channels of this instrument. You can reassign the MIDI channel for each part of this instrument. (Refer to page 93.)
- The explanations in this Owner's Manual are written with the assumption that the RIGHT 1 INPUT for the MIDI INPUT/OUTPUT SETTING is set to the CONDUCTOR mode (as in example [1] above).
- The pitch of this instrument can be adjusted for when playing with other instruments. (Refer to page 79.)

# Listen to the demonstration

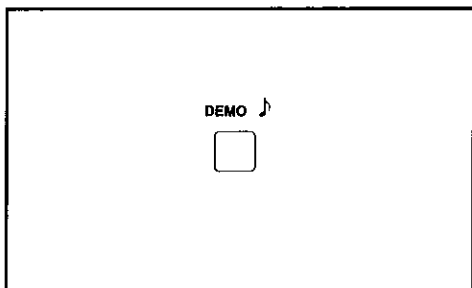
**Listen to a particular style, sound or rhythm demonstration.**



1.4 2.3

1

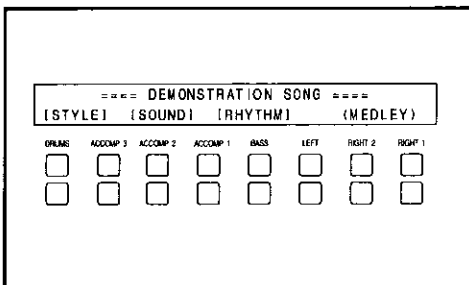
Press the **DEMO** button.



- The display changes to the DEMONSTRATION display.

2

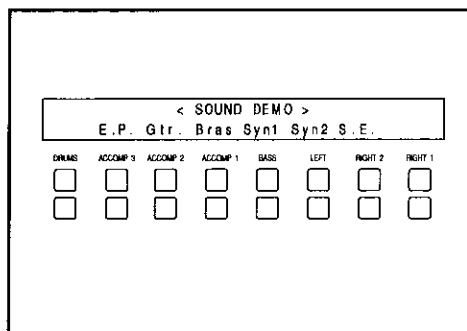
Select [STYLE], [SOUND] or [RHYTHM] from the display. (Press the corresponding button directly below the display).



- The display changes.

3

Press the button for the style, sound or rhythm demonstration performance you wish to hear.  
<Example: SOUND>

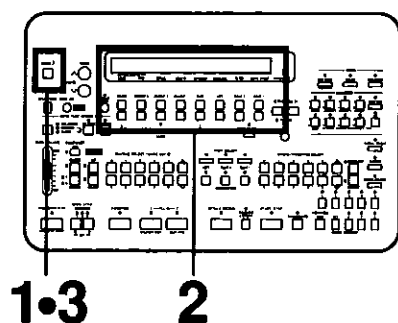


- The demonstration performance corresponding to your selection will begin.
- Repeat this procedure to listen to other styles, sounds and rhythms.
- To change for example from the SOUND demonstration to the RHYTHM demonstration, or vice versa, press the **EXIT** button and repeat the procedure from step 2.
- To end the demonstration before it has finished, select [STOP]. (Press the corresponding button directly below the display.) You can also press the **START/STOP** button to end the demonstration.

4

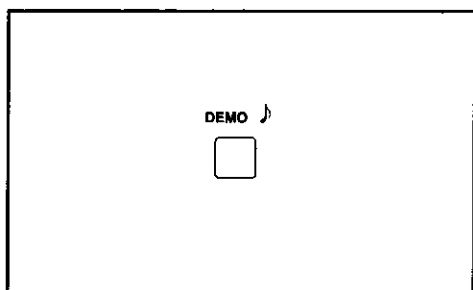
When you are finished listening to the demonstration tunes, press the **DEMO** button again.

## Listen to the medley demonstration performance.



1

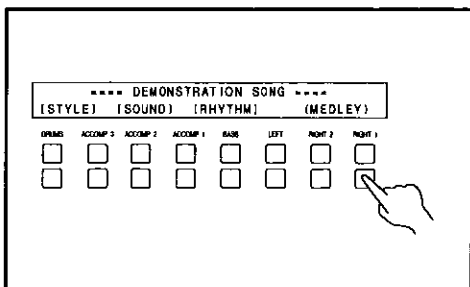
Press the **DEMO** button.



- The display changes to the DEMONSTRATION display.

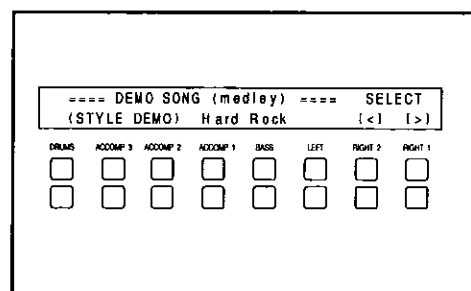
2

Select **[MEDLEY]** from the display.



- The medley demonstration performance will begin.

- The name of the currently playing style, sound or rhythm is shown on the display.



- You can choose a demonstration song with the SELECT [**<**] and [**>**] buttons.

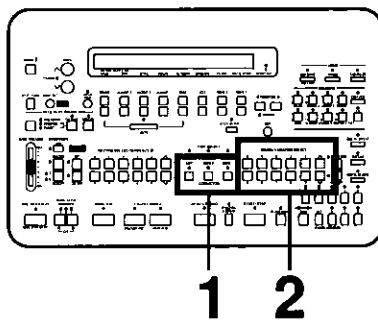
3

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

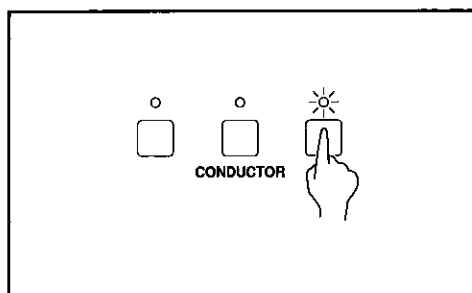
- If you press and hold the **DEMO** button for a few seconds, or if you press first the **DEMO** button and then the **START/STOP** button, the medley demonstration performance begins.
- The medley performance continues until the **START/STOP** button or the **DEMO** button is pressed again.

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

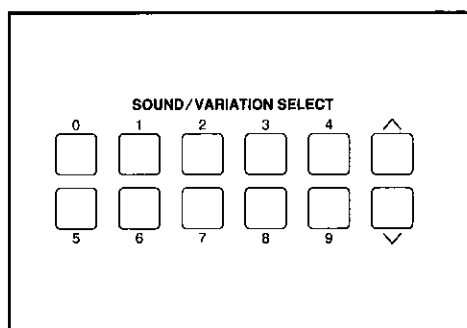
# Selecting other sounds



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



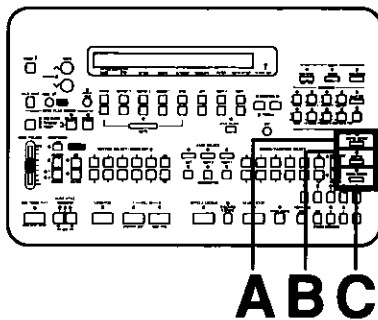
- 2** On the **SOUND/VARIATION SELECT** number pad, select a sound number (2 digits).



- The list of sounds and their numbers is found in the separate sheet provided.
- For single-digit sound numbers: for sound **03**, for example, press **0**, then **3**.
- You can use the **^** and **v** buttons to change to the next higher or lower sound number.

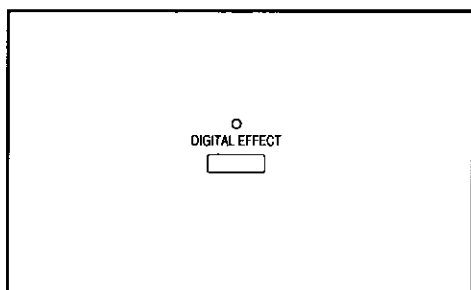
- Other things you can do are mixing sounds and playing different sounds on the left and right areas of the keyboard of the connected instrument. (Refer to page 24.)
- Each sound also has a variation sound that you can select. (Refer to page 23.)

# Add effects



## Add a feeling of spaciousness to the sound.

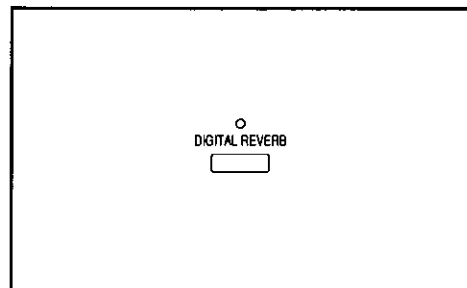
**A** Turn on the **DIGITAL EFFECT** button.



- The sound is broader and deeper.

## Add reverberation.

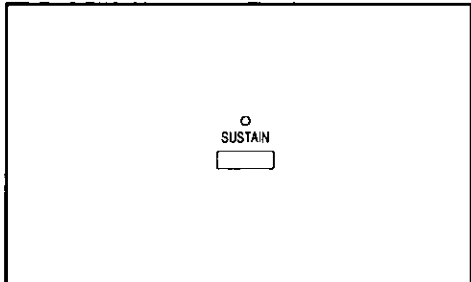
**C** Turn on the **DIGITAL REVERB** button.



- The reverberation effect is applied to all sounds.

## Add sustain.

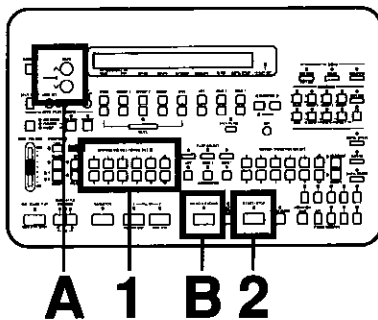
**B** Turn on the **SUSTAIN** button.



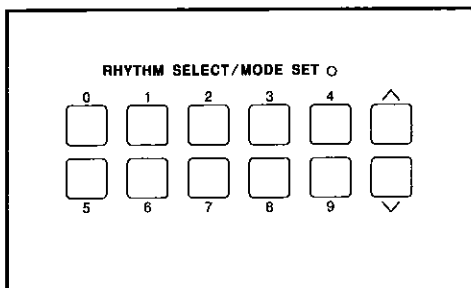
- Play and release a key on the connected instrument. The tones fade out gradually after the key is released.

- The type of **DIGITAL EFFECT** differs depending on the selected sound.

# Playing automatic rhythms

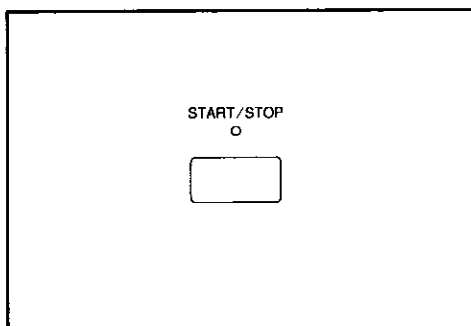


**1** On the **RHYTHM SELECT** number pad, select a rhythm number (2 digits).



- The list of rhythms and their numbers is found in the separate sheet provided.
- You can use the  $\wedge$  and  $\vee$  buttons to change to the next higher or lower rhythm number.

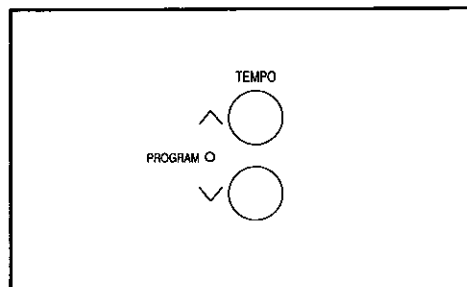
**2** Start the rhythm by pressing the **START/STOP** button.



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

## Adjust the tempo.

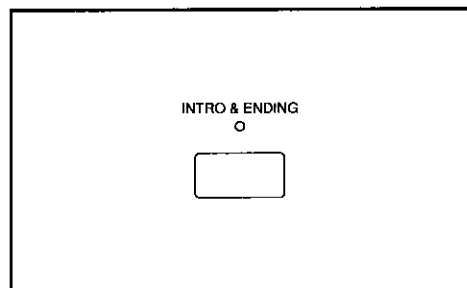
**A** Adjust the tempo with the **TEMPO** buttons.



- The tempo is shown on the display.

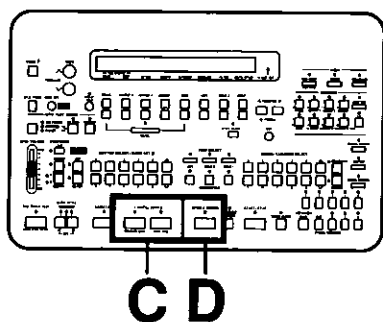
## Insert an intro pattern.

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



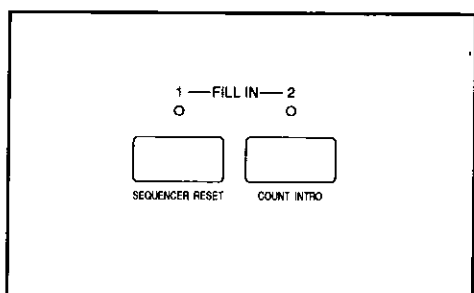
- An intro is played, after which the regular rhythm starts.





**Insert a fill-in pattern.**

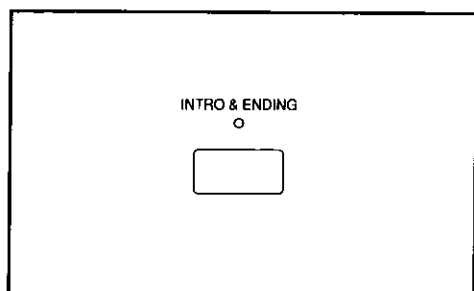
**C** While the preset rhythm pattern is playing, press either the **FILL IN 1** or **FILL IN 2** button.



- A fill-in pattern immediately starts to play.

**Insert an ending pattern.**

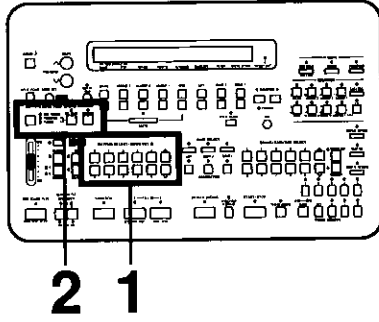
**D** While the rhythm is playing, press the **INTRO & ENDING** button.



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

# Automatic accompaniment

## Use the AUTO PLAY CHORD

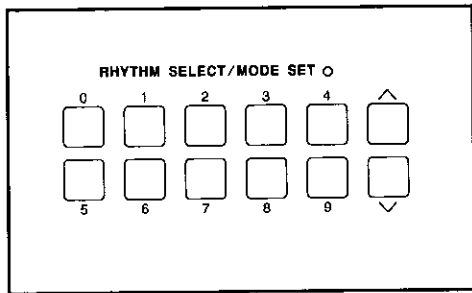


Use the **AUTO PLAY CHORD** with the following tune.

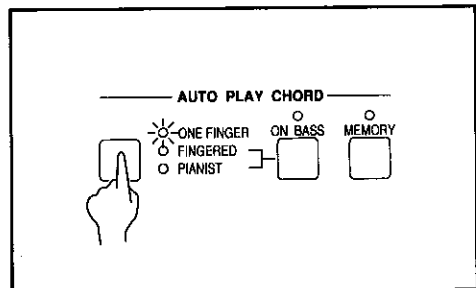
### She Wore A Yellow Ribbon



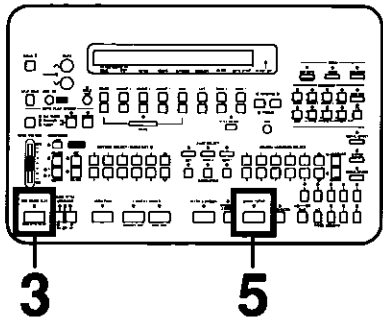
**1** On the **RHYTHM SELECT** number pad, select **95** for the **Bluegrass** rhythm.



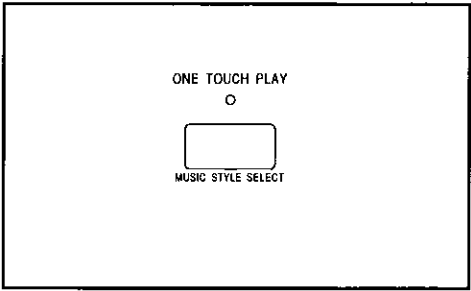
**2** In the **AUTO PLAY CHORD** section, select **ONE FINGER**.



- The keyboard of the connected instrument automatically divides into left and right playing areas.

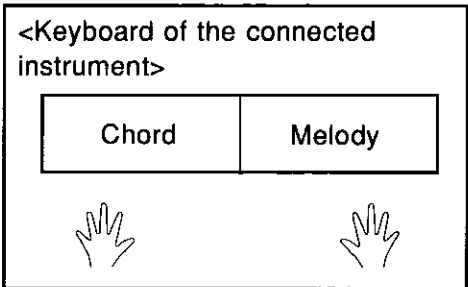


**3** Press and hold the **ONE TOUCH PLAY** button until the indicator goes out.

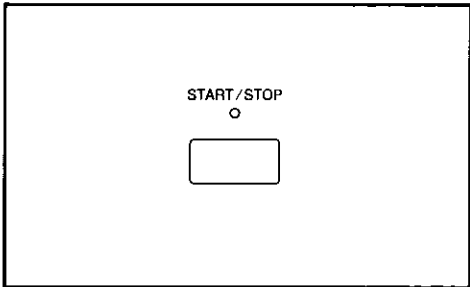


- Pressing a key on the left area of the keyboard will cause the automatic rhythm pattern to start playing (synchro start).
- When the C key is pressed on the left area of the keyboard, an accompaniment begins to play in the C major key.
- Playing the chord key (root note) and the white key to its left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

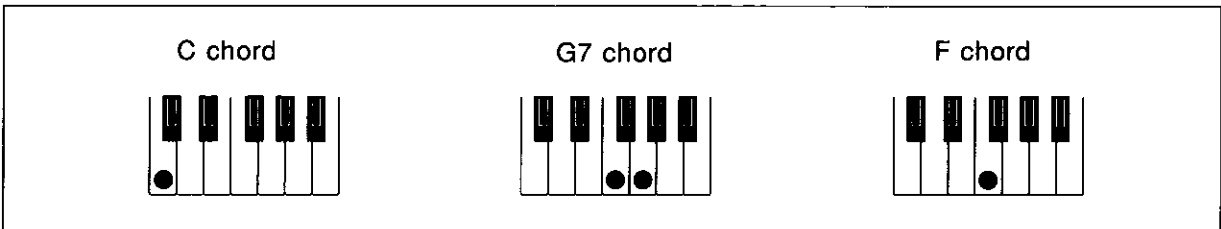
**4** Use your left hand to play the chords and your right hand to play the melody.



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



- The automatic accompaniment stops.

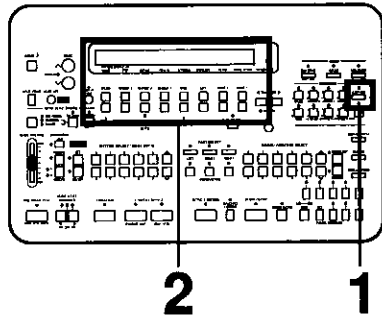


- In this example you played chords by pressing the keys for the "root notes" (**ONE FINGER** chords). But you can also specify the chord by playing all the notes in the chord. (Refer to page 34.)

- The operations on these two pages cannot be performed unless the **RIGHT 1 INPUT** for the **MIDI INPUT/OUTPUT SETTING** is set to the **CONDUCTOR** mode. (Refer to page 95.)

# Record your performance

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

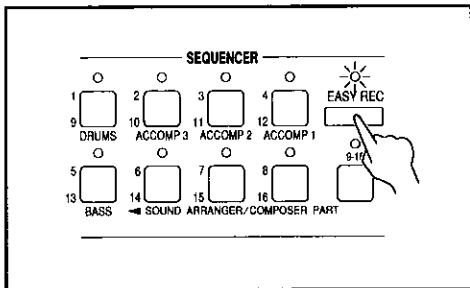


## Sonatina

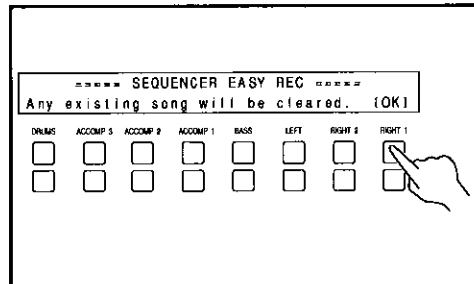
Sound: 00 Piano (RIGHT 1 part)

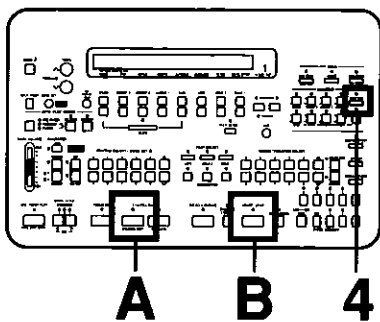


**1** In the **SEQUENCER** section, turn on the **EASY REC** button.



**2** Select [OK]. (Press the corresponding button directly below the display.)

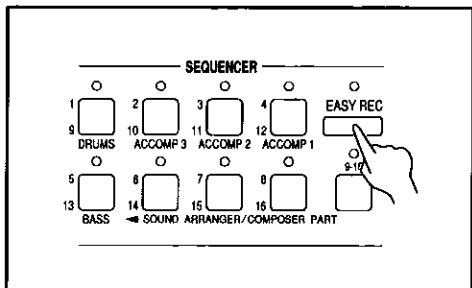




**3** Play the song on the keyboard of the connected instrument.

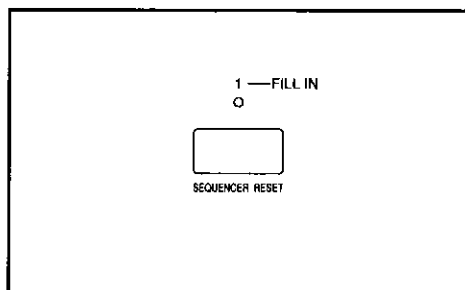
- Recording begins.

**4** When you have finished playing, press the **EASY REC** button in the **SEQUENCER** section again to turn it off.

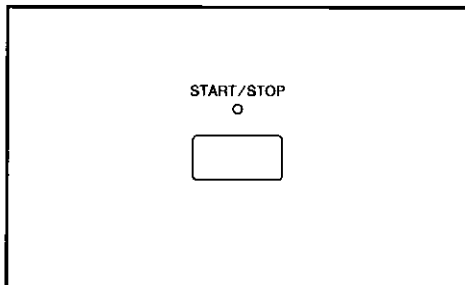


### Playing back your recorded performance

**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.

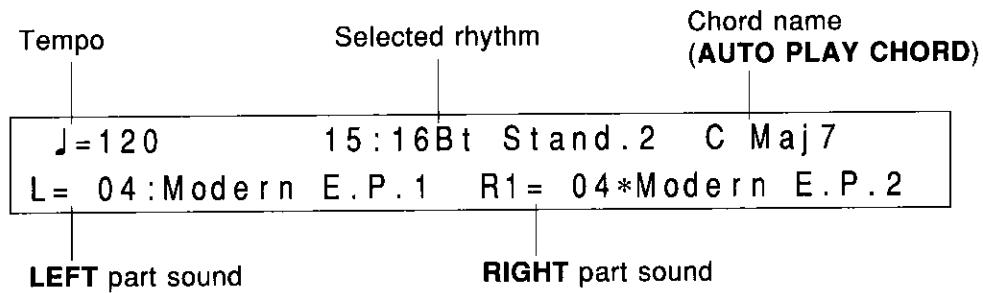
- You can also record several parts individually and then have them played back together for an ensemble performance. (Refer to page 46.)

# About the display

The display shows various information and is used for most of this instrument's operations.

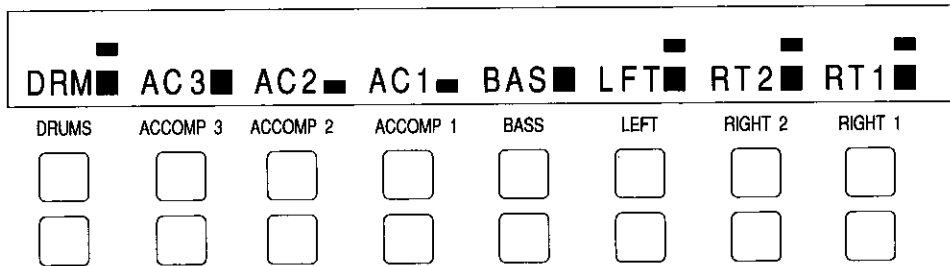
## Normal display

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



## Volume balance

When you press one of the balance buttons below the display, the volume of each performance part is shown as a bar graph. Use the buttons directly below the display to adjust the volume of each part.

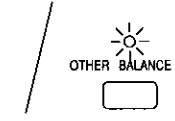
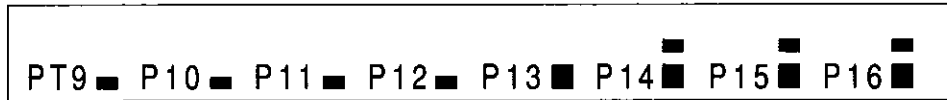
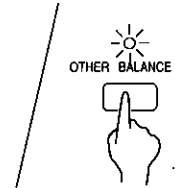


Press the upper button to increase the volume, and the lower button to decrease the volume.

- Keep the button pressed to change the level quickly.
- A few seconds after changing the setting, the display returns to the previous display.

■ **OTHER BALANCE**

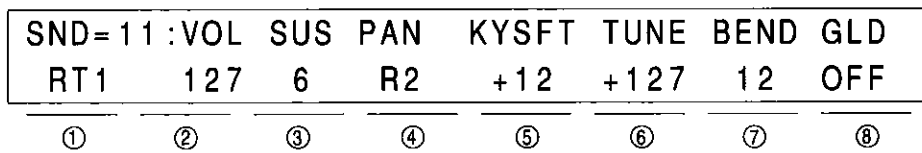
This instrument can be used as a 16-part multi-timbre sound source and the volume for each part can be adjusted. While the volume is displayed, each time the **OTHER BALANCE** button is pressed, the display alternates between the parts 1 to 8 volume display, the parts 9 to 16 volume display and the performance parts volume display.



- When this instrument is set to the GENERAL MIDI mode, pressing a balance button changes the display to the volume-setting display for channels 1 to 8, and pressing the **OTHER BALANCE** button changes the display to the volume-setting display for channels 9 to 16. (Refer to page 97.)
- While an **OTHER BALANCE** display is shown, pressing the **EXIT** button will return the display to the one prior to the volume-setting display.

**Setting display**

When setting various functions, the available options are shown on the display. The balance buttons below the display are used to select and adjust the settings.



■ **Examples of instructions you will find in this manual**

Example 1: "Press either ② button."  
 This means that you should press either balance button (upper or lower) in the ② (**AC-COMP 3**) position.

Example 2: "Use the ⑥ buttons to set the value."  
 This means that you should use the upper and lower balance buttons in the ⑥ (**LEFT**) position to change the number shown on the display.

## EXIT button



While a setting display is shown, press this button, at the lower right of the display, 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.

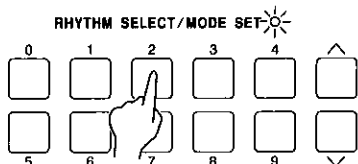
## CONTRAST

Adjust the contrast of the display.

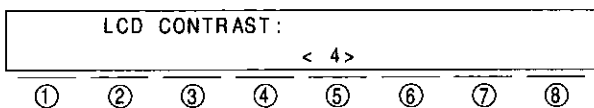
1. Press the **MODE SET** button (to the left of the display).



2. On the **RHYTHM SELECT/MODE SET** number pad, press 2.



- You can also select the function on the display by pressing the corresponding balance button.
- The following display appears.

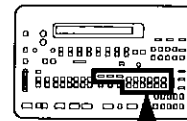


3. Use the ⑤ buttons to adjust the contrast (1 to 8).
  - The higher the number the lighter the display characters.
4. When you have finished making the settings, press the **MODE SET** button.
  - The display goes back to the previous display.



# Part I Sounds and effects

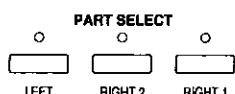
## Selecting sounds



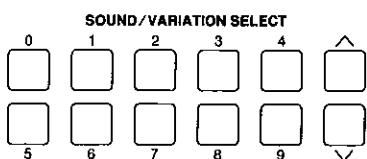
Select the sounds for the three parts you can assign to the keyboard of the connected instrument—**RIGHT 1**, **RIGHT 2** and **LEFT**. After first selecting a part, choose the desired sound by its number.

### Select a sound

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

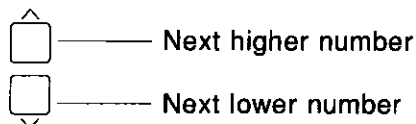


- On the **SOUND/VARIATION SELECT** number pad (0 to 9), press the buttons to select the desired sound (2 digits).



- A list of sounds and their numbers is found in the separate sheet provided.
- The selected sound number and sound name are shown on the display.
- For single-digit numbers: for example, for sound **03**, press **0**, then press **3**.
- If this instrument is set to the **GENERAL MIDI** mode, enter 3 digits to select the sound (**001** to **128**). (Refer to page 97.)

### ▲ and ▼ buttons



- Keep the ▲ or ▼ button pressed to scroll the numbers quickly.

### ■ Variation sound

Each sound also has a variation sound that you can select. After selecting the desired sound, press the ▲ button once.

- The variation sound is selected, and a \* appears to the right of the sound number on the display.
- You can also use the ▲ and ▼ buttons to alternate between the normal sound and the variation sound.
- A list of sounds and their variations can be found in the separate "REFERENCE GUIDE" provided.

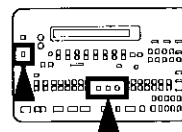
### ■ Percussion sounds (KEYBOARD PERC)

Sound numbers **95** to **99** are percussion instrument sounds and their variations.

- Percussion instrument sounds are produced by the keyboard keys of the connected instrument.
- For further information about the arrangement of percussion sounds, refer to the separate "REFERENCE GUIDE" provided.

- Repeat steps 1 and 2 to select sounds for the other parts.

# Assigning parts to the keyboard



The **CONDUCTOR** buttons are used to assign sounds to the keyboard of the connected instrument in many different ways. For example, you can assign two sounds to the 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
	All keys produce the <b>RIGHT 1</b> sounds. <div style="border: 1px solid black; padding: 5px; text-align: center; width: 100%;">RIGHT 1</div>
	All keys produce the <b>RIGHT 2</b> sounds. <div style="border: 1px solid black; padding: 5px; text-align: center; width: 100%;">RIGHT 2</div>
	The left keys produce the <b>LEFT</b> sound and right keys produce no sound ( <b>SPLIT</b> ). <div style="display: flex; justify-content: space-between; border: 1px solid black; padding: 5px;"> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">LEFT</div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">---</div> </div>
	All the keys play both <b>RIGHT 1</b> and <b>RIGHT 2</b> sounds at the same time. <div style="border: 1px solid black; padding: 5px; text-align: center; width: 100%;">RIGHT 1 + RIGHT 2</div>
	The left keys produce the <b>LEFT</b> sound and the right keys produce the <b>RIGHT 1</b> sound and the <b>RIGHT 2</b> sound ( <b>SPLIT</b> ). <div style="display: flex; justify-content: space-between; border: 1px solid black; padding: 5px;"> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">LEFT</div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">RIGHT 1 + RIGHT 2</div> </div>
	The left keys produce the <b>LEFT</b> sound and the right keys produce the <b>RIGHT 1</b> sound ( <b>SPLIT</b> ). <div style="display: flex; justify-content: space-between; border: 1px solid black; padding: 5px;"> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">LEFT</div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">RIGHT 1</div> </div>
	The left keys produce the <b>LEFT</b> sound and the right keys produce the <b>RIGHT 2</b> sound ( <b>SPLIT</b> ). <div style="display: flex; justify-content: space-between; border: 1px solid black; padding: 5px;"> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">LEFT</div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">RIGHT 2</div> </div>
	The <b>RIGHT 1</b> , <b>RIGHT 2</b> and <b>LEFT</b> sounds are not produced. • Use this setting when you wish to use this instrument to produce rhythms (including automatic accompaniment) only.

- The volume balance for each part can be adjusted. (Refer to page 20.)
- The following conditions are in effect when the **AUTO PLAY CHORD** (page 33) is used.
  - ONE FINGER, FINGERED** mode: You cannot assign sounds to all the keys.
  - PIANIST** mode: The keyboard cannot be split.

## SPLIT POINT

You can change the location of the split point.

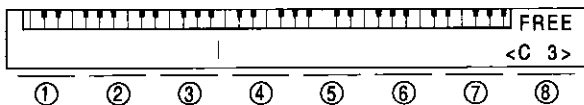


- Each time the **SPLIT POINT** button is pressed, the split point changes as follows: G2 → C3 → G3 → customized split point (see below).

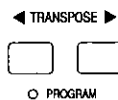
### ■ Customized split point

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.
- The following display appears.

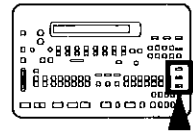


2. Use the **TRANPOSE** buttons to specify the desired split point.



- The split point is graphically indicated 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.

# 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 **KEYBOARD PERC** sounds.
- You can select the type of **DIGITAL EFFECT**. (Refer to page 88.)

## SUSTAIN

**SUSTAIN** is the gradual fading out of musical tones after the key of the connected instrument 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 some sounds.
- The length of the **SUSTAIN** can be adjusted. (Refer to page 79.)
- The sustain can also be turned on and off with the optional Foot Switch or Foot Controller (sold separately). (Refer to page 40.)

## DIGITAL REVERB

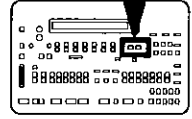
**DIGITAL REVERB** applies a reverberation effect to the sound.

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



- This effect is applied to all the sounds of this instrument.
- You can select the type of **DIGITAL REVERB** and adjust the length. (Refer to page 81.)

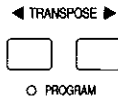
# Transpose



The **TRANPOSE** buttons are used to change the key of the entire instrument in semitone 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 **TRANPOSE** feature.

Adjust the key with the **TRANPOSE** buttons.



- Each press of the right button raises the key a semitone, and each press of the left button lowers the key a semitone (G—C—F#).
- If the two buttons are pressed at the same time, the key returns to C.
- When the **TRANPOSE** function is active, the transposed key is shown on the display.

- When the **PROGRAM** indicator is flashing, these buttons are used for setting various functions and cannot be used to change the key.

Actual key

```
J=120 <D > 15:16Bt Stand.2 C Maj7
L= 04:Modern E.P.1 R1= 04*Modern E.P.2
```

<Example: transposed to D>

Played keys



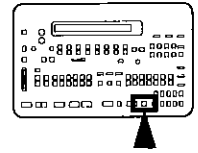
C major

Notes that sound



D major

# Techni-chord



The **TECHNI-CHORD** feature expands the sound of your performance so that a harmony is produced for the notes played on the right part of a split keyboard.

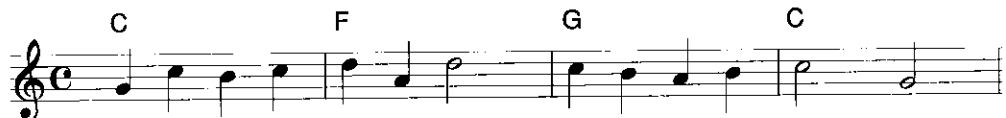
1. Use the **SPLIT POINT** button to split the keyboard of the connected instrument into left and right sections. (Refer to page 25.)
2. Press the **TECHNI-CHORD** button to turn it on.



3. Play the keyboard.
  - A harmony based on the chords you play with your left hand is added to the notes you play with your right hand.
  - This feature is very effective when used with the **ONE FINGER** mode or **FINGERED** mode of the **AUTO PLAY CHORD**. (The **TECHNI-CHORD** feature is not available for the **PIANIST** mode.)
  - You can select the desired harmony style. (Refer to page 80.)

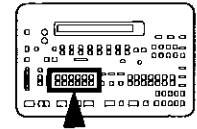
Example:  
Left hand (chord)

Right hand (melody)



# Part II Playing the rhythm

## Selecting rhythms

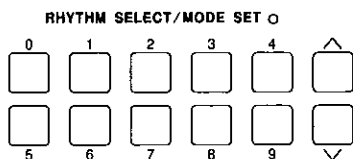


The rhythm section enhances the capabilities of your instrument with features such as automatic performance of the preset rhythm patterns and accompaniment patterns.

### Select a rhythm

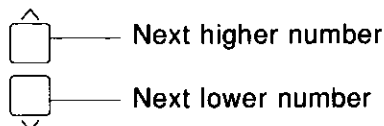
Select a rhythm by its number.

1. On the **RHYTHM SELECT/MODE SET** number pad (0 to 9), press the buttons to select the desired rhythm (2 digits).



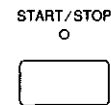
- A list of rhythms and their numbers is found in the separate sheet provided.
- The selected rhythm number and rhythm name are shown on the display.
- For single-digit numbers: for example, for rhythm 03, press 0, then press 3.

#### ■ ^ and v buttons



- Keep the ^ or v button pressed to scroll the numbers quickly.

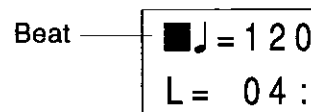
2. Press the **START/STOP** button to turn it on.



- The selected rhythm pattern immediately begins to play.
- You can stop the rhythm by pressing the **START/STOP** button again to turn it off.

#### ■ Beat

While the rhythm is on, the beat is shown on the display.



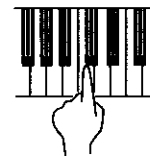
### Synchronized start

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

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



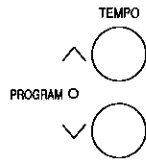
3. Play a key to the left of the keyboard split point.



- 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

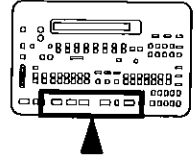
The tempo of the rhythm pattern is adjusted with the **TEMPO** buttons.



- Each press of the ^ button increases the tempo, and each press of the v button decreases the tempo.
- The tempo is shown on the display as a numerical value (♩ = 40 to 300).
- Keep the ^ or v button pressed to scroll the numbers quickly.
- If the two buttons are pressed at the same time, the tempo returns to the standard 120 setting.
- When the **PROGRAM** indicator is flashing, these buttons are used for setting various functions and cannot be used to adjust the tempo.



# Playing the rhythm

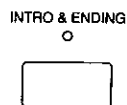


Intro, fill-in and ending patterns fitting each different rhythm pattern are permanently recorded in your instrument, thus allowing a versatile rhythm performance.

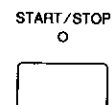
## INTRO

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.

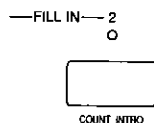


- An intro pattern is played, after which the normal rhythm pattern begins.

## 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.

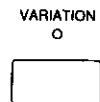
- A one-measure count is played, after which the normal rhythm pattern begins.

## 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.



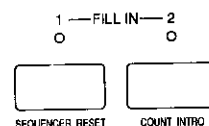
- The rhythm changes to a flashier pattern.
- Press the **VARIATION** button again to turn it off and go back to the normal rhythm pattern.
- The **VARIATION** button does not work when the **MUSIC STYLE ARRANGER** is on. (Refer to page 38.)

**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.



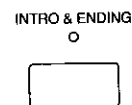
- A fill-in pattern is heard immediately for the remainder of the measure.
- When a **FILL IN** button is pressed on the last beat of the measure, the fill-in pattern continues to the end of the following measure.

**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.

# Auto Play Chord



Simply by playing a chord on the keyboard of the connected instrument, 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

<Keyboard of the connected instrument>



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**.

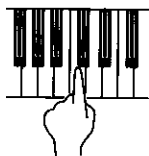
## Playing chords

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.



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

Minor	Seventh	Minor seventh
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.
Example: Cm 	Example: C7 	Example: Cm7 

### ■ FINGERED mode

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

- The automatic accompaniment can recognize the following types of chords for each key (C is given as an example): C, C7, CM7, Caug, Caug7, Cm, Cm7, Cdim, Cm7<sup>b5</sup>, CmM7, Csus4, C7sus4, C<sup>b5</sup>, C7<sup>b5</sup>, Cm<sup>b5</sup>, C6, Cm6, CM7<sup>b5</sup>, CM7<sup>#5</sup>, CmM7<sup>b5</sup>, etc.

### ■ 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 automatic accompaniment also recognizes 9th and 13th chords.

### ■ ON BASS

If the **ON BASS** button is on while the **FINGERED** or **PIANIST** mode is selected, the **BASS** part is produced in the key of the lowest note of the played chord, thus making it possible to play chords such as D on C.

### ■ MEMORY

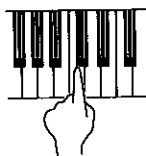
When the **MEMORY** button is on, even when the keys are released, the chord is memorized and the accompaniment continues to play until you specify another chord.

## 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 of the connected instrument 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 29.)
  4. Specify a chord.



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

- If the **ONE FINGER** or **FINGERED** mode was selected, specify the chord on the keyboard section to the left of the split point.
  - When you use **INTRO**, **FILL IN** and **ENDING**, the automatic accompaniment is also used in these patterns.
  - The volume of each part of the automatic accompaniment can be adjusted. (Refer to page 20.)
  - 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 80.)
  - In the initialized condition, when the rhythm is off, if the **ONE FINGER** or **FINGERED** mode is on and a chord is specified, the specified root note (R.B part) and chord notes (CHD part) are produced.
5. To stop the automatic accompaniment, press the **START/STOP** button.

### BREAK function

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

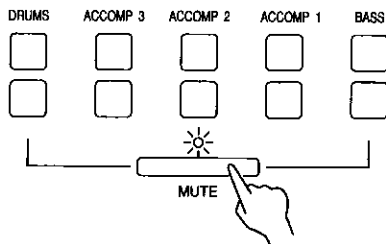
1. Select an **AUTO PLAY CHORD** mode.
  - At this time, the **MEMORY** button should be off.
2. Press the **SYNCHRO & BREAK** button to turn it on.
3. Specify a chord with your left hand.
  - The automatic accompaniment begins to play (synchronized start).
4. Release the left-hand keys.
  - The automatic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



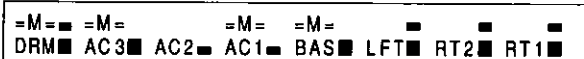
### MUTE function

You can turn off the sound of a specific part or parts of the **AUTO PLAY CHORD**.

While pressing the **MUTE** button, press the button for the part(s) whose sound you wish to turn off.

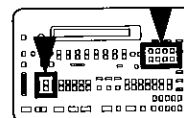


- The selected parts are muted (produce no sound).
- While the button is pressed, the balance display is shown. Parts which are muted are indicated by a "=M=" mark.



- To cancel the mute function, while pressing the **MUTE** button, again press the button for the muted part.
- If any part is muted, the **MUTE** indicator is lit. When the **MUTE** function is off for all parts, the indicator is not lit.

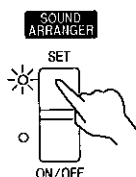
# Sound Arranger



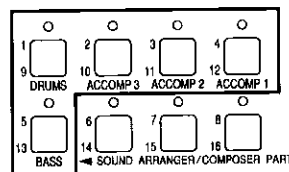
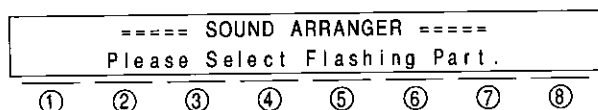
The **SOUND ARRANGER** feature lets you select other sounds for the **AUTO PLAY CHORD** parts of each rhythm.

## Setting the sounds

- In the **RHYTHM SELECT/MODE SET** section, select the rhythm whose sound you wish to change.
  - Do not select a **COMPOSER** rhythm.
- In the **SOUND ARRANGER**, press the **SET** button to turn it on.



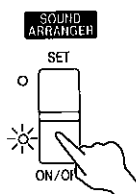
- The display changes to the following.



- The number and name of the sound currently assigned to the part are shown on the display.
- On the **SOUND/VARIATION SELECT** number pad, select the desired sound.
    - The **DIGITAL EFFECT** on/off status can also be specified (except for **KEYBOARD PERC** sounds).
    - For the **DRUMS** part, select sounds from the **KEYBOARD PERC (95 to 99)** sounds. (These sounds cannot be selected for other parts.)
  - Repeat steps 3 and 4 for the other parts as desired.
  - When you have finished selecting the sounds, press the **SET** button to turn it off.

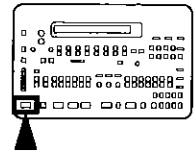
## Playing back the sounds

- In the **SOUND ARRANGER**, press the **ON/OFF** button to turn it on.



- Start the rhythm (automatic accompaniment).
  - When the **ON/OFF** button is off, the factory-preset sounds are produced.

# One Touch Play



**ONE TOUCH PLAY** sets up your instrument with a suitable registration for your chosen rhythm style so that you can make a great sound straight away, even if you are playing your instrument for the first time.

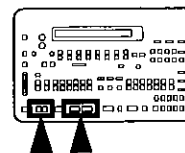
1. Select a rhythm.
  - Do not select a **COMPOSER** rhythm.
2. Press and hold the **ONE TOUCH PLAY** button until its indicator goes out.
 
  - The **AUTO PLAY CHORD** and the **SYNCHRO & BREAK** button turn on, and the sounds, effects, rhythm and tempo which are best suited for the selected music style are automatically selected.
3. Play the keyboard of the connected instrument.
  - When a key on the left section of the keyboard is pressed, the automatic rhythm begins to play immediately.
  - Press the **INTRO & ENDING** button before you play for a professional-sounding introduction.
  - Use the **ONE TOUCH PLAY** settings as a starting point for your own settings. Alter the sounds, volume and tempo to your own taste and store the new settings in the **PANEL MEMORY** for future use. (Refer to page 39.)

# Music Style Select

With this feature, all the instrument settings, including the sounds, effects and rhythm, are set according to the selected music style.

1. Press the **MUSIC STYLE SELECT (ONE TOUCH PLAY)** button to turn it on.
  - The display looks similar to the following.
2. Use the ④ or ⑤ buttons to select the performance 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.
3. Press the **MUSIC STYLE SELECT (ONE TOUCH PLAY)** button to turn it off.
4. Play the keyboard of the connected instrument.
  - When a key on the left section of the keyboard is pressed, the automatic rhythm begins to play immediately.
  - Press the **INTRO & ENDING** button before you play for a professional-sounding introduction.
  - Use the **MUSIC STYLE SELECT** settings as a starting point for your own settings. Alter the sounds, volume and tempo to your own taste and store the new settings in the **PANEL MEMORY** for future use. (Refer to page 39.)

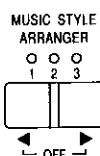
# Music Style Arranger



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.

## 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.



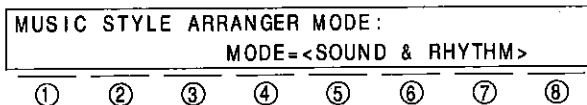
- 1: Simple pattern
- 2: Normal pattern
- 3: Flashy pattern

- Press the **▶** button to raise the number (1 → 2 → 3 → 1 → 2 ...), or the **◀** button to lower the number (3 → 2 → 1 → 3 → 2 ...).
- 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.
- The on/off status of the **VARIATION** button is also automatically set and cannot be changed when the **MUSIC STYLE ARRANGER** is on.
- While you are playing, press the **◀** or **▶** button to change the style.
- To turn the **MUSIC STYLE ARRANGER** function off, press the **◀** and **▶** buttons at the same time.

### ■ MUSIC STYLE ARRANGER mode

You can define which panel settings change when the **MUSIC STYLE ARRANGER** is used.

1. Press and hold the **◀** or **▶** button for a few seconds.
- The display changes to the following.



2. Select the mode with the **⓪** buttons.

**SOUND:** Only the sound changes.

**RHYTHM:** Only the rhythm changes.

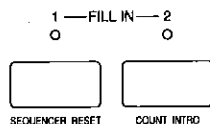
**SOUND & RHYTHM:** Both the sound and rhythm change.

**PANEL MEMORY:** The **PANEL MEMORY** number changes.

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

## How to change the music style during your performance

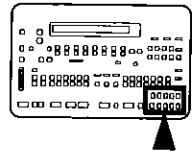
While you are playing with the **MUSIC STYLE ARRANGER** on, press the **FILL IN 1** or **FILL IN 2** button.



- 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.



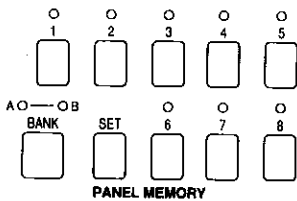
# Panel Memory



**PANEL MEMORY** stores the panel setup of your instrument, allowing you to make complex changes in seconds. Store up to 16 different panel setups (2 banks × 8 memories).

## 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 (A or B).
3. With the **SET** button held down, press one of the numbered buttons of the **PANEL MEMORY** (1 to 8).

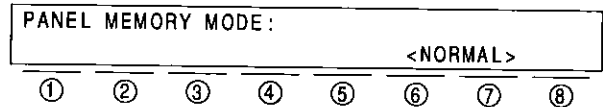


- The panel settings are now stored in the specified bank and number.
- To recall the stored settings, just select the **BANK** and press the desired **PANEL MEMORY** number button.

### ■ 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.



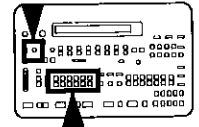
2. Use the ⑦ buttons to select the mode.

**NORMAL** mode: Stores sound and volume balance settings only.

**EXPAND** mode: Stores the total setting including rhythm (except for the **SOUND ARRANGER ON/OFF** button status), **TRANSPOSE** and tempo.

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

# Foot switch and Foot controller settings



If an optional Foot Switch and/or Foot Controllers (4-switch controller) are connected, you can assign each switch one of several functions. The assigned function(s) can then be controlled with your foot.

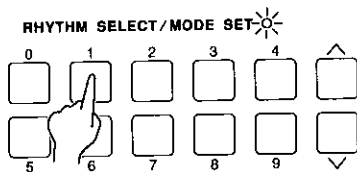
- For connections, refer to page 100. Two Foot Controllers can be connected.

## Switch setting

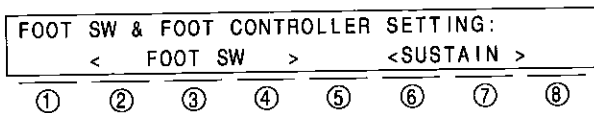
1. Press the **MODE SET** button.



2. On the **RHYTHM SELECT/MODE SET** number pad, press 1.



- You can also select the function on the display by pressing the corresponding balance button.
- The display changes to the following.



3. Use the ③ buttons to specify the switch.
  - The number to the left of the Foot Controller number is the number of the connection terminal, and the number to the right is the switch number.
4. Use the ⑦ buttons to specify the function to assign to the switch.
  - Refer to the table for functions which can be assigned.
5. Repeat steps 3 and 4 for the other switches.
6. When you have completed making the setting, press the **MODE SET** button again.

## Functions which can be assigned to the switches

Function	Action
P. MEM A1 to A8	Turns on specified <b>PANEL MEMORY</b> in <b>BANK A</b>
B1 to B8	Turns on specified <b>PANEL MEMORY</b> in <b>BANK B</b>
P. M. INC	Increase <b>PANEL MEMORY</b> number by 1
STRT/STP	<b>START/STOP</b> on/off
VARI	<b>VARIATION</b> on/off
FILL 1, 2	<b>FILL IN 1</b> or <b>2</b> on/off
ENDING	<b>INTRO &amp; ENDING</b> on
SUSTAIN	<b>SUSTAIN</b> on/off
DIGI. EFF	<b>DIGITAL EFFECT</b> on/off
GLIDE	Glide* effect on/off
TECH-CD	<b>TECHNI-CHORD</b> on/off
PUNCH	Punch in/out (Refer to page 58.)

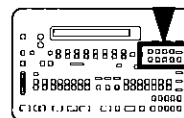
\* The glide effect "bends" the pitch down by about one semitone. (This effect does not work for some sounds.)

## Factory-preset switch assignment

Switch	Function
FOOT SW	STRT/STP
FOOT CTL	
#1-1	P.MEM A1
#1-2	P.MEM A2
#1-3	P.MEM A3
#1-4	P.MEM A4
#2-1	P.MEM A5
#2-2	P.MEM A6
#2-3	P.MEM A7
#2-4	P.MEM A8

# Part III Sequencer

## Outline of the Sequencer



A sequencer records your performance in a similar way to a tape recorder. You may want to record your entire performance in one go, or to build up a complex arrangement with several different parts playing together, like an orchestral score.

### 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 instrument.

- Features and operation of the built-in Disk Drive are explained in Part V: Disk Drive (page 70).

### 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.

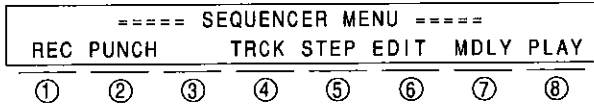
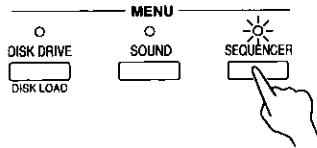
### Memory capacity

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 as a percentage (MEM: %).

- 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 75.)

### SEQUENCER menu

When you press the **SEQUENCER** button to turn it on, the following menu display appears. Press the corresponding balance button to select the desired function.



#### Summary of the SEQUENCER menu items

**REC (REALTIME RECORD)** (page 45)  
 Press either ① button to select this function.  
 Record your performance just as you play it.

**PUNCH (PUNCH RECORD)** (page 58)  
 Press either ② button to select this function.  
 Correct a selected portion of your recorded performance.

**TRCK (TRACK ASSIGN)** (page 52)  
 Press either ④ button to select this function.  
 Assign parts to up to 16 different tracks.

**STEP (STEP RECORD)** (page 47)  
 Press either ⑤ button to select this function.  
 Store the sounds note-by-note on the display.  
 You can also record the chord progression for the **AUTO PLAY CHORD**.

**EDIT (EDIT MODE)** (page 53)  
 Press either ⑥ button to select this function.  
 Full-scale editing features are available.

**MDLY (MEDLEY PLAY)** (page 60)  
 Press either ⑦ button to select this function.  
 Specify medley playback of songs recorded on a disk.

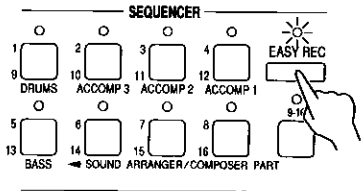
**PLAY (PLAYBACK)** (page 60)  
 Press either ⑧ button to select this function.  
 Begin playback from the middle of a performance, etc.

# Easy Record

Suppose you are playing this instrument 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.

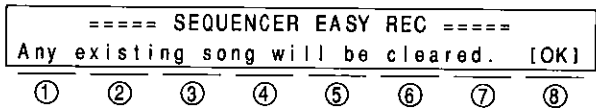
## Recording

1. Set the desired sounds, effects, rhythms, etc.
2. Press the **EASY REC** button to turn it on.



3. Press either **[OK]** button.
  - The display changes to the REAL REC display.
4. Play the keyboard of the connected instrument.
  - Recording begins as soon as you start the rhythm or play the keyboard.
5. When you have finished recording, press the **EASY REC** button to turn it off.

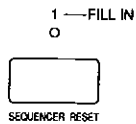
- The display changes to the following.



- When you enter the EASY RECORD mode, the contents of all **SEQUENCER** tracks will be erased. If you do not wish to erase the **SEQUENCER** tracks, press the **EASY REC** button at this time to turn it off.

## Playback

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



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



- The beginning panel settings are recalled.

- Your recorded performance is played back automatically.

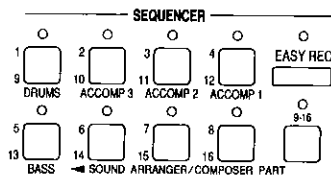
# Sequencer parts

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

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

- You can use the **TRACK ASSIGN** function to assign parts to tracks as you wish. (Refer to page 52.)
- 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.

### ■ Factory-preset track assignment



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. This mode lets you store a tune with all the subtle nuances just as you play them.

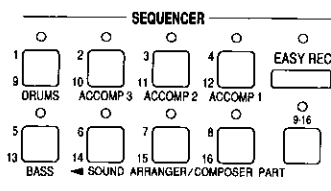
### Recording procedure

1. Set the sounds, effects, volumes, etc. for the parts you are going to record.
2. On the **SEQUENCER** menu display, select REC. (Refer to page 42).
  - The display looks similar to the following.

```
REAL REC:  J=120 MEM:60%
[ BAL ]      M= 3      METRO<ON>
```

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

3. Use the **SEQUENCER** track buttons to specify the track for the part you are going to record. (For details about recording tracks, refer to page 44.)
  - The buttons change to track buttons 9 to 16 while the 9-16 button is depressed.

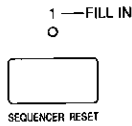


- The indicator for the selected track button flashes slowly.
- You can select two or more tracks to record at one time.
- The part name of the track is shown on the display. If more than one track is selected, the part name of the track which was selected last is shown.
- When you select a track, the panel settings you selected in step 1 are stored.

4. Adjust the tempo.
  - The tempo is shown on the display.
5. Use either Ⓣ button to turn the metronome ON or OFF.
  - The metronome selection alternates between ON and OFF each time the button is pressed.
  - The metronome sound is not recorded.
6. Play the keyboard of the connected instrument.
  - Recording begins as soon as you start the rhythm or play the keyboard.
  - 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: "M=" indicates the current measure number; and "MEM:" indicates the remaining memory (%) available for recording.
  - If you wish to adjust the volume of each track or part during recording, press either Ⓛ [BAL] button to recall the balance display. You can press the **OTHER BALANCE** button to show the track displays.
7. When you have finished recording, press the **SEQUENCER** button to turn it off.

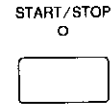
## Playback

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.



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

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



- The recorded performance is played back automatically.

## 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.
3. Repeat steps 1 and 2 to record all the desired parts.



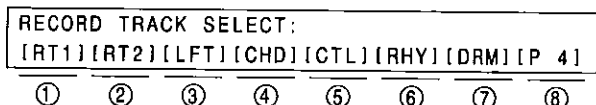
# Step Record

STEP RECORD is simply a method of making a tune by storing the sounds note-by-note on the display. Instead of playing the keyboard of the connected instrument directly as in the REALTIME RECORD mode, you can take your time to input each single note. This is an especially effective method for storing complicated passages that are difficult to play or when the exact timing of a part is critical.

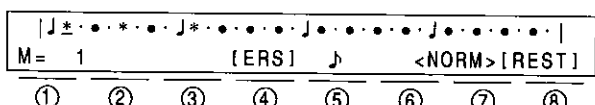
## Recording procedure

Record the performance data and panel changes.

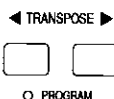
- On the **SEQUENCER** menu display, select **STEP**. (Refer to page 42.)
- The display changes to the following.



- Use the balance buttons or the track buttons to specify the track for the part you are going to record.
  - The buttons change to track buttons 9 to 16 while the 9-16 button is depressed.
  - The display looks similar to the following.



- Use the **TRANPOSE** buttons to move the cursor (underline) to the note 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 in step 4 below, the timing is automatically corrected.

- Specify the note length with the 5 buttons. Select from ♩3, ♪, ♩3, ♪, ♩3, ♪, ♩3, ♪, ♩, ♩, ♩ × 2 to 4. (A 3 denotes a triplet-type note.)

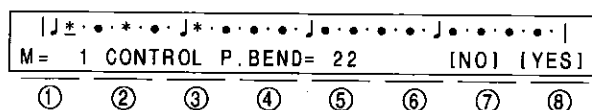
- For note values other than these, use the 6 buttons to specify the note value to be added to that which you specified with the 5 buttons.

Example: To record a dotted quarter-note (♩.)  
 ♩ + ♪

- Use the 7 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%

- Specify the pitch and velocity of the note by playing the keyboard of the connected instrument.
  - The dot on the display where the note is stored changes to a \* mark.
  - To store a rest, after specifying the note length, press either 8 [REST] button. Positions at which nothing is stored are read as rests.
  - Chords can also be stored. Button operation, wheel operation, etc. are stored at the cursor position.
  - You can press the **OTHER BALANCE** button to get the other part and track volume-setting displays.
- When a wheel on the connected instrument is operated, the display changes to the following.



- The input value is indicated on the display at 5. The value can be changed by operating the wheel.

<Continued on next page>

- Confirm the correct value and press either ⑧ [YES] button to record the value or either ⑦ [NO] button to cancel it.
- 7. Repeat steps 3 through 6 to continue storing notes.
- The cursor automatically moves according to the note length input at the cursor position.

8. 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 ① buttons to go to the measure you wish to modify.
  - If you keep the button pressed, the measure numbers advance by larger increments.
3. Use the **TRANPOSE** 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 **TRANPOSE** button is pressed. When a chord is recorded, a different note in the chord is displayed each time a **TRANPOSE** button is pressed.
4. Correct the data.
  - You can also correct data which was stored in the REALTIME RECORD mode.

### Performance data

	J	*	.	.	.	.	.	J	*	.	.	.	.	.	.	J	.	.	.	.	.	.	
M=	1	C3	V115	[ERS]	J	+	J	<	NORM	>	[	REST	]										
	①	②	③	④	⑤	⑥	⑦	⑧															

You can use the ② buttons to change the note pitch, and the ③ buttons to change the velocity (how hard the key was played).

### Sound data

The part name and the name of the sound are displayed at the point where sound data is stored. Use the **SOUND/VARIATION SELECT** buttons to change the sound as desired.

### Control data

The name of the function is displayed at the point it was stored. Change the data as desired.

- You can use the ⑤ buttons to change the volume, which is indicated as a numerical value.
- Press either [ERS] button to erase the data which is displayed.

# Store a chord progression or rhythm progression

You can use the step recording method to store a chord progression for the **AUTO PLAY CHORD** or changes in the rhythm selection and tempo, as well as the intro, fill-ins and the ending. During playback, the chords and rhythm then change automatically.

## Store a chord progression

Store a chord progression for the **AUTO PLAY CHORD**.

1. On the **SEQUENCER** menu display, select **STEP**. (Refer to page 42.)
2. Using the balance buttons or the track buttons, select the track to which the **CHORD** part has been assigned. (The factory preset is 4.)
  - The display looks similar to the following.

CHORD	STEP	▶◀	♪	♪	♪	C	mM7
M=	1	[DEL]	♪	♪	♪	[REP]	[END]
	①	②	③	④	⑤	⑥	⑦ ⑧

- The buttons below the display work as follows.

<p><b>Note value</b></p> <ul style="list-style-type: none"> <li>◦ Whole note (Lower ⑥ button)</li> <li>♪ Dotted half-note (Upper ⑥ button)</li> <li>♪ Half-note (Lower ⑤ button)</li> <li>♪ Dotted quarter-note (Upper ⑤ button)</li> <li>♪ Quarter-note (Lower ④ button)</li> <li>♪ Eighth-note (Upper ④ button)</li> </ul> <p><b>Reset</b></p> <p>▶◀ Press the upper ③ button to begin storing from the beginning.</p>	<p><b>Repeat</b></p> <p>[REP] Press either ⑦ button to end the chord-storing procedure and to specify automatic repeat playback of the stored progression.</p> <p><b>End</b></p> <p>[END] Press either ⑧ button after the whole chord progression has been stored.</p> <p><b>Delete</b></p> <p>[DEL] Press the lower ③ button to erase data.</p> <ul style="list-style-type: none"> <li>• To erase all the data from the current track, while pressing the lower ③ [DEL] button, press either ⑧ [END] button.</li> </ul>
--	--

3. Store the chords.

(Example of storing a chord progression)

C	C	F	G7	C	Am
◦	◦	♪	♪	♪	♪

<Measure 1>

While playing a C chord on the keyboard of the connected instrument, press the lower ⑥ button once to specify ◦.

- A "beep" tone indicates that the chord has been successfully stored.
- The measure number (M=) automatically advances, in accordance with the specified note value, to the number of the next unrecorded measure.

<Continued on next page>

## &lt;Measure 2&gt;

While playing a C chord on the keyboard of the connected instrument, press the lower ⑥ button once to specify ♭.

## &lt;Measure 3&gt;

(1) While playing an F chord, press the lower ⑤ button once to specify ♭.

(2) While playing a G7 chord, press the lower ⑤ button once to specify ♭.

## &lt;Measure 4&gt;

(1) While playing a C chord, press the lower ⑤ button once to specify ♭.

(2) While playing an Am chord, press the lower ⑤ button once to specify ♭.

- The chord name is shown on the display.
- You can press the **INTRO & ENDING** button or a **FILL IN** button on the panel to store the desired pattern. (An intro can be stored only at the beginning.) To specify a chord for the **INTRO** or **ENDING** pattern, while pressing the chord keys, press the **INTRO & ENDING** button. To specify a chord for the **FILL IN**, store the chord after turning on the **FILL IN 1** or **FILL IN 2** button.
- Store a rest by pressing a note value button without specifying a chord.
- Chords can also be specified in the **ONE FINGER** mode.

4. At the end of the chord progression, press either ⑧ [END] button.

- This instrument exits the recording mode.
- You can press the **INTRO & ENDING** button instead of the ⑧ [END] button for an automatic ending pattern at the end of the performance during playback.
- During playback, playback of the recorded chord progression stops at this point. For automatic repeat playback of the chord progression, press the either ⑦ [REP] button instead of the ⑧ [END] button.
- When you play back the track for the CHORD part, the chords of the automatic accompaniment change in accordance with the stored chord progression.

## ■ Correct the recorded chord progression

1. Follow the procedure to select the CHORD STEP REC display.
2. Use the ① buttons to go to the measure you wish to modify. Use the **TRANPOSE** buttons to look for the recorded data.
  - The measure number, beat number, chord name and note value, or function name (intro, fill-in, etc.) are shown on the display.
  - To go to the end of the chord progression, while pressing the upper ③ [▶◀] button, press the left **TRANPOSE** button.
  - The lengths of rests are indicated by the respective rest value × 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, you can press the lower ③ [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 a lower ③ [DEL] button is pressed, the rest is erased in units of ‡ × 1. The γ rest is erased last.

**Control data**

The name of the stored function (INTRO, FILL, etc.) is displayed. You can press the lower ③ [DEL] button to erase the data which is displayed.

## Store a rhythm progression

Changes in the rhythm selection and other related data can be stored in the RHYTHM part.

1. On the **SEQUENCER** menu display, select **STEP**. (Refer to page 42.)
2. Using the balance buttons or the track buttons, select the track to which the RHYTHM part has been assigned. (The factory preset is 6.)
  - The display looks similar to the following.

RHY	STEP	REC:						TRACK
M=	1		[ERS]	[REP]	[END]	[CLR]		
①	②	③	④	⑤	⑥	⑦	⑧	

3. Use the ① buttons to go to the measure you wish to record.
4. Use the buttons on the operation panel to 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
  - The stored data is shown on the display.

RHY	STEP	REC:						TRACK
M=	47	Swing Rock 1	[ERS]	[REP]	[END]	[CLR]		
①	②	③	④	⑤	⑥	⑦	⑧	

- When tempo data is stored, the display looks similar to the following.

RHY	STEP	REC:						
M=	47	TEMPO	J=120		[NO]	[YES]		
①	②	③	④	⑤	⑥	⑦	⑧	

- The tempo is shown on the display as a value. You can change the value with the **TEMPO** buttons.
- Press either ⑧ [YES] button to store the data. Or press either ⑦ [NO] button if you do not wish to store the data.
- 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.

5. At the end of the rhythm progression, press either ⑦ [END] button.
  - This instrument exits the recording mode.
  - If you press either ⑥ [REP] button, the recorded rhythm progression will be repeated during playback.

### ■ Correct the recorded rhythm progression

1. Follow the procedure to select the RHY STEP REC display.
2. Use the ① buttons to go to the measure you wish to modify.
3. Correct the rhythm data.
  - Press either ⑤ [ERS] button to erase the displayed data.
  - 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 CLEAR

- To erase all data from the current track, press either ⑧ [CLR] button, and then press either ⑧ [YES] button on the confirmation display.
- If you wish to cancel the clear procedure, press either ⑦ [NO] button.

# Track Assign

You can use the TRACK ASSIGN function to assign parts to tracks as you wish.

1. On the **SEQUENCER** menu display, select **TRCK**. (Refer to page 42.)
- The display looks similar to the following.

TRACK ASSIGN:		LOCAL MIDI	TRACK
<TR 1>	PART<RT1>	[YES]<ON>	OUT<CH 1>
①	②	③	④
⑤	⑥	⑦	⑧

2. Use the ① buttons to select the track.
3. Use the ③ buttons to select the part for the specified track.
  - Select one of the following parts: RT1 (RIGHT 1), LFT (LEFT), RT2 (RIGHT 2), P4 to P15 (PART 4 to PART 15), DRM (DRUMS), CHD (CHORD), APC (AUTO PLAY CHORD), CTL (CONTROL), RHY (RHYTHM).
  - For an explanation of each **SEQUENCER** part, refer to page 44.
  - When a part other than the CHD, APC, CTL or RHY part is assigned, the track assign procedure is completed at this point.
  - Either the CHD part or APC part can be assigned to a track, but not both.
  - The CHD, APC, CTL and RHY parts cannot be assigned to more than one track.
  - You can use the ⑤ buttons to turn the MIDI LOCAL CONTROL on or off, and the ⑦ buttons to assign the MIDI-OUT CHANNEL. (For a detailed explanation of these MIDI functions, refer to page 93.)

4. When assigning the CHD, APC, CTL or RHY part, press either ④ [YES] button.
  - A confirmation display appears to warn you that currently stored data in the tracks concerned will be erased. Press either ⑥ [YES] button to confirm that you wish to execute the specified track assignment. Or press either ⑦ [NO] button to stop the track assignment.

TRACK ASSIGN CHANGE will erase the data.							
TR 4	from	CHORD	→	PART13	SURE?	[NO]	[YES]
①	②	③	④	⑤	⑥	⑦	⑧

## ■ Track initial

To recall the factory-preset track assignment, press either ⑧ for [INI]. A confirmation display appears. Press either ⑥ [YES] button to confirm that you wish to initialize the tracks. Or press either ⑦ [NO] button to stop the track assignment.

===	ATTENTION!	===	TRACK INITIAL will
erase	the	chosen	track.
SURE?	[NO]	[YES]	
①	②	③	④
⑤	⑥	⑦	⑧

# 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**. (Refer to page 42.)
  - The display looks similar to the following.

```

===== EDIT MENU =====
SNG.CL  TR.CL  VEL.CG  TR.MRG  QTZ(MORE)
 ①      ②      ③      ④      ⑤      ⑥      ⑦      ⑧
  
```

2. Select the function to edit.
  - 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 EDIT menu.

### Summary of edit functions

#### **SNG. CL** (SONG CLEAR) (page 54)

Press either ① button to select this function.  
Erase the recorded contents of all tracks.

#### **TR. CL** (TRACK CLEAR) (page 54)

Press either ③ button to select this function.  
Erase the contents of a specific track.

#### **VEL. CG** (VELOCITY CHANGE) (page 54)

Press either ④ button to select this function.  
Modify the recorded velocity.

#### **TR. MRG** (TRACK MERGE) (page 55)

Press either ⑥ button to select this function.  
Merge the recorded contents of two tracks into one track.

#### **QTZ** (QUANTIZE) (page 55)

Press either ⑦ button to select this function.  
Correct the timing of your performance.

- You can press either ⑧ [MORE] button see the rest of the edit menu.

```

===== MEASURE EDIT MENU =====
ERS   CPY   INS   DEL           [RETURN]
 ①     ②     ③     ④     ⑤     ⑥     ⑦     ⑧
  
```

#### **ERS** (ERASE) (page 56)

Press either ① button to select this function.  
Erase the recorded contents of specific measures.

#### **CPY** (COPY) (page 56)

Press either ② button to select this function.  
Copy measures from one track to a specified point.

#### **INS** (INSERT) (page 57)

Press either ③ button to select this function.  
Insert specified measures at a specified point.

#### **DEL** (DELETE) (page 57)

Press either ④ button to select this function.  
Delete specified measures from a track.

- You can press either ⑧ [RETURN] button to see the previous display.

## SONG CLEAR

Erase the recorded contents of all tracks.

```
=== ATTENTION! === Any existing song
will be cleared. ARE YOU SURE? [NO][YES]
```

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Press either ⑧ [YES] button to execute the function.

- If you wish to cancel the function, press either ⑦ [NO] button.
- When the data has been erased, "COMPLETED!" appears on the display, and this instrument returns to the normal performance mode.

## TRACK CLEAR

Erase the contents of a specific track.

```
TRACK CLEAR: Press the buttons for the
tracks that you want to clear. [OK]
```

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

1. Use the track buttons to select the track or tracks you wish to clear.

2. Press either ⑧ [OK] button.

- The display changes to the following.

```
=== ATTENTION! === Existing recordings
will be cleared. ARE YOU SURE? [NO][YES]
```

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

3. Press either ⑧ [YES] button.

- If you wish to cancel the function, press either ⑦ [NO] button.
- When the data has been erased, "COMPLETED!" appears on the display.

## VELOCITY CHANGE

Modify the recorded velocity in specific measures of specific tracks.

```
VELOCITY CHANGE:
<TR 3> 1st<M112>LAST<M124> VEL<+ 48>[OK]
```

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

1. Use the ① buttons to specify the track number.

- This function does not affect the CTL, RHY or CHD part track.
- If ALL is selected, all the tracks are modified.

2. Use the ③ buttons to specify the start point (measure number) of the velocity change.

3. Use the ⑤ buttons to specify the end point (measure number) of the velocity change.

4. Use the ⑦ 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 either ⑧ [OK] button.

- The display changes to the following.

```
=== ATTENTION! === Existing recordings
will be changed. ARE YOU SURE? [NO][YES]
```

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

6. Press either ⑧ [YES] button.

- If you wish to cancel the function, press either ⑦ [NO] button.



### 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.

```

TRACK MERGE:
<TR 1> + <TR 2> → <TR 3> [OK]
  ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

1. Use the ② and ④ buttons to select the two source tracks.
  - This function does not work for the CTL, RHY or CHD part.
  - If the parts assigned to the source tracks are different, when the parts are merged in the destination track, the new track is assigned the same part as the ② track.
2. Use the ⑥ buttons to select the destination track.

3. Press either ⑧ [OK] button.
  - The display changes to the following.

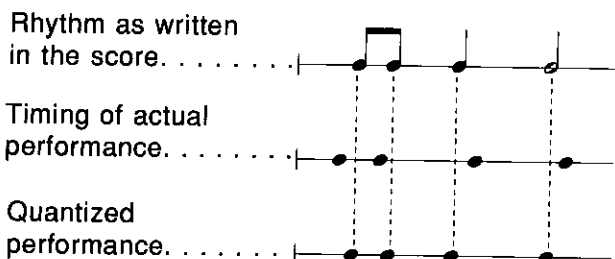
```

=== ATTENTION! === Existing recordings
will be changed. ARE YOU SURE? [NO][YES]
  ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

4. Press either ⑧ [YES] button.
  - If you wish to cancel the function, press either ⑦ [NO] button.

### 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.



```

QUANTIZE:
<TR 3> 1s1<M112> LAST<M124> QTZ<♩ > [OK]
  ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

1. Use the ① buttons to specify the track number.
  - This function does not work for the CTL, RHY or CHD part.
  - If ALL is selected, all the tracks are modified.

2. Use the ③ buttons to specify the start point (measure number).
3. Use the ⑤ buttons to specify the end point (measure number).
4. Use the ⑦ buttons to specify the quantize level.
  - Select from ♩, ♪, ♫, ♬, ♭, ♮, ♯, ♯.
  - (A 3 denotes a triplet-type note.)
5. Press either ⑧ [OK] button.
  - The display changes to the following.

```

=== ATTENTION! === Existing recordings
will be changed. ARE YOU SURE? [NO][YES]
  ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

6. Press either ⑧ [YES] button.
  - If you wish to cancel the function, press either ⑦ [NO] button.

**ERASE**

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

```
MEAS ERASE:
<TR 3> 1st<M112>LAST<M124> <ALL > [OK]
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

1. Use the ① buttons to specify the track number.
  - This function does not work for a RHY part or CHD 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. Use the ③ buttons to specify the start point (measure number).
3. Use the ⑤ buttons to specify the end point (measure number).

4. Use the ⑦ buttons to specify the type of data to be erased.

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

5. Press either ⑧ [OK] button.
  - The display changes to the following.

```
=== ATTENTION! === Existing recordings
will be changed. ARE YOU SURE? [NO][YES]
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

6. Press either ⑧ [YES] button.
  - If you wish to cancel the function, press either ⑦ [NO] button.

Practical applications

**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.

```
MEAS COPY: 1st LAST START
<TR12> <M112><M124> → <TR12><M112> [OK]
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

1. Use the ① buttons to specify the source track.
  - This function does not work for a RHY part or CHD 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. Use the ③ buttons to specify the start point (measure number) on the source track.
3. Use the ④ buttons to specify the end point (measure number) on the source track.

4. Use the ⑥ buttons to specify the destination track.
  - Measures in a track for the CTL, RHY or CHD part can be copied only to the same track.

5. Use the ⑦ buttons to specify the start point (measure number) on the destination track.

6. Press either ⑧ [OK] button.
  - The display changes to the following.

```
=== ATTENTION! === Existing recordings
will be changed. ARE YOU SURE? [NO][YES]
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

7. Press either ⑧ [YES] button.
  - If you wish to cancel the function, press either ⑦ [NO] button.

## INSERT

Insert specified measures at a specified point.

- The length of the performance accordingly increases by the number of inserted measures.

MEAS	INS:	1st	LAST	START
<TR12>	<M112>	<M124>	→ <TR11>	<M112> [OK]
①	②	③	④	⑤
			⑥	⑦
				⑧

1. Use the ① buttons to specify the source track.
  - This function does not work for a RHY part or CHD part in which a repeat command has been stored.
  - If ALL is selected, the specified measures are inserted in all tracks at the same time.
2. Use the ③ buttons to specify the first measure on the source track from which to copy.
3. Use the ④ buttons to specify the last measure on the source track from which to copy.

## DELETE

Delete specified measures from a track.

- The length of the performance accordingly decreases by the number of deleted measures.

MEAS DELETE:
<TR 3> 1st <M112> LAST <M124> [OK]
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

1. Use the ① buttons to specify the track from which measures are to be deleted.
  - This function does not work for a RHY part or CHD part in which a repeat command has been stored.
  - If ALL is selected, the specified measures are deleted from all tracks at one time.
2. Use the ③ buttons to specify the first measure to delete.

4. Use the ⑥ buttons to specify the destination track.
  - Measures in a track for the CTL, RHY or CHD part can only be inserted in to the same track.

5. Use the ⑦ buttons to specify the insert point on the destination track.

6. Press either ⑧ [OK] button.
  - The display changes to the following.

=== ATTENTION! === Existing recordings will be changed. ARE YOU SURE? [NO][YES]
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

7. Press either ⑧ [YES] button.
  - If you wish to cancel the function, press either ⑦ [NO] button.

3. Use the ⑤ buttons to specify the last measure to delete.

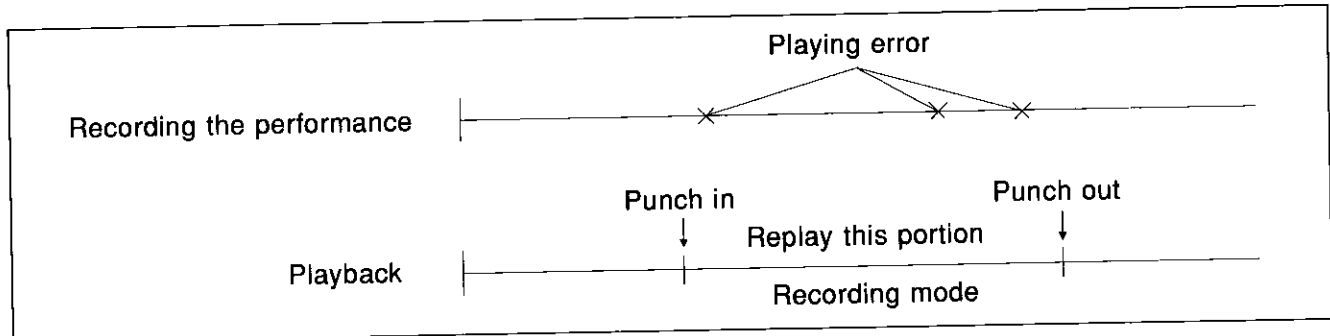
4. Press either ⑧ [OK] button.
  - The display changes to the following.

=== ATTENTION! === Existing recordings will be changed. ARE YOU SURE? [NO][YES]
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

5. Press either ⑧ [YES] button.
  - If you wish to cancel the function, press either ⑦ [NO] button.
  - When the data has been erased, "COMPLETED!" appears on the display.

# 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. "Punch in" means to enter the recording mode, and "punch out" means to exit it.



1. Turn on the track buttons for the parts you wish to play back.
  2. On the **SEQUENCER** menu display, select PUNCH. (Refer to page 42.)
    - The display looks similar to the following.
- PUNCH REC: J=120 MEM:60% M=123 METRO  
 [BAL] [AUTO PUNCH] <PUNCH IN > <ON >

① ② ③ ④ ⑤ ⑥ ⑦ ⑧
3. Select the track which contains the portion you want to correct.
  4. Use the ⑧ buttons to turn the metronome on or off.
    - You can press either ① [BAL] button and adjust the volume of each part or track.
  5. Press the **START/STOP** button to begin playback.

6. During playback, press either ⑥ [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.
  - You can also begin PUNCH IN recording by playing the keyboard.
7. Press either ⑥ [PUNCH OUT] button at the point you want to stop recording.
  - Recording stops immediately.
8. When you have finished correcting the performance, press the **SEQUENCER** button to turn it off.
  - "COMPLETED!" is shown on the display and punch recording ends.
  - The instrument returns to the normal performance mode.
  - You can specify the punch-in/punch-out points with an optional Foot Switch or Foot Controller (sold separately). (Refer to page 40.)

### ■ 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 PUNCH RECORD display, press either ③ [AUTO PUNCH] button.
- The display looks similar to the following.

AUTO PUNCH:	CURRENT M=130	METRO
IN<M132>	OUT<M139>	COUNT IN<M 2> <OFF>
①	②	③
④	⑤	⑥
⑦	⑧	

2. Use the ② buttons to specify the number of the punch-in measure.
3. Use the ④ buttons to specify the number of the punch-out measure.
  - The specified punch-out measure is not recorded.
4. Use the ⑦ buttons to specify the number of lead-in measures you wish to have played back before the punch-in measure.
5. Use the ⑧ buttons to set the metronome to on or off.
6. Press the **START/STOP** button.
  - Playback begins from the measure specified in step 4.

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.
  - Note that, even when you have set the punch-in and punch-out measures, you can begin recording before the punch-in measure starts by playing the keyboard, or by pressing a Foot Switch or Foot Controller (separately sold option) to which the PUNCH IN/OUT function has been assigned.
8. When you have finished correcting the performance, press the **SEQUENCER** button to turn it off.
    - "COMPLETED!" is shown on the display and punch recording ends.
    - The instrument returns to the normal performance mode.

## Playback from a specific measure

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

1. On the **SEQUENCER** menu display, select **PLAY**. (Refer to page 42.)
  - The display looks similar to the following.

```

SEQ PLAY:  J=120 MEM:60%  TIME SIG: 4/4
[BAL]      <M123>        [RESET][FWD]
 ①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧

```

2. Turn on the tracks you wish to have played back.
3. Use the ④ buttons to specify the beginning measure of playback.
  - 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 either ⑧ [FWD] button. (These buttons do not work during normal playback.)
  - You can press either ⑦ [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. (These buttons do not work during playback.)
  - You can press either ① [BAL] button and adjust the volume of each part or track.

4. 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.
5. 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.

- The procedure for saving your **SEQUENCER** performances on a disk is explained in Part V: Disk Drive (page 70).
- Data which has been saved in the Standard MIDI File format cannot be played in a medley performance.

1. Insert the disk into the Disk Drive.
2. On the **SEQUENCER** menu display, select **MDLY**. (Refer to page 42.)
  - The display looks similar to the following.

```

MEDLEY PLAY:
1st<SONG 2>  LAST<SONG15> [START][STOP]
 ①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧

```

3. Use the ② buttons to specify the number of the first song you wish to have played.
4. Use the ⑤ buttons to specify the number of the last song you wish to have played.

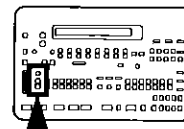
5. Press either ⑦ [START] button.
  - The songs from the specified range are repeatedly played back in order.
  - If you press the **START/STOP** button during medley play, the song currently playing will stop, and playback continues from the next recorded song on the disk.

6. To stop medley play, press either ⑧ [STOP] button.

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. Your original pattern is then stored in a memory and can be used just like the preset rhythms.

### ■ Example of a rhythm pattern

ACCOMP 1

ACCOMP 2

ACCOMP 3

BASS

DRUMS

### Components of a rhythm pattern

You can store up to 12 different rhythms (6 each in banks **A** and **B**).

- Each pattern is comprised of five parts: **DRUMS**, **BASS** and **ACCOMP 1**, **2** and **3**.
- When you set the **COMPOSER** mode to **EXPAND**, you can also create **INTRO**, **FILL IN** and **ENDING** patterns. (Refer to page 68.)

### 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.

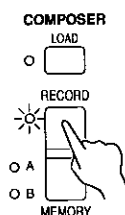
#### Memory capacity

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 display as a percentage (%).

- 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 75.)

## COMPOSER menu

When you press the **RECORD** button in the **COMPOSER** section to turn it on, the display changes to the following.



===== COMPOSER MENU =====							
REC-A	REC-B	COPY	MODE	LOAD			
①	②	③	④	⑤	⑥	⑦	⑧

To select a menu item, press the corresponding balance button.

### Summary of the COMPOSER menu items

#### REC-A (page 63)

Press either ① button to select this function. Create a pattern in a memory (1 to 6) in the A bank.

#### REC-B (page 63)

Press either ③ button to select this function. Create a pattern in a memory (7 to 12) in the B bank.

#### COPY (page 63)

Press either ⑤ button to select this function. Copy a preset rhythm pattern into a memory.

#### MODE (page 68)

Press either ⑥ button to select this function. Specify whether or not you are making your own **INTRO**, **FILL IN** and **ENDING** patterns.

#### LOAD

Press either ⑧ button to select this function. Recall the desired **COMPOSER** data from data saved on a disk.

- The items on this menu are also on the **DISK DRIVE** menu, and the procedures are the same. (Refer to page 77.)

## COMPOSER LOAD

The prerecorded **COMPOSER** rhythms on the accessory disk can also be used with your instrument. (Refer to page 72.)

## MIDI CHANNEL

MIDI channel 1 is used for recording all the **COMPOSER** parts. However, as this channel assignment is executed automatically, it is not necessary to manually assign the channel. In addition, when **COMPOSER** recording is completed, the channel assignment automatically reverts to the pre-recording status.



# Setting up to create a rhythm pattern

First decide whether you are going to "Edit a preset rhythm pattern" or "Create a completely new rhythm." Below are the instructions for preparing to edit a preset rhythm pattern. If you are going to create a completely new rhythm pattern, follow the instructions on page 64.

## Edit a preset rhythm pattern

- On the **COMPOSER** menu display, select **COPY**. (Refer to page 62.)
- The display looks similar to the following.

```
COPY:
<16Bt Stand.1 ><NORMAL> → <B-MEM10> [OK]
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

- Use the ①, ② and ③ buttons to select a rhythm name to copy.
  - You can also use the **RHYTHM SELECT** buttons to select the rhythm.
- Use the ④ and ⑤ buttons to select a rhythm pattern to copy.
  - Select from **NORMAL** (the basic rhythm), **INTRO**, **FILL 1**, **FILL 2**, **ENDING**, **VARIAT** (variation), **FILL 1V** and **FILL 2V** (V=variation).

- Use the ⑥ and ⑦ buttons to specify the memory bank (A or B) and memory to copy to.
  - For bank A, select from **A-MEM1** to 6, **INTRO**, **F IN1**, **F IN2** and **ENDNG**. For bank B, select from **B-MEM7** to 12, **INTRO**, **F IN1**, **F IN2** and **ENDNG**.

- Press either ⑧ [OK] button.
  - "COPY COMPLETED!" is shown on the display and copying ends.

- Press the **EXIT** button.

- On the **COMPOSER** menu display, select the bank to which you copied the rhythm pattern (the memory bank you selected in step 4: **REC-A** or **REC-B**).
  - The display looks similar to the following.

```
=== Please Select a Composer Memory ===
MEM1 MEM2 MEM3 MEM4 MEM5 MEM6 (MORE)
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

- Create **INTRO**, **FILL IN** and **ENDING** patterns after setting the **COMPOSER** mode to **EXPAND**. (Refer to page 68.)

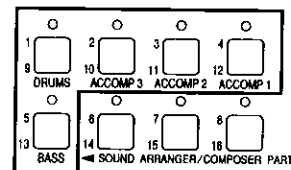
- Select the memory to which you copied the rhythm pattern (the memory you selected in step 4).
  - The display looks similar to the following.

```
PTN:A-MEM1
[CLR THE ENTIRE PTN] [NAMING] [SETTING]
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

- If you wish to name your new rhythm pattern, press ⑤ or ⑥ for [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. If you do not wish to assign a new name, skip to step 12.
  - FILL IN**, **INTRO** and **ENDING** patterns cannot be named.

```
PATTERN NAMING PTN:A-MEM1
<Heavy Metal R> [A/a] [CLR]
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
```

- Use the **TRANSPOSE** buttons to move the cursor. Use the ③ and ④ buttons to select the character. Repeat these steps to input the whole name (up to 13 characters).
  - To erase the name, press either ⑧ [CLR] button.
  - Use either ⑦ [A/a] button to switch between upper case and lower case characters.
- Press the **EXIT** button.
- Use the **COMPOSER PART** buttons to select the rhythm part you want to record first.



- The indicator flashes.
- The pattern you copied and the metronome sound start, and recording begins. (Refer to page 65.)

### Create a completely new rhythm

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

```

=== Please Select a Composer Memory ===
MEM1 MEM2 MEM3 MEM4 MEM5 MEM6 (MORE)
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

- Select the memory number to record to.
  - Create INTRO, FILL IN and ENDING patterns after setting the **COMPOSER** mode to EXPAND. (Refer to page 68.)
  - The display looks similar to the following.

```

                                PTN:A-MEM1
[CLR THE ENTIRE PTN] [NAMING] [SETTING]
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

- Press either ② [CLR THE ENTIRE PTN] button to erase the contents of the memory number you selected in step 2.
  - The following confirmation display appears. Press either ⑧ [YES] button to execute the function, or press either ⑦ [NO] button to cancel the function.

```

=== ATTENTION! === B-ENDNG pattern
will be cleared. ARE YOU SURE? [NO][YES]
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

- If either ⑧ [YES] button is pressed, "COMPLETED!" is shown on the display, and the display returns to the step 2 display.
- Press either ⑤ or ⑥ [NAMING] button.
    - FILL IN, INTRO and ENDING patterns cannot be named.
    - The display looks similar to the following.

```

PATTERN NAMING                                PTN:A-MEM1
<Heavy Metal R>                                [A/a][CLR]
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

- Use the **TRANPOSE** buttons to move the cursor. Use the ③ and ④ buttons to select the character. Repeat these steps to input the whole name (up to 13 characters).
  - To erase the name, press either ⑧ [CLR] button.
  - Use either ⑦ [A/a] button to switch between upper case and lower case characters.

- Press the **EXIT** button.

- Press either ⑦ or ⑧ [SETTING] button.
  - The display looks similar to the following.

```

MEAS T.SIG CHORD=Ac_Bs FILL-IN SELECT
 4   4/4   C   Maj 7_N<Heavy Metal 1>[OK]
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

- Adjust the various recording settings.

- Use the ① buttons to specify the number of measures in your repeating rhythm pattern (1 to 8).
- Use the ② buttons to specify the time signature (1/4 to 8/4).
- The number of measures and time signature can be changed only when the pattern has been cleared.
- Use the ③ buttons to specify the root note of the chords you wish to record.
- Use the ④ buttons to specify the type of chord you wish to record (Min or Maj).
- Use the ⑤ buttons to specify the type of phrase progression for the **ACCOMP** and **BASS** (Ac\_Bs) parts.
  - N = normal progression, 7 = seventh. Select for the combined **ACCOMP** and **BASS** parts.

#### ■ FILL IN SELECT

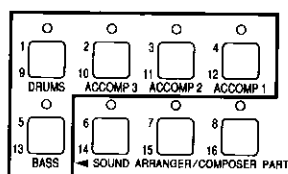
You can select fill-in, intro and ending patterns from a preset rhythm pattern.

- This setting is effective only when the **COMPOSER** mode is set to **NORMAL**. (Refer to page 68.)

- Use the ⑥ and ⑦ buttons to specify the rhythm name.
  - You can also use the **RHYTHM SELECT** buttons to select the rhythm.
  - You cannot select a rhythm with a time signature different from that of the time signature you specified with the ② buttons.
- Press either ⑧ [OK] button.
  - When the settings have been successfully stored, "COPY COMPLETED!" appears on the display.

- Press the **EXIT** button.

10. Use the **COMPOSER PART** buttons to select the rhythm part you want to record first.



- The indicator flashes.
- The metronome sound starts, and recording begins. (Continue to the next section.)

## Record your rhythm pattern

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

### Recording procedure

```
REAL REC: J=120 M2 MEM:60% PTN:A-MEM1
Q<J3>[BAL][STP][CL][INST][ALL] SOLO<OFF>
```

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- 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.
- Select the sound.
  - For the **DRUMS** part, select sounds from the **KEYBOARD PERC** sounds (95 to 99).
- 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 "M".
- Use the keyboard percussion keys to play the **DRUMS** part. (Refer to the separate REFERENCE GUIDE.)
- Record the performance in C major for correct chord progressions during playback of the **BASS** and **ACCOMP** parts. To record the performance in a different scale, specify a different key and chord beforehand on the SETTING display. (Refer to page 64.)
- The **SUSTAIN** effect is also recorded for the **BASS** and **ACCOMP** parts.

### The display during recording

#### ■ QUANTIZE

Press either ① [Q] button to 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.

- Select from ♩3, ♪, ♪3, — (off), ♪, ♪3, ♪, ♪. (A 3 denotes a triplet-type note.)

#### ■ BALANCE

Press either ② [BAL] button if you wish to adjust the volume of each part during recording. The volume-setting display appears. Adjust the volume of each part. (These settings are not stored.)

- If you press the **EXIT** button, the display returns to the previous display.

#### ■ STEP

Press either ③ [STP] button to change to the STEP REC display, on which you can store the notes one by one. (Refer to page 67.)

#### ■ PART CLEAR

Press either ④ [CL] button if you wish to erase all recorded contents of the currently selected part.

#### ■ INST ERASE

When the **DRUMS** part is selected, the **DRUMS** part can be cleared instrument by instrument. Hold down either ⑤ [INST] button and specify the instrument sound to be deleted by pressing the corresponding instrument key on the keyboard of the connected instrument, after which only the specified instrument will be erased for as long as this button is kept pressed.

### ■ ALL ERASE

The performance recorded in the selected part is erased for as long as either ⑥ [ALL] button is pressed.

### ■ SOLO

When you press either ⑧ button to select <ON>, only the part which is currently being recorded is played back.

- When you have completed recording one part, select the next part to record with the **COMPOSER PART** buttons.

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

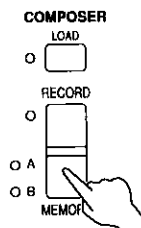
- When you have finished recording the rhythm, press the **RECORD** button in **COMPOSER** section to turn it off.

### ■ Maximum simultaneous tones

The maximum number of notes which can sound simultaneously for each part is 8. Even if you record more notes at one timing, only 8 are produced when the pattern is played back.

## Playback

- Press the **MEMORY** button of the **COMPOSER** to select the bank in which the desired rhythm is stored (**A** or **B**).



- Use the **RHYTHM SELECT** buttons to select the number of the desired rhythm. (For bank **A**, select from 01 to 06; for bank **B**, select from 07 to 12.)

- 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**.

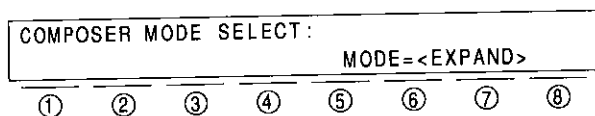


# Creating your own intro, fill-in and ending patterns

You can create and play back your original intro, fill-in and ending patterns.

## COMPOSER mode

1. On the **COMPOSER** menu display, select **MODE**. (Refer to page 62.)
  - The display looks similar to the following.



2. Use the ⑦ buttons to 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.

- You can specify which rhythm is played back with **FILL-IN SELECT** on the **SETTING** display. (Refer to page 64.)

### ■ EXPAND MODE

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

- Select this mode if you wish to create your own intro, fill-in and ending patterns.

## Recording

After setting the **COMPOSER** mode to **EXPAND**, use the following procedure.

1. Press the **EXIT** button.
  - The display returns to the menu display.
2. Select the bank in which to record (REC-A or REC-B).
3. On the memory-select display, press either **Ⓢ** [**MORE**] button.
  - The display looks similar to the following.

```

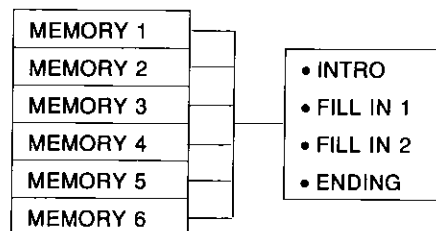
=== Please Select a Composer Memory ===
INTR FIL1 FIL2 ENDG [RETURN]
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
    
```

- You can press either **Ⓢ** [**RETURN**] button if you wish to go back to the previous display.
4. Select the pattern you wish to record.

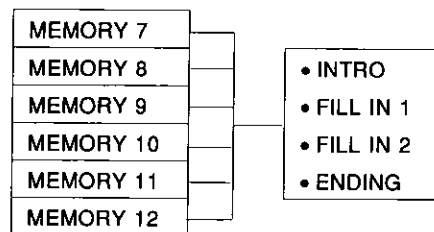
- ① INTR: **INTRO**
- ② FIL1: **FILL IN 1**
- ③ FIL2: **FILL IN 2**
- ④ ENDG: **ENDING**

5. Change the recording settings as desired. (Refer to page 64.)
  - **FILL IN**, **INTRO** and **ENDING** patterns cannot be named.
6. Follow the procedure to record the rhythm. (Refer to page 65.)
  - Repeat the above procedure for each pattern as desired.
  - Only one each **FILL IN 1**, **FILL IN 2**, **INTRO** and **ENDING** pattern can be created for each of the two **MEMORY** banks (**A** and **B**). The fill-in patterns, etc. for each bank are used for all the basic rhythms in the same **MEMORY** bank.

### <MEMORY A>



### <MEMORY B>



# Part V Disk Drive

## Outline of the Disk Drive function

The Disk Drive enables you to store **COMPOSER** memories, **SEQUENCER** data etc. for future use.

### Internal memory and Disk Drive

The storable internal memory is fixed at a limited capacity, but this external memory device expands the storable memory infinitely.

- You can use 3.5 inch 2DD (720 KB) or 2HD (1.44 MB) disks; however, 2HD disks formatted as 2DD cannot be used.
- Specific formats are handled as follows.

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

**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.

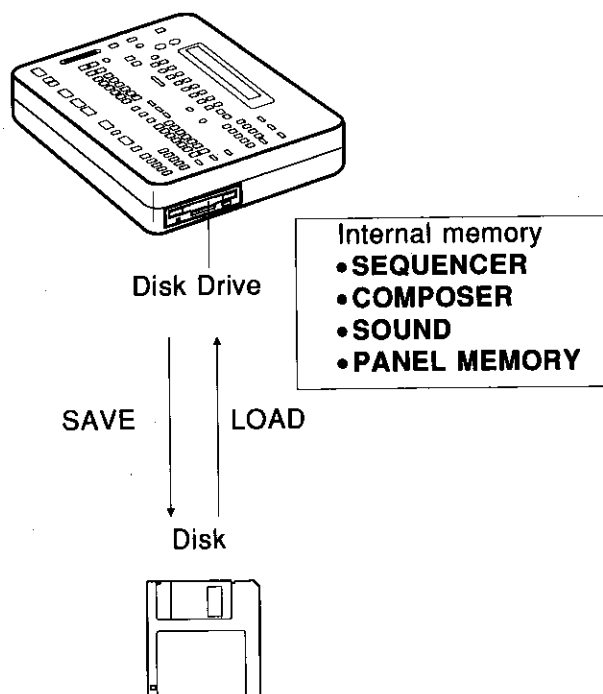
#### ■ Playback of commercial software

Disks recorded using the Disk Drive of this instrument can, of course, be played back on your instrument. But this instrument also reads song data from disks recorded in the Standard MIDI File format, enabling you to play commercial song disks on this instrument. In addition, by saving this instrument's **SEQUENCER** data in the Standard MIDI File format, you can play it back on an external 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 instrument, and vice versa on 2DD disks.

- Only files with the ".MID" extension can be loaded.
- No more than 128 KB of data can be loaded into this instrument.

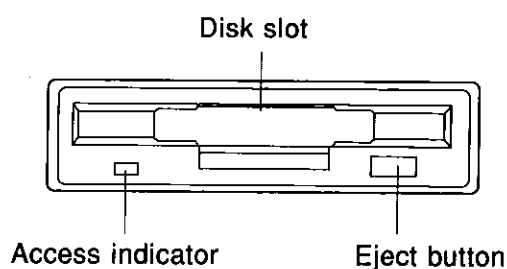


Technics: Maximum 20 files  
SMF: Maximum 40 performances

**Warning:** Standard MIDI Files ensure the compatibility of data such as key on, key off, velocity, program number. It does not guarantee 100% faithful reproduction of recorded music which is replete with such data. For exact playback of music, it may be necessary to perform extensive adjustments of all the sound generator settings. As you the listener are the ultimate judge of what sounds best, you should perform such adjustments to your satisfaction.



## Main parts of the Disk Drive



### Eject button

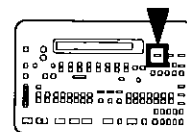
Press to remove the disk from the Disk Drive.

### Access indicator

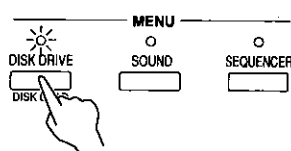
Lights when data is being loaded from or saved to disk.

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

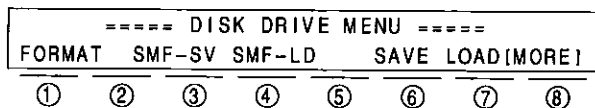
## Outline of procedure



- In the **MENU** section, press the **DISK DRIVE** button to turn it on.



- The display changes to the following.



- To select an item, press the corresponding balance button below the display.

### FORMAT (page 74)

Press either ① button to select this function. Format new disks or erase the contents of recorded disks so they can be used by this instrument.

### SMF-SV (Standard MIDI File save) (page 76)

Press either ③ button to select this function. Save data from this instrument's memory in the Standard MIDI File format to a disk.

### SMF-LD (Standard MIDI File load) (page 73)

Press either ④ button to select this function. Load song data which was stored in the Standard MIDI File format into this instrument's memory.

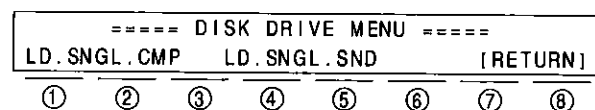
### SAVE (page 75)

Press either ⑥ button to select this function. Save data from this instrument's memory to a disk.

### LOAD (page 73)

Press either ⑦ button to select this function. Load data from a disk into this instrument's memory.

- You can press either ⑧ [MORE] button to see more of the menu.



- You can press either ⑧ [RETURN] button to go back to the previous menu.

### LD. SNGL. CMP (Load single COMPOSER) (page 77)

Press either ① or ② button to select this function. Load **COMPOSER** data from a disk into a specified memory number.

### LD. SNGL. SND (Load single SOUND) (page 77)

Press either ④ or ⑤ button to select this function. Load **SOUND** data from a disk into a specified memory number.

- Select the desired menu and follow the procedures on the corresponding display.

- Press the **EXIT** button to return to the menu display.

- When you have finished setting the functions, press the **DISK DRIVE** button to turn it off.

## Using the included disk

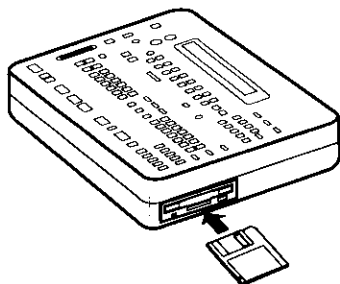
Stored on the accessory "RHYTHM PATTERNS" disk are 20 additional rhythms. You can load these patterns into your instrument's memory and use them just like the preset rhythms.

### COMPOSER LOAD

Load the data from the disk into your instrument's **COMPOSER** memory.

- When the load procedure is executed, any data previously stored in the **COMPOSER** memories is erased. If you wish to preserve the contents of the **COMPOSER**, be sure to save the data to a disk before beginning the load procedure. (Refer to page 75.)
- For each rhythm, a normal pattern and a variation pattern are both available.
- The names of the rhythms are printed on the disk.

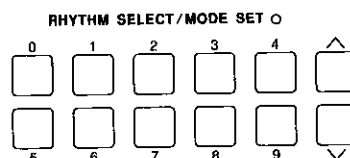
1. Insert the accessory disk into the Disk Drive. Push it all the way in until you hear a click.



2. Press the **LOAD** button of the **COMPOSER** to turn it on.



3. Use the **RHYTHM SELECT** number pad to select the number of the pattern on the disk (01 to 20).



- The load operation begins.
  - When the load procedure is finished, "COMPLETED!" is shown on the display.
4. To select the rhythm pattern, use the **COMPOSER**'s **MEMORY** button to select **A** or **B**, and the **RHYTHM SELECT** number pad to select the memory number to play.
    - Select **MEMORY A**, memory number **01** if you wish to play the normal pattern. Select **MEMORY B**, memory number **07** if you wish to play the variation pattern.
    - The other **COMPOSER** memories are empty.
  5. Press the **START/STOP** button.
    - The rhythm pattern begins to play back.
    - The **AUTO PLAY CHORD** can also be used.
    - **INTRO**, **FILL IN** and **ENDING** patterns matching the selected rhythm are also produced.
  - You can use the same procedure to load only **COMPOSER** data from the performance data you saved to a disk. This procedure is equivalent to selecting **CMP** for the **OPTION** on the **LOAD** display. (Refer to page 73.)

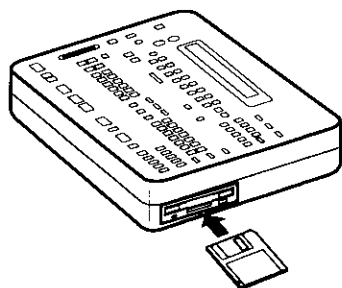
## Loading data

Recall (load) the data from the disk to this instrument'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 **DISK DRIVE** menu display, select LOAD. (Refer to page 71.)

- The display looks similar to the following.

LOAD:	NAME	OPTION	
<#05:	_____	.PNL>	<ALL> [LOAD]
①	②	③	④ ⑤ ⑥ ⑦ ⑧

3. Use the ② or ③ 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. Use the ⑤ buttons to specify the kind of data you wish to load from the disk to this instrument.

- The kind of data which was specified during the SAVE procedure is automatically selected. Skip this step if you do not wish to change the selection. (Refer to page 75.)

5. Press either ⑧ [LOAD] button.

- The 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 LOAD display quickly by pressing and holding the **DISK DRIVE (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 instrument's **SEQUENCER**.

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

2. On the **DISK DRIVE** menu display, select SMF-LD. (Refer to page 71.)

- The display looks similar to the following.

MIDI FILE LOAD:			
<#05:	_____	.MID>	[LOAD]
①	②	③	④ ⑤ ⑥ ⑦ ⑧

3. Use the ② or ③ buttons to select the file number with the desired data.

- Files in which data is currently stored are indicated by the file name following the file number.

4. Press either ⑧ [LOAD] button.

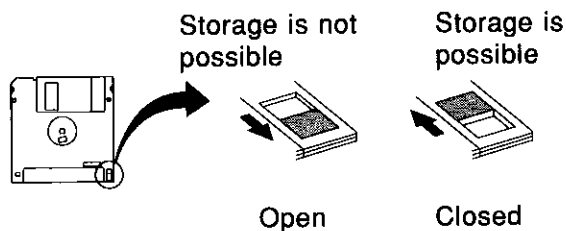
- The MIDI FILE LOAD operation begins.
- When the operation has been successfully completed, "COMPLETED!" is shown on the display.
- Press the **START/STOP** button to begin playback of the song data.

# 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.
- You can use 3.5 inch 2DD or 2HD disks; however, 2HD disks formatted as 2DD cannot be used.
- 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 **DISK DRIVE** menu display, select **FORMAT**. (Refer to page 71.)
  - The display changes to the following.

```

=== ATTENTION!(2HD) === Data on the Disk
will be erased. ARE YOU SURE? [NO][YES]
  ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧

```

3. Press either ⑧ [YES] button.
  - If you wish to cancel the format operation, press either ⑦ [NO] button instead.
  - When you press the [YES] button, disk formatting begins.
  - 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 this instrument to a disk.

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

1. On the **DISK DRIVE** menu display, select **SAVE**. (Refer to page 71.)
- The display changes to the following.

FILE NAMING:							
<CHERRY>				[DEL]	[SAVE]		
①	②	③	④	⑤	⑥	⑦	⑧

2. Type a name for the new data file (up to 6 characters).
  - Use the **TRANSPOSE** buttons to move the cursor to the character position. Use the **③** buttons to select the character. Repeat these steps to type the whole name.
3. Press either **⑧** [SAVE] button.
  - The display looks similar to the following.

SAVE:	NAME	OPTION	TYPE	(2HD)			
<#05:	_____	.ALL>	<ALL>	<KN2000> [SAVE]			
①	②	③	④	⑤	⑥	⑦	⑧

4. Use the **③** or **④** 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.
5. Use the **⑤** buttons to specify the kind of data you wish to store in the data file on the disk.

ALL: All data from this instrument SEQ: Only <b>SEQUENCER</b> data CMP: Only <b>COMPOSER</b> data SND: Only <b>SOUND</b> memory data PNL: Panel status and data stored in the <b>PANEL MEMORY</b>
---

- If ALL is selected, the maximum number of songs which can be saved is 10 but may be less if you are saving songs which use a lot of memory.
- To maximize the efficient use of disk space, it is a good practice to erase unused memories before saving to disk. **COMPOSER** data especially uses considerable memory, so those memories which contain unnecessary data should be erased.

6. Use the **⑦** buttons to specify the model type.

[AC1200]: When data saved to disk will be used with this instrument.

[KN2000]: When data saved to disk will be used with Keyboard model SX-KN2000.

7. Press either **⑧** [SAVE] button.

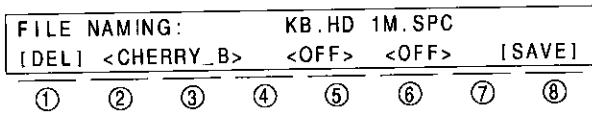
- When the operation has been successfully completed, "COMPLETED!" is shown on the display.
- If you attempt to save data to a file number in which data is currently saved, the display changes to the confirmation display. Press either **⑧** [YES] button if you wish to continue with the SAVE procedure, or press either **⑦** [NO] button if you wish to cancel the procedure.

### ■ FILE delete

To erase a song from a disk, on the FILE NAMING display, press either **⑥** [DEL] button. On the DELETE display, after using the **②** buttons to select the number of the song you wish to erase, press either **⑥** [DEL] button. The display changes to the confirmation display. Press either **⑧** [YES] button to erase the song, or press either **⑦** [NO] button to cancel the procedure.

### MIDI FILE SAVE

1. On the **DISK DRIVE** menu display, select SMF-SV. (Refer to page 71.)
  - The display looks similar to the following.



2. Type a name for the new data file (up to 8 characters).
  - Use the **TRANSPOSE** buttons to move the cursor to the character position. Use the **③** buttons to select the character. Repeat these steps to type the whole name.

■ **KB. HD: Keyboard header**

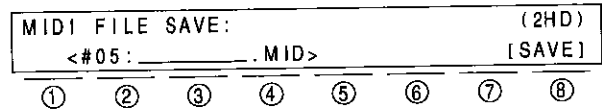
By pressing either **⑤** button to select <ON>, you can save the sound, volume and other settings for each part as data at the beginning of the file. If <OFF> is selected, this data is not saved.

■ **1M. SPC: One-measure space**

When there is various data other than performance data stored at the beginning of a file, the start of playback may be delayed. This can be avoided by inserting a one-measure space before the beginning of the performance. Press either **⑥** button to select <ON> and insert a one-measure space. Select <OFF> if you do not wish to insert the space.

- When set to <ON>, a space is added each time a file is saved. Therefore, if you have already saved a file once with the 1M. SPC set to <ON>, please set it to <OFF> each time the file is subsequently saved.

3. Press either **⑧** [SAVE] button.
  - The display looks similar to the following.



4. Use the **②** buttons to select the file number in which to save the data.
  - Files in which data is currently stored are indicated by the file name following the file number.
5. Press either **⑧** [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 either **⑧** [YES] button if you wish to continue with the SAVE procedure, or press either **⑦** [NO] button if you wish to cancel the procedure.

■ **FILE delete**

To erase a song from a disk, on the FILE NAMING display, press either **①** [DEL] button. On the MIDI FILE DELETE display, after using the **②** buttons to select the number of the song you wish to erase, press either **⑧** [DEL] button. The display changes to the confirmation display. Press either **⑧** [YES] button to erase the song, or press either **⑦** [NO] button to cancel the procedure.

# Single data-type load

You can load **COMPOSER** or **SOUND** data into the memories you specify.

## LOAD SINGLE COMPOSER

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 **DISK DRIVE** menu display, select LD. SNGL. CMP. (Refer to page 71.)
  - The display looks similar to the following.

```
LOAD SINGLE COMPOSER:
FILE<01:BLUE_W> <A-MEM1 > → <B-MEM10> [OK]
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
```

3. Use the ② buttons to select the file number to load.

4. Use the ④ or ⑤ buttons to select the memory number to load.
5. Use the ⑦ buttons to specify the memory to load to.
6. Press either ⑧ [OK] button.
  - When the operation has been successfully completed, "COMPLETED!" is shown on the display.
- This procedure can also be begun from the **COMPOSER** menu display. (Refer to page 62.)

## LOAD SINGLE SOUND

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 **DISK DRIVE** menu display, select LD. SNGL. SND. (Refer to page 71.)
  - The display looks similar to the following.

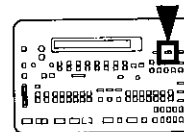
```
LOAD SINGLE SOUND MEMORY: Distortion Pi
FILE<01:BLUE_W><MEM-11> → <MEM-10> [OK]
 ①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧
```

3. Use the ② buttons to select the file number to load.

4. Use the ④ or ⑤ buttons to select the memory number to load.
5. Use the ⑦ buttons to specify the memory to load to.
6. Press either ⑧ [OK] button.
  - When the operation has been successfully completed, "COMPLETED!" is shown on the display.

# Part VI Adjusting the sounds

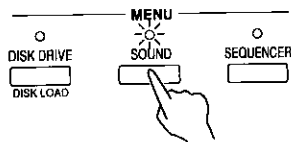
## Sound mode



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

### Selecting the function

1. In the **MENU** section, press the **SOUND** button to turn it on.



2. Select the desired menu and follow the procedures on the corresponding setting display (explained on the following pages).

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

- The display changes to the following menu display.

===== SOUND MENU =====							
PART	TUNE	T. CHORD	L. HOLD	REV			
①	②	③	④	⑤	⑥	⑦	⑧

- To select the desired function, press the corresponding balance button.

#### Summary of the **SOUND** menu items

##### **PART** (page 79)

Press either ① button to select this function. Set the various sound attributes for each part.

##### **TUNE** (TUNING) (page 79)

Press either ③ button to select this function. Fine-tune the pitch of this instrument, and select the type of tuning.

##### **T.CHORD** (TECHNI-CHORD type) (page 80)

Press either ⑤ button to select this function. Select the **TECHNI-CHORD** harmony style.

##### **L.HOLD** (LEFT HOLD) (page 80)

Press either ⑦ button to select this function. Set the mode which determines how the **LEFT** part sounds during an **AUTO PLAY CHORD** performance.

##### **REV** (REVERB) (page 81)

Press either ⑧ button to select this function. Select the type and depth of the **DIGITAL REVERB**.



# Adjusting the settings

Adjust the settings after selecting the function.

## PART

Set the various sound attributes for each part.

SND=11:VOL	SUS	PAN	KYSFT	TUNE	BEND	GLD
RT1	127	6	R2	+12	+127	12 OFF
①	②	③	④	⑤	⑥	⑦ ⑧

1. Use the ① buttons to select the part.

- Select from RT1 (RIGHT 1), RT2 (RIGHT 2), LFT (LEFT), P4 to P16 (PART 4 to 16), CHD (CHORD), and R.B (ROOT BASS).
- PART 16 is reserved for the **DRUMS** part.
- For information concerning CHD and R.B, refer to the section on the **AUTO PLAY CHORD** (page 34).
- PART 4 to 16 are used for MIDI functions.
- For parts for which **KEYBOARD PERC** sounds are selected, only the VOL setting can be adjusted.
- The PAN, KYSFT, TUNE, BEND and GLD settings cannot be changed for the CHORD and ROOT BASS parts.

2. Adjust the attributes as desired.

- Use the ② [VOL] buttons to adjust the volume for the part (0 to 127).
- Use the ③ [SUS] buttons to specify 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.

- Use the ④ [PAN] buttons to adjust the stereo balance of the part (L2 to R2).
  - At 0, the sound is at the center.
  - A "L" value moves the sound to the left, and a "R" value to the right.

- Use the ⑤ [KYSFT] buttons to specify the amount of key shift (-12 to +12).
  - A value of 1 means a shift of one semitone. To raise (or lower) the pitch one octave, set the value to +12 (or -12).
  - A - value lowers the pitch, and a + value raises it.

- Use the ⑥ [TUNE] buttons to fine-tune the pitch of the part (-128 to +127).

- Use the ⑦ [BEND] buttons to set the amount of pitch change when the PITCH BEND wheel of the connected instrument is used (0 to 12).
  - Increments are in semitones. A value of 12 is one octave.

- Use the ⑧ [GLD] buttons to turn the glide function of the Foot Switch or Foot Controller (separately sold option) to ON or OFF for the part.
  - Different functions can be assigned to the Foot Switch and Foot Controller(s). (Refer to page 40.)

- By turning the **DIGITAL REVERB** button on or off, the reverb on/off status for each part can be set.

3. Repeat steps 1 and 2 for the other parts, as desired.

## TUNING

Fine-tune the pitch of this instrument, and select the type of tuning.

TUNE:	TUNING<440.0Hz>	TYPE<E.TEMPERA >
①	②	③ ④ ⑤ ⑥ ⑦ ⑧

1. Use the ③ 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.

2. Use the ⑦ buttons to select the type of tuning.

E. TEMPERA: One octave is divided into pitches of 12 equally spaced intervals.  
 PIANO TUNE: Standard acoustic piano tuning, in which the lower pitches are tuned slightly lower and the higher pitches are tuned slightly higher.

### TECHNI-CHORD

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

TECHNI-CHORD TYPE:							
<BIG BAND REEDS>							
①	②	③	④	⑤	⑥	⑦	⑧

1. Use the ⑤ buttons to select the harmony style.
- Select from CLOSE, OPEN1, OPEN2, DUET, COUNTRY, THEATRE, HYMN, BLOCK, BIG BAND BRASS, BIG BAND REEDS, OCTAVE, HARD ROCK and FANFARE.

- For a detailed explanation of the different harmony styles, refer to the separate "REFERENCE GUIDE" provided.
- When the OCTAVE, HARD ROCK or FANFARE style is selected, the **TECHNI-CHORD** functions even when the keyboard of the connected instrument is not split.

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 of the connected instrument sounds during an **AUTO PLAY CHORD** performance.

LEFT HOLD SETTING:							
<OFF>							
①	②	③	④	⑤	⑥	⑦	⑧

Use the ⑤ 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 <b>LEFT</b> part sound and chord note specified by the pressed keys are heard.	The <b>LEFT</b> part notes and the chord note are not heard (the <b>RIGHT</b> part sound is heard for the entire keyboard).
When rhythm is on	The <b>LEFT</b> part notes and the chord note are not heard.	The <b>LEFT</b> 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 <b>LEFT</b> part sound.	The <b>LEFT</b> part sound of the pressed keys is heard.	The <b>LEFT</b> part notes and the chord note are not heard (the <b>RIGHT</b> 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**.

- This setting is effective for all parts.

REVERB:							
TYPE<HALL2>				DEPTH<8>			
①	②	③	④	⑤	⑥	⑦	⑧

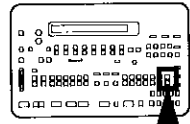
1. Use the ③ buttons to select the type.
  - Select from ROOM1, ROOM2, HALL1, HALL2, HALL3 and ECHO.
2. Use the ⑥ buttons to adjust the depth of the reverb (1 to 8).
  - The larger the number, the greater the amount of reverb.

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.

# Part VII Creating sounds

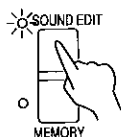
## Outline of the Sound Edit



**SOUND EDIT** enables you to create your own new sound by altering one of the preset sounds. Your new sound can then be stored in one of the sound memory locations.

### Outline of procedure

1. Select a preset sound on which to build your new sound.
  - The **KEYBOARD PERC** sounds (95 to 99) cannot be edited.
2. Press the **SOUND EDIT** button to turn it on.



- The display changes to the following menu display.

==== SOUND EDIT MENU =====							
EASY	GENERAL	TONE	EFFECT				
①	②	③	④	⑤	⑥	⑦	⑧

- To select the desired function, press the corresponding balance button.

#### Summary of the SOUND EDIT menu items

##### EASY (page 83)

Press either ② button to select this function. The most often used edit functions—such as **OCTAVE** and **VIBRATO**—are assembled on one display for easy sound modification.

##### GENERAL (page 84)

Press either ④ button to select this function. Editing functions which apply to the entire sound.

##### TONE (page 86)

Press either ⑥ button to select this function. Modify the tones which make up the sound.

##### EFFECT (page 88)

Press either ⑧ button to select this function. Select the type and degree of **DIGITAL EFFECT** for the sound.

3. Select the desired menu and follow the procedures on the corresponding setting display (explained on the following pages).

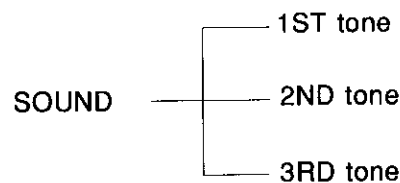
#### Example: EFFECT

EFFECT:	TYPE	DEP	SPD	DLY	DTN		
◀ORI▶<ON ><ST>	CELE1	12	13	14	+15		
①	②	③	④	⑤	⑥	⑦	⑧

- Press the ① button to switch between the modified sound (EDT) and the original sound (ORI). This allows you to compare the edited sound to the original sound as you are modifying it. Play the keyboard of the connected instrument to confirm the sound.
  - Press the **EXIT** button to return to the **SOUND EDIT** menu display.
4. When the sound is just the way you like it, press the **TEMPO** button to store your new sound. (Refer to page 88.)

#### ■ TONE

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 3RD tone may not be generated.

## Easy Edit

The most commonly used edit functions are consolidated on one display, providing convenient and quick editing operation. Select **TONE SHUFFLE** for a quick and simple sound change, or select specific attributes, such as **OCTAVE** and **VIBRATO**, to adjust individually.

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



2. Use the balance buttons below the display to modify each attribute.
- Play the keyboard of the connected instrument to check the sound.

**TONE SHUFFLE:** An editing method in which various elements of the sound automatically change, and you just choose the sound you like.

**RANGE:** Specify the degree of change in the sound.

**INI:** The initial status of the currently selected sound.

1 to 10: Change only the 3RD tone.

11 to 20: Change only the 2ND tone.

21 to 30: Change only the 1ST tone.

- There are 10 **RANGE** levels for each tone. The higher the number, the more dramatic the change from the initial condition of the current sound. For example, if the 1ST tone is a piano sound, and if you set the **RANGE** to 21 and then press **STEP** to look for a desired sound, you can choose from among different piano-type sounds. However, if you set the **RANGE** to a higher number, the difference between sounds is much more dramatic.
- Changing the **RANGE** setting does not affect the sound unless the **STEP** button is also pressed.

**STEP:** After setting the **RANGE**, change the sound until you find the one you like.

- The volume of each tone cannot be changed.

**OCTAVE:** Shift the octave range (-2 to +2).

**VIBRATO:** Set the vibrato depth (OFF, INI, 1 to 30).

**AUTOBEND:** Specify the amount of pitch change during the attack period (OFF, INI, 1 to 30).

**ENVELOPE:** Specify how the volume changes over time (INI, 1 to 30).

**FILTER:** Make major changes to the sound by applying different filter effects (THRU, INI, 1 to 30).

**DIGITAL EFFECT:** Change the degree of **DIGITAL EFFECT** (OFF, INI, 1 to 30).

- If a function is set to OFF, the effect is not applied to the sound.
  - INI signifies pre-edit setting.
  - When set to THRU, no filter effect is applied.
  - If \*\*\* is shown for an attribute, it indicates that the attribute was modified on the GENERAL EDIT, TONE EDIT or EFFECT EDIT display. If you then modify the attribute on the EASY EDIT display, the previous modifications are canceled.
  - You can make more precise modifications to the sound attributes. If you simultaneously press both balance buttons for an attribute, the display changes to the setting display for that attribute. These displays are explained on the following pages. To return from the setting display to the EASY EDIT display, press the **EXIT** button.
3. Store your new sound. (Refer to page 88.)

# General Edit

These editing functions pertain to the entire sound.

## Selecting attributes

1. On the **SOUND EDIT** menu, select **GENERAL**. (Refer to page 82.)
  - The display looks similar to the following.

===== GENERAL EDIT =====							
OCTAVE	VIBRATO	AUTOBEND	REVERB				
①	②	③	④	⑤	⑥	⑦	⑧

2. Select the attribute you wish to modify.

- ② [OCTAVE]: Set the pitch of the sound by octaves.
- ④ [VIBRATO]: Modify the vibrato attributes of the sound.
- ⑥ [AUTOBEND]: Pitch change during the attack period.
- ⑧ [REVERB]: Amount of **DIGITAL REVERB** effect on the sound.

3. Modify each attribute (explained below).
  - When you have finished modifying an attribute, press the **EXIT** button to return to the **GENERAL EDIT** menu display, select another attribute and continue modifying the sound.

## OCTAVE

OCTAVE:	OCTAVE SHIFT						
◀ORI▶	0						
①	②	③	④	⑤	⑥	⑦	⑧

Use the ④ buttons to raise or lower the pitch of the sound by octaves (-2 to +2).

- To lower the pitch one octave (or two octaves), set the value to -1 (or -2). To raise the pitch one octave (or two octaves), set the value to +1 (or +2).

## VIBRATO

VIB:	1ST	2ND	3RD	PMD	VMD	SPD	DLY
◀EDT▶	ON	ON	OFF	15	15	10	8
①	②	③	④	⑤	⑥	⑦	⑧

1. Use the ②, ③ and ④ buttons to turn the vibrato **ON** or **OFF** for the corresponding tone.
  - An explanation of tones (1ST, 2ND, 3RD) is found on page 86.
2. Use the ⑤ buttons to specify the frequency change (pitch) of the vibrato (0 to 30).
3. Use the ⑥ buttons to specify the depth of the volume change (0 to 30).
4. Use the ⑦ buttons to set the vibrato speed (0 to 30).

5. Use the ⑧ buttons to 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.

### AUTOBEND

AUTOBEND:	MODE	DEP	SPD	TYPE	PTN		
◀ORI▶	<ON> INV	30	30	TRL	5UP		
①	②	③	④	⑤	⑥	⑦	⑧

1. Use the ③ buttons to turn the effect on or off.
  - OFF: This effect is off for the sound.
  - ON: This effect is on for the sound.
  - TCH (TOUCH): This effect is applied only when the keyboard is played hard.
2. Use the ④ buttons to select the 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.
  - INV: The effect is applied to all the tones, but is inverted for the 2nd tone.
3. Use the ⑤ buttons to specify the amount of pitch bend (-30 to +30).

4. Use the ⑥ buttons to specify the time it takes for the altered pitch (auto bend pitch) to become the normal pitch (key pitch) (0 to 30).
  5. Use the ⑦ buttons to specify the type of effect.
    - BND (BEND): The pitch change is continuous.
    - TRL (TRILL): The pitch changes in steps.
  6. Use the ⑧ buttons to select the pattern of the effect.
    - BEND types: UP, UPDWN (UP-DOWN), UPDRP (UP-DROP), DLYUP (DELAY-UP)
    - TRILL types: DWNUP (DOWN-UP), UPDWN (UP-DOWN), MELDY (MELODY), 5UP
- A list of AUTOBEND patterns can be found in the separate "REFERENCE GUIDE" provided.

### REVERB

REVERB:	REVERB DEPTH						
◀ORI▶	8						
①	②	③	④	⑤	⑥	⑦	⑧

- Use the ④ buttons to adjust the depth of the reverb (0 to 16).
- This setting is effective when the **DIGITAL REVERB** button is on.

# Tone Edit

Modify the separate tones which comprise the sound.

## Selecting attributes

1. On the **SOUND EDIT** menu, select **TONE**. (Refer to page 82.)
  - The display looks similar to the following.

```

===== TONE EDIT =====
TONE  LEVEL&PITCH  ENVELOPE  FILTER
①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧

```

2. Use the buttons below the display to select the attribute you wish to modify.

- ② **TONE**: Set the sound of each tone.
- ④ **LEVEL & PITCH**: Adjust the volume and pitch of each tone.
- ⑥ **ENVELOPE**: Specify how the sound changes over time.
- ⑧ **FILTER**: Make major changes to the sound by eliminating specific frequency ranges.

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.

## TONE

```

TONE:      GROUP      SELECT
<ORI><1ST><ON >  A  Piano
①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧

```

1. Use the ② buttons to select the tone to modify (1ST, 2ND or 3RD).
2. Use the ③ buttons to turn the tone ON or OFF.
3. Use the ④ buttons to select the group of the tone (A to N).

4. Use the ⑥ or ⑦ buttons to select the sound of the tone.
  - Detailed information about groups and sounds is found in the separate "REFERENCE GUIDE" provided.
5. Repeat steps 1 through 4 for the other tones.



## LEVEL & PITCH

LEVEL&PITCH:		VOL	KEY TUNE	
◀ORI▶	<1ST>	127	0	4
①	②	③	④	⑤
			⑥	⑦
				⑧

- Use the ② buttons to select the tone to modify.
- Use the ④ buttons to adjust the volume (0 to 127).
- Use the ⑥ buttons to adjust the pitch (-24 to +24).
  - Increments are in semitones. A - value lowers the pitch, and a + value raises it.
- Use the ⑦ buttons for fine-adjustment of the pitch (-50 to +50).
  - Slight differences in pitches between the tones add fullness to the sound.
- Repeat steps 1 through 4 for the other tones.

## ENVELOPE

ENVELOPE:		ATK	DCY1	SUS1	DCY2	SUS2	RLS
◀ORI▶	<1ST>	50	10	25	12	0	25
①	②	③	④	⑤	⑥	⑦	⑧

- Use the ② buttons to select the tone to modify.
- Use the ③ buttons to modify the ATTACK time (0 to 50).
- Use the ④ buttons to modify the DECAY 1 time (0 to 50).
- Use the ⑤ buttons to modify the SUSTAIN 1 time (0 to 50).
- Use the ⑥ buttons to modify the DECAY 2 time (0 to 50).
- Use the ⑦ buttons to modify the SUSTAIN 2 time (0 to 50).
- Use the ⑧ buttons to modify the RELEASE time (0 to 50).
  - For details about the envelope, refer to the separate "REFERENCE GUIDE" provided.
- Repeat steps 1 through 7 for the other tones.

## FILTER

FILTER:		CUTOFF	TYPE	TCHCV	TCHDEP
◀ORI▶	<1ST>	101	LPF	2	20
①	②	③	④	⑤	⑥
					⑦
					⑧

- Use the ② buttons to select the tone to modify.
- Use the ③ buttons to specify the frequency range which is cut by the filter (0 to 127).
- Use the ⑤ buttons to select the filter type.
 

LPF: Low-pass filter  
Low-range signals are unchanged. High-range signals are cut according to the ③ value.

THRU: No filter effect is applied.
- Use the ⑥ buttons to specify the cut-off frequency to key velocity curve (-3 to +3).
  - For details about curve types, refer to the separate "REFERENCE GUIDE" provided.
- Use the ⑦ buttons to set the filter strength in proportion to key velocity (0 to 50).
- Repeat steps 1 through 5 for the other tones.

## 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.

- On the **SOUND EDIT** menu, select **EFFECT**. (Refer to page 82.)
  - The display looks similar to the following.

EFFECT:	TYPE	DEP	SPD	DLY	DTN		
◀ORI▶<ON ><ST>	CELE1	12	13	14	+15		
①	②	③	④	⑤	⑥	⑦	⑧

- Use the ② buttons to 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.
- Use the ③ buttons to select the type of output (ST=stereo; MN=monaural).

- Use the ④ buttons to select the type of effect.
  - Select from CELE (CELESTE) 1, 2, CHO (CHORUS) 1, 2, ENSMBL (ENSEMBLE) 1, 2, TREMOLO, ROTARY, DELAY, REPEAT, SOLOEFF (SOLO EFFECT).
  - When the EFFECT display is selected, the display for the effect type which is best-suited for the sound currently being edited is automatically selected.
- Use the ⑤ to ⑧ buttons to adjust the corresponding parameter.
  - For a detailed explanation of the parameters of each type of effect, refer to the separate "REFERENCE GUIDE" provided.
  - When the type is changed, the parameters revert to the factory-preset values.

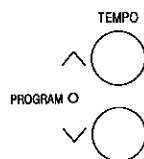
## Store the new sound

You can store up to 36 original sounds in the memories, and then select them just like the factory-preset sounds.

**Warning:** Your new sound will be erased if you exit the **SOUND EDIT** mode without first storing it in a memory.

### Procedure

- When you have edited the sound to just the way you like it, press either **TEMPO** button.



- The display looks similar to the following.

SOUND NAMING:							
<ROMANCE PIANO>	[A/a]	[CLR]	[WRITE]				
①	②	③	④	⑤	⑥	⑦	⑧

- Type a new name for your sound (up to 13 characters).
  - Use the **TRANSPOSE** buttons to move the cursor to the character position. Use the ② and ③ buttons to select the character. Repeat these steps to type the whole name.
  - Use either ⑤ [A/a] button to switch between upper case and lower case characters.
  - To erase the name, press the ⑥ [CLR] button.

3. Press either ⑧ [WRITE] button.

WRITE:		== BANK SELECT ==	
ROMANCE	PIANO → M1:	Piano	[OK]
①	②	③	④
⑤	⑥	⑦	⑧

4. Use the ⑤ buttons to select the memory number in which to store the new sound (M1 to M36).

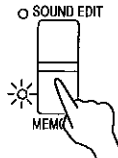
5. Press either ⑧ [OK] button.

- The new sound is stored, and "WRITE COMPLETED!" is shown on the display.
- The instrument returns to the normal performance mode.
- The stored sound memories can be saved on a disk for recall at a later time. (Refer to page 75.)

## Select a new sound

You can select your original sound just like the factory-preset sounds.

1. Press the **MEMORY** button of the **SOUND EDIT** to turn it on.



2. On the **SOUND/VARIATION SELECT** number pad, select the number of the desired memory (**01 to 36**).

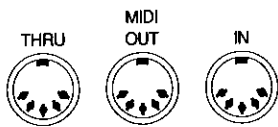
- Your original sound is recalled.

## What is MIDI?

MIDI (Musical Instrument Digital Interface) is the international standard for digital communication of electronic musical instrument data. This means that any equipment which has a MIDI terminal—such as electronic musical instruments and personal computers—can easily exchange digital data with other MIDI equipment without resorting to complicated conversions or connections.

### MIDI terminals

(On the rear panel)



- 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

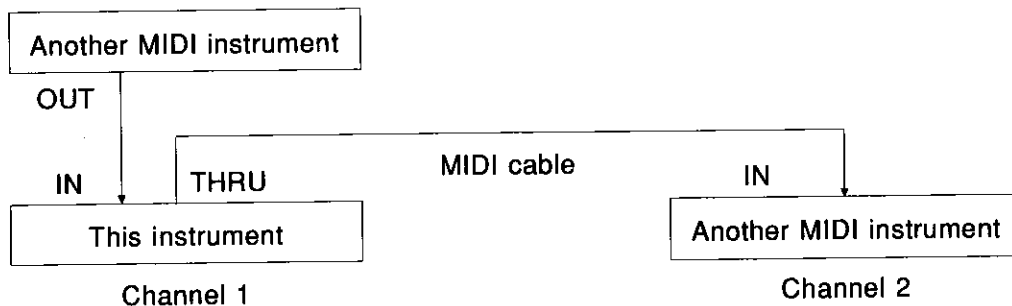
- For these connections, use a commercially available MIDI cable.

### MIDI channels

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. This characteristic also makes it possible to link multiple sound generators and to control each by matching specific channels.

Example:



## The following kinds of data can be transmitted/received.

### ■ NOTE data

This is the most basic kind of MIDI data which is exchanged, and is used to specify which keys are played and how hard they are played.

NOTE NUMBER: Number specifying which key is played.

NOTE ON: Specifies that a key is played.

NOTE OFF: Specifies that a key is released.

VELOCITY: Specifies how hard a key is struck.

- MIDI notes are assigned numbers from 0 to 127, with middle C (C3) as 60. Note pitches are in semitone increments, with the higher numbers assigned to the higher pitches.

### ■ PROGRAM CHANGE

This is sound change data. When a different sound is selected on the transmitting instrument, the sound on the receiving instrument also changes.

### ■ CONTROL CHANGE

These are volume, sustain, effect, etc. data used to enhance performance expression. Each function is distinguished by its control number, and the function which can be changed by the control differs depending on the instrument.

### ■ EXCLUSIVE data

This is sound data, etc. particular to a specific instrument model. This data can also be transmitted and received by the DUMP function.

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

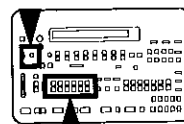
## GENERAL MIDI

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. Song data created on the equipment of one manufacturer can be played back on the equipment of a different manufacturer, as long as both conform to the GENERAL MIDI standard. This instrument conforms to this standard and can be used as a GENERAL MIDI sound generator.

Equipment which conforms to GENERAL MIDI standards is indicated by the following logo.



# Outline of MIDI functions



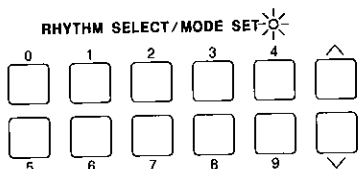
Select the various settings which are used for MIDI operation of the instrument.

## Outline of procedure

1. Press the **MODE SET** button.



2. On the **RHYTHM SELECT/MODE SET** number pad, select the number for the function you wish to set (1 digit).



- You can also select the function on the display by pressing the corresponding balance button.

**3: MIDI CH** (page 93)

Assign a MIDI channel to each part.

**4: OTHERS** (page 93)

Other MIDI settings.

**5: PRESETS** (page 97)

Establish the optimum settings depending on how this instrument is connected to other equipment.

**6: GM** (page 97)

Specify whether this instrument is compatible with GENERAL MIDI standard instruments.

**7: DUMP** (page 98)

Settings related to SYSTEM EXCLUSIVE data exchange.

- The display changes to the corresponding setting display.
- You can also use the **RHYTHM SELECT/MODE SET** ^ and v buttons to select the setting display.
- If **OTHERS** was selected, the display changes to the following.

===== MIDI OTHER SETTINGS MENU =====							
PART	REAL	COM	IN/OUT	CTRL	MSG	P	MEM
①	②	③	④	⑤	⑥	⑦	⑧

3. Perform the setting procedures (explained on the following page).

4. When you have finished adjusting the settings, press the **MODE SET** button again.

### Summary of OTHERS menu

**PART (PART SETTING)** (page 93)

Press either ① button to select this function. Make the OCTAVE and LOCAL CONTROL settings for each part.

**REAL (REALTIME MESSAGES)** (page 94)

Press either ② button to select this function. Set the realtime command settings, such as tempo and start/stop.

**COM (COMMON SETTING)** (page 94)

Press either ③ button to select this function. Functions which are common to all parts.

**IN/OUT (INPUT/OUTPUT SETTINGS)** (page 95)

Press either ④ or ⑤ button to select this function. Various settings related to data transmission and reception.

**CTRL.MSG (CONTROL MESSAGE)** (page 96)

Press either ⑥ or ⑦ button to select this function. Enable or disable the exchange of various control data.

**P.MEM (PANEL MEMORY)** (page 96)

Press either ⑧ button to select this function. Settings related to transmission of **PANEL MEMORY** data.

# Setting the functions

Adjust the settings after selecting the function.

## BASIC CHANNEL

Channel numbers have already been assigned to parts (factory-presets), but you can reassign channel numbers to parts as desired.

BASIC CHANNEL:							
			PART	<RIGHT 1>		<ch 1>	
①	②	③	④	⑤	⑥	⑦	⑧

- Use the ⑥ buttons to select the part.
- Use the ⑧ buttons to select a basic channel for the part (OFF, ch1 to ch16).
  - A part which has been set to OFF cannot be used to transmit or receive MIDI data.
- Repeat steps 1 and 2 for each part as desired.

## ■ Default channel settings

Part	Channel	Part	Channel
RIGHT 1	1	PART 14	14
RIGHT 2	2	PART 15	15
LEFT	3	PART 16	
PART 4	4	(DRUMS)	16
PART 5	5	CONTROL	OFF
PART 6	6	AUTO PLAY CHORD	
PART 7	7		
PART 8	8	ACCOMP 1	OFF
PART 9	9	ACCOMP 2	OFF
PART 10	10	ACCOMP 3	OFF
PART 11	11	BASS	OFF
PART 12	12	DRUMS	OFF
PART 13	13	CHORD	OFF

## 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).

- On the OTHERS menu, select PART.
  - The display looks similar to the following.

PART SETTING:								
			PART	<RIGHT 1>	OCTAVE	<-2>	LOCAL	<OFF>
①	②	③	④	⑤	⑥	⑦	⑧	

- Use the ③ buttons to select the part.
- Use the ⑤ buttons to set the OCTAVE SHIFT value (-3 to 3).
  - Octave shift is set for transmitted data only and does not affect the sound output from this instrument.
  - 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.

- Use the ⑧ buttons to enable or disable this instrument's sound generator (LOCAL CONTROL).

ON: The performance from this instrument is transmitted as MIDI data and also sounds from this instrument.

OFF: The performance from this instrument is transmitted as MIDI data but does not sound from this instrument.

## REALTIME MESSAGES

Enable or disable the exchange of **START/STOP** data (**REALTIME COMMANDS**), and select the **CLOCK** mode.

- On the **OTHERS** menu, select **REAL**. (Refer to page 92.)

- The display looks similar to the following.

```

REALTIME MESSAGES:
REALTIME COMMANDS<OFF>  CLOCK<INTERNAL>
 ①      ②      ③      ④      ⑤      ⑥      ⑦      ⑧
  
```

- Use the ⑤ buttons to change the **REALTIME COMMANDS** setting.

**ON:** Rhythm and **SEQUENCER** start/stop, continue, and song position pointer data can be transmitted/received.

**OFF:** This data cannot be transmitted/received.

- Use the ⑦ buttons to change the **CLOCK** setting.

**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.

- When **MIDI** is selected, the tempo is displayed as [---] and the rhythm and **SEQUENCER** are disabled until the **CLOCK** signal is received from the connected instrument.

## COMMON SETTING

Set the functions which are common to all parts.

- On the **OTHERS** menu, select **COM**. (Refer to page 92.)

- The display looks similar to the following.

```

COMMON SETTING 1:
<P.CHG TO P.MEM>                                <OFF>
 ①      ②      ③      ④      ⑤      ⑥      ⑦      ⑧
  
```

- Use the ①, ② or ③ buttons to select the setting.

### P. CHG TO P. MEM

Enable or disable the exchange of **PROGRAM CHANGE** numbers for the **RIGHT 1** part by operation of the **PANEL MEMORY** buttons (**ON/OFF**).

- The **PANEL MEMORY BANK A** numbers correspond to **PROGRAM CHANGE** numbers 0 to 7, and **BANK B** numbers to **PROGRAM CHANGE** number 8 to 15.

### NOTE ONLY

Of the performance data, specify whether or not only **NOTE** data is exchanged (**ON/OFF**).

### REALTIME SYSEX

Specify whether or not **MIDI** data is exchanged as **SYSTEM EXCLUSIVE** data during the performance (**ON/OFF**).

### NON REALTIME SYSEX

Specify whether or not **MIDI** data is exchanged as **SYSTEM EXCLUSIVE** data before the performance (**ON/OFF**).

### INTRO, FILL-IN, ENDING

Enable or disable the exchange of intro, fill-in and ending data on the channel for the **DRUMS** part (**ON/OFF**).

### APC CONTROL

Enable the exchange of data for the on/off status of the **AUTO PLAY CHORD** modes on the channel for the **ACCOMP 1** part (**ON/OFF**).

### TRANSPOSE

Specify whether the **NOTE** number of the transposed **NOTE** is transmitted/received (**ON**) when **TRANSPOSE** is on, or if the **NOTE** number of the played key is transmitted/received (**OFF**).

### PROGRAM CHANGE MODE

Settings related to the **PROGRAM NUMBER** of each sound.

**NORMAL:** The **PROGRAM CHANGE** numbers correspond to the sound numbers.

**TECH:** **PROGRAM CHANGE** numbers are standardized among all Technics models which are set to this mode. The **PROGRAM CHANGE** number assigned to a given 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**

Specify how note numbers are assigned to percussion sounds.

**NORMAL:** **KEYBOARD PERC** instrument sounds correspond to this instrument's key NOTE numbers.

**TECH:** **KEYBOARD PERC** instrument sounds correspond to the same key NOTE numbers for connected Technics models set to this type. (The closest instrument sound is automatically selected.)

**GM:** **KEYBOARD PERC** instrument sounds follow the GM standard.

**SONG SELECT**

Specify whether song number data can be exchanged (ON/OFF).

**MIDI SETUP LOAD**

Specify whether MIDI settings stored on a disk are automatically recalled when disk data is loaded (ON/OFF).

**ACCORDION MODE**

The most suitable chord determination and the octave arrangement for the percussion instruments are automatically selected when a MIDI accordion is connected (ON/OFF).

3. Use the **Ⓢ** buttons to change the setting.

4. Repeat steps 2 and 3 for other functions.

**INPUT/OUTPUT SETTING**

Make the settings which determine how various performance data is treated during data reception and transmission.

1. On the OTHERS menu display, select IN/OUT. (Refer to page 92.)

- The display looks similar to the following.

INPUT/OUTPUT SETTING 1:							
<RIGHT 1 INPUT>				<DIRECT>			
①	②	③	④	⑤	⑥	⑦	⑧

2. Use the **②** or **③** buttons to select the item.

**RIGHT 1 INPUT**

Specify how note data is handled when it is received on the channel for the **RIGHT 1** part.

**CONDUCTOR:** The **CONDUCTOR** settings of this instrument determine which part the data is used for.

**DIRECT:** It is treated only as **RIGHT 1** part data.

**AUTO PLAY CHORD INPUT**

Specify whether input data for the **ACCOMP 1, 2, 3, BASS** and **DRUMS** parts is received (ON/OFF).

**TECHNI-CHORD OUTPUT**

Specify whether keyboard notes generated by the **TECHNI-CHORD** function are transmitted (ON/OFF).

**DRUM PATTERN OUTPUT**

Specify whether data from the **DRUMS** part is transmitted (ON/OFF).

**AUTO PLAY CHORD OUTPUT**

Specify whether data for the **ACCOMP 1, 2, 3, BASS** and **CHORD** parts is transmitted (ON/OFF).

3. Use the **Ⓢ** buttons to change the setting.

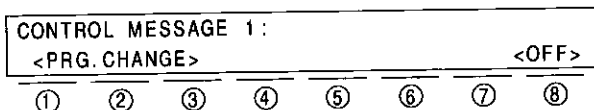
4. Repeat steps 2 and 3 for each item.

- MIDI channels should be assigned to the automatic accompaniment parts before exchanging data. (Refer to page 93.)

### CONTROL MESSAGE

Enable or disable the exchange of various control data.

- On the OTHERS menu display, select CTRL.MSG. (Refer to page 92.)
  - The display looks similar to the following.



- Use the ② or ③ buttons to select the item.
  - Select from PRG. CHANGE, BANK SELECT, PITCH BEND, VOLUME, EXPRESSION, PAN, SUSTAIN, EFFECT&REVERB, MODULATION, TUNING, BEND RANGE and RESET ALL CONTROLLERS.

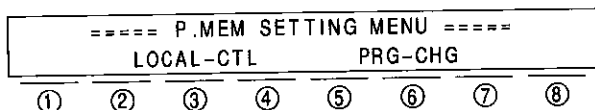
- Use the ⑧ buttons to change the setting (ON/OFF).
  - The BANK SELECT setting is effective only when PRG. CHANGE is set to ON.
  - The TUNING setting is effective for both the TUNING and KEY SHIFT setting.

- Repeat steps 2 and 3 for each item.

### PANEL MEMORY

Two settings related to transmission of **PANEL MEMORY** data.

- On the OTHERS menu display, select P. MEM. (Refer to page 92.)
  - The display looks similar to the following.



- Select one of the menus.
 

**LOCAL-CTL (PANEL MEMORY LOCAL CONTROL):**  
 Press either ③ button to select this item. During a performance, you can change the sound generator setting and MIDI mode setting by changing the **PANEL MEMORY** selection.

**PRG-CHG (PANEL MEMORY PROGRAM CHANGE):**  
 Press either ⑥ button to select this item. Enable or disable the transmission of PROGRAM CHANGE numbers for the **RIGHT 1**, **RIGHT 2** and **LEFT** parts by operation of the **PANEL MEMORY** buttons.

- Make the settings.

#### ■ PANEL MEMORY LOCAL CONTROL



- Use the ② buttons to specify the **PANEL MEMORY** number.
- Use the ③ buttons to turn the specified **PANEL MEMORY LOCAL CONTROL** ON or OFF.
- Use the ⑤ buttons to select a part (**RIGHT 1**, **RIGHT 2** or **LEFT**).
- Use the ⑦ buttons to turn the **LOCAL CONTROL** to ON or OFF.
- Use the ⑧ buttons to set the MIDI output to ON or OFF.
  - The NOTE data and CONTROL data are not transmitted for a part which is set to OFF.
- Repeat steps 3 to 5 for the other parts.
- Repeat steps 1 to 6 for the other **PANEL MEMORY** numbers.

### ■ PANEL MEMORY PROGRAM CHANGE

P.MEM PRG CHG:	PART	P.CHG	BANK
P.MEM<A-5><ON>	<RIGHT1>	<OFF>	<5>
①	②	③	④
⑤	⑥	⑦	⑧

1. Use the ② buttons to specify the **PANEL MEMORY** number.
2. Use the ③ buttons to turn the specified **PANEL MEMORY PROGRAM CHANGE** output to ON or OFF.
3. Use the ⑤ buttons to select a part (**RIGHT 1**, **RIGHT 2** or **LEFT**).

4. Use the ⑦ buttons to specify a **PROGRAM CHANGE** number (0 to 127, OFF).
  - **PROGRAM CHANGE** numbers are not transmitted for a part which is set to OFF.
5. Use the ⑧ buttons to specify a **BANK SELECT** number (0 to 255).
6. Repeat steps 3 to 5 for the other parts.
7. Repeat steps 1 to 6 for the other **PANEL MEMORY** numbers.

### MIDI PRESETS

Establish the optimum settings depending on how this instrument is connected to other equipment.

MIDI PRESETS:	with APC
1 PX Piano	-> AC1200 [OK]
①	②
③	④
⑤	⑥
⑦	⑧

1. Use the ① buttons to specify the connection setup.
  - Select <with APC> if the performance includes the **AUTO PLAY CHORD** performance. Select <without APC> if the **AUTO PLAY CHORD** is not used.
  - Detailed information about the **MIDI PRESETS** can be found in the separate "REFERENCE GUIDE" provided.

2. Press the ⑧ [OK] button.

- When the settings have been successfully stored, "COMPLETED!" appears on the display.

### GENERAL MIDI MODE

Specify whether or not this instrument should be compatible with **GENERAL MIDI** standard instruments.

GENERAL MIDI MODE:	<OFF>
①	②
③	④
⑤	⑥
⑦	⑧

Use the ⑧ buttons specify whether or not this instrument should be compatible with **GENERAL MIDI** standard instruments (ON/OFF).

- The confirmation display appears. Press either ⑧ [YES] button to confirm the setting, or press either ⑦ [NO] button to cancel the procedure.
- Changing this setting will cause all **SEQUENCER** data to be erased.
- This setting is automatically set to OFF when the power is turned on. If the setting is set to ON and the instrument is then turned off, all **SEQUENCER** data will be erased.
- This setting is automatically set to ON if disk data other than Technics data is loaded.

- If ON is selected, the status of this instrument 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 of the connected instrument changes. (Refer to the separate "REFERENCE GUIDE" provided.)
- If **GENERAL MIDI** on/off data is received from connected MIDI equipment, the received data has priority.

## BULK DUMP

This instrument's internal data such as panel settings, performance data, etc. can be transmitted to and received from another AC1200 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 display.

SYSEX BULK DUMP:							
[COMP]	[SEQ]	[SND.M]	[P.MEM]	[TOTAL]			
①	②	③	④	⑤	⑥	⑦	⑧

### ■ Transmitting

1. Follow the procedure necessary to prepare the receiving instrument for data reception.
2. Press the corresponding balance button to specify the type of data to transmit.

- ① [COMP]: **COMPOSER** data
- ③ [SEQ]: **SEQUENCER** data
- ④ [SND.M]: **SOUND** memory data
- ⑥ [P.MEM]: **PANEL MEMORY** data
- ⑧ [TOTAL]: All data

- The display changes to the following.

SYSTEM EXCLUSIVE BULK DUMP SEND							
ARE YOU SURE ? [NO][YES]							
①	②	③	④	⑤	⑥	⑦	⑧

3. To execute data transmission, press either ⑧ [YES] button.
  - Press the ⑦ [NO] button if you wish to cancel the procedure.
  - When either ⑧ [YES] button is pressed, data transmission begins.
  - During transmission, the transmitting status is shown on the display.

### ■ Receiving

After accessing this display on this instrument, follow the transmission procedure on the transmission side.

- During reception, the receiving status is shown on the display.

# Initialize

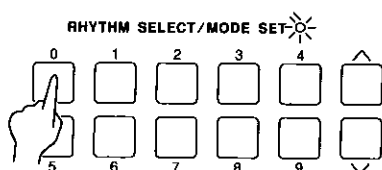
This instrument has many settable functions and storable memories. However, you can return the settings and memory to the factory-preset status.

## INITIAL

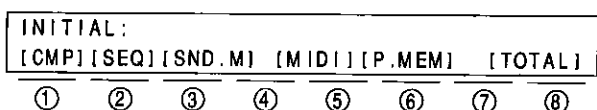
1. Press the **MODE SET** button.



2. On the **RHYTHM SELECT/MODE SET** number pad, select **0**.



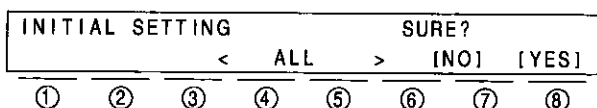
- The display changes to the following.



3. Press the corresponding balance button to select the desired type of initialization.

- ① [CMP]: **COMPOSER** settings
- ② [SEQ]: **SEQUENCER** settings
- ③ [SND.M]: **SOUND** memory settings
- ⑤ [MIDI]: **MIDI** settings
- ⑥ [P.MEM]: **PANEL MEMORY** settings
- ⑧ [TOTAL]: **All** settings

- The display changes to the confirmation display.



4. Press the ⑧ [YES] button.
  - Press the ⑦ [NO] button if you wish to cancel the procedure.
  - When you press the ⑧ [YES] button, initialization begins. When initialization is completed, "COMPLETED!" is shown on the display and the instrument returns to the normal performance mode.

- You can also reset all the instrument settings with the following procedure: Turn off the **PLAY** button once. Then, while pressing the **0**, **1** and **2** buttons on the **RHYTHM SELECT/MODE SET** number pad at the same time, turn the **PLAY** button on again.

### ■ Backup memory

The panel settings are maintained in a backup 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 instrument, use the **SAVE** procedure to store the desired data on a disk for recall at a later time.

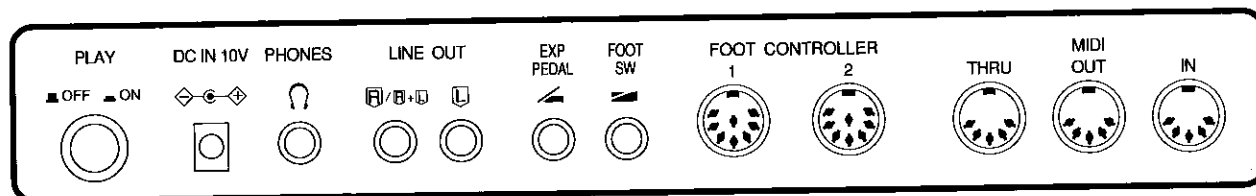
- The back-up memory does not function unless the power has been on for about 10 minutes.
- When you quit the operating mode, a reminder to save the data may appear on the display.

# Options and connections

This page shows the optional accessories that are available for your instrument. 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)



### FOOT CONTROLLER 1, 2

One or two optional SZ-FC2 Foot Controllers can be connected to these terminals to control various functions. (Refer to page 40.)

### EXP PEDAL

The optional SZ-E2 Expression Pedal (sold separately) can be connected to this terminal to control the volume.

### FOOT SW

An optional SZ-P1 Foot Switch (sold separately) can be connected to this terminal to control various functions. (Refer to page 40.)

### 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.)

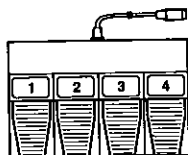
### PHONES

For silent practice, headphones may be used.

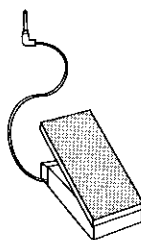
### MIDI

These terminals are for connection to another MIDI instrument. (Refer to page 90.)

## Separately sold options



**SZ-FC2**  
Foot Controller



**SZ-E2**  
Expression  
Pedal



**SZ-P1**  
Foot Switch

# 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.
09	The data on the disk is copy protected.
10	The data is already copy protected.
11	The password that you entered is incorrect.
20	A problem has occurred with your <b>SEQUENCER</b> 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.
27	It is only possible to copy melody tracks. Tracks such as rhythm, chord and control cannot be copied.

No.	Contents
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 AC1200 and cannot be played. The <b>SEQUENCER</b> memory has been cleared.
30	It is not possible to change the time signature or measure length of a <b>COMPOSER</b> pattern after it has been recorded. If you want to proceed, you must first clear the entire <b>COMPOSER</b> pattern.
31	The time signature of the pattern from which you are copying is different from the <b>COMPOSER</b> memory that you are using. Either: Change the time signature of the <b>COMPOSER</b> 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 AC1200 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.
45	Incompatible disk format.
46	It is only possible to insert melody tracks.
47	Please select a preset pattern (00-99).

# Symptoms which appear to be signs of trouble

The following changes in performance may occur in this instrument but do not indicate trouble.

	Phenomenon	Remedy
Sounds and effects	The buttons and keys of the connected instrument, etc. malfunction.	<ul style="list-style-type: none"> <li>• Turn off the <b>PLAY</b> button once, then turn it on again. If this procedure is not successful, turn off the <b>PLAY</b> button once. Then, while pressing the three lower number buttons in the <b>RHYTHM SELECT</b> number pad (0, 1 and 2) at the same time, turn the <b>PLAY</b> button on again. (Note that, in this case, all programmable settings, functions and memories return to their factory-preset status.)</li> </ul>
	No sound is produced when the keys of the connected instrument are pressed.	<ul style="list-style-type: none"> <li>• The <b>MAIN VOLUME</b> is at the minimum setting. Adjust the volume with the <b>MAIN VOLUME</b> control.</li> <li>• The MIDI channel assignment of this instrument and the connected instrument do not match. (Refer to page 93.)</li> <li>• 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.)</li> <li>• The <b>LOCAL CONTROL</b> for a part performed on the keyboard is set to OFF. Set the <b>LOCAL CONTROL</b> to ON. (Refer to page 93.)</li> </ul>
	Only percussive instrument sounds are produced when the keyboard of the connected instrument is played.	<ul style="list-style-type: none"> <li>• A <b>KEYBOARD PERC</b> sound (numbers 95–99) has been selected. On the <b>SOUND SELECT</b> number pad, select a different sound number.</li> </ul>
	The volume is very low when the keyboard of the connected instrument is played.	<ul style="list-style-type: none"> <li>• The volume setting in the <b>SEQUENCER</b> contents is very low. Follow the <b>INITIAL</b> procedure to reset the settings. (Refer to page 99.)</li> </ul>
	Some sounds cannot be selected.	<ul style="list-style-type: none"> <li>• When the <b>GENERAL MIDI</b> status is set to on, The sounds which can be selected and operation which can be executed are limited. Turn the <b>GENERAL MIDI</b> status off to return the instrument to its normal operation. (Refer to page 97.)</li> </ul>
	The sound you hear is different from the sound you selected.	<ul style="list-style-type: none"> <li>• This sometimes occurs when you play back <b>SEQUENCER</b> or <b>COMPOSER</b> data which was created on a different model, or when MIDI data is received from a connected instrument. Select the desired sounds again.</li> </ul>
Rhythm	The rhythm does not start.	<ul style="list-style-type: none"> <li>• The <b>DRUMS</b> volume is set to the minimum level. Use the balance buttons to set the <b>DRUMS</b> volume to an appropriate level.</li> <li>• In the <b>RHYTHM SELECT</b> section, a rhythm in <b>MEMORY A</b> or <b>MEMORY B</b> with no stored pattern was selected. Select a different rhythm.</li> <li>• A <b>SEQUENCER</b> track button is on. When you are not playing back the <b>SEQUENCER</b> performance, turn off the track buttons.</li> <li>• <b>CLOCK</b> is set to MIDI. Set <b>CLOCK</b> to INTERNAL. (Refer to page 94.)</li> <li>• The rhythm does not work when the <b>GENERAL MIDI</b> mode is set to ON. Turn the <b>GENERAL MIDI</b> status off to return the instrument to its normal operation. (Refer to page 97.)</li> </ul>



	Phenomenon	Remedy
SEQUENCER	Storage is not possible.	• The remaining memory capacity of the <b>SEQUENCER</b> is 0. Follow the <b>SONG CLEAR</b> or <b>TRACK CLEAR</b> procedure to erase the memory. (Refer to page 54.)
	Multi-track storage is not possible.	• The playback track has been selected, but the <b>START/STOP</b> 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 <b>START/STOP</b> button to begin playback. (Refer to page 46.)
	The playback measure indication is different from when the performance was recorded.	• 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 <b>RHYTHM</b> part. (Refer to page 51.)
AUTO PLAY CHORD	No sound is produced for the automatic accompaniment.	• In the <b>RHYTHM SELECT</b> section, a rhythm in <b>MEMORY A</b> or <b>MEMORY B</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 <b>ACCOMP</b> part does not sound if its corresponding volume is set to the minimum level. Use the respective balance buttons to set the <b>ACCOMP 1, 2</b> and <b>3</b> volumes to appropriate levels.
COMPOSER	Storage is not possible.	• The remaining memory capacity of the <b>COMPOSER</b> 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 <b>COMPOSER</b> . If you wish to change the time signature and/or measure data, first follow the procedure to clear the memory. (Refer to page 64.)
	The playback timing of the rhythm pattern is different from the timing with which it was recorded.	• The <b>QUANTIZE</b> 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 <b>OFF</b> when recording. (Refer to page 65.)
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 this instrument's memory are erased.	• When performing the load operation from a disk, this instrument's memory changes to that of the data loaded from the disk. If you wish to preserve a song which is stored in this instrument's memory, save it on a disk before performing the load procedure. (Refer to page 75.)
Other	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.

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# Specifications

SM-AC1200	
SOUND GENERATOR	PCM
MAXIMUM NUMBER OF NOTES PRODUCED SIMULTANEOUSLY	32 NOTES
SOUNDS	200 SOUNDS
EFFECTS	DIGITAL EFFECT, SUSTAIN, DIGITAL REVERB
PART SELECT	RIGHT 1, RIGHT 2, LEFT
TRANSPOSE	G-C-F#
RHYTHM	100 RHYTHMS
CONTROLS	MAIN VOLUME, OTHER BALANCE, CONDUCTOR, START/STOP, INTRO & ENDING, FILL IN 1, FILL IN 2, VARIATION, COUNT INTRO, SYNCHRO & BREAK, TEMPO, SPLIT POINT, MUTE
AUTO PLAY CHORD	ONE FINGER, FINGERED, PIANIST, MEMORY, ON BASS, MUSIC STYLE ARRANGER, SOUND ARRANGER
ONE TOUCH PLAY	○ (ONE TOUCH PLAY/MUSIC STYLE SELECT)
TECHNI-CHORD	○
PANEL MEMORY	2 BANKS × 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, MEASURE INSERT, MEASURE DELETE), PUNCH RECORD, PLAY, MEDLEY
COMPOSER	5 PARTS: BASS, ACCOMP 1, ACCOMP 2, ACCOMP 3, DRUMS STORAGE CAPACITY: APPROX. 8600 NOTES INPUT MODES: REALTIME RECORD, STEP RECORD FUNCTIONS: COMPSER LOAD, CLEAR, MODE SELECT, COPY, LOAD SINGLE COMPOSER PATTERN MEMORY: 2 BANKS × 10 (MEMORY 1-6, INTRO, FILL IN 1, FILL IN 2, ENDING)
DISK DRIVE	3.5 INCH DISK DRIVE FOR 2HD (1.44 MB), 2DD (720 KB) DISK LOAD, DISK SAVE, MIDI FILE LOAD, MIDI FILE SAVE, DISK FORMAT, LOAD SINGLE COMPOSER PATTERN, LOAD SINGLE SOUND MEMORY
SOUND SETTING	PART SETTING (VOLUME, SUSTAIN, PAN, KEY SHIFT, TUNE, PITCH BEND RANGE, GLIDE SETTING), TUNING, TECHNI-CHORD TYPE, LEFT HOLD, REVERB
SOUND EDIT	EASY EDIT, GENERAL EDIT (OCTAVE SHIFT, VIBRATO, AUTOBEND, REVERB), TONE EDIT (TONE, LEVEL & PITCH, ENVELOPE, FILTER), EFFECT EDIT MEMORY: 36
MODE SET	INITIAL, FOOT SWITCH & FOOT CONTROLLER SETTING, LCD CONTRAST, MIDI BASIC CHANNEL, MIDI OTHER SETTINGS, MIDI PRESETS, GM MODE SET, BULK DUMP
DISPLAY	LCD (40 CHARACTERS × 2 LINES) EXIT, DISPLAY HOLD
DEMO	○
TERMINALS	DC IN 10V, PHONES, LINE OUT (R/R+L, L), FOOT SW, EXP PEDAL, FOOT CONTROLLER 1, 2, MIDI (IN, OUT, THRU)
POWER REQUIREMENT	AC: WITH SY-AD8 AC ADAPTOR AC120/220/230/240V 50/60 Hz AC120V 60Hz (NORTH AMERICA AND MEXICO)
DIMENSIONS (W×H×D)	36.8 cm × 7.0 cm × 25.0 cm (14-1/2" × 2-3/4" × 9-27/32")
NET WEIGHT	2.1 kg (1.0 lbs.)*
ACCESSORIES	AC ADAPTOR (SY-AD8), RHYTHM PATTERN DISK

\* Without AC ADAPTOR

Design and specifications are subject to change without notice.

# MEMO

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