CONCERT

KORG DIGITAL PIANO

XC-2000

XC-1000

GENERAL MIDI INSTRUMENT

Owner's Manual

AI² Synthesis System

KORG

Thank you purchasing the Korg XC-2000/XC-1000 Concert digital piano. In order to enjoy long and trouble-free use, please read this manual carefully and use the instrument correctly.

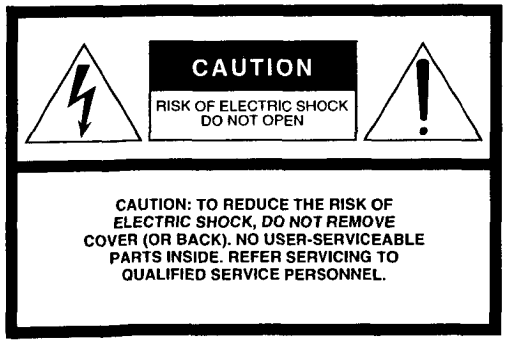
Ⓔ ①

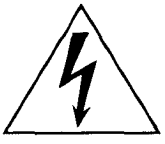
IMPORTANT SAFETY INSTRUCTIONS

WARNING — When using electric products, basic precautions should always be followed, including the following.

1. Read all the instructions before using the product.
2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
3. This product should be used only with a cart or stand that is recommended by the manufacturer.
4. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at 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.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
8. 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.
9. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
10. Care should be taken so that objects do not fall and liquids are not spilled onto the enclosure through openings.
11. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the product; 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.
12. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

SAVE THESE INSTRUCTIONS





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

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

CAUTION
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATENTION – POUR ÉVITER LES CHOCS ÉLECTRIQUES , INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.

CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).

Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

IMPORTANT NOTICE FOR THE UNITED KINGDOM

As the colours of the wores in the mains lead of this apparatus 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 which is marked with the letter N or coloured black.
- the wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
- Do not connect the wire to earth terminal of a three-pin plug.

Back-up Battery

The XC-2000/XC-1000 uses a back-up battery to prevent memory loss when the power is turned off. If the display shows "Lo", the battery should be replaced. Consult the nearest Korg Service Center or dealer.

Data handling

Unforeseen malfunctions can result in the loss of memory contents. Please be sure to save important data on a floppy disk (XC-2000 only) or an external data filer (storage device). Korg can accept no responsibility for any loss or damage which you may incur as a result of data loss.

Floppy disks

Floppy disk types and formats

The XC-2000 can use two types of 3.5 inch floppy disk: 2DD or 2HD.
A new disk or one that has been used by a different device cannot be used by the XC-2000. Such disks must first be "formatted" before they can be used by the XC-2000.
For the formatting procedure, refer to p.35 .

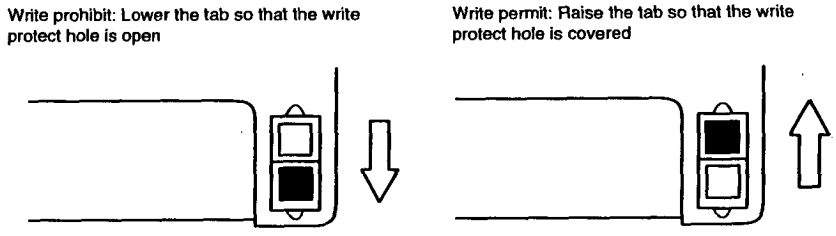
Floppy disk handling

- Do not open the disk shutter or touch the magnetic surface inside the floppy disk. If the magnetic disk becomes soiled or scratched, it will be impossible to read or write data.
- Never transport the XC-2000 with a floppy disk inserted in the floppy disk drive. Vibration may cause the disk drive heads to scratch the floppy disk, making it unusable.
- Do not put floppy disks near a magnetic field, such as televisions, computers, computer displays, speakers, or power transformers. Doing so may erase the data recorded on the disk.
- Avoid using or storing floppy disks in locations of high temperature or humidity, or locations with excessive dust or dirt.
- Do not place objects on top of a floppy disk.
- After using a floppy disk, return it to its original case.
- While the floppy disk drive is operating, do not move the piano.

Floppy disk write protect slider

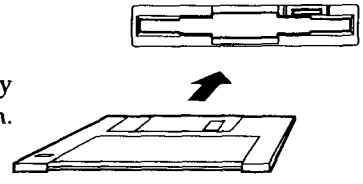
Floppy disks have a small window called a "write protect hole," which helps prevent accidental erasure or rewriting of the data.

In order to prevent erasure of the data on a disk, move the tab downward after saving, to the "write prohibit" position.



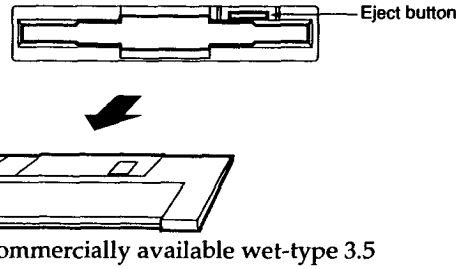
Inserting floppy disks

Insert a floppy disk into the disk drive with the label facing up. Push it all the way into the drive until it clicks into place. Forcing a disk in will cause malfunction. Disks must be inserted gently, and straight in.



Removing floppy disks

To remove a floppy disk from the disk drive, first check the LCD to make sure that no message such as "Loading" or "Saving" is displayed. Then press the eject button to remove the disk.



Cleaning the disk drive heads

If the heads of the disk drive are dirty, errors may occur when saving or loading. It is important to regularly clean the heads. To do so, use a commercially available wet-type 3.5 inch dual-sided head cleaning disk. Using a single-sided cleaning disk will damage the drive.

1) Moisten the cleaning disk with cleaning fluid.
2) Insert the cleaning disk into the disk drive.
3) Press the [LOAD] switch to execute the "Load" operation. The "– – – ." in the LED display will blink.
4) After about 10 seconds, press the eject button to remove the cleaning disk. For 5 minutes after cleaning, do not use the disk drive. Using the disk drive before the cleaning fluid has evaporated will cause malfunctions.

Continuing the cleaning process for an extended period of time will damage the disk drive.

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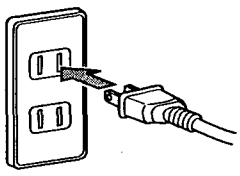
Introduction

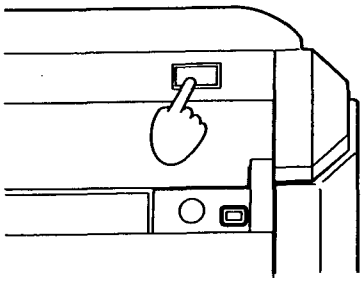
1. Preparing to play

Plug in the power cable



- **Plug the power cable into an AC outlet.**
  Be sure to use an AC outlet of the correct voltage for your instrument.

Turn on the power

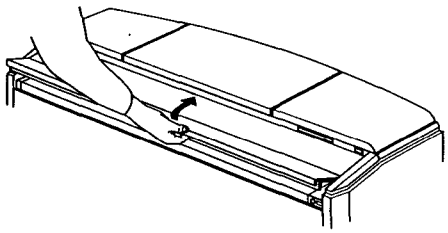


- **Press the [POWER] switch to turn on the power.**
  When the power is turned on, the [POWER] indicator located on the left front will light.

  At this time, the pedals will be initialized, so do not press a pedal until numerals appear in the LED display.

  To turn the power off, press the [POWER] switch once again.
  When the power is off, the [POWER] indicator located on the left front will be off.

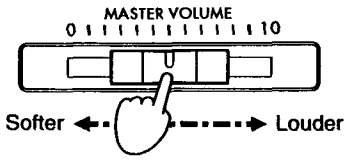
Open the key cover



- **Lightly lift the center of the edge, and gently slide the cover away from you.**
  To close the key cover, lightly grasp the center of the edge, and slide it toward you. (A certain degree of force will be necessary to start it sliding.)

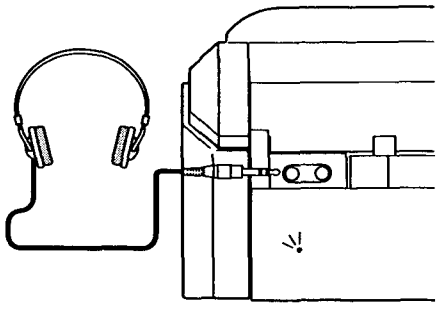
  When opening or closing the key cover, be careful not to pinch your fingers.
  Applying excessive force, or opening and closing the cover roughly may cause malfunction. Also, disconnect any headphones or mic etc. (XC-2000 only) from the connectors before closing the keyboard cover. If such devices are connected when the keyboard cover is closed, damage may occur to the piano itself, the headphones or the mic.

Adjust the volume



- **Raise the [MASTER VOLUME] slider to approximately the middle position.**
  Moving the slider toward the right will increase the volume. Moving it toward the left will decrease the volume. With a setting of "0" there will be no sound. Adjust an appropriate volume while actually playing the instrument. The [MASTER VOLUME] slider controls the volume that is output from the built-in speakers, the headphone jack, and the rear panel [OUTPUT] jacks.

When using headphones

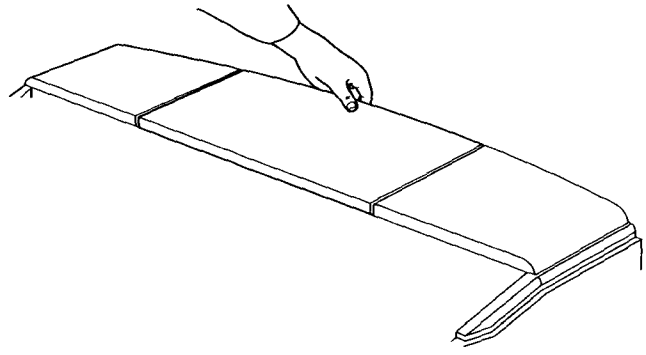


- **Connect the mini-plug of the stereo headphones to the [PHONES] jack located at the left side of the piano.**
  When headphones are plugged in, no sound will be heard from the built-in speakers. Use headphones when the volume would be obtrusive to those around you, such as at night.
  Since there are two headphone jacks, two people can listen to the piano.

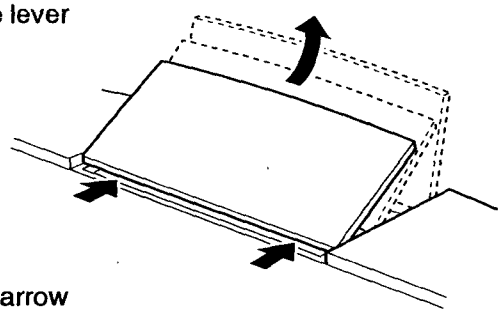
Using the music stand

- **Setting up the music stand**

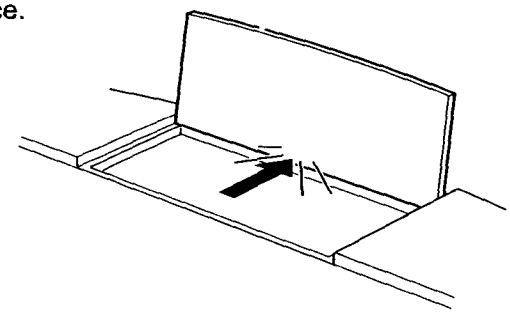
1. Grasp the center of the back edge of the music stand.



2. Slide the music stand so that it is lifted upward. Do not hold the lever on the back.

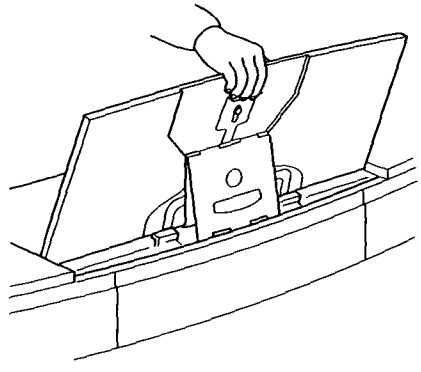


3. When it has been fully lifted up, press in the direction of the arrow until you hear a click. The music stand will be locked into place.



- **Folding down the music stand**

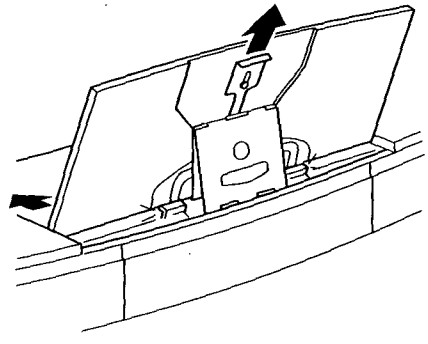
1. Grasp the lever located in the center of the back side of the music stand.



2. Pull the lever upward, and move the lower part of the music stand toward yourself to press it downward and defeat the lock.

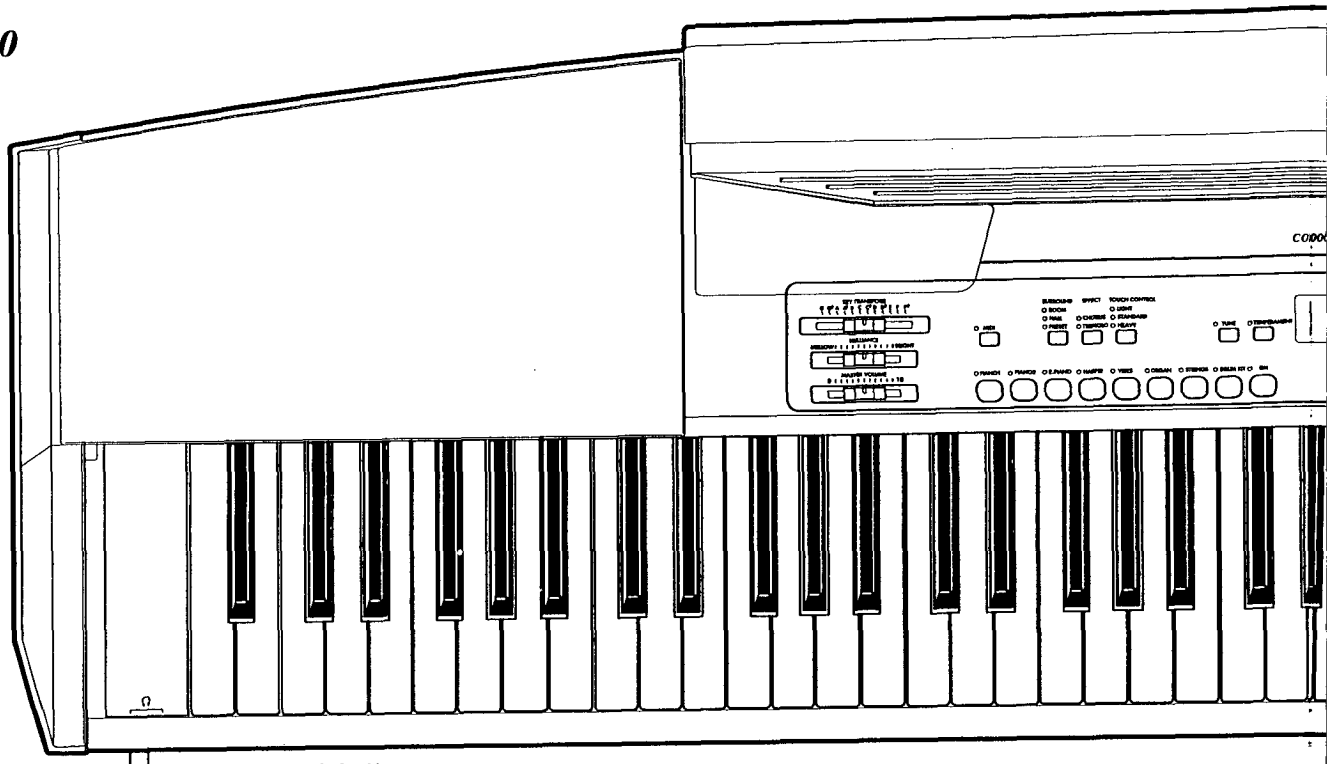
3. Gently press down on the music stand to fold it down completely.

   Be careful not to pinch your hand or fingers.



2. Controls and their functions

XC-2000



[PHONES] jack (p.2)
[POWER] indicator (p.2)

MIDI
This switch is used to make settings for various MIDI-related functions, and in conjunction with other switches to set additional functions.
4. [MIDI] switch (p.68)

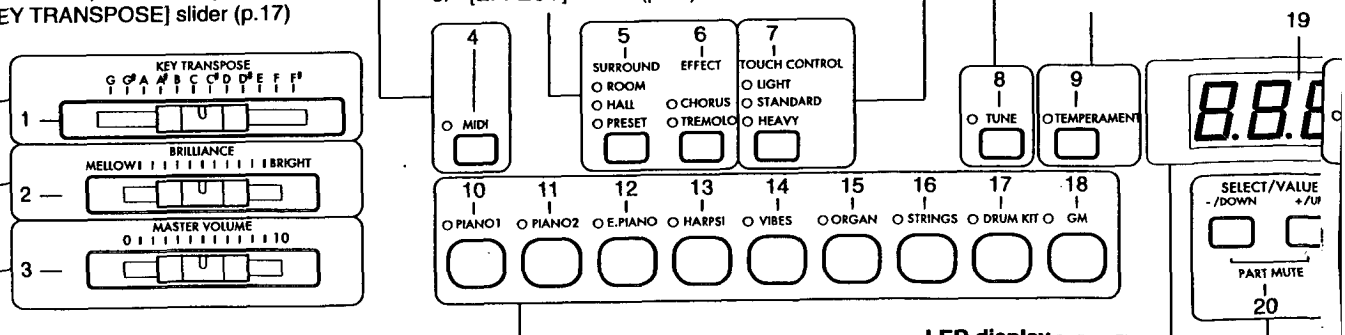
Key transpose
This slider transposes the key.
1. [KEY TRANSPOSE] slider (p.17)

Touch control
This switch adjusts the way in which the volume will change in response to your keyboard playing dynamics.
7. [TOUCH CONTROL] switch (p.16)

Surround, Effect
These switches add various effects to the sound
5. [SURROUND] switch (p.12)
6. [EFFECT] switch (p.12)

Tune
This switch adjusts the pitch.
8. [TUNE] switch (p.18)

Temperament
This switch selects baroque tunings and other temperaments.
9. [TEMPERAMENT] switch (p.17)



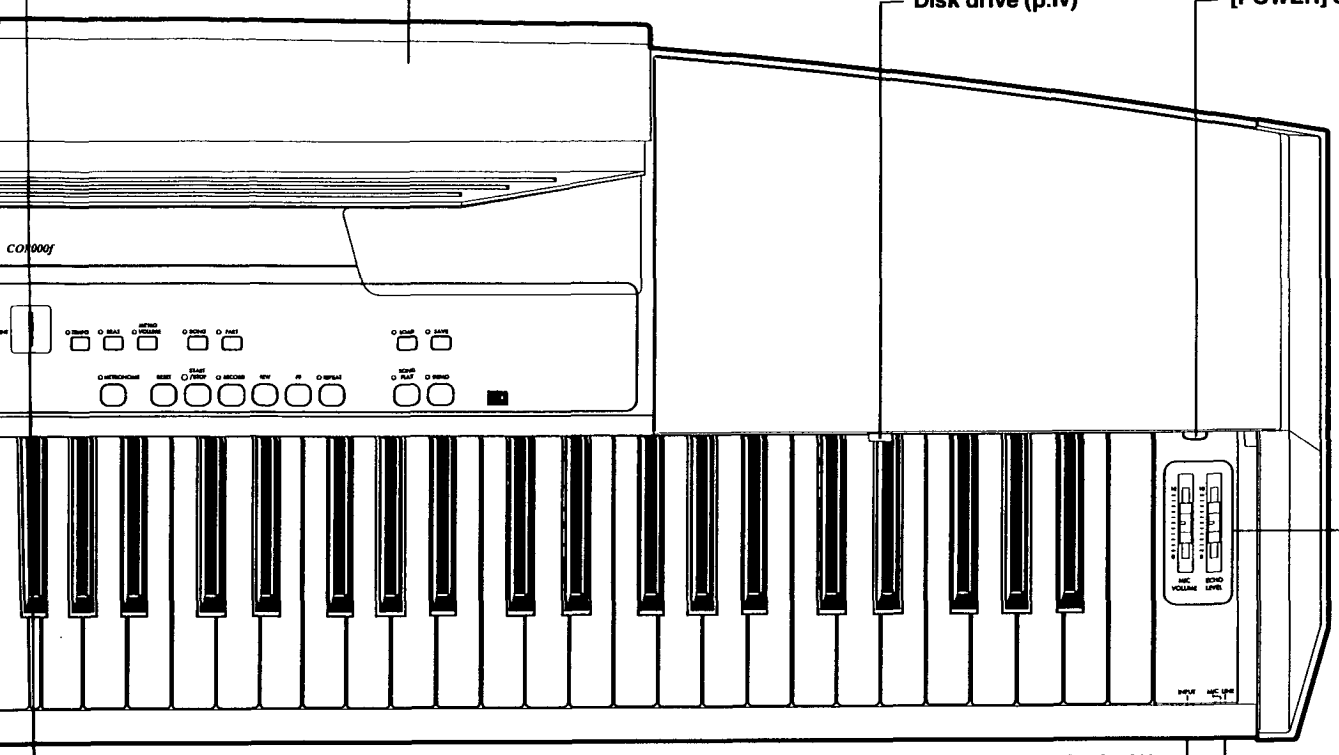
Master volume
This slider controls the volume output from the speakers or headphones.
3. [MASTER VOLUME] slider (p. 2)

Brilliance
This slider controls the brightness of the tone.
2. [BRILLIANCE] slider (p.12)

Sound selector switches
These switches select sounds.
10. [PIANO1] switch, 11. [PIANO2] switch,
12. [E.PIANO] switch, 13. [HARPSI] switch,
14. [VIBES] switch, 15. [ORGAN] switch,
16. [STRINGS] switch, 17. [DRUM KIT] switch,
18. [GM] switch (p.10)

LED display
This indicates the tempo or the sound number, etc.
19. LED display

Select/Value
These switches set the value shown in the LED display.
20. [+/UP] switch, [-/DOWN] switch

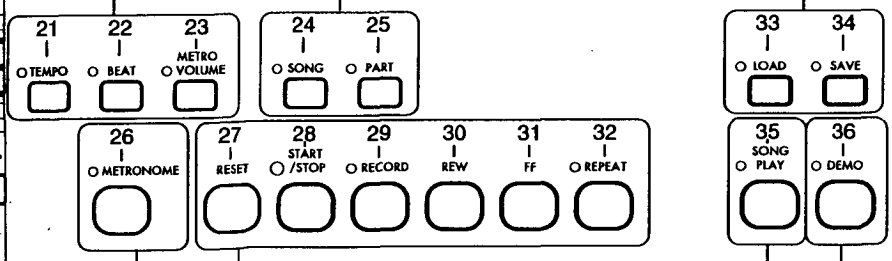


Tempo, Beat, Metronome
These switches make metronome settings.
21. [TEMPO] switch,
22. [BEAT] switch (p.14),
23. [METRO VOLUME] switch (p.15)

Song, Part
These switches are used to select the Song or Part number when using the recorder or when playing a song.
24. [SONG] switch,
25. [PART] switch (p.21 ~)

Load, Save
These switches load musical data from floppy disk and save it to floppy disk.
33. [LOAD] switch (p.37, 40)
34. [SAVE] switch (p.36, 41)

Mic volume, Echo level
When enjoying karaoke etc. with a mic connected to the [INPUT] connector, these sliders adjust the mic volume and the amount of echo applied to the mic.
[MIC VOLUME] slider, [ECHO LEVEL] slider (p.42)



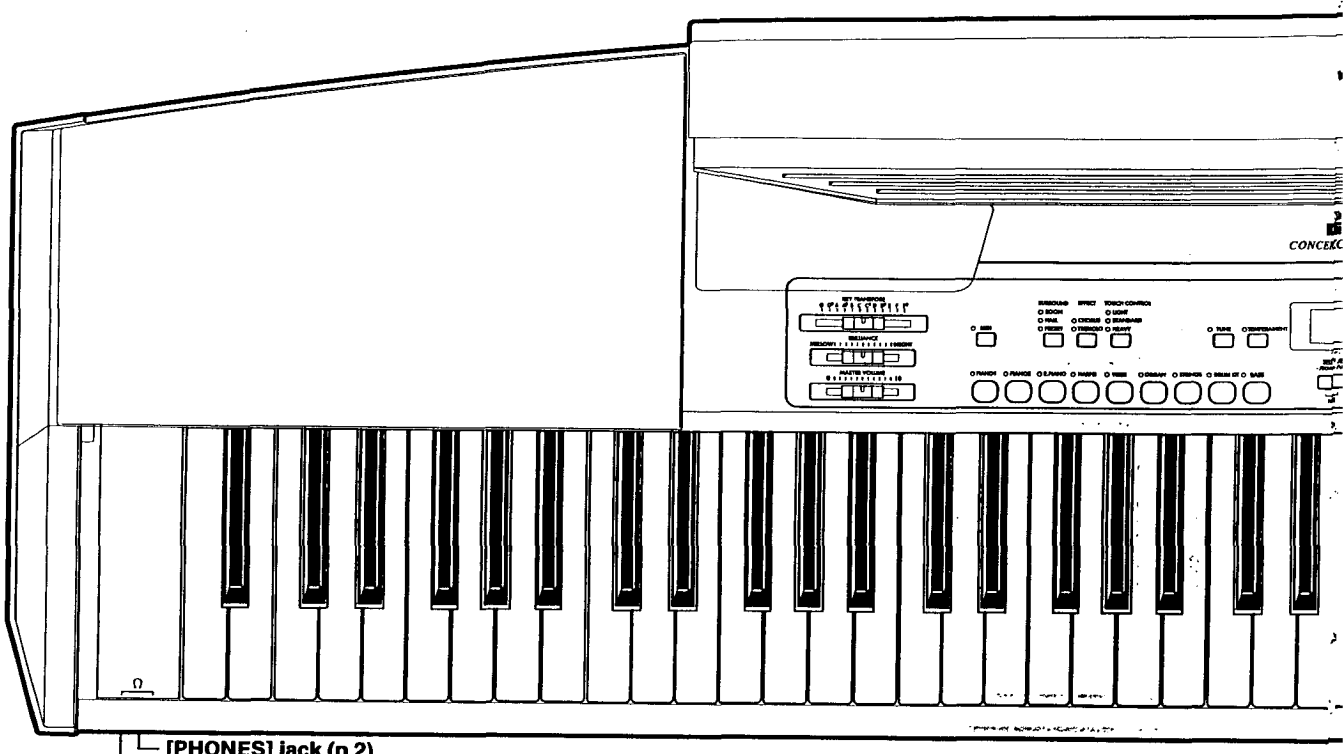
Recorder
These switches are used to record/playback your performance.
27. [RESET] switch, 28. [START/STOP] switch,
29. [RECORD] switch, 30. [REW] switch,
31. [FF] switch, 32. [REPEAT] switch (p.21 ~)

Metronome
This switch starts/stops the metronome.
26. [METRONOME] switch (p.14)

Demo
This switch plays the built-in demo songs.
36. [DEMO] switch (p.8)

Song play
This switch plays Standard MIDI File format song files.
35. [SONG PLAY] switch (p.38)

XC-1000



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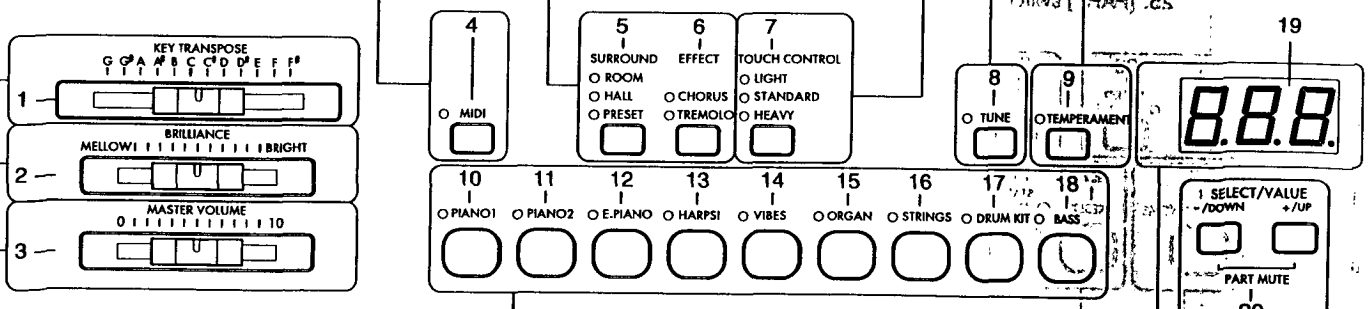

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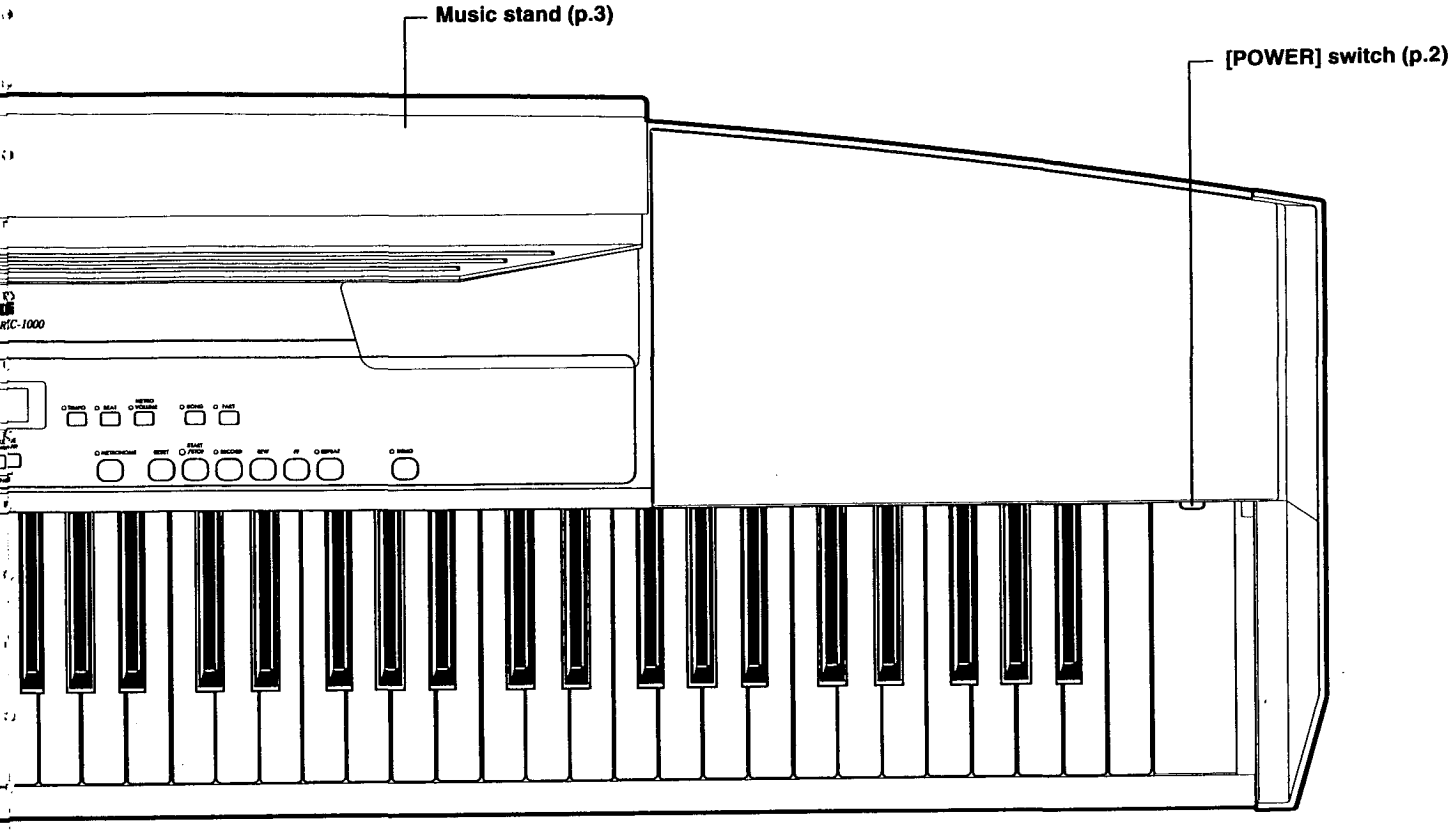

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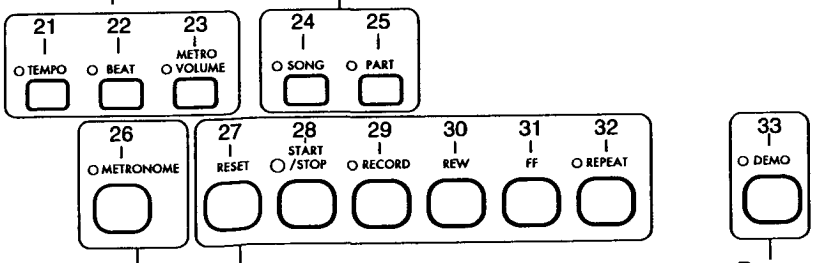
24. [SONG] switch,
25. [PART] switch (p.21 ~)



Recorder
These switches are used to record/playback your performance.
27. [RESET] switch, 28. [START/STOP] switch,
29. [RECORD] switch, 30. [REW] switch,
31. [FF] switch, 32. [REPEAT] switch (p.21 ~)

Demo
This switch plays the built-in demo songs.
33. [DEMO] switch (p.8)

Metronome
This switch starts/stops the metronome.
26. [METRONOME] switch (p.14)

3. Listening to the demo songs

Five demo songs are built-in. Listen to the demo songs to hear the rich sounds and expressive possibilities of the XC-2000/XC-1000.

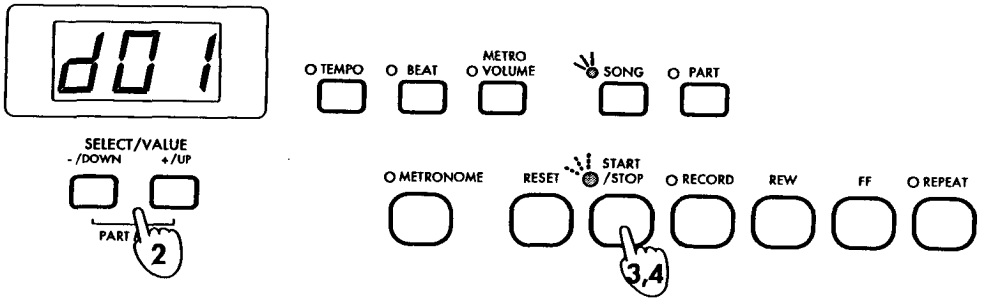
1. Press the DEMO switch.
   The indicator located at the upper right of the [DEMO] switch and the indicator located at the upper left of the [SONG] switch will light, and the LCD display will show the demo song number (d01).

2. Press the [+/UP] or [-/DOWN] switch to select the number of the song that you wish to hear.

Number	Song name
d01	G. Gershwin / Rhapsody in Blue
d02	F. Chopin / Polonaise A-major Op.40-1
d03	KORG original / Splendid View
d04	KORG original / Ragtime Paradise
d05	F. Liszt / A Dream of Love

3. Press the [START/STOP] switch, and the demo will begin playing.
   The indicator located at the upper left of the [START/STOP] switch will blink in time with the tempo.

   All of the demo songs will play back, beginning with the selected song.



4. To stop playback, press the [START/STOP] switch.
   The indicator at the upper left of the [START/STOP] switch will go off.

5. When you finish listening to the demo songs, press the [DEMO] switch while a song is not playing.
   The indicator at the upper left of the [DEMO] switch will go off.

Listening to the songs from the included demo disk (XC-2000 only)

Before performing this procedure, please read "Before using the disk drive" (page iv).

1. Insert the included demo disk into the disk drive of the XC-2000.
2. Press the [SONG PLAY] switch.
   The indicator at the upper left of the [SONG PLAY] switch will light. After the disk has been checked, the LED display will show the song numbers (F01) of the demo songs contained in the floppy disk.

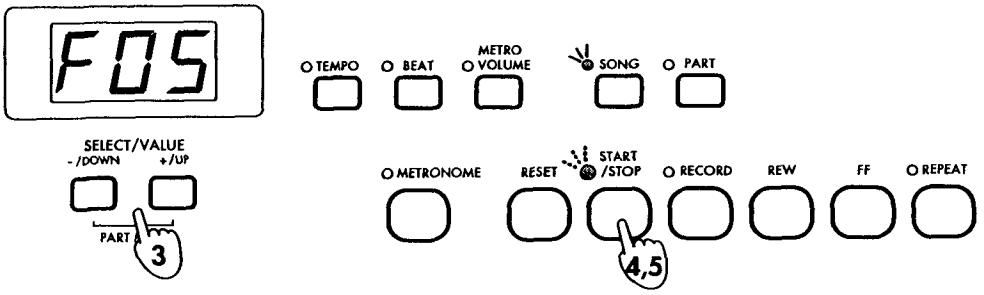
3. Use the [+/UP] or [-/DOWN] switches to select the number of the song you wish to hear.

Number	Song name
F01	G. Gershwin / Rhapsody in Blue
F02	F. Chopin / Polonaise A-major Op.40-1
F03	KORG original / Splendid View
F04	KORG original / Ragtime Paradise
F05	F. Liszt / A Dream of Love
F06	M. Moussorgsky / Pictures at an Exhibition — Promenade
F07	J. Strauss (the elder) / Arranged by T. Alexander / Radetzky March Op.228
F08	T. Alexander / Classitalio

F01 - F05 are the same as the built-in demo songs.

4. Press the [START/STOP] switch and the demo song will begin playing.
   The indicator at the upper left of the [START/STOP] switch will blink in time with the tempo of the song.

   When the selected song finishes playing, the next-numbered song will automatically begin playing. When song F08 ends, playback will stop.



5. To stop playback, press the [START/STOP] switch.
   The indicator at the upper left of the [START/STOP] switch will go off.
6. When you finish listening to the demo songs, press the [SONG PLAY] switch while a song is not playing.
   The indicator at the upper left of the [SONG PLAY] switch will go off.

The song files on the included demo disk are saved in a proprietary format.

About Song Play

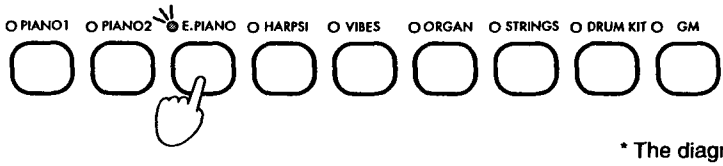
This is a function that loads song files such as Standard MIDI Files (SMF) directly from disk and plays them back. Commercially available SMF/GM data disks can be played back easily using Song Play mode (see p.38). By connecting a mic to the [INPUT] connector located at the right front of the XC-2000, you can sing along with the song (see p.42).

Playing

1. Selecting a sound

The XC-2000 has 143 sounds, and the XC-1000 has 16 sounds.

- **Press one of the [Sound selector] switches to select the sound you wish to play.**
  The indicator at the upper left of the selected switch will light, and you can play that sound.

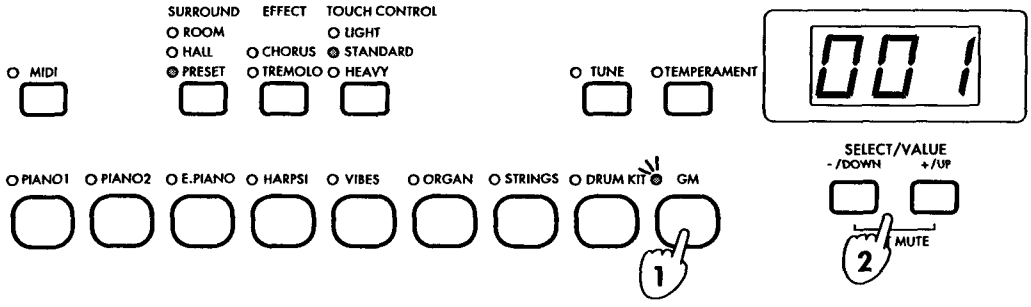


* The diagram shows the XC-2000

Selecting a sound from a sound group

Groups of several sounds are contained within the [DRUM KIT] and [GM] switches of the XC-2000, and the [BASS] switch of the XC-1000. You can select and play a desired sound from these groups.

1. Press a [Sound selector] switch which contains a group of sounds.
   The indicator at the upper left of the selected [Sound selector] will light, and the LED display will indicate the number of the currently selected sound.
2. Press the [+/UP] or [-/DOWN] switch to select a sound.
   Refer to p.65 for the list of sounds. Each time you press the [+/UP] or [-/DOWN] switch, the sound number will increase or decrease by 1. If you hold down the currently selected [Sound selector] switch (i.e., the switch whose indicator is lit) and press the [+/UP] or [-/DOWN] switch, the sound number will increase or decrease in steps of 10. If there is no sound number 10 higher than the current one, the last number will be selected.



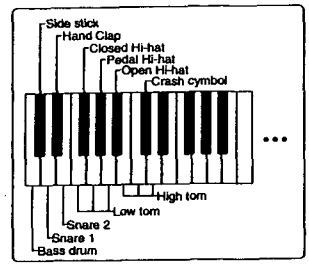
Sound	XC-1000	XC-2000	Comment
PIANO 1	○	○	A rich and spacious acoustic piano
PIANO 2	○	○	A subdued acoustic piano
E.PIANO (electric piano)	○	○	A light and clear electric piano
HARPSI (harpsichord)	○	○	A delicately refined classical harpsichord
VIBES (vibraphone)	○	○	A smooth vibraphone
ORGAN	○	○	A majestic pipe organ
STRINGS	○	○	A string ensemble with violin etc.
DRUM KIT	○	○	XC-1000 has one sound; a GM (General MIDI) compatible GM Kit XC-2000 has a total of eight sounds; the above GM Kit and 7 of its own drum kits
GM (General MIDI)		○	128 GM-compatible sounds
BASS	○		Eight types of bass sounds, such as acoustic bass and synth bass

The maximum number of simultaneous notes is 16 for [PIANO1], and for some of the [GM] (XC-2000 only) and [BASS] (XC-1000 only) sounds. For all other sounds, the maximum number of simultaneous notes is 32.

When the power is turned on, [PIANO1] will be selected on the XC-2000. On the XC-1000, the sound last selected for Part 1 of Song 1 when the power was turned off will be selected.

What is a Drum Kit?

A drum kit is a set of assignments placing a different drum sound (such as snare or hi-hat) on each note of the keyboard, as shown in the diagram at right.



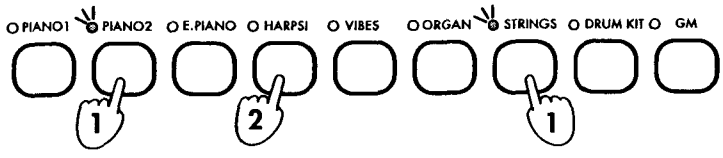
What is GM (General MIDI)?

The XC-2000 is compatible with the GM system. GM (General MIDI System Level 1) is a world-wide standard that was created as a standard arrangement of sounds that would be shared between manufacturers and models. MIDI tone generators and song data that are GM compatible bear the "GM" logo. Any "GM" song data can be played back correctly on any "GM" tone generator. The 128 [GM] sounds and the "01" [DRUM KIT] (GM Kit) are the GM compatible sounds.

Simultaneously playing two sounds.

You can simultaneously play two [Sound selector] sounds (such as [PIANO2] and [STRINGS]) from each note of the keyboard. This is called the Layer function.

1. Hold down one of the two desired [Sound selector] keys, and then press the other one.
   The indicators at the upper left of the two selected [Sound selector] keys will light, and both sounds will be heard for each note you play.

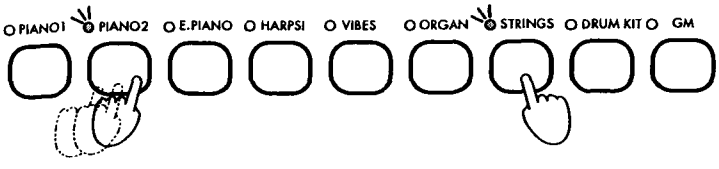


It is not possible to select [DRUM KIT].
The [SURROUND] and [EFFECT] effects (see p.12) will be applied to the [Sound selector] key that you press first.
When Layering is used, the number of maximum simultaneous notes will decrease, since two sounds are being played from each note.
When the built-in recorder is used, there are several restrictions if Layering is selected. Refer to p.24.

2. Press just one [Sound selector] key, and layering will be canceled.

Adjusting the volume balance of the two sounds

- **Hold down the [Sound selector] key whose volume you wish to decrease, and repeatedly press the [Sound selector] key whose volume you wish to increase.**



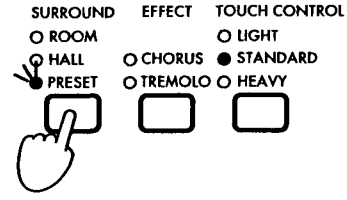
Each time you repeatedly press the [Sound selector] key, its volume will increase.

The volume balance will be remembered even after the layer is canceled.

2. Adding reverberation or spaciousness to the sound

Adding reverberation to the sound

Here's how to add reverberation to the sound selected by the [Sound selector] key. (the Surround effect)



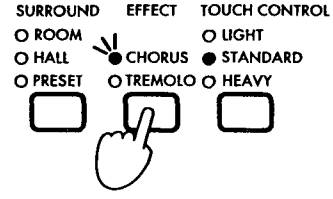
- **Press the [SURROUND] switch to select the desired effect.**
  Each time you press the switch, the indicator at its upper left will cycle through the choices of effect.

Surround	Comment
ROOM	The reverberance of a small room
HALL	The reverberance of a concert hall
PRESET	The effect most suitable for each sound will be applied. When [PIANO1] or [PIANO2] are selected, pressing the damper pedal will produce a simulation of the resonance of an acoustic piano. Selecting "PRESET" is especially effective for the [GM] (XC-2000 only) sounds.
OFF (indicator off)	There will be no surround effect.

Adding spaciousness to the sound

Here's how to add modulation to the sound selected by the [Sound selector] key, making the sound more spacious. (the Modulation effect)

- **Press the [EFFECT] switch to select the desired effect. Each time you press the switch, the indicator at its upper left will cycle through the choices of effect.**



Effect	Comment
CHORUS	The sound will become more spacious
TREMOLO	The sound will modulate between left and right
OFF (indicator off)	There will be no modulation effect.

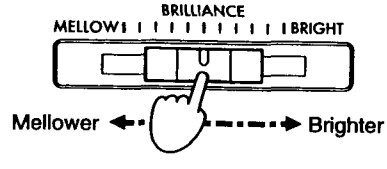
If you select "PRESET" for [SURROUND], the [EFFECT] indicator will go off, and the most suitable effect will be selected for each sound, just as with [SURROUND].

[SURROUND] and [EFFECT] can be set for each of the [Sound selector] keys. Each time you subsequently select that [Sound selector] key, the same effect will automatically be selected.

✎ *On the XC-2000, the effects (surround and effect) specified for [PIANO1] immediately before the power was turned off will be selected. On the XC-1000, the effects specified for Part 1 of Song 1 immediately before the power was turned off will be selected.*

Adjusting the brightness of the sound

Moving the [BRILLIANCE] slider toward the right ("BRIGHT") will make the sound brighter, and moving it toward the left ("MELLOW") will make the sound more mellow.

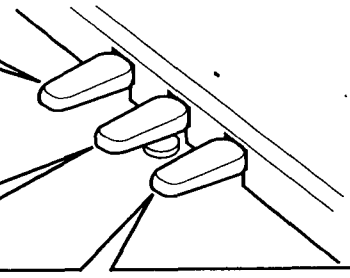


3. Using the pedals

The XC-2000/XC-1000 have three types of pedals: damper, sostenuto, and soft. Here's how to use these pedals as you play.

Soft pedal
While the pedal is pressed, the sound will be softer and more gentle. The depth to which you press the pedal will affect the softness of the sound (half-pedal effect).

Sostenuto pedal
The damper effect will be applied only to the sound of notes which are already pressed when this pedal is pressed, and these notes will be sustained while the pedal remains pressed.
The effect will not apply to notes which are newly played after pressing this pedal.

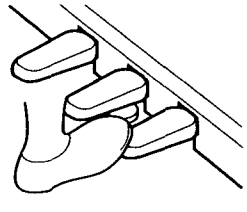


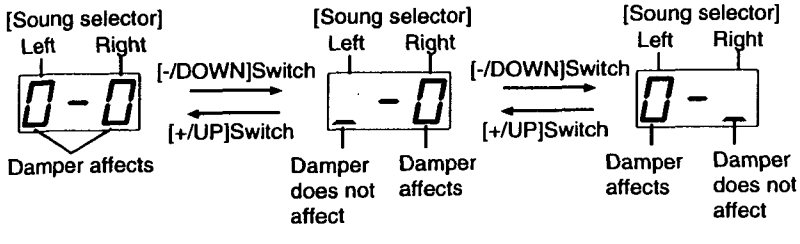
Damper pedal
Notes will be sustained while the pedal is pressed, producing a rich resonance. The depth to which you press the pedal will affect the degree of the effect (half-pedal effect).
When [PIANO1] or [PIANO2] are selected, setting [SURROUND] to "PRESET" will produce an effect that simulates the resonance of an acoustic piano's strings.

Pedal setting for Layering

When the Layer function is used, you can specify which of the two layered sounds the damper pedal will affect. For example you can change the settings so that the damper pedal applies to the piano sound but not to the string sound as you play.

1. Hold down the [MIDI] switch, and press the damper pedal.
   The indicator at the upper left of the [MIDI] switch will light, and the following LED display will appear.





   The left side of the LED display shows the setting for the left of the two selected [Sound selector] keys, and the right side shows the setting for the right [Sound selector] key. With a setting of "0" the damper will function, and with a setting of "_" will not function.

2. Press the [+/UP] or [-/DOWN] switch to change the setting.

✎ *When the power is turned on again, the damper effect will apply to both of the [Sound selector] keys.*

4. Playing with the metronome

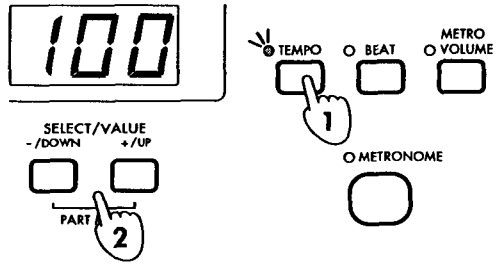
When you wish to play accurately in tempo, use the metronome.
This metronome provides the basis for the time signature and tempo of the recorder discussed in the following chapter.

Starting the metronome

1. Press the [METRONOME] switch, and the metronome will start.
   The indicator at the upper left of the [METRONOME] switch will light.
2. Press the [METRONOME] switch once again, and the metronome will stop.
   The indicator at the upper left of the [METRONOME] switch will go off.

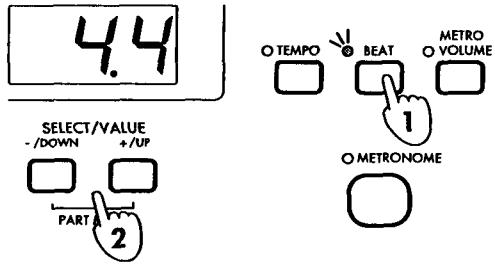
Since one voice is used to sound the metronome, the maximum number of simultaneous notes will be 1 less.

Adjusting the tempo

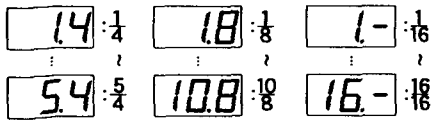


1. Press the [TEMPO] switch.
   The indicator at the upper left will light, and the current tempo of the metronome will appear in the LED display. The range of settings is ♩=30 ~ 250.
2. Press the [+/UP] or [-/DOWN] switch to adjust the tempo.
   Each time you press the [+/UP] or [-/DOWN] switch, the value will increase or decrease by one. If you continue holding the switch, the value will increase/decrease continuously. If you hold down the [TEMPO] switch and press the [+/UP] or [-/DOWN] switch, the value will increase/decrease in steps of ten.

Changing the time signature



1. Press the [BEAT] switch.
   The indicator at the upper left of the [BEAT] switch will light, and the LED display will indicate the current time signature of the metronome. The range of settings is 1/4—5/4, 1/8—10/8, 1/16—16/16. The display will be as follows.

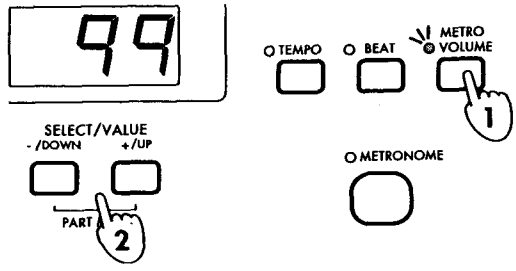


2. Press the [+/UP] or [-/DOWN] switch to set the time signature.
   Each time you press the [+/UP] or [-/DOWN] switch, the value will increase or decrease by one. If you continue holding the switch, the value will increase/decrease continuously.

The tempo and time signature are set independently for each song.

Adjusting the volume

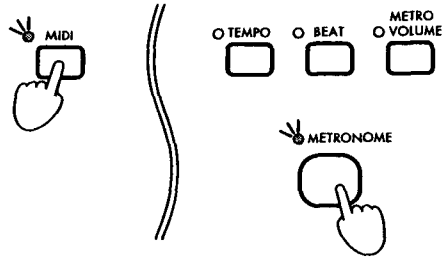
1. Press the [METRO VOLUME] switch.
   The indicator at the upper left of the [METRO VOLUME] switch will light, and the LED display will show the current metronome volume. The range of settings is 0 (minimum) ~ 127 (maximum).
2. Press the [+/UP] or [-/DOWN] switch to adjust the volume.
   Each time you press the [+/UP] or [-/DOWN] switch, the value will increase or decrease by one. If you continue holding the switch, the value will increase/decrease continuously. If you hold down the [METRO VOLUME] switch and press the [+/UP] or [-/DOWN] switch, the value will increase/decrease in steps of ten.



Selecting the accented note of the time signature

You can specify whether the accented notes (strong beats) of the time signature will be sounded by a bell or by the normal metronome sound, or whether there will be no accent (all weak beats).

- **Hold down the [MIDI] switch and press the [METRONOME] switch repeatedly to cycle through the following settings.**
  While you are holding down the [MIDI] switch, the indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [METRONOME] switch will be lit, off, or blinking to indicate the setting.



Accent note	Indicator
bell sound	lit
normal metronome sound	off
no accent	blinking

If you select the bell as the accent note, Part 16 will be muted.

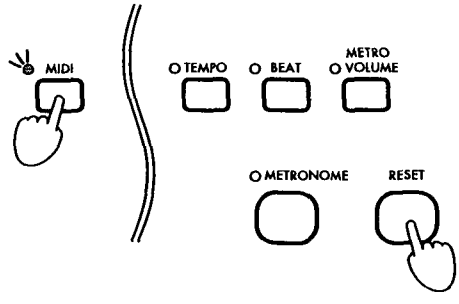
When you turn the power on again, the XC-2000 will be set to a tempo of 120, time signature of 4/4, and volume of 127. However, the accent note setting will be remembered even when the power is turned off. The XC-1000 remembers all of the metronome-related settings even when the power is turned off.

If the sound is not what you expect

As you begin using the many functions of the XC-2000/XC-1000, you may not know how to adjust the sound to your liking. In such cases, you can use the following procedure (reset), and then re-select the sound. Page 72 explains the contents of the data that will be reset by this operation.

- **Hold down the [MIDI] switch, and press the [RESET] switch.**

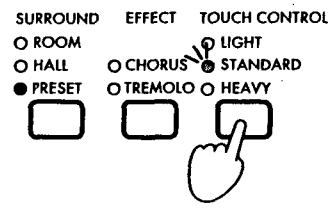
When you perform this procedure, the pedal settings will also be reset, so be careful not to press the pedals at this time.

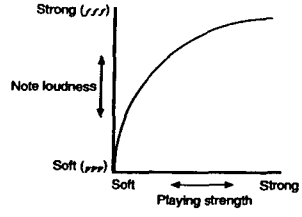
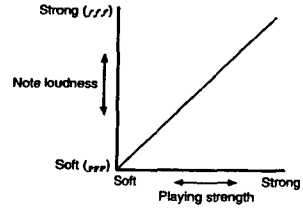
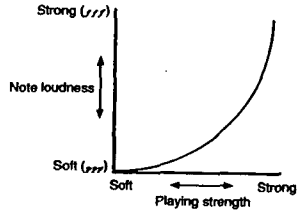


5. Adjusting the keyboard touch

The Touch Control function lets you adjust the way in which the volume will be affected by your playing dynamics.

- **Each time you press the [TOUCH CONTROL] switch, the setting will cycle through the three choices.**



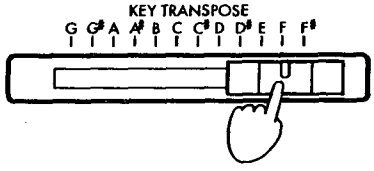
Touch control	Remarks
LIGHT	Even a light touch will produce fortissimo (ff). 
STANDARD	This is the normal piano touch. 
HEAVY	With this setting, you will have to play strongly to produce fortissimo. This setting gives you expressive dynamics from pianissimo (pp) to fortissimo. 

✎ *When the power is turned on, this will automatically be set to "STANDARD."*

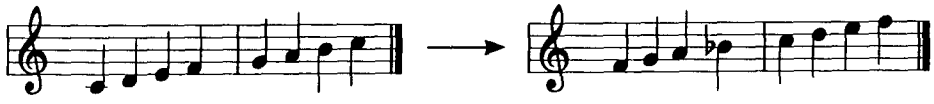
6. Transposing the pitch.

When the song you are playing contains many sharps or flats, or when the key is too high or too low to match other instruments or to sing along with, you can change the pitch of the keyboard so that the song can be played in an easier key or at a more singable pitch. This is referred to as the Transpose function.

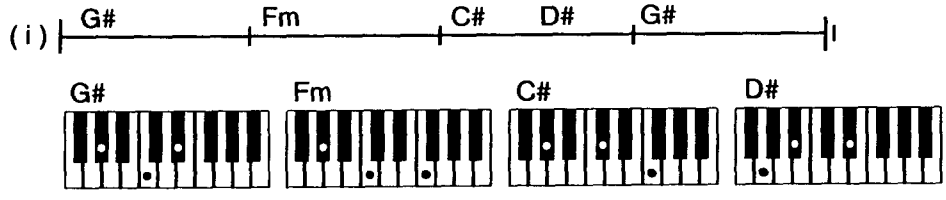
- **Move the [KEY TRANSPOSE] slider to the desired key.**
  The "C" note will be given the pitch that you specify on the [KEY TRANSPOSE] slider. The range of settings is 11 semitones in semitone steps (C(-5) ~ F#(+6)).



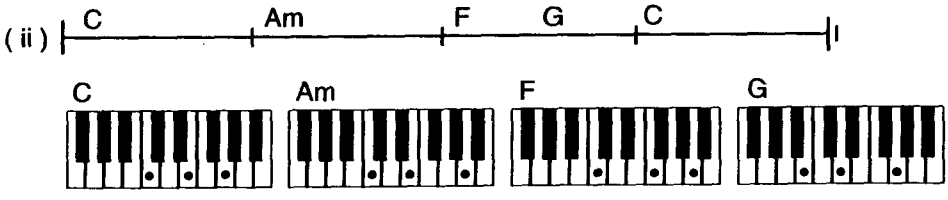
Example 1. If the [KEY TRANSPOSE] slider is set to "F," pressing the "C" note will produce a pitch of "F."



Example 2. Using the Transpose function, a song written in a difficult key (with many black keys) can be played in an easier key.



If the entire song is four semitones higher, the chords will be as follows.



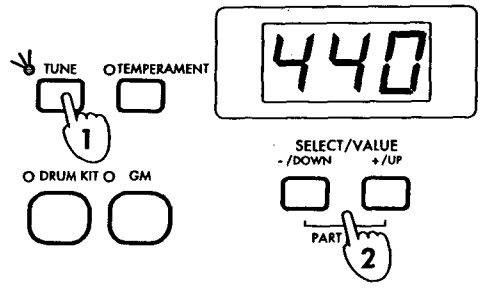
This is much easier to play. However if you play the song this way, the pitch will be higher than it should be. So, simply lower the pitch that is produced by the XC-2000/XC-1000 by four semitones (i.e., move the [KEY TRANSPOSE] slider to "G#").

Example 3. To raise the key of the song by 1 semitone, move the [KEY TRANSPOSE] slider to "C#". TO lower it by 1 semitone, move the slider to "B".

7. Making fine adjustments to the pitch

This function lets you make fine adjustments to the pitch so that you can match the pitch of the piano to the other instruments with which you are playing. The pitch can be adjusted in the range of 427 ~ 453 Hz (Hertz). For an even finer adjustment, you can adjust the pitch in the range of +/-50 cents.

1. Press the [TUNE] switch.
   The indicator at the upper left of the [TUNE] switch will light, and the LED display will show the current tuning value.



2. Press the [+/UP] or [-/DOWN] switch to adjust the pitch.
   Each time you press the [+/UP] or [-/DOWN] switch, the value will increase or decrease by one. If you continue pressing the switch the value will continue to change.

Hz (Hertz) : This is a unit of absolute value used to indicate pitch. When tuning instruments to each other, the middle A note (A4) is used. Usually A4=440 Hz, but the standard pitch has differed by area and by historical period, and recently there is a tendency to tune to a slightly sharper pitch (A4=441 ~ 444 Hz).

cent : Cents are the smallest unit used to indicate relative pitch. A semitone is 100 cents, and an octave is 1200 cents. 1 cent is a very small amount, and a difference of +/-3 cents should not normally cause any problem.

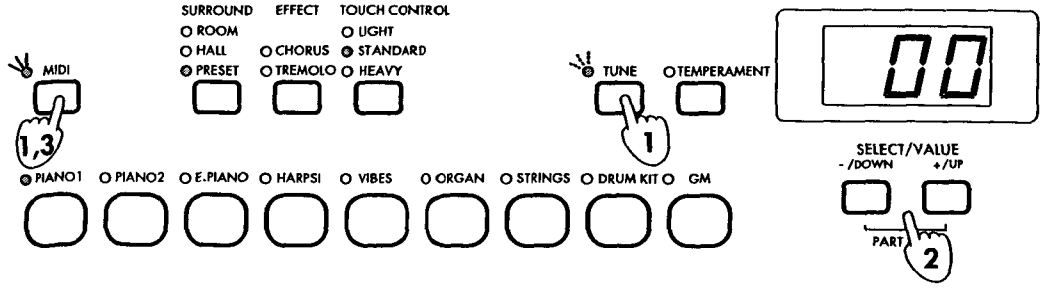
Switching between units of "Hertz" and "Cents"

1. Hold down the [MIDI] switch, and press the [TUNE] switch.
   The [MIDI] switch indicator will light, and the [TUNE] switch indicator will blink. The LED display will indicate the current tuning unit ("cents" or "Hertz").

2. Press the [-/DOWN] switch to select units of "cents," and press the **[+/UP]** switch to select units of "Hertz."

   When the display is switched from "cents" to "Hertz," the "Hertz" setting closest to the current "cents" setting will appear, and the tuning value will be set to that setting.

3. After you have selected the unit of tuning, press the [MIDI] switch (or the [RESET] switch).
   The [MIDI] and [TUNE] indicators will go off, and you will return to the display that you were in before performing step 1. This means that if the [TUNE] switch had been pressed before performing step 1, the [TUNE] switch indicator will be lit, and the LED display will show the currently selected unit.



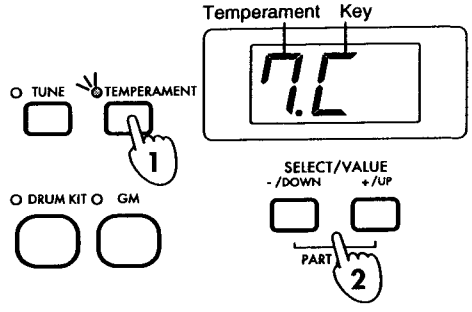
4. After pressing the [TUNE] switch, press the [+/UP] or [-/DOWN] switch to adjust the tuning value. (Refer to the above procedure.)

The tuning setting is remembered even when the power is turned off.

8. Selecting a temperament

Many compositions of classical music were composed using temperaments (tunings) which are different than the "Equal Temperament" that is usually used today. The XC-2000/XC-1000 provide classical temperaments such as Kirnberger and Werckmeister so that these compositions can be played with their original temperament, allowing the notes and chords to resonate as they originally did. Special temperaments such as Arabic and Indonesian scales are also provided.

1. Press the [TEMPERAMENT] key.
   The [TEMPERAMENT] indicator will light, and the number of the currently selected temperament will appear in the LED display. In the case of a temperament for which a key setting is required, the key setting will appear at the right of the temperament number.



LED	Temperament	Key	Remarks
0.	Equal temperament		This is the most widely used scale, and consists of equally-spaced semitone steps, meaning that the scale will be the same for all keys.
1.	Equal temperament (random)		This introduces a slight degree of irregularity to the equal temperament pitches. It is suitable for simulating acoustic instruments whose pitch is naturally unstable.
2.	Pure major	○	The major chords of the selected key will be perfectly in tune.
3.	Pure minor	○	The minor chords of the selected key will be perfectly in tune.
4.	Arabic (1/4)	○	This is a quarter-tone scale of Arabic music. Set the Key parameter to C for "rast C/bayati D", D for "rast D/bayati E", F for "rast F/bayati G", G for "rast G/bayati A", or A# for "rast Bb/bayati C".
5.	Pythagorean	○	This scale is based on ancient Greek musical theory, and is suitable for playing melodies.
6.	Werckmeister	○	An equal-tempered scale used in the latter baroque period.
7.	Kirnberger	○	A scale created in the 18th century and used mainly for harpsichord.
8.	Slendro	○	An Indonesian gamelan scale in which the octave consists respectively of 5 notes. When the key is C, the keys C, D, F, G, and A are used.
9.	Pelog	○	An Indonesian gamelan scale in which the octave consists of 7 notes. When the key is C, the keys C, D, E, F, G, A, and B are used.

2. Press the [+/UP] or [-/DOWN] switch to select the temperament.
   Each time you press the [+/UP] or [-/DOWN] switch, the value will increase or decrease by one. If you continue holding the switch, the value will change continuously.

Setting the key (tonic)

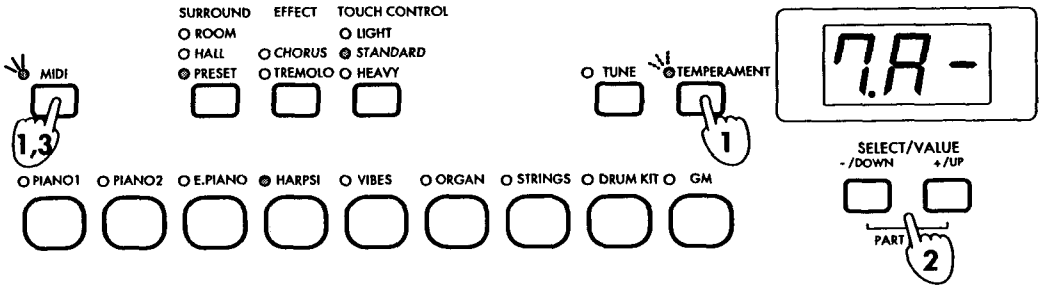
For temperaments whose "Key" column contained a " ○ ", you will need to set the key to match the key of the song you are playing.

1. Hold down the [MIDI] switch, and press the [TEMPERAMENT] switch.
   The [MIDI] switch indicator will light, and the [TEMPERAMENT] switch indicator will blink. The LED display will show the number of the currently selected temperament and the selected key.

LED	Key
C	C
d-	D♭(♯C)
d	D
E-	E♭(♯D)
E	E
F	F

LED	Key
G-	G♭(♯F)
G	G
A-	A♭(♯G)
A	A
b-	B♭(♯A)
b	B

2. Press the [+/UP] or [-/DOWN] switch to set the key.
   Each time you press the [+/UP] or [-/DOWN] switch, the value will increase or decrease by one. If you continue pressing the switch, the value will change continuously.



3. When you finish changing the settings, press the [MIDI] switch (or the [RESET] switch).
   The [MIDI] switch indicator will go off, and you will return to the display you were in before performing step 1.

✎ *When the power is turned on, this will automatically be set to "Equal temperament".*

About stretched tuning

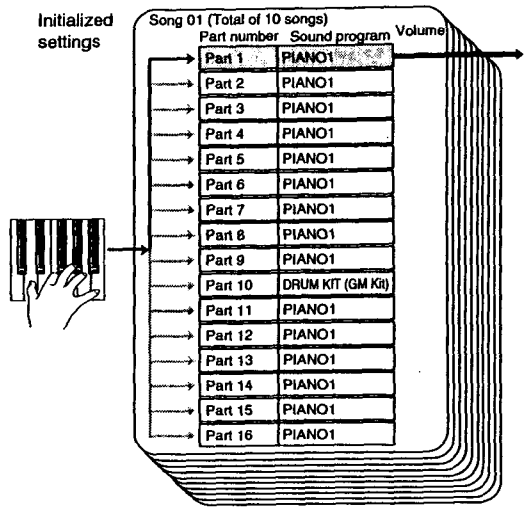
When [PIANO1] or [PIANO2] are selected, a "stretched" tuning will be applied so that the low range is tuned slightly lower, and the high range slightly higher, than equal temperament. This is the tuning used on acoustic pianos, and produces a more natural resonance.

Record and playback your performance

1. Recording your performance

The XC-2000/XC-1000 allow you to record and playback your keyboard playing just as easily as when using a tape recorder. Up to 10 songs can be recorded, and each song contains 16 Parts. Each of these Parts can be recorded independently, and played back simultaneously.

With the factory settings, Part 16 cannot be used since the bell sound is selected for the metronome. If you turn off the bell setting, Part 16 will be displayed, and you can use it for recording and playback (see p.15).

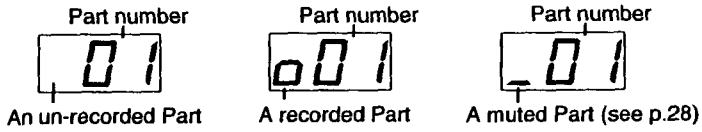


- **If you are using an XC-2000, insert a floppy disk into the disk drive.**

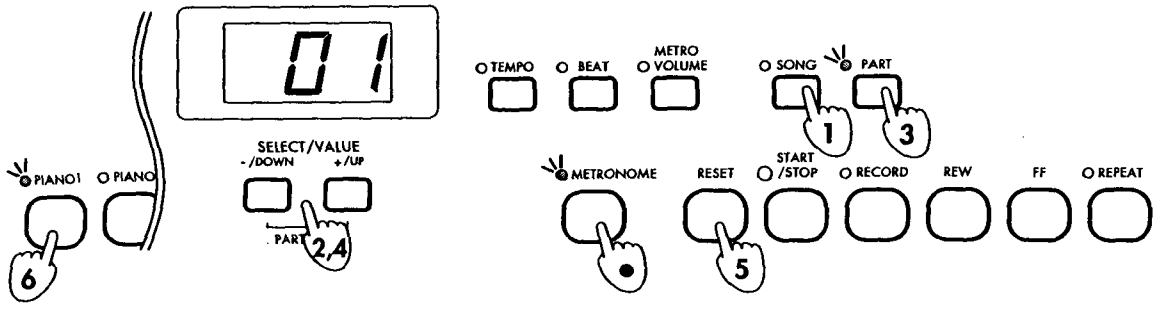
Use commercially available 3.5 inch floppy disks (see page iv). Before using a new floppy disk, you must be sure to format it (see p.35).
When the XC-2000 is turned off, all musical data recorded in the recorder will be lost. For this reason we recommend that you save important data frequently.

1. Press the [SONG] switch.
   The indicator at the upper left of the [SONG] switch will light, and the LED display will show the current song number (01 ~ 10).
2. Press the [+/UP] or [-/DOWN] switch to select the song that you wish to record.
   Each time you press the [+/UP] or [-/DOWN] switch, the song number will increase or decrease by one. If you continue holding the switch, the number will change continuously.
3. Press the [PART] switch.
   The indicator at the upper left of the [PART] switch will light, and the LED display will show the current Part number (01 ~ 16). The status of the selected Part is shown at the left of the Part number.

Example: When part 1 is selected



4. Press the [+/UP] or [-/DOWN] switch to select the Part you wish to record.
   Normally you will select an un-recorded Part. If you wish to re-record, select a previously recorded Part. If you continue holding the switch, the number will change continuously.
5. Press the [RESET] switch.
   When you press the [RESET] switch, you will move to the beginning of the song.

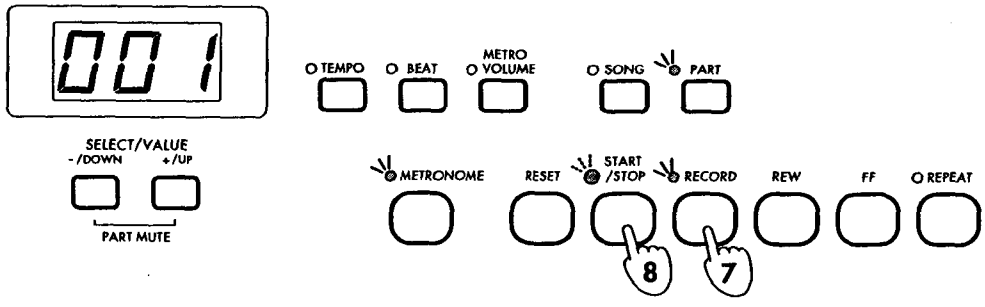


6. Use the [Sound selector] buttons to select a sound.
   During playback, the sound you choose here will be selected. To record with a layer, see p.24.
   You can also press the [Sound selector] to switch sounds after recording has begun. However it will not be possible to select a layer. During playback, the sounds will be switched at the point where you pressed the [Sound selector] button.

- **If you wish to record in time with the metronome, press the [METRONOME] switch to hear the metronome sound.**
  If necessary, adjust the time signature, tempo, and volume (see p.14).
- **You can correct (quantize) the timing at which notes are recorded. For details refer to p.29.**

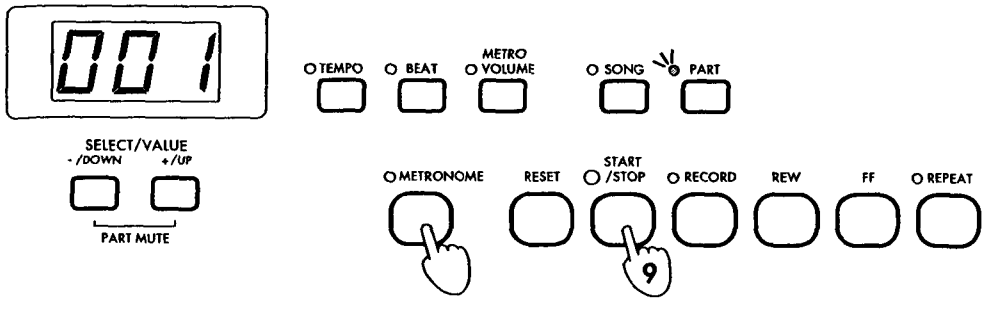
7. Press the [RECORD] switch.
   The indicator at the upper left of the [RECORD] switch will light. At this time it is not possible to change the Part number. If you need to change the Part number, press the [RECORD] switch once again to cancel record-ready mode.

8. Recording will begin when you either play a note or press the [START/STOP] switch.
   If you play a note, recording will begin immediately. If you press the [START/STOP] switch, there will be a two-measure count (the LED display will show "-02" → "-01") and then recording will begin.
   During recording, the indicator at the upper left of the [START/STOP] switch will blink in time with the tempo, red on the first beat of the measure, and green on other beats.



9. Press the [START/STOP] switch to stop recording.
   At this point, operation differs between the XC-2000 and the XC-1000.

☞ **For the XC-1000**
The indicator at the upper left of the [START/STOP] switch and the [RECORD] switch indicator will go off, and you will automatically return to the measure at which you started recording. If the metronome is playing, press the [METRONOME] switch to stop the metronome.



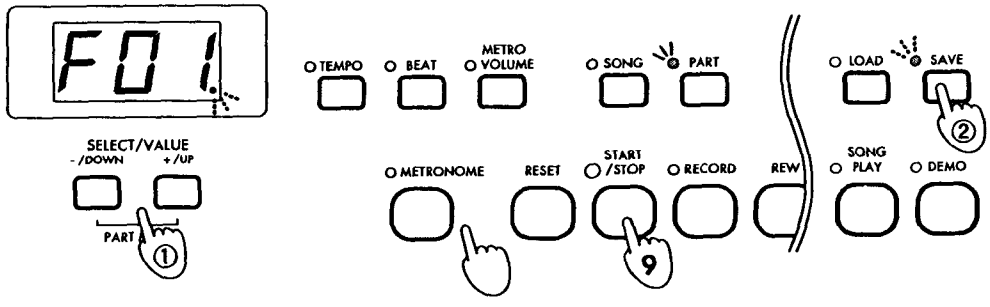
☞ **For the XC-2000**

The indicator at the upper left of the [START/STOP] switch and the [RECORD] switch indicator will go off. Then the indicator at the upper left of the [SAVE] switch will blink. After the disk has been checked, the LED display will show file number "F01", indicating that the musical data that you just recorded can be saved to floppy disk.
If a floppy disk is not inserted, the LED display will show "nod", and the indicator at the upper left of the [SAVE] switch will go off.

To save the data (if a floppy disk is inserted in the disk drive),

① **Press the [+/UP] or [-/DOWN] switch to select the file number in which the data will be saved.**
If data already exists in the file number that you specify, the file number in the LED display will blink. If you wish to keep the data in that file, select a different file before continuing to the next step. If you wish to erase the file whose number is blinking and overwrite the current data into that file, proceed to step (2). If you overwrite the old data, all data (all 10 songs) in that file will be lost forever.

② **Press the [SAVE] switch to execute saving.**
When the save operation is completed, the indicator at the upper left of the [SAVE] switch will go off, and you will automatically move to the first measure. If the metronome is playing, press the [METRONOME] switch to stop the metronome.
If a floppy disk is not inserted into the disk drive, refer to p.36.



If you decide not to save the data,

● **Press the [RESET] (or [MIDI]) switch.**
The indicator at the upper left of the [START/STOP] switch will go off, and you will automatically move to the first measure. If the metronome is playing, press the [METRONOME] switch to stop the metronome. If you wish to hear the playback from the measure where you begin recording, press the [START/STOP] switch without pressing the [RESET] switch.

Cautions when recording on the XC-2000

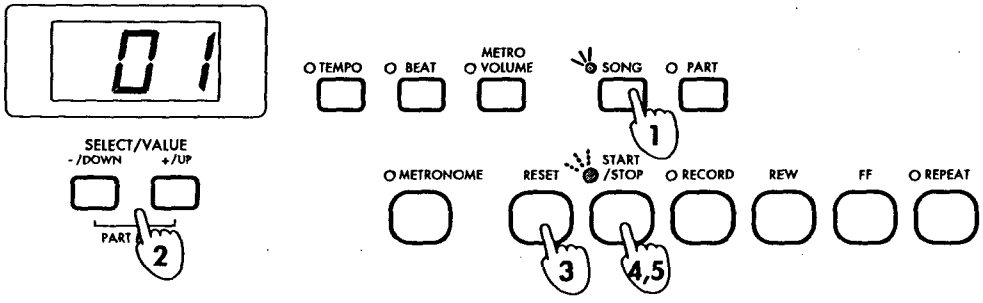
The musical data recorded by the XC-2000 will be lost when you perform the following operations. Please be sure to save important musical data on a floppy disk or on an external data filer (refer to pages 36 and 48).

- Turn the power off.
- Load song data from a floppy disk (see pages 37 and 40)
- Use Song Play to playback Format 1 data (see page 38)

On the XC-1000, the recorded data is remembered even when the power is turned off.

2. Playing back your performance

1. Press the [SONG] switch.
   The indicator at the upper left of the [SONG] switch will light, and the current song number (01 ~ 10) will appear in the LED display.
2. Press the [+/UP] or [-/DOWN] switch to select the song you wish to hear.
3. Press the [RESET] switch.
   When you press the [RESET] switch, you will return to the first measure.
4. Press the [START/STOP] switch, and playback will begin.
   During playback, the indicator at the upper left of the [START/STOP] switch will blink in time with the tempo.



5. To stop playback, press the [START/STOP] switch.
   The indicator at the upper left of the [START/STOP] switch will go off. Likewise, if the entire performance finishes playing back, playback will stop and the indicator at the upper left of the [START/STOP] switch will go off.

Adjusting the speed (tempo) of playback

Press the [TEMPO] switch, and then press the [+/UP] or [-/DOWN] switch to adjust the tempo which is displayed in the LED display (see page 14). Adjusting the tempo of the song will not affect the pitch.

Changing the sound

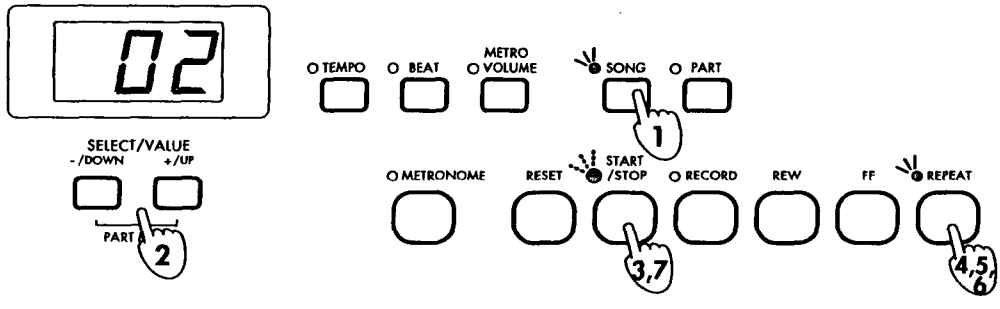
You can playback with a different sound than when you recorded. Press the [Sound selector] to select the sound with which you want that part to play. However if you have pressed the [Sound selector] during recording to switch sounds, the sound selected during recording will be selected automatically at that point during playback.

Notes when a layer is selected

- If you select a layer, the musical data of the next-numbered part (i.e., part 2 if part 1 was layered) will no longer be played back, and it will not be possible to select that part. When you cancel the layer, it will be possible to playback and select that part.
- Layering is not possible when part 16 (or part 15, if the bell is selected for the metronome) is selected.
- The two layered parameters will use the same MIDI channel. This means that if a MIDI program change message is received, both parts will switch to the same sound.

Repeating a section A-B

1. Press the [SONG] switch.
   The indicator at the upper left of the [SONG] switch will light, and the current song number will appear in the LED display.
2. Press the [+/UP] or [-/DOWN] switch to select the song number that you wish to playback repeatedly.
3. Press the [START/STOP] switch to begin playback.
   The indicator at the upper left of the [START/STOP] switch will blink in time with the tempo.
4. At the location where you wish to begin repeating, press the [REPEAT] switch.
   The indicator at the upper left of the [REPEAT] switch will blink. This sets the starting measure of the section to be repeated.
5. Playback will continue. At the location where you wish to stop repeating, press the [REPEAT] switch once again.
   The indicator at the upper left of the [REPEAT] switch will light. This sets the ending measure of the section to be repeated. The specified section will now be played back repeatedly.



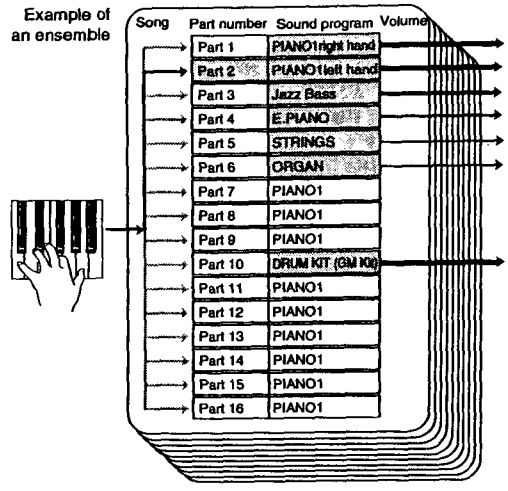
6. To cancel the specified repeat section, press the [REPEAT] switch again.
   Each time you press the [REPEAT] switch during playback, the action of the switch will cycle between "starting measure" → "ending measure" → "cancel settings" → "starting measure."
7. Press the [START/STOP] switch to stop playback.
   The indicator at the upper left of the [START/STOP] switch will go off.

The beginning and end of the repeated area are set in terms of the measures marked by the metronome. This means that the actual beginning of the repetition may be earlier than the point at which you pressed the switch, and the end may be later. While using this A-B repeat function, it is not possible to use the [REW] or [FF] switches to move between measures.

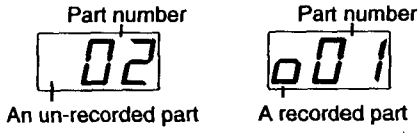
3. Creating an ensemble

While playing back previously-recorded Parts, you can record additional Parts. For example you might record the right-hand and left-hand separately on different Parts, or record bass and drums on their own Parts to create a colorful ensemble.

Example of an ensemble



1. Press the [SONG] switch.
   The indicator at the upper left of the [SONG] switch will light, and the current song number (01 ~ 10) will appear in the LED display.
2. Press the [+/UP] or [-/DOWN] switch to select the song in which you wish to create an ensemble recording.
3. Press the [PART] switch.
   The indicator at the upper left of the [PART] switch will light, and the LED display will show the current Part number (01 ~ 16). The status of the currently selected Part will be shown at the left of the number.



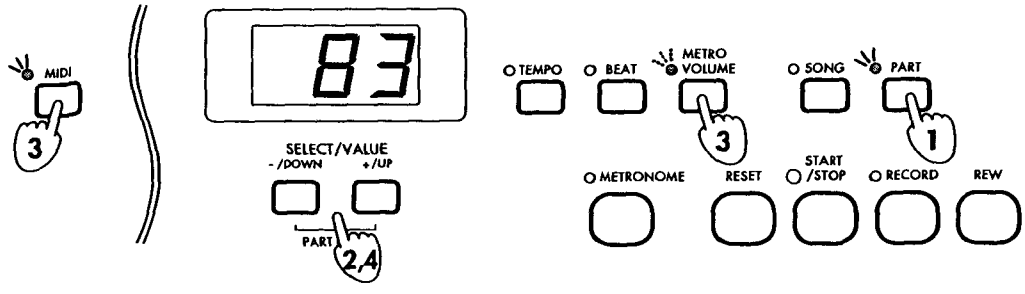
4. Press the [+/UP] or [-/DOWN] switch to select an un-recorded Part.
5. Refer to step 5 of the procedure "1. Recording your performance" (page 21), and record the Part you wish to add while you listen to the previously-recorded performances.

The [SURROUND] and [EFFECT] effects of the currently selected Part will apply to all Parts.

Adjusting the volume of each Part

Here's how to adjust the volume of each Part in the ensemble to regulate the balance between Parts.

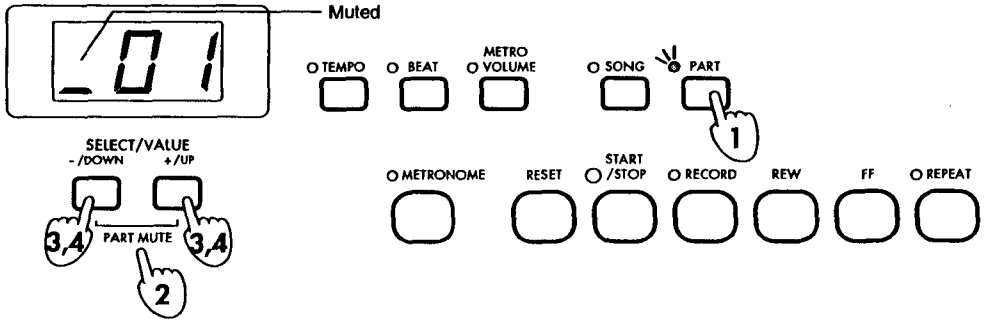
1. Press the [PART] switch.
   The indicator at the upper left of the [PART] switch will light.
2. Press the [+/UP] or [-/DOWN] switch to select the Part whose volume you wish to adjust.
3. Hold down the [MIDI] switch, and press the [METRO VOLUME] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [METRO VOLUME] switch will blink. The volume of the currently selected Part will appear in the LED display as a value of 0 (minimum) to 127 (maximum).
4. Press the [+/UP] or [-/DOWN] switch to adjust the volume.



Muting parts

By muting (temporarily silencing) one Part of a previously-recorded performance, you can then play or sing along to add the missing part. This procedure mutes the sound only temporarily, and does not cause data to be permanently erased (as is done by "Erasing a Part," discussed on page 31). It is also possible to use the procedure "Adjusting the volume of each Part" to set the volume to 0, but in this case playing the keyboard will produce no sound since the volume has been set to 0.

1. Press the [PART] switch.
   The indicator at the upper left of the [PART] switch will light, and the LED display will show the current Part number (01 ~ 16). The status (see p.21) of the selected Part will be shown at the left of the number.
2. Press the [+/UP] or [-/DOWN] switch to select the Part that you wish to mute.
3. Simultaneously press the [+/UP] and [-/DOWN] switches to mute the Part.
   The LED display will change as shown below, and when the musical data is played back, this Part will not play.



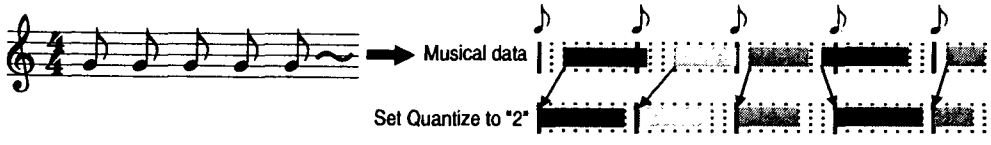
4. Simultaneously press the [+/UP] and [-/DOWN] switches once again, and muting will be canceled.
   The LED display and the volume will return to the un-muted status.

Creating a GM score (XC-2000 only)

Musical data created on the XC-2000 can be converted into a Standard MIDI File (SMF) (see p.41) so that it can be played back on another GM sound source. If you wish to do this, select Part 10 (MIDI channel 10) as the Drum Part, and use [DRUM KIT] "01" (GM Kit). For the other parts 1 ~ 9 and 11 ~ 16, select sounds from [GM]. This will ensure that the data can be played back with the same sounds on another GM sound source. However, settings for [SURROUND] and [EFFECT] will not be reflected on the other sound source.

4. Correcting the timing of musical data you record

You can automatically correct the timing of your playing as you record. This is called the (realtime) Quantize function. Suppose that you are playing along with the metronome and attempting to record the notes just as they are printed in the musical score. If your timing is slightly off, this function can automatically correct your timing. The notes will be moved to the nearest location of the timing interval you specify. In the example below, all the notes are eighth notes, so you would use the following procedure to set Quantize to "2"= ♪.

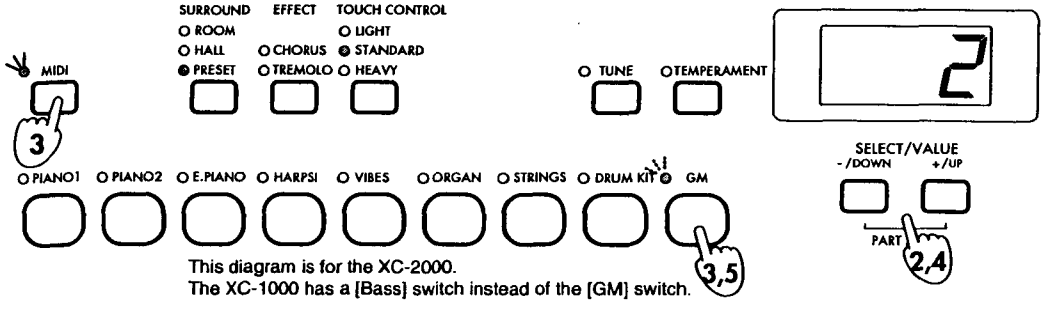


1. Follow the procedure "1. Recording your performance" (p.21) through step "4".

2. On the XC-2000 hold down the [MIDI] switch and press the [GM] switch.
   On the XC-1000 hold down the [MIDI] switch and press the [BASS] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [GM] switch (on the XC-2000) or the [BASS] switch (on XC-1000) will blink. The LED display will show the quantize resolution.

3. Press the [+/UP] or [-/DOWN] switch to select the timing resolution to which the notes will be corrected.
   With a setting of "96" the timing will not be corrected, and your performance will be recorded just as you play it. With a setting of "12" ~ "1" the timing of your playing will be corrected to the nearest specified interval. "12"= $♪_3$, "8"= ♪, "6"= $♪_3$, "4"= ♪, "3"= $♪_3$, "2"= ♪, and "1"= ♩.
   Example : With a setting of "12" the timing will be adjusted to the nearest thirtysecond note triplet. With a setting of "1" the timing will be adjusted to the nearest quarter note.

   Depending on the selected Quantize resolution, your performance may change dramatically. Select an appropriate Quantize setting.



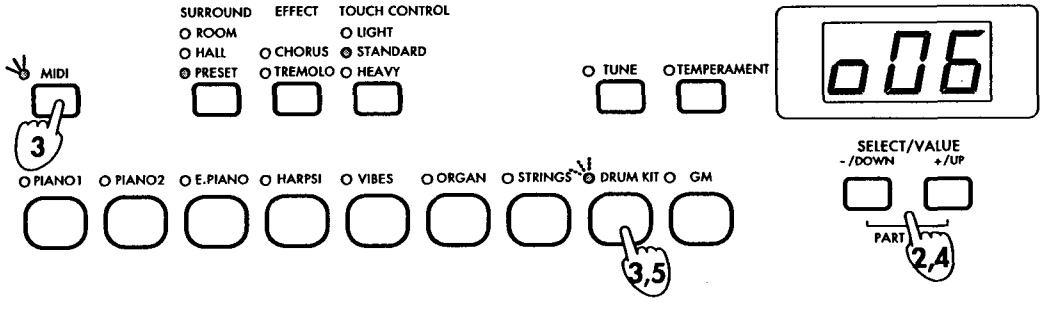
4. Use steps "5" and following of "1. Recording your performance" to begin recording.

   The timing is quantized according to the time signature and tempo of the metronome. Press the [METRONOME] switch to turn on the metronome before you start recording.

5. Combining the data of two Parts into one Part

Musical data that has been recorded separately on two Parts can be combined into one Part. This is called the Bounce function. When data is combined into one Part, the other track will automatically become empty, allowing you to record an additional performance into that Part.

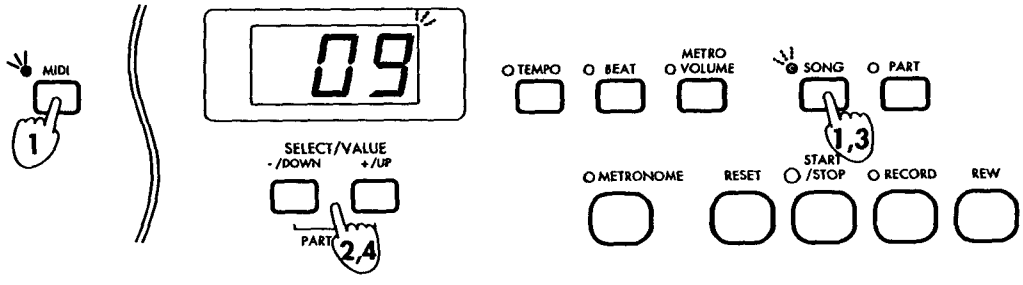
1. Press the [PART] switch.
   The indicator at the upper left of the [PART] switch will light, and the LED display will show the current Part number (01 ~ 16). The status (see p.21) of the selected Part will be displayed at the left of the number.
2. Press the [+/UP] or [-/DOWN] switch to select the Part into which the data will be combined (the Bounce destination).
3. Hold down the [MIDI] switch, and press the [DRUM KIT] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [DRUM KIT] switch will blink.
4. Press the [+/UP] or [-/DOWN] switch to select the other Part whose data will be combined (the Bounce source).
5. Press the [DRUM KIT] switch, and the data of the "bounce source" Part will be combined with the Part selected in step 2, and the Part selected in step 4 will become empty.
   The sound of the bounce destination will be used. For example if you bounce data being played by a piano sound (the bounce destination) with data being played by a strings sound (the bounce source), the data will be combined into the piano Part, and will all be played by a piano sound.



6. Erasing a song/part

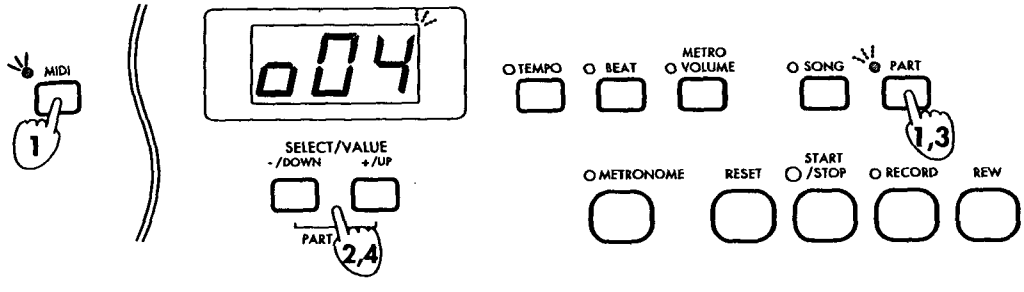
Erasing a song

1. Hold down the [MIDI] switch, and press the [SONG] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [SONG] switch and the song number in the LED display will blink.
2. Press the [+/UP] or [-/DOWN] switch to select the song number that you wish to erase.
3. Press the [SONG] switch, and the selected song data will be erased.
   The indicator at the upper left of the [MIDI] switch will go off, and the song number in the LED display will light.
   If you decide not to erase the song data, press the [MIDI] switch (or the [RESET] switch).



Erasing a part

1. Hold down the [MIDI] switch, and press the [PART] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [PART] switch and the Part number in the LED display will blink.
2. Press the [+/UP] or [-/DOWN] switch to select the Part number that you wish to erase.
3. Press the [PART] switch, and the Part data will be erased.
   The indicator at the upper left of the [MIDI] switch will go off, and the Part number in the LED display will light.
   If you decide not to erase the Part data, press the [MIDI] switch (or the [RESET] switch).



7. Various recording methods

Setting the recording mode

On the XC-2000/XC-1000 you can select the following methods of recording.

LED	Recording mode	Explanation
0	Overwrite	Data that was previously recorded will be erased, and only the newly recorded data will remain.
1	Overdub	Data that was previously recorded will be combined with the newly recorded data.
2	Automatic punch-in/out	Before starting to record, you can specify the measures to be recorded, so that only those measures are re-recorded.
3	Manual punch-in/out	During recording, you can press the sostenuto pedal to specify the area which will be re-recorded.

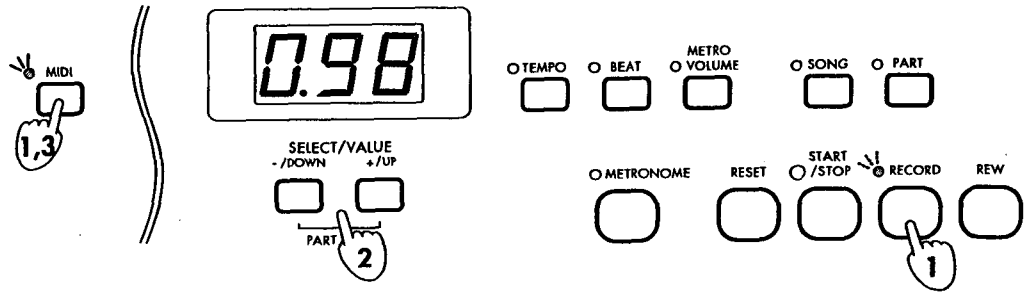
1. Hold down the [MIDI] switch, and press the [RECORD] switch.

Example: 0.98

Recording mode Remaining memory

The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [RECORD] switch will blink. The LED display will show the recording mode and the remaining amount of memory. For the remaining amount of memory refer to page 34.

2. Press the [+/UP] or [-/DOWN] switch to select the recording mode (0 ~ 3).



3. Press the [MIDI] switch (or the [RESET] switch) to exit the setting mode.

✎ *When the power is turned on, the "overwrite" recording method is selected.*

Overwrite

With this method of recording, the new data will be written over any previously recorded data. All data existing at and following the measure where recording began will be rewritten. If any data existed after the location where recording ended, it too will be erased.
Normally you will use this method of recording.

- **Set the recording mode to "0" before recording (refer to the above procedure).**

Overdub

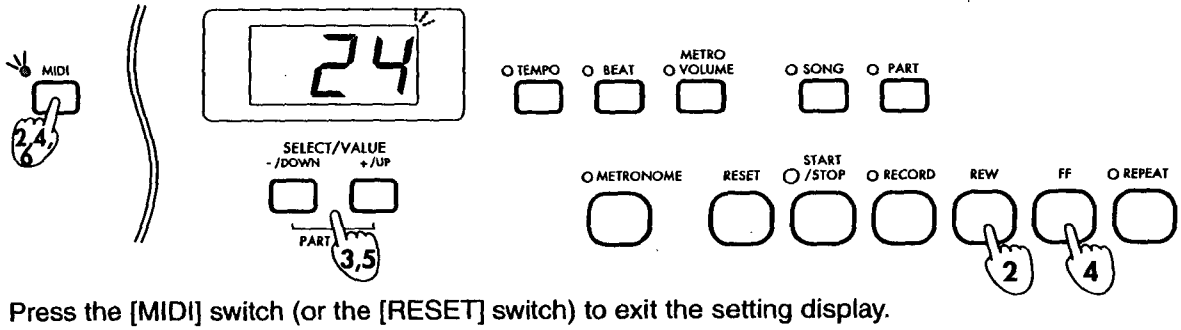
With this method of recording, the new data will be added to the previously recorded data. Data existing at or following the measure where recording began will not be erased, but will be combined with the newly recorded data.

- **Set the recording mode to "1" before recording (refer to the above procedure).**
  When you press the [RECORD] switch to enter record-ready mode (refer to step 7 on page 22), the "recording mode and remaining memory" will blink in the LED display, allowing you to check the current recording mode. (At this time it is not possible to change the recording mode.) When you press the [START/STOP] switch or play a note, overdub recording will begin.

Automatic punch-in/out

With this method of recording, only the specified range of measures will be recorded. This is convenient when you wish to correct just a certain portion of a performance. First, specify the measures at which you want recording to begin and end. Then start recording just as usual. Recording will take place only in the specified area.

1. Set the recording mode to "2" (refer to the previous page).
2. Hold down the [MIDI] switch, and press the [REW] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the measure number will blink in the LED display.
3. Press the [+/UP] or [-/DOWN] switch to specify the measure at which recording will begin (punch-in).
   Recording will start from this measure.
4. Hold down the [MIDI] switch, and press the [FF] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the measure number will blink in the LED display.
5. Press the [+/UP] or [-/DOWN] switch to specify the measure at which recording will end (punch-out).
   Recording will occur to the end of this measure.



6. Press the [MIDI] switch (or the [RESET] switch) to exit the setting display.
7. Begin recording as usual.
   When you press the [RECORD] switch to enter record-ready mode, the recording mode and the remaining amount of memory will blink in the LED display, allowing you to check the current recording mode. (It is not possible to change the recording mode at this time.) Press the [START/STOP] switch or a note on the keyboard, and automatic punch-in/out recording will begin.
   Be sure to start recording at a location earlier than the punch-in point (the location where recording will actually begin). When you begin recording, the data will playback until the punch-in point is reached. Then (overwrite) recording will begin. When the punch-out point is reached, recording will end, and playback will resume from the following measure.

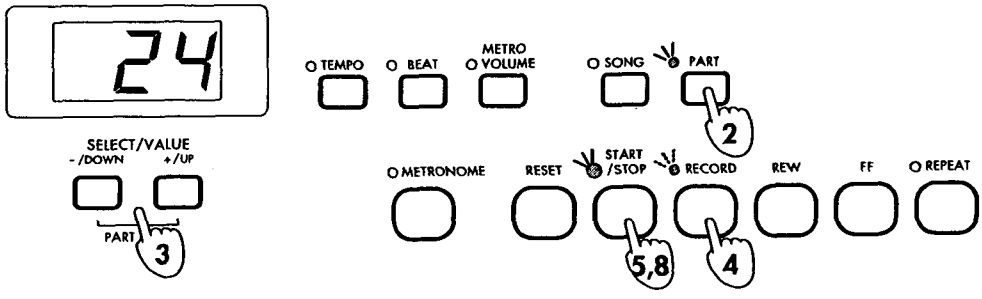
   The "measures" used by this function will follow the time signature and tempo of the metronome. This means that if you have been recording without regard to the metronome time signature or tempo, the punch-in/out points will not match the actual time signature or tempo.

Manual punch-in/out

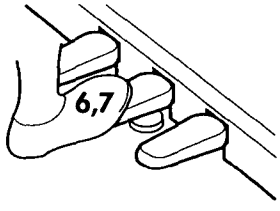
With this method of recording, you manually specify the area in which recording will take place. This is convenient when you wish to correct just a certain portion of a performance. During recording, press the sostenuto pedal to specify the measures to be recorded.

1. Set the recording mode to "3" (refer to the previous page).
2. Press the [PART] switch.
   The indicator at the upper left of the [PART] switch will light.

3. Press the [+/UP] or [-/DOWN] switch to select the Part that you wish to record.
4. Press the [RECORD] switch.
   The indicator at the upper left of the [RECORD] switch will blink, and the recorder will enter record-ready mode.
5. Press the [START/STOP] switch to begin playback.
   The indicator at the upper left of the [START/STOP] switch will blink in time with the tempo, and playback will begin. At this time, the indicator at the upper left of the [RECORD] switch will be blinking, and your playing is not yet being recorded.



6. When you reach the location where you want recording to begin, press the [Sostenuto pedal].
   The indicator at the upper left of the [RECORD] switch will change to steadily lit, and (overwrite) recording will begin.
7. When you reach the location where you want recording to end, press the [Sostenuto pedal] once again.
   The indicator at the upper left of the [RECORD] switch will change to blinking. Recording will end, and playback will resume.



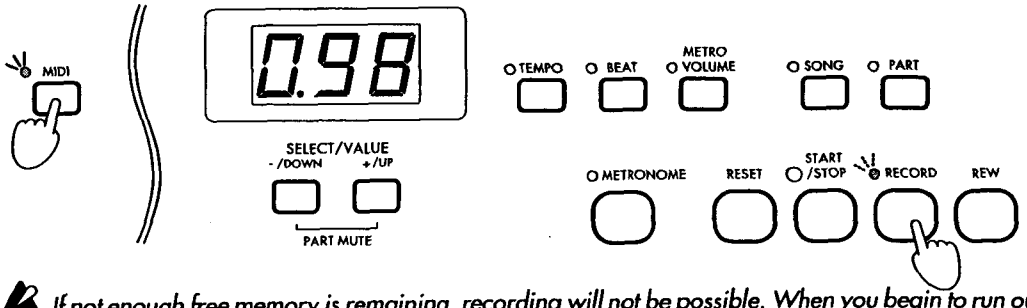
8. Press the [START/STOP] switch to stop playback.
   The indicator at the upper left of the [START/STOP] switch and the indicator at the upper left of the [RECORD] switch will go off.

Since the [Sostenuto pedal] is used in this recording mode to specify the punch-in/out timing, it will not be possible to use the Sostenuto pedal function.

Remaining recording memory display

This displays the percentage of internal memory that remains available for recording.

- **Hold down the [MIDI] switch, and press the [RECORD] switch.**
  The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [RECORD] switch will blink. The LED display will show the remaining amount of recorder memory in the range of 0 ~ 99 (%).



If not enough free memory is remaining, recording will not be possible. When you begin to run out of memory, save the data on an external MIDI data filer etc. (see p.48) or to the internal disk drive (only on the XC-2000: see p.36 and following), and then erase songs or parts from internal memory (see p.31).

Various functions of the XC-2000

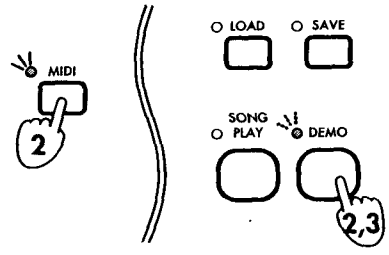
1. Formatting (initializing) a disk

In order for a new floppy disk to be used by the XC-2000, it must first be formatted (initialized). It is also possible to re-format an old disk which contains unwanted data. Disks can also be formatted on an MS-DOS computer.

When a floppy disk is formatted, all data which was on that disk will be lost. Before formatting a disk, make sure that it does not contain data you wish to keep.

1. Insert the floppy disk that you wish to format into the disk drive.
2. Hold down the [MIDI] switch, and press the [DEMO] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [DEMO] switch will blink. After the floppy disk has been checked, one of the following messages will appear in the LED display.

   If another message appears, refer to page 70.



-F-	00F	01F
An un-formatted disk	A formatted disk containing no song files	A formatted disk containing song files (the left 2 digits are the file number)

If the [DEMO] switch is on (if the indicator at the upper left is lit), this procedure is not possible. Turn it off.

3. Press the [DEMO] switch, and formatting will begin.
   The LED display will blink "dF".

   Formatting a 2DD floppy disk requires approximately 1 minute 30 seconds, and a 2HD floppy disk approximately 2 minutes. When formatting is complete, the indicators at the upper left of the [MIDI] switch and the [DEMO] switch will go off, and the LED display will return to the previous display.

   If you decide not to format, press the [MIDI] switch when the indicator at its upper left is lit.

While the "." in the right edge of the LED display is lit, the disk drive is in operation. Never attempt to remove the floppy disk while the disk drive is operating.

2. Saving musical data to floppy disk

Musical data from the built-in recorder can be saved to floppy disk. All ten songs of the recorder are saved as 1 file.

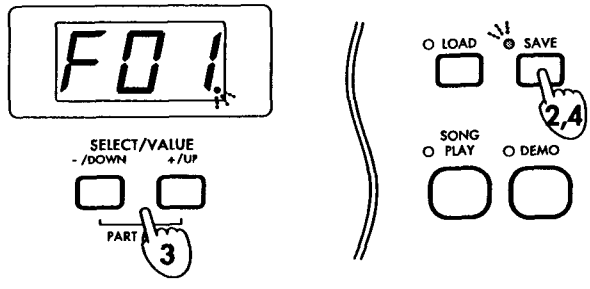
On the XC-2000, all musical data recorded in the recorder will be lost when the power is turned off. Before turning the power off, any data you wish to keep must be saved to floppy disk (or to an external data filer).

You can also convert the musical data of the recorder into a SMF song file (*.MID) (see p.41).

1. Insert a (formatted) floppy disk into the disk drive.
2. Press the [SAVE] switch.
   The indicator at the upper left of the [SAVE] switch will blink. After the disk has been checked, the file number ("F01" ~ "F99") will appear in the LED display.
3. Press the [+/UP] or [-/DOWN] switch to select the file number in which you wish to save the data.

   If a file of the same number already exists on the disk, the file number in the LED display will blink, and a message will ask you whether you wish to replace the old file with the new file. Before you proceed, make sure that you do not need to keep the data of the old file. This "Save" operation will erase the old file. Unless you intend to overwrite the old data (i.e., to save the new data under a file number which is the same as an old file), you should select a file number which does not blink. To cancel the "Save" operation, press the [MIDI] switch.

4. Press the [SAVE] switch to execute the "Save" operation.
   The "." in the right edge of the LED display will blink. When saving is complete, the indicator at the upper left of the [SAVE] switch and the "." in the right edge of the LED display will go off.



3. Loading musical data from floppy disk

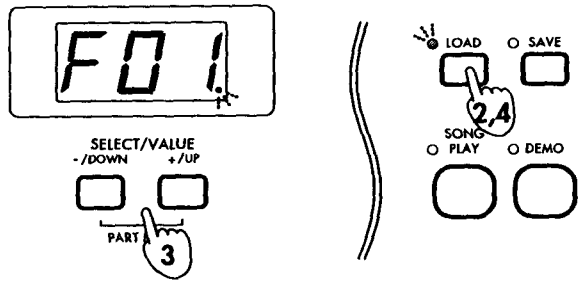
Musical data can be loaded from floppy disk into the internal recorder.

In addition to data that was originally recorded on the XC-2000, SMF song files (*.MID) can be converted into song files for the recorder (KORGPF**.SNG) and loaded (see p.40).

When data is loaded, all musical data in the recorder will be erased. Before loading data, be sure to save important musical data from internal memory to disk.

1. Insert the floppy disk into the disk drive.
2. Press the [LOAD] switch.
   The indicator at the upper left of the [LOAD] switch will blink. After the disk is checked, the file number ("F01" ~ "F99") will appear in the LED display.
3. Press the [+/UP] or [-/DOWN] switch to select the song file that you wish to load.
4. Press the [LOAD] switch to execute the "Load" operation.
   The "." in the right edge of the LED display will blink. When loading is complete, the indicator at the upper left of the [LOAD] switch and the "." in the right edge of the LED display will go off.

   If you decide not to load, press the [MIDI] switch.



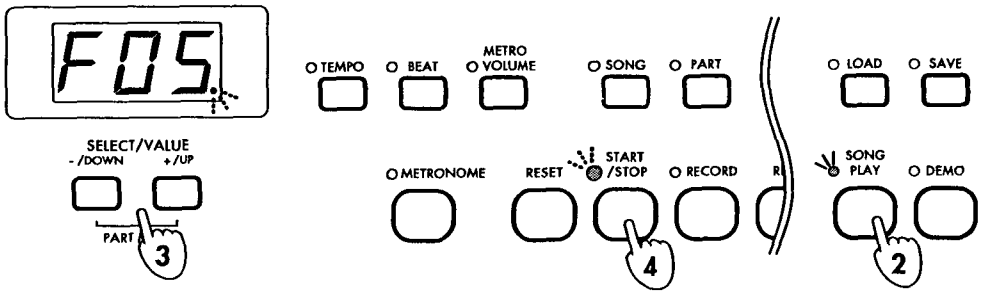
4. Playing back a Standard MIDI File

Standard MIDI File (SMF) is a format for sequencer (recorder) musical data that allows data to be exchanged between devices even if they are different models or even made by different manufacturers. Each song occupies one file. The XC-2000 can use SMF data of "format 0" in which all the musical data is contained in a single track (part), and of "format 1" in which the musical data is divided among tracks (parts) by its MIDI channel.

Standard MIDI File (SMF) song files can be loaded directly from floppy disk and played. This is called the Song Play function. This is convenient when you wish to successively play two or more SMF song files, or when you are in a hurry to playback a song file.

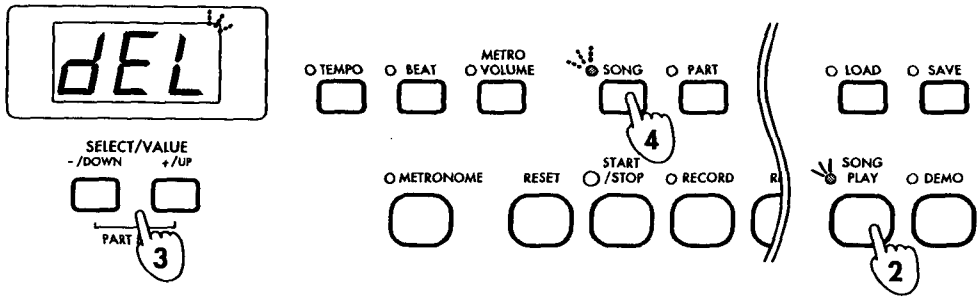
1. Insert a floppy disk containing a SMF song file into the disk drive of the XC-2000.
2. Press the [SONG PLAY] switch.
   The indicator at the upper left of the [SONG PLAY] switch will light. After the disk is checked, the file number ("F01" ~ "F99") of the song file(s) on the disk will appear in the LED display.
3. Press the [+/UP] or [-/DOWN] switch to select the song file that you wish to playback.
4. Press the [START/STOP] switch.
   If the song file to be played back is in Format 0
   The indicator at the upper left of the [START/STOP] switch and the "." in the right edge of the LED display will blink, and playback will begin. The songs will playback in succession, starting with the file number you selected, and ending with the last file number.

   If the song file to be played back is in Format 1
   - **If the internal recorder does not contain musical data**, the indicator at the upper left of the [START/STOP] switch will initially blink rapidly. Then it will begin blinking at the tempo, and playback will begin. The songs will playback in succession, starting with the file number you selected, and ending with the last file number.



- **If the internal recorder contains musical data**, the indicator at the upper left of the [SONG] switch will blink, and the LED display will show a blinking message of "dEL" (delete), asking you whether it is OK to delete the song data from internal memory.

If you use Song Play to playback song data of format 1, all data in the internal recorder will be erased. If you do not wish to erase this data, press the [SONG PLAY] switch to turn off the indicator. Then save the data to floppy disk before continuing.



When you press the [SONG] switch, the indicator at the upper left of the [SONG] switch will change to being steadily lit. The "." in the right edge of the LED display and the indicator at the upper left of the [START/STOP] switch will blink for several seconds. Then they will begin blinking at the tempo of the song, and playback will begin. The songs will playback in succession, starting with the file number you selected, and ending with the last file number.

5. To stop playback, press the [START/STOP] switch.
   The indicator at the upper left of the [START/STOP] switch will go off.

6. When you have finished listening, press the [SONG PLAY] switch.
   The indicator at the upper left of the [SONG PLAY] switch will go off.

Even while in Song Play mode, you can change the sound of each Part and adjust the volume (p.27), or mute it (p.28). By connecting a mic to the [INPUT] connector located on the front right of the piano and muting the melody part of a song from a commercially available SMF/GM disk, you can sing along (see p.42).

If the data plays back with the wrong sound selections, or other problems occur, check the "Program filter settings" (p.47) and make sure that "Equal temperament" is selected (p.19). Then press the [RESET] switch, and playback again.

In Song Play mode, Surround will automatically be set to "PRESET" and cannot be changed. Nor will it be possible to select a layer.

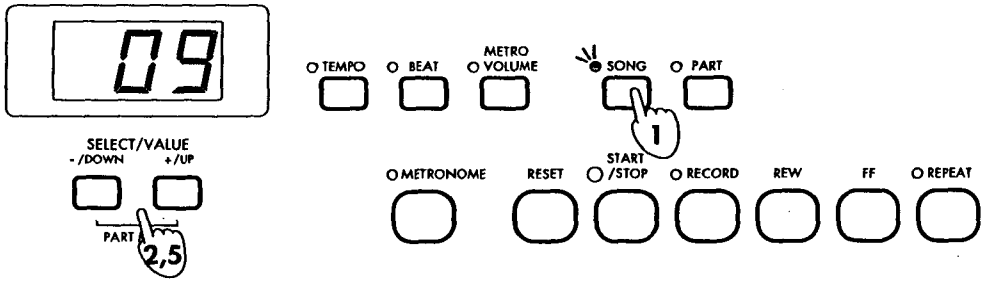
The numbers that appear in the LED display indicate the order in which the SMF files were written to the disk. This order may differ from the song order written on the disk.

5. Loading a Standard MIDI File

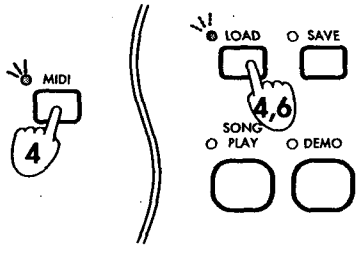
SMF format song files can be converted into data for the recorder, and loaded into the internal recorder. This is convenient when you wish to use the recorder of the XC-2000 to edit the song file.

1. Press the [SONG] switch.
   The indicator at the upper left of the [SONG] switch will light, and the LED display will show the song number.
2. Press the [+/UP] or [-/DOWN] switch to select the song number of the internal recorder into which the data will be loaded (the loading destination).

   The SMF song file from the floppy disk will be loaded into the song number that you specify. The data will be loaded only into this song number, and the data of the other songs will not be erased. If the loading destination song number contains data which you wish to keep, save it to floppy disk before continuing.



3. Insert a floppy disk containing a SMF song file into the disk drive of the XC-2000.
4. Hold down the [MIDI] switch, and press the [LOAD] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the [LOAD] switch indicator will blink. The disk will be checked, and the LED display will show a file number.
5. Press the [+/UP] or [-/DOWN] switch to select the SMF song file which will be loaded into the internal recorder.



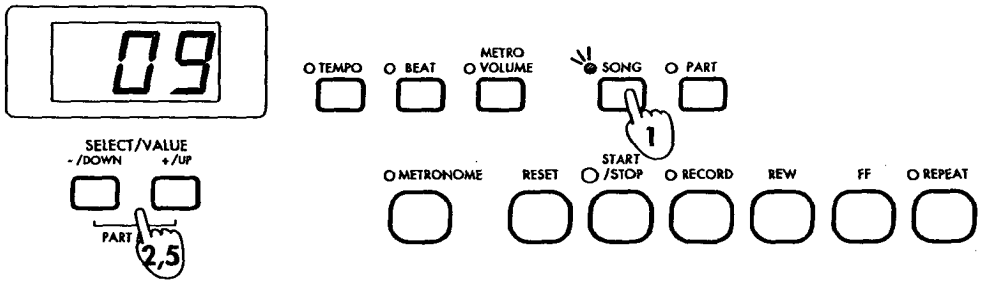
6. Press the [LOAD] switch, and loading will begin.
   The "." in the right edge of the LED display will blink. The song file data will be converted as it is loaded into the internal recorder. When loading is complete, the indicator at the upper left of the [LOAD] switch and the "." in the right edge of the LED display will go off.

   If you decide not to load the data, press the [MIDI] switch.

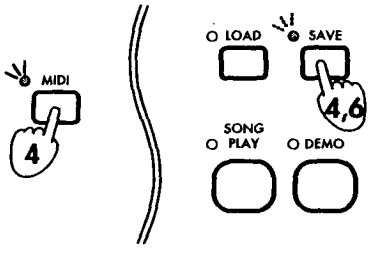
6. Saving musical data to floppy disk as SMF data

Musical data recorded on the internal recorder can be converted into SMF data and saved to a floppy disk. This data can then be played back or edited by a different SMF-compatible device.

1. Press the [SONG] switch.
   The indicator at the upper left of the [SONG] switch will light, and the LED display will show the song number.
2. Press the [+/UP] or [-/DOWN] switch to select the recorder song number which will be saved as SMF data.



3. Insert a floppy disk into the disk drive of the XC-2000.
4. Hold down the [MIDI] switch, and press the [SAVE] switch.
   The [MIDI] switch indicator will light, and the [SAVE] switch indicator will blink.
   The disk will be checked, and a file number will appear in the LED display.
5. Press the [+/UP] or [-/DOWN] switch to select the file in which the data will be saved.
   One song of the recorder will be saved as one song file.

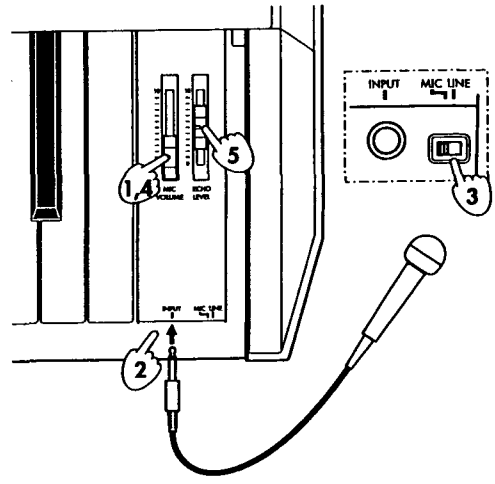


If a file of the same number already exists on the disk, the file number in the LED display will blink, and a message will ask you whether you wish to replace the old file with the new file. Before you proceed, make sure that you do not need to keep the data of the old file. This "Save" operation will erase the old file. Unless you intend to overwrite the old data (i.e., to save the new data under a file number which is the same as an old file), you should select a file number which does not blink. The file number you select here is different than the file number used when playing data in Song Play mode, or when converting SMF data into a song file for the recorder. If you decide not to save the data, press the [MIDI] switch.

6. Press the [SAVE] switch and the data will be saved.
   The "." in the right edge of the LED display will blink. The internal recorder data will be converted into SMF format as it is saved to the floppy disk. When saving is complete, the indicator at the upper left of the [SAVE] and the "." in the right edge of the LED display will go off.

7. Connecting a mic and singing

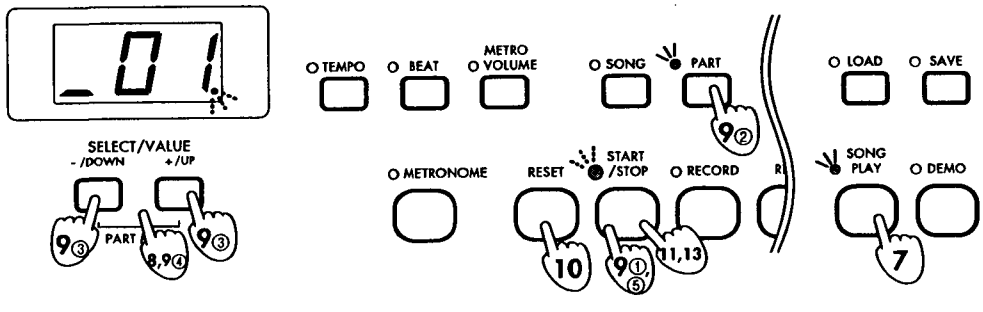
By connecting a mic to the XC-2000 you can sing along with your songs. Try singing along with songs from commercially available SMF/GM disks.



1. Lower the [MIC VOLUME] slider located on the right side of the piano to the "0" position.
2. Connect the mic to the [INPUT] jack located at the right front of the piano.
   (If the mic has an on/off switch, turn it on.)
3. Set the [MIC/LINE] switch to the "MIC" position.
4. Use the [MIC VOLUME] slider to adjust the mic volume.
   If the sound is distorted, set the [MIC/LINE] switch to the "LINE" position.
5. Use the [ECHO VOLUME] slider to adjust the amount of echo.
6. Insert a floppy disk containing SMF song data into the disk drive of the XC-2000.
7. Press the [SONG PLAY] switch.
   The indicators at the upper left of the [SONG PLAY] switch and the [SONG] switch will light. The disk will be checked, and the LED display will show the song files ("F01" ~ "F99") which the floppy disk contains.
8. Press the [+/UP] or [-/DOWN] switch to select the song number (the song file).

   Most commercially available SMF/GM data is saved in format 0. For this reason, the explanation here will assume that you are playing back a format 0 song file. If you are playing back a format 1 song file, refer to page 38.

9. Mute the vocal (melody) part.
   If you do not know which is the melody part, use the following procedure.
   ① Press the [START/STOP] switch to begin playback. ② Press the [PART] switch. ③ Simultaneously press the [+/UP] and [-/DOWN] switches to mute the Part (see p.28). Did the melody part disappear? If not, simultaneously press the [+/UP] and [-/DOWN] switches once again to unmute the Part. ④ Press the [+/UP] switch to select the next Part, and try muting it. In this way, check each Part to find and mute the melody part. ⑤ Press the [START/STOP] switch to stop playback.



10. Press the [RESET] switch to return to the first measure.
11. Press the [START/STOP] switch, and sing along with the music.
    The indicator at the upper left of the [START/STOP] switch will blink in time with the tempo.
12. If the key is not comfortable for you to sing in, move the [KEY TRANSPOSE] slider to adjust the key.
    Relative to "C," moving the slider to the left will lower the key in semitone steps, and moving it to the right will raise the key. Normally this slider will be set to the "C" position.
13. When the song ends, press the [START/STOP] switch.

- *If you are not using this function, lower the [MIC VOLUME] and [ECHO LEVEL] sliders to the "0" position, and disconnect the mic (or other device) from the [INPUT] jack.*
- *The volume of the device connected to the [INPUT] jack is adjusted only by the [MIC VOLUME] slider. The [MASTER VOLUME] slider does not affect the volume of the [INPUT] jack.*
- *The [INPUT] jack is monaural. If you wish to connect a stereo output device such as a synthesizer so that its sound is heard from the built-in speakers of the XC-2000, make connections to the [INPUT] jacks located at the back of the bottom panel.*
- *If a device with high output is connected to the [INPUT] jack, set the [MIC/LINE] switch to the "LINE" position.*
- *The following conditions can cause acoustic feedback, so make the appropriate adjustments. Mic directionality. / Mic is pointed toward the piano. / Mic is too close to the piano. / Mic volume and echo level adjustment.*

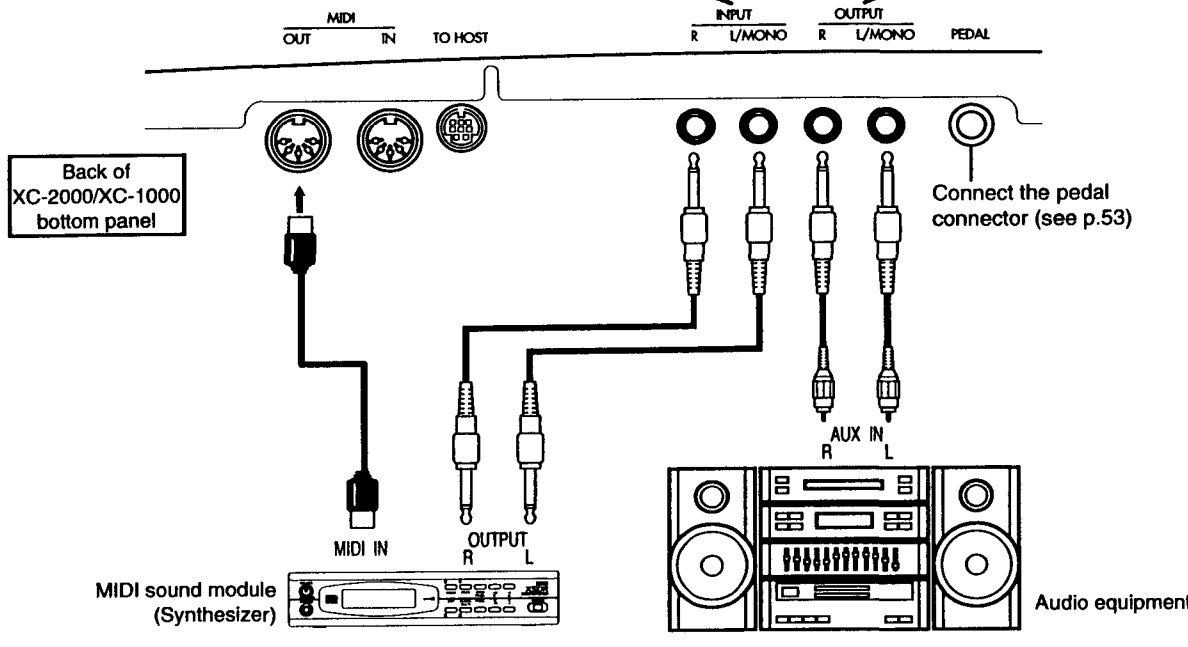
Connections with other devices

1. Connecting a synthesizer or audio device

You can connect a synthesizer or audio device to the XC-2000/XC-1000 so that its sound can be heard through the built-in speakers, or record your playing on a tape recorder etc.

[INPUT] jacks (L/MONO, R)
These are input jacks to which the output jacks of a synthesizer or audio device can be connected so that the sound can be heard through the built-in speakers. If connecting in mono, use the L/MONO jack. To adjust the volume, use the volume control of the connected device.

[OUTPUT] jacks (L/MONO, R)
These are output jacks which can be connected to the input jacks of an audio system to achieve a greater volume of sound, or to record your playing on a tape recorder etc. If connecting in mono, use the L/MONO jack. Use the [MASTER VOLUME] slider of the XC-2000/XC-1000 to adjust the volume. The sound of the device connected to the [INPUT] jacks will also be output here. In addition, the sound of the device connected to the front panel [INPUT] jack (see p.43) will also be output from these jacks.



2. Connecting MIDI devices

What is MIDI?

MIDI (Musical Instrument Digital Interface) is a world-wide standard which allows electronic musical instruments and computers to exchange musical data (keyboard playing, sound selections etc.) in the form of digital data.

You can play other MIDI instruments from the keyboard of the XC-2000/XC-1000. Operations such as selecting sounds, using the damper pedal, and many other functions are also transmitted along with the notes. In the same way, another MIDI keyboard or sequencer (an automatic playback device) can be used to control the XC-2000/XC-1000.

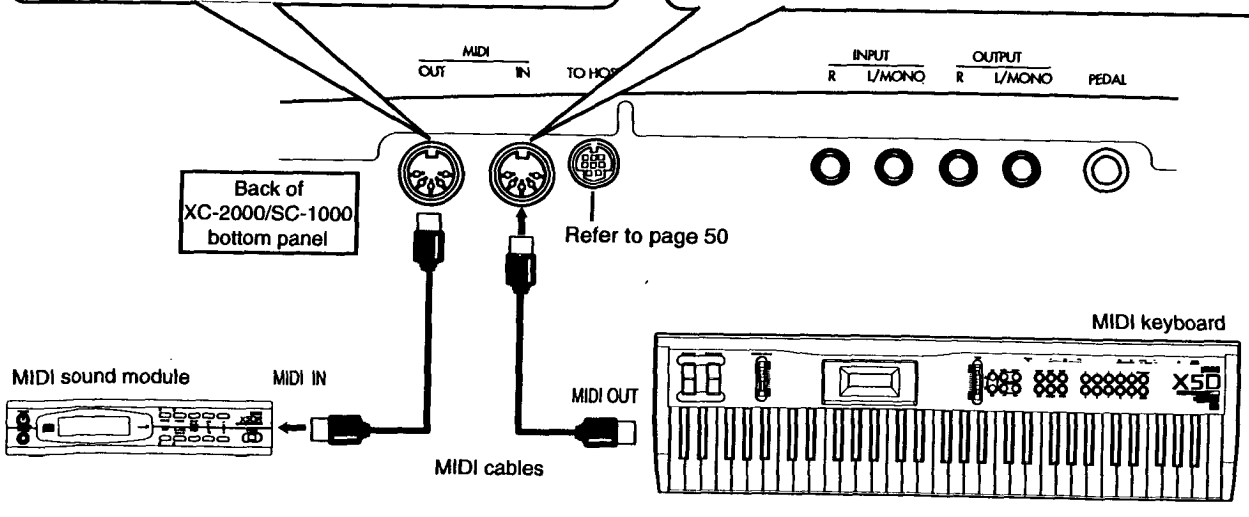
This section explains ways of using MIDI related to the XC-2000/XC-1000. If you are further interested in MIDI, you may wish to read one of the many excellent introductory books which are widely available.

MIDI connections

MIDI cables are used to transfer messages. These cables are connected from the MIDI connectors of the XC-2000/XC-1000 to the MIDI connectors of another MIDI device so that commands can be exchanged.

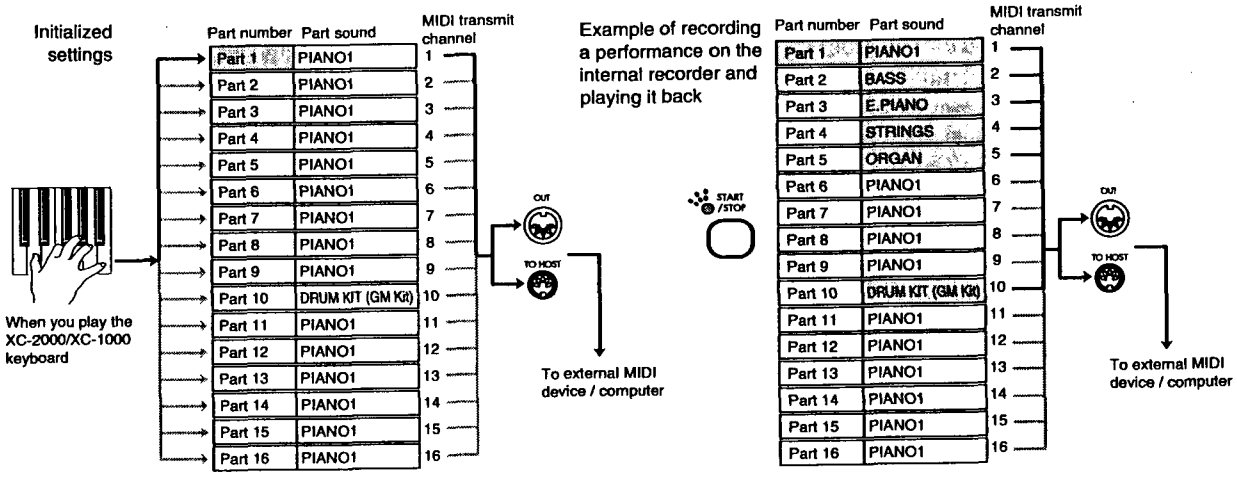
[MIDI OUT] connector
This connector transmits MIDI messages. By using this connector, the MIDI messages which are transmitted when you play the keyboard of the XC-2000/XC-1000 or when you playback the recorder can cause external MIDI instruments to produce sound. Use a MIDI cable to connect the [MIDI OUT] connector of the XC-2000/XC-1000 to the [MIDI IN] connector of the external MIDI device.

[MIDI IN] connector
This connector receives MIDI messages. By using this connector, MIDI messages transmitted from an external MIDI device (MIDI keyboard or sequencer etc.) can cause the XC-2000/XC-1000 to produce sound. Use a MIDI cable to connect the [MIDI OUT] connector of the external MIDI device to the [MIDI IN] connector of the XC-2000/XC-1000.

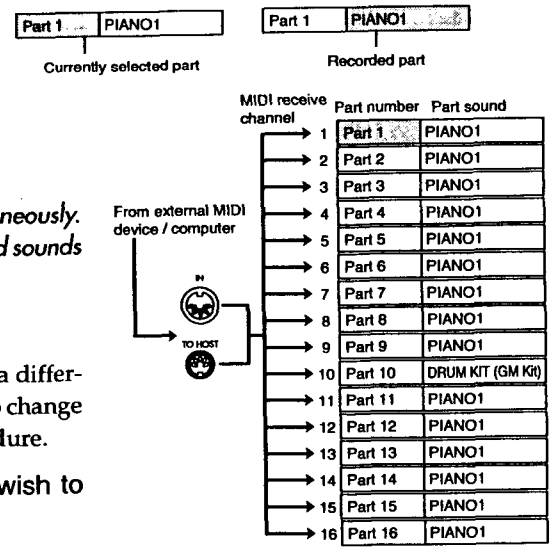


MIDI channel settings

After you have finished making MIDI connections, set the MIDI channels of the XC-2000/XC-1000 and the external MIDI device. MIDI uses sixteen channels: 1 ~ 16.
When you play the keyboard of the XC-2000/XC-1000, the keyboard will transmit messages on the MIDI channel which is specified for the currently selected Part of the song. Musical data from the recorder is transmitted on the MIDI channels which are specified for each Part of the recorded song.



MIDI messages from the external MIDI device will be received on the MIDI channels which are specified for each Part of the currently selected song. By assigning a different MIDI channel to each Part, messages can be received from an external sequencer to play up to 16 different sounds simultaneously on the XC-2000/XC-1000. This is referred to as "multi-timbral" capability.



The XC-2000/XC-1000 can produce up to 32 notes simultaneously. However this number may decrease depending on the selected sounds or layering.

Changing MIDI channels

The easiest way to change the MIDI transmit channel is to select a different Part number. However there may be cases in which you wish to change the MIDI channel transmitted by a Part. Use the following procedure.

1. Select the Part of the song whose MIDI channel you wish to change.
2. Hold down the [MIDI] switch, and press the [BEAT] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [BEAT] switch will blink. The LED display will show the MIDI channel of the currently selected Part.
3. Press the [+/UP] or [-/DOWN] switch to change the MIDI channel.

   With the initial settings, changing the MIDI channel of a Part will mean that two Parts will have the same channel. In this situation, when data of that channel is received, the sounds selected for each of these two Parts will play simultaneously. If this sounds wrong, set the MIDI channel of the other Part to the MIDI channel previously used by the first Part.

4. When you finish making settings, press the [MIDI] switch (or the [RESET] switch).
   The indicators at the upper left of the [MIDI] switch and the [BEAT] switch will go off.

When the power of the XC-2000 is turned on, the settings will automatically be initialized to the settings shown above. The settings of the XC-1000 are remembered even when the power is turned off.

Changing the global MIDI channel

System Exclusive messages are transmitted and received on the Global channel. When the Data Dump operation (p.48) is performed on the XC-2000/XC-1000, the data is transmitted and received on the Global MIDI channel. Here's how to set the Global MIDI channel.

1. Hold down the [MIDI] switch, and press the [VIBES] switch.
   The indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [VIBES] switch will blink. The LED display will show the Global MIDI channel setting.
2. Press the [+/UP] or [-/DOWN] switch to set the Global MIDI channel.
3. When you have finished making the setting, press the [MIDI] switch (or the [RESET] switch).
   The indicators at the upper left of the [MIDI] switch and the [VIBES] switch will go off.

✎ *When the power is turned on, the Global MIDI channel will automatically be set to channel 1.*

Local on/off setting

With a setting of Local Off, playing the keyboard of the XC-2000/XC-1000 will cause only an external sound source connected to MIDI OUT (or TO HOST) to sound, and the internal sound source of the XC-2000/XC-1000 will not sound. You can also use a setting of Local Off to prevent notes from being sounded in duplicate by the XC-2000/XC-1000 when an external sequencer is connected with its "echo back" function turned on. Normally, you will leave this setting at Local On so that playing the keyboard will produce sound.

- Hold down the [MIDI] switch, and press the [PIANO1] switch. Each time you do so, the setting will alternate.
  While you hold down the [MIDI] switch, the indicator at the upper left of the [MIDI] switch will light, and the indicator at the upper left of the [PIANO1] switch will be either lit or off.

Setting	[PIANO1]	Comment
Local On	off	Playing the keyboard will produce sound
Local Off	lit	Playing the keyboard will not produce sound; only MIDI messages will be output

✎ *When the power is turned on, this will be set to Local On.*

Program filter settings

When MIDI messages are received from an external MIDI device (sequencer or computer) to play the tone generator of the XC-2000/XC-1000, incorrect bank numbers may cause the wrong sounds to be used. Similarly, the same problem may occur when the recorder of the XC-2000/XC-1000 or the song play function of the XC-2000 is used to transmit MIDI messages to an external MIDI device to play the external device. By changing the Program Filter settings you can avoid such problems.

- Hold down the [MIDI] switch, and press the [EFFECT] switch. Each time you do so, the setting will alternate.
  While you hold down the [MIDI] switch, the indicator at the upper left of the [MIDI] switch will light, and the two indicators at the upper left of the [EFFECT] switch will be either lit or off, depending on the setting.

CHORUS	TREMOLO	No.	When transmitted or received	When the internal tone generator is played in Song Play
off	off	1	ignore Program Change and Bank Select	ignore Bank Select
lit	off	2	ignore Bank Select	ignore Bank Select
lit	lit	3	both valid (see p.48)	both valid
lit	blinking	4	both valid (see p.48)	both valid

Normally this should be set at "3". If the sounds are not being selected correctly, try a setting of "2" or "4."

Program Change and Control Change numbers

When the above-mentioned Program Filter is set to "3" or "4," the following Program Change and Control Change messages will be transmitted and received. The numbers in parentheses ( ) are for a setting of "4."

Bank Select				
MSB	LSB	Program Change #	Sound selector	
0 (0)	4 (4)	0	PIANO1	
0 (0)	4 (4)	1	PIANO2	
0 (0)	4 (4)	2	E.PIANO	
0 (0)	4 (4)	3	HARPSI	
0 (0)	4 (4)	4	VIBES	
0 (0)	4 (4)	5	ORGAN	
0 (0)	4 (4)	6	STRINGS	
62 (0)	0 (2)	0, 16, 25, 32, 40, 64, 24, 48	DRUM KIT1, 2, 3, 4, 5, 6, 7, 8	:XC-2000 only
56 (0)	0 (0)	0~127	GM	:XC-2000 only
62 (0)	0 (0)	0~127	DRUMKIT	:XC-1000 only
56 (0)	0 (0)	32~39	BASS	:XC-1000 only

When selecting XC-2000/XC-1000 sounds from an external MIDI sequencer etc., first transmit the MSB (see table) as Control Change #0, then the LSB (see table) as Control Change #32, and finally transmit the Program Change. The operation will depend on the setting of the Program Filter (see previous page).

Control Change settings

The messages produced by the damper pedals etc. connected to the XC-2000/XC-1000 can be transmitted to external MIDI devices to control them. In the same way, messages such as Volume, Pan (stereo position), and Damper Pedal which are received from an external MIDI device can control the XC-2000/XC-1000. For a list of the Control Change messages which are transmitted and received, see page 64.

- Hold down the [MIDI] switch, and press [PIANO2]. Each time you press [PIANO2], the setting will alternate between these messages being transmitted and not transmitted.
  As long as you continue holding the [MIDI] switch, the indicator at the upper left of the [MIDI] switch will be lit, and the indicator at the upper left of the [PIANO2] switch will be either lit or off depending on the setting.

Setting	[PIANO2]	Meaning
Enabled	off	Control Changes will be transmitted and received
Disabled	lit	Control Changes will not be transmitted or received

Bank Select messages will be transmitted and received even if this setting is disabled. Be sure not to press the pedals while making this setting.

Saving musical data from the internal recorder to a data filer

Musical data recorded on the internal recorder can be saved on an external MIDI data filer (storage device). Later, this data can be transmitted back to the internal recorder and played back. This is referred to as the Data Dump procedure.

Be sure to carefully read the owner's manual for your data filer before performing this operation.

To save internal recorder data to the data filer

1. Use a MIDI cable to connect the [MIDI OUT] of the XC-2000/XC-1000 to the [MIDI IN] of an external MIDI device (data filer etc.). Alternatively, use a special cable to connect the serial port of your computer to the [TO HOST] connector of the XC-2000/XC-1000.

2. Operate the data filer so that it is waiting to receive MIDI data from the XC-2000/XC-1000.
3. Hold down the [MIDI] switch, and press the [STRINGS] switch.
   The data dump will begin, and the MIDI data will be transmitted from [MIDI OUT] to the data filer.

   While a data dump is in progress, do not touch the keyboard or switches of the XC-2000/XC-1000. The time required for a data dump will depend on the contents of the musical data.

To load data from the data filer back into the internal recorder

1. Use a MIDI cable to connect the [MIDI IN] of the XC-2000/XC-1000 to the [MIDI OUT] of the external MIDI device (data filter etc.) which will be transmitting the data dump. Alternatively, use a special cable to connect the serial port of your computer to the [TO HOST] connector of the XC-2000/XC-1000.
2. Set the Global MIDI channel of the receiving device to match the MIDI channel of the transmitting device (the Global MIDI channel that was selected when the data was transmitted to the data filter).
3. Operate the data filer so that it transmits the XC-2000/XC-1000 musical data.

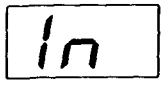
   While a data dump is in progress, do not touch the keyboard or switches of the XC-2000/XC-1000. Pedal settings (see "Pedal settings for a layer") cannot be stored on a data filer.

Synchronizing the internal recorder with an external MIDI device

The recorder of the XC-2000/XC-1000 can playback in synchronization with a MIDI rhythm machine or sequencer which is connected via MIDI.

Connect the [MIDI OUT] of the master device (the MIDI device which will be controlling the other device) to the [MIDI IN] of the slave device (the device being controlled). Alternatively, use a special cable to connect the serial port of your computer to the [TO HOST] connector of the XC-2000/XC-1000.

1. Hold down the [MIDI] switch, and press the [TEMPO] switch.
   The [TEMPO] switch indicator will blink. The LED display will show the current setting.



Internal

External

2. Press the [+/UP] or [-/DOWN] switch to select "In" if the XC-2000/XC-1000 is to be the master device, or "E" if it is to be the slave device.
3. If the XC-2000/XC-1000 is the master, press the [START/STOP] switch. For operation of the external MIDI device, refer to its owner's manual.
4. When you finish making settings, press the [MIDI] switch.
   The indicators at the upper left of the [MIDI] switch and the [TEMPO] switch will go off.

   The MIDI Clock messages (signals for synchronizing the tempo) transmitted from the XC-2000/XC-1000 follow the metronome tempo. (For Clock and other settings of the connected MIDI device, refer to its owner's manual.)

   With a setting of "E" (external), the recorder will not playback or record unless MIDI Clock messages are being received. When you press the [START/STOP] switch the LED display will show "E". This display will also appear when you press the [TEMPO] switch.

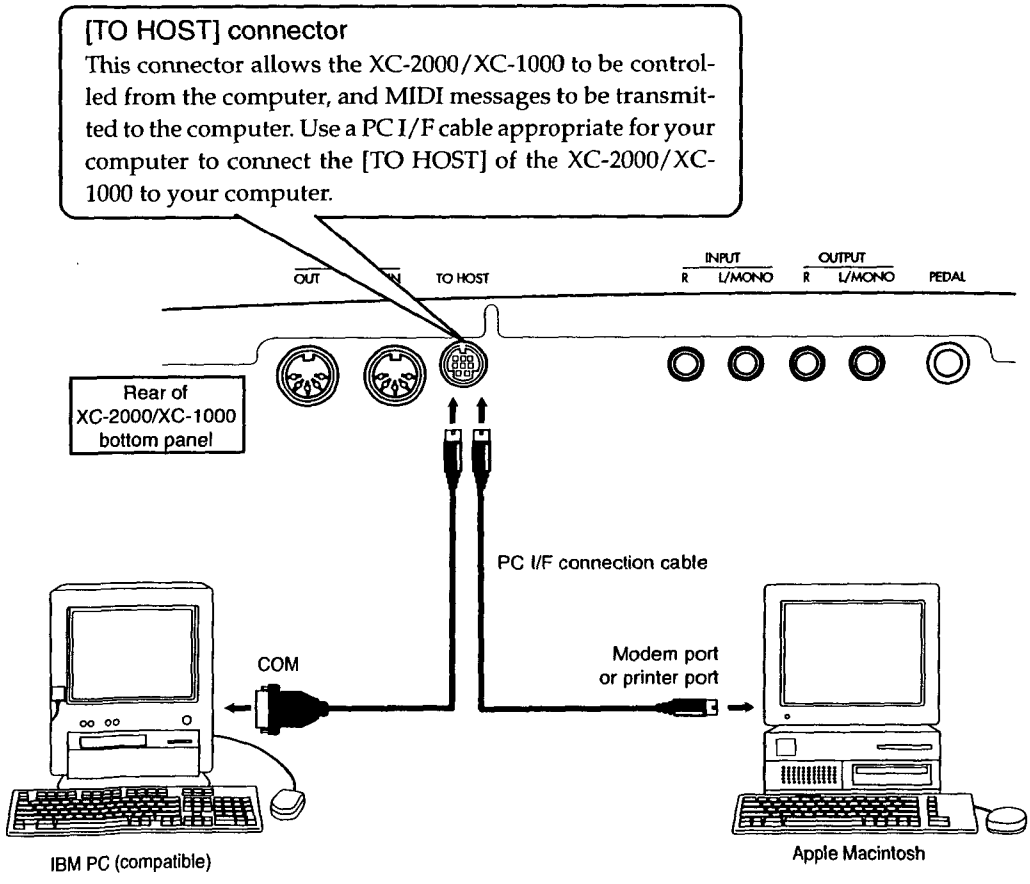
3. Connections with a computer

A special PC I/F connection cable can be used to connect the XC-2000/XC-1000 to a computer. This allows the computer to play the XC-2000/XC-1000, or keyboard playing on the XC-2000/XC-1000 to be recorded on the computer — the same operations can be done using MIDI as discussed on the previous pages.

The XC-2000/XC-1000 can be connected to the following computers using a special PC I/F connection cable.

IBM PC (compatibles):
Connection kit AG-001/AG-001A (connection cable, "Korg MIDI Driver" software) [sold separately]
However, applications which are not Windows-compatible cannot be used with this method of connection unless they specifically support the XC-2000/XC-1000.

Apple Macintosh series:
Connection kit AG-002 (connection cable, "Korg MIDI Driver" software) [sold separately]



Do not connect both the [MIDI OUT] and the [TO HOST] connectors of the XC-2000/XC-1000 to the same external device. Connect only one or the other.

Data which the XC-2000/XC-1000 receives from the computer cannot be transmitted from MIDI OUT, and data received from MIDI IN cannot be transmitted to the computer.

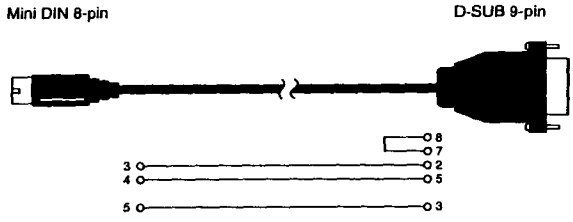
Connections with an IBM PC (compatible)

1. Use a special PC I/F cable (AG-001/AG-001A) [sold separately] to connect the serial port (COM port) of the IBM PC (compatible) to the [TO HOST] connector of the XC-2000/XC-1000.
   If the serial port of your computer uses a 25 pin connector, you will need a 9 pin — 25 pin conversion adapter [sold separately].
2. Hold down the [MIDI] switch, and press the [ORGAN] switch.
3. Press the [-/DOWN] switch to set the baud rate to "38.4" (38.4 kPBS).
4. If you are using Windows, install the KORG MIDI Driver. For installation, refer to page 55.

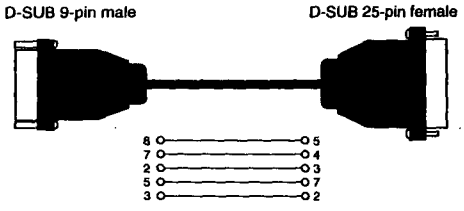
Connections with an Apple Macintosh

1. Use a special PC I/F cable (AG-002 [sold separately]) to connect the modem port or the printer port of the Apple Macintosh to the [TO HOST] connector of the XC-2000/XC-1000.
2. Hold down the [MIDI] switch, and press the [ORGAN] switch.
3. Press the [-/DOWN] switch to set the baud rate to "31.2" (31.25 kPBS).
   If you will be using the Korg MIDI Driver, refer to page 59.

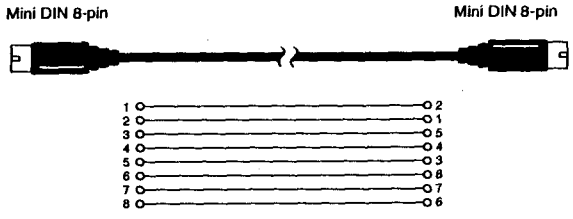
(1) AG-001/AG-001A (for IBM PC or Compatible)



(3) AG-004 (Adapter for IBM or Compatible)



(2) AG-002 (for Macintosh)

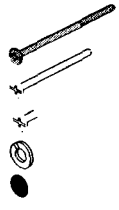


Data

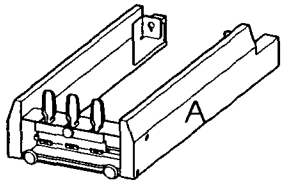
1. Assembling the ST-3000 stand (included)

- Open the carton, remove the contents, and check that all items are present.
- For assembly, you will need a Phillips (+) screwdriver.
- Assemble the stand in the sequence given by the instructions, taking care that each part is correct and in the correct orientation.
- Be sure to use two people to assemble the stand. In particular when tightening the screws to fasten large components, one person will be needed to support the component while the other person tightens the screws. Also be careful when placing the instrument upright in the course of assembly. The instrument and stand are heavy, and must be supported firmly during assembly to avoid placing undue strain on the screws or screw-holes, overturning, or causing damage or injury.

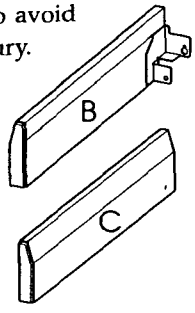
1 Long screws ..... 2 ×
2 Medium screws ..... 6 ×
3 Short screws ..... 2 ×
4 Lock washers ..... 8 ×
5 Caps ..... 6 ×



A Pedal stand 1



B Left side plate 1



C Right side plate 1

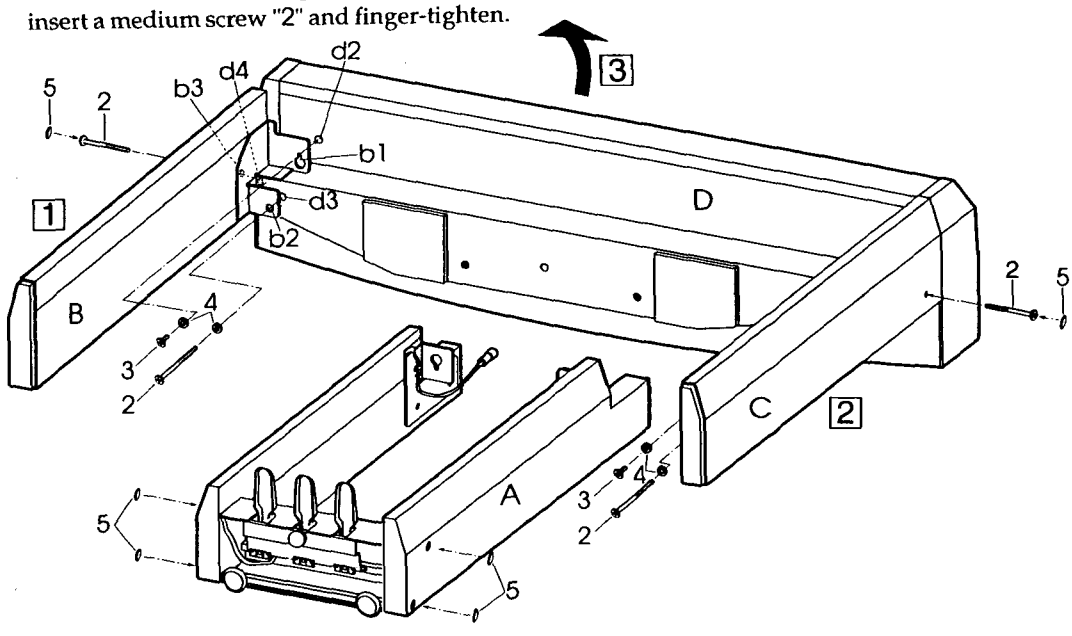
- Assembly will be easy if the instrument is placed with its back panel resting on the floor. Before you do so, spread out the sheet of packing material to prevent the floor from being scratched.

1 Attach the left side panel "B" to the piano "D."

1. Align "b1" of the inside of the left side panel with "d2" of the bottom panel of the piano, insert a short screw "3" with a lock washer "4" and finger-tighten.
2. Align "b2" of the inside of the left side panel with "d3" of the bottom panel of the piano, insert a medium screw "2" with a lock washer "4" and finger-tighten.
3. Align "b3" of the outside of the left side panel with "d4" of the bottom panel of the piano, insert a medium screw "2" and finger-tighten.
4. Make sure that all three screws are in place, and then tighten all screws as far as they will go.

2 Attach the right side panel "C" to the piano in the same way as you did for the left side panel "B."

3 Check that all steps have been completed correctly, and place the piano upright.
(Attach the caps after all screws have been completely tightened.)

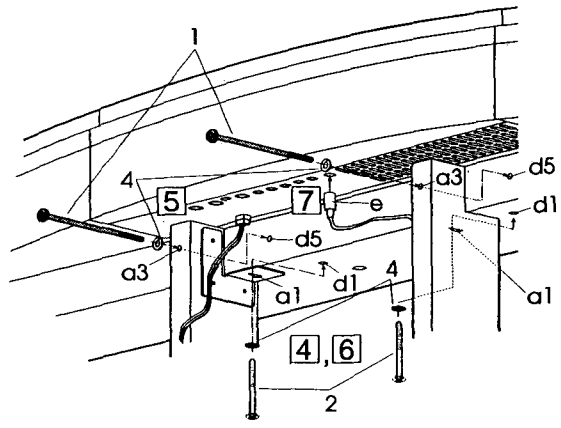


4 Align the two locations "a1" of the pedal stand "A" with the two locations "d1" of the bottom panel of the piano "D," insert medium screws "2" with lock washers "4" and finger-tighten.

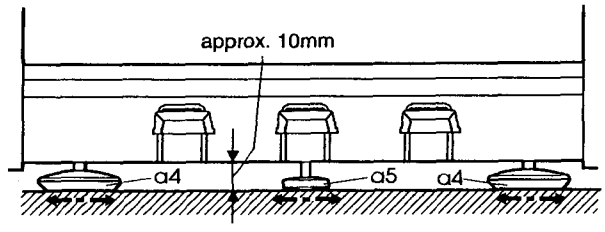
5 Align the two locations "d5" of the rear panel of the piano with the two locations "a3" of the pedal stand, insert long screws "1" with lock washers "4" and tighten.

6 Completely tighten all screws which were finger-tightened in step .

7 Insert the pedal connector "e." Point the arrow symbol of the connector toward the front of the piano, and insert it carefully.



8 Adjust the foot "a4" so that the piano is level. (If the piano is placed on a completely flat surface, there should be about 10 mm (3/8 inch) between the lower edge of the pedal stand and the floor.) Next adjust the foot "a5" located on the bottom (front) of the pedal stand until it touches the floor. Unless the three feet are adjusted correctly, rattling or vibration may appear in the sound of the instrument.



As you continue using the piano for an extended period of time, the screws in various parts of the stand may gradually loosen, causing the stand to sway. If this happens, be sure to re-tighten all screws before continuing use. Continuing to use the piano with loosened screws is very dangerous, since this can result in damage to the stand or in the stand tipping over. Likewise, re-tighten all screws before moving the piano to a different location.

When moving the piano to a different location, dragging it will scratch the floor. Be sure to use two or more people to lift the piano if it must be moved.

Using the piano with the power cable pinched under the bottom panel, pedal stand, or feet, etc. is extremely hazardous. Be very careful not to allow any heavy object to rest on the power cable.

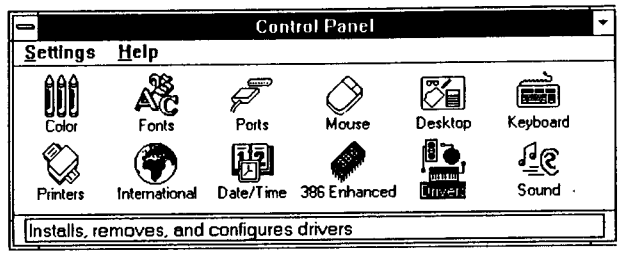
2. Korg MIDI Driver installation and setup

The "Korg MIDI Driver" software is included with the optional AG-001/AG-001A and AG-002. If the application (sequencer) you are using on your IBM PC (compatible) is compatible with Windows, using the Korg MIDI Driver will allow the XC-2000/XC-1000 connected to the serial port to be handled as a MIDI device. If the application (sequencer) you are using on your Apple Macintosh is compatible with the Apple MIDI Manager, using the Korg MIDI driver will allow the XC-2000/XC-1000 connected to the serial port to exchange data with the Macintosh.

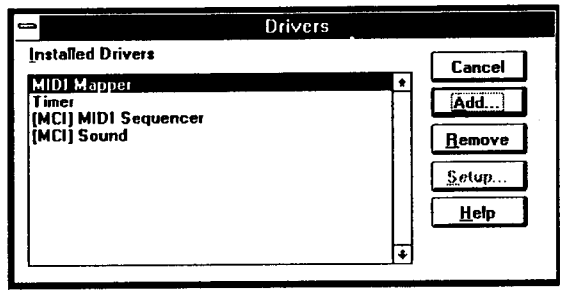
Installing the Korg MIDI Driver into Windows 3.1

If the processing speed of your computer is not fast enough, data from MIDI IN may not be received correctly.

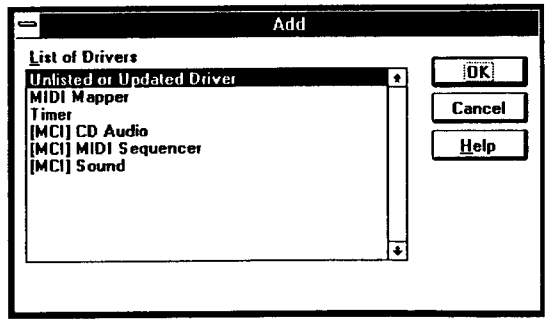
1. In the control panel, double-click the Drivers icon.



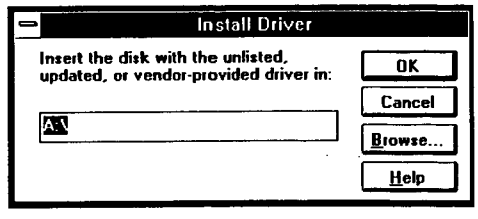
2. Click the [Add] button.



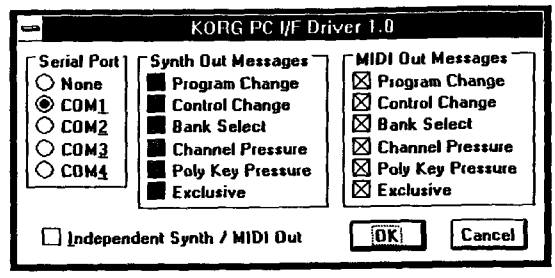
3. From the list of drivers, select [Unlisted or Updated Driver] and click the [OK] button.



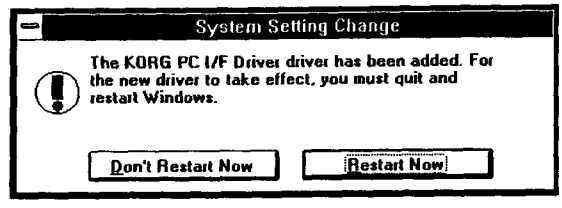
4. Insert the disk included with the AG-001/AG-001A into the floppy disk drive of your computer. If you insert it into drive A, type in "A:\" (or "B:\" if using drive B), and click the [OK] button.
(The directory "A:\PC98", on the disk included with AG-001A, is for a type of computer sold only in Japan, and cannot be used with your computer.)



5. Select Korg PC/IF Driver, and click [OK]. The setup window will appear. Now perform the setup as explained in the following section "Setting up the Korg MIDI Driver (Windows)".

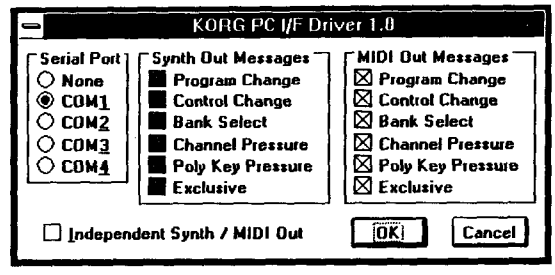


6. After setup, remove the disk and select [Restart Now] to make the driver take effect.



Setting up the Korg MIDI Driver (Windows)

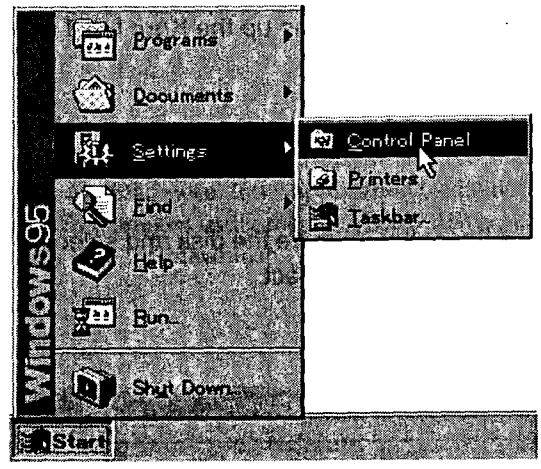
1. Double-click the driver icon located in the control panel, select [Korg PC/IF Driver], and click the set button to access the setup window.
2. Set the Serial Port setting to the serial port that is connected to the XC-2000/XC-1000 [COM1]~[COM4].
   If you wish to use the serial port for another purpose after installing the Korg MIDI Driver, either delete the driver or select [None] to defeat the driver.
3. When the XC-2000/XC-1000 is connected, [Independent Synth/ MIDI Out] is not used, so do not check this item.
   If you check it, operation will be incorrect.
4. [MIDI Out Messages] allows you to select the messages that will be transmitted to the XC-2000/XC-1000.
5. When you have finished making your selections, click the [OK] button. If you wish to cancel, click [Cancel].



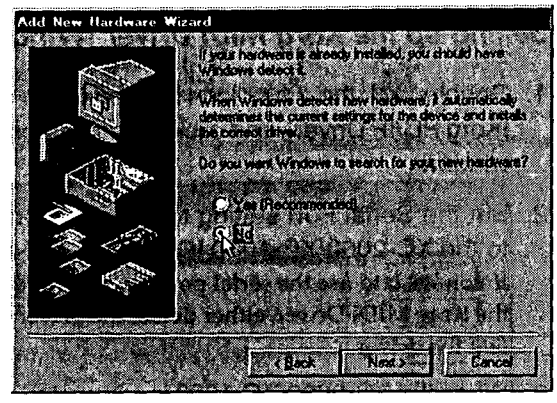
Installing the Korg MIDI Driver into Windows 95

If the processing speed of your computer is not fast enough, data from MIDI IN may not be received correctly.

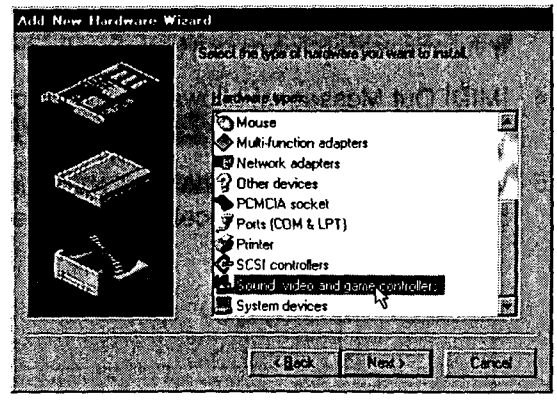
1. In the task bar, click the [Start] button. Click the [Control Panel] item located in [Settings].



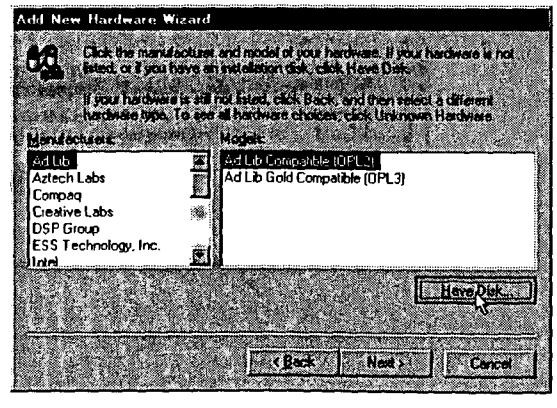
2. In the control panel, double-click the [Hardware] icon, and the hardware wizard will start up. Click the [Next >] button.
3. In reply to the question "Automatically detect new hardware?" be sure to select [No], and click the [Next >] button.



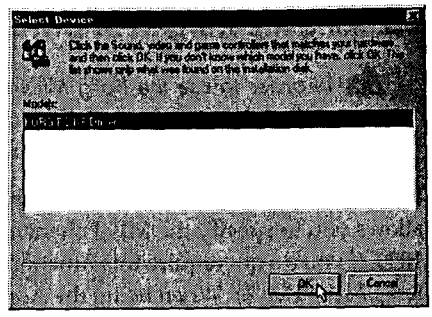
4. Select [Sound, video, and game controllers] and click the [Next >] button.



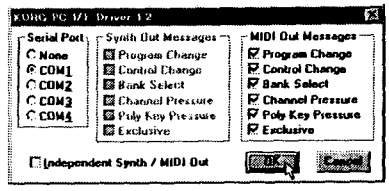
5. Click [Have Disk].
   A dialog box will appear, allowing you to specify the drive and directory.
6. Insert the floppy disk included with the AG-001/AG-001A into the floppy disk drive of your computer. If you have inserted it into drive A, type "A:\" (or "B:\" if using drive B), and click the [OK] button.
   (The directory "A:\PC98", on the disk included with AG-001A, is for a type of computer sold only in Japan, and cannot be used with your comuter.)



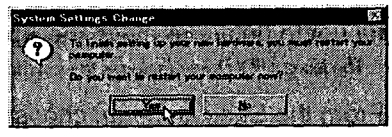
7. Click the [OK] button and then click [Finish].



8. Perform the setup following the procedure of "Setting up the Korg MIDI Driver (Windows)" (p. 55), and click the [OK] button.

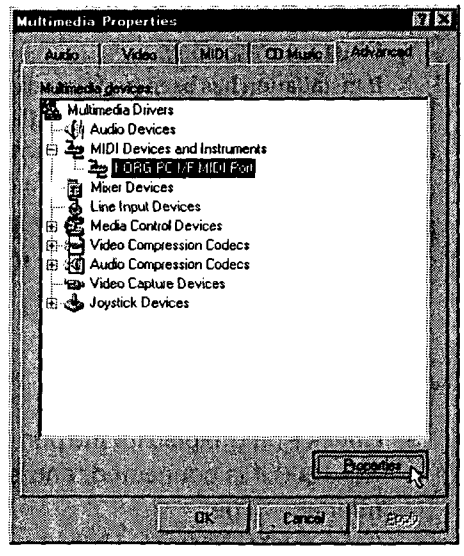


9. Be sure to restart so that the driver will take effect.

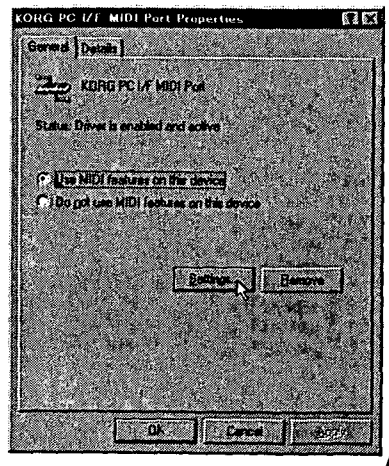


Modifying the Korg MIDI Driver setup for Windows 95

1. In the control panel, double-click the [Multimedia] icon, and the Multimedia Properties dialog box will appear.
2. Click the [Advanced] tab located in the upper right.
3. Click [+] for [MIDI Device and Instruments] (the display will change to [–]), and click [Korg PC I/F MIDI Port].
4. Click the [Properties] button.
   The properties of the Korg PC I/F MIDI Port will appear.



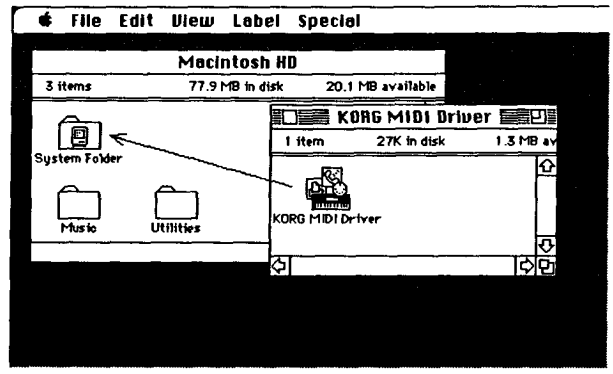
5. Click the [Settings] button.
   Follow the procedure of "Setting up the Korg MIDI Driver (Windows)" (p. 55), and click the [OK] button.
   If you have modified the settings, restart Windows.



Installing the Korg MIDI Driver into the Macintosh

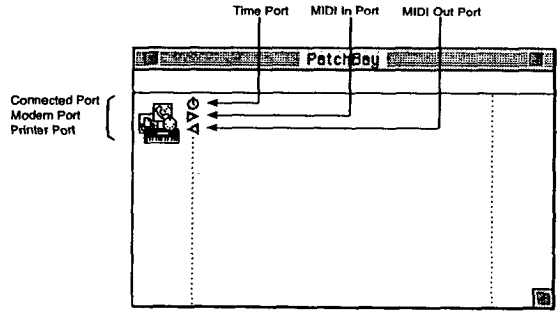
In order to use the Korg MIDI Driver, Apple MIDI Manager and PatchBay must already be installed. Use the Apple MIDI Manager and PatchBay that are included with the MIDI application that you are using. They are not included with the AG-002.

When the Korg MIDI Driver is used, the "Modem MIDI Out/Port settings" dialog box (refer to p. 59) allows you to specify the MIDI channels and types of messages that will be sent to the XC-2000/XC-1000. If you do not require this function, you can simply use the Apple MIDI Driver without using the Korg MIDI Driver. When using the Apple MIDI Driver or when using a MIDI application (sequencer) which does not use the Apple MIDI Driver, refer to p. 59.

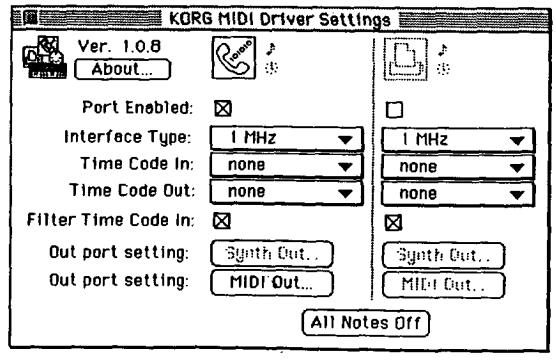


1. Copy the Korg MIDI Driver from the disk included with the AG-002 into the system folder of the start-up drive.
2. If the system folder contains the Apple MIDI Driver, either delete it or move it to another folder. Be careful not to delete or move the Apple MIDI Manager.
   * *The Korg MIDI Driver includes the functions of the Apple MIDI Driver.*
3. From the Special menu, choose "Restart."

Setting up the Korg MIDI Driver (Macintosh)

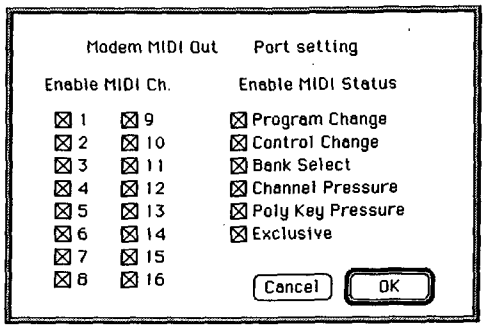


1. Start up PatchBay.
   If installation has been performed correctly, the Korg MIDI Driver icon will appear in the PatchBay window when PatchBay is started up, as shown below. (The Modem/Printer port displays may be different, depending on your setup.)
2. In PatchBay, double-click the Korg MIDI Driver icon.
   A setup dialog box will appear.



3. Check Port Enabled for the port to which the XC2000/XC-1000 if is connected, and select [1 MHz] as the Interface Type.
   (Since the XC-2000/XC-1000if does not contain a Korg PC IF, do not select [Korg PC IF].)

4. Click the [Out Port Setting] button.
   The following dialog box will appear. Here you can select the MIDI channels/messages that will be output to each port. Only the channels/messages which are checked will be output.
5. After making settings, click the [OK] button.
6. Start up your MIDI application (sequencer), and drag with the mouse from the Out Port ◁ symbol of the MIDI application to connect it to the MIDI Out of the MIDI Driver.



- *For details on using PatchBay, refer to the explanation contained in "About PatchBay..." in the " ● " menu.*

If you wish to use the Apple MIDI Driver, start up PatchBay (after first deleting or moving the Korg MIDI Driver if it is in the system folder), double-click the Apple MIDI Driver icon, check Enabled for the port to which the XC-2000/XC-1000if is connected, set the Interface Type to [1 MHz], and close the dialog box. In the PatchBay, drag with the mouse from the Out Port symbol of the MIDI application (sequencer) to connect it to MIDI Out.

If you are using a MIDI application (sequencer) which does not use the Apple MIDI Manager, select the Port to which the XC-2000/XC-1000if is connected, and set the Clock setting to [1 MHz].

About the MIDI File Translator included with the AG-002

Most commercially available Standard MIDI File (SMF) song files are saved in MS-DOS format. The MIDI File Translator included with the AG-002 is a translator program for Apple File Exchange that converts MS-DOS SMF song files into a form that Macintosh MIDI applications can recognize as SMF files.

1. Put the MIDI File Translator into the Apple File Exchange folder.
2. Double-click Apple File Exchange to start it up.
3. Insert the MS-DOS disk that you wish to convert into the floppy disk drive.
   A window such as the following will appear. Be sure to start up Apple File Exchange before inserting the MS-DOS format disk into the disk drive.
4. Select the song that you wish to convert.
5. Click the "<<Convert<<" (or ">>Convert>>") button.
   The conversion will begin. When the bar graph reaches 100% the conversion is complete. The converted file will appear in the box at the left.
6. Exit Apple File Exchange.

Using PC Exchange to convert SMF data

If Apple File Exchange is not included with your Macintosh system, you can use PC Exchange to convert MS-DOS format SMF song files so that they can be recognized by the Macintosh.

As an example, we will explain the procedure using the MIDI Player included with Korg Audio Gallery (sold separately) to open an MS-DOS SMF song file.

1. In the control panel, open PC Exchange.
   The PC Exchange control panel will appear.

2. Click the [Add...] button.
   The [Specify application for DOS extension] window will appear.

3. Input "MID" for the DOS extension item.
   MS-DOS uses a filename extension consisting of a period and three characters to distinguish different types of files. It is usual to assign an extension of ".MID" to SMF files.

4. From the list that appears in the lower part of the dialog box, select [MIDI Player v1.0.1]
   The icon selected for the application item will appear.
   Now select a MIDI application (sequencer) that can use SMF data, and that software will be able to open SMF song files.

5. From the [Document type] popup menu choose [MIDI] and click the [OK] button.

The item added to the PC Exchange window will be displayed, and has been registered.

Now you can insert an MS-DOS SMF disk into the disk drive and use it as is.

- *For details refer to the explanation of "Macintosh PC Exchange."*

3. MIDI implementation

1. TRANSMTTED DATA

1-1 CHANNEL MESSAGES

Status	Second	Third	Description		ENA
1000 nnnn	0kkk kkkk	0100 0000	Note Off kkk kkkk = 16~114		A
1001 nnnn	0kkk kkkk	0vvv vvvv	Note On kkk kkkk = 16~114 vvv vvvv = 1-127		A
1010 nnnn	0kkk kkkk	0vvv vvvv	Poly Key Pressure (Recorded Data)		C,Q
1011 nnnn	0000 0000	0mmm mmmm	Bank Select(MSB)	*1	P
1011 nnnn	0010 0000	0111 1111	Bank Select(LSB)	*1	P
1011 nnnn	0100 0000	0vvv vvvv	Damper Pedal vvv vvvv = 0-127		C
1011 nnnn	0100 0010	0000 0000	Sosutenuto Off		C
1011 nnnn	0100 0010	0111 1111	Sosutenuto On		C
1011 nnnn	0100 0011	0vvv vvvv	Soft Pedal vvv vvvv = 0-127		C
1011 nnnn	0ccc cccc	0vvv vvvv	Control Data (Recorded Data) ccc cccc = 0-127		C
1100 nnnn	0ppp pppp	---- ----	Program Change ppp pppp = 0-127	*1	P
1101 nnnn	0vvv vvvv	---- ----	Channel Pressure		C

nnnn : MIDI Channel No. (0-15)
vvvv : Value

ENA = A : Always Enabled
C : Enabled when Control Filter is ENA
P : Enabled when Program Filter is ENA
Q : Enabled when sequence ifs playing (transmiting) or recording (receiving)

*1 :	Program	: MIDI Out
XC-2000	PIANO1 - STRINGS	: mm, ll, pp = 00, 04, 00 ~ 06
	Drum1	: mm, ll, pp = 3E, 00, 00
	Drum2	: mm, ll, pp = 3E, 00, 10
	Drum3	: mm, ll, pp = 3E, 00, 19
	Drum4	: mm, ll, pp = 3E, 00, 20
	Drum5	: mm, ll, pp = 3E, 00, 28
	Drum6	: mm, ll, pp = 3E, 00, 40
	Drum7	: mm, ll, pp = 3E, 00, 18
	Drum8	: mm, ll, pp = 3E, 00, 30
	GM1 ~ GM128	: mm, ll, pp = 38, 00, 00 ~ 7F
XC-1000	PIANO1 ~ STRINGS	: mm, ll, pp = 00, 04, 00 ~ 06
	Drum1	: mm, ll, pp = 3E, 00, 00
	Bass1 ~ Bass8	: mm, ll, pp = 38, 00, 20 ~ 27

1-2 SYSTEM COMMON MESSAGES

Status	Second	Third	Description
1111 0010	0sss ssss	0ttt tttt	Song Position Pointer sss ssss : Least signifficant(LSB) *2 ttt tttt : Most signifficant(MSB) *2
1111 0011	0000 ssss	---- ----	Song Select ssss : Sont No. = 0~9

*2 : For Example Time Signature = 4/4, 8/8
tt, ss = 00, 10 / Measure

1-3 SYSTEM REALTIME MESSAGES

Status	Description	
1111 1000	Timing Clock	*3
1111 1010	Start	*3
1111 1011	Continue	*3
1111 1100	Stop	*3
1111 1110	Active Sensing	

*3 : Transmits when Recorder is playing or recording (Internal Clock)

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

Byte	Description	
1111 0000	Exclusive Status	
0111 1110	Non Realtime Message	
0000 gggg	MIDI GLOBAL CHANEL	(DEVICE ID)
0000 0110	INQUIRY MESSAGE	
0000 0010	IDENTITY REPLY	
0100 0010	KORG ID	(MANUFACTURERS ID)
0100 0011	XC-series ID	(FAMILY CODE (LSB))
0000 0000		(FAMILY CODE (MSB))
0001 iiii		(MEMBER CODE (LSB))
0000 0000		(MEMBER CODE (MSB))
0*** ****	ROM No. 1~	(Minor Ver. (LSB))
0000 0000		(Minor Ver. (MSB))
0*** ****	SOFT VER. 1~	(Major Ver. (LSB))
0000 0000		(Major Ver. (MSB))
1111 0111	END OF EXCLUSIVE	

Transmits when INQUIRY MESSAGE REQUEST Received

i iiii = 0D (XC-2000)
= 1D (XC-1000)

1-5 STRUCTURE OF KORG SYSTEM EXCLUSIVE MESSAGES

```
1st Byte = 1111 0000 : Exclusive Status
2nd Byte = 0100 0010 : KORG ID                          Ex. Header
3rd Byte = 0011 gggg : Format ID   g:Global Ch.
4th Byte = 0100 0011 : XC-series ID
5th Byte = 0fff ffff : Function Code
6th Byte = 0ddd dddd : Data
 |          |          |
LastByte = 1111 0111 : End of Exclusive ....... EOX
```

2. RECOGNIZED RECEIVE DATA

2-1 CHANNEL MESSAGES

Status	Second	Third	Description		ENA
1000 nnnn	0kkk kkkk	0xxx xxxx	Note Off		A
1001 nnnn	0kkk kkkk	0000 0000	Note Off		A
1001 nnnn	0kkk kkkk	0vvv vvvv	Note On vvv vvvv = 1~127		A
1010 nnnn	0kkk kkkk	0vvv vvvv	Poly Key Pressure (for Seq. rec)		C,Q
1011 nnnn	0000 0000	0mmm mmmm	Bank Select(MSB)	*1	P
1011 nnnn	0000 0001	0vvv vvvv	Modulation1 Depth (Pitch Modulation)		C
1011 nnnn	0000 0010	0vvv vvvv	Modulation2 Depth (CutOff Modulation)		C
1011 nnnn	0000 0110	0vvv vvvv	Data Entry(MSB)		C
1011 nnnn	0000 0111	0vvv vvvv	Volume vvv vvvv = 0~127		C
1011 nnnn	0010 0000	0111 1111	Bank Select(LSB)	*1	P
1011 nnnn	0010 0110	0vvv vvvv	Data Entry(LSB)		C
1011 nnnn	0100 0000	0vvv vvvv	Damper Pedal vvv vvvv = 0~127		C
1011 nnnn	0100 0010	00xx xxxx	Sosutenuto Off		C
1011 nnnn	0100 0010	01xx xxxx	Sosutenuto On		C
1011 nnnn	0100 0011	0vvv vvvv	Soft Pedal vvv vvvv = 0~127		C
1011 nnnn	0100 1000	0vvv vvvv	Release Time	*4	C
1011 nnnn	0100 1001	0vvv vvvv	Attack Time	*4	C
1011 gggg	0101 1100	0000 0000	Effect1 OFF		C
1011 gggg	0101 1100	0xxx xxxx	Effect1 ON		C
1011 gggg	0101 1110	0000 0000	Effect2 OFF		C
1011 gggg	0101 1110	0xxx xxxx	Effect2 ON		C
1011 nnnn	0110 0100	0000 00rr	RPN Parameter No.(LSB)	*3	A
1011 nnnn	0110 0101	0000 0000	RPN Parameter No.(MSB)	*3	A
1011 nnnn	0111 1000	0000 0000	All Sound Off		C
1011 nnnn	0111 1001	0000 0000	Reset All Controllers		C
1011 nnnn	0111 1010	0000 0000	Local Control Off		A
1011 nnnn	0111 1010	0111 1111	Local Control On		A
1011 nnnn	0111 1011	0000 0000	All Notes Off		A
1011 nnnn	0111 110x	0000 0000	Omni Mode Off/On (All Notes Off)		A
1011 nnnn	0111 1110	000m mmmm	Mono Mode On (All Notes Off) mmmm = 0~16		A
1011 nnnn	0111 1111	0000 0000	Poly Mode On (All Notes Off)		A
1100 nnnn	0ppp pppp	— —	Program Change	*1,*2	P
1101 nnnn	0vvv vvvv	— —	Channel Pressure		C
1110 nnnn	0bbb bbbb	0bbb bbbb	Bender Change		C

```
gggg     : Global Channel
xxx xxxx : random (>0)

 *1 :                MIDI In          : Program
     XC-2000
     mm, ll, pp  = 00, 04, 00 ~ 06    : PIANO1 ~ STRINGS
                 = 38, 00, 00 ~ 7F    : GM1 ~ GM128
                 = 3E, 00, 00         : Drum1
                 = 3E, 00, 10         : Drum2
                 = 3E, 00, 19         : Drum3
                 = 3E, 00, 20         : Drum4
                 = 3E, 00, 28         : Drum5
                 = 3E, 00, 40         : Drum6
                 = 3E, 00, 18         : Drum7
                 = 3E, 00, 30         : Drum8
     XC-1000
                 = 00, 04, 00 ~ 06    : PIANO1 ~ STRINGS
                 = 38, 00, 20 ~ 27    : Bass1 ~ Bass8
                 = 3E, 00, 00         : Drum1

 *2 : After processing (while Exclusive = ENA)
      transmits exclusive message
     [DATA LOAD COMPLETED] or [DATA LOAD ERROR].

 *3 : rr = 0 : Pitch Bend Sensitivity
         = 1 : Fine Tune
         = 2 : Coarse Tune

 *4 : vv < 40 : Fast
         = 40 : No change
         > 40 : Slow
```

2-2 SYSTEM COMMON MESSAGES

Status	Second	Third	Description
1111 0010	0sss ssss	0ttt tttt	Song Position Pointer
1111 0011	000s ssss	---- ----	Song Select

Received when in SONG mode (External Clock)

2-3 SYSTEM REALTIME MESSAGES

Status	Description	
1111 1000	Timing Clock	*5
1111 1010	Start	*5
1111 1011	Continue	*5
1111 1100	Stop	*5
1111 1110	Active Sensing	*5

*5 Received when in SONG mode (External Clock)

2-4 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)

Byte	Description	
1111 0000	EXCLUSIVE STATUS	
0111 1110	NON REALTIME MESSAGE	
0ggg gggg	MIDI CHANNEL	*6
0000 aaaa	SUB ID 1	*7
0000 00bb	SUB ID 2	*7
1111 0111	END OF EXCLUSIVE	

```
*6 : gg = 0-F   : Received if Global Channel
        = 7F    : Received on any Channel
*7 : a, b = 06, 01 : INQUIRY MESSAGE REQUEST
            09, 01 : GENERAL MIDI MODE ON
          (Received anytime except when Seq playing/recording)
```

2-5 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (REALTIME)

Byte	Description	
1111 0000	EXCLUSIVE STATUS	
0111 1111	REALTIME MESSAGE	
0ggg gggg	MIDI CHANNEL	*6
0000 0100	SUB ID 1	
0000 00bb	SUB ID 2	*8
0vvv vvvv	VALUE(LSB)	*8
0mmm mmmm	VALUE(MSB)	*8
1111 0111	END OF EXCLUSIVE	

```
*8 : b= 01: MASTER VOLUME  (mm, vv = 00,00 ~ 7F, 7F : Min ~ Max)
     = 02: MASTER BALANCE
           (mm, vv = 0, 00 ~ 40, 00 ~ 7F, 7F : L ~ Center ~ R)
```

3. MIDI EXCLUSIVE FORMAT (R:Receive, T:Transmit)

ALL SONG DATA DUMP

Byte	Description
F0, 42, 3g, 43	EXCLUSIVE HEADER
0100 1000	ALL SONG DATA DUMP
0sss ssss	Seq. Data Size
|	|
0ddd dddd	Control Data
|	|
0ddd dddd	Sequence Data
|	|
1111 0111	EOX

[Digital piano]

XC-2000/XC-1000

MIDI Implementation Chart

Function ...		Transmitted	Recognized	Remarks
Basic channel	Default Changed	1 1~16	1 1~16	
Mode	Default Messages Altered	 ×	3 ×	
Note number :	True voice	16~114	0~127 0~108	0~127 when transmitting recorder data 0~127 received for some sounds
Velocity	Note ON Note OFF	1~127 ×	1~127 ×	2~126 when transmitting recorder data
After Touch	Polyphonic Channel	× ×	○ ○	Polyphonic for recorder data only
Pitch Bender		×	○	*C
Control Change	0,32	○	○	Bank Select *P
	1,2	×	○	Modulation *C
	6,38	×	○	Data Entry
	7	○	○	Volume *C
	10	×	○	Panpot *C, *3
	11	×	○	Expression *C
	64	○ 0~127	○ 0~127	Damper Pedal *C
	66	○	○	Sostenuto Pedal *C
	67	○ 0~127	○ 0~127	Soft Pedal *C
	72,73	×	○	EG Time *C
	92,94	×	○	Effect 1,2 ON/OFF *C
	100,101	×	○	RPN *2
	120,121	×	○	All Sound Off, Reset All Controller
	0~101	○	○	(sequence data)
Program Change :	True#	○ 0~127 **********	○ 0~127	*P
System Exclusive		○	○	Device Inquiry Sequence Data Dump
System Common	: Song Pos	○	○	*1
	: Song Sel	○ 0~9	○ 0~9	*1
	: Tune	×	×	
System Realtime	: Clock	○	○	*1
	: Commands	○	○	*1
Aux Messages	: Local ON/OFF	×	○	
	: All Notes OFF	×	○ 123~127	
	: Active Sense	○	○	
	: Reset	×	×	
Notes		*C:Received (transmitted) when Control Changes are enabled. *P: Received (transmitted) when Program Changes are enabled. *1: Transmitted and not received when Clock is Internal. The opposite when Clock is External. *2: LSB,MSB=00,00: Pitch Bend Range, =01,00: Fine Tune, =02,00: Coarse Tune *3: Except for [PIANO1], [PIANO2], and [GM] "001."		

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

○ : Yes
× : No

4. Sound group list

[GM] sound list (XC-2000 only)

[Piano]
1 Piano
2 BritePiano
*3 HammerPno
*4 HonkeyTonk
5 New Tines
6 Digi Piano
7 Harpsicord
8 Clav

[Percussion]
9 Celesta
10 Glocken
11 Music Box
12 Vibes
13 Marimba
14 Xylophon
15 Tubular
16 Santur

[Organ]
17 Full Organ
*18 Perc Organ
19 BX-3 Organ
20 ChurchPipe
21 Positive
22 Musette
23 Harmonica
24 Tango

[Guitar]
25 ClassicGtr
26 A.Guitar
27 JazzGuitar
28 Clean Gtr
29 MuteGuitar
30 Over Drive
31 DistGuitar
*32 RockMonics

[Bass]
33 Jazz Bass
34 Deep Bass
35 Pick Bass
36 Fretless
37 SlapBass 1
38 SlapBass 2
*39 SynthBass1
40 SynthBass2

[Strings]
41 Violin
42 Viola
43 Cello
44 ContraBass
45 TremoloStr
46 Pizzicato
47 Harp
48 Timpani

[Ensemble]
49 Marcato
50 SlowString
*51 Analog Pad
52 String Pad
53 Choir
54 Doo Voice
55 Voices
56 Orch Hit

[Brass]
57 Trumpet
58 Trombone 1
59 Tuba
60 Muted Trpt
*61 FrenchHorn
62 Brass
*63 SynBrass 1
*64 SynBrass 2

[Reed]
65 SopranoSax
66 Alto Sax
67 Tenor Sax
68 Bari Sax
69 Sweet Oboe
70 EnglishHrn
71 BasoonOboe
72 Clarinet

[Pipe]
73 Piccolo
74 Flute
75 Recorder
76 Pan Flute
77 Bottle
78 Shakuhachi
79 Whistle
80 Ocarina

[Synth Lead]
*81 SquareWave
*82 Saw Wave
*83 SynCaliope
*84 Syn Chiff
*85 Charang
*86 AirChorus
*87 Rezzo4ths
*88 Bass&Lead

[Synth Pad]
*89 Fantasia
90 Warm Pad
*91 Poly Pad
92 Ghost Pad
*93 BowedGlas
*94 Metal Pad
*95 Halo Pad
96 Sweep

[SynthEffects]
*97 Ice Rain
*98 SoundTrack
*99 Crystal
*100 Atmosphere
*101 Brightness
*102 Goblin
103 Echo Drop
*104 Star Theme

[Ethnic]
*105 Sitar
106 Banjoe
107 Shamisen
108 Koto
109 Kalimba
*110 Scotland
*111 Fiddle
112 Shanai

[Percussive]
113 Metal Bell
114 Agogo
115 SteelDrums
116 Woodblock
*117 Taiko
118 Tom
119 Synth Tom
120 Rev Cymbal

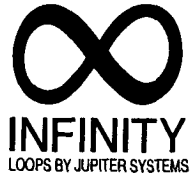
[Sound Effects]
121 Fret Noise
122 NoiseChiff
*123 Seashore
*124 Birds
*125 Telephone
*126 Helicopter
*127 Stadium!!
128 GunShot

[BASS] sound list (XC-1000 only)

01 Jazz Bass
02 Deep Bass
03 Pick Bass
04 Fretless
05 SlapBass 1
06 SlapBass 2
*07 SynthBass1
08 SynthBass2

When a sound marked by * is selected, the maximum number of simultaneous notes will be 16.

[PIANO1], [PIANO2] and [GM] "001" sounds processed by Infinity™.



[DRUM KIT] map

Key	PC#	1. GM Kit	Ex. asn	2. Power Kit	Ex. asn	3. Analog Kit	Ex. asn	4. Jazz Kit	Ex. asn
A0	21	↓	↓	↓	↓	↓	↓	↓	↓
	22	↓	↓	↓	↓	↓	↓	↓	↓
	23	↓	↓	↓	↓	↓	↓	↓	↓
C1	24	↓	↓	↓	↓	↓	↓	↓	↓
	25	↓	↓	↓	↓	↓	↓	↓	↓
	26	↓	↓	↓	↓	↓	↓	↓	↓
	27	↓	↓	↓	↓	↓	↓	↓	↓
	28	Rock Kick	Off	Ambi.Kick	Off	Syn Kick 3	Off	CrispKick	Off
	29	Snare 3	Group6	Rock Snare	Off	Syn Snare2	Off	Snare 4	Group6
	30	Open HHS	Group1	Open HHS	Group1	Open SynHHS	Group1	Open HHS	Group1
	31	Fat Kick	Off	Gated Kik	Off	Dance Kick	Off	Ambi.Kick	Off
	32	Timbale-Paila	Off	Timbale-Paila	Off	Timbale-Paila	Off	Timbale-Paila	Off
	33	Snare 1	Group6	TightSnare	Off	Ambi.Snare	Off	RollSnare2	Group6
	34	RollSnare1	Group6	Rev Snare	Off	Rev Snare	Off	RollSnare1	Group6
	35	Real Kick	Off	Gated Kik	Off	Crisp Kick	Off	Punch Kick	Off
C2	36	ProcesKick	Off	Metal Kick	Off	Syn Kick 1	Off	Rock Kick	Off
	37	Side Stick	Off	Side Stick	Off	Syn Rim	Off	Side Stick	Off
	38	Rock Snare	Group6	PowerSnare	Off	Syn Snare1	Off	Soft Snare	Group6
	39	Hand Claps	Off	Hand Claps	Off	Syn Claps	Off	Hand Claps	Off
	40	LightSnare	Group6	GatedSnare	Off	LightSnare	Off	Snare 2	Group6
	41	Tom Lo	Off	ProcessTom	Off	SynTom1 Lo	Off	Tom Lo	Off
	42	Tite HH	Group1	Tite HH	Group1	CloseSynHH	Group1	Tite HH	Group1
	43	Tom Lo	Off	ProcessTom	Off	SynTom1 Lo	Off	Tom Lo	Off
	44	Pedal HH	Group1	Pedal HH	Group1	CloseSynHH	Group1	Pedal HH	Group1
	45	Tom Lo	Off	ProcessTom	Off	SynTom1 Lo	Off	Tom Lo	Off
	46	Open HHL	Group1	Open HHL	Group1	Open SynHHL	Group1	Open HHL	Group1
	47	Tom Hi	Off	ProcessTom	Off	SynTom1 Lo	Off	Tom Hi	Off
C3	48	Tom Hi	Off	ProcessTom	Off	SynTom1 Lo	Off	Tom Hi	Off
	49	Crash Cym	Off	Crash Cym	Off	Open SynHH	Off	Crash Cym	Off
	50	Tom Hi	Off	ProcessTom	Off	SynTom1 Lo	Off	Tom Hi	Off
	51	Ride Edge	Off	Ride Edge	Off	Ride Edge	Off	Ride Cym 2	Off
	52	China Cym	Off	China Cym	Off	China Cym	Off	China Cym	Off
	53	Ride Cup	Off	Ride Cup	Off	Ride Cup	Off	Ride Cym 1	Off
	54	Tambourine	Off	Tambourine	Off	Tambourine	Off	Tambourine	Off
	55	Splash Cym	Off	Splash Cym	Off	Splash Cym	Off	Splash Cym	Off
	56	Cowbell	Off	Cowbell	Off	SynCowbell	Off	Cowbell	Off
	57	Crash Cym	Off	Crash Cym	Off	Crash Cym	Off	Crash Cym	Off
	58	Vibraslap	Off	Vibraslap	Off	Vibraslap	Off	Vibraslap	Off
	59	Ride Cym 1	Off	Ride Cym 1	Off	Ride Cym 1	Off	Ride Edge	Off
C4	60	Hi Bongo	Off	Hi Bongo	Off	Hi Bongo	Off	Hi Bongo	Off
	61	Lo Bongo	Off	Lo Bongo	Off	Lo Bongo	Off	Lo Bongo	Off
	62	Mute Conga	Off	Mute Conga	Off	SynTom1 Hi	Off	Mute Conga	Off
	63	Open Conga	Off	Open Conga	Off	SynTom1 Hi	Off	Open Conga	Off
	64	Open Conga	Off	Open Conga	Off	SynTom1 Hi	Off	Open Conga	Off
	65	Hi Timbale	Off	Hi Timbale	Off	Hi Timbale	Off	Hi Timbale	Off
	66	Lo Timbale	Off	Lo Timbale	Off	Lo Timbale	Off	Lo Timbale	Off
	67	Agogo	Off	Agogo	Off	Agogo	Off	Agogo	Off
	68	Agogo	Off	Agogo	Off	Agogo	Off	Agogo	Off
	69	Cabasa	Off	Cabasa	Off	Cabasa	Off	Cabasa	Off
	70	Maracas	Off	Maracas	Off	SynMaracas	Off	Maracas	Off
	71	Whistle S	Group2	Whistle S	Group2	Whistle S	Group2	Whistle S	Group2
C5	72	Whistle L	Group2	Whistle L	Group2	Whistle L	Group2	Whistle L	Group2
	73	Guiro S	Group3	Guiro S	Group3	Guiro S	Group3	Guiro S	Group3
	74	Guiro L	Group3	Guiro L	Group3	Guiro L	Group3	Guiro L	Group3
	75	Claves	Off	Claves	Off	Syn Claves	Off	Claves	Off
	76	WoodBlock2	Off	WoodBlock2	Off	WoodBlock2	Off	WoodBlock2	Off
	77	WoodBlock3	Off	WoodBlock3	Off	WoodBlock3	Off	WoodBlock3	Off
	78	Hi Cuica	Group4	Hi Cuica	Group4	Hi Cuica	Group4	Hi Cuica	Group4
	79	Lo Cuica	Group4	Lo Cuica	Group4	Lo Cuica	Group4	Lo Cuica	Group4
	80	MuteTriang	Group5	MuteTriang	Group5	MuteTriang	Group5	MuteTriang	Group5
	81	OpenTriang	Group5	OpenTriang	Group5	OpenTriang	Group5	OpenTriang	Group5
	82	Cabasa	Off	Cabasa	Off	Cabasa	Off	Cabasa	Off
	83	JingleBell	Off	JingleBell	Off	JingleBell	Off	JingleBell	Off
C6	84	Bell Tree	Off	Bell Tree	Off	Bell Tree	Off	Bell Tree	Off
	85	Castanet	Off	Castanet	Off	Castanet	Off	Castanet	Off
	86	Side Stick	Off	Side Stick	Off	Side Stick	Off	Side Stick	Off
	87	Taiko Lo	Off	Taiko Lo	Off	Taiko Lo	Off	Taiko Lo	Off
	88	–	–	–	–	–	–	–	–
	89	–	–	–	–	–	–	–	–
	90	–	–	–	–	–	–	–	–
	91	–	–	–	–	–	–	–	–
	92	–	–	–	–	–	–	–	–
	93	–	–	–	–	–	–	–	–
	94	–	–	–	–	–	–	–	–
	95	–	–	–	–	–	–	–	–
C7	96	–	–	–	–	–	–	–	–
	97	–	–	–	–	–	–	–	–
	98	–	–	–	–	–	–	–	–
	99	–	–	–	–	–	–	–	–
	100	–	–	–	–	–	–	–	–
	101	–	–	–	–	–	–	–	–
	102	–	–	–	–	–	–	–	–
	103	–	–	–	–	–	–	–	–
	104	–	–	–	–	–	–	–	–
	105	–	–	–	–	–	–	–	–
	106	–	–	–	–	–	–	–	–
	107	–	–	–	–	–	–	–	–
C8	108	–	–	–	–	–	–	–	–

[DRUM KIT] on the XC-1000 is "1. GM Kit." Key: MIDI note number.
PC#: Program number and program name. Ex.asn: Sounded as mono within the same group (example: Tight Hi-Hat and Open Hi-Hat). ↓: same content as sound indicated by the arrow
–: not sounded. Keys 35–81 of 1 GM Kit are the sounds specified by GM.

Key	PC#	5. Brush Kit	Ex. asn	6. Perc Kit	Ex. asn	7. Dance Kit	Ex. asn	8. Orch Kit	Ex. asn
A0	21	↓	↓	↓	↓	↓	↓	↓	↓
	22	↓	↓	↓	↓	↓	↓	↓	↓
	23	↓	↓	↓	↓	↓	↓	↓	↓
C1	24	↓	↓	↓	↓	↓	↓	↓	↓
	25	↓	↓	↓	↓	↓	↓	↓	↓
	26	↓	↓	↓	↓	↓	↓	↓	↓
	27	↓	↓	↓	↓	↓	↓	↓	↓
	28	Crisp Kick	Off	Hi Bongo	Off	Crisp Kick	Off	Pedal HH	Group1
	29	FingerSnap	Group6	Lo Bongo	Off	PicloSnare	Off	Open HH	Group1
	30	Open HHS	Group1	Tambourine	Off	Open HHS	Group1	Ride Edge	Off
	31	Ambi.Kick	Off	Agogo	Off	Syn Kick 2	Off	↓↔	↓↔
	32	Timbale-Paila	Off	VocalSnr 1	Off	Side Stick	Off	↓↔	↓↔
	33	Brush Slap	Group6	Agogo	Off	TightSnare	Off	↓↔	↓↔
	34	RollSnare1	Group6	Slap Bongo	Off	Rev Snare	Off	↓↔	↓↔
	35	Punch Kick	Off	WoodBlock3	Off	Ambi.Kick	Off	Real Kick	Off
C2	36	Rock Kick	Off	Claves	Off	Dance Kick	Off	Orch B.Drm	Off
	37	Side Stick	Off	WoodBlock2	Off	Side Stick	Off	Side Stick	Off
	38	Brush Tap	Group6	Cowbell	Off	Syn Snare2	Off	RollSnare2	Off
	39	Brush Slap	Off	WoodBlock1	Off	Hand Claps	Off	Castanet	Off
	40	BrushSwish	Off	Castanet	Off	Ambi.Snare	Off	RollSnare2	Off
	41	Brush Tom	Off	Baya 2	Off	ProcessTom	Off	↓↔	↓↔
	42	Tite HH	Group1	Cabasa	Off	Tite HH	Group1	↓↔	↓↔
	43	Brush Tom	Off	Baya 1	Off	ProcessTom	Off	↓↔	↓↔
	44	Pedal HH	Group1	Maracas	Off	Pedal HH	Group1	↓↔	↓↔
	45	Brush Tom	Off	Baya 2	Off	ProcessTom	Off	↓↔	↓↔
	46	Open HHL	Group1	Cabasa	Off	Open HHL	Group1	↓↔	↓↔
	47	Brush Tom	Off	Tabla 3	Group1	ProcessTom	Off	↓↔	↓↔
C3	48	Brush Tom	Off	Tabla 2	Group1	ProcessTom	Off	↓↔	↓↔
	49	Crash Cym	Off	Vibraslap	Off	Crash Cym	Off	↓↔	↓↔
	50	Brush Tom	Off	Tabla 1	Group1	ProcessTom	Off	↓↔	↓↔
	51	Ride Cym 2	Off	MuteTriang	Group3	Ride Edge	Off	↓↔	↓↔
	52	China Cym	Off	Orch B.Drm	Off	China Cym	Off	↓↔	↓↔
	53	Ride Cym 1	Off	OpenTriang	Group3	Ride Cup	Off	Timpani	Off
	54	Tambourine	Off	Guiro S	Group2	Tambourine	Off	Tambourine	Off
	55	Splash Cym	Off	JingleBell	Off	Splash Cym	Off	Splash Cym	Off
	56	Cowbell	Off	Guiro L	Group2	Cowbell	Off	Cowbell	Off
	57	Crash Cym	Off	Bell Tree	Off	Crash Cym	Off	Crash Cym	Off
	58	Vibraslap	Off	Thing	Off	Vibraslap	Off	Vibraslap	Off
	59	Ride Edge	Off	Maracas	Off	Ride Edge	Off	Orch Crash	Off
C4	60	Hi Bongo	Off	Hand Claps	Off	Hi Bongo	Off	Hi Bongo	Off
	61	Lo Bongo	Off	Syn Claps	Off	Lo Bongo	Off	Lo Bongo	Off
	62	Mute Conga	Off	Scratch Lo	Off	Mute Conga	Off	Mute Conga	Off
	63	Open Conga	Off	Scratch Hi	Off	Open Conga	Off	Open Conga	Off
	64	Open Conga	Off	ScratchDbl	Off	Open Conga	Off	Open Conga	Off
	65	Hi Timbale	Off	Whistle S	Group4	Hi Timbale	Off	Hi Timbale	Off
	66	Lo Timbale	Off	Whistle L	Group4	Lo Timbale	Off	Lo Timbale	Off
	67	Agogo	Off	Slap Conga	Off	Agogo	Off	Agogo	Off
	68	Agogo	Off	Mute Conga	Off	Agogo	Off	Agogo	Off
	69	Cabasa	Off	Open Conga	Off	Cabasa	Off	Cabasa	Off
	70	Maracas	Off	Open Conga	Off	Maracas	Off	Maracas	Off
	71	Whistle S	Group2	Mute Cuica	Off	Whistle S	Group2	Whistle S	Group2
C5	72	Whistle L	Group2	Open Cuica	Off	Whistle L	Group2	Whistle L	Group2
	73	Guiro S	Group3	P-Timbale	Off	Guiro S	Group3	Guiro S	Group3
	74	Guiro L	Group3	R-Timbale	Off	Guiro L	Group3	Guiro L	Group3
	75	Claves	Off	Hi Timbale	Off	Claves	Off	Claves	Off
	76	WoodBlock2	Off	Lo Timbale	Off	WoodBlock2	Off	WoodBlock2	Off
	77	WoodBlock3	Off	Syn Claves	Off	WoodBlock3	Off	WoodBlock3	Off
	78	Hi Cuica	Group4	SynCowbell	Off	Hi Cuica	Group4	Hi Cuica	Group4
	79	Lo Cuica	Group4	FingerSnap	Off	Lo Cuica	Group4	Lo Cuica	Group4
	80	MuteTriang	Group5	Taiko Hi	Off	MuteTriang	Group5	MuteTriang	Group5
	81	OpenTriang	Group5	Taiko Lo	Off	OpenTriang	Group5	OpenTriang	Group5
	82	Cabasa	Off	Zap 2	Off	Cabasa	Off	Cabasa	Off
	83	JingleBell	Off	RollSnare1	Group5	JingleBell	Off	JingleBell	Off
C6	84	Bell Tree	Off	RollSnare2	Group5	Bell Tree	Off	Bell Tree	Off
	85	Castanet	Off	Orch Crash	Group6	Castanet	Off	Castanet	Off
	86	Side Stick	Off	Orch Crash	Group6	Side Stick	Off	Side Stick	Off
	87	Taiko Lo	Off	↓	↓	Taiko Lo	Off	Taiko Lo	Off
	88	–	–	↓	↓	–	–	–	–
	89	–	–	↓	↓	–	–	–	–
	90	–	–	↓	↓	–	–	–	–
	91	–	–	↓	↓	–	–	–	–
	92	–	–	↓	↓	–	–	–	–
	93	–	–	↓	↓	–	–	–	–
	94	–	–	↓	↓	–	–	–	–
	95	–	–	↓	↓	–	–	–	–
C7	96	–	–	↓	↓	–	–	–	–
	97	–	–	↓	↓	–	–	–	–
	98	–	–	↓	↓	–	–	–	–
	99	–	–	↓	↓	–	–	–	–
	100	–	–	↓	↓	–	–	–	–
	101	–	–	↓	↓	–	–	–	–
	102	–	–	↓	↓	–	–	–	–
	103	–	–	↓	↓	–	–	–	–
	104	–	–	↓	↓	–	–	–	–
	105	–	–	Orch Hit	Off	–	–	–	–
	106	–	–	–	–	–	–	–	–
	107	–	–	–	–	–	–	–	–
C8	108	–	–	–	–	–	–	–	–

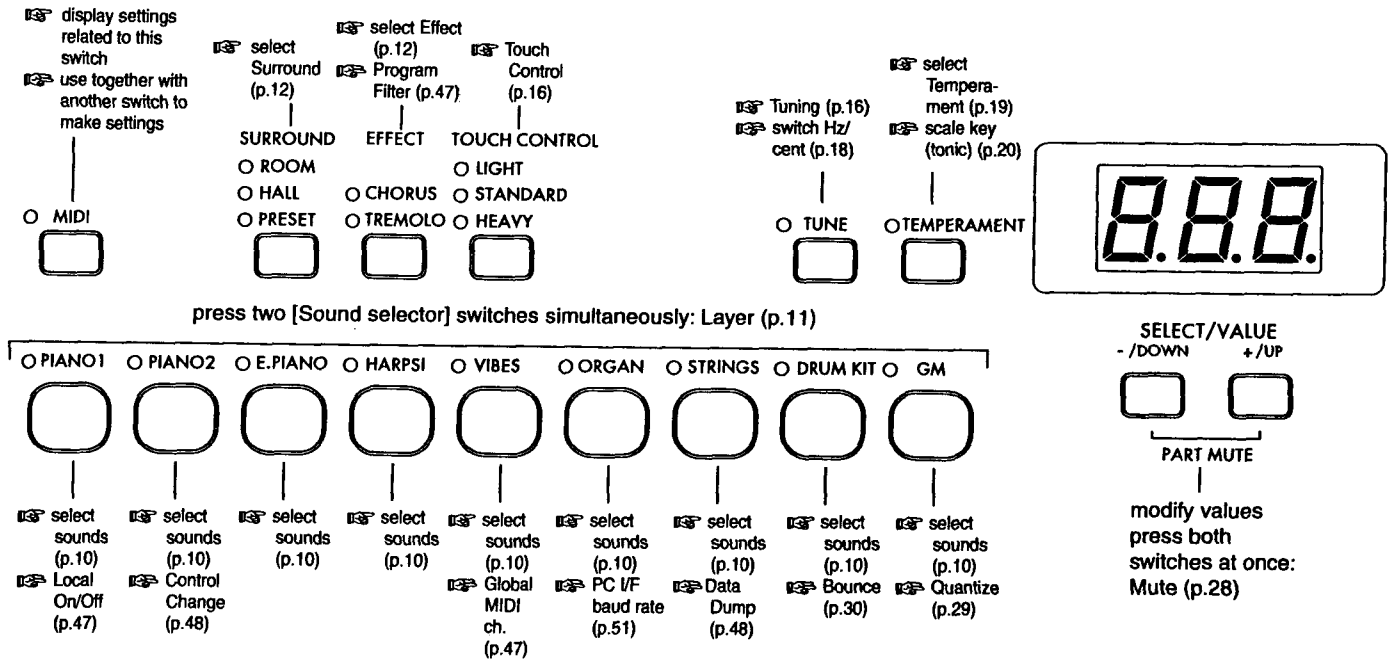
[DRUM KIT] on the XC-1000 is "1. GM Kit." Key: MIDI note number.
PC#: Program number and program name. Ex.asn: Sounded as mono within the same group (example: Tight Hi-Hat and Open Hi-Hat). ↓: same content as sound indicated by the arrow
-: not sounded. Keys 35~81 of 1.GM Kit are the sounds specified by GM.

5. List of switch functions

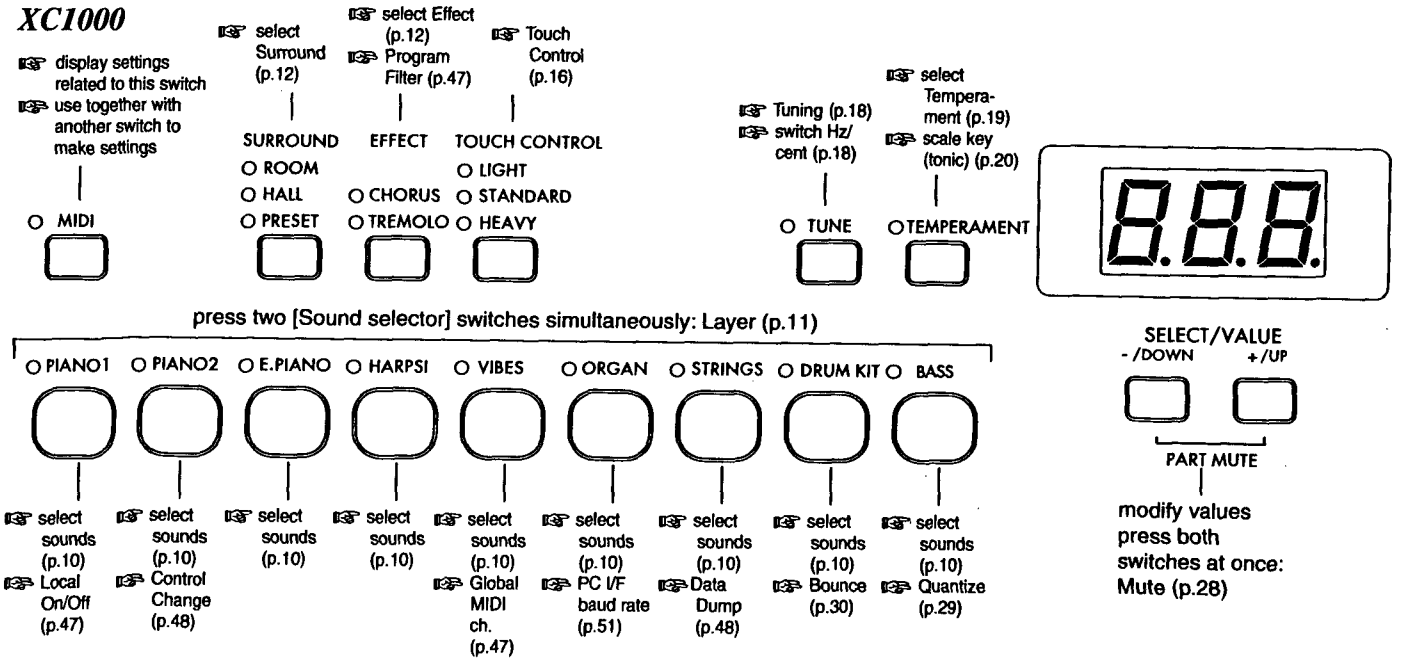
Here is a summary of the functions performed by each of the switches of the XC-2000/XC-1000.

Symbols:
☞ : the function when this switch is pressed by itself
☞ : the function when this switch is pressed while holding down the [MIDI] switch

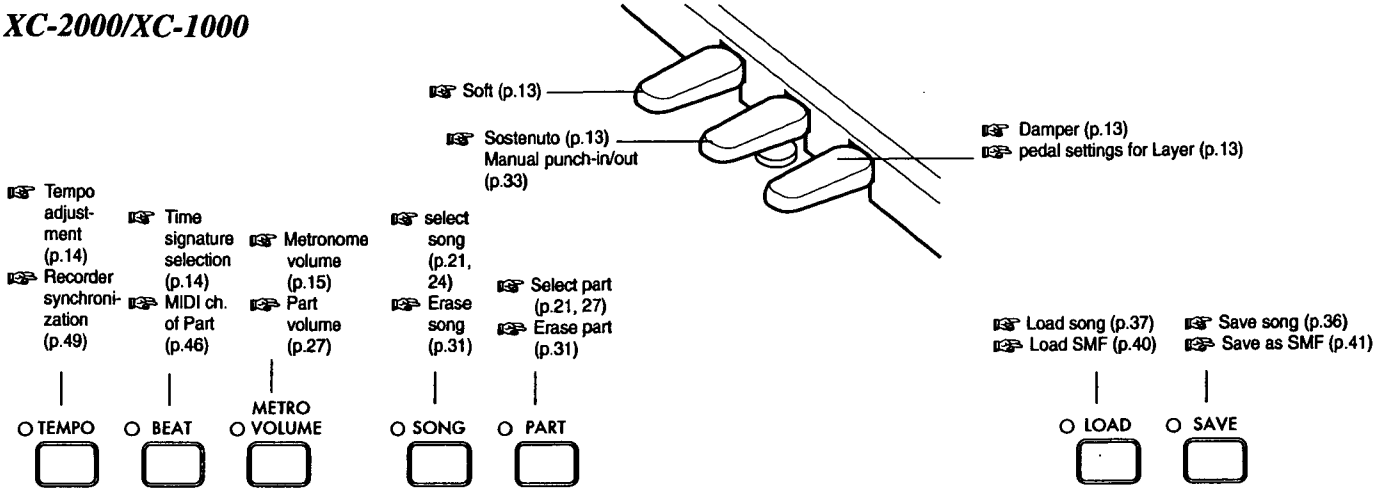
XC-2000

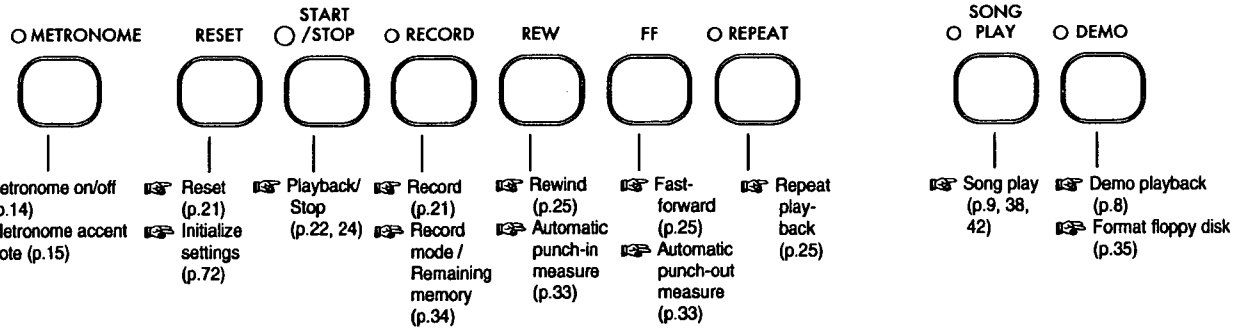


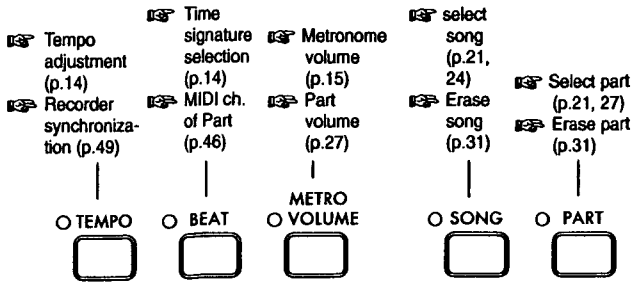
XC1000

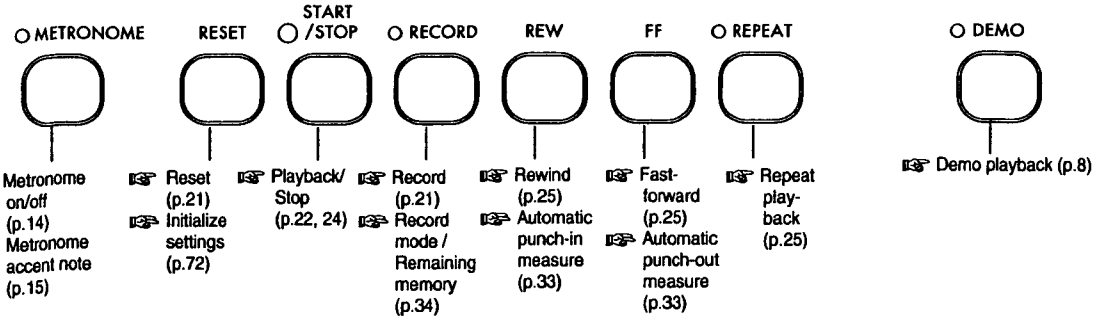


XC-2000/XC-1000









6. LED display messages

Messages

E--	This will be displayed if you press the [TEMPO] switch when External Clock is selected for the recorder.
Lo	The internal backup battery is running down. Contact a nearby service center or your dealer.

Error messages (XC-2000 only)

E06	No more files can be created in the currently inserted disk. Insert a different disk and try the operation again.
E10	The selected file contains no data.
E11	The data in the file is damaged. Make sure that you have selected the correct file.
E13	The selected file has a Read-Only attribute setting. The XC-2000 is not able to change the attribute of a file. If you wish to change the file attribute, use a computer to do so, and then insert the disk into the XC-2000 and try the operation again. For details on file attributes and how to change them, refer to the owner's manual of your computer or of your computer's operating system.
E14	The specified file number is already used by that disk as a directory. Specify a different file number and try the operation again.
E15	The specified file number is already used by that disk as a system file. Specify a different file number and try the operation again.
E16	The specified file is not for the XC-2000. Specify the correct file number and try the operation again.
E18	The XC-2000 has insufficient memory for its work area. in order to allocate sufficient work area in memory, song data currently in the internal memory of the XC-2000 must be erased. If memory contains data you wish to keep, save the data to disk. Then erase song data to increase the amount of free memory, and try the operation again.
E24	You attempted to save a song which contains no data.
E25	The selected file is not in Standard MIDI File format. Select the correct file and try the operation again.
E26	The selected file is in Standard MIDI File format 2. The XC-2000 cannot use Standard MIDI File format 2 data.
-F-	The currently inserted floppy disk has a format which cannot be used by the XC-2000. Check whether you have inserted the correct disk.

FuL

- The currently inserted disk cannot contain any more data. Insert a disk that has free space remaining, and try the operation again.
- There is insufficient memory to playback all of the tracks of the currently specified SMF format 1 musical data. If you playback now, some of the tracks will not be heard.

-P-

The disk is write protected. If it is OK to rewrite the data on the disk, move the write protect slider to cover the opening on the disk, and try the operation again.

nod

No floppy disk is inserted in the disk drive. Insert a disk correctly into the drive, and try the operation again.

noF

The disk contains no files of the relevant type (*.SNG for Song mode, and *.MID for Song Play or SMF Loading).

Other disk-related messages (XC-2000 only)

88F
blinking

The disk you are attempting to format already contains xx files. If you format this disk, all the files on the disk will be lost. Make sure that you have inserted the correct disk.

F88
blinking

When saving, or when saving SMF data, a file of the same number that you specified already exists on the disk. If you execute saving, the file of that number will be erased and replaced by the newly saved data.

- - -
blinking

This will be displayed while the contents of the disk are being checked.

F88.
blinking

When saving or loading, the file number will be displayed and the period will blink to indicate that data is being saved to or loaded from disk.

dF.
blinking

This will be displayed while a disk is being formatted.

dEL
blinking

There is insufficient memory to playback all of the tracks of the currently specified SMF format 1 musical data. In order to obtain sufficient free memory, song data must be erased from internal memory. If there is data that you do not wish to lose, save the data to disk, and then repeat the operation. If it is OK to erase the data, press the [SONG] switch. All song data will be erased, and then the SMF format 1 data will be played back.

7. Initializing settings

You can initialize the following settings for a specified song: sound selections for each Part, surround, effect, volume, MIDI channel settings, and pedal settings. If you have modified the MIDI channel of the Parts, or loaded musical data from an external sequencer or the internal disk drive (XC-2000 only), the piano may not operate in the way that you expect. In such situations, you can perform this Initialization operation to bring back the "basic" settings. This operation should also be performed if the pedals are not responding correctly.

Part	Part sound	Surround	Volume	MIDI channel
1~9, 11~16	PIANO1	PRESET	127	1~9, 11~16
10	DRUM Kit (GM KIT)	PRESET	127	10

1. Press the [SONG] switch, and then press the [+/UP] or [-/DOWN] switch to select the song that you wish to initialize.
   Pedal settings are initialized in common to all songs, so if you wish to initialize the pedal settings, select a song in which sounds are not selected for the Parts.
2. Simultaneously press the [MIDI] switch and the [RESET] switch, and the data will be initialized.

   Do not press the pedals during this operation.

8. Troubleshooting

Problem	Action	Refer to page
Power does not turn on	Is the power cable connected to an AC outlet?	2
	Is the power switch on?	2
	If the problem is still not resolved, contact a Korg dealer.	
No sound	Is the [MASTER VOLUME] slider of the XC-2000/XC-1000 raised?	2
	Is the headphone jack in use?	2
	Is the Part volume at "0"?	27
	Is the Part muted?	28
	Make sure that the Local setting is ON.	47
Sound does not change	Turn off the [DEMO] switch.	8
Sound is interrupted	The sounds of the XC-2000/XC-1000 are produced by analysis and modification of samples (recordings) of original instrumental sounds. For some sounds, pressing a note will play one sample, and for other sounds, two samples. The [PIANO1] sound and some of the [GM] (XC-2000) and [BASS] (XC-1000) sounds use two samples. When these sounds are selected, the maximum number of notes which can be played simultaneously will be 16, including notes held by the damper pedal. For other sounds, the maximum number of simultaneous notes will be 32. If you are using a Layer to play two sounds simultaneously, the maximum number of simultaneous notes will depend on whether the sounds use one or two samples. For example if you have layered a sound that uses one sample with a sound that uses two samples, the maximum number of simultaneous notes will be 10. As you use layers or record multiple parts on the recorder, be aware of these points so that you can make the best use of the available note production capacity.	

Problem	Action	Refer to page
Pedal does not work correctly	Was a pedal pressed when the power was turned on or when settings were initialized?	2,72
	Has the pedal connector been disconnected?	53
Sostenuto pedal effect does not work	Is manual punch-in selected as the recording mode?	32
	Has the pedal connector been disconnected?	53
Cannot playback	Make sure that the XC-2000/XC-1000 is set to "In" (internal). If you wish to use it as the slave device (the device which will synchronize to the master device), set it to "E" (external), and set the external device to transmit MIDI Clock data.	49
Cannot record	Is there sufficient free space in the recorder?	34
	Is the recording mode setting appropriate?	32
	Make sure that the XC-2000/XC-1000 is set to "In" (internal). If you wish to use it as the slave device (the device which will synchronize to the master device), set it to "E" (external), and set the external device to transmit MIDI Clock data.	49
Does not respond to transmitted MIDI data	Make sure that all MIDI cables are connected correctly.	45
	Make sure that the XC-2000/XC-1000 is receiving data on the same channel as the transmitting device is using.	46
	Do the MIDI channels (Part, Global) match?	46,47
Specified drum sound is not heard when keyboard is played	Make sure that the [KEY TRANSPOSE] slider is set to "C."	17

Floppy disk-related problems (XC-2000)

Problem	Action	Refer to page
Cannot format a floppy disk	Are you using a 3.5 inch 2DD or 2HD floppy disk? Be sure to use one of these types of disk.	iv
	Is the disk inserted correctly?	iv
	Is the write protect tab of the disk in the Protect position?	iv
	Is the [DEMO] switch ON?	35
	Clean the heads of the internal disk drive.	iv
Cannot save data to a floppy disk	Is the disk inserted correctly?	iv
	Is the write protect tab of the disk in the Protect position?	iv
	Is the disk formatted?	35
	Clean the heads of the internal disk drive.	iv
Cannot load data from a floppy disk	Is the disk inserted correctly?	iv
	Does the disk contain data?	35
	Clean the heads of the internal disk drive.	iv

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10. Specifications

	XC-2000	XC-1000
Keyboard	88 note (velocity sensitive)	
Touch control	Light, Standard, Heavy	
Tone generator	ai-squared Synthesis System	
Polyphony	32/16*1	
Sound programs	ROM : 7 + GM 128 + GM Dr1 + Dr 7	ROM : 7 + Bass 8 + Dr1
Sound program (groups)	Piano 1, Piano 2, Electric piano, Harpsichord, Vibraphone, Organ, Strings, Drum kits (8), GM (128)	Piano 1, Piano 2, Electric piano, Harpsichord, Vibraphone, Organ, Strings, Drum kit, Bass (8)
Effects	Surround (Room/Hall/Preset), Effect (Chorus/Tremolo)	
Recorder	16 tracks, 10 songs (maximum 40,000 step capacity) <Reset, Start/Stop, Record, REW, FF, Repeat, Song Select, Part Select, Load, Save>	16 tracks, 10 songs (maximum 31,000 step capacity) <Reset, Start/Stop, Record, REW, FF, Repeat, Song Select, Part Select>
Floppy disk drive	3.5 inch 2DD/2HD (SMF music data can be played back)	—
Metronome	Metronome, Tempo, Beat, Volume	
Display	8 segment LED × 3	
Pedal controls	Damper *2, Soft *2, Sostenuto	
Connectors	Output *3 (L/MONO, R), Input *3 (L/MONO, R), Headphones *4 × 2, MIDI (IN, OUT), PC I/F (TO HOST)	
Mic input	Input *3, Mic volume, Echo level volume, Mic/Line select switch	—
Controls	Master volume, Power switch, Brilliance, Key transpose, Tuning, Temperament	
Main amplifier	40W × 2	30W × 2
Speakers	13cm × 2, 10cm × 2, 5cm × 2	13cm × 2, 5cm × 2
Power supply	AC Local Voltage	
Power consumption	120W	75W
Dimensions	1,414 (W) X 392 (D) X 815,6 (H) mm	
Weight (with stand)	53 kg	49kg
Color and Grain	red-brown birds-eye maple / black	
Included items	Demo data disk	–
Options	ih, AG-001/AG-001A, AG-002, AG-004	AG-001/AG-001A, AG-002, AG-004

*1: May decrease depending on sounds or layers
*2: Responds to half-pedaling
*3: Phone plug
*4: Stereo mini-plug

Appearance and specifications are subject to change without notice for product improvement.

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XC-2000f/XC-1000 Owner's Manual

NOTICE

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0805 GH *Printed in Japan*