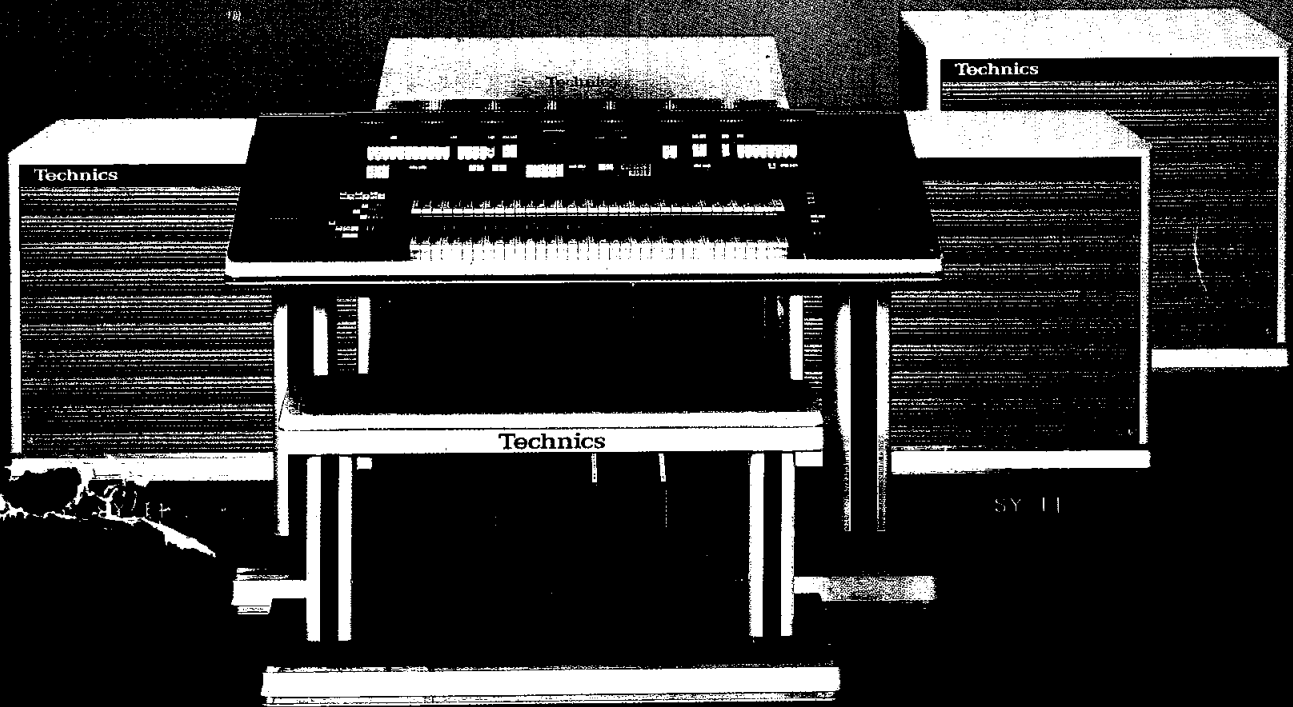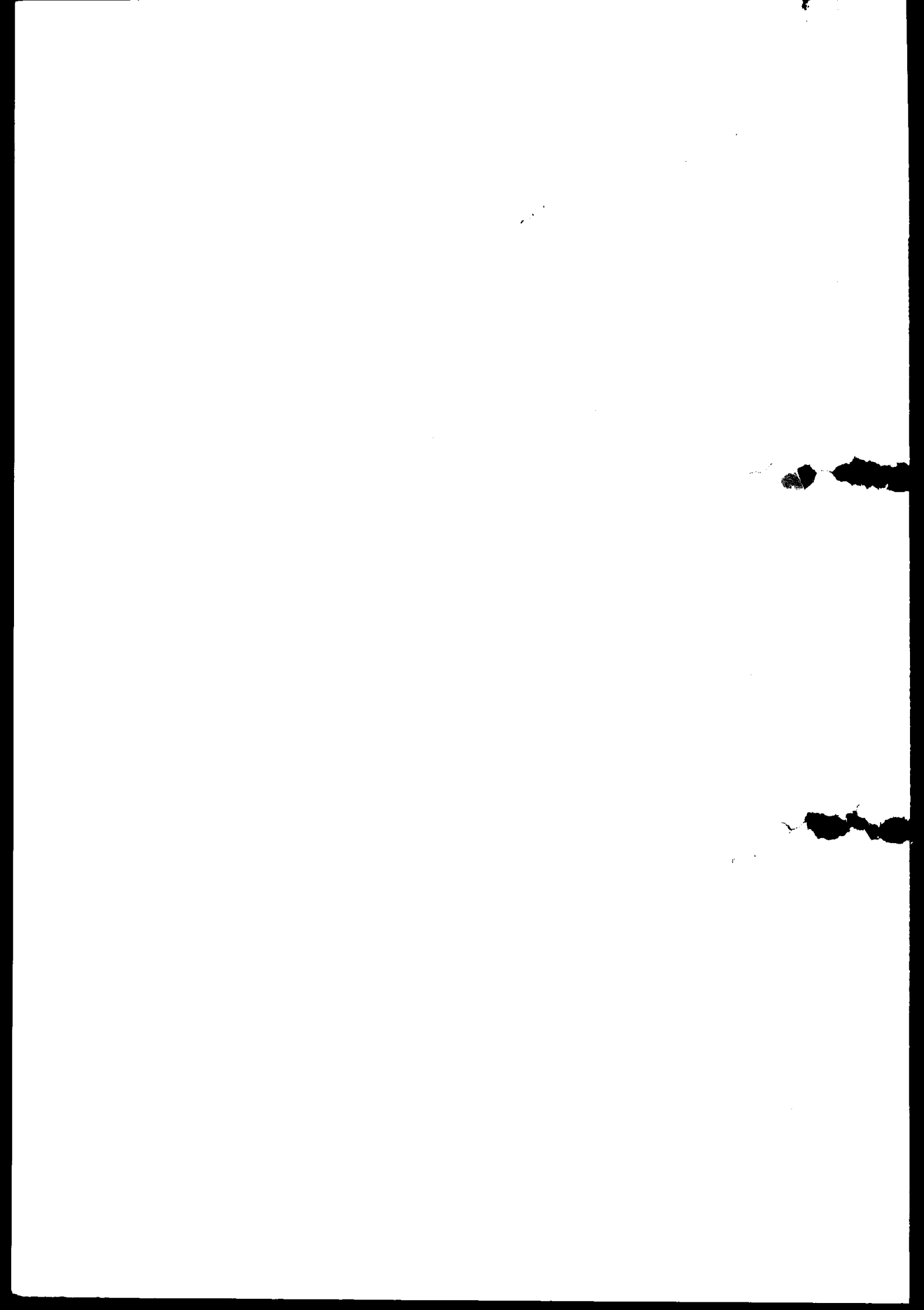# Technics
SX-A1

Technics

OWNER'S MANUAL

Caution

Voltage (except North America, Europe, Taiwan)
Be sure the voltage adjuster (located on the rear panel) is in accordance with local voltage in your area before using this unit. Use a screwdriver to set the voltage adjuster to the local voltage.

IMPORTANT (for GREAT BRITAIN)
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 colored 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

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 50.

Here is the main control panel on your Technics organ.

Each button has a light (LED, or light-emitting diode) that goes on when that particular control is activated.

The circled numbers cross-reference the various features, with explanations appearing later in the book.
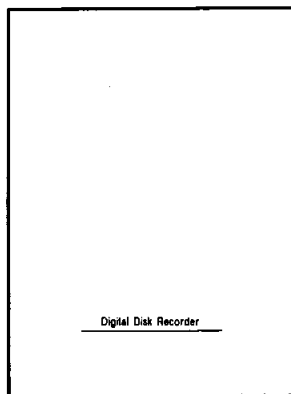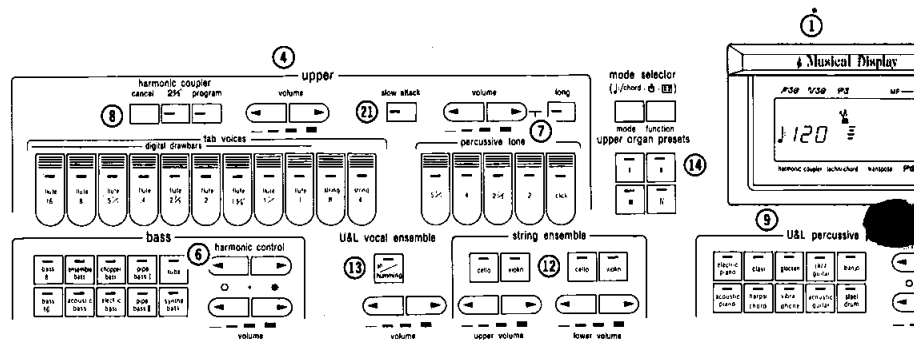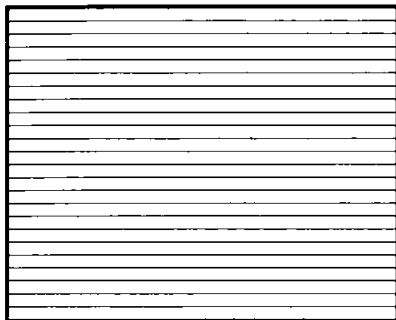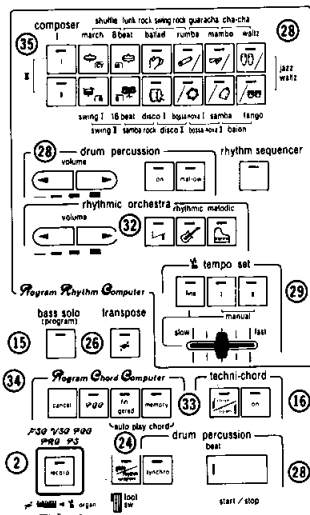
③

orchestral conductor

upper   lower

| percus-sive presets | orches-tral presets | solo synth presets | lower tab voices | | percus-sive presets | orches-tral presets | solo synth presets |
| organ presets | string ensemble | vocal ensemble | | | organ preset | string ensemble | vocal ensemble |

upper   lower

⑰ multi-tremolo/vibrato   ⑱ effect conductor   ⑤ harmonic coupler   lower

vibrato

U ─── U&L ─── L

| cancel | cancel | cancel | cancel | cancel |
| tab voices | percus-sive | orches-tral | solo synth | tab voices |

multi-tremolo

U tab voices | L tab voices | slow fast   phaser

| chorus | chorus | chorus | chorus | chorus |
| celeste | celeste | celeste | celeste | celeste |

phaser

cancel 2' program   volume

─── digital drawbars ───

| flute 8 | flute 4 | flute 2⅔ | flute 2 | flute 1⅗ | flute 1 | string 8 | string 4 |

⑤ percussion   ⑳ Voice Setting Computer   ⑩ U&L orchestral presets   ⑪ U&L solo synthesizer presets   harmonic control
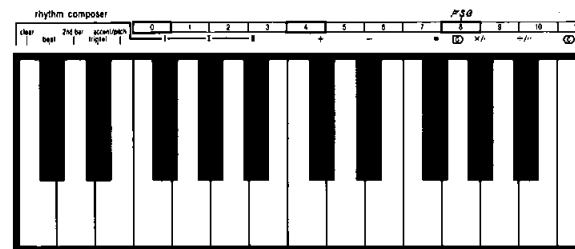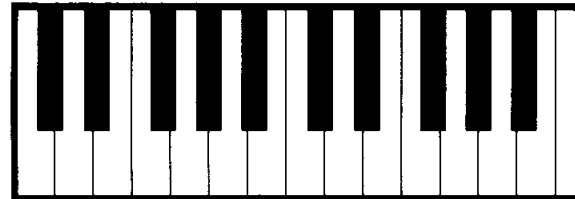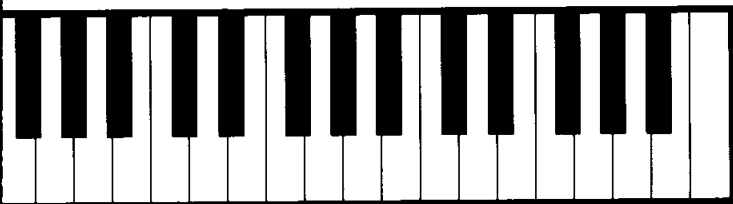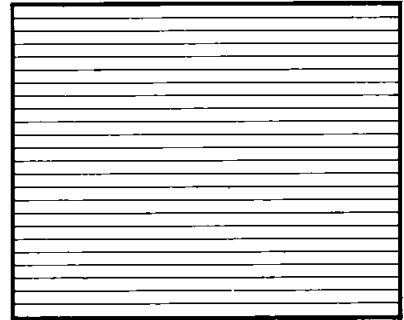
㉚ | | |
㉛ | | |

cancel | V | VI | VII

| trum-pet | french horn | accor-dion | synth brass |
| trom-bone | saxo-phone | clari-net | wah brass |

harmonic control

○ • ☀

volume

| har-monica | trum-pet | clari-net | oboe | whistle | cosmic | key sender |
| violin | trom-bone | saxo-phone | flute | pan flute | rock guitar | synthe chopper |

harmonic control

volume

solo
fill in & intro

⑲ ─ sustain ─

upper
on

U&L percussive presets
on

lower
on

bass

⑳ digital reverb

Play Sequencer
㊲ bass lower upper solo

㉗ V   tuning free set − +

main volume

Fullband Setting Computer

㊲ □   ● power off on

Digital Memory Pack

FSG
open/close
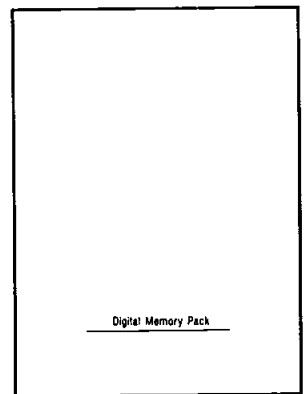
organ presets   rhythm sequencer & chord composer

| 14 | 15 | 16 | 17 | 18 | 19 | 20 |

㉓
⑮   ㉒

3
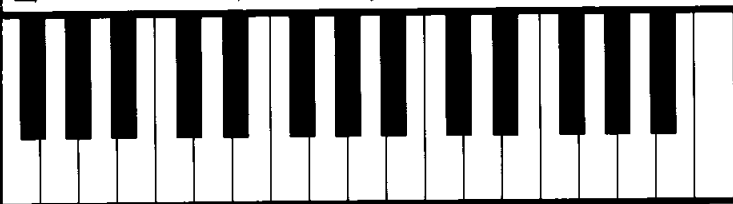
Connection of Tone Cabinets

The built-in speakers of this Technics organ are intended only for use as monitors. When performing on stage for example, use the SY-T1 Tone Cabinets designed for public performance.

●Use the monitor volume control to adjust the monitor speaker volume.

Monitor volume control

Connection terminals
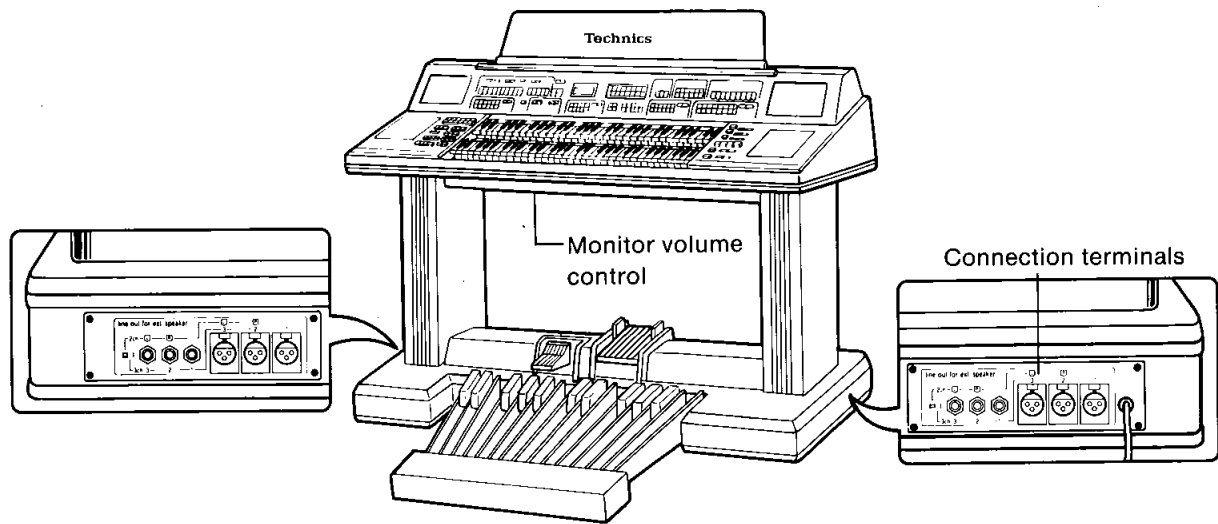
●Identical connection terminals are located on the right and left sides of the lower unit. If the channel selector switches on both sides are set in the same position, a tone cabinet can be connected to either side of the organ. (For example, the right signal can be obtained from the right side of the organ and the left signal from the left side.)

●Use the cannon type cord supplied with the Tone Cabinets to connect them to the Technics organ.

The following connections are possible depending on the number of tone cabinets used.

Two Tone Cabinets

(Right)   (Left)
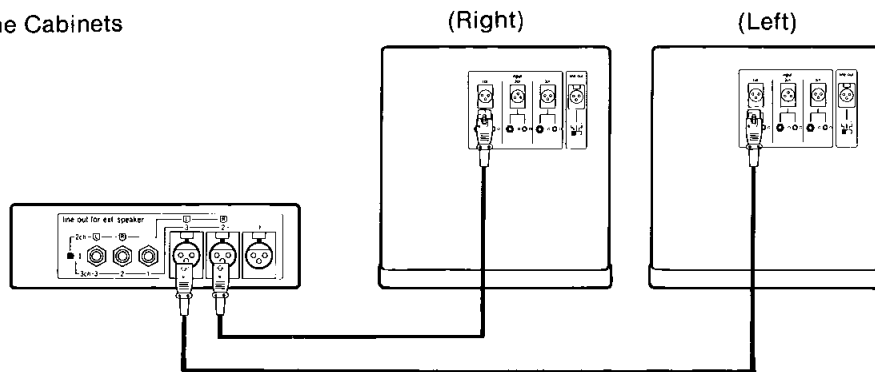
Three Tone Cabinets

(Right)   (Center)   (Left)
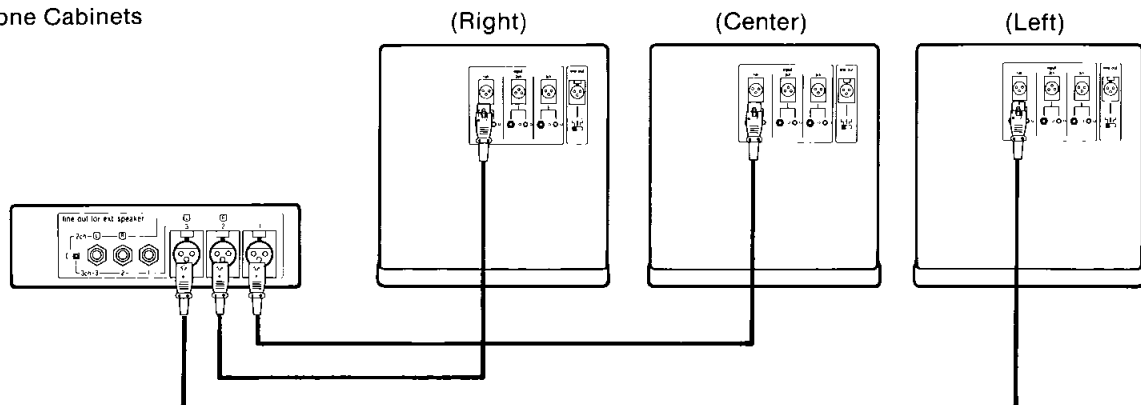
●A well-balanced sound can be obtained by connecting the organ and Tone Cabinets as shown in the figure.

4

Disassembly

This Technics organ can be separated into upper and lower units. If the units must be separated for shipment or for some other reason, follow the procedure shown in the figure below. To reassemble the cabinets, reverse the procedure.

1. Disconnect the cords (extending from the legs in the lower unit) from the sockets in the upper unit.
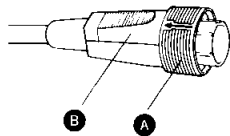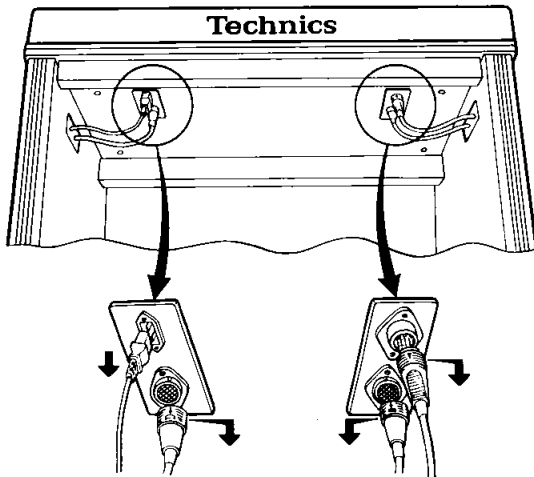
- To plug in the connector, hold part **B** and push the connector in until you hear a "click."
- To unplug the connector, hold part **A** and pull the connector out.

2. Remove the four thumbscrews.
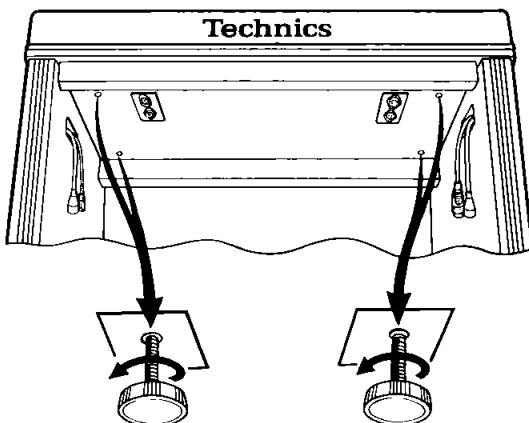
3. Remove the upper unit from the lower unit.
- The music stand can be easily removed as shown in the figure.
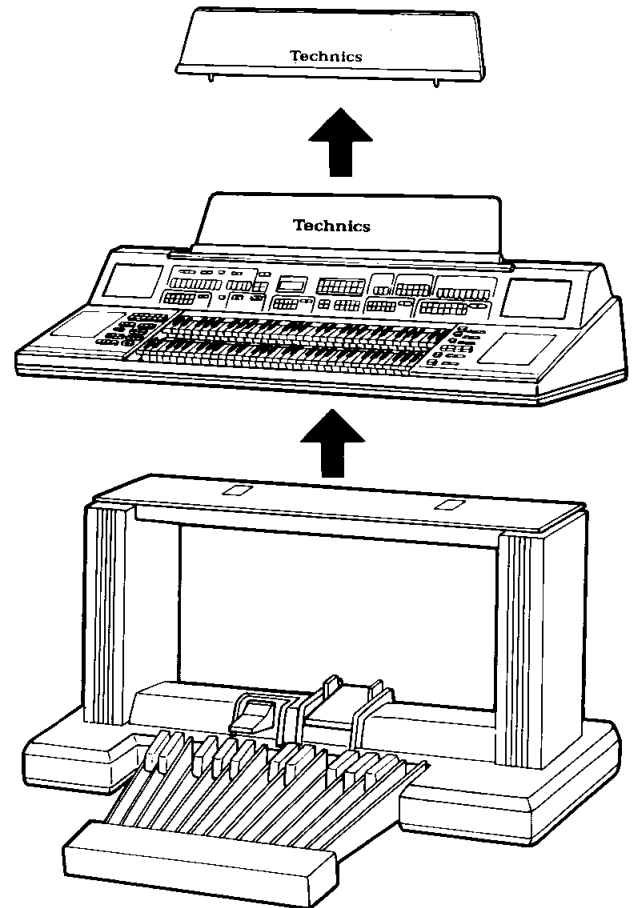
4. Remove the pedal keyboard unit from the lower unit.

5

All buttons and tablets are equipped with LEDs which light up when in operation.

Tablet
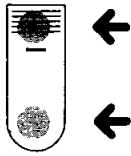
• Turns off when this part is pressed.

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

Controls

All levels and effects on the organ are controlled by 3- or 4-stage buttons, except for the rhythm tempo control.

Harmonic control
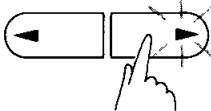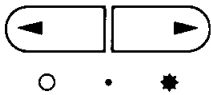
• When the right button is pressed, the brilliance of the sound is increased.

• If both buttons are pressed simultaneously, the sound returns to its normal, or intermediate, level.
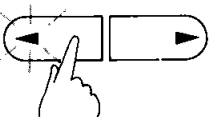
• When the left button is pressed, the sound is "softened."

Volume, Effect
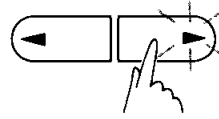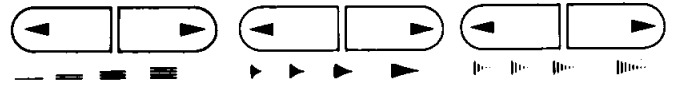
• When the right button is pressed, the LED on the button lights up and the volume or effect is at maximum.
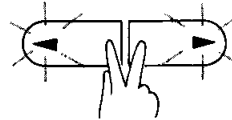
• If both buttons are pressed simultaneously, the volume or effect returns to the normal, or intermediate, level and both LEDs turn on.
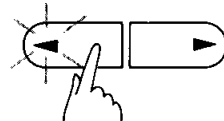
• When the left button is pressed, the LED on the button lights up and the volume or the effect is decreased.
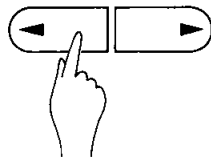
• If the left button is pressed again, the volume or effect is at minimum and the LED turns off.

Power/Main Volume Controls

Pressing the power switch turns the organ on.

Main Volume adjusts the loudness of the entire organ.

main volume   power
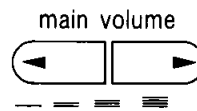
The circled numbers on the separate color sheet correspond to the section numbers in this instruction manual.

① Musical Display

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

I. Display of selected functions

When a function is selected as illustrated below, it is indicated by its symbol, such as ≜ , ◀ , or 𝄢 .

mode selector
(♩/chord . ♂ . ⊞)
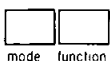
mode   function
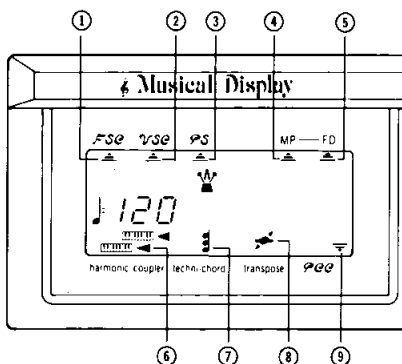
① Fullband Setting Computer (Refer to ㊲)
② Voice Setting Computer (Refer to ㉕)
③ Play Sequencer (Refer to ㊲)
④ Memory Pack (Refer to ㊲)
⑤ Memory Disk (Refer to ㊲)
⑥ Harmonic Coupler (Refer to ⑧)
⑦ Techni-Chord (Refer to ⑯)
⑧ Transpose (Refer to ㉖)
⑨ Program Chord Computer (Refer to ㉞)

II. Display of Musical Contents/Stopwatch/Computation

Each time the **mode** button is pressed the mode indicated on the musical display changes. There are 3 primary modes:
- Tempo
- Stopwatch
- Computation

a) Tempo

■ The tempo and rhythm beat are displayed. When the rhythm starts, the metronome on the display begins swinging.

Rhythm   Beat
tempo
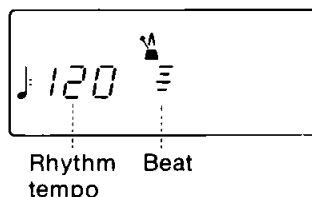
■ When the **function** button is pressed, the accompaniment of the lower, and pedal keyboards are also displayed.
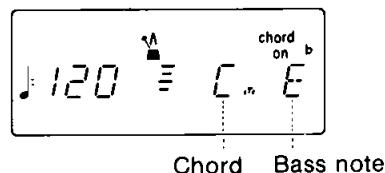
Chord   Bass note

- Bass note (except for roots) is also displayed when you play the pedals in manual play or the Fingered mode of the Auto Play Chord.

- Chord names C#, D#, Gb, G#, and A# are displayed as Db, Eb, F#, Ab, and Bb, respectively.

- When the **function** button is pressed again, only the rhythm tempo and beat are displayed.

b) Stopwatch

The stopwatch function is assumed when the mode button is pressed. Now you can measure your performance time. The ⏱ , ′ , and ″ marks flash to indicate that the stopwatch is on standby. When the rhythm section or note is played the stopwatch starts. The stopwatch stops 2 seconds after play stops, and the total performance time is displayed. The measurement of performance time resumes when play resumes. Performances may be timed in this manner up to 59 minutes and 59 seconds.

minutes   seconds
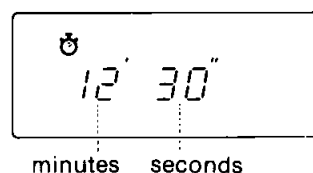
- The display is reset when the **function** button is pressed.

c) Computation

Pressing the **mode** button for the computation mode allows you to calculate the relationship between the tempo, the number of bars, and the performance time. This mode is also capable of arithmetical operations needed to determine the number of bars.

- White keys 0 through 9 and the black keys between them on the lower keyboard are used to input numerical information and perform calculations.

lower keyboard

7
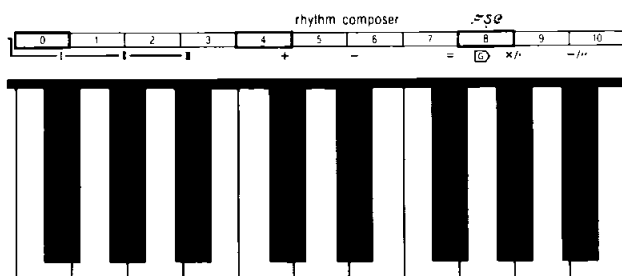
- Set the tempo, enter the number of bars, and press the function button. Performance time for the preset tempo and number of bars will be displayed.

Set the tempo with the tempo control.

Set the number of bars using the lower keyboard.
Key operation: [1][6][0]

Performance time for 160 bars at ♩ = 120 is displayed.
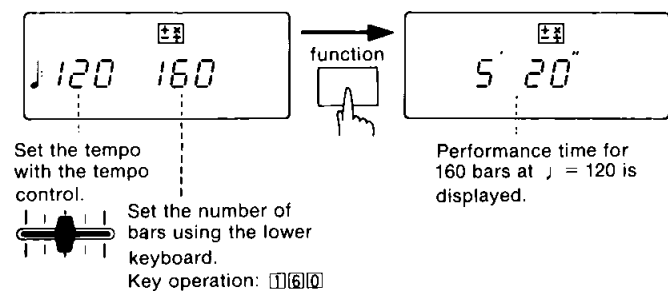
- Set the tempo and press the **function** button to set the performance time. Press the **function** button again and the number of bars for the preset tempo and performance time will be displayed.

Set the tempo with the tempo control.

Set the performance time.
Key operation: [2][:][3][0][″]

The number of bars playable for 2 minutes and 30 seconds at ♩ = 150 is displayed.
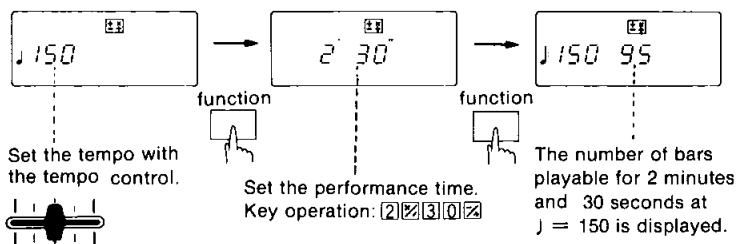
- If the tempo is changed using the tempo control, the number of bars or the performance time changes accordingly. (If the **function** button is pressed, the preset number of bars or the preset performance time will be displayed.)
- If the rhythm tempo is changed to a different beat, the performance time and the number of bars of the new beat will be displayed.
- The arithmetical operation keys can be used to determine the number of bars.
- Up to 3 digits can be displayed without decimal fractions.
  Example: 40 + 32 − 16 =
  Key operation: [4][0] [+] [3][2] [−] [1][6] [=]
- Numbers greater than 999 will result in the error display ($\mathcal{E}$).

III. Secondary display modes

When storing the harmonic coupler, organ presets, Transpose, Tuning, and Program Chord Computer etc, the contents being stored are displayed. See each section for details.

② **Record**

Record creates no effect of its own. This button is used to store functions such as **Organ Presets**, the **Voice Setting Computer**, and the **Program Chord Computer**. When you press **record**, its light goes on and the lights of all programable features flash quickly. Press the button for the feature you with 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 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 relevant sections.

Contents stored by using the **record** button remain in 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 31 keys on the upper keyboard.

Upper keyboard	To check lower keyboard tones and effects	To check upper keyboard tones and effects

Lower keyboard	Used for storage operation

Initial Key

This **initial** key is used to set the tones 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.

- 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 relevant sections.)

ion *VSe* / organ presets

| 13 | 14 | 15 | 16 |

(F♯/G♭) /initial
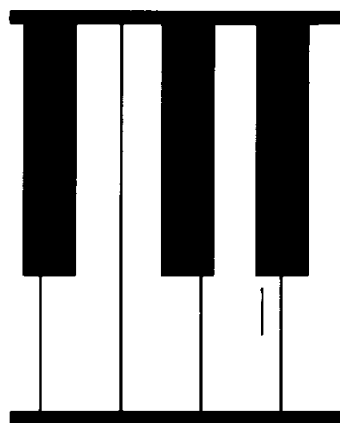
⟨③⟩ Orchestral Conductor
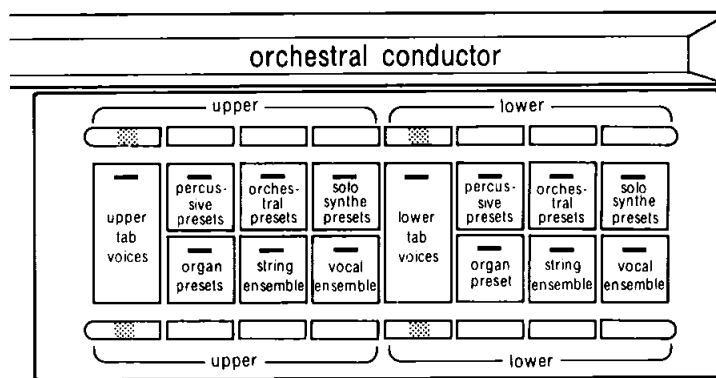
The Orchestral Conductor is the nerve center of the Technics organ. It allows you to instantly set up complete groups of voices or instrumental effects; you can even change them as you play. This adds a versatility to your playing that few professionals enjoy.

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 shines 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.

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

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

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

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

Vocal ensemble enables you to add choral effects to your music.

Organ presets lets you store your favorite organ sound.

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.
Tab voices and organ presets cannot be used together.

- The voices of percussive presets, orchestral presets, solo synthe presets and vocal ensemble 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.

④ Upper Tab Voices

volume

tab voices
digital drawbars

| flute 16 | flute 8 | flute 5⅓ | flute 4 | flute 2⅔ | flute 2 | flute 1⅗ | flute 1⅓ | flute 1 | string 8 | string 4 |
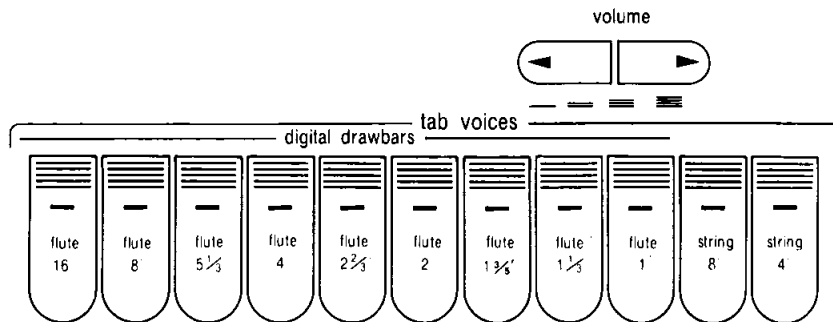
Footage Marks

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.

Flutes

The clear, mellow sounds of this tone family provide the basis for most voice combinations (registrations) on the organ.

Experiment with each flute voice on your organ, playing on various parts of the upper keyboard. Try them in different combinations, too.

Strings

Like the flutes, strings are extremely versatile. They make beautiful solo voices, and they add sparkle and brilliance to any combination of tabs. String and flute combinations are the basis for many theater organ sounds. You can create an entire string section with String 8 when you play three- and four-note chords on your upper keyboard (or when you use the Techni-chord feature).

Volume buttons let you adjust the volume.

Flute volume Adjustment

The flute volume level of the tab voices are 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.
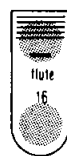
Press here to decrease the volume by one step.

Press here to increase the volume by one step.

● 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** —

● Flute Footage Level Display Examples

feet
16 8 5⅓ 4 2⅔ 2 1⅗ 1⅓ 1
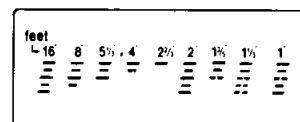
Even if the footage is displayed, if there is no tablet for it, it cannot be stored.

⑤ Lower Tab Voices

volume

tab voices
digital drawbars

| flute 8 | flute 4 | flute 2⅔' | flute 2 | flute 1⅓' | flute 1' | string 8 | strng 4 |

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.

Flute 8, 4, 2⅔', 2, 1⅓', 1' are the voices you'll most often use for accompaniment, especially for the brighter-sounding solo voices.

String 8, 4 add brilliance to any voice combination. Try it with the flutes.

Volume buttons let you adjust the volume.

⑥ Pedal Voices

bass

harmonic control

| bass 8 | ensemble bass | chopper bass | pipe bass I | tuba |
| bass 16 | acoustic bass | electric bass | pipe bass II | synthe bass |

volume
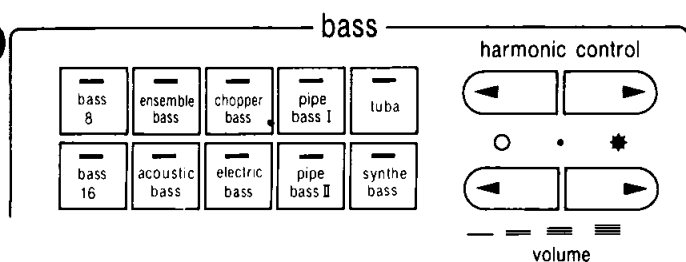
These buttons utilize the PCM system to provide the full body of real-life bass sounds. These buttons are used individually, but bass 8 and bass 16 can be combined.

Bass 8 is useful for playing rhythmic music and adds definition to your pedal notes when combined with Bass 16. Use it alone for light, quiet bass tones.

Bass 16 is a deep, flute-like organ voice that provides a solid foundation for all your music; it is especially effective for sacred music and the classics.

Ensemble bass is suitable for use as an accompaniment with orchestral music.

Acoustic bass adds the realistic sound of this instrument to your music.

Chopper bass is an exciting voice produced by the electric bass.

Electric bass is suited to contemporary music.

Pipe bass I is a full voice pipe organ sound.

Pipe bass II is one of the 16' principal voices.

Tuba is similar to the orchestral instrument it's named after— a broad, full voice with a more defined sound than the bass 16 voice.

Synthe bass provides a good accompaniment for the contemporary electric orchestral and synthesized sounds.

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

Harmonic control buttons adjust tone brilliance.

⑦ Upper Percussive Tone

volume   long

percussive tone

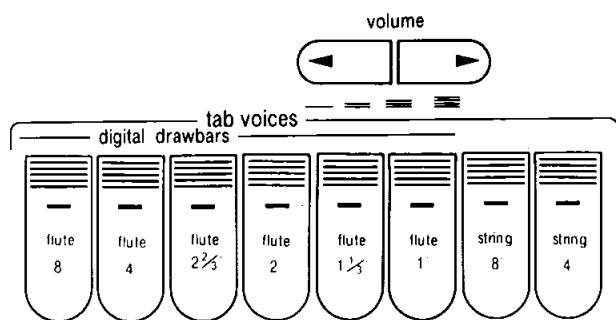| 5⅓' | 4' | 2⅔' | 2' | click |
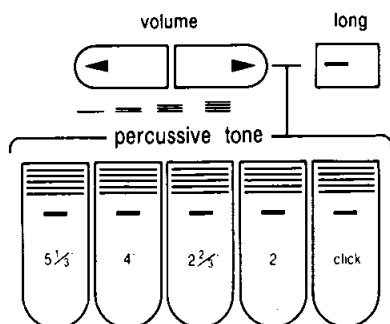
This feature adds a tone with a fast initial attack to any of the upper voice tab sounds; or it may be used alone. The effect is what you hear when a player strikes a piano key or plucks a banjo string. It is particularly useful when you play jazz or rock organ sounds.

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.

Volume buttons let you adjust the volume

⑧ Harmonic Coupler

upper harmonic coupler

cancel   2⅔'   program

lower harmonic coupler

cancel   2'   program
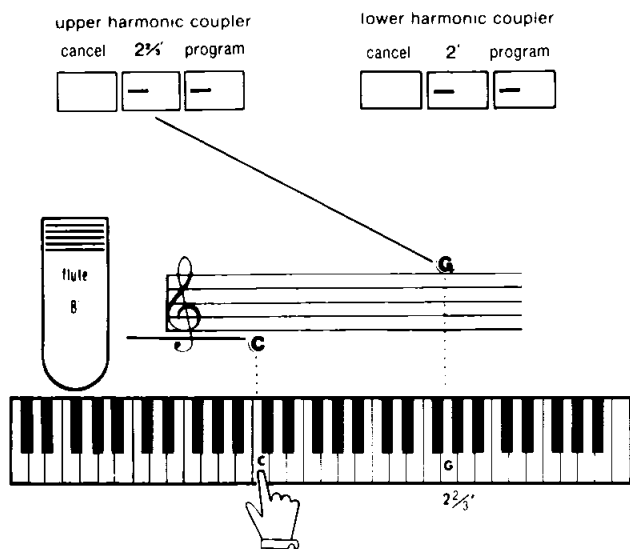
flute 8

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 flutes 16, 8, and 4 and play the same C key. Then add harmonic 2-2/3 and play the key again—from three voices to six.

Harmonic couplers work with upper or lower tab voices and Upper Percussive Tone. It is effective on up to four notes played simultaneously on either keyboard.

When the tab voices is mixed with other voice groups, the harmonic coupler is deactivated. (When mixed with organ presets, its harmonic coupler is given priority.)

In addition, you can create your own harmonic couplers for storage with the **program** button.

1. Press the **record** button.

2. Press the **program** button. (The **program** button will flash slowly.)

3. Press the key at the desired interval from the lowest C key on the lower keyboard.

   In this case, the lower part of the upper keyboard monitors the lower harmonic coupler, and the upper part of the keyboard monitors the upper harmonic coupler effect.

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

♣Musical Display

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

4C
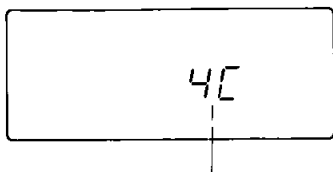
This number corresponds to the number of the keyboard octave of the following figure.

• Typical Harmonic Coupler Examples
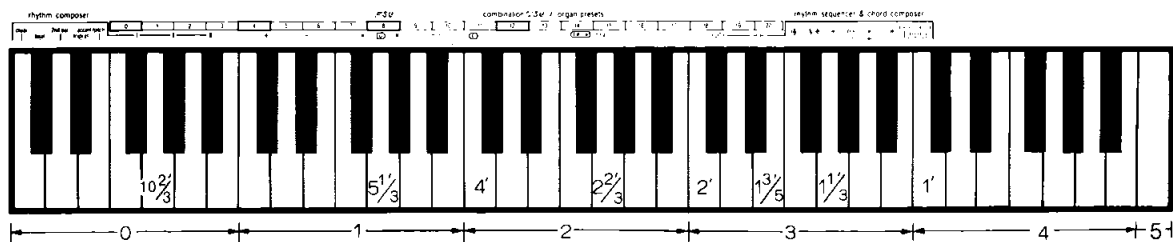
• To return to ordinary playing, press the **cancel** button.

⑨ Percussive Presets

U&L percussive presets

electric piano	clavi	glocken	jazz guitar	banjo
acoustic piano	harpsi-chord	vibra-phone	acoustic guitar	steel drum

harmonic control

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volume

"Percussive" refers to instruments that are played by being struck or plucked.

These presets incorporate PCM technology that allows real instrument sounds to be reproduced.

Acoustic piano provides an authentic voice—try it on a wide variety of songs.

Electric piano is now most commonly used, along with the piano. This sound goes well with a wide range of music, especially with new jazz and pops.

Harpsichord. The quaint, dry sound of this instrument sounds good on many classical selections or on certain popular favorites.

Clavi is best suited to backing "funky" music, etc.

Vibraphone is a rich, mellow sound

Glocken reproduces the real sound of the glockenspiel.

Acoustic guitar is a soft and delicate voice that enhances many musical moods.

Jazz guitar works well as a solo sound or when combined with other instruments.

Steel drum is indispensable for music such as calypso.

Banjo is a voice often used for country and western music.

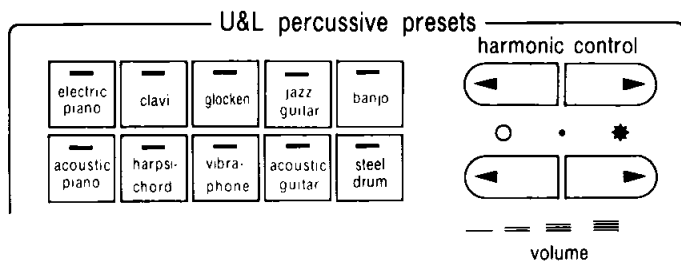**Harmonic control** buttons adjust tone brilliance.

Volume buttons let you adjust the volume.

⑩ Orchestral Presets

U&L orchestral presets

trum-pet	french horn	accor-dion	synthe brass
trom-bone	saxo-phone	clari-net	wah brass

harmonic control

◄ ►

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volume
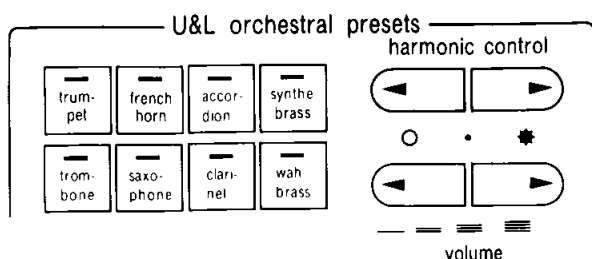
You can use these voices as solo instruments, or in combination with other sounds.

Trombone is a full-bodied sound, especially useful as a solo instrument.

Trumpet dominates any voice combination because of its brilliant and sparkling tone.

Saxophone, played on the lower half of your upper keyboard, sounds like a tenor sax.

French horn is a broad, soft, rich sound.

Clarinet is a voice best suited for a soft, mellow solo.

Accordion blends well with other voices, such as flutes.

Wah brass can range from the old "wha-wha trumpet" to the newer sounds of today.

Synthe brass is a brass voice for greater playing enjoyment used with the phaser effect.

Harmonic control buttons adjust tone brilliance.

Volume buttons let you adjust the volume

⑪ Solo Synthesizer Presets

U&L solo synthesizer presets

harmonica | trum-pet | clari-net | oboe | whistle | cosmic | key-bender

violin | trom-bone | saxo-phone | flute | pan flute | rock guitar | synthe chopper

harmonic control

volume

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. For example:

Violin is a full, rich sound on the lower part of your upper keyboard and a brilliant voice on the upper part.

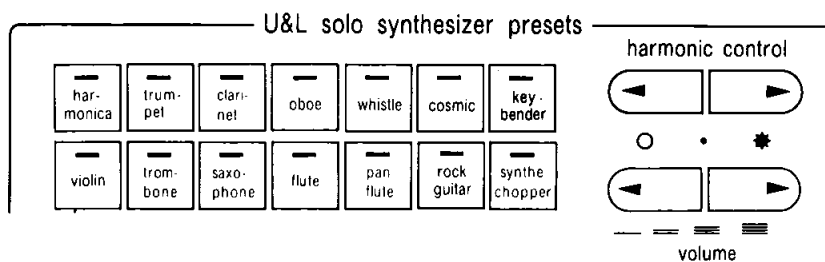**Harmonica** makes a bright, delicate solo voice no matter what type of song you play.

Trombone has a smooth, round tone that blends very well with strings or flutes.

Trumpet dominates any voice combination because of its brilliant and sparkling tone.

Saxophone has the tonal characteristics of a real tenor sax.

Clarinet is a voice best suited for a soft, mellow solo.

Flute is a pure, free voice that complements any melody.

Oboe is a thin yet soft tone.

Pan flute sounds so real — the breathy attack, the soft, mellow tone — you'll hardly believe it's really your Technics organ.

Whistle is a novelty voice, yet is heard fairly often in synthesizer performances of music of all kinds.

Rock guitar is a powerful voice suited for rock and fusion music.

Cosmic recreates the sound of an electric guitar, complete with fuzz-tone effect.

**Synthe chopper** is a percussive voice with a "key pop" effect, making it an ideal jazz or rock organ sound.

Key bender is an effect button that enables the voice of the pressed key to begin sounding at a halftone lower when playing legato.

Harmonic control buttons adjust tone brilliance.

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. This gives you the advantage of using these voices in combination with others, yet they will remain solo sounds.

⑫ String Ensemble

string ensemble

cello | violin | cello | violin

upper volume | lower volume
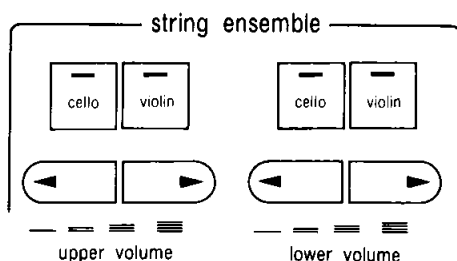
This feature allows you to create beautiful, shimmering string sounds, as either a solo voice or an entire string section.

Cello or **violin** sound can be selected. If you wish to mix these two sounds, press both buttons simultaneously.

Upper volume adjusts the loudness of the String Ensemble on the upper keyboard.

Lower volume adjusts the loudness on the lower keyboard.

⑬ Vocal Ensemble

U&L vocal ensemble

ah/humming

volume
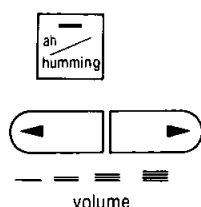
This feature enables you to create colorful and exciting choral effects on either your upper or lower keyboard. Your favorite effects can be selected by using the **vocal ensemble** button of the Orchestral Conductor. An "ah" tone is created with the **ah/humming** button off, but creates humming when the button is on. Their volume can also be adjusted with the U&L Vocal Ensemble controls.

⑭ Organ Presets

Your favorite organ tones can be stored for use anytime.

● Tones and effects in the figure above are storable.

● Combinations of four types (**organ presets I~IV**) for the upper keyboard and one type (**organ preset**) for the lower keyboard can be stored.

1. Set your favorite tone.

● Press the tab voices button of the Orchestral conductor to check the selected tone.

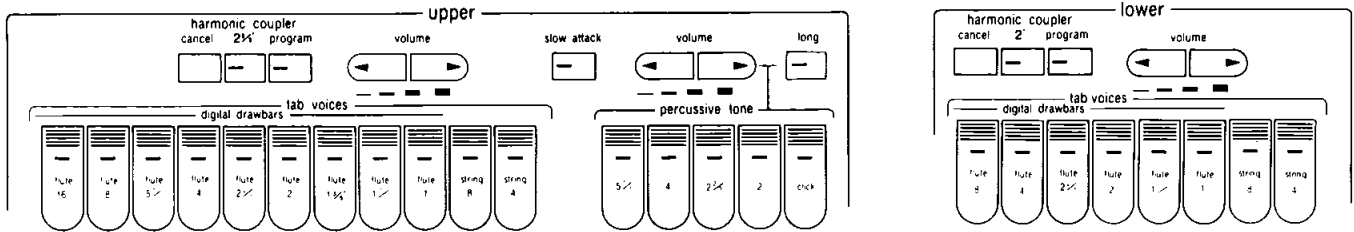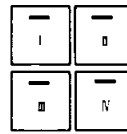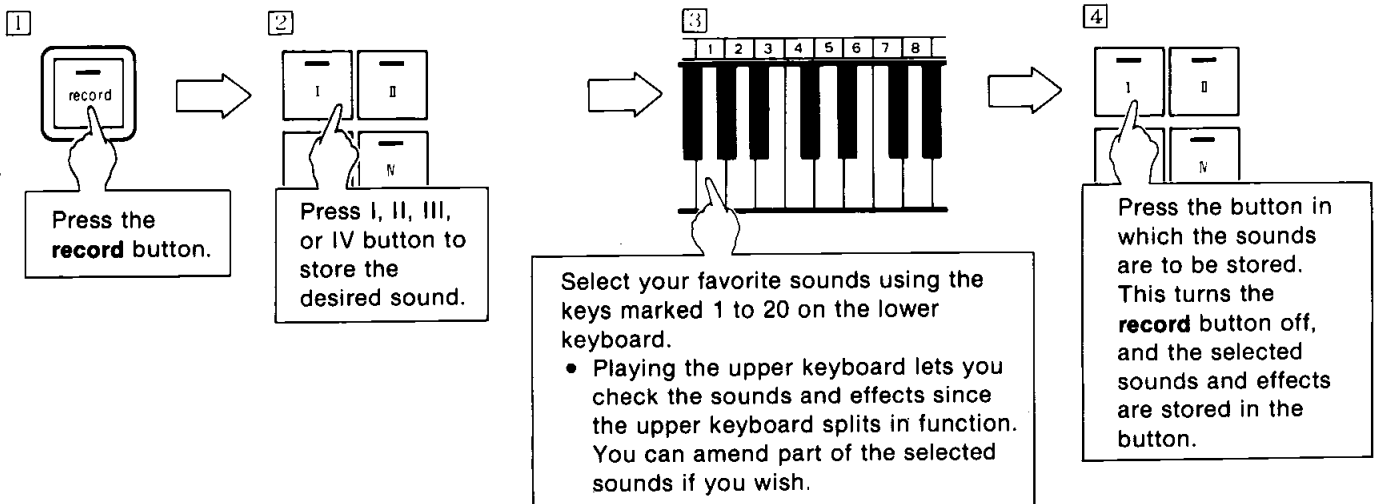**2.** With the **record** button held down, press the **organ presets I~IV** button. (For the lower keyboard, press the lower **organ preset** button of the Orchestral Conductor.) This stores setting in the memory bank.

● To change to another combination, perform the above operation for new storage.

How to Use the Factory Preset Organ Sound

In addition to your original tones, you can choose 4 of your favorite sounds from the 20 factory preset organ tones on the lower keyboard. These can be stored in I through IV buttons.

Press the record button.

Press I, II, III, or IV button to store the desired sound.

Select your favorite sounds using the keys marked 1 to 20 on the lower keyboard.
● Playing the upper keyboard lets you check the sounds and effects since the upper keyboard splits in function. You can amend part of the selected sounds if you wish.

Press the button in which the sounds are to be stored. This turns the record button off, and the selected sounds and effects are stored in the button.

● In step 4, pressing the II button instead of the I button stores the selected sounds in the I button and readies the II button for storage. After the desired sounds are selected, press the II button to complete the storage. If further storage is desired, press the III button instead of the II button for continued operation.

The following organ tone groups are preset in keys 1 to 20.

● These organ tones include unique sounds and effects unavailable from using the buttons and tablets.

1~5:	Pop organs
6~10:	Jazz and rock organs
11~15:	Classical organs
16~20:	Special organs

15

How to use the digital drawbar

You can adjust the Flute levels individually.

1. Press the **record** button on.

2. Press **I, II, III,** or **IV organ presets** button. (Or press the lower **organ preset** button of the Orchestral Conductor.)

3. Set your favorite tone.
   - For strings 8' and 4', percussive tone and slow attack, press the relevant tabs or buttons on.
   - If you wish to change the flute levels of the 20 organ presets, choose your favorite preset from the lower keyboard.
   - For flutes, adjust the footage levels while watching the musical display.
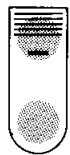
Pressing here decreases volume by one step.

Pressing here increases volume by one step.

With 5 bars, volume is maximum. When the number of bars becomes zero, the voice is turned off.

- Pressing the **Initial** key turns off all the tablets and buttons.

4. Press **I, II, III** or **IV organ presets** button. (Press the **organ preset** button of the Orchestral Conductor for the lower keyboard.) This turns **record** off, thereby completing storage operation.

Musical Display

- Flute Footage Level Display Exmaples
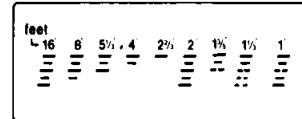
- Even if the footage is displayed, if there is no tablet for it, it cannot be stored.

- The footage is displayed by the 5 bars as follows:

level	0 off	1	2	3	4	5	6	7 max
display								

(----- flashes)

---

⑮ Full Bass pedal

The full bass pedal system automatically selects the lowest tone being played on the lower keyboard. The bass note corresponding to the tone sounds only when the full bass pedal is pressed. The tones, volume levels, and effects are the same as those obtained through the pedal keyboard button.

- All tones on the lower keyboard are regulated in 16' steps. Accordingly, bass 8' and bass 16' produce a tone of the same pitch.
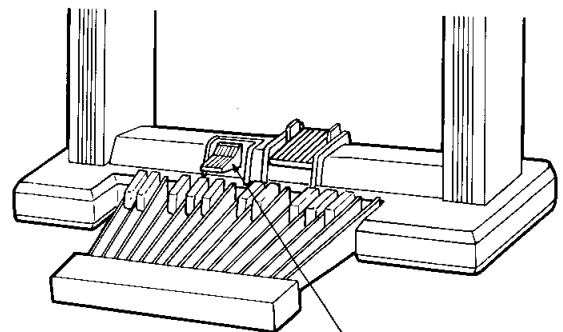
Bass solo...if the full bass pedal is pressed with the **bass solo** button on, the lower keyboard tones die out and only the bass solo is heard.
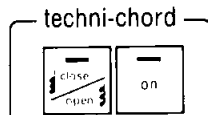

Full Bass pedal

■ Creation of a Walking Bass Using the Jazz Wood bass

(Between Ped and*, play the lower keyboard with the full bass pedal down.)

Ped. - *

- You can use the full bass pedal to turn other functions on and off. (Refer to ㉟.)
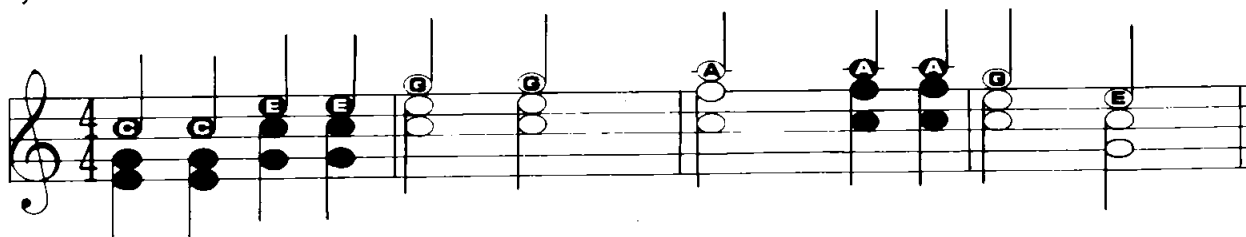
⑯ Techni-Chord

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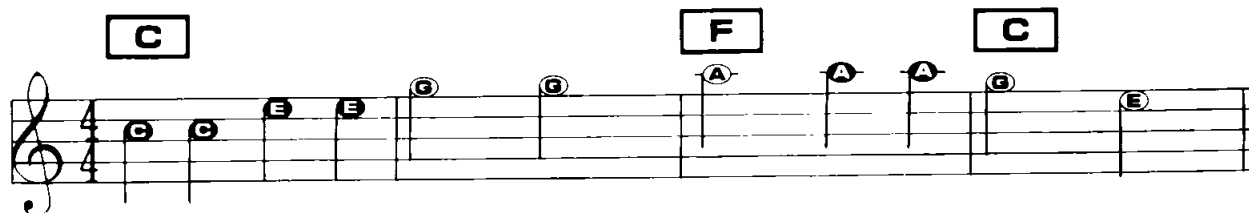
Now press the **on** button and play the example again. Here's how your one-finger melody looks when written out—three-note melody chords!
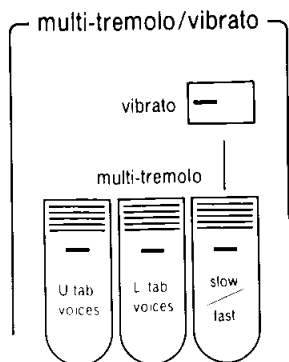

Now press the **close/open** button to play the harmony style in the open position usually found in the brass ensemble and choral.

Techni-Chord functions for any sound other than the Solo Synthe.

Techni-Chords cannot be played using the lower two octaves of the upper keyboard.

Effects
⑰ Multi-tremolo/Vibrato

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

Vibrato is a rapid change of pitch (high and low tones) that adds a warm, wavering quality to a musical tone.

Vibrato can be heard in a singer's voice and in the tone of most wind or string instruments.

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

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

Slow/fast — In the off position, you will hear a 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.

Vibrato — Vibrato is given priority over **multi-tremolo**. When the **vibrato** button is pressed during use of the tremolo effect, the vibrato turns on and tremolo is cancelled. To return to the tremolo effect, press the **vibrato** button again to turn it off.

17

Multi-tremolo Speed Adjustment

The Technics organ allows the speed to be adjusted in the fast multi-tremolo position. The fast multi-tremolo 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 **upper tab voices** button of the multi-tremolo. (The LED on the button will slowly flash.)
3. 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 **lower tab voices** button of the multi-tremolo.
5. Adjust the frequency using the slow/fast button.
6. When the adjustment is completed, press the **record** button to turn it off.

* The vibrato and slow multi-tremolo speeds 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 (20.3Hz and 6.4 Hz), press the **initial** key in step 3 or 5 above.

♯Musical▤Display▤

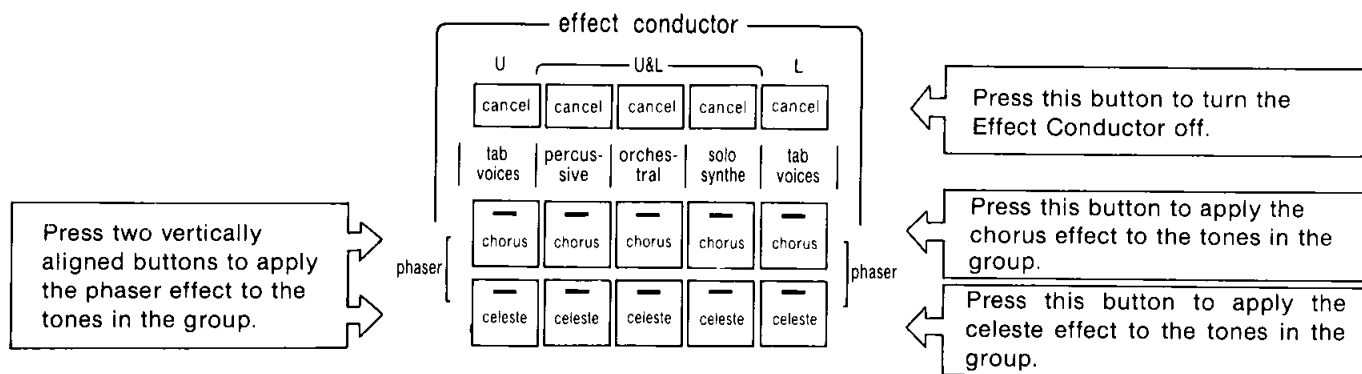The Multi-tremolo speed is displayed.
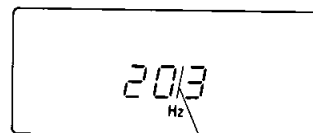
This bar represents a decimal point.

⑱ Effect Conductor

Chorus, **celeste**, and **phaser** effects are avilable in 5 tone groups. Chorus and celeste effects provide beautiful, extended sound. The phaser effect provides a slow, gradual change in tone.
* These effects do not apply to percussive tones.

Press this button to turn the Effect Conductor off.

Press this button to apply the chorus effect to the tones in the group.

Press this button to apply the celeste effect to the tones in the group.

Press two vertically aligned buttons to apply the phaser effect to the tones in the group.

⑲ Sustain Controls

These Technics models have sustain incorporated with their upper and lower keyboards and pedals.
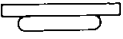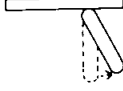
Regardless of where it is used, sustain allows the sound of the notes to fade gradually away (decay).

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 or percussive presets, press the respective button. This feature does not work when upper tab voices or lower tab voices are combined with orchestral presets or organ presets.

18
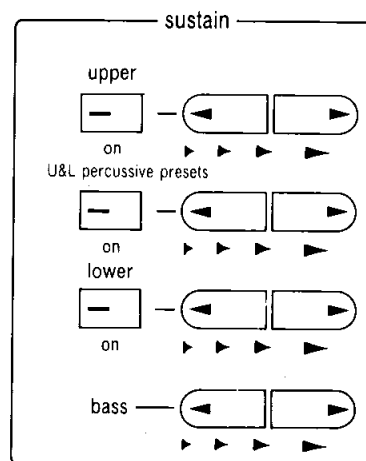
Knee Lever

- With the sustain button ON, operate the knee lever located under the keyboards with the right knee. This allows you to quickly turn sustain ON and OFF anytime during performance.

Knee lever \\ Sustain button	upper lower	percussive presets
	With sustain button ON	With sustain button ON
Turn left when not in use	Sustain at work for tab voices	Sustain at work for percussive presets
Raise when in use	No sustain at work	No sustain at work
Operate with the right knee	Sustain at work for any group other than percussive presets and solo synthe presets of the orchestral conductor	Sustain at work for percussive presets

You can turn other functions on and off by moving the knee lever. (Refer to ㊱.)

⑳ Digital Reverb

digital 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 the echo, your Technics organ is equipped with reverb to electronically replace the echo which is lost. Reverb is effective with most general settings.

㉑ Slow Attack

slow attack

When this button is not used, the response of the upper tab voices is instant — press a key and you will hear a musical tone immediately. 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.

㉒ 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*

19
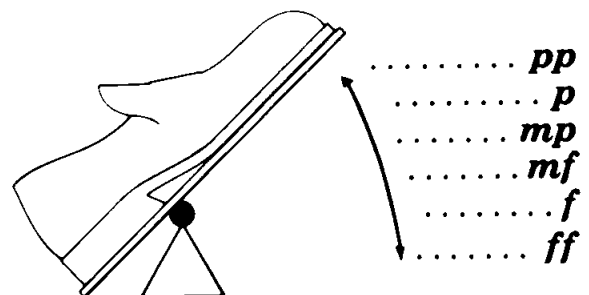
㉓ Glide Control

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".
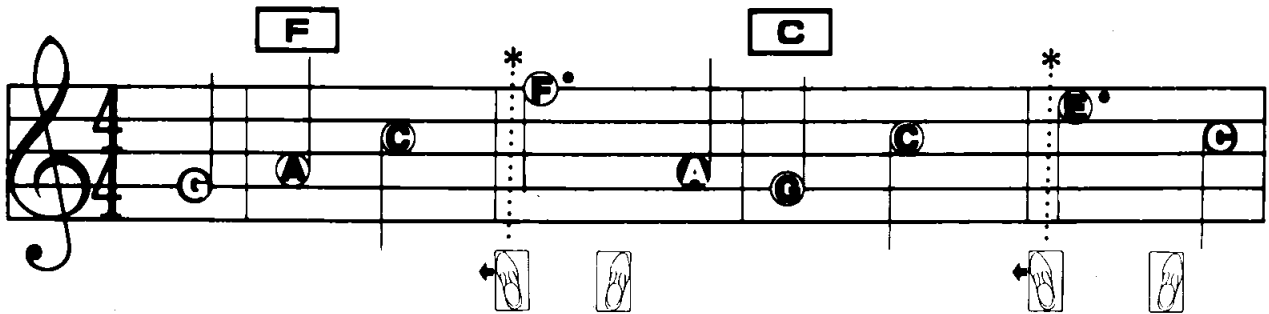
㉔ Foot Switch — Glide/Rhythm

This button allows you to use the left glide control switch for two purposes — to provide a means for 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 left foot switch provides the glide effect. Press the button to on and the left foot switch starts and stops the rhythm.

- The right foot switch allows you to turn the Fill in & Intro I on and off.
- You can turn other functions on and off by using these foot switches. (Refer to ㊱.)

㉕ Voice Setting Computer

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 I through VII are used to store the voices and effects for both keyboards and pedals.

1. **Set registration.**

2. **With the Record button held down, press the I button.**
   This stores your setting in the memory bank. That's all it takes!
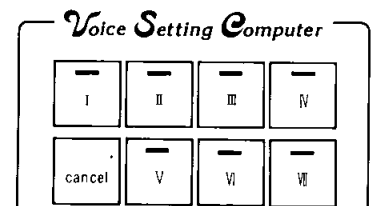
To change your custom registrations, just set up the tabs you want and then press **record** and the desired button. The previous setting is automatically replaced by the new one.

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.

20
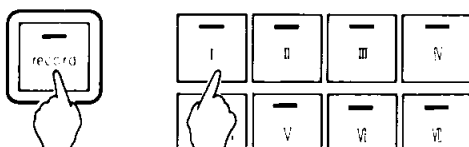
How to Use the Factory-Preset VSC

In addition, the factory-preset 20 voices combinations allows you to choose your favorites for storage in I through VII buttons.

1. **Press the Record button.**

2. **Press the I 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 I button again** turns the **record** button off, and the selected voice is stored in the I button.

• In step 4, when the **II** button is pressed instead of the **I** button, the selected voice is stored in the **I** button and the storage operation can be immediately continued for the **II** button.
After the desired voice is selected, pressing the **II** button again completes storage and turns the **record** button off. If further storage is desired, however, press the **III** button instead of the **II** button and continue as with the **I** and **II** buttons.

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

1. theater organ	11. soft brass
2. church organ	12. big band brass
3. pop organ (I)	13. marching brass
4. pop organ (II)	14. synthe brass
5. rock organ	15. fusion guitar
6. jazz organ	16. new wave
7. classical strings	17. funk rock
8. symphonic ensemble	18. jazz guitar combo
9. pop ensemble (I)	19. mix combo
10. pop ensemble (II)	20. modern baroque

These voices include unique tones and effects unavailable with normal buttons and tablets.
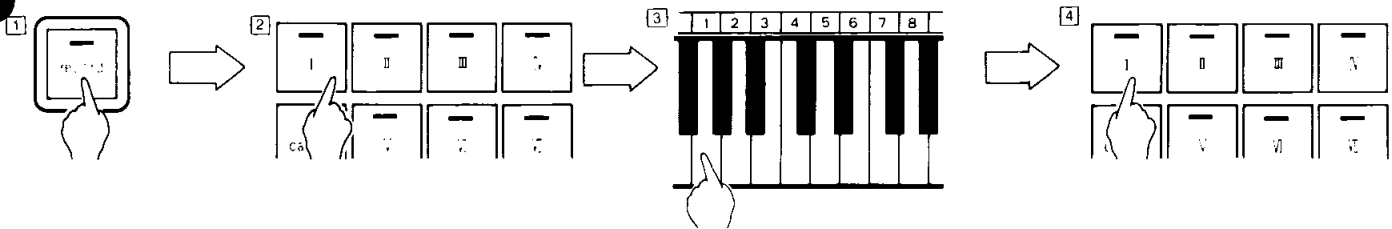
㉖ Transpose

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. Here's how you can quickly and easily put the song in a comfortable vocal range:

1. **Press Record.**

2. **Press Transpose.**

3. **Press one of the keys** in the section of the lower keyboard marked: Ⓖ ~ Ⓒ ~ ⟨F♯/G♭⟩ ; this automatically puts the song in a different key. You might have to try several keys before you find one that's comfortable. Do this by playing in the upper keyboard. Note that the display will indicate correct key signature only if the initial key signature is "C".
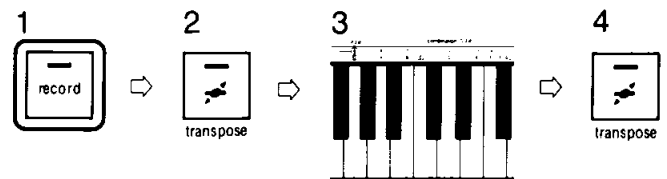
─ 🎼 **Musical Display** ─

The transposed key is displayed

+ F

• +, − indicate whether the transposed key is higher or lower than C.

4. **Press Transpose again** to "lock in" the new key signature.

The light on the **transpose** button stays on continuously, telling you a transposition is in effect.

To change back to the original key, just press **transpose** again (and the light goes out). You can recall the transposition by just pressing **transpose** again.

Another good use for the Transpose feature is to allow you to play with certain other instruments — trumpet, saxophones, etc. — that are "built in different keys". The Transpose feature can allow you both to read the same music and what you play will sound good together.

• 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.
• When the following voices are transposed to a lower key, the lowest keys equal to the number of keys transposed do not emit any sound.

Upper Keyboard: all voices
Lower Keyboard: percussive presets:
acoustic piano, electric piano, harpsichord, vibraphone, glocken, steel drum
solo synthesizer presets: whistle
bass (full bass pedal)

㉗ Tuning

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 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.
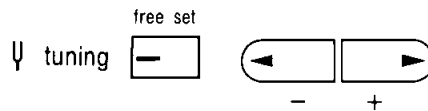

♮ tuning free set [−] ◄ ►
                       −   +

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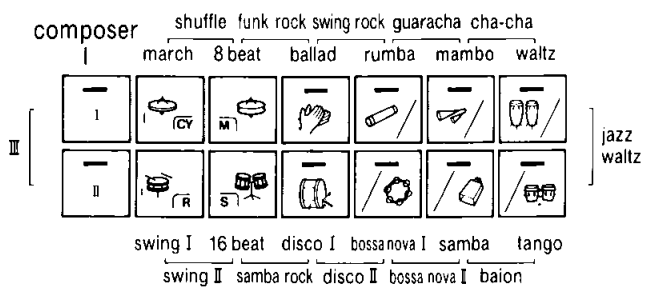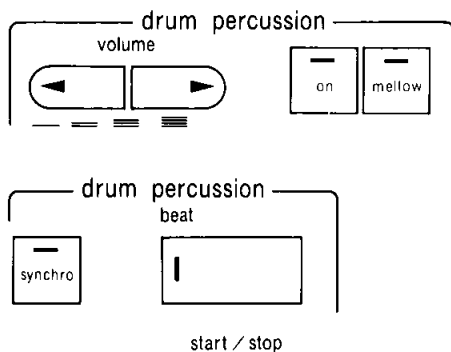
Every time the + or the − button is pressed, the pitch changes by about 1/3 Hz.
The bars on the right indicate the decimal numbers as follows: _ indicates 0 Hz, = indicates 1/3 Hz, and ≡ indicates 2/3 Hz.

- 443.0 Hz
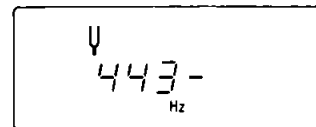
㉘ Drum Percussion (Automatic Rhythm)

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 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 **drum percussion on** button to turn on when you use Drum Percussion.

The **mellow** button softens the drum sounds.

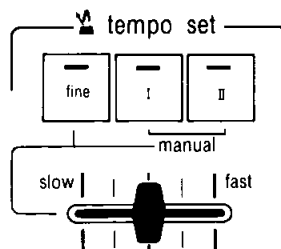The sliding tempo control adjusts the tempo.

㉙ Tempo Set

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)

㉚ 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, with a conga is added for pattern variations.

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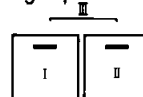
• Try this feature for all individual automatic rhythm patterns.

• 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.

㉛ Fill In & Intro

This feature lets you use a one measure drum solo (or "fill") as an introduction to a song, or to connect different sections of a song. Using the bossa nova rhythm, let's see how this works.

As an intro (introduction):
1. Press **bossa nova I**.
2. Press **fill in & intro** — indicator lights up.
3. Start the rhythm (press Rhythm **start/stop**). You'll hear the drums start with the intro and continue on to the bossa nova. After the intro, the indicator light goes out.

As a fill-in:
1. Press **bossa nova I**.
2. Start the rhythm.
3. Whenever you want the "drummer" to "fill-in", press **fill in & intro — the fill-in is immediately played for one measure, after which the bossa nova I rhythm resumes.**

Solo

Pressing the **fill in & intro** 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
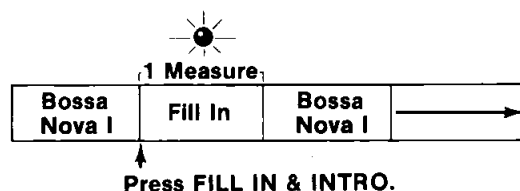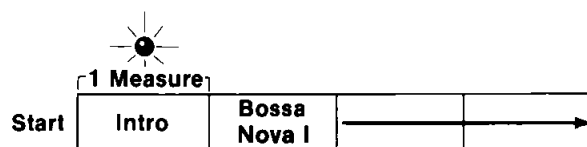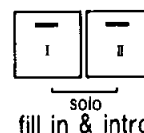

Two patterns, I and II, are available for Fill In & Intro. Try a variety of rhythms with these patterns.

notes are held or when the keyboard is not being played. Pressing the **fill in & intro** 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.

㉜ Rhythmic Orchestra
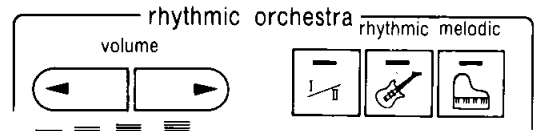
These controls work exclusively in conjunction with the automatic rhythms. No matter which drum pattern you use, the rhythmic voices(s) provides chords that are perfectly synchronized with the automatic rhythm. Try all the drum patterns on your model and listen to the Rhythmic Orchestra voice with each.

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 (2', program) enhances the sound from the rhythmic button.

㉝ Auto Play Chord
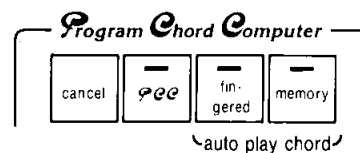
Auto Play Chord is an effective musical aid AND a source of enjoyment regardless of your previous musical experience. Combined with other exciting Technics features — Automatic Rhythm, and Techni-Chord — Auto Play Chord can help you create orchestral and full organ sounds using only one finger on each 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 pedal, 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 playing.

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.

24

㉞ 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.
This 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 below, and the nine keys on the right of the lower keyboard.

● NOTE: A total of a 100 chord entries may be made before the built-in Computer memory is full. A quarter measure (⌒┼┼┤) is counted as 2 chords. When the Computer memory is full, short beeps will sound.

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.
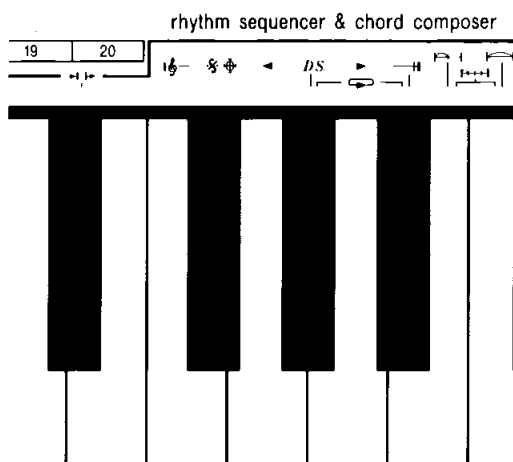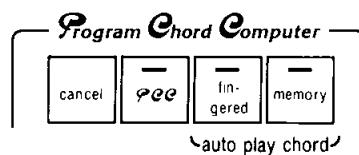
can be pressed should you wish to start programming over from the beginning.

▬┥ (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.* key 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

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
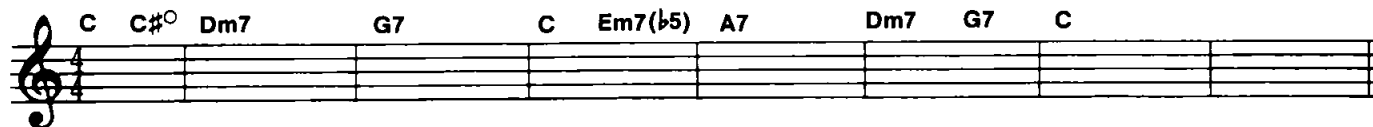
Storing Chords in the Computer

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 ⊢—¬ .

C   ⇁
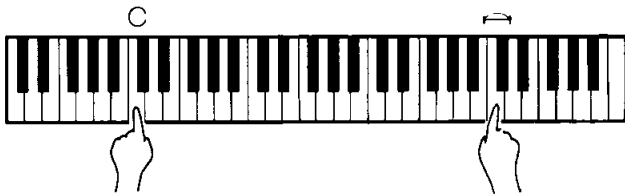
Since the C♯ diminished chord is not available as a one-finger mode, you'll have to form it yourself (C♯-E-G-B♭). Hold it and press the ⊢¬—¬ key again. The "beep" sounds and the first measure is complete.

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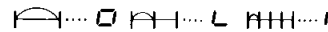
2. Press the ⊣ (End) key. This closes the memory to further storage, and turns off the **record** switch. The LED light on the **PCC** button stays on, however.

┌─ ♯Musical Display ─────────

The sequence number and chord name are displayed.

    ⟋¬   chord

    06 *E*₋⁵₇*L*
     ①   ②   ③
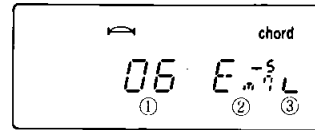
① Sequence number
② Chord name
③ Chord length

   ⊢—¬····□ ⊢¬—¬····L ⋔⋔⋔····I

Keys *D.S.*, ⊛⊕ and ⊣ are displayed as *♩* , *⁵* and *⁵* respectively. Pressing the *D.S.* key and ⊣ key simultaneously displays *;* .

└──────────────────────────

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 or 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 Record and PCC buttons.**

2. **Press Start/Stop to begin chord sequence with 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.**
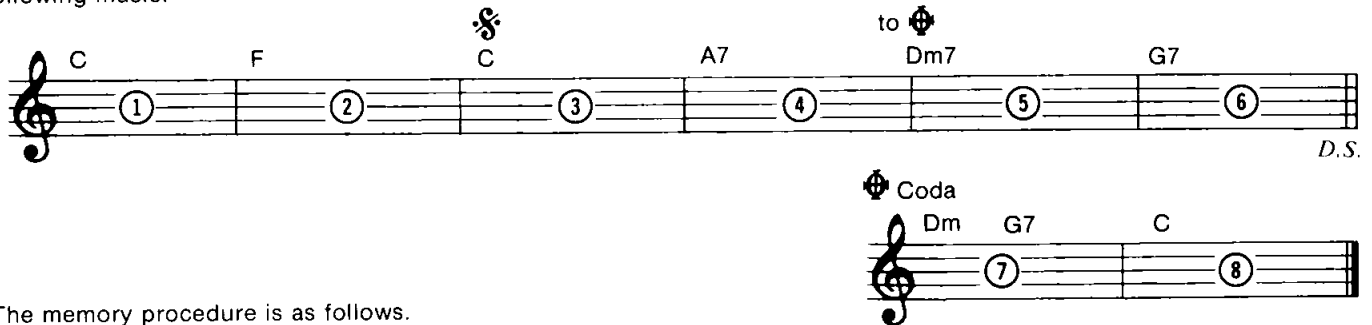
Steps 4 and 5 as above.

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.
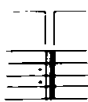
The memory procedure is as follows.
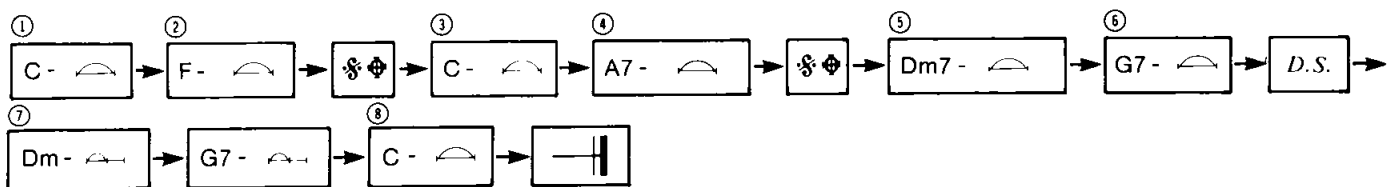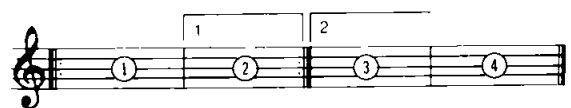
Music written with repeat marks other than 𝄋 ⊕, *D.S.* can be stored with the following correspondence.

𝄋 ⊕ : ▤ , ▤ , *Fine*

D.S.: *D.C. al Fine* , ▤

(For ▤ , press the 𝄋 ⊕, *D.S.* keys in succession.)

Example

The memory procedure is as follows:

The following kinds of music cannot be stored by using 𝄋 ⊕, *D.S.* keys.
- When the position of ▤ and to ⊕ are the same.
- When the ranges of 2 repeats overlap.
- When the position of ▤ and *D.C.* or *D.S.* are the same.

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Voice, Fill in & Intro Storage

This Program Chord Computer stores not only chords but voices from the Voice Setting Computer, as well as Fill in & intro 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.
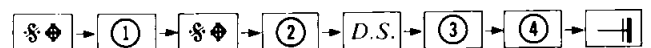
● **For Fill in & Intro storage:**
Pressing the **fill in & intro** button at the beginning of a song stores intro. Pressing the button after storage of a chord stores the fill-in for a measure at the beginning of the chord.

● **For Arrange Percussion Storage:**
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 six seconds.

● The voice will change a half beat ahead of the rhythm so that you can remain in tempo with the rhythm.

● Lets store the following:

chord		C	F	C	G7	Em	A7	Dm G7	C
fill in & intro	Intro II				fill in				
arrange percussion		II					I		
VSC		I				II			

After first pressing the **record** button then the **PCC** button, perform the storage operation as follows:
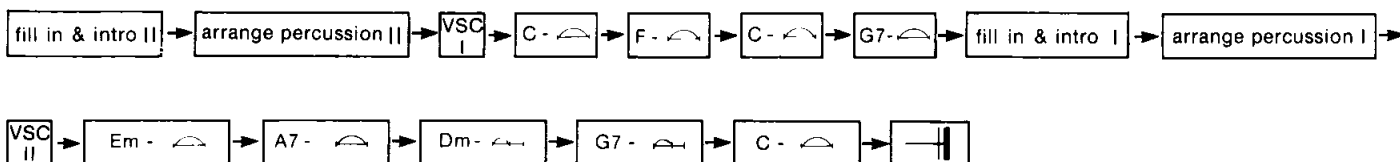
● Up to 8 selections of the voice, Fill In & Intro, arrange percussion can be stored. (Storing voice, Fill In & Intro and arrange percussion in sequence is counted as one selection.)

● It is also possible to store voices, Fill In & Intro, and arrange percussion after a chords sequence has been entered. Let's store the previous example using the following procedure.

● 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.

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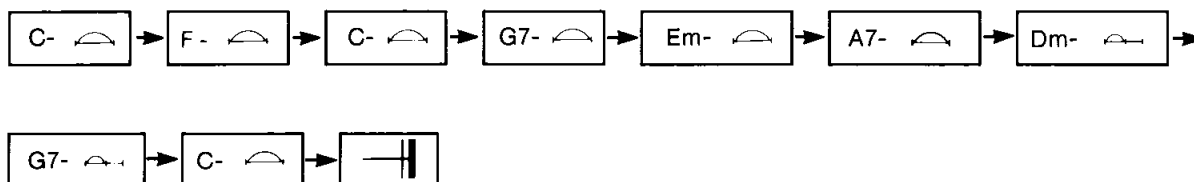
2. Press the **record** button and then the **PCC** button.
3. Press the **fill in & intro II** button.
4. Press the **arrange percussion II** button.
5. Press the **I** button of the Voice Setting Computer.
6. Press the Forward key (►) four times to advance chord to the G7 position.
7. Press the **fill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

28

㉟ 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.

composer
shuffle funk rock swing rock guaracha cha-cha
march 8 beat ballad rumba mambo waltz
jazz waltz
swing I 16 beat disco I bossa nova I samba tango
swing II samba rock disco II bossa nova II baion

rhythmic orchestra — rhythmic melodic
volume
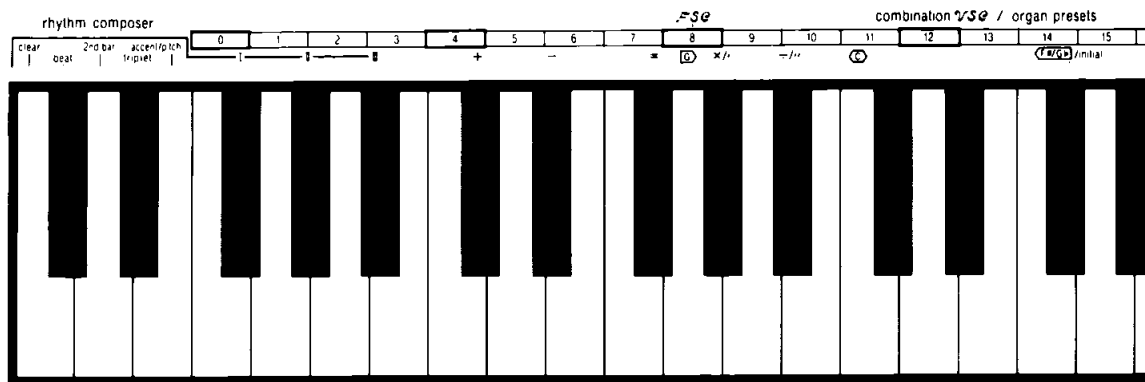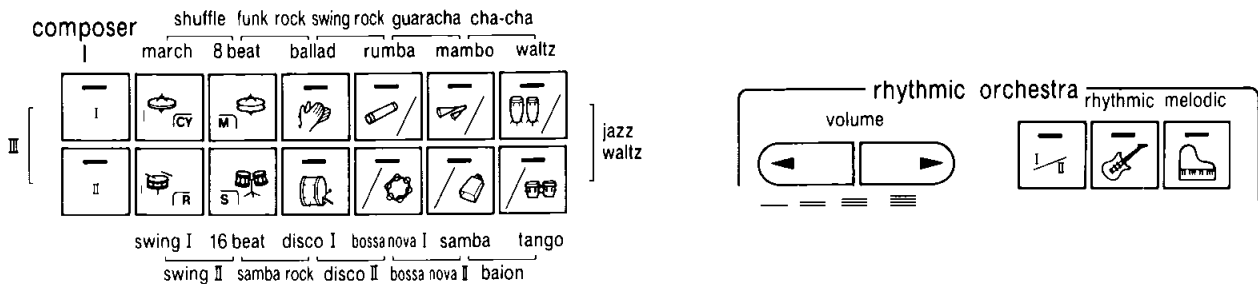
rhythm composer

Here's 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 Compose 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.
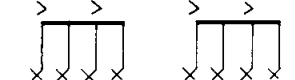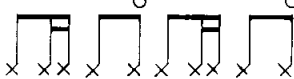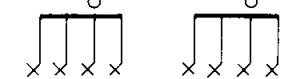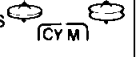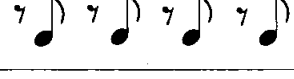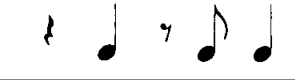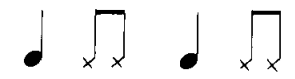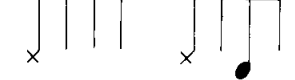
Triplet is the black key used to store four-beat triplet rhythms, such as the rock ballad (12/8 time).

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.

Here is how you can create your own disco rhythm using only the preset keys.

1. **Press Record** and either **Composer I, II** or **III.**

2. **Press Clear** key to cancel anything recorded previously.

3. **Add each rhythm voice.** Here's how, starting with the bass drum playing four beats per measure (disco style — see chart).

a. Press [box]
b. Press **Preset I.**
c. Press 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 with 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 [icon]

3. Press **Preset III** — the hi hat pattern is now changed.

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

You'll be amazed at how many ways all these preset patterns can be combined to create colorful and exciting percussion sounds!

- To create Cymbal sounds, [icon] and [icon] keys must be pressed simultaneously.
- To create Rim shot sounds, the [icon] and [icon] keys 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 0 to 15 numbered keys on your lower keyboard are where the various percussion voices are stored in relation to the different beats in a measure. Keys 0 through 11 are used to store three-beat rhythms (ek.g. waltz), while all sixteen are used for other rhythm patterns (four beats per measure).

As illustrated below, each of the keys numbered 0 to 15 corresponds to one-sixteenth of a note per measure.
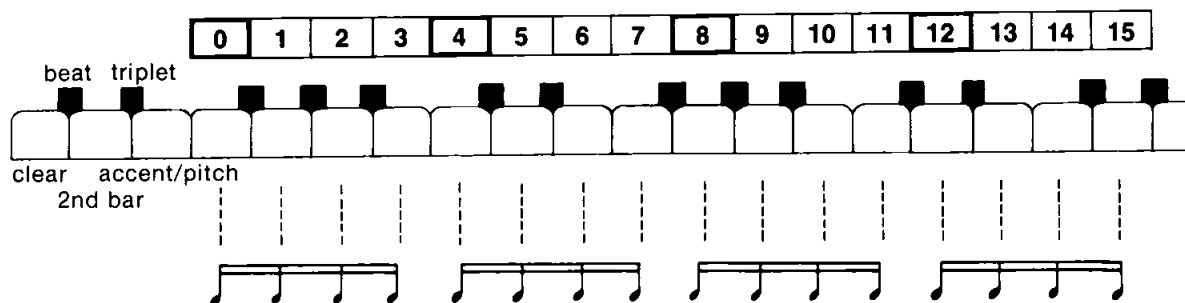
Using just the bass drum and snare drum, the following illustrations show where a basic waltz ① and soft rock ② pattern would be assigned to the lower keys. Keep in mind that each group of four sixteenth notes (♫♫) represents one beat; therefore, all sixteen numbered keys on your organ represent one four-beat (4/4) measure of music.
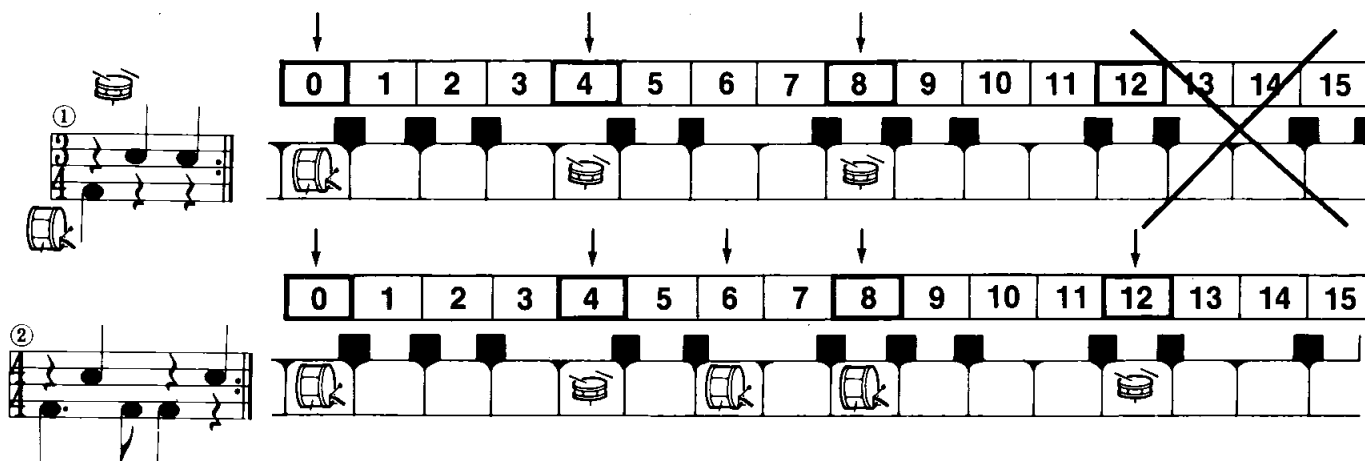
If you wanted to add the closed hi-hat playing an eighth note pattern (♪♪♪♪) to either example, you could use the Preset III key since this pattern is built-in. Merely take the steps outlined previously.

Here is what happens when you press the Triplet key:

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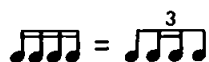
IMPORTANT NOTE: The Program Rhythm Computer lets you easily mix Preset key rhythm patterns with those you create on your lower keyboard.

Programming Rhythms

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

Rock rhythm
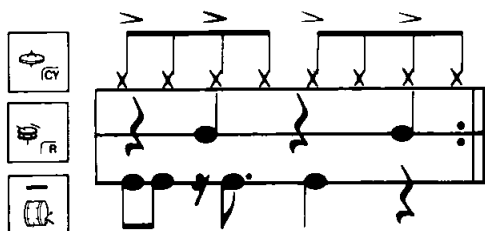
Programming The Rock Rhythm

1. Press **Record** and either **Composer I, II** or **III**.

2. Press **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 0, 2, 5, 8**. This provides the bass drum figure shown in the example.

7. Press **Record** to turn off programming feature.

Now, by pressing the Composer button and starting the rhythm, you should hear the complete rock rhythm.

Programming The Jazz Waltz

Remember that, since this is a three-beat pattern, only keys 0 through 11 will be used. Notice also that this is a two-measure example.

1. Press **Record** and eithe **Composer I, II** or **III**.

2. Press **Clear** key.

3. Press **Triplet** and then **Beat** keys since the example contains three-beat triplets in the hi-hat cymbals.

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

5. Press lower manual **keys 0 and 8**.

6. Press **closed hi-hat** and lower **keys 4 and 7**. Hi-hat cymbal part for first measure is complete.

Jazz waltz
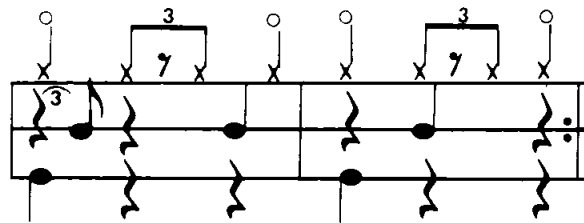
7. Press **bass drum** button and lower manual **key 0**.

8. Press **snare drum** button and lower **keys 3 and 8**.

For the second measure of the example...

9. Hold down the white **2nd Bar** key and enter the **snare drum** on the lower manual **key 4**.

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

Press the Composer button again and start the rhythm to hear your two-measure jazz waltz pattern.

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 button indicating voice** you wish to change.

4. **Press 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 0 through 11 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 0 through 7 are used.

Five-beat Rhythms (a three-beat measure + two-beat measure pattern)
1. Press the **record** button.
2. Select **Composer I, II** of **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.

Using The Sequencer

rhythm sequencer

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 and Fill In & Intro features.

Here are the control functions you'll need to sequence rhythms:
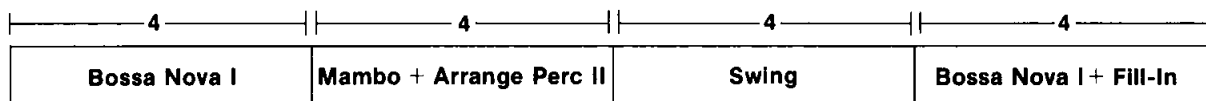
Rhythm Sequencer button is pressed before you enter the various rhythms in the desired order. Press again when you wish to play back the sequence.

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**	**Swing**	**Bossa Nova I + Fill-In**

1. Press Record.

2. Press Rhythm Sequencer.

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, 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 measures of bossa nova.

8. Press the —H 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 —H key, simultaneously press the D.S. key and —H 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 —H key.

To hear the entire sequence, press rhythm start/stop. To use other rhythms, merely press Rhythm Sequence 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 ㉞).
- In addition to the rhythm, settings in the tempo set button, the rhythmic orchestra, and the volume can also be stored.
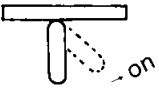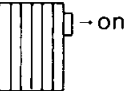
However, the tempo control and fine button functions cannot be stored.

- 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.

㊱ Program Function Switches

Many functions used during play can be stored in the function switches (knee lever, left and right foot switches, and full bass pedal). This makes it possible for you to change the tone and effect using your foot or knee. For example, the I button function of the Voice Setting Computer can be activated by the knee lever. This lets you change the tone and effect during play only by moving your knee.

Function switches enable the storage and programming of the function buttons given below:

Function switch	Original function	Storable function button
Knee lever	Sustain ON/OFF	Voice Setting computer (I to VII), Multi-tremolo Slow/fast, Techni-Chord Fill in & intro (I, II and solo)
Left foot switch (with glide/rhythm button on)	Start/stop for drum percussion	Voice Setting Computer (I to VII), Multi-tremolo Slow/fast, Techni-Chord Drum percussion start/stop Fill in & intro (I, 2 and solo)
Right foot switch	Fill in I	
Full bass pedal (with bass solo button on)	Bass solo	Program Chord Computer (PCC), Fingered, Memory, and Play Sequencer (solo, upper, lower and bass)

For Storage

1. Press the **record** button.
2. Press the function switch to be used.
   (For example, push the knee lever to the right.)
   • 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 switch. (In this example, the tones and effects change to those of the I button of the Voice Setting Computer while the knee lever is pushed to the right.)

• The tones and effects can be changed only when the knee lever and full bass pedal remain on. However, they change with every press of the foot switches.
• To return the switches to their original function (e.g., sustain ON/OFF for the knee lever), press the initial key on the lower keyboard as in step 3 above.

㊲ Play Sequencer Fullband Setting Computer

The following can be stored in a memory pack or on a digital memory disk and recalled anytime:
Melodies or accompaniments, registration of tones, effects and rhythm combinations, and information needed to play songs such as that stored in the Program Chord Computer and Program Rhythm Computer using the record button. Songs and registrations can be stored in a memory pack or on a memory disk as described below.

■ Digital memory pack (SY-P3)

PS mode: One song including its parts in the Play Sequencer.

FSC mode: Only registrations for eight songs.

> The SY-P2 memory pack can only be used in the FSC mode (not in the PS mode) to store registrations for four songs.

■ <Digital Disk Recorder>
   Digital Memory Disk (SY-D1)

Normal mode: 20 songs including their parts in the Play Sequencer.

Professional mode: One song about 20 times as long as one song stored in the normal mode (expression changes are also stored).

Memory Pack and Memory Disk Insertion

■ Inserting a Memory Pack

1. Press the open/close button.

• When finished using the memory pack, remove it and press the open/close button.
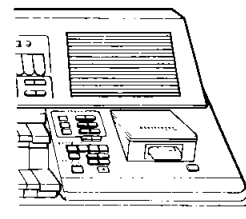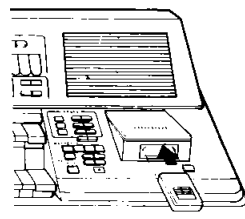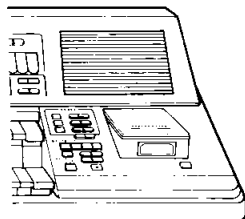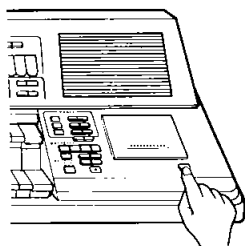
2. With the label of the memory pack facing up, insert it firmly in the slot in the direction of the arrow.

■ Inserting a memory disk
   <Digital Disk Recorder>

— Eject button
— Access indicator

1. Press the open/close button.

• When finished using the memory disk, press the eject button and remove it, and then press the open/close button.
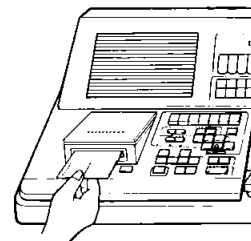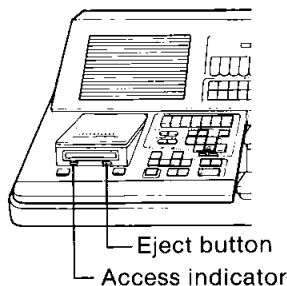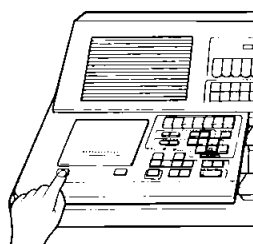
2. With the label of the memory disk until it clicks in place facing up, insert until it clicks in place.

■ Access indicator (access)
This LED lights when storing on the memory disk or reading its contents.

Memory Disk Modes

The memory disk can be used in two modes.

■ Normal Mode

Lets you store up to 20 songs.
- This is equivalent to the storage capacity of 20, SY-P3 memory packs in the PS mode.

■ Professional Mode

Lets you store one song 20 times as long as one song stored in the normal mode.
- Expression pedal changes during performance can also be stored.

Normal mode

Up to 20 songs can be recorded.																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

= SY-P3 × 20 (PS mode)

Professional mode

One long song, including expression changes can be stored.

Memory disk

Memory pack (SY-P3)
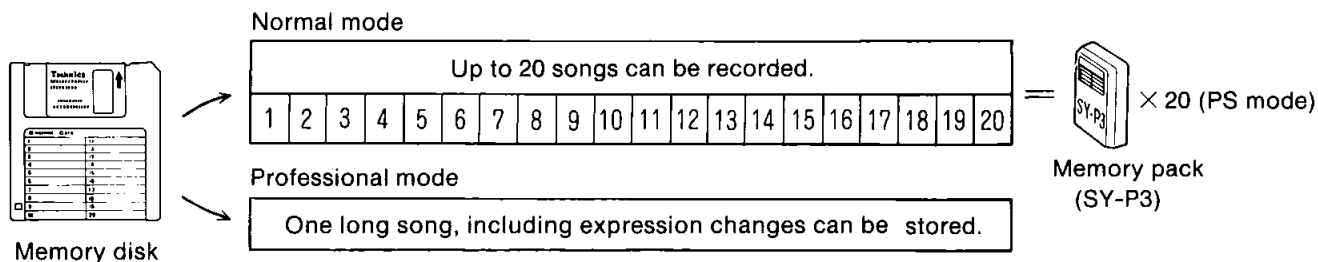
■ Changing Modes

SY-D1 memory disks are preset to the normal mode. To use them in the professional mode, follow the procedure below.

- Also, use the same procedure to return a disk set in the professional mode to the normal mode.

1. Insert the memory disk.

2. Press the record button. (The LED will flash.)

record

3. Press the Fullband Setting Computer button. (The LED will slowly flash.)
- The Musical Display will show "20" to indicate the normal mode.

Normal mode

Fullband Setting Computer

Beep

20

4. Press the initial key on the lower keyboard to change the mode.
- The Musical Display will indicate "/".
- Each time the initial key is pressed while the Fullband Setting Computer button is flashing, the mode will alternate between the normal and professional modes.

Lower keyboard

Professional mode

Beep
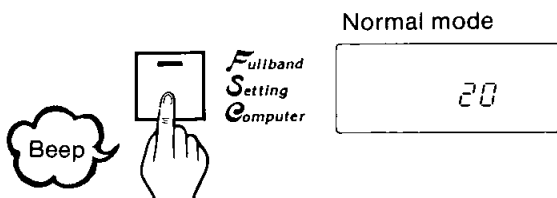
5. After you have set the memory disk to the desired mode, press the Fullband Setting Computer button to turn it off.
- The Musical Display will return to the condition it was in before the mode change operation.

Fullband Setting Computer
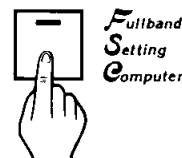
Write down which mode the memory disk is set in and play it back only in that mode.

For Storage:

1. Insert a memory pack or a memory disk.

[Memory pack]
Set the switches on the back of the memory pack as shown in the figure.

■ To store performances including the contents of the Play Sequencer

mode selector		
FSC	☐▮	*PS*
off	▮☐	on
memory protector		
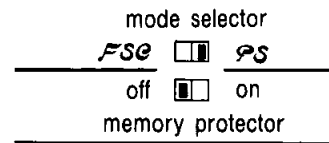
■ To store only registrations

mode selector		
FSC	▮☐	*PS*
off	▮☐	on
memory protector		
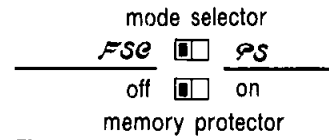
■ To prevent accidental erasure of a stored song, set the memory protector to the "on" position.

[Memory disk]
Confirm that the erasure prevention switch of the memory disk is set to permit storage on the disk.

• Storage is not possible • Storage is possible

2. Set the tones and effects used in the song to be stored.
• If necessary, also store the Voice Setting Computer contents, organ presets, etc.

Registrations

♪

(tone, effect and other settings)

3. Store your performance using the Play Sequencer.
• If you are only storing registrations, this step is not necessary.
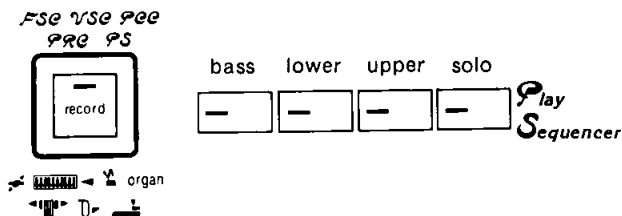
① Press the record button. The LED will flash.
② Press the Play Sequencer buttons for the parts you want to store. The LEDs for those buttons will slowly flash.
• By pressing two or more buttons in sequence, those parts can be stored simultaneously.
• In the professional mode, it may take 2 or 3 seconds before an indicator starts flashing.
③ Play the part you wish to store.
• To store your performance together with automatic performance of other parts, press the rhythm start/stop button. This initiates their playback.

④ When you are finished playing, press the record button to turn it off.
• The registrations will return to the initial condition before the performance.
• To store other parts, repeat steps 1 through 4.
• Refer to page 44 for more information on the Play Sequencer.

③ Play
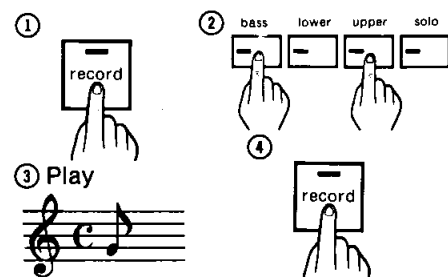
• In the professional mode, the procedure up to step 3 stores the registrations and performance on the memory disk. To change the registrations already stored, follow the procedure below.

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4. Store the contents of the above performance in a memory pack or on a memory disk.

- If you want to change the initial registrations, reset them.

To Store in a Memory Pack

1. Press the record button. The LED will flash.
2. Press the Fullband Setting Computer button to the right of the lower keyboard. The LED on the button will slowly flash.
3. ■ When you want to store your performance (PS mode) press the number 1 key of the lower keyboard.
   ■ To store only the registrations (FSC mode), press one of the keys from 1 to 8 (or 1 to 4 when using the SY-P2 memory pack) on the lower keyboard.
- A beep will sound to indicate that storage is complete. (In the PS mode, this will take several seconds.)
- In the FSC mode, other registrations can be stored in the remaining parts of the Memory Pack.
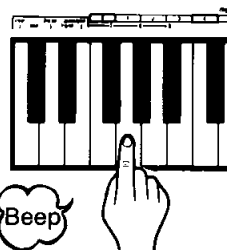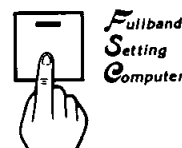
To Store on a Memory Disk

1. Press the record button. The LED will flash.
2. Press the FSC (disk recorder) button of the digital disk recorder to the left of the lower keyboard. The LED will slowly flash.
3. ■ To store in the normal mode
   Press one of the keys numbered from 1 to 20 on the lower keyboard.
   ■ To store in the professional mode
   Press the number 1 key on the lower keyboard.
- A beep will sound to indicate that storage is complete, and the access indicator will go out.
- If a new song is stored in a number which already has a stored song, that song will be erased.
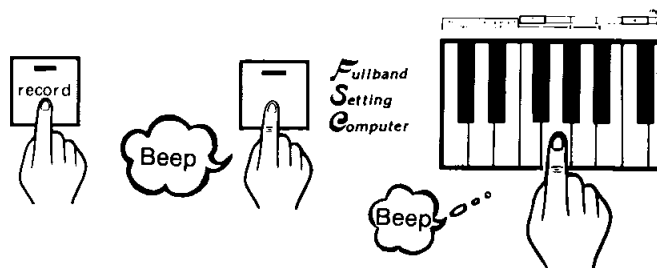
■ Write the titles of stored songs on the label of the memory pack or memory disk.

■ **Fullband Setting Computer Button and FSC Button**
   The Fullband Setting Computer button to the right of the lower keyboard is used to store and play back performances in a memory pack, and the FSC button on the digital disk recorder on the left side is used to store and play back performances on a memory disk.
   When a memory pack is not inserted, the Fullband Setting Computer button can be used to store and play back performances on a memory disk.
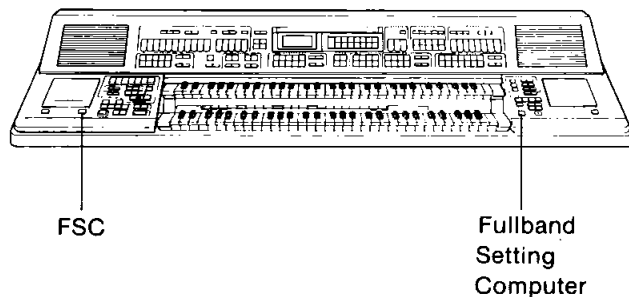
To prevent misoperation, avoid inserting a memory pack and a memory disk in the unit at the same time except when making copies.

FSC   Fullband
                                       Setting
                                       Computer

Storage Capacity of the Play Sequencer

	Memory pack (SY-P3) PS mode	Memory disk (SY-D1)	
		Normal mode (20 songs)	Professional mode (1 song)
Upper keyboard	500 tones — 1,000 tones*	500 tones — 1,000 tones*	10,000 tones
Lower keyboard	500 tones	500 tones	10,000 tones
Solo Synthe Preset	350 tones — 700 tones*	350 tones — 700 tones*	7,000 tones
Pedal keyboard	350 tones	350 tones	7,000 tones
control**	about 60 steps	about 60 steps	about 10,000 steps

- Pressing one key and releasing it is counted as one tone. The end of a measure may sometimes be counted as one tone.

For example ♩ ♩ is counted as 7 tones.

* The storage capacity for the upper or lower keyboard and the solo synthe presets or pedal keyboard can be doubled if one is used without the other. Use the following procedure to double the storage capacity.
1. Press the record button.
2. Turn on the Play Sequencer button you will use.
3. Turn on the Fullband Setting Computer button to the right of the lower keyboard.
4. Press the number 2 white key on the lower keyboard.
   - The Musical Display will indicate that the capacity for that part has been doubled.
   - Pressing the number 1 key on the lower keyboard will return it to the original mode.
5. Turn off the Fullband Setting Computer button.
** During storage of the upper keyboard, control information such as the switching of tones and effects are also stored. In the professional mode, changes in the volume by the expression pedal are also stored.

♪ Musical Display

The musical display indicates the number of tones that can still be stored. In the example below, 500 more tones can be stored in the lower keyboard.

U... Upper *L*... Lower
S... Solo Synthe Presets *B*... Bass

```
500 L
```
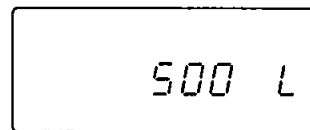
- If two or more Play Sequencer buttons are programmed simultaneously, the button which has the least number of tones remaining is displayed.
- *F* is displayed when no more storage is possible.

■ **Precaution — Storing on a Memory Disk in the Professional Mode**

- When storing a song in the professional mode, the access indicator will light continuously, to confirm storage.
  (It also lights continuously during automatic play of stored songs.)
- When the access indicator is lit, the motor in the digital disk recorder is rotating.
  If the access indicator remains lit for a long time, as when left in the storage condition, undue wear may result. Be careful to prevent this.

- If a sustain or the reverb is on and the tune is ended by lowering the volume with the expression pedal when storing in the professional mode, be sure to wait five to ten seconds before turning off the record button.
  If the record button is turned off immediately after the tune is ended, unnecessary sound may be heard at the end of the tune when it is played back.

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Automatic Performance of Stored Material

1. Insert the memory pack or memory disk on which the performance has been stored.

2. Turn on the Fullband Setting Computer button.
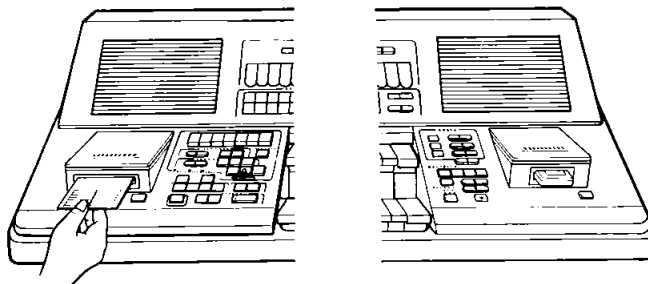
Fullband Setting Computer

3. Press the key number on the lower keyboard at which the song was stored.
- Wait a few seconds until a beep is sounded and the number is displayed in the Musical Display.
  The indicators for the tones and effects at the beginning of the song will light.
- The storage functions of the Program Chord Computer and the Voice Setting Computer are also set at this time.

Specify the number
Lower keyboard
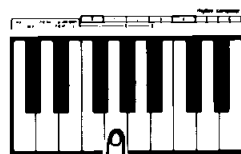
A few seconds later

Beep
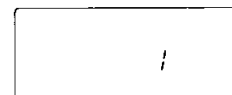
4. Press the start/stop button to start playback of a song stored with the Play Sequencer function.
- A song stored without using a rhythm is also started with the start/stop button.
- Expression pedal changes in the professional mode. When a song is started with the expression pedal completely depressed down, the stored volume changes are played back. When the expression pedal is released, the volume changes according to actual changes made with the expression pedal and not the stored changes.
- To repeat a performance that has just finished or that has been stopped, perform the procedure from step 2.

beat

or Foot Switch

♦Musical≡Display≡

The Fullband Setting Computer number selected with the lower keyboard is displayed.

♩ 120   3

Rhythm tempo
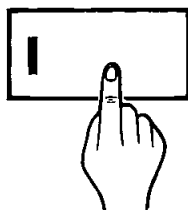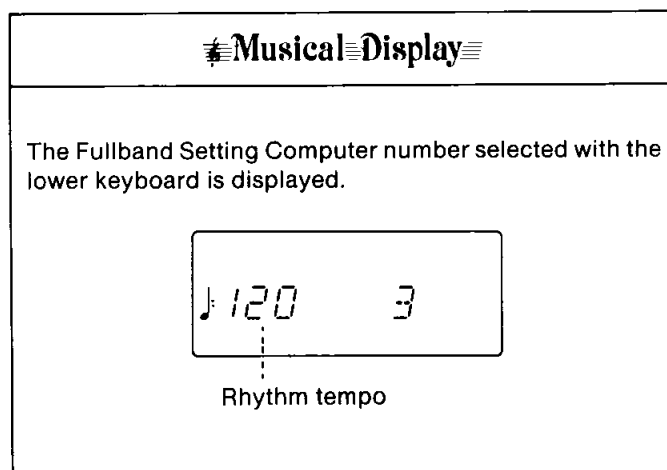
- Store and perform automatic performance on the same Technics organ model. If an automatic performance is played back on a different model, some of the stored functions may not operate or the registrations may need to be changed.

Copying Songs

The Technics organ (SX-A1) has a built-in memory with the same capacity as that of one song stored on a memory disk in the normal mode. By using this memory, the contents of a digital memory disk (normal mode) or digital memory pack can be copied onto another digital memory disk or another digital memory pack.
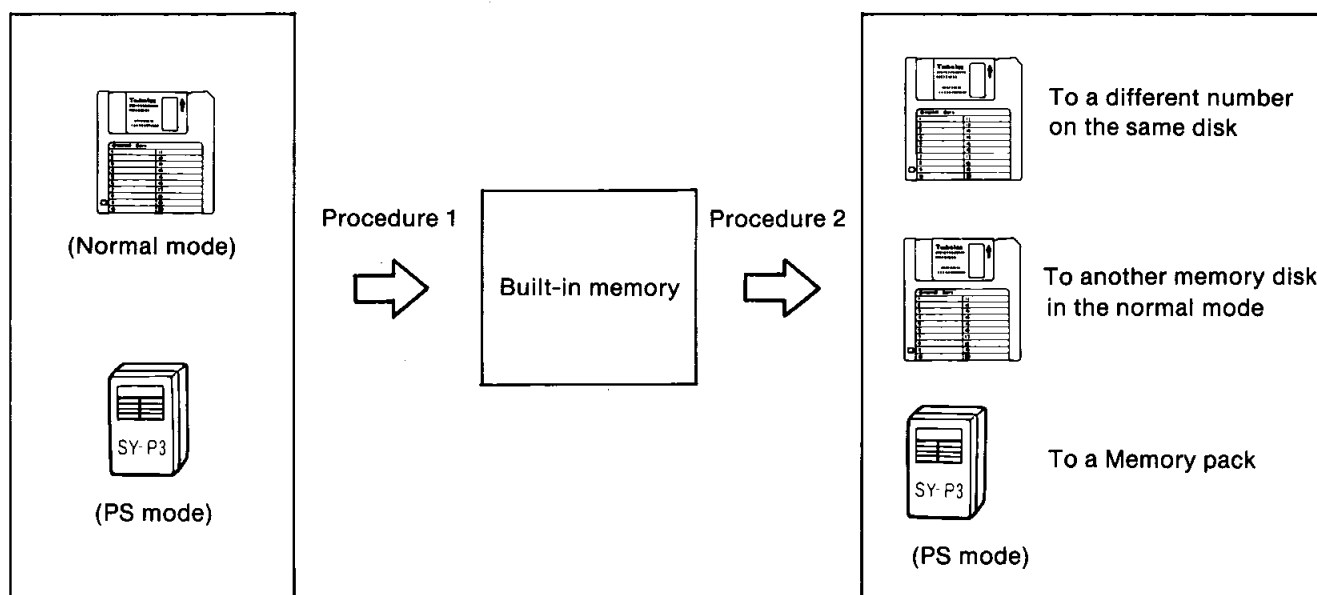
Making Copies

[Procedure 1]
Read the contents of a digital memory disk (normal mode) or digital memory pack (SY-P3, PS mode) into the organ's built-in memory.

1. Insert the memory disk or memory pack on which the song has been stored.
2. ■ To read from a memory disk
   Press the FSC button on the left side. Then press one of the keys numbered from 1 to 20 on the lower keyboard.
   ■ To read from a memory pack
   Turn on the Fullband Setting Computer to the right of the organ. Then press the number 1 key on the lower keyboard.
   • Wait a few seconds until a beep is sounded.
   • This will temporarily store the song in the organ's built-in memory.
   • The registrations are the same as those set at the beginning of the song. If you wish to change them, reset new registrations.

[Procedure 2]
Store the contents of the organ memory on a digital memory disk (normal mode) or memory pack (SY-P3, PS mode).

1. Insert the memory disk or memory pack on which contents are to be stored.
2. Press the record button. The LED will flash.
3. ■ To store on a memory disk
   Press the FSC button on the left side; the LED will slowly flash. Then press the number on the lower keyboard, from 1 to 20, at which the song is to be stored.
   ■ To store in a memory pack
   Press the Fullband Setting Computer button to the right of the organ. The LED will slowly flash. Then press the number 1 key on the lower keyboard.
   • Wait a few seconds until a beep is sounded. This completes the copy procedure.

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■ For example, use the following procedure to copy the contents of a memory disk (normal mode) in a memory pack (SY-P3, PS mode).

(Normal mode)   (PS mode)
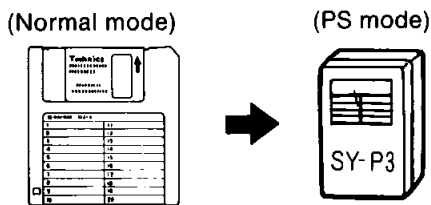
1. Insert the digital memory disk with the performance you want to copy.
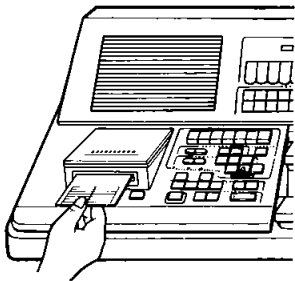
2. Press the FSC button on the left side.

3. Press the key on the lower keyboard corresponding to the number (1 to 20) of the song you want to copy.
   ● Wait until a beep is sounded.

Lower keyboard
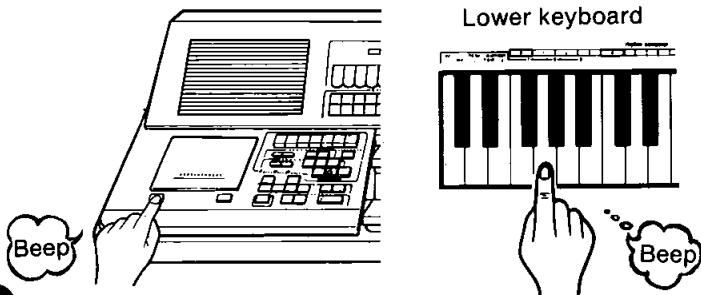
4. Firmly insert a memory pack (SY-P3) in the slot on the right side of the Technics organ.
   ● Set the mode selector of the memory pack to "PS" and the memory protector to "off".
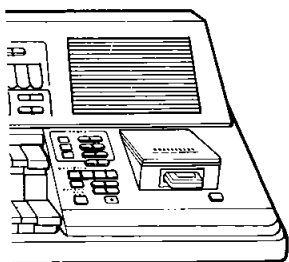
5. Press the record button. The LED will flash.

6. Press the Fullband Setting Computer button on the right. The LED will slowly flash.

7. Press the number 1 key on the lower keyboard.
   ● Wait a few seconds until a beep is sounded.

Fullband Setting Computer
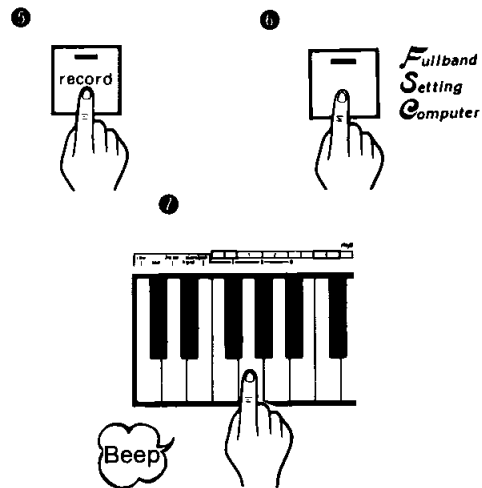
Note:
● A performance stored on a memory disk in the professional mode cannot be copied.
● When a memory disk in the professional mode is inserted in the memory disk recorder, the storage on or the playback from a memory pack (PS mode) is impossible.
● When a memory pack in the FSC mode is used, only registrations can be copied from a memory disk. (Registrations for four songs can be copied with an SY-P2 memory pack and eight songs with an SY-P3 memory pack.)
● Storage and playback are performed according to the position of the Play Sequencer button (on or off).

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Clearing a Disk

When the digital memory disk connot be stored on or played back properly due to the effects of a magnetic field use the following procedure to clear the disk.
- This procedure clears the entire contents of the disk.

1. Load the disk in place.
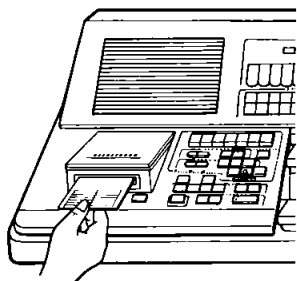
2. Press the Fullband Setting Computer button while holding down the record button, and then while continuing to hold down the record button, press the initial key on the lower keyboard.
- This completes the clearing procedure, and after about 40 seconds, the access indicator will go out and the clearing operation will be completed. The memory disk is set to the normal mode at this time.

1.

While holding down on the record button, press the Fullband Setting Computer button on the Technics organ and then the initial key.

2.   3.
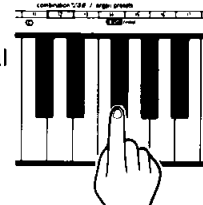
- When using commercially available floppy disks other than Technics SY-D1, use 3.5-inch micro floppy disks (single sided, double density, double track), and initialize them with the clearing operation.

Note:
The digital disk recorder may not operate properly with some commercially available floppy disks.

More about Play Sequencer Storage Operations

■ **Solo Button**
A melody different from that in the upper button can be stored in the solo button with solo synthesizer tones. Therefore, by automatically playing back the lower, upper and solo buttons, a performance that sounds as if it were played on three keyboards can be obtained.

■ Bass notes can most easily be stored in the Play Sequencer bass button by using the full bass pedal and playing the lower keyboard. Such stored notes may not all be heard or their pitch may change, however, if transposed. To store bass notes that can be acurately be transposed, use only the pedal keyboard.

I. Simultaneous Storage of Ordinary Performances

1. Press the record button. The LED will flash.
2. Press the Play Sequencer buttons one at a time for the parts (e.g., bass, lower, upper) you wish to store. The LEDs will slowly flash.
- Confirm that the indicators on the buttons for the parts you wish to store are flashing.
- The solo button is used to store a melody different from that stored in the upper button, so it should be left off at this time.
3. Play the song you want to store.
- Start the rhythm, if desired, and then begin playing. The rhythm can be turned on and off during the song as well.
4. When your performance is finished, press the record button to turn it off.
- It can also be turned off by pressing the Play Sequencer button.

II. Storing Other Parts Together with Automatic Performance of Stored Parts (Multiplex Storage)

1. Turn off all four Play Sequencer buttons.
2. Press the record button. The LED will flash.
3. Press the Play Sequencer button for the part you wish to store first. The LED will slowly flash.
4. Play the part to be stored.
5. When you have finished playing that part, press the Play Sequencer button for the next part to be stored. The indicator will slowly flash.
- The rhythm will stop automatically.
- Confirm that the indicators for parts already stored are lit.
- Instead of step 5, you can do the following:
Press the record button to turn it off. Then press the button again to turn it on and press the Play Sequencer button for the part you wish to store next. The LED for that button will slowly flash.

6. When the start/stop button is pressed, parts already stored are automatically played back to let you play the next part to be stored with them.
- **Songs with no rhythm can also be started with the start/stop button.**
- When storing part of a song, you do not have to wait until the end of the song to press the button for the next part to be stored. Do not stop the rhythm when doing this.
7. Repeat steps 5 and 6 for the remaining parts.
8. Press the **record** button to turn it off.
- For storage in the **solo** button, the upper solo synthe preset button of the Orchestral Conductor is automatically turned on. Play a melody on the upper keyboard and it will be stored.

III. Revising Stored Parts and Adding New Solo Parts

1. Turn on the Play Sequencer button for the part to be played back automatically.
2. Press the record button. The LED will flash.
3. Press the button for the part to be revised or added to. The LED will slowly flash.
- Confirm that the LED on the button for the part to be played back automatically is lit.
4. Start automatic performance by pressing the start/stop button, and play the parts to be revised or added.
- **Songs with no rhythm can also be started with the start/stop button.**
5. When finished playing, press the record button to turn it off.

●Precautions for Automatic Performance

- Confirm that only the Play Sequencer buttons for the parts to be played back automatically are lit. (When unnecessary play sequencer buttons are on, unrelated melodies will be included or the rhythm may stop in the middle of the song.)
- When the melody stored in the solo button is automatically played back and the solo synthe presets button of the orchestral conductor is on, notes played manually will also be heard and cause the solo synthesizer presets melody to be altered.

■ Manual play during automatic performance
- Upper and lower
  During an automatic performance, the upper and lower keyboards can also be played to produce an ensemble-like effect. The maximum number of tones that can be simultaneously created by the upper and lower keyboards is 8 each (4 when the harmonic coupler is used). When the tones exceed 8, those played manually take precedence.
- Bass and solo
  These parts are monotone, so simultaneous automatic and manual performances are not possible. However, manually played tones can be heard during the lulls in automatic performance. (Solo play is only possible when the solo synthe presets button of the orchestral conductor is on.)

■ Solo Synthesizer Presets
- When the Play Sequencer Solo Button is off:
  If the solo synthe presets button of the Orchestral Conductor is on, the solo synthesizer 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 synthesizer presets can be performed as independent melodies.
  - In this case, the solo synthe presets button of the orchestral conductor need not be selected.
  - If the solo synthe presets button of the Orchestral Conductor is turned on, notes played manually are given priority.
  - Solo synthesizer presets cannot be performed by the Play Sequencer upper or lower button.

Manual performance

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

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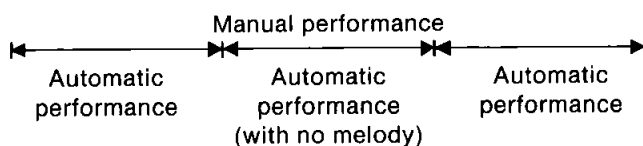
Precautions to take when handling a digital memory disk

■ Do not open the shutter and touch the recording surface of the digital memory disk.
  ●Fingerprints on the recording surface will gather dust and damage the disk.

■ Do not place heavy objects on the digital memory disk or bend, throw or drop it.
  ●The disk may be deformed or damaged.

■ Do not bring the disk near radios, TVs, or other devices that generate a magnetic field.
  ●This could cause the contents to be erased or generate errors.

■ Never use or store the disk in places where it may be subjected to direct sunlight, dust, high temperatures, or high humidity.

■ Do not use a disk that is wet or has erasure crumbs or metal powder on it.

■ Do not disassemble the digital memory disk.

■ Do not use thinner, alcohol, or freon to clean the disk.
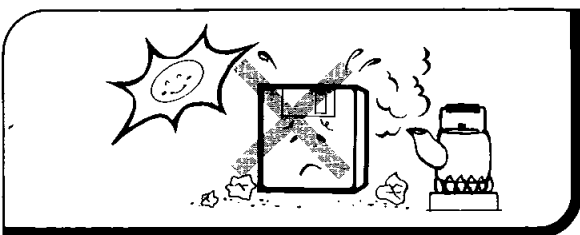
■ After use, be sure to store the disk in its case.
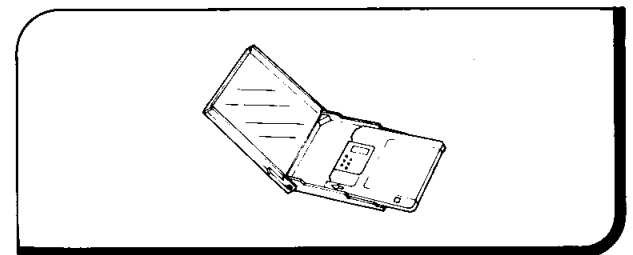
Precautions when using the Memory Pack

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.
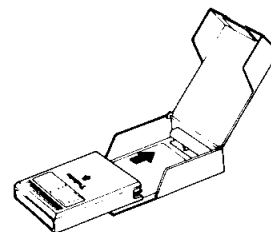
㊳ Connection Terminals
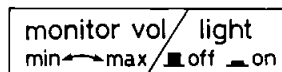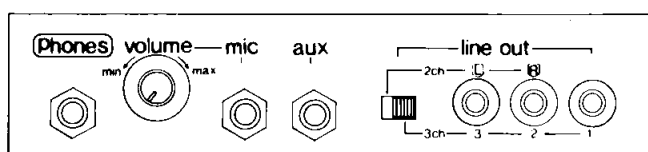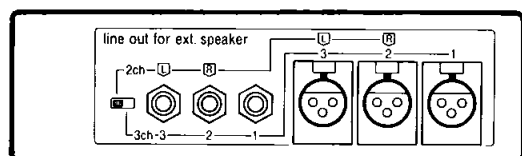
Phones For silent practice headphones may be used. Because the tone cabinets still play when headphones are used, lower the volume or turn the tone cabinet power off. (Use headphones with 16 ohm impedance.)

Mic (input level 7.5 mV 10kΩ) 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, 10kΩ) 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 unbalanced)
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 be tape recorded by using this method of connection also. A 2-channel output (L, R) or a 3-channel output (1, 2, 3) can be selected with a switch.

Line out for ext. speaker
(output level 300 mV, 600Ω balanced)
Use these terminals to connect Tone Cabinets.
- Set the selector switch for 2-channels (L, R) or 3-channels (1, 2, 3) depending on the number of speakers to be connected.

Light (■off ▲ on)
Turns the panel light and the foot light on/off.

Monitor volume
Used to adjust the monitor speaker volume.

㊴ Symptoms which appear to be signs of trouble

The following changes in performance may occur in the Technics organ 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 ④)
An error buzzer sounds when a key on the lower keyboard is pressed, making playing impossible.	If the mode button to the left of the musical display is set to the computation mode, playing is not possible. Press button to display either the metronome or the stopwatch mode.
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. • 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.	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 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 adsjusted with the tempo control.
The knee lever, foot switches and fullbass pedal do not operate properly. For example, the knee lever does not turn the sustain function on and off.	Any functional on and off operation other than the factory-presets are storable in these switches. For example, the knee lever can turn the Techni-Chord on and off. Store your favorite functions to turn them on and off. (Refer to ㊱.)
The fast multi-tremolo speed is improper.	The fast multi-tremolo speed is preadjustable. Adjust to your favorite speed. (Refer to ⑰.)
The contents of the Transpose, Program Chord Computer, Fullband Setting Computer, etc. cannot be stored.	After pressing the record, depress 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 than those desired are stored.	• To store your created tones and effects, press the I to VII buttons of the Voice Setting Computer while the record button is held down. • To select your favorite voice from the 20 factory-preset voices, press the record button and depress one of the I to VII buttons on the Voice Setting Computer within 5 seconds. Then press the key corresponding to the preferred voice of the keys 1 to 20 on the lower keyboard. Finally press the selected I to VII button again.
Storage is not possible wit the Program Chord Computer.	• Check that the PCC button is slowly flashing. Pressing the Fingered Mode button turns off the record button, making storage operation impossible. • Do not release the left hand (Chord designation) before pressing the measure keys (⊷⊳, ⊶, and ⊷) keys.

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Phenomenon	Cause and remedy
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.
Storage or playback cannot be performed using the Fullband Setting Computer (FSC) (a beep is sounded indicating an error).	■ When using a memory pack ●Make sure that the memory pack is firmly inserted into the slot. ●When the memory protector switch on the memory pack is in the "on" position, nothing can be stored in the memory pack. ●If the mode selector on the memory pack is not set in the mode being used (the FSC or PS mode), neither storage nor playback is possible. ●The SY-P2 memory pack cannot be used in the PS mode. ■ When using a memory disk ●If the memory disk is not correctly inserted, neither storage nor playback will be possible. Remove the memory disk by pressing the eject button, then reinsert the disk. ●If an "E"appears on the Musical Display when the record and Fullband Setting Computer buttons are pressed, clear the memory disk (see page 44). (This operation clears all disk contents.) ●If an error beep is heard when reading out a tune in the normal mode, press on the Fullband Setting Computer button again, then press the key corresponding to the number of the tune to be read out.
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.
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 digital disk recorder produces a noise during storage or automatic performance.	This occurs when the digital disk recorder searches for a storage location. It does not indicate a problem.
The rhythm and melody do not coincide during automatic performance.	This occurs when automatic performance is started before the beep is sounded after pressing the Fullband Setting Computer button and selecting the song from the lower keyboard when reading out stored contents. Be sure to wait for the beep before starting.
When the digital memory pack and digital memory disk are loaded, the contents of the memory pack (PS mode) cannot be played automatically.	●When the digital memory disk (Professional mode) is loaded, the contents of the digital memory pack cannot be read out. In this case, turn off the digital disk recorder or unload the digital memory disk.
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 depress 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.

㊵ 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 organ was purchased.

If water gets into the unit...

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

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

If operation seems abnormal...

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

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

● Because the power source is located inside the organ, it is normal for the cabinet or roll-top keyboard cover to become warm.

A word about the power cord...

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

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, nor 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 organ in top condition.

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

● To keep the lustre of the keys and tabs, 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.

SPECIFICATIONS

keyboard		upper manual 61 keys lower manual 61 keys pedal keyboard 25 keys full bass pedal 1 key
digital disk recorder		record*, FSC (disk recorder), open/close, eject, access, Storage Medium…3.5 inch micro floppy disk
digital memory pack		open/close
fullband setting computer		fullband setting computer, record*
play sequencer		bass, lower, upper, solo, record*
voice setting computer		I—VII, cancel, record*, 20 combination VSC (lower keyboard)
tone selector		orchestral conductor (upper…7, lower…7)
upper tones	tab voices	flute 16', 8', 5-1/3', 4', 2-2/3', 2', 1-3/5', 1-1/3', 1', string 8', 4', volume, (record*…flute level)
	(percussive tone)	5-1/3', 4', 2-2/3', 2', click, long, volume
	(harmonic coupler)	2-2/3', program, cancel, record*
	organ presets	I, II, III, IV, record*, 20 organ presets, digital drawbars
	string ensemble	cello, violin, volume
	vocal ensemble	ah/humming, volume
	percussive presets	accoustic piano, electric piano, harpsichord, clavi, vibraphone, glocken, accoustic guitar, jazz guitar, steel durm, banjo, harmonic control, volume
	orchestral presets	trombone, trumpet, saxophone, french horn, clarinet, accordion, wah brass, synthe brass, harmonic control, volume
	solo synthesizer presets	violin, harmonica, trombone, trumpet, saxophone, clarinet, flute, oboe, pan flute, whistle, rock guitar, cosmic, synthe chopper, key bender, harmonic control, volume
lower tones	tab voices	flute 8', 4', 2-2/3', 2', 1-1/3', 1', string 8', 4', volume
	(harmonic coupler)	2', program, cancel, record*
	organ presets	record*, digital drawbars
	string ensemble	cello, violin, volume
	vocal ensemble	○ (U/L)
	percussive presets	○ (U/L)
	orchestral presets	○ (U/L)
	solo synthesizer presets	○ (U/L)
bass tones		bass 16', 8', acoustic bass, ensemble bass, electric bass, chopper bass, pipe bass I, II, synthe bass, tuba, harmonic control, volume
effects	bass solo	○
	sustain	(upper) on, control, (percussive presets) on, control, (lower) on, control, (bass) control
	slow attack	upper
	multi-tremolo/vibrato	U tab voices, L tab voices, vibrato, slow/fast, (record*…tremolo speed)
	effect conductor	chorus, celeste, phaser, U tab voices, U&L percussive presets, U&L orchestral presets, U&L solo synthe presets, L tab voices
	digital reverb	○
	glide	footswitch L
techni-chord		on, close/open
drum percussion (selectors)		march, shuffle, swing I, II, 8 beat, funk rock, 16 beat, samba rock, ballad, swing rock, disco I, II, rumba, guaracha, bossa nova I, II, mambo, cha-cha, samba, baion, waltz, tango, jazz waltz
(controls)		on, mellow, synchro, start/stop, volume, footswitch L, glide/rhythm
tempo set		I, II, manual, fine, tempo, record*
arrange percussion		I, II, III
fill in & intro		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, record*, clear, beat, 2nd bar, triplet, accent/pitch, I, II, III, 0~15, ♭ , ◄, ►, ►➔, ↷, ↦, § ◆, D.S., ⇥, ⇨, ·↷·, ⇥►, (lower keyboard)
transpose		transpose, record*, Ⓓ ~ Ⓒ ~ (F#/G♭)
tuning		free set, +, −
musical display		mode selector (mode, function), +, −, =, ✕/', ÷/', (lower keyboard)
program function switches		knee lever, footswitch R, L, full bass pedal, record*
others		power switch, main volume, expression pedal, headphone jack, input jack, microphone jack (with volume), output jack [1, 2 (R), 3 (L)…pin jack (unbalanced), 2ch/3ch switch] line out for ext. speaker [1, 2 (R), 3 (L)…large jack, cannon type connector (balanced), 2ch/3ch switch], panel foot light switch, monitor volume, initial (lower keyboard)
output (monitor speaker)		10 W ✕ 2
monitor speakers		14 cm (5-1/2") ✕ 2
power requirement		250 W, 300 VA (canada) AC 120/220/240 V 50/60 Hz AC 120 V 60 Hz (North America)
cabinet (W ✕ H ✕ D)		160.6 cm ✕ 110.6 cm ✕ 69.2 cm (63-7/32" ✕ 43-17/32" ✕ 27-1/4")
net weight		body 157 kg (346.1 lbs), pedal keyboard 23.4 kg (51.6 lbs), bench 43.6 kg (96.1 lbs)
accessories		digital memory pack (SY-P3)…1, digital disk recorder (SY-D1)…5

*Common "record" switch is used for these switches.