Technics

Caution

Voltage (except North America, Europe [excluding U.K.], and Taiwan)
Be sure the voltage adjuster (below the keyboard) is in accordance with local voltage in your area before using this unit. Use a screwdriver to set the voltage adjuster to the local voltage.

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

BEFORE YOU PLAY, PLEASE READ THE CAUTIONARY COPY APPEARING ON PAGE 35.

IMPORTANT (for UNITED KINGDOM)
THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

BLUE — NEUTRAL
BROWN — LIVE

As the colours of the wires in the mains lead of this unit 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 with the letter N or coloured BLACK.

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

This apparatus was produced to BS 800: 1977.

Attention

Tension (à l'exception de l'Amérique du nord, de l'Europe et de Taiwan)
Avant de mettre cet appareil en marche, s'assurer que le sélecteur de tension sous le clavier est réglé sur la tension locale. Pour régler le sélecteur de tension utiliser un tournevis plat (−).
Avant toute utilisation, prière de lire l'avertissement apparaissant à une page ultérieure.

Precaución

Tensión (excepto América del Norte, Europa y Formosa)
Cerciórese de que el ajustador de tensión, debajo del teclado, está ajustado al valor de la tensión de su residencia. Efectúe esta comprobación antes de utilizar el órgano. Para ajustar la tensión emplee un destornillador para posicionar el ajustador de tensión al valor correspondiente.
Antes de empezar a tocar, lea las precauciones de las páginas siguientes.

ENGLISH

FRANÇAIS

ESPAÑOL

Part I   Basic Functions

In this section, basic functions of voice, effect and rhythm are explained. For various storage functions that use the **record** button, refer to Part II.

Most buttons and tablets are equipped with LEDs which light up when in operation.
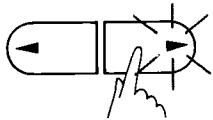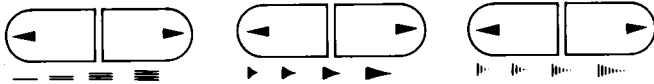
Tablet (EX60 only)

- Turns off when this part is pressed.

- The LED lights up and the function turns on when this part is pressed.
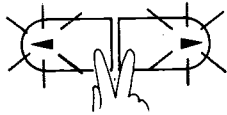
Controls

Volume and effects on this organ are controlled by 2- or 4-stage buttons, except the transpose and rhythm tempo controls.
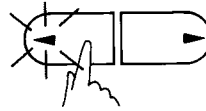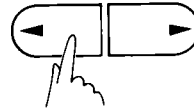
Volume, Effect

- When the right button is pressed, the LED on the button lights up and the volume or effect is at the maximum.
- If both buttons are pressed simultaneously, the volume or effect returns to the normal or intermediate level and both LEDs turn on.

- When the left button is pressed, the LED on the button lights up and the volume or the effect is decreased.
- If the left button is pressed again, the volume or effect is at the minimum and the LED turns off.
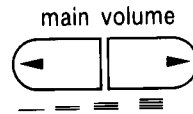
- Pressing this button increases the volume, and the LED on the button lights up.
  Pressing it again causes the LED to turn off and the volume to return to the normal level.

Power/Main Volume Controls

Pressing the **power** switch turns the organ on.

Main volume adjusts the loudness of the entire organ.

main volume
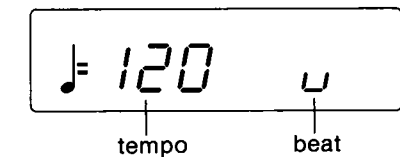
power
▲ off ▲ on

① Musical Display

The LCD display shows the musical contents of what is being played and the function selected.

I. Display of musical contents

a) During Manual Play:
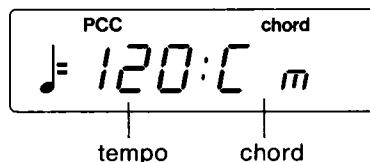The tempo and beat are displayed.

tempo   beat

beat display

I ...1   *L* ...2   *U* ...3   *O* ...4

II. Display of stored contents

When storing the Program Chord Computer, Play Sequencer, Fullband Setting Computer, etc. (which are explained later), the contents being stored are displayed. See each section for details.

b) During Auto Play Chord or Program Chord Computer play (refer to ㉙, ㉜):
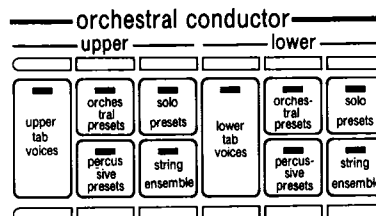The tempo and chord are displayed.

• Chord names C♯, D♯, G♭, G♯, and A♯ are displayed as D♭, Eb, F♯, A♭ and B♭, respectively.

tempo   chord

E
N
G
L
I
S
H

② Orchestral Conductor
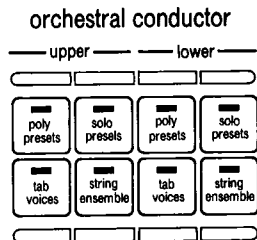
(EX50)

(EX60)

The Orchestral Conductor is the nerve center of the Technics organ. It allows you to instantly set up complete groups of voices or instrumental effects; you can even change them as you play. This adds a versatility to your playing that few professionals enjoy.

Understanding the Orchestral Conductor is easy if you think of each button as an "on-off switch" that controls the voice group indicated. The buttons each have a light that illuminates when the button is pressed. Here is a basic description of each button that appears on the various models:

Tab voices allows you to set-up a complete voice tab combination (registration) for the upper keyboard (or lower keyboard) by merely pressing this one button.

NOTE: This button MUST be pressed whenever you wish to use any of the flute or string voices.

Percussive presets brings in the sounds of instruments that are plucked or struck—piano, harpsichord, and vibraphone.

Orchestral presets allows you to instantly add the sounds of such effects as wah brass, clarinet, and trombone.

Poly presets brings in the sounds of both orchestral and percussive instruments.

**String ensemble** brings in the rich, shimmering sound of strings.

Solo presets allows you to add contemporary effects to your instrumental sounds.

All of these buttons are self-cancelling. To deactivate one, you must press another. If you wish to combine some of the sounds, press two or more buttons at the same time or hold one down and press another.

The voices of **poly presets** (EX50), **percussive presets** (EX60), **orchestral presets** (EX60) and **solo presets** can be used on each keyboard independently but not on both at once.

The presets of the Technics organ are designed to reproduce true instrumental effects. They can also produce treble and bass sounds outside the range of the real instrument. Particularly in the bass range, the tones start up slowly. Therefore, if you play fast, use the treble range for the most effective performance.

3

③ Upper Tab Voices
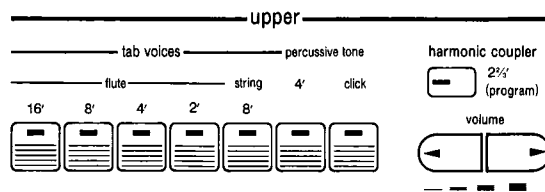
(EX50)
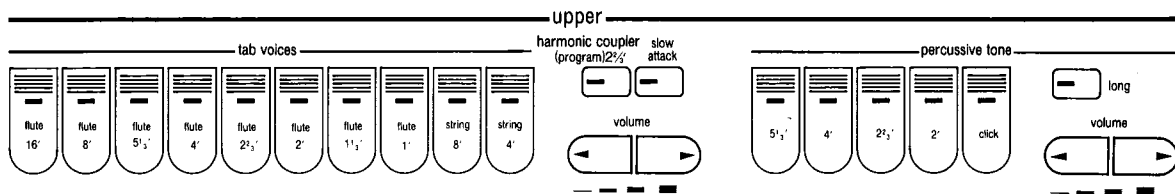
(EX60)

Footage Marks

To help you use the Technics solo voices most effectively, you should know something about the numbers that appear on many of the voice tabs. These are called footage marks because they refer to the lengths of pipe used to create musical tones on a pipe organ. The bigger the number (or length of pipe), the lower the tone.

Tab Voices

Select the basic voices of flute and strings.
Using the **volume** buttons, adjust the volume of the **tab voices** and **percussive tone**.

The flute volume level of the **tab voices** is preadjustable. (Refer to ㊳.)

Percussive Tone

This feature adds a tone with a fast initial attack to any of the upper voice tab sounds; or it may be used alone. The effect is what you hear when a player strikes a piano key or plucks a banjo string. It is particularly useful when you play jazz or the rock organ sounds.
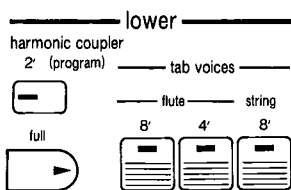
The tabs with footage numbers create tones of those pitch levels; use the fractional voice sparingly—as spices in cooking.

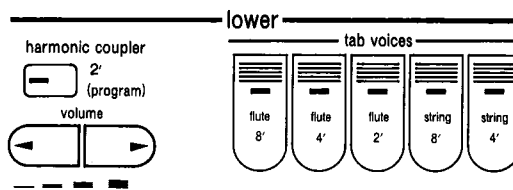**Click** is used to provide a "pop" effect each time you press a key on your upper keyboard.

Long causes the percussive tones to decay more slowly (EX60 only).

The **volume** buttons let you adjust the **percussive tone** (EX60 only).
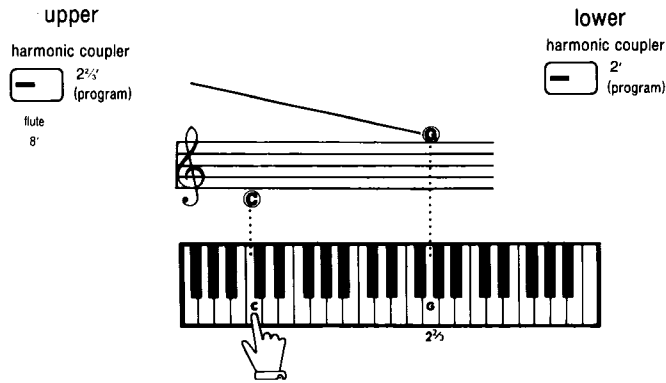
④ Lower Tab Voices

(EX50)

(EX60)

These voices are heard when you play on the lower keyboard; they are used mostly for accompaniment, played by your left hand. Try them individually and in combination.

Adjust the volume using the **full** button (EX50) or the **volume** buttons (EX60).

4

⑤ Harmonic Coupler

upper

harmonic coupler

▭ 2⅔'
(program)

flute
8'

lower

harmonic coupler

▭ 2'
(program)

The harmonic coupler might be called "phantom voices" because they add sounds that were not built into the voice tab groups. To illustrate, set up the organ to play with only the **flute 8'** voice on the upper keyboard.
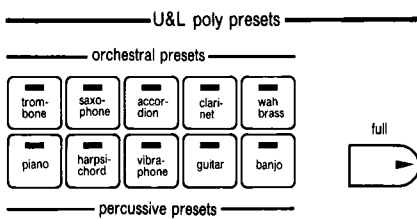
If you play the C key indicated in the illustration, you will hear the C note shown. Then, press **upper harmonic coupler 2-2/3'**. Play the key again and you will hear the C note plus the high G note shown.

To hear what the harmonic coupler can really do, press **upper flute 16', 8',** and **4'** and play the same C key. Then add **harmonic coupler 2-2/3'** and play the key again—from three voices to six.
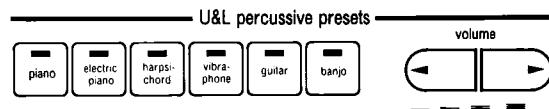
Harmonic couplers work with all voice groups except **solo presets**. It is effective on up to four notes played simultaneously on either keyboard.

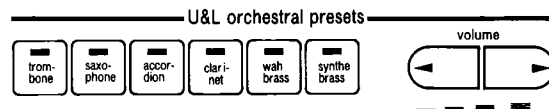- Using the **harmonic coupler** button, you can create your own harmonic couplers for storage. (Refer to ㊱.)

⑥ Poly Presets
Percussive Presets/Orchestral Presets

─────── U&L poly presets ───────

─── orchestral presets ───

trom-bone	saxo-phone	accor-dion	clari-net	wah brass
piano	harpsi-chord	vibra-phone	guitar	banjo

─── percussive presets ───

full
▭►

(EX50)

─────── U&L percussive presets ───────

volume

piano	electric piano	harpsi-chord	vibra-phone	guitar	banjo

◄ ►
▬ ▬ ▬ ▬

─────── U&L orchestral presets ───────

volume

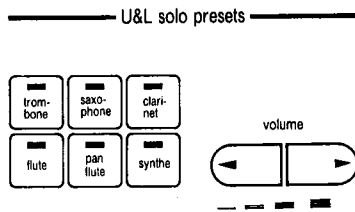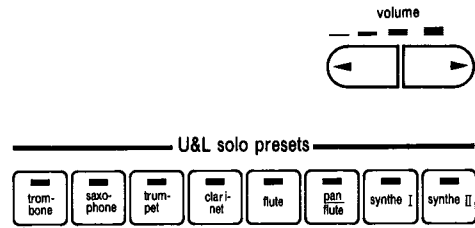| trom-bone	saxo-phone	accor-dion	clari-net	wah brass	synthe brass

◄ ►
▬ ▬ ▬ ▬

(EX60)

- In the EX50, using the **poly presets** button on the Orchestral Conductor, the **orchestral presets** and the **percussive presets** can be selected.

- In the EX60, the **percussive presets** and the **orchestral presets** can be selected individually on the Orchestral Conductor.

- Adjust the volume using the **full** button (EX50) or the **volume** buttons (EX60).

- Voices cannot be mixed.

⑦ Solo Presets

U&L solo presets

trom-bone	saxo-phone	clari-net
flute	pan flute	synthe

volume

(EX50)

volume

U&L solo presets

| trom-bone | saxo-phone | trum-pet | clari-net | flute | pan flute | synthe I | synthe II |

(EX60)

Technics has made synthesizer effects easy—they're all preset sounds! Each voice produced by the PCM system is realistic with all the typical characteristics of each instrument.

Volume buttons let you adjust volume levels.

All these sounds are monophonic, which means they will sound on only one key at a time no matter how many you press.

- When only selecting solo presets on the Orchestral Conductor, the key pressed will sound, so that rapid passages can be easily played up and down the keyboard.

- Other groups of voices can be combined using the Orchestral Conductor.
  Play the chord with your left hand and the melody with your right hand. If you remove your right hand from the keyboard, the solo preset sound will not shift to the left hand so that the melody can be successfully played. (When the interval between the chord and melody is less than one whole note, the sounds will shift to the left hand.)

⑧ String Ensemble

string ensemble

upper volume

lower volume

(EX50)

string ensemble
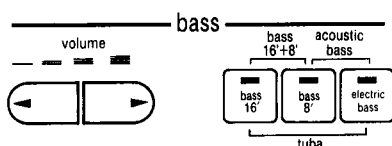
upper volume   lower volume
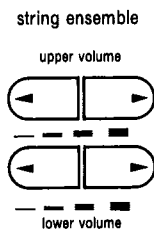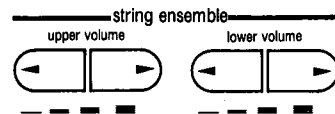
(EX60)

This feature allows you to create beautiful, shimmering string sounds, as either a solo voice or an entire string section.
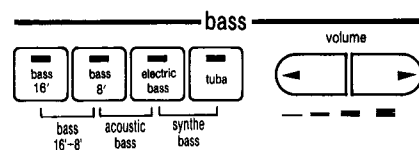
Upper volume adjusts the loudness of the **string ensemble** on the upper keyboard.

Lower volume adjusts the loudness on the lower keyboard.

⑨ Pedal Voices

bass

volume

| bass 16' | bass 8' | electric bass |

bass 16'+8'   acoustic bass

tuba

(EX50)

bass

| bass 16' | bass 8' | electric bass | tuba |

bass 16'-8'   acoustic bass   synthe bass

volume

(EX60)

These buttons utilize the PCM system to provide the full body of real-life bass sounds.

Volume allows you to adjust the loudness of the pedal tones in relation to the upper and lower keyboard voices.

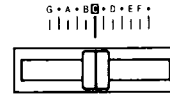ENGLISH

⑩ Pedal to Lower (EX60 only)

This is known as a "coupler" because it couples the pedal sounds to the lower keyboard. When the button is pressed you can play bass notes on your lower keyboard.

- All of the pedal sounds become 16' on the lower keyboard. Therefore, **bass 8'** and **bass 16'** can reach the same pitch.

⑪ Transpose

transpose

G • A • B C • D • E F •

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

Adjust the key by moving the slide control from the normal key of C.

- The pedal keyboard notes are lowered one octave when 8' notes are transposed higher than a major 3rd, and become one octave higher when 16' notes are transposed to lower than C.
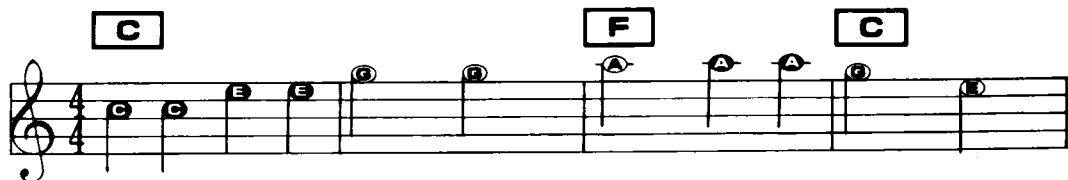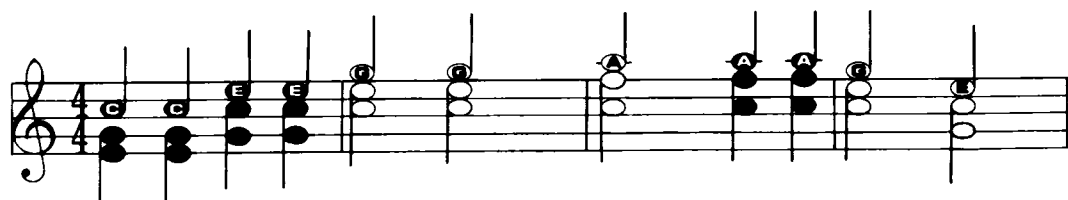
⑫ Techni-Chord

techni-chord

close open / on
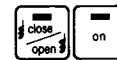
Techni-Chord makes your melodies sound like those of a professional organist by transferring the chord tones you play on the lower keyboard to each melody note you play on the upper keyboard.

Set up your organ to play the example below—use either One-Finger mode, or form your own.

Holy, Holy, Holy

Now press the **on** button and play the example again. Here's how your one-finger melody looks when written out—three-note melody chords!


Now press the **close/open** button to play the harmony style in the open position usually found in the brass ensemble and choral.

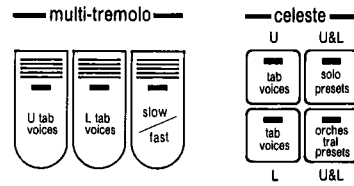Techni-Chord functions for any sound other than the solo presets.

Techni-Chords cannot be played using the lower seven keys of the upper keyboard.

Using the **close/open** button, a different harmony style can be selected. (Refer to ㉗.)

⑬ Chorus/Tremolo/Celeste
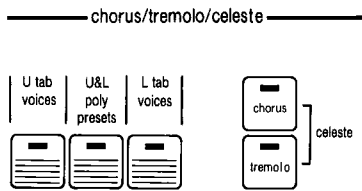
(EX50)

(EX60)

The basic effect of tremolo is a rapid change in volume (loudness).

And celeste is the multi-directional effect which makes you feel you are playing in a huge concert hall or cathedral.

The percussive tone is not affected by the celeste and tremolo effects.

The tremolo speed can be adjusted. (Refer to ㉟.)

■ EX50

U tab voices lets you bring any of the upper tab voices into the tremolo/celeste effect; **L tab voices** allows you to do the same with lower keyboard voices.

U&L poly presets applies the chorus/tremolo/celeste effect to these keyboard instruments.

The two buttons on the right are used to select effects.

With the **chorus** button on, you will hear the chorus effect—a very slow tremolo, especially suited to religious and classical music.

Pressing both **chorus** and **tremolo** buttons simultaneously will create the celeste effect.

■ EX60
Tremolo

In the EX60, a multi-tremolo effect can be selected.

U tab voices lets you bring any of the upper tab voices into the tremolo effect.

L tab voices allows you to do the same with lower keyboard voices.

Slow/fast — In the off position, you'll hear the very slow tremolo, especially suited to religious and classical music. Press the button to the on position and hear the faster effect, ideal for most other kinds of music.

Celeste

U tab voices lets you bring any of the upper tab voices into the celeste effect; **L tab voices** allows you to do the same with lower keyboard voices.

Orchestral presets applies the celeste effect to these instruments on both keyboards.

Solo presets — The celeste effect may be applied to the solo presets voices on both keyboards.

⑭ Sustain Controls

These Technics models have sustain incorporated with their upper and lower keyboards and pedals.

Regardless of where it is used, sustain allows the sound of the notes to fade gradually away (decay).

Pedal sustain is always at work, the length of which can be adjusted by using the sustain control. To combine sustain with the **upper tab voices, lower tab voices, poly presets** (EX50) or **percussive presets** (EX60), press the respective button. This feature does not work when upper tab voices or lower tab voices are combined with orchestral presets.

Sustain is applied to string ensemble with the **upper** or **lower** button.

• In the EX50, only the percussive presets of the poly presets can be sustained.
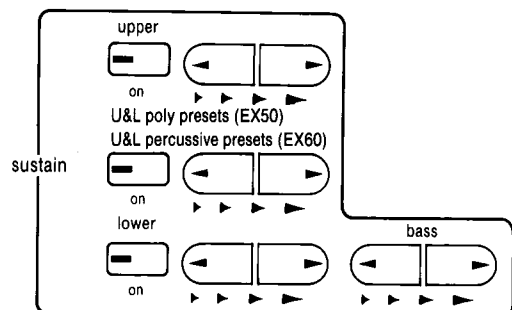
• Using the control buttons of the **U&L poly presets** (EX50) or the **U&L percussive presets** (EX60), the decay period of the percussive presets can be adjusted. When the keys are continually pressed, the sound will naturally fade away according to the desired decay period.

⑮ Reverb
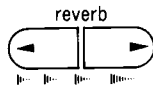
Reverb is an abbreviation for reverberation. If you've walked down a narrow, uncarpeted hallway, you may recall that your footsteps "echoed," or became louder than usual. This was due to the sound waves bouncing from the walls and ceiling instead of being absorbed into the carpeting, furniture and draperies. Because the furnishings in most rooms usually absorb all of the echo, your Technics organ is equipped with reverb to electronically replace the echo which is lost. Reverb is effective with most general settings.

⑯ Slow Attack (EX60 only)

When this button is not used, the response of the upper tab voices is instantaneous. Press a key and you will immediately hear a musical tone. Press the **slow attack** button, however, and you'll notice a slight hesitation between the time you press the key and the time you hear the tone. This effect is especially useful for imitating instruments that have a natural slow attack such as the accordion, harmonica, or the pipe organ.

⑰ Expression Pedal

The expression pedal regulates the loudness of ALL the organ voices, regardless of how individual volume controls may be set.

Pushing down with your toe makes the organ louder; pushing down with your heel makes the tone softer.

The "halfway down" position of the pedal represents the medium volume range—this is always a good starting point if dynamic marks don't appear in the music.

pp
p
mp
mf
f
ff
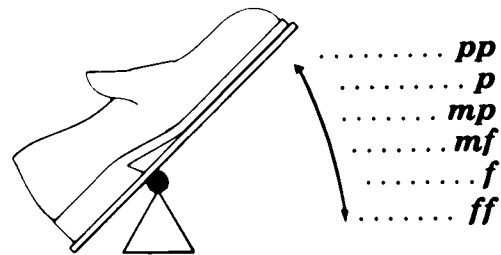
⑱ Glide Control

The glide control switch is located on the left side of the expression pedal. When pressed to the left with the side of your foot, it lowers the pitch or tuning of the organ about one half-step. The example below shows how you can achieve the Hawaiian guitar effect. Press the glide switch just before you play the note you want to "bend" (✻).
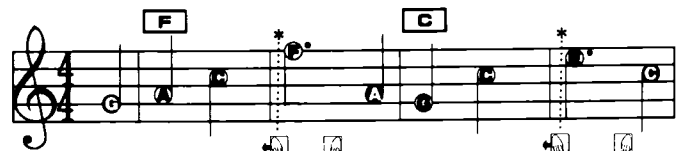
⑲ Foot Switch — Glide/Rhythm

This button allows you to use the glide control switch for two purposes—to let you to conveniently turn the automatic rhythm on and off, and to help you add the "glide effect" to your music.

When the button is not on, the foot switch provides the glide effect. Press the button to on and the foot switch starts and stops the rhythm.

- Other functions can be turned on and off using this foot switch. (Refer to ㉟.)

⑳ Tuning
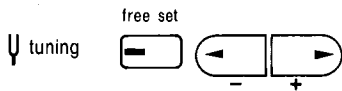
Ⴘ tuning free set

This function facilitates the adjustment of pitches when used for an ensemble with other instruments.

With the **free set** button off, the pitch is set at the standard 440 Hz.

Tuning

1. Press the **free set** button on.
2. Press the **+** control button intermittently or keep it held down to increase the pitch, and press the **−** control button to decrease it. Adjust the pitch to any other instrument in use. When the pitch is higher than the standard 440 Hz, the LED on the **+** button illuminates. If lower, the LED on the **−** button illuminates.

When playing at the standard 440 Hz, turn the **free set** button off.
The pitch adjusted in step **2** is stored, making it possible to play at this pitch when the **free set** button is turned on again.

The pitch can be adjusted within the range from 438 Hz to 446 Hz. The LED will flash when the pitch reaches the upper or lower limit of the adjustment range.

♣Musical≣Display≣

- The pitch is displayed when the **free set** button is turned on. The pitch display turns automatically to the previous display about 5 seconds after finishing tuning.

Every time the **+** or the **−** button is pressed, the pitch changes by about 1/3 Hz.
The bars on the right indicate the decimal numbers as follows: _ indicates 0 Hz, = indicates 1/3 Hz, and ≡ indicates 2/3 Hz.

- 443.0 Hz

```
443:_
```
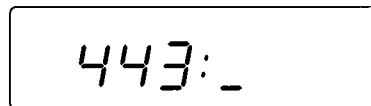
# ㉑ Voice Setting Computer

Voice Setting Computer
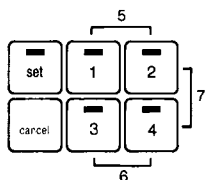
(EX50)
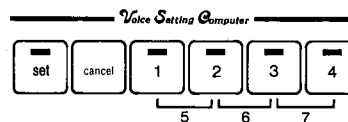
(EX60)

All voices and effects can be programmed into the Voice Setting Computer. NOTE: No slide control setting can be recorded in the computer.

The button marked **cancel** lets you shut off the Voice Setting Computer and change to standard organ sounds.

Buttons 1 through 7 are used to store the voices and effects for both keyboards and pedals.

1. Set registration.

2. With the **set** button held down, press the **1** button. This stores your setting in the memory bank. That's all it takes!

Voice Setting Computer
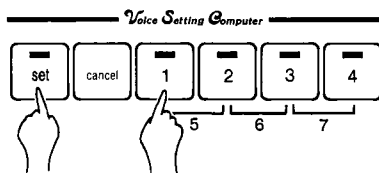
To change your custom registrations, just set up the tabs you want and then press **set** and the desired button. The previous setting is automatically replaced by the new one.

You can change the selected voice and effect from the memory by pressing any other button. The memory contents in the organ, however, remain unchanged.

You can store in buttons **1—7** any of the 20 factory-preset voice combinations. (Refer to ㉛.)

The on or off condition of the harmonic couplers and that of the open/close of the Techni-chord are stored but the programmed contents are not.

㉒ Drum Percussion (Automatic Rhythm)

(EX60)
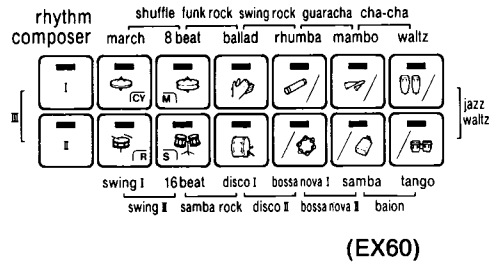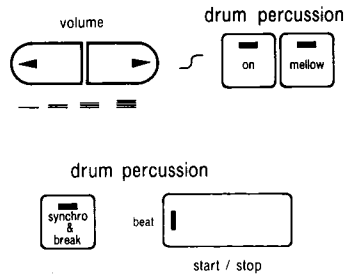
The rhythm unit, which employs a pulse code modulation (PCM) system for a more realistic sound, consists of rhythm selector buttons, start/stop devices, a downbeat light and volume and speed controls.

The rhythm buttons themselves are self-cancelling—if one is pressed and you choose a new rhythm, the light on the first button goes out when you press the button for the new pattern. Pressing the two adjacent buttons simultaneously selects the rhythm indicated between them.

The **start/stop** button instantly starts and stops the drum rhythm. The rhythm always starts on the first beat of a measure. The LED light on this button indicates the downbeat by flashing on the first beat of each measure. This helps you relate the drum rhythms to the music and helps you keep track of "where you are" while playing.

Synchro & break starts the drum rhythm you've chosen only when a pedal or a key on the lower keyboard is pressed.

Volume allows you to adjust the loudness of the drums to be in balance with the keyboard voices.

Press the **drum percussion on** button to turn on when you use Drum Percussion (EX60 only).

The **mellow** button softens the drum sounds (EX60 only).

The sliding **tempo** control adjusts the tempo.

● In the EX60, set any tempo in the **tempo set** button. (Refer to ㉞.)

㉓ Drum Variation (EX60 only)

When the **on** button is turned on, the specific sound of an instrument such as the bass drum or snare drum can be changed.
● For example, the drum sound changes to an electronic drum with **disco I**.
● The rhythm without a drum such as Latin-type cannot be changed.

drum variation

㉔ Arrange Percussion (EX60 only)

arrange percussion

Arrange percussion is designed to change the patterns and to add various percussion instrument sounds to enrich each of the 23 rhythms.

I is the simplest rhythm pattern.

With II on, an enriched bass, for example, bass with a conga is added for pattern variations.

With III (I and II pressed simultaneously), an enriched treble, for example, with a tambourine, is added for more pattern variations.
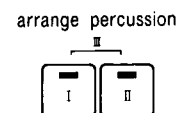
● Try this feature for all individual automatic rhythm patterns.

● Automatic rhythms are designed so that their patterns change according to performance conditions (such as the number of keys being pressed). This "play response" function creates a greater change of patterns when **arrange percussion II** or III is turned on.

11

㉕ Intro & Ending

The rhythm is started after the intro pattern is completed, and stopped after the ending pattern is completed.

**Intro:** When the **on** button is turned on and the rhythm is started, the normal rhythm pattern will start after one measure of the intro pattern.

Ending: If the **on** button is pressed at the end of a rhythm tune, one measure of the ending pattern will occur, and then the rhythm will stop.

- If the **vari** button is turned on, the ending pattern will be changed.

㉖ Fill In

fill in
solo

[I] [II]
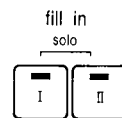
Two patterns, I and II are available for **fill in**.

During rhythm play, if button I or II is pressed, the leftover portion of that measure will immediately be filled in. If the button is pressed at the last beat of the measure, that beat and the following measure will be filled in.

- When button I or II is turned on the rhythm is started, a normal rhythm pattern will start after one measure of the intro pattern.

Solo

Pressing the **fill in** I and II buttons simultaneously produces solo effects.

- The **solo** only slightly affects the sound of the automatic rhythm performance when there is constant movement on the keyboard, but a brilliant drum solo is produced when the notes are held or when the keyboard is not being played. Pressing the **fill in** I or II button returns the rhythm to normal after one measure of fill in is played.

- If the rhythm starts after the I and II buttons are pressed simultaneously, a solo introduction is brought in for 8 measures before the normal rhythm begins.

㉗ Rhythmic Orchestra

volume   rhythmic orchestra

◁ ▷ — [I/II] [rhythmic] [melodic]
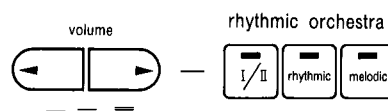
These controls work exclusively in conjunction with the automatic rhythms. No matter which drum pattern you use, the rhythmic voices provides chords that are perfectly synchronized with the automatic rhythm. Try all the drum patterns on your model and listen to the rhythmic orchestra voice with each.
Rhythmic orchestra can be used with or without Auto Play Chord.
If you combine rhythmic orchestra with the lower keyboard voices, you will hear a combination of sustained (continuous) and rhythmic chord accompaniment.

- Pressing the **rhythmic** button allows chordal accompaniment.
- Pressing the **melodic** button allows melodic accompaniment.
- Pressing the **I/II** button further changes the accompaniment pattern.

NOTE: Pressing the **lower harmonic coupler** button enhances the sound from the **rhythmic** button.

㉘ One Touch Play

If this button is pressed, the appropriate voice and effect registration for the rhythm chosen are automatically set. Therefore, immediate play is possible if a rhythm is selected and this button is pressed for several seconds until the button stops flashing.

㉙ Auto Play Chord

Program Chord Computer
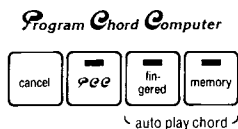
⌣ auto play chord ⌐

Auto Play Chord is an effective musical aid and a source of enjoyment regardless of your previous musical experience. Combined with other exciting Technics features—Automatic Rhythm, and Techni-Chord—Auto Play Chord can help you create orchestral and full organ sounds using only one finger on each hand. Further, it can actually help you learn to play the organ in the traditional manner. Let's see how...

The **fingered** button, if pressed, automatically selects the One Finger mode when you play only one key on the lower keyboard or the Fingered mode when playing 3 or more keys.

One finger mode allows you to play a full chord and a bass tone by pressing any single key on your lower keyboard; these chords are called *major*, indicated by a chord symbol letter (C, E♭, etc.). To play *seventh* chords (G7, B♭7, etc.), press any long, light-coloured bass pedal as you play the appropriate key. To play *minor* chords (Am, F♯m, etc.), press any short, black bass pedal as you play the appropriate key. Occasionally you'll play *minor seventh* chords (Dm7, Gm7, etc.). As you play the lower manual key with the appropriate letter-name, press any long and short bass pedals, at the same time, with your left foot.

Fingered mode also allows you to form your own chords on the lower keyboard; the correct bass tone is automatically provided. If you press any bass pedal at this time, the sound of the relevant key is produced, allowing bass playing regardless of the APC system status.

Memory provides the sound of the chord and bass tone even if you release the lower manual key(s). The chord and bass continue to sound until you play another chord or stop the rhythm.

In addition to the features listed above, your Technics organ has a walking bass feature available at all times. This allows you to automatically re-create professional bass parts when you use either pedal voice along with any of the automatic rhythms.

Cancel shuts off the Auto Play Chord feature, permitting normal play.

Set up lower keyboard and pedal voices and play the chord example below. If you use the One Finger mode, play the chord key indicated by the letter-name in each chord symbol. If you play in the Fingered mode, form the chords as shown with your left hand. Use **memory** to allow yourself time to find the correct notes.

■ **About the Break Function**
    When the **fingered** and **synchro & break** buttons are turned on and the **memory** button is turned off, the rhythm is heard while pressing the keys on the lower keyboard. If the hand is removed, the rhythm will stop. Press the keys again and the rhythm will start from the first beat.

Refer to Part I for basic operations of each function. (The section number corresponding to each operation is indicated in parentheses following the heading.)

㉚ **Record**

Record creates no effect of its own. This button is used to store functions such as the **Play Sequencer** and the **Program Chord Computer**. When you press **record**, its light and the lights of all programmable features flash quickly. Press the button for the feature you wish to use. Its light will flash slowly and the lights of the other features will go out.
NOTE: If you don't make your selection within about five seconds, all of the lights will go out—just press **record** again and then make your choice.

While depressing the **record** button, you can also press the button for the feature you wish to use. For details, see the appropriate sections.

Contents stored by using the **record** button remain in the memory for about one week even when the power switch is turned off.

Upper Keyboard Split Functions

When recording certain functions, the lower manual keyboard is used to enter program information. At this time the lower manual voices may be monitored using the lower 19 keys on the upper keyboard.

Upper keyboard	To check lower keyboard tones and effects	To check upper keyboard tones and effects
	(19 keys)	(25 keys)

Lower keyboard	Used for storage operation
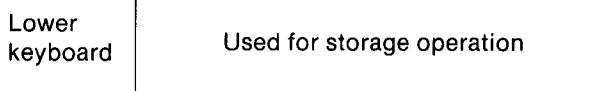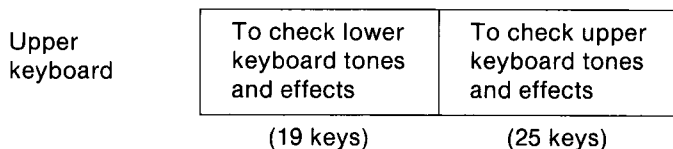
Initial Key

This **initial** key is used to set the voices and effects of the Technics organ or to return the stored contents to their factory preset state.
1. Press the **Fullband Setting Computer** button to turn it on.
2. Press the **initial** key on the lower keyboard.
   This returns any function to its factory preset state.
• The contents stored in the Play Sequencer and Fullband Setting Computer are left as they are.
• If the **initial** key is pressed during storage, only the function involved returns to its factory preset state or is cleared of its stored contents. (For details, see the appropriate sections.)
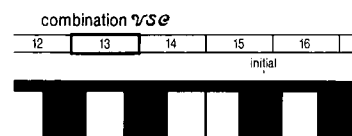
㉛ **Voice Setting Computer** (㉑)

How to Use the Factory-Preset VSC

In addition to your own registrations, the factory-preset 20 voices combinations allow you to choose your favorites for storage in buttons **1** through **7**.

1. Press the **record** button.

2. Press the **1** button to store the desired voices.

3. Select your favorite voice from the keys marked from **1** to **20** on the lower keyboard. (Playing the upper and pedal keyboards lets you check the voices and effects.)

4. Pressing the **1** button again turns the **record** button off, and the selected voice is stored in the **1** button.

• In step 4, when the **2** button is pressed instead of the **1** button, the selected voice is stored in the **1** button and the storage operation can be immediately continued for the **2** button.

After the desired voice is selected, pressing the **2** button again completes storage and turns the **record** button off. If further storage is desired, however, press the **3** button instead of the **2** button and continue as with the **1** and **2** buttons.

• The following voices are preset in the keys from **1** to **20**.

1. entertainment organ 1	11. brass ensemble 1
2. entertainment organ 2	12. brass ensemble 2
3. jazz organ 1	13. miller brass (TC)
4. jazz organ 2 (HC: U-2-2/3', L-2')	14. disco brass (HC: U-0G)
5. church organ 1 (HC: L-2')	15. synthe orchestra (HC: U-2C)
6. church organ 2	
7. string orchestra	16. funk rock
8. symphonic orchestra	17. accordion (HC: U-2C, TC)
9. society piano (HC: U-3C)	
10. jazz quartet	18. panflute
	19. full orchestra 1
	20. full orchestra 2

These voices include unique tones and effects unavailable with normal buttons and tablets.
A more impressive sound can be produced when the effects in parentheses above are used.
HC=harmonic coupler; U=upper; L=lower; TC=Techni-chord

14

㉜ Program Chord Computer

The Program Chord Computer, complete with a memory bank, is an amazing device that is exclusive to most Technics organ models. That's right—a computer built into the Technics organ! This makes it possible for you to program the chord accompaniment of an entire song and store it right inside the organ. The main advantage of this is that, while you're learning to play a song, the computer can play the accompaniment, complete with rhythm, while you concentrate on practicing the melody.

The feature is also used in conjunction with the Fullband Setting Computer, which is discussed on later pages.

There are two groups of controls that operate the Program Chord Computer—the buttons illustrated at right, and the nine keys on the right of the lower keyboard.

NOTE: A total of 100 chord entries may be made before the built-in computer memory is full. A quarter-measure (⌒⊢⊣) is counted as two chords. When the computer memory is full, short beeps will sound.

Program Chord Computer

| cancel | PCC | fin-gered | memory |

↳ auto play chord ↵

rhythm sequencer & chord composer

The **PCC** button prepares the computer for the storage of the chords of your choice (after **record** is pressed).

The eight keys are used for the actual process of storing chords in the computer. Here is what they do:

↙———↘ stores a chord for an entire measure (one chord per measure).

↦——↤ stores a chord for a half-measure (two chords per measure).

⌒⊢⊣ (pressing two keys at a time) stores a chord for a quarter-measure (four chords per measure).

Amend keys (► ◄) are used to correct individual chords in a sequence, or to change chords already in the memory bank.
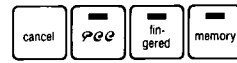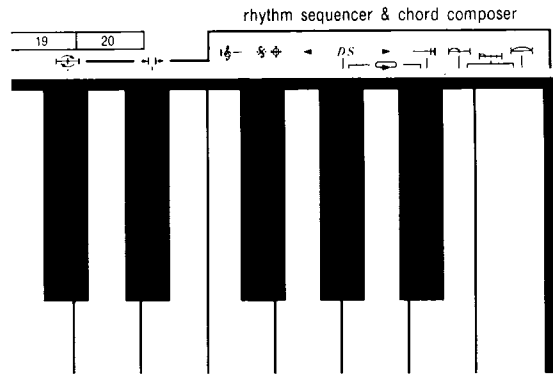
⏴ can be pressed should you wish to start programming over from the beginning.

⊣ (end) is pressed when the entire chord sequence is stored.

⊐ (pressing two keys at one time) completes storage so that performances can be automatically repeated.

►◄ ► allows you to input a pause at any time during the recording. This pause is reproduced when the recording is played back.

The use of the 𝄪 ♮ and *D.S.* keys allows you to store chords according to the music, making storage operation easy. This is explained later in detail.

♬Musical♬Display♬

It's possible to store these types of chords:

| Major	Minor	Seventh	Minor Seventh	Augmented	Diminished	Minor Seventh Flat Fifth	Major Seventh	Minor Major Seventh	Seventh Suspended Fourth
C	Cm	C7	Cm7	Caug	C° or C dim.	C⌀ or Cm7 (♭5)	CM7 or C maj. 7	CmM7	C7sus4
⌐	⌐m	⌐ ┐	⌐ m┐	⌐ A	⌐ d	⌐ m┐⁻ˢ	⌐ M┐	⌐mM┐	⌐ ┐S

Some of these chord types are not available as One-Finger mode; no matter, however, since your computer easily mixes One-Finger and Fingered modes.

Use the following example to learn operations of the Program Chord Computer. The variety of chords presented will help you do this.

C	C#°	Dm7		G7		C	Em7 (♭5)	A7		Dm7	G7	C	

Storing Chords in the Computer

1. Press **record** and then **PCC**. Computer memory is now ready to receive the chords in the example.

   Press and hold the C chord on your lower keyboard, either as a One-Finger or Fingered mode. DON'T PRESS THE "FINGERED" BUTTON however, since doing so cancels the record feature. While holding the C chord key(s), press the key marked ⊢╫┤ . The chord sounds while you're holding it; as you press the ⊢╫┤ key, you'll hear a "beep"—this tells you the chord is now in the memory. ALWAYS REMEMBER: When you hear the chord you want, THEN press ⊢╫┤ or ⊢◁┤ .
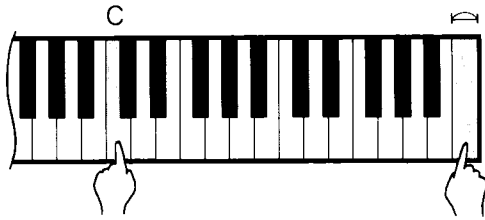
   Since the C# diminished chord is not available as a One-Finger mode, you'll have to form it yourself (C#-E-G-B♭). Hold it and press the ⊢╫┤ key again. The "beep" sounds and the first measure is complete.

   The second measure contains only the Dm7 chord. If you don't form it yourself, you can press the One-Finger D chord and add a short bass pedal (for minor) and a long pedal (for seventh). While holding this chord, press the ⊢◁┤ key; the second measure is now complete.

   Continue with the remaining chords in the example, entering half and whole measures as required. Incidentally, the notes of the Em7 (♭5) chord are E-G-B♭-D. The last chord, C, is played for two measures. As you hold down the key(s), press the ⊢◁┤ key twice—once for each measure.

2. Press the ─╫ (end) key. This closes the memory to further storage, and turns off the **record** button. The LED light on the **PCC** button stays on, however.



### ≋Musical≋Display≋

The sequence number and chord name are displayed.

$$06:E\ m7^{-5}$$

PCC   chord
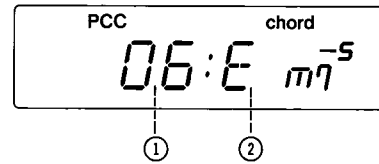
① Sequence number
② Chord name

Keys *D.S.*, ⅋⊕ and ─╫ are displayed as *d* , *S* and *E* respectively. Pressing the *D.S.* key and ─╫ key simultaneously displays *r* .


Other facts you should know about storing chords...

- To store "no chord" (N.C.) press the ⊢╫┤ or ⊢◁┤ key, as necessary, without playing a chord.

When the programmed chord sequence is automatically played back, it stops after one play. For repeat automatic play, follow the procedures below in step 2 above.

- To repeat the programmed chord sequence until the rhythm is stopped:
  Instead of the ─╫ key, press the ⟿ key (pressing the *D.S.* and ─╫ keys at the same time).

- To specify the number of repetitions (up to 8 times):
  While holding the *D.S.* key down, press one of the keys 1 to 8 (on the lower keyboard) corresponding to the number of repetitions (e.g. the 3 key to repeat 3 times). Then press the ─╫ key.

If you press the ⊣ ⊦ key when storing the chord sequence, the sequence will stop at the first beat of the next chord during automatic playback. Pressing the **start/stop** button resumes the sequence at the chord next to the stopped one.

- For example, press the G7 ⊢◁┤ , ⊣ ⊦ , C ⊢◁┤ and Am ⊢◁┤ keys for storage. When automatically played back, the chord sequence stops at the first beat of the C chord after the G7. Pressing the **start/stop** button resumes the sequence at the Am chord.

Note: A quarter-measure or *D.S.* key is counted as two chords.

Playing the Programmed Chords

After making sure the **PCC** LED light is on, start the automatic rhythm of your choice. The stored chords are automatically repeated in sequence for the correct number of measures.

When you are playing a programmed chord sequence and you wish to replay a certain part of the program—maybe you missed a melody note—press the **start/stop** button. This stops the automatic rhythm and the chords; at the same time, the program returns to the beginning of the chord sequence, allowing you to restart and play again.

Modifying or Correcting Programmed Chords

Suppose you wanted to change the A7 chord in the example to an E♭7—here are a couple of ways you could do it.

Using the Automatic Rhythm

1. Press the **record** and **PCC** buttons.

2. Press **start/stop** to begin the chord sequence with the rhythm.

3. Stop the rhythm when the sequence reaches the A7 chord.

4. Play and hold the new chord (E♭7) and press the ⊢⌐⊣ key. The new chord is now in the position of the original chord.

5. Press **PCC** again.

Using the Forward (►) or Back (◄) Keys

Step 1 as above.

2. Press the ► key once for each chord from the start of the program. In this case, the A7 is the seventh chord in the sequence; watch the example and press ► seven times.

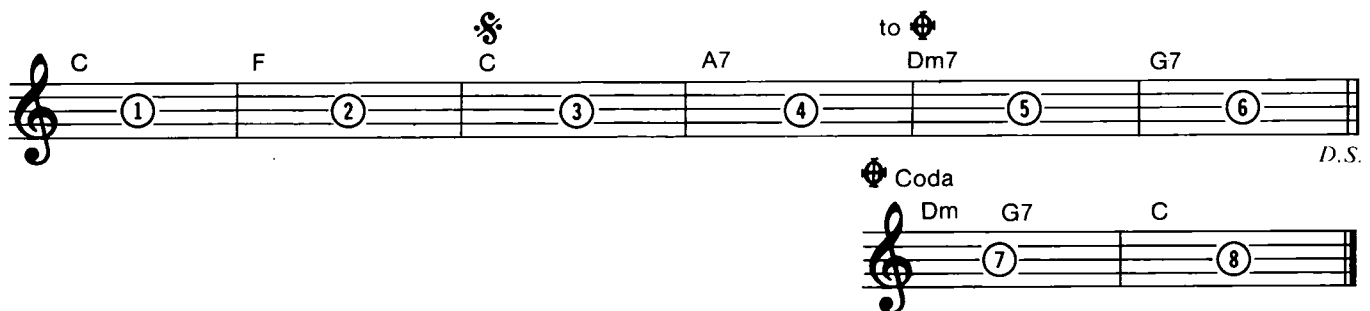3. Stop when you hear the chord you want to change.

Steps 4 and 5 as above.

The ◄ key is used the same way when you want to move one chord at a time from the end of the program to the beginning.

Other facts you should know about changing chords...

• The ► and ◄ keys operate only when the rhythm is stopped and the **record** and **PCC** buttons are pressed.

• Each press of the ► key advances one unit and each press of the ◄ key moves sequence back one unit, whether the unit is a whole measure, a half-measure, or a quarter-measure.

• Should you enter the wrong chord, press the ◄ key once and enter the correct chord.

Using the 𝄋 ⊕ , *D.S.* Keys

After pressing the symbol keys according to the music sheet, the chord of the measure is stored. Let's try to store the following music.

The memory procedure is as follows.
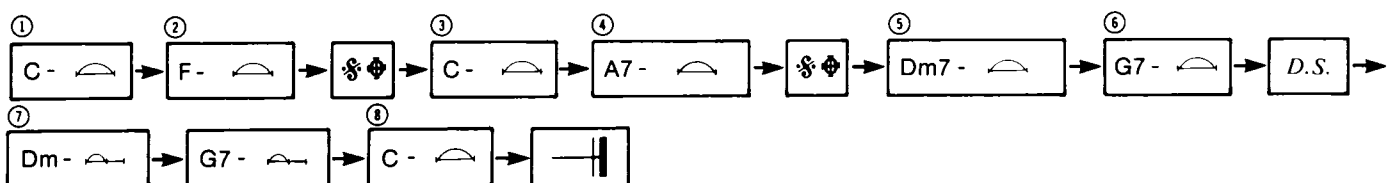
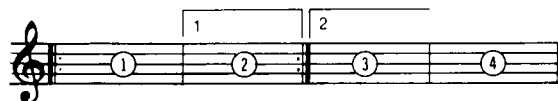Music written with repeat marks other than $\cdot\!\!\$\,\diamondsuit$, *D.S.* can be stored with the following correspondence.

$\cdot\!\!\$\,\diamondsuit$: ▤ , ▤ , *Fine*

D.S.: *D.C., al Fine* , ▤

(For ▤ , press the $\cdot\!\!\$\,\diamondsuit$, *D.S.* keys in succession.)

Example

The memory procedure is as follows:

$\boxed{\cdot\!\!\$\,\diamondsuit}$ → $\boxed{①}$ → $\boxed{\cdot\!\!\$\,\diamondsuit}$ → $\boxed{②}$ → $\boxed{D.S.}$ → $\boxed{③}$ → $\boxed{④}$ → $\boxed{\dashv}$
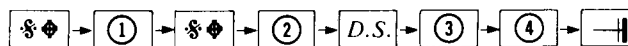
The following kinds of music cannot be stored by using $\cdot\!\!\$\,\diamondsuit$, *D.S.* keys.

• When the position of ▤ and to $\diamondsuit$ are the same.
• When the ranges of two repeats overlap.
• When the position of ▤ and *D.C.* or *D.S.* are the same.

Voice, Intro & Ending, Fill-in Storage

This Program Chord Computer stores not only chords but voices from the Voice Setting Computer, as well as **intro & ending, fill in** and **arrange percussion**.

■ For Voice storage:
Before storing a chord, press the **Voice Setting Computer** button. This stores the selected voice at the beginning of the next measure. The voice will continue until the next voice is selected.

■ For Intro & Ending, Fill-in Storage
Intro
Storage can be done by pressing the **intro & ending**, the **fill in I** or the **fill in II** button at the beginning of a tune.
When the **fill in I** and **II** buttons are simultaneously pressed for storage, eight measures of a drum solo are stored as the intro.

Fill-in
After storing a chord, press the **fill in I** or **II** button and one measure of that chord will be stored as the fill-in.
When **I** and **II** buttons are pressed simultaneously, a drum solo will be stored until **I** or **II** is pressed a second time.

Ending
If the **intro & ending** button is pressed at the end of a song, the last chord will be stored as an ending pattern. (The **record** button will be turned off.)

### ■ For Arrange Percussion Storage (EX60 only):
Before storing a chord, press the **arrange percussion** button. This stores the selected arrange percussion at the beginning of the next measure.

• When the chord sequence is over, you can continue playing with the last voice selected. But when you stop playing, the first voice will return after 10 seconds.
• The voice will change a half-beat ahead of the rhythm so that you can remain in tempo with the rhythm.
• When the song is repeated, the last voice of the song continues through the first voice of the second sequence. In order to specify the first voice of the second sequence, store the desired voice after the last chord is stored.

- **Let's store the following:**

chord		C	F	C	G7	Em	A7	Dm G7	C
intro & ending, fill in	intro				fill in I				ending
arrange percussion (EX60)		II				I			
VSC		1				2			

After first pressing the **record** button then the **PCC** button, perform the storage operation as follows:
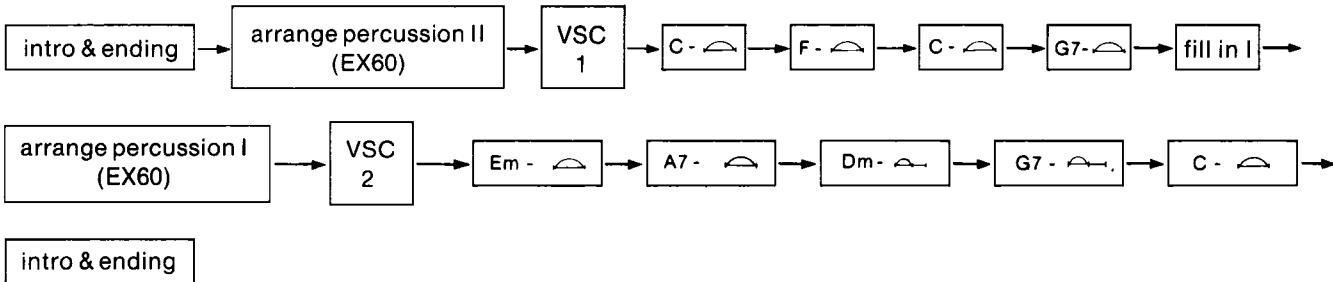
- Up to 10 selections of the voice, intro & ending, fill in, arrange percussion can be stored. (Storing voice, intro & ending, fill in and arrange percussion in sequence is counted as one selection.)

- It is also possible to store voices, intro & ending, fill in, and arrange percussion after a chord sequence has been entered.
  Let's store the previous example using the following procedure.

1. First, store only the chords.
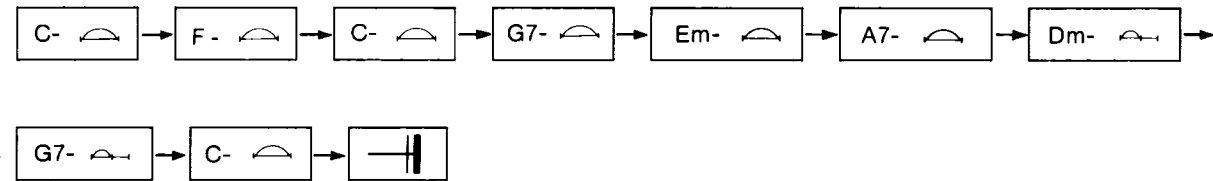
2. Press the **record** button and then the **PCC** button.
3. Press the **intro & ending** button.
4. Press the **arrange percussion II** button (EX60 only).
5. Press the **I** button of the Voice Setting Computer.
6. Press the Forward key (►) four times to advance the chord to the G7 position.
7. Press the **fill in I** button.
8. Press the **arrange percussion I** button.
9. Press the **2** button of the Voice Setting Computer.
10. Press the Forward key (►) six times.
11. Press the **intro & ending** button.

㉝ Program Rhythm Computer

In addition to providing a wide variety of standard rhythm patterns to complement your music, Technics has now made it possible for you to make up your own drum rhythms. Not only that—you can store them in a memory and recall them for use whenever you wish!

The controls illustrated below, along with the main portion of your lower keyboard, make all this possible.
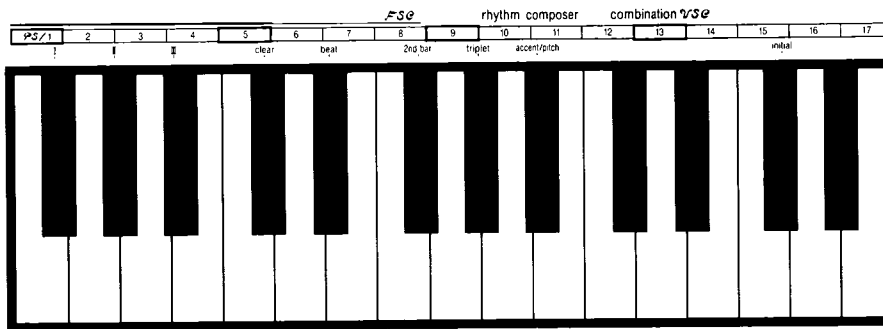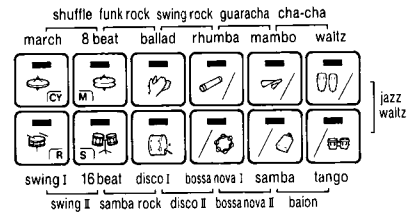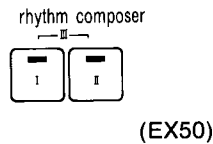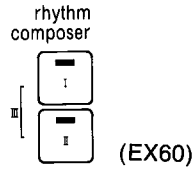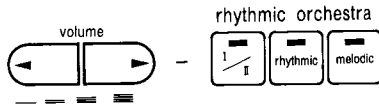
The following is a brief description of each control button used in the composing and programming process:

Composer I, II and **III** (pressing two buttons at one time) are where your rhythms are stored (in memory). An indicator light tells you which button is in use. Each button is also pressed to play back the stored rhythms.

Rhythm Instruments. These fourteen voices provide the sounds for the rhythm patterns you create.
1. Closed hi-hat
2. Open hi-hat
3. Cymbals
4. Snare drum
5. Tom-tom
6. Rim shot
7. Bass drum
8. Hand clap
9. Shaker
10. Tambourine
11. Agogo bell
12. Cowbell
13. Conga
14. Bongo

The following keys on the lower keyboard are also used in programming your own rhythms:

Clear is pressed, when **composer I, II** or **III** is activated, to cancel all voices assigned to that particular track. To cancel an individual voice from a rhythm you've created, press the button for that voice and then press the **clear** key; all other voices will remain.

Beat is used to program any rhythm, other than four-beat rhythms.

2nd bar is used for storing two-measure rhythms such as the **bossa nova**, or certain rock and disco patterns. The rhythm in this measure continually alternates with the rhythm you program in the first measure.
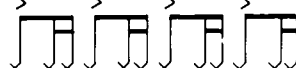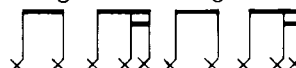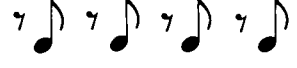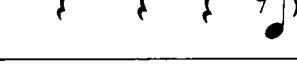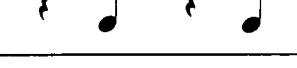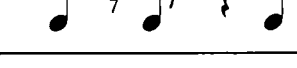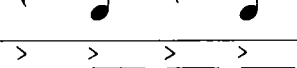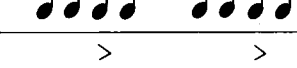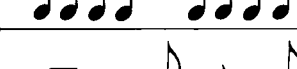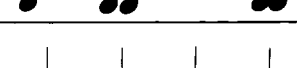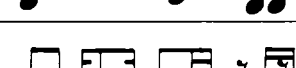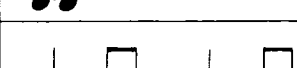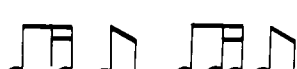
Triplet is the black key used to store four-beat triplet rhythms, such as the rock ballad (12/8 time).

Accent/pitch is used to accent the voice of a specific timing or to change its pitch.

I, II, III provide frequently used rhythms for storage and replay. All three are based on salsa rock, or Latin-disco, rhythms (**preset** keys).

Programming with Presets

The chart below shows the various rhythm patterns that are available when you use the three **preset** keys. Try all of them and become familiar with each.

To create your own disco rhythm using only the **preset** keys, follow these directions.

1. Press **record** and either **composer I, II** or **III**.

2. Press the **clear** key to cancel anything recorded previously.

3. Add each rhythm voice. Start with the bass drum playing four beats per measure (disco style—see chart).

a. Press 🔲 .
b. Press the **preset I** key.
c. Press the rhythm **start/stop** button to hear the pattern— you'll find it helpful to leave the rhythm on as you add the various voices so you can hear each one and decide if you wish to use it or choose another.

Do this with each voice you wish to use, choosing the individual rhythms from the three **preset** keys.

4. Press **record** when programming is complete. To hear the rhythm, press the **composer** button again and then the rhythm **start/stop**.

Modifying Preset Combinations

Suppose you wish to change the hi-hat pattern to eighth notes (♫♫♫) in each measure...

1. Press **record**.

2. Press 🔲 .

3. Press the **preset III** key—the hi-hat pattern is now changed.

4. Press **record, composer**, and rhythm **start/stop** to hear the changes you've made.

These preset patterns can be combined to create a variety of colorful and exciting percussion sounds!

- To create cymbal sounds, the 🔲 and 🔲 buttons must be pressed simultaneously.
- To create rim shot sounds, the 🔲 and 🔲 buttons must be pressed simultaneously.
- The same timing cannot be set for open hi-hat, closed hi-hat and cymbals. This is also true of the snare drum, tom-tom and rim shot.

- For Latin percussions (shaker/tambourine, agogo bell/ cowbell and conga/bongo), only one of the upper and lower buttons can be used. For example, a previously stored shaker pattern is cleared and replaced when a tambourine pattern is stored.
- In the factory preset state, the metronome sound is stored in the **composer I, II** and **III** buttons.

A Brief Look at Your Lower Keyboard

The 1 to 16 numbered keys on your lower keyboard are where the various percussion voices are stored in relation to the different beats in a measure. Keys 1 through 12 are used to store three-beat rhythms (e.g. waltz), while all sixteen are used for other rhythm patterns (four beats per measure).

As illustrated below, each of the keys numbered 1 to 16 corresponds to one-sixteenth of a note per measure.
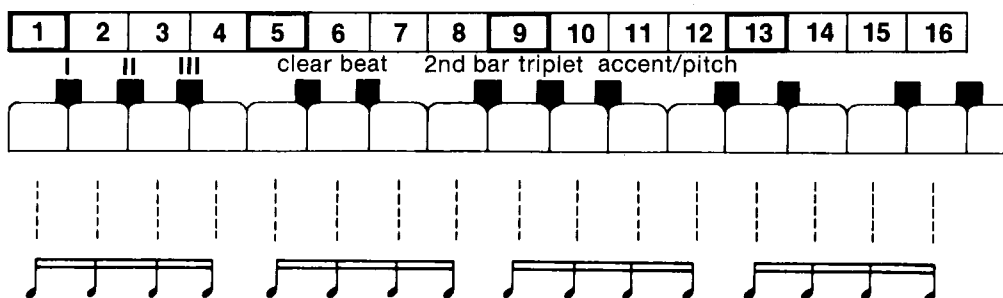
Using just the bass drum and snare drum, the following illustrations show where a basic waltz ① and soft rock ② pattern would be assigned to the lower keys. Keep in mind that each group of four sixteenth notes (♫♫♫) represents one beat; therefore, all sixteen numbered keys on your organ represent one four-beat (4/4) measure of music.
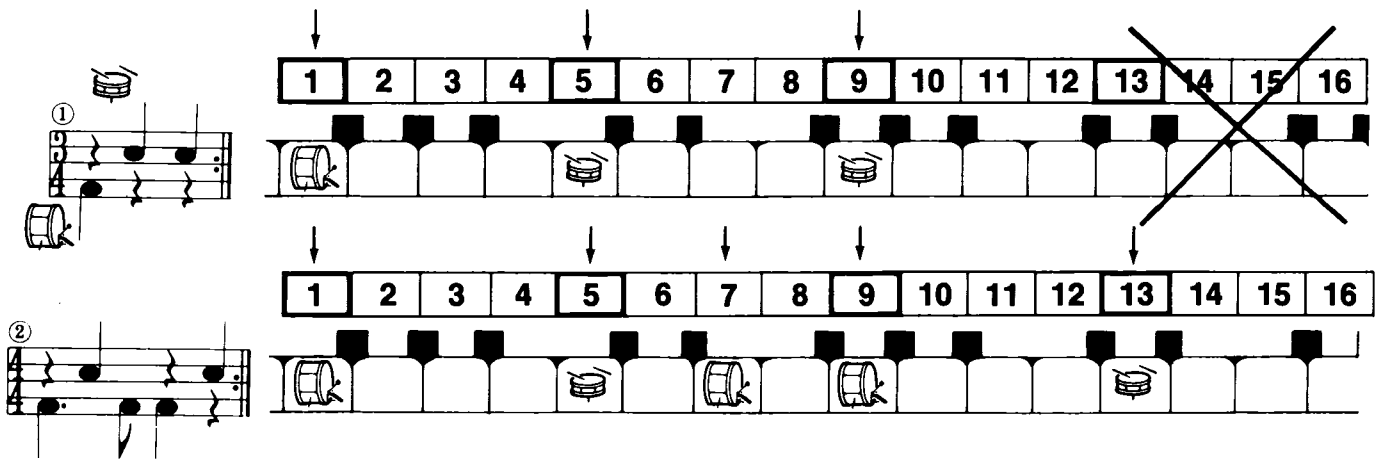
If you wanted to add the closed hi-hat playing an eighth-note pattern (♪♪♪♪) to either example, you could use the **preset III** key since this pattern is built-in. Merely take the steps outlined previously.

The illustration shows what happens when you press the **triplet** key:

$$\text{♪♪♪♪} = \overset{3}{\text{♪♪♪♪}}$$
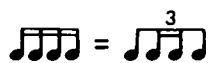
IMPORTANT NOTE: The Program Rhythm Computer lets you easily mix **preset** key rhythm patterns with those you create on your lower keyboard.

Programming Rhythms

Since it is possible to create such a wide variety of rhythms on your Technics organ, we'll consider specific patterns in order to help you understand how to use the computer.

Programming the Rock Rhythm

1. Press **record** and either **composer I, II** or **III**.

2. Press the **clear** key.

3. Press **closed hi-hat** and **preset III**.

4. Press rhythm **start/stop** to check the pattern.

5. Press **snare drum** and **preset I**.

6. Press **bass drum** and lower keys **1, 3, 6, 9**. This provides the bass drum figure shown in the example.

7. Press **record** to turn off the programming feature.
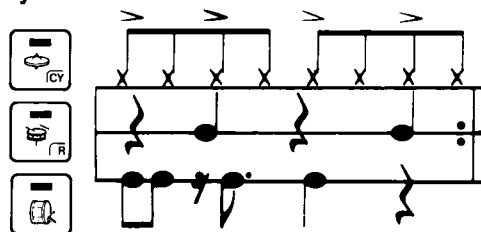
Now, by pressing the **composer** button and starting the rhythm, you should hear the complete rock rhythm.

Rock rhythm

Programming the Jazz Waltz

Remember that, since this is a three-beat pattern, only keys 1 through 12 will be used. Notice also that this is a two-measure example.

1. Press **record** and either **composer I, II** or **III**.

2. Press the **clear** key.

3. Press **triplet** and then **beat**, since the example contains three-beat triplets in the hi-hat cymbals.

4. Press the **open hi-hat** button.

5. Press lower manual keys **1** and **9**.

6. Press **closed hi-hat** and lower keys **5** and **8**. The hi-hat cymbal part for the first measure is now complete.

7. Press the **bass drum** button and lower manual key **1**.

8. Press the **snare drum** button and lower keys **4** and **9**.

Jazz waltz
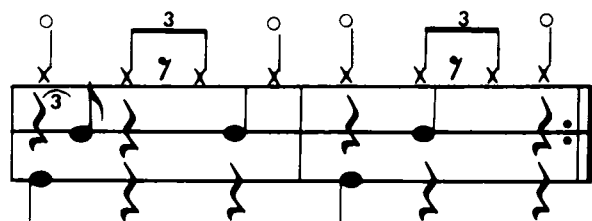
For the second measure of the example__

9. Hold down the **2nd bar** key and enter the **snare drum** on the lower manual key **5**.

10. Press **record**—programming is complete.

Turn on the **composer** button and start the rhythm to hear your two-measure jazz waltz pattern.

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Modifying Programmed Rhythms

At any time, you can change any voice in any rhythm pattern you've programmed. All you do is:

1. Press **record**.

2. If necessary, press **triplet** or **beat**.

3. Press the button indicating the voice you wish to change.

4. Press the **clear** key to erase existing pattern for that instrument.

5. Enter new pattern.

6. Press **record** and the **composer** button.

To Store Rhythms Other Than Four-Beat Rhythms

Three-beat Rhythms
1. Press the **record** button.
2. Select either **composer I, II or III**.
3. Press the **clear** key.
4. Press the **beat** key.
5. Store the rhythm pattern for each instrument.
   - In the preset mode, the first three beats are stored.
   - In the manual mode, the white keys **1** through **12** are used to store the rhythm.
6. Press the **record** button.

Two-beat Rhythms
Instead of step 4 in the above procedure, press the **2** key on the lower keyboard with the **beat** key held down. Then store the 2-beat rhythm patterns.
- In the preset mode, the first two beats are stored.
- In the manual mode, the white keys **1** through **8** are used.

Five-beat Rhythms (a three-beat measure + two-beat measure pattern)
1. Press the **record** button.
2. Select **composer I, II or III**.
3. Press the **clear** key.
4. Press the **beat** key. With the **beat** and **2nd bar** keys held down, press the **2** key on the lower keyboard.
5. Store the two-measure pattern for each instrument.
6. Press the **record** button.
- Similarly, to program seven-beat rhythms, store the two-measure pattern of the four- and three-beat rhythms.

How to Use the Accent/Pitch Key

This key lets you accent the rhythm pattern or change its pitch.

- The following instruments may be accented:
  Hi-hat, cymbals, snare drum, rim shot, bass drum, shaker and tambourine.
- These instruments may be accented by lowering the pitches:
  Tom-tom, agogo bell, conga, cowbell and bongo.
- The accent/pitch function is not available for hand claps.

1. Press the **record** button.
2. Select **composer I, II or III**.
3. Press the instrument button to be accented.
4. With the **accent/pitch** key held down, press the white key to set the timing to be accented.
5. Repeat steps 3 and 4 for all the instruments to be accented.
6. Press the **record** button.

- The rhythmic orchestra patterns, rhythmic and melodic, may be stored in a similar manner. The bass voice during automatic performance will be sounded in the rhythm patterns of a bass drum.

Drum Variation

■ **EX50**
When storing a rhythm pattern in **composer III**, the drum sound will automatically shift to that of an electronic drum.

■ **EX60**
The rhythm pattern stored in the **composer** is independent of the **drum variation** button. When changing a voice, turn on the **drum variation** button during playback.

Using the Sequencer

rhythm
sequencer

[▬ on]

In addition to making it possible for you to create your own rhythms, Technics also lets you store these rhythms for playing back in any sequence you choose. This applies to rhythms you've created for the **composer** memory, the twenty-three patterns that are part of the **drum percussion** selector, and even the arrange percussion (EX60) and Intro, Fill In features.

Here are the control functions you'll need to sequence rhythms:

The **rhythm sequencer on** button is pressed before you enter the various rhythms in the desired order. Press again when you wish to play back the sequence.

Lower manual keys 1-20: Each key number represents that number of measures for sequencing purposes.

You'll easily understand the sequence function if you enter this sixteen-measure example using only standard rhythms.

4	4	4	4
Bossa Nova I	Mambo + Arrange Perc II (EX60 only)	Swing	Bossa Nova + Fill-in

1. Press **record**.

2. Press **rhythm sequencer on**.

3. Press **bossa nova I** and then lower key **4**. The first four measures are now entered in the sequencer.

4. Press **mambo** and **arrange percussion II** (EX60 only), followed by lower key **4** once again. (Press **arrange percussion I**.)

5. Press **swing** and lower key **4**.

6. Press **bossa nova I** and key number **4**.

7. Press either **fill in** button twice to add this feature to the final section. NOTE: If **fill in** is pressed only once, you'll get a half-measure in 4/4 time or a third of a measure in 3/4 time. **Fill in** should be pressed only after the TOTAL number of measures in a section has been entered—in this case, four measure of bossa nova.

8. Press the ─╢ key. This closes the memory to further storage, and turns off the **record** button.

- To repeat the programmed sequence until the rhythm is stopped:
  Instead of pressing the ─╢ key, simultaneously press the *D.S.* key and ─╢ key (⊂➡).

- To specify the number of repetitions (up to 8 times):
  While holding the *D.S.* key down, press one of the keys **1** to **8** (on the lower keyboard) corresponding to the number of repetitions (e.g. the **3** key to repeat 3 times). Next press the ─╢ key.
- If the **intro & ending** button is pressed instead of the ─╢ key, one measure of the ending pattern will be stored.

To hear the entire sequence, press the rhythm **start/stop**. To use other rhythms, merely press **rhythm sequencer** button.

- The **rhythm sequencer** allows you to make 48-measure designations.
- Instead of keys **1** through **20** on the lower keyboard, the ⊢╕ , ⊢╫ and ⊢╫╫ keys on the right can be used to store 3/4, 1/2 and 1/4 measures.
- The ⚡ ⚡ and *D.S.* keys can also be used to easily store music segments for repetition (refer to ㉜).
- In addition to the rhythm, settings in the **tempo set** button (EX60 only), the rhythmic orchestra, and the volume can also be stored.
  However, the **tempo** control and **fine** button functions cannot be stored.
- Pressing the ◄ ► key as the rhythm is stored causes the music to stop at that point when played back automatically. Pressing the **start/stop** button resumes automatic play.
- If the ↩⟳ key is pressed while recording a two-measure pattern, the preceding and succeeding measures will be interchanged.

♣Musical♣Display♣

Displays the designation number.

```
 02
```
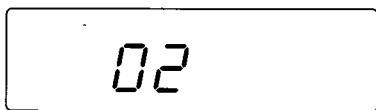
•During storage, confirm storage contents using the ◄ or ► key. The number of measures will be displayed next to the designation numbers. Also, ⊔ , ∟ , and ╱ will be displayed for ⊢╕ , ⊢╫ , and ⊢╫╫ respectively.

�34 Tempo Set (EX60 only) (㉒)
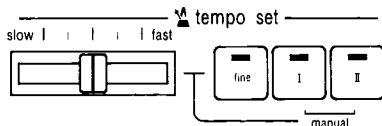
Two of your favorite tempos, once they are stored can be recalled at any time by simply pressing the appropriate **tempo set** button.

To store:
(Press **tempo set** buttons I and II simultaneously to turn them off.)
1. Adjust the tempo to your favorite speed by sliding the tempo control.
2. With the **record** button pressed, press **tempo set** button I. This stores the tempo in button I.

- You can store another favorite tempo using **tempo set** button II.
- To make more precise adjustments using the sliding tempo control, first press the **fine** button.
- To adjust the tempo using the tempo control, first press **tempo** buttons I and II simultaneously to switch them off (manual mode).

�35 Program Function Switch (⑲)

The function desired during play can be stored in the foot switch. Thus, voice and effect can be easily changed with your foot.

- Turn on the **glide/rhythm** button.
- The original function is to start/stop the drum percussion.
- Functions for storage
  Voice Setting Computer (1~7)
  Chorus/tremolo (EX50)
  - When the **celeste** is selected, **chorus** and **tremolo** cannot be interchanged using the foot switch.
  Multi-tremolo slow/fast (EX60)
  Techni-chord
  Fill in (I, II, solo)
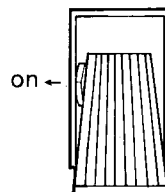
For Storage

1. Press the **record** button.
2. Press the foot switch to the left.
- This causes a short beep to sound, and the LEDs of the buttons available for recording flash.
3. Press the button of the function you wish to store.
   (Press the I button of the Voice Setting Computer, for example.) This automatically turns the **record** button off and completes storage of the selected function in the foot switch. (In this example, the tones and effects change to those of the I button of the Voice Setting Computer when the foot switch is pressed to the left.)
- Press the foot switch once again to return to the original voice and effect.
- To return the foot switch to the original function (drum percussion start/stop), press the **initial** key on the lower keyboard instead of the button described in step 3 above.

㊱ Harmonic Coupler (⑤)

You can store harmonic couplers at any desired interval using the **harmonic coupler (program)** button.

1. Press the **record** button (the button will flash).

2. Press either the **upper** or **lower harmonic coupler** button (the button will flash slowly).

3. Press the key of the desired interval from the C key on the lower keyboard (labeled ★). (For example, press the C key on the far right when changing to **harmonic coupler 1'**.)
   - At this time, the harmonic coupler effect can be monitored on the upper keyboard.

4. Pressing the **harmonic coupler** button again turns the **record** button off and completes storage.

- Typical harmonic coupler examples:
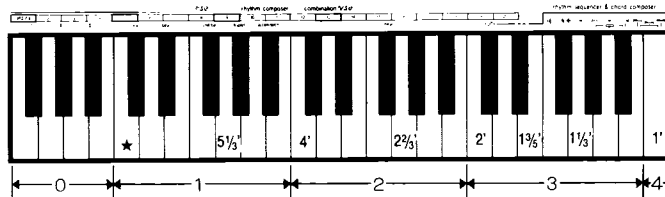
⬛Musical⬛Display⬛

The name of the depressed key and its octave level are displayed.

$$4\ C$$

This number corresponds to the number of the keyboard octave of the following figure.

㊲ Techni-chord (⑫)

When the **close/open** button is in the open position, you can store harmony by choosing one of the four factory-preset harmony style patterns.

1. Press the **record** button (the button will flash).
2. Press the **close/open** button of the **techni-chord** (the button will flash slowly).

3. Select the desired harmony style from keys **1~4** on the lower keyboard.
   - The harmonic style selected can be monitored on the upper keyboard. (The chord is pressed on the lower 19 keys, the melody on the upper 25 keys.)
   - The following four harmony styles are available.

Lower keyboard	Style	Display
1	open 1	$O1$
2	open 2	$O2$
3	duet 1	$D1$
4	duet 2	$D2$

㊳ Flute Volume Adjustment (③, ④)

The flute volume level of the tab voices is preadjustable.

■ To adjust the **upper flute tab**:
1. Press the **record** button.
2. Press the **upper tab voices** button on the Orchestral Conductor.
3. Adjust the flute volume levels using their tabs.

■ EX50

The volume increases one step each time the button is pressed. When the maximum volume is reached, a press of the button returns it to zero.

■ EX60
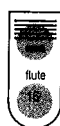
Press here to derease the volume by one step.

Press here to increase the volume by one step.

• Volume levels can be adjusted in 7 steps.
• Press the **initial** key to return to the factory preset mode.

4. Press the **record** button again to turn it off.
• To adjust the **lower flute tab**, omit step 2 above and press the **lower tab voices** button on the Orchestral Conductor.

```
━━Musical═Display━
The footage and the level are displayed.

        ┌──────────┐
        │  I6F:5   │
        └──────────┘
            ┊    ┊
         footage  level
```
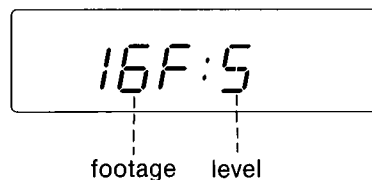
㊴ Tremolo Speed Adjustment (⑬)

The Technics organ allows the tremolo speed to be adjusted. The **tremolo** (EX50) or the **fast multi-tremolo** (EX60) creates an effect like two speakers rotating at different speeds. The fast and slow speeds are both adjustable.
1. Press the **record** button.
2. Fast speed adjustment:
   Press the **U tab voices** button of the **chorus/tremolo/celeste** (EX50) or the **multi-tremolo** (EX60). (The LED on the button will slowly flash.)
3. ■ EX50
   Tap the **tremolo** button to increase the frequency. Tap the **chorus** button to decrease it.
   ■ EX60
   Tap the lower part of the **slow/fast** button to increase the frequency. Tap the upper part to decrease it.
• The frequency is indicated on the Musical Display.
• During speed adjustment, the **multi-tremolo** is automatically turned on for both the upper and lower keyboards. This allows you to carefully check how the tremolo effect is applied.
4. Slow speed adjustment:
   Press the **L tab voices** button.
5. Adjust the frequency using the **chorus** and **tremolo** buttons (EX50) or the **slow/fast** button (EX60).
6. When the adjustment is completed, press the **record** button to turn it off.

• The **chorus** and **celeste** speeds (EX50) or the **vibrato** and **slow multi-tremolo** speeds (EX60) remain unchanged during this adjustment.
• Adjustment range
  Fast speed: 8.4 Hz to 30.5 Hz
  Slow speed: 4.9 Hz to 8.1 Hz
• If you wish to return the speed to the factory preset state (20.3 Hz and 6.4 Hz), press the **initial** key in step 3 or 5 above.

```
━━Musical═Display━
The tremolo speed is displayed.

Example 20.3 Hz

        ┌──────────┐
        │  20:3    │
        └──────────┘

This colon (:) represents a decimal point.
```
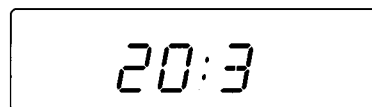
Part III Storage of Performance Contents

④⓪ Internal Memory

Your performance as well as the contents of the registraton, Voice Setting Computer, Program Chord Computer, Program Rhythm Computer and other functions can be stored in the internal memory of this organ. The following two modes are available using the internal memory.

■ **PS (Play Sequencer) Mode**
In addition to the tune played, voices and effects can also be stored and automatically recalled.

■ **FSC (Fullband Setting Computer) Mode**
The contents of the initial registration, Voice Setting Computer, Program Chord Computer, Program Rhythm Computer and other functions for five tunes can be stored. The contents are recalled by simply using the **FSC** button.

● These contents for a single tune can be automatically stored in the PS mode.

Changing the Mode

1. Press the **record** button (the button will flash).
2. Press the **FSC** button (the button will flash slowly).
3. The mode will be indicated by the appearance of ‎ _F5E_ or _P5_ on the Musical Display.
   The mode will change each time the **initial** key is pressed on the lower keyboard.
4. Turn off the **record** button when the desired mode is set.

● These contents can be stored in either the PS or FSC mode. After the contents are stored in the PS mode, if the mode is changed to FSC and other contents are stored, the contents stored in the PS mode are erased.

● Contents stored in the memory are maintained for about one week even when the power is turned off.

● When the optional digital memory pack or digital disk recorder is used, the contents of the internal memory cannot be stored or played back.

④① Play Sequencer

All parts—bass, lower, upper and solo—can be stored at one time, or parts can be played separately and then synchronized for storage.
For example, a bass line played on the pedal keyboard is first recorded. As it is played back, chords can be added using the lower keyboard. Then, as the new recording is played back, a melody line can be added using the upper keyboard. Solo presets can also be used. The combined recording, or any of its elements, can be retrieved at any time.
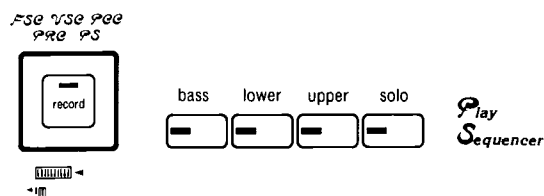
Solo Button

A different melody from that stored in the **upper** button can be stored in the **solo** button using one of the solo presets. Automatic performance using the **lower, upper,** and **solo** buttons produces the sound of three keyboards played at once.

Bass

When storing in the **bass** part of the Play Sequencer, storing using the lower keyboard is made easy if the **pedal to lower** button is turned on.

● Such stored notes may not all be heard or their pitch may change, however, if transposed. To store bass notes that can be accurately transposed, use only the pedal keyboard.

For Storage:
I. Setting Modes and Registration

1. Set the internal memory in the PS mode (See ④⓪.)
2. Set the voices and effects for the song to be stored.
● If an introduction is needed, turn on the **intro & ending** button.

● If Play Sequencer storage operation is performed, this setting will be automatically stored in the memory.
● If necessary, store in advance the Voice Setting Computer, the Program Rhythm Computer, etc.

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II. For Storage of Ordinary Performances

1. Press the **record** button. The button will flash.
2. Press the **Play Sequencer** buttons one at a time for the parts you wish to store (for example, the **bass**, **lower** and **upper**). The buttons will then flash slowly.
   - Check that the buttons for the parts you wish to store flash slowly.
   - At this time, turn off the **solo** button.

3. Play the song to be stored.
   - Start the rhythm if desired and play the parts you wish to store. You can turn the rhythm on and off while playing the song.
4. After playing, press the **record** button to turn it off.
   - Instead of the **record** button, you may press the **Play Sequencer** button which turns off the Play Sequencer and ends the recording.

III. To Store Other Parts for Automatic Performance (Multiplex Storage)

1. Turn off all four **Play Sequencer** buttons.
2. Press the **record** button. The button will flash.
3. Press the **Play Sequencer** button for the part to be stored first. The button will flash slowly.
4. Play the part to be stored.
5. After playing the part, press the **Play Sequencer** button for the next part to be stored. The button will flash slowly.
   - The rhythm automatically stops.
   - Check at this time that the button for the previously stored part is still lit.
   - Instead of step 5, you may press the **record** button to turn it off. Then press the button again (the button will flash) and press the **Play Sequencer** button for the part you wish to store next. This button will then flash slowly.

6. Pressing the **start/stop** button begins the automatic performance of the previously stored part, to which you can add a second part.
   - **You can also begin a song which has no rhythm by pressing the start/stop button.**
   - To store one portion of a song, press the button for the part to be stored next. You need not wait for the automatic performance to be completed. In this case, do not stop the rhythm.
7. Repeat steps 5 and 6 to complete storage in the other **Play Sequencer** buttons.
8. Press the **record** button to turn it off.
   - For storage in the **solo** button, the **upper solo presets** button of the Orchestral Conductor is automatically turned on. Play a melody on the upper keyboard and it will be stored.

IV. To Modify Previously Stored Parts or Add a Solo Part

1. Turn on the **Play Sequencer** button for the part to be automatically played.
2. Press the **record** button. The button will flash slowly.
3. Press the **Play Sequencer** button for the part to be replaced. The button will flash slowly.
   - Check at this time that the button for the part to be automatically played is still lit.

4. Pressing the **start/stop** button begins automatic performance of the stored part which may be modified or added to.
   - **You can also begin a song which has no rhythm by pressing the start/stop button.**
5. After playing, press the **record** button to turn it off.

- The storage capacity is as follows:

Upper Lower	200 tones 200 tones	*400 tones
Solo Bass	150 tones 150 tones	*300 tones
Control	**35 steps	

* The storage capacity of the **upper** or **lower** is doubled if either is used alone without the other.
The same also applies to the **solo** and to the **bass**.

In this case, follow the storage procedure below.
1. Press the **record** button.
2. Press the **Play Sequencer** button to be used.
3. Press the **Fullband Setting Computer** button.
4. Press the white key **2** on the lower keyboard.
   - Double capacity is indicated on the musical display.
   - Pressing the white key **1** returns the display to the original mode.
5. Press the **Fullband Setting Computer** button.
**During storage using the upper keyboard, control data such as changes in the tones and effects being played can also be stored.

- How to Count the Number of Tones
  The cycle of one key being pressed and released is counted as one tone.

- The rhythm tempo can be freely adjusted during playback Therefore, it is possible to store contents by playing the keyboard slowly.

- If new songs are stored over songs already stored, the previously stored songs are cleared.

♯Musical♪Display♫

① The number displayed is 1/10 of the remaining storage capacity. (In the example below, an additional 100 tones can be stored.)
   - When simultaneously storing 2 or more parts, the smaller figure is displayed.
   - When 0 is displayed and the error alarm beeps, further storage in that part is not possible.
   - If the error indicator displays "*E r r*", further storage is not possible.
② Part Display
   U ...upper   *S* ...solo
   L ...lower   *B* ...bass
③ Beat Display
   I ...1   *U* ...3
   L ...2   *O* ...4

```
   PS      part
  10:U  L
   ①     ②  ③
```

30
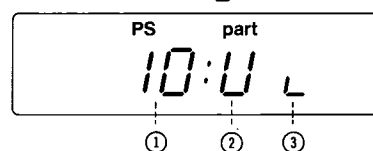
V. Registration storage

■ **Registration storage**
When **Play Sequencer** storage operation is performed, the contents set before the **record** button is pressed are automatically stored in the memory.

■ **Checking and modifying registration before performance**
When the **record** button and **Play Sequencer** button flash before performance, no modification or addition can be stored. If you wish to check or modify the registration, turn on the **Fullband Setting Computer** button. After checking and modifying the contents, turn off the **Fullband Setting Computer** button.

■ **Readout of the stored registration**
Turn on the **Fullband Setting Computer** button and press the **1** key on the lower keyboard. This will set the stored registrations.

■ **Modification of the stored registration**
To modify the registration for a song already stored in the **Play Sequencer** buttons:
1. Set the registration you wish to store.
2. Press the **record** button. The button will flash.
3. Press the **Fullband Setting Computer** button. The button will flash slowly.
4. Press the **1** key on the lower keyboard.

■ **Storage of changes in registration during performance**
The **upper** button of the **Play Sequencer** stores changes in registration in the buttons on the control panel, excluding the **main volume**, **Play Sequencer**, and **Fullband Setting Computer** buttons. This information is stored along with the upper manual keyboard information.

For Automatic Performance of the Stored Contents

• To use the stored tones and effects, turn on the **Fullband Setting Computer** button and then press the **1** key on the lower keyboard.
1. Press the **Play Sequencer** button to turn on the part you wish to perform automatically.
• Make sure that only the **Play Sequencer** button for the part you wish to perform automatically is lit. (If the **Play Sequencer** button for any other part is turned on, the wrong melody may be played or the rhythm may stop during performance.)
• If the **solo presets** button of the Orchestral Conductor is turned on during automatic performance of the melody stored in the **solo** part of the **Play Sequencer** button, manually played voices will also be produced. This may adversely affect the **solo presets**.
2. Start the rhythm for automatic performance of the selected part.
• Press the **start/stop** button to begin a song which has no rhythm.

■ **Ensemble-like Playing During Manual Performance**
• **Upper** and **lower**
During an automatic performance, you can also play the upper and lower keyboards to produce an ensemble-like effect. The maximum number of tones that can be simultaneously created by the upper and lower keyboards is 8 (4 when the harmonic coupler is used). For more than 8 tones, top priority is always given to those manually played.
• **Bass** and **solo**
These parts are monotone and do not allow simultaneous automatic and manual performance. However, you can play these parts during automatic performance without a melody. (For the **solo** part, manual performance is possible only when the **solo presets** button of the Orchestral Conductor is selected.)

Manual performance

|←——————————►|◄————————►|◄————————►|

| Automatic performance | Automatic performance (with no melody) | Automatic performance |
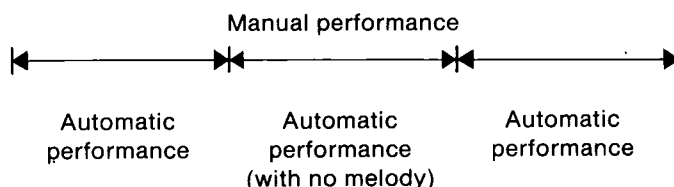
Solo Presets

■ When the **Play Sequencer solo** button is off:
If the **solo presets** button of the Orchestral Conductor is turned on, the **solo presets** can be performed by the **Play Sequencer upper** or ·**lower** button as in ordinary performances.

■ When the **Play Sequencer solo** button is on:
Solo presets can be performed as independent melodies.
• In this case, the **solo presets** button of the Orchestral Conductor need not be selected.
• If the **solo presets** button of the Orchestral Conductor is also selected, priority is given to manually played tones.
• Solo presets cannot be performed by the **Play Sequencer upper** or **lower** button.

㊷ Fullband Setting Computer

The Fullband Setting Computer is used to set tones, effects and rhythm combinations. It also allows storage in the memory of information needed to play songs such as the contents stored in the Program Chord Computer and Program Rhythm Computer. The stored contents can be freely retrieved for use whenever required.

- The contents for up to five tunes, excluding the performance, can be stored.
  The contents for a single tune can be stored including the contents of the Play Sequencer (see Play Sequencer ㊵).
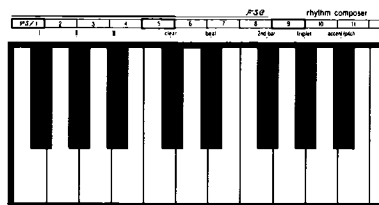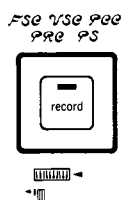
For Storage

1. Set the internal memory to the FSC mode.
- When using the Play Sequencer for storage, the stored contents of the PCC, other functions, or Registration are automatically stored. When changing these contents, leave the internal memory in the PS mode and follow steps 2~6.

2. The tone and effect combinations registered for playing the song should be stored in the Voice Setting Computer.
- Perform the storage operation in advance when using the harmonic coupler programs.
3. Store the functions, such as the Program Chord Computer, that you require.
4. Set the tones, effects and rhythms at the beginning of the song being played.
- If you desire an "intro," press the **intro & ending** button after stopping the rhythm.

Now you can store the above contents in the memory.

5. First press the **record** button and then the **Fullband Setting Computer** button.

6. Press key **1**, **2**, **3**, **4** or **5** on the lower keyboard within 5 seconds. This stores the contents in the track of the memory that corresponds with the key number pressed.
- To store with Play Sequencer contents, press the **1** key on the lower keyboard.
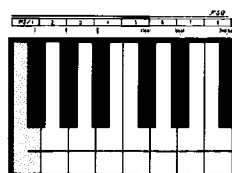
Pressing this key stores the contents in track 1 of the memory.

In a similar manner, store the contents of your favorite songs in the remaining tracks of the memory.
- Steps **2** to **6** above remove the contents of the stored memory and store the new song.

Let's place the memory pack contents in the organ!

1. Press the **Fullband Setting Computer** button.
2. Press the keys on the lower keyboard that correspond to the number of the song you wish to play. The tones and effects played at the beginning of the song will be indicated by the LEDs.
- At the same time, the contents stored in the Program Chord Computer and Voice Setting Computer, etc. are also set automatically.
- Transpose is also played back, but once the slide control is moved, the key indicated by the position of the slide control is set.

NOTE: You can change the voice and effect controls when you play back the programmed songs; the musical contents in the memory cannot be changed, however.

♪Musical♪Display♪

The selected number is displayed.

$$\exists$$
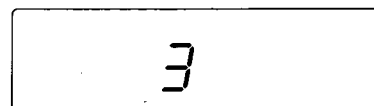
- $E\ rr$ will be displayed if the operator improperly operates the keyboard.

43 Optional Memory Pack (SY-P2 or SY-P3)

VSC - PRESET .
Reg 4 tunes.
4.

- You can store and preserve the contents of the Play Sequencer or the Fullband Setting Computer.
- By switching the **mode selector** on the memory pack, storage is possible in either of the following two modes.

mode selector

FSC ▯▯ PS

off ▯▯ on
memory protector
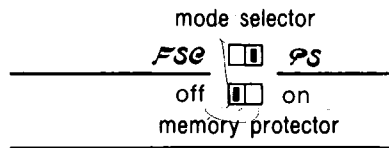
Mode	Contents that can be stored
FSC mode FSC ▮▯ PS	Registrations for 4 tunes for the SY-P2; 8 tunes for the SY-P3
PS mode FSC ▯▮ PS	One long song using the Play Sequencer

- If new songs are stored over songs already stored in the memory pack, the previously stored songs are cleared. If you wish to keep the stored songs, turn **on** the **memory protector**.

Storage operation

1. Select desired storage mode, **FSC** mode or **PS** mode (see above).
2. Switch the **memory protector** to the **off** position.
3. Insert the memory pack into the slot on the upper right of the keyboard.
4. Store the performance according to the directions for the mode selected in Step 1.
- For Play Sequencer directions, see section 41.
- For Fullband Setting Computer directions, see section 42.
- There is no need to set the mode of the internal memory.
- When storing the contents of the Fullband Setting Computer, use keys **1** to **4** on the lower keyboard for SY-P2 and keys **1** to **8** for SY-P3.
5. To protect your performance from accidental erasure, switch the **memory protector** to **on**.

Playback operation

1. Insert a memory pack with stored contents into the slot.
2. Recall the performance according to the directions for the mode indicated by the **mode selector** switch.
- For Play Sequencer directions, see section 41.
- For Fullband Setting Computer directions, see section 42. Use keys **1** to **4** on the lower keyboard for SY-P2 and keys **1** to **8** for SY-P3.
- When the memory pack is in the slot, the contents of the memory pack have priority over the contents in the organ's built-in memory.
- Programs stored in the memory pack on other models cannot be played back on this model.
- The contents of the internal memory (PS mode) cannot be copied onto a digital memory pack.

- The storage capacity is as follows:

	memory pack SY-P2		memory pack SY-P3	
Upper Lower	200 tones 200 tones }	*400 tones	500 tones 500 tones }	*1000 tones
Solo Bass	150 tones 150 tones }	*300 tones	350 tones 350 tones }	*700 tones
Control	35 steps		60 steps	

*double-length mode

- The memory pack allows storage of your performance in either the **PS** mode or the **FSC** mode. The PS mode stores 1 song including a melody while the FSC mode stores only the registration for 4 songs (SY-P2) or 8 songs (SY-P3).
- To perform the stored contents, be sure to use the mode in which they were stored.
  - When the other mode is used, either the stored contents cannot be performed or the organ may not operate properly.
 When the organ does not operate properly:
  1. Press the **Fullband Setting Computer** button to turn it on.
  2. Press the **initial** key on the lower keyboard.

Precautions when using the Memory Pack

1. The memory pack includes electronic components such as ICs and should never be dropped or hit.
2. Do not touch the connector directly.
3. Never try to disassemble the memory pack.
4. Do not subject the memory pack to extreme temperatures or humidity.
- If the memory pack's built-in battery runs out, the stored contents will be cleared.

■ **Protective Case**
In order to prevent problems that may result from static electricity or dust, always store the memory pack in its protective case when not in use.

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㊹ Optional Digital Disk Recorder
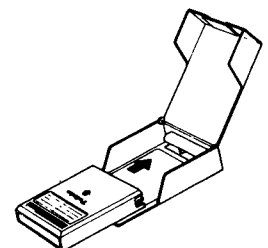
Digital Disk Recorder

Digital Memory Disk
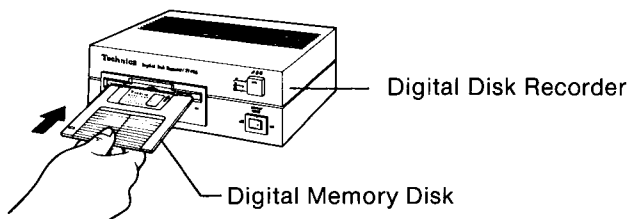
The SY-FD5 Digital Disk Recorder will let you store the contents of a particularly long tune or many tunes on an SY-D1 digital memory disk.
- The SY-FD1 Digital Disk Recorder can also be used with this organ.

■ The memory disk is equipped with two modes.

- **Normal (20-song) Mode**
  This mode lets you store up to 20 songs. (This is equivalent in storage capacity to 20 optional SY-P3 digital memory packs in the PS mode.)

- **Professional Mode**
  Enables storage of one long song (20 times as long as normal mode).

■ The storage capacity is as follows:

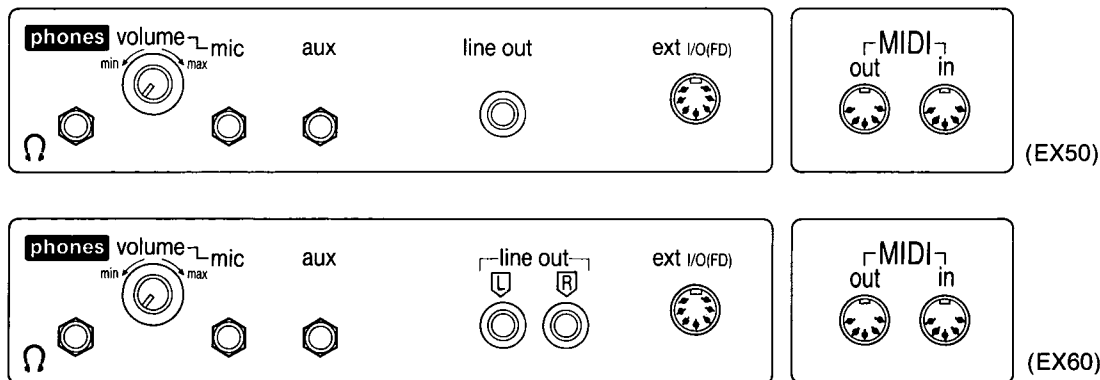|	Normal Mode		Professional Mode
Upper Lower	500 tones 500 tones	} *1,000 tones	10,000 tones 10,000 tones
Solo Bass	350 tones 350 tones	} *700 tones	7,000 tones 7,000 tones
Control	60 steps		10,000 steps

*double-length mode

- The internal memory of the organ cannot be used for storage or playback when the digital disk recorder is connected to the organ and turned on.
- The contents of the internal memory (PS mode) cannot be copied onto a digital memory disk.
- For proper use of the digital disk recorder, refer to its operating instructions.
- On the Musical Display, the 10,000 tones are displayed as 999.

㊺ Connection Terminals

(Below the lower keyboard)

phones volume⌐mic aux line out ext I/O(FD) ⌐MIDI⌐ out in (EX50)

phones volume⌐mic aux ⌐line out⌐ L R ext I/O(FD) ⌐MIDI⌐ out in (EX60)

Phones
For silent practice headphones may be used. When plugged in, the organ's speaker system is automatically switched off, and the entire organ is heard only through the headphones. (Use headphones with 16 ohm impedance.)

Mic (input level 7.5 mV, 10 kΩ)
The organ will accept a microphone of the uni-directional type. This type of microphone reduces feedback to the minimum.

Mic volume balances instrumental or vocal sounds fed into the microphone with the loudness of the organ.

Aux (input level 150 mV, 10 kΩ)
Among the many items which can be connected to this are tape/disc pre-amps, portable synthesizers, etc.

Line out (output level 300 mV, 600Ω)
By plugging into a high-power amplifier, the organ sound, including microphone and auxiliary instruments, can be reproduced at a very high volume level. The organ can also be tape recorded by using this method of connection.
With the EX50, monaural output is offered; with the EX60, 2-channel (L and R) output is offered.

Ext I/O (FD)
An optional digital disk recorder (SF-FD5) may be connected to this terminal for the storage of longer music performances or groupings of songs.

㊻ Cautions for Safest Use of This Unit

Installation location

1. **A well-ventilated place.**
   Take care not to use this unit in a place where it will not receive sufficient ventilation, and not to permit the ventilation holes to be covered by curtains, or any similar materials.

2. **Place away from direct sunlight and excessive heat from heating equipment.**

3. **A place where humidity, vibration and dust are minimized.**

Power source

1. **Be sure the line voltage selector is in accordance with local voltage in your area before connecting the plug to the socket.**

2. **DC power cannot be used.**

Handling the power cord

1. **Never touch the power cord, or its plug, with wet hands.**

2. **Don't pull the power cord.**

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

Do not permit metal articles to get inside the unit.

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

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

If water gets into the unit . . .

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

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

If operation seems abnormal . . .

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

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

A word about the power cord . . .

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

Don't touch the inside parts of this unit.

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

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

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

MAINTENANCE

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

- Be sure to switch the instrument off after use, and do not switch the unit on and off in quick succession, as this places an undue load on the electronic components.

- To keep the luster of the keys and buttons, simply use a clean, damp cloth; polish with a soft, dry cloth. Polish may be used but do not use thinners or petro-chemical-based polishes.

- A wax-based polish may be used on the cabinet, although you will find that rubbing with a soft cloth will suffice.

ENGLISH

㊼ Symptoms which appear to be signs of trouble

The following changes in performance may occur in the
Technics keyboard but do not indicate trouble:

Phenomenon	Remedy
Voices of flute tablets do not sound.	The flute volume levels are adjustable for each individual tablet. If set to 0, however, the voice of the tablet will not sound. Adjust the flute tablets to the desired levels. (Refer to ㊳.)
Different voices are heard in the lower and upper half keys on the upper keyboard.	The lower portion of the upper manual keyboard is used to sound the lower manual voices when the lower manual keyboard is required for programming functions.
A rhythm does not start or no rhythm sounds.	●No rhythm sounds if the **drum percussion on** button is turned off (EX60). ●If the **PCC** button has no stored chords, no rhythm will start when turned on. Press the **cancel** button. ●If the **composer** button has no stored rhythm patterns, no rhythm will sound. Select other rhythm buttons.
Rhythm tempo control remains inoperative (EX60).	When the **tempo set** button is turned on: ●The tempo control does not operate if the **fine** button is turned off. ●If the **fine** button is turned on, fine adjustment is possible in the tempo control. Press the **tempo set** buttons I and II simultaneously to turn them off. This allows the rhythm tempo to be adjusted with the tempo control.
The foot switch does not operate properly.	Any functional on and off operation other than the factory-presets is storable in the foot switch. (Refer to ㉟.)
The tremolo speed is improper.	The **tremolo** speed is preadjustable. Adjust to your favorite speed. (Refer to ㊳.)
The contents of the Program Chord Computer, Fullband Setting Computer, etc. cannot be stored.	After pressing the **record** button, press the necessary buttons within 5 seconds. The **record** button turns off after a lapse of 5 seconds, making storage operation impossible. Press the **record** button again.
When storing the created tones and effects in the Voice Setting Computer, voices other then those desired are stored.	●To store your created tones and effects, press the **1** to **7** buttons of the Voice Setting Computer while the **set** button is held down. ●To select your favorite voice from the 20 factory-preset voices, press the **record** button and depress one of the **1** to **7** buttons on the Voice Setting Computer within 5 seconds. Then press the key corresponding to the preferred voice of keys **1** to **20** on the lower keyboard. Finally, press the selected **1** to **7** button again.
Storage is not possible with the Program Chord Computer.	●Check that the **PCC** button is slowly flashing. Pressing the **fingered** button turns off the **record** button, making storage operation impossible. ●Do not release the left hand (chord designation) before pressing the measure keys (⟞⟝ , ⟞⊢⟝ , and ⟞⊢⊢⟝).
When the rhythm stored in the **rhythm composer** is played, the rhythmic orchestra and automatic bass accompaniment do not sound.	●Store patterns in the **rhythmic** and **melodic** buttons of the **rhythmic orchestra**, just as you would with other rhythmic instrumental effects. ●The bass of Auto Play Chord sounds with a drum bass, which should be stored.
The stored registration cannot be used when performance is started with the **Play Sequencer** button turned on.	To use the stored registration, turn on the **Fullband Setting Computer** button and then press the **1** key on the lower keyboard.

Phenomenon	Remedy
The stored introduction is not reproduced during automatic performance.	●Set the beginning of a song, such as an introduction, before turning on the **record** button. ●To add an introduction after the **record** button and **Play Sequencer** button flash, set it after turning on the **Fullband Setting Computer** button. Then turn off the **Fullband Setting Computer** button.
No storage is possible even when the **record** button and **Play Sequencer** button are slowly flashing.	●No storage is possible when the **Fullband Setting Computer** button is turned on. Turn it off before playing. ●If any **Play Sequencer** button is lit, press the **start/stop** button for automatic performance of the stored part. Another part can then be stored.
The quick rhythm tempo is delayed when the Play Sequencer is used.	This occurs when too many tones are played at one time. Slow down the tempo (to about $\int$ =250) or reduce the number of tones played at a time.
Different tones and effects are stored in the Fullband Setting Computer (FSC).	If the Voice Setting Computer (VSC) function is selected, the stored contents in this button are stored into the FSC. When the tones and effects selected by the VSC are changed, store them in the VSC again before storage in the FSC.
The cabinet and slide cover become heated to some degree.	The Technics organ has a built-in power source that heats the cabinet and slide cover to some degree. This is not an indication of trouble.
The buttons, tablets, keyboards, etc. malfunction.	●Press the **Fullband Setting Computer** button first to turn it on and then press the **initial** key on the lower keyboard. ●If the buttons, tablets, keyboards, etc. do not return to normal, turn the **power** switch off once, then turn on again.

Partie I Fonctions de base

Dans cette section sont expliquées les fonctions de base de voix, effet et rythme. Pour les diverses fonctions d'enregistrement qui nécessitent l'utilisation du bouton **record**, se référer à la partie II.

La plupart des boutons et plaquettes sont munis d'une LED qui s'allume lorsqu'ils sont en marche.
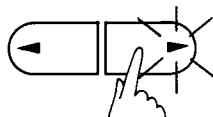
Tablette (EX60 seulement)

- La diode LED s'éteint quand cette partie est enfoncée.

- La LED s'allume et le registre est en service lorsque cette partie est enfoncée.
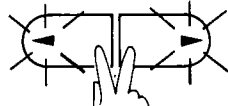
Commandes

Cet orgue permet de commander le volume et les effets par des boutons à 2 ou 4 positions à l'exception des commandes de **transpose** et **tempo** du rythme.
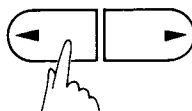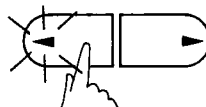
Volume, Effet

- Lorsque le bouton de droite est enfoncé, le témoin lumineux (LED) situé sur le bouton s'allume et le volume ou l'effet s'accroît.
- Si les deux boutons sont enfoncés simultanément, le volume ou l'effet retournent à un niveau normal ou intermédiaire, et les deux témoins lumineux s'éteignent.

- Lorsque le bouton de gauche est enfoncé, le témoin lumineux (LED) situé sur le bouton s'allume et l'effet ou le volume est diminué.
- Si l'on presse de nouveau le bouton de gauche, le volume ou l'effet est diminué et le témoin lumineux s'éteint.
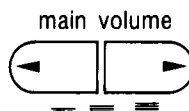
full
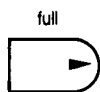
- En appuyant sur ce bouton, le volume augmente et la LED située sur le bouton s'allume. Si l'on appuie sur ce bouton encore une fois, la LED s'éteint et le volume retourne au niveau normal.

Secteur/Contrôles de volume général

Enfoncez le commutateur (**power**) et l'orgue s'allume. Quand ceci est fait, la lampe témoin située sur le bouton s'allume; si cela ne se produit pas, vérifiez que l'orgue est bien branché.

Main volume (volume principal) permet de régler la puissance sonore de tout l'orgue.

main volume

power
▲ off ▲ on

SPECIFICATIONS

		SX-EX50 (L)	SX-EX60
keyboard		upper manual 44 keys, lower manual 44 keys, pedal keyboard 13 keys	
one touch play		on	
fullband setting computer		fullband setting computer, record*, ①~⑤ (lower keyboard)	
play sequencer		bass, lower, upper, solo, record*	
voice setting computer		set, 1~7, cancel, 20 combination VSC (lower keyboard)	
tone selector		orchestral conductor (upper...4, lower...4)	orchestral conductor (upper...5, lower...5)
upper tones	tab voices	flute 16', 8', 4', 2', string 8', volume	flute 16', 8', 5-1/3', 4', 2-2/3', 2', 1-1/3', 1', string 8', 4', volume
	(percussive tone)	4', click	5-1/3', 4', 2-2/3', 2', click, long, volume
	(harmonic coupler)	2-2/3' (program), record*	
	string ensemble	volume	
	percussive presets	(poly presets) piano, harpsichord, vibraphone, guitar, banjo,	piano, electric piano, harpsichord, vibraphone, guitar, banjo, volume
	orchestral presets	trombone, saxophone, accordion, clarinet, wah brass, full	trombone, saxophone, accordion, clarinet, wah brass, synthe brass, volume
	solo presets	trombone, saxophone, clarinet, flute, pan flute, synthe, volume	trombone, saxophone, trumpet, clarinet, flute, pan flute, synthe I, II, volume
lower tones	tab voices	flute 8', 4', string 8', full	flute 8', 4', 2' string 8', 4', volume
	(harmonic coupler)	2' (program), record*	
	string ensemble	volume	
	percussive presets	(poly presets) ○ (U/L)	○ (U/L)
	orchestral presets		○ (U/L)
	solo presets	○ (U/L)	
bass tones		bass 16', 8', 16'+8', acoustic bass, electric bass, tuba, volume	bass 16', 8', 16'+8', acoustic bass, electric bass, synthe bass, tuba, volume
effects	pedal to lower	———	○
	sustain	(upper) on, control; (poly presets) on, control; (lower) on, control; (bass) control	(upper) on, control; (percussive presets) on, control; (lower) on, control; (bass) control
	slow attack	———	○
	chorus/tremolo/celeste	U tab voices, U/L poly presets, L tab voices, chorus, tremolo, celeste	(multi-tremolo) U tab voices, L tab voices, slow/fast (celeste) U tab voices, L tab voices, solo presets, orchestral presets
	reverb	○	
	glide	foot switch	
techni-chord		on, close/open (program)	
drum percussion (selectors)		march, shuffle, swing I, II, 8 beat, funk rock, 16 beat, samba rock, ballad, swing rock, disco I, II, rhumba, guaracha, bossa nova I, II, mambo, cha-cha, samba, baion, waltz, tango, jazz waltz	
(controls)		synchro & break, start/stop, volume, foot switch, glide/rhythm, tempo	on, mellow, drum vari, synchro & break, start/stop, volume, foot switch, glide/rhythm
tempo set		———	I, II, manual, fine, tempo, record*
arrange percussion		———	I, II, III
intro & ending		on, vari	
fill in		I, II, solo	
rhythmic orchestra		rhythmic, melodic, I/II, volume	
auto play chord		fingered, memory, cancel	
program chord computer		PCC, cancel, record*, 𝄐, ◄ , ► , ⌐, ⌐, ⊢⊣, 𝄋, D.S., —𝄐, ⌐, ⊣ ⊢ (lower keyboard)	
program rhythm computer		composer I, II, III, rhythm sequencer on, record*, clear, beat, 2nd bar, triplet, accent/pitch, I, II, III, 1~16, 𝄐, ◄ , ► , ⌐, ⌐, ⊢⊣, 𝄋, D.S., —𝄐, ⌐, ⌖, ⊣ ⊢ (lower keyboard)	
transpose		control (G ~ C ~ F♯)	
tuning		free set, +, —	
musical display		○	
program function switches		foot switch, record*	
MIDI		set, clock int/MIDI, start/stop, program change, effect, sustain, part select (bass, lower, upper, solo), MIDI terminals (in, out)	
others		power switch, main volume, expression pedal, headphone jack, input jack, microphone jack (with volume), output jack, ext I/O (FD) terminal, initial (lower keyboard), digital memory pack slot	
output		50 W	100 W
speakers		30 cm (11-13/16") ×1, 6.5 cm (2-9/16") ×1	30 cm (11-13/16") ×1, 20 cm (7-7/8") ×1, 6.5 cm (2-9/16") ×1
power requirement		160 W	250W 300VA (Canada)
		AC 120/220/240 V 50/60 Hz	AC 120 V 60 Hz — North America, Taiwan AC 220 V 50/60 Hz — Europe (except for England)
cabinet (W×H×D)		(EX50L) 107.6 cm × 92.9 cm × 52.0 cm (42-3/8" × 36-9/16" × 20-15/32") (EX50) 111.4 cm × 96.9 cm × 57.2 cm (43-27/32" × 38-5/32" × 22-17/32")	111.4 cm × 99.9 cm × 58.9 cm (43-27/32" × 39-11/32" × 23-3/16")
net weight without bench		(EX50L) 48 kg (105.8 lbs.) (EX50) 61 kg (134.5 lbs.)	67 kg (147.7 lbs.)

*Common "record" button is used for these buttons.

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MEMO