Technics

KEYBOARD

SX-KN200
SX-KN400

Vol. 3

VOL. 3

PRACTICAL APPLICATIONS

This volume comprises a detailed explanation of **SEQUENCER**, **COMPOSER**, Function Setting and MIDI.
Read the parts which are relevant to the functions you wish to use.

APPLICATIONS PRATIQUES

Ce tome comprend les explications détaillées sur **SEQUENCER**, **COMPOSER**, réglage des fonctions et MIDI.
Lisez les articles concernant les fonctions que vous souhaitez utiliser.

APLICACIONES PRACTICAS

Este tomo consta de una explicación detallada del **SEQUENCER**, **COMPOSER**, Ajuste de las funciones y MIDI.
Lea las partes relacionadas a las funciones que desea utilizar.

應用篇

在VOL. 3對於**SEQUENCER**(程序處理)程**COMPOSER**(編輯器)的應用功能、設定方法以及MIDI的應用操作加以詳細說明。
如欲利用上述功能時，請翻閱本篇，則善於應用豐富的技巧。

ENGLISH
FRANÇAIS
ESPAÑOL
中文

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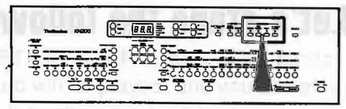
Part III Recording and playback

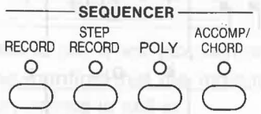
Sequencer



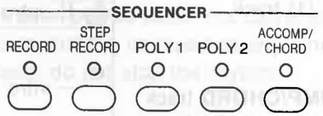
The **SEQUENCER** stores your entire performance—melody and accompaniment, sound and panel setting changes, even changes in the rhythm—for completely automatic playback whenever you desire.

The performance can be stored part by part: **POLY** (KN200), **POLY 1**, **2** (KN400) and **ACCOMP/CHORD**.

KN200



KN400



■ **Data which can be stored in each track**

When all the tracks are set to the recording mode, all the panel settings (except for **TEMPO**) are automatically stored at the beginning of the song. In addition, the following data is stored during recording.

Part	What you can store
POLY (KN200) **POLY 1** (KN400) **POLY 2** (KN400)	**RHYTHM START/STOP**, **FILL IN**, **INTRO & ENDING**, performance data, and changes in the **SOUND SELECT** settings, ****BALANCE** settings, **EFFECT** settings, **PITCH BEND/MODULATION** data (KN400), glide on/off data (except **POLY 2**).
***ACCOMP/CHORD**	**RHYTHM START/STOP**, **FILL IN**, **INTRO & ENDING**, performance data, **ACCOMP PART** status, **AUTO PLAY CHORD**, and changes in the tempo setting, ****BALANCE** settings (**DRUMS**, **BASS & ACCOMP**), **RHYTHM SELECT** settings, **PITCH BEND/MODULATION** data (KN400), the **PANEL MEMORY** status, and **TRANSPOSE** status

*For the **ACCOMP/CHORD** part, in addition to the performance you actually play and record in real-time, you can also use the **STEP RECORD** function to record the chord progression step by step.
****SUB BALANCE** setting are not stored.

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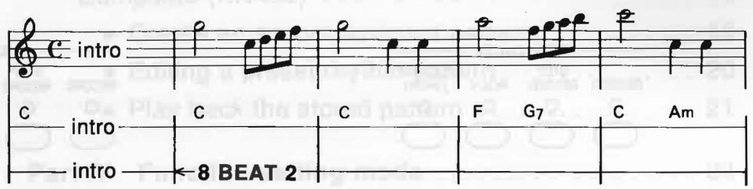
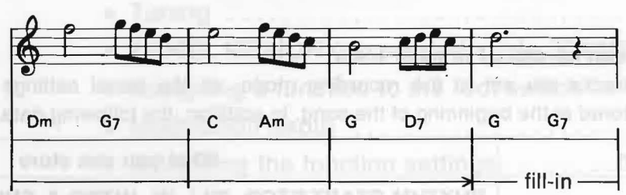
Let's store the following music.

Registration: **POLY (1)**.....**SPECIAL 6**
RHYTHM.....**8 BEAT 2**
AUTO PLAY CHORD.....**FINGERED** on
SYNCHRO & BREAK .....on

POLY (1) track

ACCOMP/CHORD track
(AUTO PLAY CHORD)





Storing each part (multi-track storage)

1. Set the sound, rhythm, **AUTO PLAY CHORD**, etc. before starting to play.
   - If you wish to insert an intro, press the **INTRO & ENDING** button to turn it on.

2. Press the **RECORD** button in the **SEQUENCER** section. Its indicator lights.

3. Press the **SEQUENCER** button for the part you wish to store first (for example, the **ACCOMP/CHORD** button). The indicator for the part flashes slowly.

4. Now play the part: Play the C chord on the left keyboard to begin recording.

   - Listen to the intro which plays for 4 measures.
   - When the rhythm is not used, do not start the rhythm. The rhythm can be started and stopped any time during the performance, as desired.

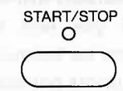
5. When you have finished playing the part, press the **RECORD** button to turn it off.

   - If the rhythm is on, it will stop automatically.
   - At this time, confirm that the indicator for the part already stored is still lit.

6. Press the **RECORD** button. Its indicator lights.

7. Press the **SEQUENCER** button for the next part to be stored (for example, **POLY (1)**). The indicator of the selected part will flash slowly.
   - Confirm that the indicator for the part you selected in step 3 is lit.

8. Press the **START/STOP** button. The part(s) already stored will be played, and you can play in time with it to store the next part.
   - Use the **START/STOP** button to start playback of the already-stored part(s), even for a song which has no rhythm.



   - If you wish to end a part before the end of the song, you do not have to wait until the entire song has been played back. You can press the button to record the next part at any time, but in this case, do not stop the rhythm.

9. When you have finished storing all the parts, press the **RECORD** button again to turn it off.

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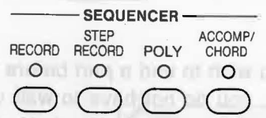
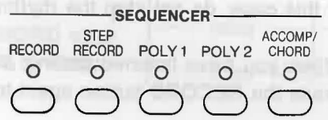
Playing back the recorded performance

1. Press to turn on the **SEQUENCER** button(s) for the parts of the performance you wish to have played back.

KN200

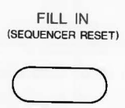


KN400



- Make sure that only the **SEQUENCER** indicators for the parts you wish to have played back are lit. (If the **SEQUENCER** indicator for another part is turned on, the wrong melody may be played or the rhythm may stop during the performance.)

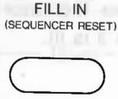
2. Press the **SEQUENCER RESET** button.



3. Press the **START/STOP** button to begin the automatic playback.

- Use the **START/STOP** button to start playback even if the song has no rhythm.
- If the **START/STOP** button is pressed during automatic playback of the recorded performance, playback will stop. If the **START/STOP** button is pressed again, playback will continue from the point at which it stopped. Note, however, that if the rhythm was stored with the song, the rhythm does not start in this case.

SEQUENCER RESET



When the **START/STOP** button is off, by pressing the **SEQUENCER RESET** button for 1~2 seconds, the indicators for the parts which have been stored turn on and the panel settings change to the settings at the beginning of the stored performance.

- If the **START/STOP** button is pressed during automatic playback of a performance, to return to the beginning of the performance, press the **SEQUENCER RESET** button.

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Advanced applications

Storage capacity

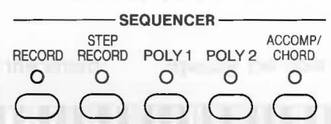
Expressed in terms of notes, the total storage capacity of the **SEQUENCER** is approximately 1600 notes.

- Data such as sound changes etc. can be stored for each part, but will reduce the storage capacity accordingly.
- **How to count the number of notes**
  The cycle of one key being pressed and released is counted as one note.
- When the remaining storage capacity becomes 20% or less, it is shown as a percentage (%) on the display.
- When "0" is shown on the display and the "beep, beep, beep" error message sounds, no more data can be stored in the **SEQUENCER**.
- The tempo can be freely adjusted during playback. Therefore, you may record the performance by playing the keyboard slowly.
- If new songs are stored over songs already stored, the previously stored songs are erased.

Storing two or more parts at the same time

By setting up the **SEQUENCER** to record multiple tracks, you can perform and record multiple parts at one time.

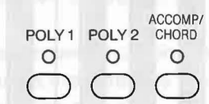
(KN400)



1. Set the beginning sounds and effects before starting to play.

2. Press the **RECORD** button in the **SEQUENCER** section. Its indicator lights.

3. Press the **SEQUENCER** buttons for the parts you wish to store. The indicators flash slowly. (KN400)



4. Play.

- Keyboard sounds are produced according to the **CONDUCTOR** settings.

- KN400: When storing the **POLY 1** or **POLY 2** part, select the respective part on the **CONDUCTOR** before selecting the sound.
- When recording the **ACCOMP/CHORD** track during multiple-track recording, be sure to turn on the **ONE-FINGER** or **FINGERED** button of the **AUTO PLAY CHORD** before storing chords.
- KN400: When recording both the **POLY 2** and **ACCOMP/CHORD** tracks, turn off the **ACCOMP PART 2** and **3** buttons.

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

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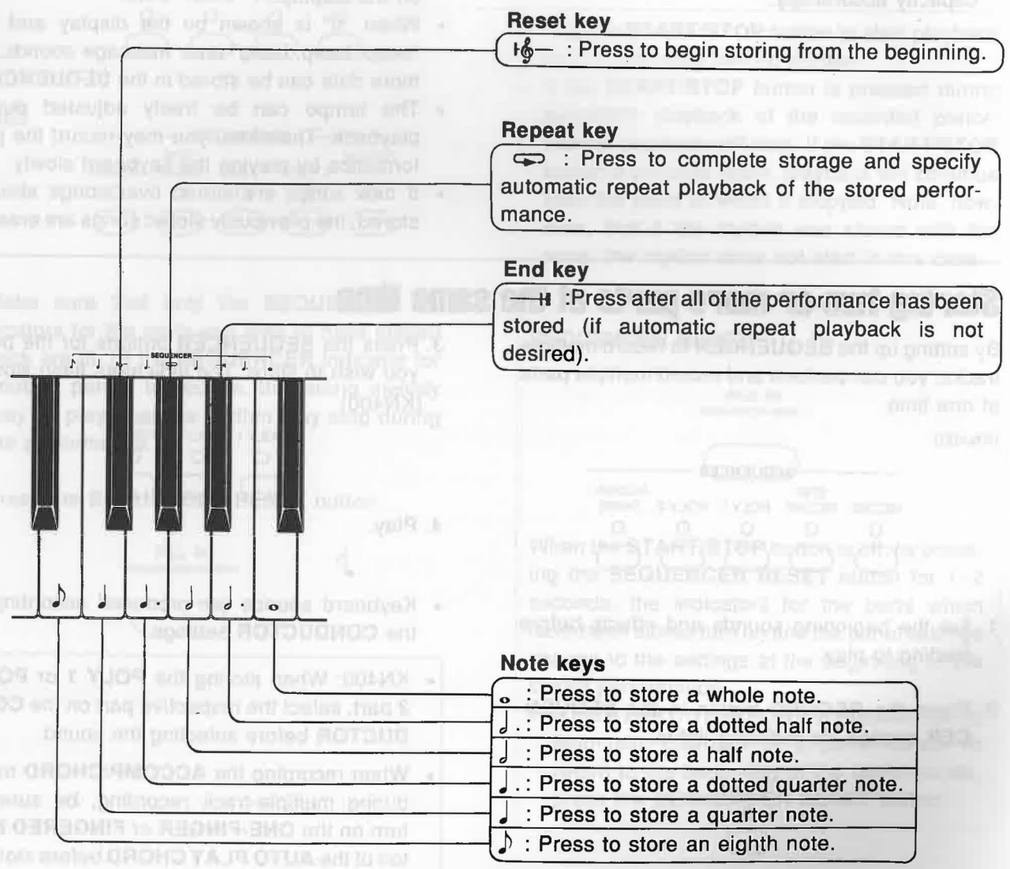
Storing a chord progression

The **ACCOMP/CHORD** part can be stored using the **STEP RECORD** function of the **SEQUENCER**.

In addition to the **SEQUENCER** buttons, the nine keys indicated on the right part of the keyboard are used for storing with the **STEP RECORD** method.



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ACCOMP/CHORD

Chord progressions and changes in the sounds, effects and rhythm can all be stored in the **ACCOMP/CHORD** part.

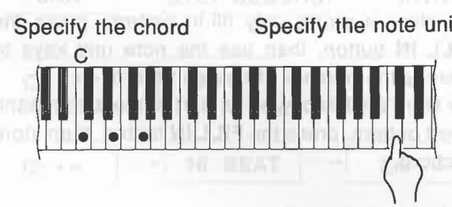
Store the following example:

1. Set up the panel with a rhythm, sounds and effects which fit the tune.

2. Press the **STEP RECORD** button of the **SEQUENCER** section. Its indicator lights.

- If the **AUTO PLAY CHORD** function was not activated, the mode now changes automatically to the **FINGERED** mode of the **AUTO PLAY CHORD**.
- The **ACCOMP/CHORD** indicator flashes slowly.

3. Store one measure of a C chord.



While holding down a C chord on the left part of the keyboard, press the key to specify a whole note (one measure of C chord).

- A "beep" will sound to indicate that the chord has been stored.
- If, while holding down a C chord, the key is pressed two times, the C chord will be stored for two measures.

4. Store one measure of an F chord.
While holding down an F chord on the left part of the keyboard, press the key to specify a whole note (one measure of an F chord).

5. In the same way, store one measure of a G chord and one measure of a C chord.

6. Press the key to end storage.
- If you want the sequence to be repeated automatically, instead of the key, press the key. (In the case of a 3-beat rhythm, if an intro is used or if the number of measures is an odd number, the timing will be off.)
- To insert an ending pattern, press the **INTRO & ENDING** button instead of the key.

- To store the sequence again (redo) from the beginning, press the reset key and begin storing again from step 3.

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Automatic playback of the stored chord sequence

1. Turn on the **ACCOMP/CHORD** button.

2. Press the **SEQUENCER RESET** button.
3. Select a rhythm and press the **START/STOP** button to start the rhythm. The stored chord sequence is automatically played back.

Storing rhythm changes

In addition to chord progressions, you can also store changes in the rhythm by using the **STEP RECORD** function.

■ **Storing the beginning panel settings**

1. Select the sounds, effects and rhythm on the panel.
2. Press the **STEP RECORD** button to turn it on.

- Its indicator flashes.
- The beginning panel settings (except for **TEMPO**) are stored.

3. Store the chords.

■ **Storing an intro**

1. Press the **STEP RECORD** button to turn it on.

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

3. Store the chords.

- During playback, after the **DRUMS** intro pattern is played, the **ACCOMP** and **BASS** rhythm patterns are added.
- If you wish the intro to include the **ACCOMP** and **BASS** patterns, first turn on the **STEP RECORD** button, then, while holding down a chord on the keyboard, turn on the **INTRO & ENDING** button.

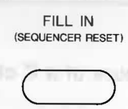
■ **Storing a rhythm change in the middle of the tune**

1. Store the chord progression up to the point where the rhythm changes.
2. Select a different rhythm.

- A "beep" will sound to indicate that the change has been stored.

3. Continue storing the chord progression.

■ **Storing a fill-in**



To store a drums-only fill-in pattern, press the **FILL IN** button, then use the note unit keys to specify the number of notes in the fill-in.
To store a fill-in played as part of the accompaniment pattern, press the **FILL IN** button, then store a chord.

■ **Storing an ending**

If the **INTRO & ENDING** button is pressed at the end of the tune, an ending pattern is stored and the **STEP RECORD** button turns off.

If the **INTRO & ENDING** button is pressed while the keys for a chord are pressed, the ending will be played as part of the accompaniment pattern.

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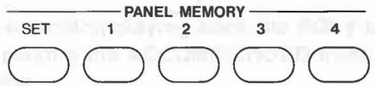
■ **Storing a 3-beat rhythm**

When storing chords for a 3-beat rhythm such as the **WALTZ** or **JAZZ WALTZ**, specify the note units for one measure of a chord as ♩. .

■ **Storing sound changes in the middle of the tune (KN400)**

Changes in the **PANEL MEMORY** selection can be stored in the **SEQUENCER**.

1. Store the chord progression up to the point where the **PANEL MEMORY** selection changes.
2. Press one of the **PANEL MEMORY 1~4** buttons.



- A "beep" will sound to indicate that the change has been stored.

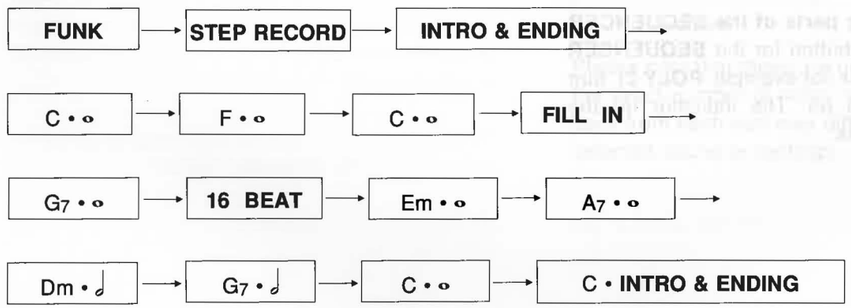
3. Continue storing the chord progression.

An example of storing in the Sequencer

What to store

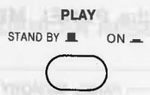
Chord		C	F	C	G_7	Em	A_7	Dm G_7	C	C
FILL IN, INTRO, ENDING	INTRO				FILL IN					ENDING
RHYTHM	FUNK					16 BEAT				

How to store

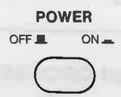


To clear specific parts or the entire performance

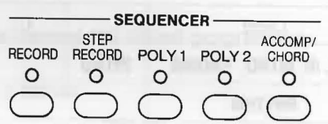
[KN200]
Press the **PLAY** button to turn it off (**STANDBY**). The entire contents of the **SEQUENCER** are erased.



[KN400]
The **SEQUENCER** contents remain in the memory for about one week after the **POWER** button is turned off.



■ **To clear the entire contents of the SEQUENCER**
While pressing the **RECORD** button in the **SEQUENCER** section, turn the **POWER** button on. The indicators for all the **SEQUENCER** parts flash.



■ **To clear specific parts of the SEQUENCER**
While pressing the button for the **SEQUENCER** part you wish to clear (for example, **POLY 2**), turn the **POWER** button on. The indicator for the specified part flashes.

■ **About the maximum number of notes which can sound from the SEQUENCER parts**
The maximum number of notes which can be recorded in or played back from each track of the **SEQUENCER** changes depending on the status of the **AUTO PLAY CHORD** and **ACCOMP PART** (KN400).
In general, the number of notes can be calculated as follows.

When recording/playing back only one track
■ **KN200**
POLY track ..... 11 notes
ACCOMP/CHORD track .....4 notes

■ **KN400**
POLY 1 track .... 11 notes
POLY 2 track .... 11 notes
ACCOMP/CHORD track .....4 notes

When recording/playing back both the POLY 1 and POLY 2 tracks (KN400)
POLY 1 track .... 7 notes
POLY 2 track .... 4 notes

- Even when the **ONE-FINGER** or **FINGERED** button of the **AUTO PLAY CHORD** is on, and the **ACCOMP PART 2** and **3** buttons are on, the notes stored in or played back from the **POLY 2** part of the **SEQUENCER** have priority.

When recording/playing back the POLY track while playing the ACCOMP/CHORD track
■ **KN200**
POLY track.....4 notes
■ **KN400**
With ACCOMP PART 2 and 3 on
POLY 1 track ....4 notes
POLY 2 track ....(Not available for recording/playback)*
* The **ACCOMP/CHORD** track recording/playback has priority over **POLY 2** track recording/playback.

With ACCOMP PART 2 and 3 off

POLY 1 track	POLY 2 track
7 notes	—
—	3 notes
4 notes	3 notes

Please note that these are general rules and that the exact number of notes recorded in or played back from each part may differ depending on the selected sound or settings.

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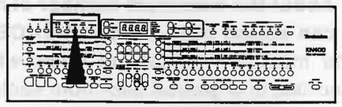
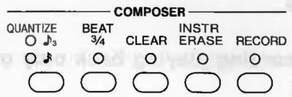
Composer (KN400)

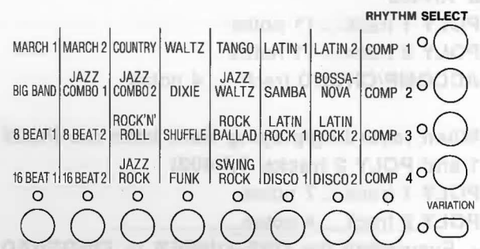
With the **COMPOSER** you can create original rhythms, or you can edit preset rhythms as desired. Then store up to four of your creations in the **COMP 1~4** buttons for instant recall.

In the **COMPOSER** section, the five parts comprising the rhythm—**DRUMS**, **BASS** and **ACCOMP 1, 2, 3**—are selected with the **RECORD** button and added one at a time.

Although you may choose to store only one or two parts in the **COMPOSER**, the **BASS** and **ACCOMP 1, 2, 3** parts should be stored if using the **AUTO PLAY CHORD** feature.







Here is what the parts of the **COMPOSER** do:

RECORD: Press this button and the part indicated on the display is available for storing. Each time the button is pressed, the part available for storing changes.

INSTR ERASE: Use this button to delete the pattern of a specific instrument from the **DRUMS** part.

CLEAR: When this button is pressed, the contents of the part indicated on the display are cleared.

BEAT: Press this button to specify 3/4 time. When it is off, the time signature is 4/4 time.

QUANTIZE: By turning on this function before recording, the timing of the recorded performance is automatically "evened out."

COMP 1~4: Store four of your original patterns in these buttons for instant recall.

ENGLISH

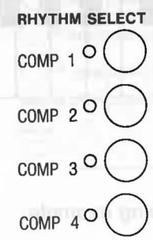
Create an accompaniment pattern.

A repeating two-measure pattern is stored by playing in real-time on the keyboard.

I. Setting up to store the rhythm pattern

1. Press the **RECORD** button in the **COMPOSER** section. The **COMP 1~4** indicators flash.

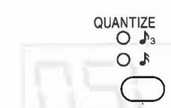
2. Press one of the **COMP 1~4** buttons in which you will store your new rhythm pattern. The indicator for the selected button lights. " A L L " appears on the display.



3. When creating a new rhythm pattern, all parts of a previously stored rhythm in the selected number button can now be deleted by pressing the **CLEAR** button.

4. To record a pattern in 3/4 time, press the **BEAT** button to turn it on.

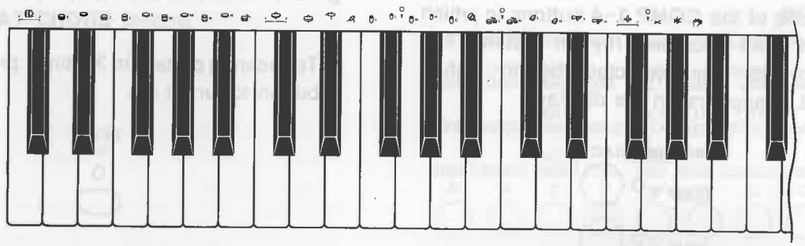
5. To use the quantize function, use the **QUANTIZE** button to select ♪₃ or ♪ . (Refer to page 19.)



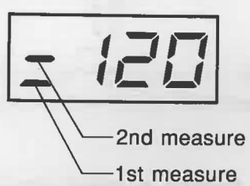
II. Storing the DRUMS part

1. Press the **RECORD** button in the **COMPOSER** section. " d r " appears on the display. The metronome starts. (If the **DRUMS** part has not been cleared, any previously stored **DRUMS** rhythm can also be heard.)

2. Play the desired percussive keys on the keyboard in time with the metronome for two measures.



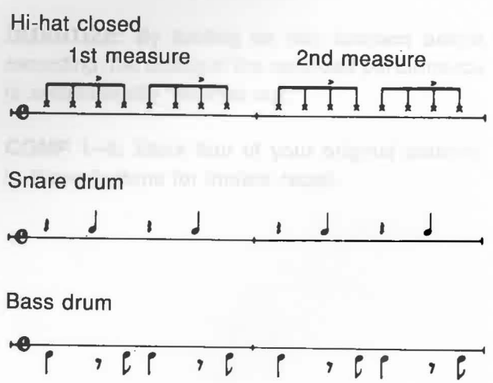
- You can distinguish the 1st measure from the 2nd measure by the horizontal lines on the display.



- If you press a percussive key while pressing the **INSTR ERASE** button, that instrument will be deleted for as long as the **INSTR ERASE** button is pressed.
- Up to four instruments can sound with the same timing. However, if the **MANUAL PERCUSSION** is played with the **COMPOSER** during playback, the number of **DRUMS** instruments that sound becomes less.
- Adjust the tempo as necessary.
- If either **QUANTIZE** level is selected during recording, any unevenness in the timing of the performance is smoothed out. The default setting is ♪. (Refer to page 19.)

- Any contents stored in the **DRUMS** part can be deleted by pressing the **CLEAR** button.

Store the following example:

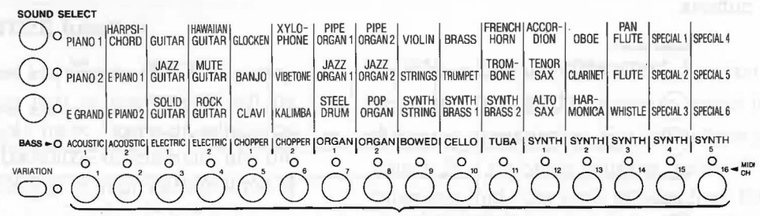


III. Storing the BASS part

1. Press the **RECORD** button in the **COMPOSER** section. The display changes to show " b A S ". In addition to the metronome and the **DRUMS** pattern just stored, any previously stored **BASS** and **ACCOMP** patterns now sound.

- If you wish to delete all the previously stored **BASS** part, press the **CLEAR** button.

2. Use the 16 buttons in the horizontal row of the **SOUND SELECT** matrix to select the **BASS** sound.



Select the **BASS** sound (indicated in the bottom row) with these buttons.

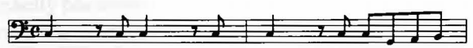
3. Play two measures of the **BASS** pattern on the keyboard.

- Record the performance in C major for correct chord progressions during playback.
- The **BASS** pattern can be played on the entire keyboard, regardless of the indicated split point. However, those notes played on C4 or higher will sound in a lower octave.
- Play the **BASS** pattern for two measures to store it. Then, as the two-measure pattern is repeated, you can play the keyboard to add notes to the pattern. The final version of the **BASS** pattern is the one that is stored.

- Adjust the tempo as necessary.
- If either **QUANTIZE** level is selected during recording, any unevenness in the timing of the performance is smoothed out. The default setting is ♪. (Refer to page 19.)

Here is what you play:

BASS part



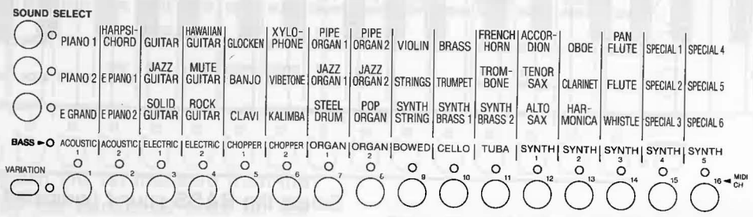
ENGLISH

IV. Storing the ACCOMP 1 part

1. Press the **RECORD** button in the **COMPOSER** section. The display changes to show " A C 1 ". In addition to the patterns stored for the **DRUMS** and **BASS** parts, any previously stored **ACCOMP 1** pattern now sounds.

- If you wish to delete all the previously stored **ACCOMP 1** part, press the **CLEAR** button.

2. Select the **ACCOMP 1** sound with the buttons in the **SOUND SELECT** matrix. Select any of the preset sounds by pressing one of the 3 vertical row buttons and one of the 16 horizontal row buttons.



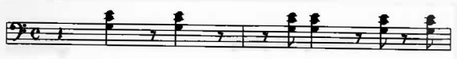
3. Play two measures of the polyphonic **ACCOMP 1** pattern on the keyboard.

- Record the performance in C major for correct chord progressions during playback.
- Up to 4 notes can sound at the same time.
- Play the **ACCOMP 1** pattern for two measures to store it. Then, as the two-measure pattern is repeated, you can play the keyboard to add notes to the pattern. The final version of the **ACCOMP 1** pattern is the one that is stored.

- When the **CLEAR** button is pressed, the **ACCOMP 1** part is completely erased.
- Adjust the tempo as necessary.
- If either **QUANTIZE** level is selected during recording, any unevenness in the timing of the performance is smoothed out. The default setting is ♪. (Refer to page 19.)

Here is what you play:

ACCOMP 1 part



ENGLISH

V. Storing the ACCOMP 2/ACCOMP 3 parts

Press the **RECORD** button again. You can record the **ACCOMP 2** part and the **ACCOMP 3** part in the same manner as for the **ACCOMP 1** part.

- Up to 3 notes can sound at the same time from the combined **ACCOMP 2** and **ACCOMP 3** parts.

VI. Finish storing the rhythm

When all the parts to the pattern have been stored as desired, press the **RECORD** button of the **COMPOSER** once again to complete the storage operation.

- The **RECORD** button turns off, and the display returns to the tempo display.

About the QUANTIZE function

When you play the keyboard, your timing may not be exact, and that is the way it will be recorded and played back. However, when you record with the **QUANTIZE** function on, any unevenness in the timing of your performance is smoothed out.

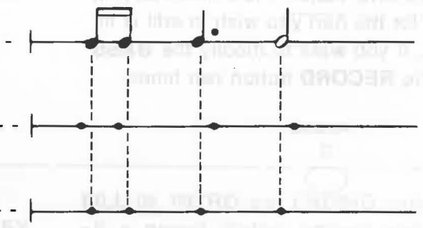
To record with the **QUANTIZE** function on, just press the **QUANTIZE** button to select the ♪3 or ♪ degree of resolution. For triplet-type patterns, select ♪3 ; for other patterns, select ♪ . (Note, however, that note units smaller than the selected **QUANTIZE** level will not be recorded correctly. In this case, record with the **QUANTIZE** function off.)

For example, if you record the following music with the **QUANTIZE** level set to ♪:

Written score - - - - - - - - - - - -

Timing of actual performance - - - - - - - - - - - - -

Recorded with **QUANTIZE** function - - - - - - - -



- The **QUANTIZE** function also works for **PITCH BEND**. In order to store a smooth, continuous **PITCH BEND**, the **QUANTIZE** function must be off.

Storage capacity

Expressed in terms of notes, the total storage capacity of the **COMPOSER** is approximately 600 notes.

- When the remaining storage capacity becomes 50 notes or less, the display shows the number of notes which can be stored.
- When "0" is shown on the display and the "beep, beep, beep" error message sounds, no more data can be stored in the **COMPOSER**.

ENGLISH

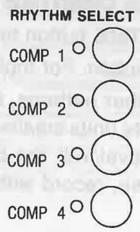
Editing a preset rhythm pattern

The editing feature of the **COMPOSER** allows you to modify any of the factory-preset rhythms or even your original rhythms, and then store the new patterns in the four **COMP** buttons.

1. Select the rhythm to be modified with the buttons in the **RHYTHM SELECT** matrix.

2. Press the **RECORD** button in the **COMPOSER** section.

3. Press one of the **COMP 1~4** buttons in which to store the modified rhythm pattern. The selected rhythm is now recalled. " A L L " appears on the display.



4. Press the **RECORD** button 1 to 5 times so that the indicator for the part you wish to edit is lit. For example, if you want to modify the **BASS** part, press the **RECORD** button two times.

5. You can clear the part and begin storing it from the beginning, or you can edit the part without clearing it.
- Press the **CLEAR** button ONLY if you wish to delete all of the pattern for the selected part and store a new pattern from the beginning.

6. If desired, use the **RECORD** button to select other parts to modify.

7. When you have completed making the modifications, press the **RECORD** button the number of times required for the **RECORD** button indicator to turn off. The modified version of the rhythm pattern is now stored in the specified **COMP** button.

■ **Note regarding modification of preset rhythm patterns**

Preset rhythms which are stored in the **COMP** buttons may have a somewhat different nuance from the original preset rhythms.

ENGLISH

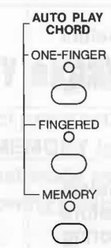
Play back the stored pattern

The rhythm pattern you stored in the **COMPOSER** is played back automatically while you specify the chords in the same manner as for the **AUTO PLAY CHORD**.

1. Press the button in which the rhythm pattern is stored (one of the **COMP 1~4** buttons in the **RHYTHM SELECT** matrix).

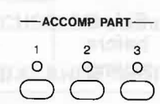
- The indicator lights.

2. Press the **ONE-FINGER** button or **FINGERED** button of the **AUTO PLAY CHORD** to turn it on.



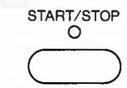
- The indicator lights.

3. Press the **ACCOMP PART 1**, **2** and **3** buttons to turn them on.



- The indicators light.

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



- The **DRUMS** pattern begins to play.

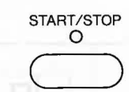
5. Specify the chord on the left part of the keyboard, and play the melody on the right part.

Split point

Keyboard	(left part)	(right part)
	Specify chord	Play melody

- The **BASS** and **ACCOMP 1**, **2** and **3** parts are played back in the chord you specify on the keyboard.

6. To stop the rhythm pattern playback, press the **START/STOP** button.

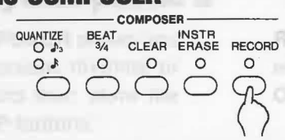


Notes:
- Select the keyboard split point with the **KEY SPLIT** button.
- You can turn off any of the **ACCOMP PART** buttons during playback if you do not wish the correponding part(s) to be played back.
- Adjust the volume of the **BASS** and **ACCOMP PART 1**, **2** and **3** with the corresponding **BALANCE** buttons. (Refer to Vol. 2, page 5.)

FILL IN, **INTRO** and **ENDING** patterns
- If a preset rhythm pattern was edited and stored in a **COMP** button, when the **FILL IN** or **INTRO & ENDING** button is pressed while the pattern is playing back, the **FILL IN**, **INTRO** or **ENDING** pattern corresponding to the original rhythm will sound.
- If the **COMP** button's memory is erased and a completely new pattern is stored, the **FILL IN**, **INTRO** and **ENDING** patterns that sound will be those of the rhythm which was selected immediately before beginning the recording procedure.

Outline of storing in the COMPOSER

1

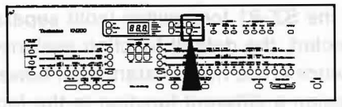


2 Press one of the **COMP** buttons (1~4) to turn it on.

	RECORD button	Display	Storable part	CLEAR button	QUANTIZE	BEAT	INSTR ERASE
3	RECORD	ALL	—	All parts erased	—	4/4 or 3/4	—
4	RECORD	dr	DRUMS	DRUMS part erased	Select before storing.	—	Erase for each instrument.
5	RECORD	bAS	BASS	BASS part erased	Select before storing.	—	—
6	RECORD	AC1	ACCOMP 1	ACCOMP PART 1 part erased	Select before storing.	—	—
7	RECORD	AC2	ACCOMP 2	ACCOMP PART 2 part erased	Select before storing.	—	—
8	RECORD	AC3	ACCOMP 3	ACCOMP PART 3 part erased	Select before storing.	—	—
9	RECORD	120 (tempo)	—	—	—	—	—

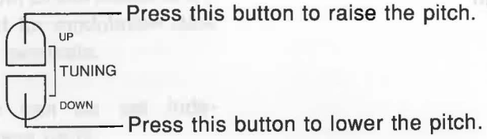
Part IV Function setting mode

Setting the functions



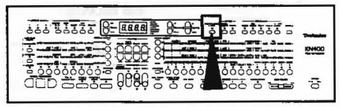
Tuning

With this function you can fine-tune the pitch of the entire instrument.



- The pitch is shown on the display.
- Press the two buttons at the same time to reset the pitch to 440.0 Hz.
- The pitch is adjustable within a range of 427.3 Hz to 453 Hz.
- The decimal display changes as follows: 0.3 → 0.6 → 1.0.

PANEL MEMORY expanded mode (KN400)



You can set the range of panel settings which are stored in the **PANEL MEMORY** locations.
In addition to the normal mode settings (refer to Vol. 2, page 8), the following settings are storable in the expanded mode:

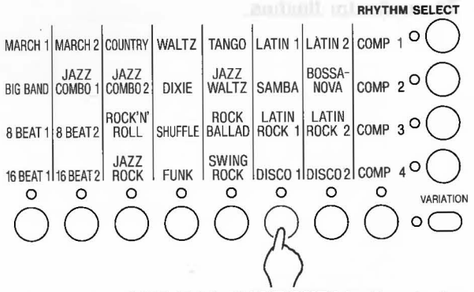
- **RHYTHM SELECT** status
- Tempo
- **TRANSPOSE** status
- **MANUAL PERCUSSION** sound

1. Press the **SUB BALANCE/MIDI** button two times.

2. While " M I d I " is shown on the display, press either **TEMPO** button.

- " P L 1 " is shown on the display.

3. In the **RHYTHM SELECT** matrix, press the third button from the right in the horizontal row to turn it on.



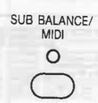
4. Press the **SUB BALANCE/MIDI** button to turn it off.

Assigning a function to the foot switch

If the SZ-P1 foot switch (sold separately) is connected, the default function assigned to the foot switch is the rhythm start/stop; however, you can assign a different function to the foot switch.

Connection

1. Press the **SUB BALANCE/MIDI** button two times.



2. While " M I d " (KN200) or " M I d I " (KN400) appears on the display, use the **TEMPO**'s **SLOW** or **FAST** button to select " F U n " (function) on the display.

- The indicator flashes.

3. Use the **POLY** (KN200) or **POLY 1** (KN400) **BALANCE** buttons to assign the desired function to the foot switch.

Display	Function
SUS	Sustain on/off
GLd	Glide effect*
tEC	TECHNI-CHORD on/off
Str	START/STOP
F IL	FILL IN
End	INTRO & ENDING

*Glide effect: As long as the foot switch is depressed, the pitch of the pressed keyboard keys is lowered by a half-tone; when the foot switch is released, the pitch returns to normal.

The glide effect works for the following sounds: **GUITAR, JAZZ GUITAR, SOLID GUITAR, ROCK GUITAR, MUTE GUITAR, HAWAIIAN GUITAR, BANJO, VIOLIN, BRASS, TRUMPET, SYNTH BRASS 1, 2, TROMBONE, FRENCH HORN, TENOR SAX, ALTO SAX, HARMONICA, CLARINET, PAN FLUTE, FLUTE, WHISTLE, SPECIAL 1, 2, 3, 5, 6**

4. Press the **SUB BALANCE/MIDI** button to turn it off.

Modulation depth

■ **KN200**

You can set the vibrato depth for modulation data received through the MIDI terminals.

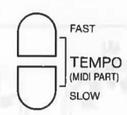
■ **KN400**

You can set the vibrato depth of this instrument's **MODULATION** control and for modulation data received through the MIDI terminals.

- The modulation depth can be set independently for each of these parts:
  KN200: **POLY**
  KN400: **POLY 1, POLY 2, ACCOMP 1, 2, 3, BASS**

1. Press the **SUB BALANCE/MIDI** button two times.

2. While " M I d " (KN200) or " M I d I " (KN400) appears on the display, use the **TEMPO**'s **FAST** or **SLOW** button to display the desired part name on the display.



- The indicator flashes.

3. Use the **POLY** (KN200) or **POLY 1** (KN400) **BALANCE** buttons to adjust the vibrato depth.
- The settable range of the vibrato depth is 0~9.

KN200 KN400

- The higher the number, the more pronounced the vibrato.

4. Repeat steps 2 and 3 to set the vibrato depth for the other parts.
5. When the vibrato depth has been set for all the parts as desired, press the **SUB BALANCE/MIDI** button to turn it off.

ENGLISH

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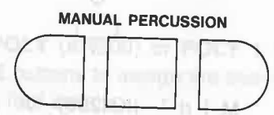
Initializing the function settings

■ **KN200**
When the keyboard is turned off, all of the stored memories of the **SEQUENCER** and settings for MIDI, the foot switch, etc. are erased and return to their factory-preset (initialized) status.

■ **KN400**
The various memory contents and settings of the **SEQUENCER**, **COMPOSER**, MIDI, foot switch, etc. remain in the internal memory of the instrument for about one week even after the **POWER** button is turned off. To reset all the memories and settings to their factory-preset status (initialized settings), follow the procedure below.

1. Press the **POWER** button to turn off the instrument.

2. While depressing all three **MANUAL PERCUSSION** buttons, press the **POWER** button to turn on the instrument.



Part V MIDI

What is MIDI?

MIDI (Musical Instrument Digital Interface) is the international standard for digital communication of electronic musical instrument data.

This means that any equipment which has a MIDI terminal—such as electronic musical instruments and personal computers—can easily exchange digital data with other MIDI equipment without resorting to complicated conversions or connections.

What can you do with MIDI?

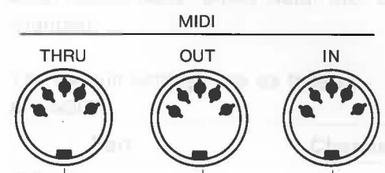
Control another connected MIDI keyboard
By playing on one MIDI keyboard, you can produce a performance on one or more connected MIDI keyboards. If different sounds and effects are assigned to each keyboard, one person playing on one keyboard can produce an ensemble performance of many instruments. Another use would be to centrally control the sounds, effects and volumes of connected instruments on one keyboard.

Automatic performance on the keyboard
If performance data for a MIDI instrument is stored in a computer or MIDI sequencer, the stored data can be used for automatic performance of the MIDI instrument.

Synchronized performance
Play along with a connected MIDI sequencer or rhythm machine for a synchronized performance.

ENGLISH

About the MIDI terminals



IN: The terminal by which this instrument receives data from other equipment.

OUT: The terminal that transmits data from this instrument to other equipment.

THRU (KN400):
The terminal that transfers data from the **IN** terminal directly to other equipment.

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

The following kinds of data can be transmitted/received

- Keyboard key note (keyboard on/off) data
- Keyboard velocity data (KN200: receive only)
- Pitch bend data (KN400)
- Control change data
  - modulation
  - balance
  - main volume
  - sustain
  - rhythm variation
  - fill in, intro & ending
  - digital celeste
- Program change data (sound for each part, and **DRUMS** instrument)
- Clock signal
- Start/stop data

Note: Data cannot be transmitted/received when the **DEMO** ♪ button is on.

Connection examples

- To generate sound from a connected instrument by playing this instrument

- To generate sound from this instrument by playing a connected instrument

- To generate sound from this instrument by operating a connected sequencer

Basic channel

There are 16 basic channels (1~16) for MIDI signals. The channels on the transmission side and receiving side must match before keyboard on/off data, sound data, effect data, etc. can be exchanged.

The default settings are as follows:

- KN200

Part	Channel
POLY	1
BASS	3
ACCOMP 1	5
ACCOMP 2	9
ACCOMP 3	10
DRUMS	15
CONTROL	16

- KN400

Part	Channel
POLY 1	1
POLY 2	4
BASS	3
ACCOMP 1	5
ACCOMP 2	9
ACCOMP 3	10
DRUMS	15
CONTROL	16

ENGLISH

Setting MIDI functions

Here is an outline of the procedures for setting the various MIDI functions:

I. Enter the MIDI function-setting mode.

↓

II. Set the functions for each part.

1. Select the part.
2. Set each function.
   - Basic channel
   - Local control

Repeat for each part.

↓

III. Set the functions common to all parts.
- Receive mode
- Transmit mode
- Program change mode
- Note only
- **PANEL MEMORY** program change (KN400)
- MIDI clock
- **START/STOP**

↓

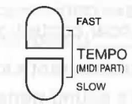
IV. Exit the MIDI function-setting mode.

ENGLISH

I. Enter the MIDI function-setting mode

1. Press the **SUB BALANCE/MIDI** button two times.

2. While " M I d " (KN200) or " M I d I " (KN400) appears on the display, press either **TEMPO** button.



II. Set the functions for each part

■ Select the part

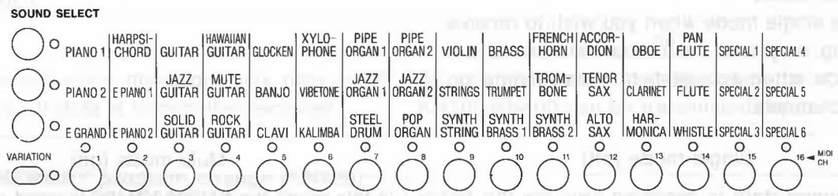
Select the part whose functions you wish to set first with the **TEMPO** buttons.

- The indication for the selected part will appear on the display.

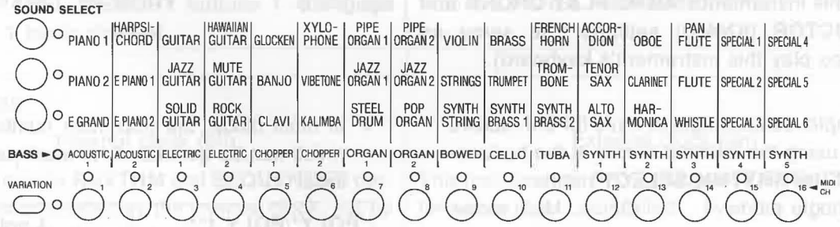
■ Basic channel

In the **SOUND SELECT** matrix, use the horizontal row of buttons to select a channel (1~16).

KN200



KN400



- It is not necessary to set the functions for the **CONTROL** part, which is for transmitting/receiving **MAIN VOLUME** data. Basic channel 16 is automatically assigned for this part.
- Channel 16 is reserved for the **CONTROL** part, so select from channels 1~15.
- The same basic channel cannot be assigned to two or more parts. If you selected a channel which has already been set, an error beep sounds.

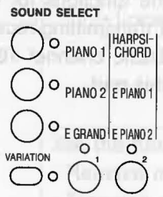
■ **Local control**

Specify, for each part, whether the performance played on this instrument's keyboard is output by this instrument's sound generator or not.

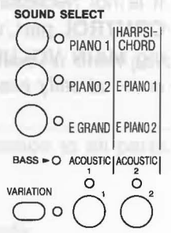
Local control on	Local control off
Notes play on this instrument's keyboard are output by this instrument's sound generator and are sent to the **MIDI OUT** terminal.	Notes played on this instrument's keyboard are not output by this instrument's sound generator but are sent to the **MIDI OUT** terminal.

Set local control to on/off by using the **VARIATION** button.

KN200



KN400



- The lit **VARIATION** indicator means the local control on status.

Set the MIDI functions for each of the other parts.

III. Set the functions common to all parts

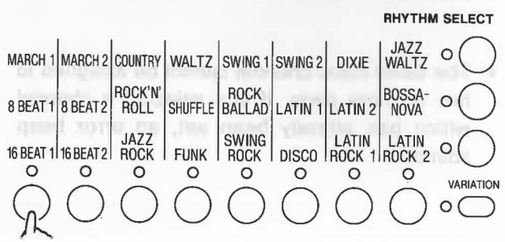
■ **Receive mode**

Set to the single mode when you wish to receive data using only one basic channel. Set to the multi mode when you wish to receive data on multiple channels.

Single mode (off)	Multi mode (on)
Performance data is received only for the basic channel assigned to the **POLY** (KN200) or the **POLY 1** (KN400) part. The performance is controlled by this instrument's **AUTO PLAY CHORD** and **CONDUCTOR** (KN400) settings (the same as when you play this instrument's keyboard).	In this mode the KN200/KN400 is used as a sound generator, and data can be received independently for all sound parts for which a basic channel is assigned.

For example, select single or multi for the receive mode by using the leftmost button in the horizontal row of the **RHYTHM SELECT** matrix.

Off.....Single mode On.....Multi mode



- In multi mode, the maximum number of notes which can be generated for each part is as follows:

POLY*/POLY 1**	4 notes
ACCOMP 1	4 notes
ACCOMP 2	3 notes
ACCOMP 3	
BASS	1 note
DRUMS	4 notes

*KN200 **KN400

■ **Transmit mode**

You can send data for the automatic accompaniment pattern of the **AUTO PLAY CHORD.**

APC mode (on)	Chord mode (off)
The **AUTO PLAY CHORD**'s **ACCOMP** and **BASS** patterns which are formed by playing chords on this instrument's keyboard are transmitted as performance data.	The chord data is transmitted exactly as the chords are played on the keyboard.

■ **Program change mode**

You can match the sound change data when transmitting/receiving between different Technics instruments.

Normal (off)	Technics (on)
The program change numbers correspond to the order of the sounds as they are lined up from the leftmost sound of the bottom row and beginning with 1. The **KEYBOARD PERCUSSION** instrument sounds correspond to the Keyboard's key note numbers.	Program change numbers are standardized among all Technics models which are set to this mode: the program change number assigned to a given sound on one model is assigned to the same sound on all models in the same mode. The **KEYBOARD PERCUSSION** instrument types correspond to the same key note numbers for connected Technics models set to this mode.

■ **NOTE ONLY**

on	off
Of the channel voice message, only note on/off and all-note-off data is transmitted/received.	All channel voice message data used in the KN200/KN400 can be transmitted/recieved.

■ **PANEL MEMORY program change (KN400)**

Enable (on)	Disable (off)
You can transmit/receive program change data from the **PANEL MEMORY** buttons **1~4** through the **POLY 1** basic channel.	You cannot transmit/receive program change data from the **PANEL MEMORY** buttons.

■ **MIDI clock**

Internal clock (off)	External clock (on)
This instrument's **RHYTHM** and **SEQUENCER** performance is controlled by the internal clock, not by the connected instrument's clock.	This instrument's **RHYTHM** and **SEQUENCER** performance is controlled by the connected instrument's clock.

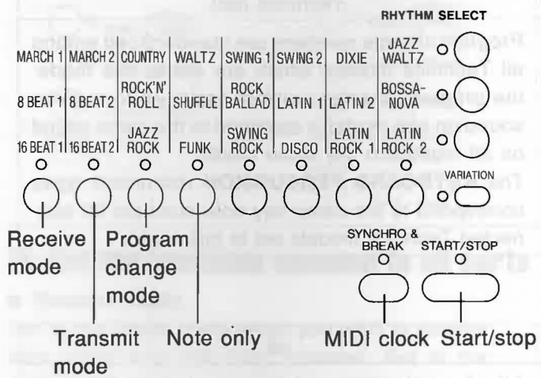
■ **START/STOP**

Enable (on)	Disable (off)
RHYTHM and **SEQUENCER** start/stop data are received/transmitted.	**RHYTHM** and **SEQUENCER** start/stop data are not received/transmitted.

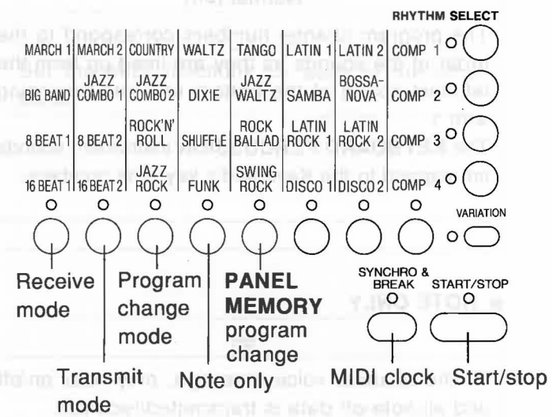
Set the on/off status of each of the above modes by using the buttons in the horizontal row of the **RHYTHM SELECT** matrix.

- In the modes described above, the "on" and "off" indications refer to the corresponding button's on/off status.

KN200

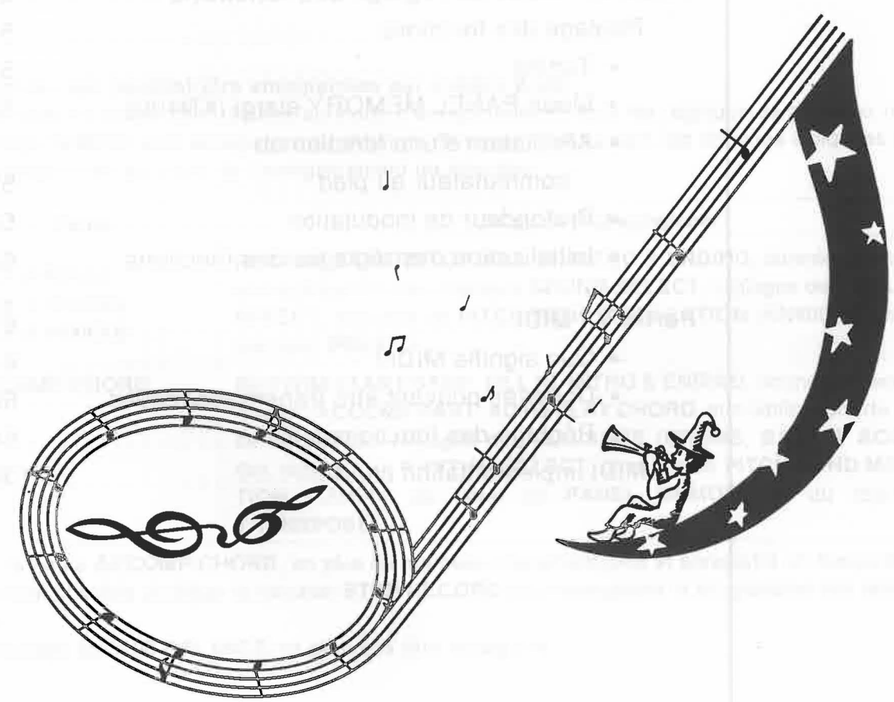


KN400



IV. Exit the MIDI function-setting mode.

When you have finished making all the settings, press the **SUB BALANCE/MIDI** button to turn it off.



Keyboard
[SX-KN200/SX-KN400]

MIDI Implementation Chart

(Transmitted)

Function		POLY (KN200)/ POLY 1 (KN400)	POLY 2 (KN400)	ACCOMP 1	ACCOMP 2	ACCOMP 3	BASS	DRUMS	CONTROL	Remarks
Basic Channel	Default	1~16	1~16	1~16	1~16	1~16	1~16	1~16	1~16	memorized
	Changed	1~16	1~16	1~16	1~16	1~16	1~16	1~16	1~16	
Mode	Default	3	3	3	3	3	3	3	3	OMNI OFF POLY MODE
	Messages	×	×	×	×	×	×	×	×	
	Altered	—	—	—	—	—	—	—	—	
Note Number		31~102	31~102	31~102	31~102	31~102	31~102	36~69**	—	Changes depending on the position of the transpose control.
	True voice	—	—	—	—	—	—	—	—	
Velocity	Note ON	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	—	
	Note OFF	× (9nH:v=0)	× (9nH:v=0)	× (9nH:v=0)	× (9nH:v=0)	× (9nH:v=0)	× (9nH:v=0)	× (9nH:v=0)	—	
After Touch	Key's	×	×	×	×	×	×	×	×	
	Ch's	×	×	×	×	×	×	×	×	
Pitch Bender		× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	×	×	
Control Change	1	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	×	×	modulation
	7	○	○	○	○	○	○	○	×	volume
	64	○	○	○	×	×	○	×	×	sustain
	80	×	×	○	×	×	×	×	×	auto play chord
	82	×	×	×	×	×	×	○	×	intro & ending, fill in
	93	○	○	×	×	×	×	×	×	chorus
Prog Change		○	○	○	× (KN200) ○ (KN400)	× (KN200) ○ (KN400)	○	○	×	
	True #	—	—	—	—	—	—	—	—	
System exclusive		×								
System common	Song Pos	×								
	Song Sel	×								
	Tune	×								
System Real Time	Clock	○								
	Commands	* ○ ×								start/stop, continue
Aux Messages	Local ON/OFF	×	×	×	×	×	×	×	—	
	All notes OFF	○	○	○	○	○	○	○	—	
	Active Sense	○								
	Reset	×								
Notes		* ○ × .....Whether or not the data for each of these items is transmitted can be set. **When the program change mode is set to Technics (on), note numbers for **DRUMS** differ.								

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

Keyboard
[SX-KN200/SX-KN400]

MIDI Implementation Chart

(Recognized)

Function		POLY (KN200)/ POLY 1 (KN400)	ACCOMP 1	ACCOMP 2	ACCOMP 3	BASS	DRUMS	CONTROL	Remarks
Basic Channel	Default	1~16	1~16	1~16	1~16	1~16	1~16	1~16	memorized (KN400)
	Changed	1~16	1~16	1~16	1~16	1~16	1~16	1~16	
Mode	Default	3	3	3	3	3	3	3	OMNI OFF POLY MODE
	Messages	×	×	×	×	×	×	×	
	Altered	—	—	—	—	—	—	—	
Note Number		0~127	0~127	0~127	0~127	0~127	36~69***	—	Changes depending on the sound.
	True voice	36~119	36~119	36~119	36~119	24~107	36~69	—	
Velocity	Note ON	○	○	○	○	○	○	—	
	Note OFF	×	×	×	×	×	×	—	
After Touch	Key's	×	×	×	×	×	×	×	
	Ch's	×	×	×	×	×	×	×	
Pitch Bender		○	○	○	○	○	×	×	
Control Change	1	○	○	○	○	○	×	×	modulation
	7	○	○	○	○	○	○	×	volume
	64	○	○	○	○	○	×	×	sustain
	80	×	○	×	×	×	×	×	auto play chord
	82	×	×	×	×	×	○	×	intro & ending, fill in
	93	○	×	×	×	×	×	×	chorus
Prog Change		0~47	0~47	0~47	0~47	0~15	0~23 (KN200)		
	True #	0~3** (KN400)					0~31 (KN400)		
System exclusive		×							
System common	Song Pos	×							
	Song Sel	×							
	Tune	×							
System Real Time	Clock	○							
	Commands	* ○ ×							start/stop, continue
Aux Messages	Local ON/OFF	×	×	×	×	×	×	—	
	All notes OFF	○	○	○	○	○	○	—	
	Active Sense	○							
	Reset	×							
Notes		* ○ × .....Whether or not the data for each of these items is transmitted can be set. **P. MEMO/P. CG ***When the program change mode is set to Technics (on), note numbers for **DRUMS** differ.							

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

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