Technics

OWNER'S MANUAL
INSTRUCTIONS D'EMPLOI
GEBRUIKSAANWIJZING

BEDIENUNGSANLEITUNG
INSTRUCCIONES DE MANEJO
ISTRUZIONI PER L'USO

Caution

Voltage (except North America, Europe [excluding U.K.], and 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.

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 27.

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 coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured BLUE must be connected to the terminal with the letter N or coloured BLACK.

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

This apparatus was produced to BS 800: 1977.

Vorsicht!

Netzspannung (außer Nordamerika, Europa, Taiwan)
Versichern Sie sich, daß der Spannungswähler auf der Rückseite mit Ihrer lokalen Netzspannung übereinstimmt, bevor Sie das Instrument in Betrieb nehmen. Ist dies nicht der Fall, benutzen Sie einen Minusschraubenzieher, um den Spannungswähler auf die örtliche Netzspannung einzustellen.
Bevor Sie anfangen zu spielen, lesen Sie bitte die Vorsichtshinweise auf der letzten Seite dieser Anleitung.

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

TECHNICS, Model No.
SX-EX10L/SX-EX20(L)/SX-EX30(L)
(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

Vfg 1046 / 1984
(Amtsblattverfügung)

funk-entsört ist.
Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

PANASONIC DEUTSCHLAND GMBH
Name des Herstellers/Importeurs

Precaución

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

Attention

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

Attenzione

Voltaggio (eccetto Nord America, Europa, Taiwan)
Assicurarsi che il cambio tensione, sul pannello posteriore, concordi la tensione con il voltaggio della tensione di rete. Usate nel caso un cacciavite per adattare la tensione.
Prima di suonare vi consigliamo di leggere le indicazioni dell'ultima pagina.

Attentie!

Netspanning (behalve voor Noord Amerika, Europa, Taiwan)
Let er op dat de spanningscaroussel, die zich op het achterpaneel bevindt, op de juiste netspanning staat vóór het orgel wordt aangesloten. Gebruik een kleine schroevedraaier om de spanningscaroussel in te stellen.
Voordat U gaat spelen, lees de waarschuwings punten op de latere bladzijden zorgvulding en goed door.

Part I Basic Functions

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

ENGLISH

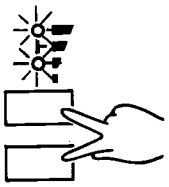
Most buttons are equipped with indicators which light up when in operation.

Controls

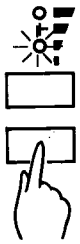
Volume and effects on this organ are controlled by 4-stage buttons, except the **TRANSPOSE** and **RHYTHM TEMPO** controls.

Volume, Reverb (EX30 only)

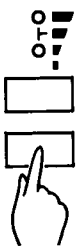
•When the upper button is pressed, the upper indicator lights up and the volume or effect is at the maximum.



•If both buttons are pressed simultaneously, the volume or effect returns to the normal or intermediate level and both indicators turn on.



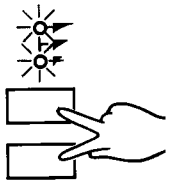
•When the lower button is pressed, the lower indicator lights up and the volume or the effect is decreased.



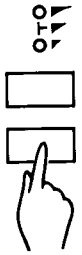
•If the lower button is pressed again, the volume or effect is at the minimum (or turned off, in the case of **DRUMS**, **ACCOMP** and **REVERB** [EX30]) and both indicators are off.

Sustain

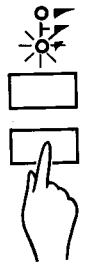
•When the upper button is pressed, the upper indicator lights up and the sustain effect is at the maximum.



•If both buttons are pressed simultaneously, the sustain effect returns to the normal or intermediate level and both indicators turn on.



•If the lower button is pressed when either or both of the indicators are lit, the sustain effect is turned off and both indicators turn off.

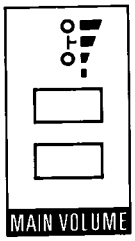


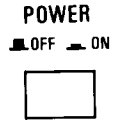
•When the lower button is pressed again, the lower indicator lights up and the sustain effect is at the minimum.

Power/Main Volume Controls

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

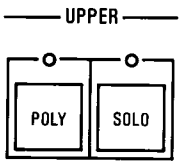
MAIN VOLUME adjusts the loudness of the entire organ.



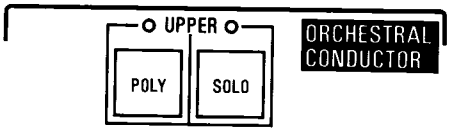


The circled numbers on the separate sheet correspond to the section numbers in this instruction manual.

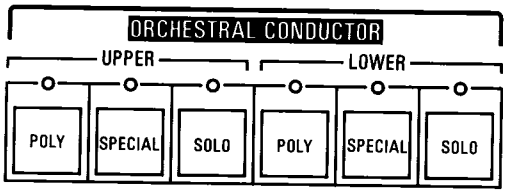
① Orchestral Conductor



(EX10)



(EX20)



(EX30)

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.

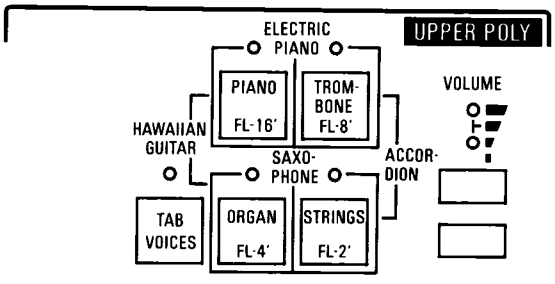
Understanding the **ORCHESTRAL CONDUCTOR** is easy if you think of each button as an "on-off switch" that controls the voice group indicated. The buttons each have an indicator that illuminates when the button is pressed.

- **EX10/EX20: UPPER POLY** and **UPPER SOLO** can be selected.
- **EX30: POLY**, **SPECIAL** and **SOLO** can be selected independently for **UPPER** and **LOWER**. **SPECIAL** and **SOLO** can each be selected for either **UPPER** or **LOWER**, but not for both.

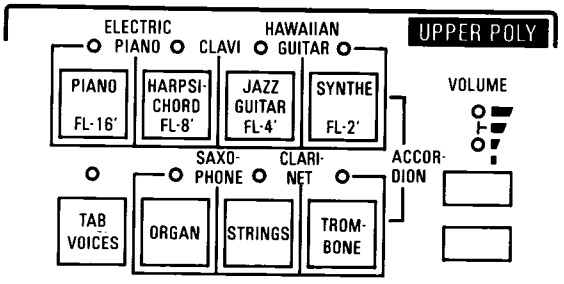
All of these buttons are self-cancelling. To deactivate one, you must press another. If you wish to combine some of the sounds, press two or more buttons at the same time or hold one down and press another.

All voices of the Technics organ are reproductions of true instrumental effects made possible by the PCM system. Treble and bass sounds outside the range of the real instruments can also be produced. Particularly in the bass range, the tones start up slowly. Therefore, if you play fast, use the treble range for the most effective performance.

② Upper Poly



(EX10)



(EX20/EX30)

POLY brings in the sounds of both orchestral and percussive instruments. (The **TAB VOICES** button must be off.)

- Pressing two adjacent buttons simultaneously will produce the sound which is indicated between the two buttons.
- Voices cannot be mixed.
- On the EX30, you can combine voices from among 10 preset sounds and set them in the **ORGAN** button. (Refer to ㉔.)
- Adjust the volume using the **VOLUME** buttons for **UPPER POLY**.

ENGLISH

Tab Voices

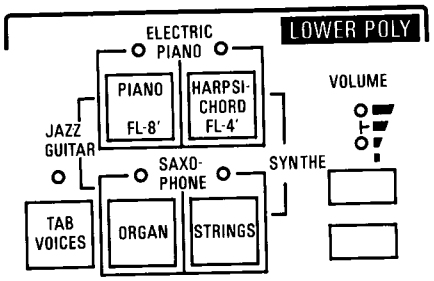
When the **TAB VOICES** button is turned on, the four **FL-** buttons become **FLUTE** voice buttons.

- Only **FLUTE** voices will sound when the **TAB VOICES** button is on. To use voices other than **FLUTE** voices, press the **TAB VOICES** button again to turn it off.
- The four **FLUTE** voices can be mixed as desired.

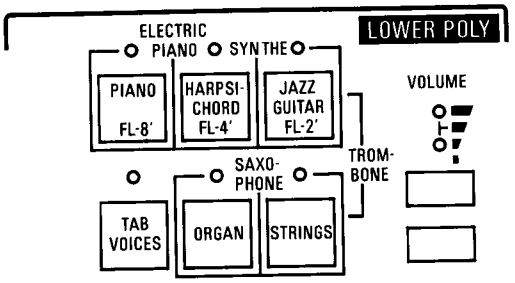
Footage Marks

To help you use the **TAB VOICES** most effectively, you should know something about the numbers that appear on the **FLUTE** buttons. 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.

③ Lower Poly



(EX10)

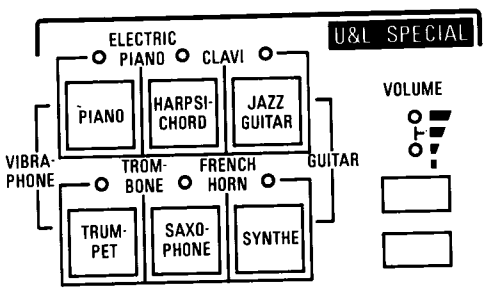


(EX20/EX30)

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

The **LOWER POLY** buttons are operated and function like the **UPPER POLY** buttons.

④ Special (EX30 only)



SPECIAL is comprised of both orchestral and percussive instruments, and can be selected for either the upper or lower keyboard by the **ORCHESTRAL CONDUCTOR** buttons.

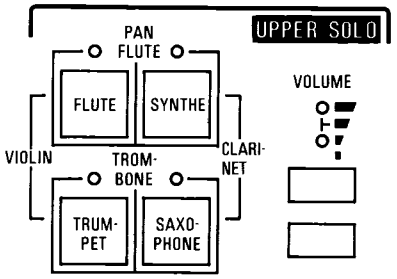
- **SPECIAL** tones cannot be mixed.

■ **Number of notes that sound simultaneously from both upper and lower keyboards.**

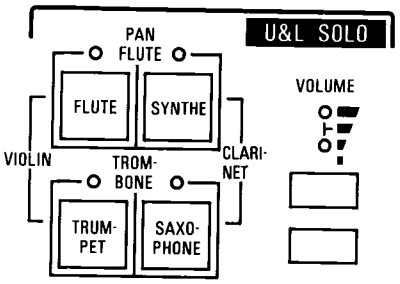
	Upper	Lower
EX10	7*	4
EX20	6	8*
EX30	8	8

*4 when **ACCOMP VOLUME** is on

⑤ Solo



(EX10/EX20)



(EX30)

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

■ **EX10/EX20: UPPER SOLO** only is available.

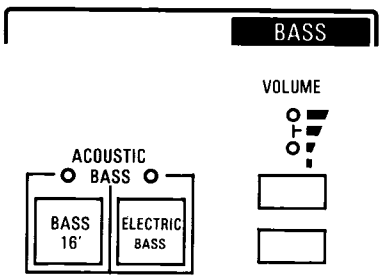
■ **EX30:** you can select either **UPPER** or **LOWER SOLO**.

VOLUME buttons let you adjust volume levels.

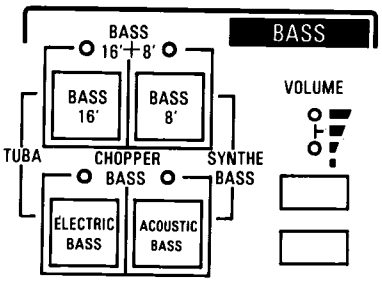
- When selecting only **SOLO** on the **ORCHESTRAL CONDUCTOR**, the key pressed will sound without any lag, so that rapid passages can be easily played up and down the keyboard.

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

⑥ Pedal Voices



(EX10)

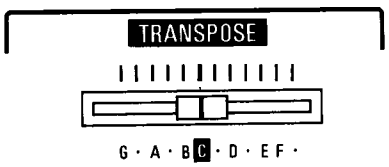


(EX20/EX30)

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

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

⑦ Transpose



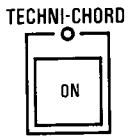
ENGLISH

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

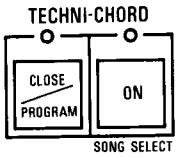
Adjust the key by moving the slide control from the normal key of C.

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

⑧ Techni-Chord



(EX10)

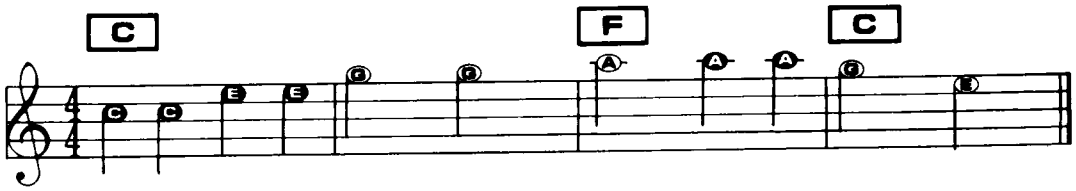


(EX20/EX30)

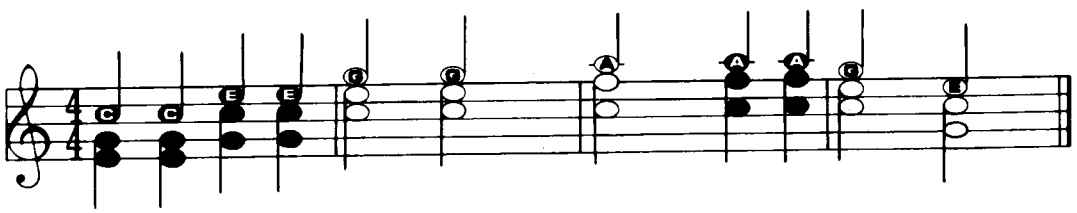
TECHNI-CHORD makes your melodies sound like those of a professional organist by transferring the chord tones you play on the lower keyboard to each melody note you play on the upper keyboard.

Set up your organ to play the example below—use either the 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! (For the EX20/EX30, the **CLOSE/PROGRAM** button should be off.)

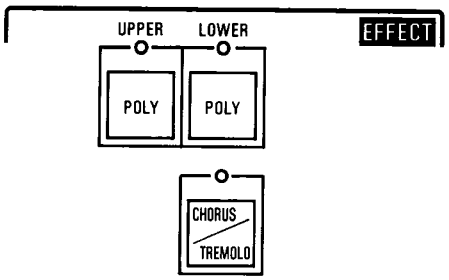


TECHNI-CHORD functions for any sound other than the **SOLO** sounds.

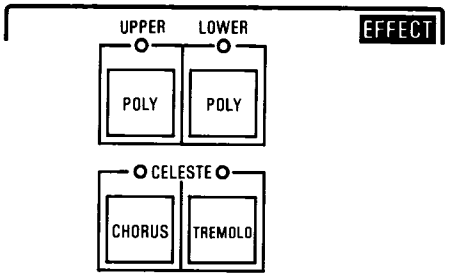
Techni-Chords cannot be played using the lower seven keys of the upper keyboard.

On the EX20/EX30, now press the **CLOSE/PROGRAM** button to play the harmony style selected from among four different preset harmony styles. (Refer to ㉖.)

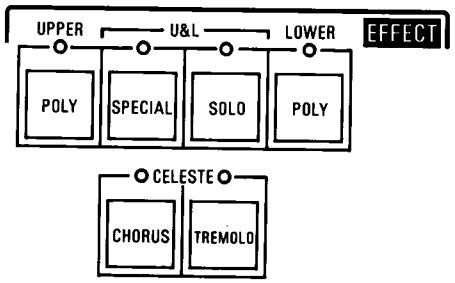
⑨ Effect (Chorus/Tremolo) (EX10) (Chorus/Tremolo/Celeste) (EX20/EX30)



(EX10)



(EX20)



(EX30)

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

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

The **TREMOLO** speed can be adjusted. (Refer to ㉗.)

■ **EX10**

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

UPPER POLY lets you bring any of the **UPPER POLY** voices into the **CHORUS/TREMOLO** effect; **LOWER POLY** allows you to do the same with lower keyboard voices.

■ **EX20/EX30**

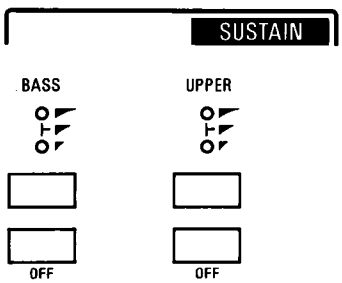
The two lower buttons are used to select effects.

With the **CHORUS** button on, you will hear the chorus effect—a very slow tremolo, especially suited to religious and classical music. Press the **TREMOLO** button to turn it on and hear the faster effect, ideal for most other kinds of music. Pressing both **CHORUS** and **TREMOLO** buttons simultaneously will create the **CELESTE** effect.

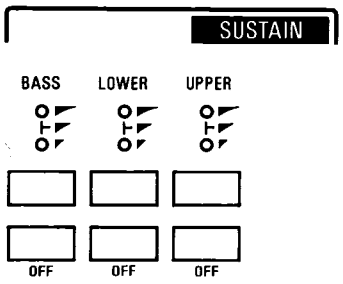
UPPER POLY lets you bring any of the **UPPER POLY** voices into the **TREMOLO/CELESTE** effect; **LOWER POLY** allows you to do the same with lower keyboard voices.

U&L SPECIAL and **U&L SOLO** apply the chorus/tremolo/celeste effect to these keyboard instruments (EX30 only).

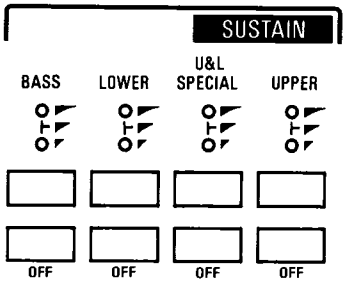
⑩ Sustain Controls



(EX10)



(EX20)



(EX30)

These Technics models have sustain incorporated in their upper and lower keyboards and pedals (except for **LOWER POLY** on the EX10 and **SOLO**).

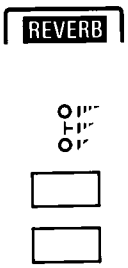
Regardless of where it is used, sustain allows the sound of the notes to gradually fade away (decay).

- **SUSTAIN** does not function for the following voices:
  POLY: **ACCORDION, TROMBONE, CLARINET, SAXOPHONE**
  SPECIAL: **FRENCH HORN, SAXOPHONE, TROMBONE, TRUMPET**

Sustain can be applied selectively to individual groups of sounds.

- **UPPER POLY** sustain is adjusted with the **SUSTAIN UPPER** buttons.
- On the EX20/EX30, use the **SUSTAIN LOWER** buttons to adjust the **LOWER POLY** sustain.
- Operation of the **SUSTAIN** controls is explained in detail on page 2.

⑪ Reverb (EX30 only)



ENGLISH

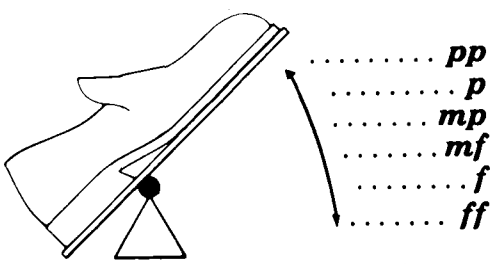
Reverb is an abbreviation for reverberation. If you've walked down a narrow, uncarpeted hallway, you may recall that your footsteps "echoed," or became louder than usual. This was due to the sound waves bouncing from the walls and ceiling instead of being absorbed into the carpeting, furniture and draperies.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

⑫ Expression Pedal

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

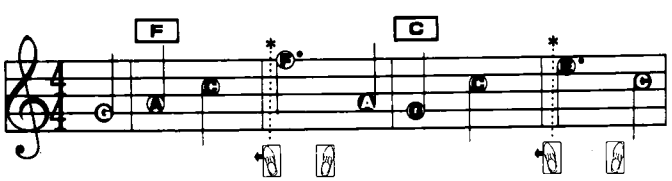
Pushing down with your toe makes the organ louder; pushing down with your heel makes the tone softer.

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.



⑬ Glide Control

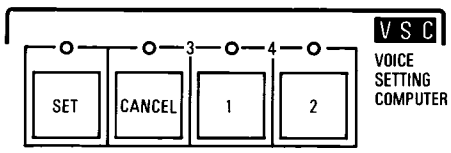
The glide control switch is located on the left side of the expression pedal. When pressed to the left with the side of your foot, it lowers the pitch or tuning of the organ about one half-step. The example below shows how you can achieve the Hawaiian guitar effect. Press the glide switch just before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



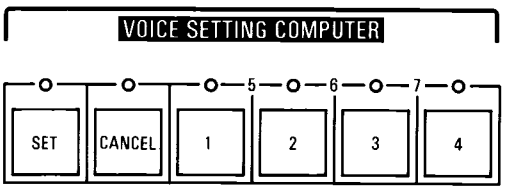
- Other functions can be turned on and off using this foot switch. (Refer to ㉕.)

- The glide effect does not function for the following voices:
  POLY: **PIANO, ELECTRIC PIANO, HARPSICHORD, CLAVI, STRINGS**
  SPECIAL: **PIANO, ELECTRIC PIANO, HARPSICHORD, CLAVI, FRENCH HORN, VIBRAPHONE**
  Pedal Voices

⑭ Voice Setting Computer (EX20/EX30)



(EX20)



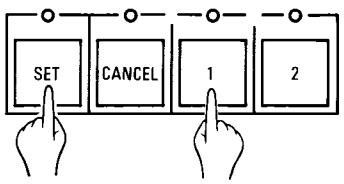
(EX30)

All voices and effects can be programmed into the **VOICE SETTING COMPUTER**. NOTE: No slide control setting can be recorded in the computer.

The button marked **CANCEL** lets you shut off the **VOICE SETTING COMPUTER** and change to standard organ sounds.

Buttons **1**~**4** (EX20) or **1**~**7** (EX30) are used to store the voices and effects for both keyboards and pedals.

1. Set the registration.
2. With the **SET** button held down, press the **1** button. This stores your setting in the **1** button. That's all it takes!



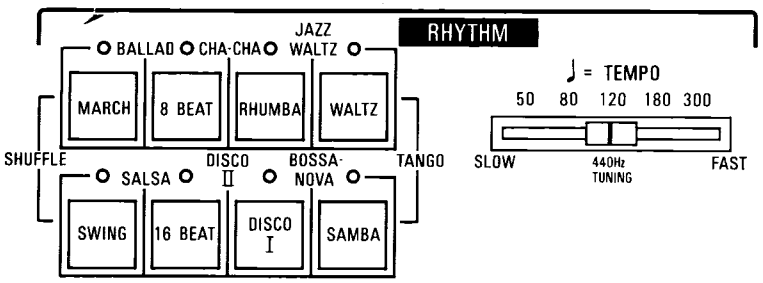
To change your custom registrations, just set up the buttons you want and then press **SET** and the desired number button. The previous setting is automatically replaced by the new one.

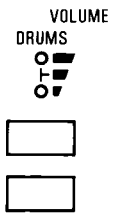
You can change the selected voice and effect from the memory by pressing any other number button. The memory contents in the organ, however, remain unchanged.

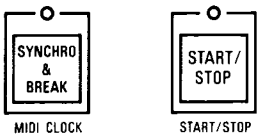
You can store in the number buttons any of the 32 factory-preset voice combinations. (Refer to ㉓.)

The on or off condition of the **CLOSE/PROGRAM** button of the **TECHNI-CHORD** is stored, but the programmed contents are not.

⑮ 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, beat indicators, and volume and speed controls.

The **RHYTHM** buttons themselves are self-cancelling—if one is pressed and you choose a new rhythm, the indicator(s) for the first rhythm 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 indicator above the button indicates the downbeat by flashing on the first beat of each measure. This helps you relate the drum rhythms to the music and helps you keep track of "where you are" while playing.

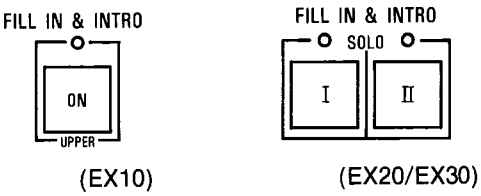
SYNCHRO & BREAK starts the drum rhythm you've chosen only when a pedal or a key on the lower keyboard is pressed.

DRUMS VOLUME buttons allow you to adjust the loudness of the drums to be in balance with the keyboard voices.

TEMPO adjusts how fast or slow the rhythm is played.

- The numbers alongside the sliding control represent the approximate tempo.

⑯ Fill in & Intro



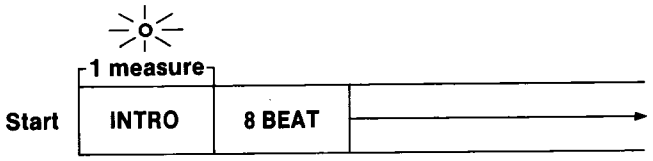
(EX10) (EX20/EX30)

ENGLISH

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 **8 BEAT** rhythm, let's see how this works.

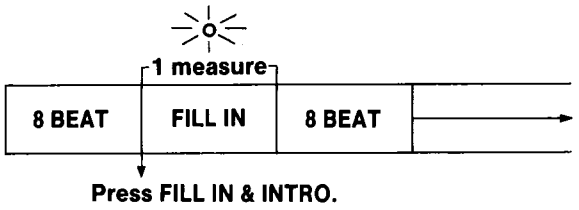
As an intro (introduction):

1. Press **8 BEAT**.
2. Press **FILL IN & INTRO**—the indicator lights up.
3. Start the rhythm (press **START/STOP**). You'll hear the drums start with the intro and continue on to the **8 BEAT** rhythm. After the intro, the indicator goes out.



As a fill in:

1. Press **8 BEAT**.
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 **8 BEAT** rhythm resumes.



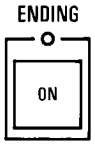
- For the EX20/EX30, two patterns, **I** and **II**, are available.

Solo (EX20/EX30)

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 notes are held or when the keyboard is not being played. Pressing the **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.

⑰ Ending



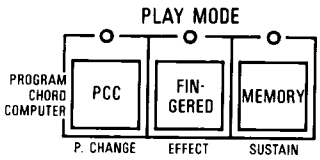
If this button is pressed at the end of a rhythm tune, one measure of the ending pattern will sound, and then the rhythm will stop.

- The ending patterns for the **BASS & ACCOMP** (explained later) are also produced by pressing this button.

⑱ One Touch Play

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

⑲ Play Mode



These buttons are used to select the desired type of accompaniment.

■ **Normal mode** (**PCC** and **FINGERED** buttons are off)
- The accompaniment is formed from the pedal and lower keyboards.
- When the rhythm is started, pressing keys on the lower keyboard starts the rhythmic **ACCOMP**.
- With the **MEMORY** button on, a **BASS & ACCOMP** which matches the fingered chord on the lower keyboard starts.

■ **Auto Play Chord mode** (the **FINGERED** button is on)
- The chord and bass sound when the lower keyboard is played.
- When the rhythm is started, the rhythmic **ACCOMP** automatically starts. (The tone selected by the **LOWER** button of the **ORCHESTRAL CONDUCTOR** is not rhythmic. To turn off this sound completely, press the **TAB VOICES** button of the **LOWER POLY**, and turn off all the **FLUTE** buttons.)
- With the **MEMORY** button on, the played chord is memorized and continues to sound until another chord is played. (Refer to ⑳.)

■ **PROGRAM CHORD COMPUTER mode** (the **PCC** button is on)
- The accompaniment is automatically played following the chord progression which was stored in the **PROGRAM CHORD COMPUTER**. (Refer to ㉒.)

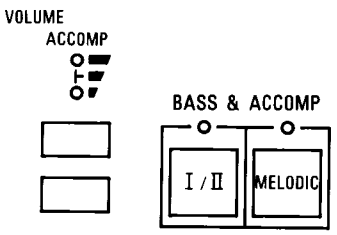
■ **About tone, volume and pattern**

ACCOMP: The **ACCOMP** is performed in a tone and pattern which is automatically matched to the selected rhythm.
Adjust the volume with the **ACCOMP VOLUME** buttons.

■ **EX10/EX20:** Turning on the **MELODIC** button of the **BASS & ACCOMP** changes the rhythmic pattern to a melodic pattern.

■ **EX30:** With the **MELODIC** button of the **BASS & ACCOMP** on, a melodic pattern is added.

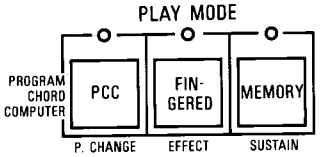
The **BASS** and **ACCOMP** patterns also change depending on whether the **I/II** button is on or off.



BASS: The **BASS** sound is determined by the **BASS** tone buttons and **VOLUME** buttons.

- The sounds selected by the **LOWER** buttons of the **ORCHESTRAL CONDUCTOR** are controlled by their respective tone and **VOLUME** buttons.

⑳ Auto Play Chord



ENGLISH

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-colored bass pedal as you play the appropriate key. To play *minor* chords (Am, F♯m, etc.), press any short, black bass pedal as you play the appropriate key. Occasionally you'll play *minor seventh* chords (Dm7, Gm7, etc.). As you play the lower manual key with the appropriate letter-name, press any long and short bass pedals, at the same time, with your left foot.

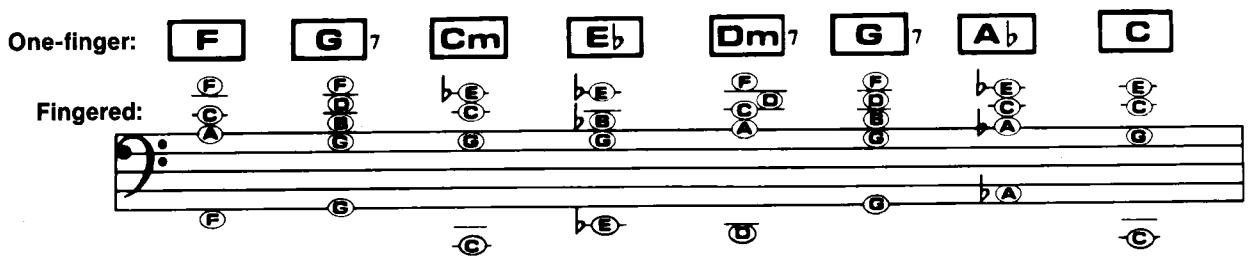
FINGERED mode also allows you to form your own chords on the lower keyboard; the correct bass tone is automatically provided. If you play the pedal keyboard at this time, the bass pattern beginning with the pressed note is played.

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.

Pressing the **FINGERED** button again shuts off the Auto Play Chord feature, permitting normal play.

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



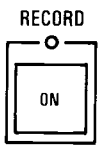
■ **About the Break Function**

When the **FINGERED** and **SYNCHRO & BREAK** buttons are turned on and the **MEMORY** button is turned off, the rhythm is heard while pressing the keys on the lower keyboard.
If the hand is removed, the rhythm will stop. Press the keys again and the rhythm will start from the first beat.

Part II Storage Functions

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

㉑ Record



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

Contents stored by using the **RECORD** button remain in the memory for about one week even when the power switch is turned off (EX20/EX30).

Upper Keyboard Split Functions

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

Upper keyboard	To check lower keyboard tones and effects	To check upper keyboard tones and effects
	(19 keys)	(25 keys)
Lower keyboard	Used for storage operation	

Initial Key

This **INITIAL** key is used to set the voices and effects of the Technics organ or to return the stored contents to their factory preset state.

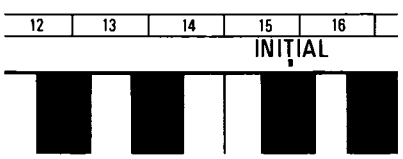
■ **EX10**
1. Press the **RECORD** button. The indicator flashes.
2. Press the **MODE SET** (**ONE TOUCH PLAY**) button. The indicator flashes slowly.
3. Press the **INITIAL** key on the lower keyboard.

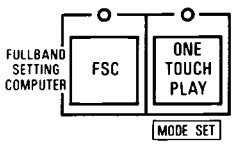
- The stored contents are also returned to their factory preset state when the **POWER** is turned off once and then on again.

■ **EX20/EX30**
1. Press the **FULLBAND SETTING COMPUTER** (**FSC**) button to turn it on.
2. Press the **INITIAL** key on the lower keyboard.

This returns the stored contents to their factory preset state.
- The contents stored in the **PLAY SEQUENCER** (EX30) and **FULLBAND SETTING COMPUTER** (EX20/EX30) are left as they are.
- If the **INITIAL** key is pressed during storage, only the function involved returns to its factory preset state. (For details, see the appropriate sections.)

(EX10)





(EX20/EX30)

㉒ Program Chord Computer

The **PROGRAM CHORD COMPUTER**, complete with a memory bank, is an amazing device that is exclusive to most Technics organ models. That's right—a computer built into the Technics organ! This makes it possible for you to program the chord accompaniment of an entire song and store it right inside the organ. The main advantage of this is that, while you're learning to play a song, the computer can play the accompaniment, complete with rhythm, while you concentrate on practicing the melody.
The feature is also used in conjunction with the **FULLBAND SETTING COMPUTER**, which is discussed on later pages (EX20/EX30).

There are two groups of controls that operate the **PROGRAM CHORD COMPUTER**—the buttons illustrated at right, and the 9 keys on the right of the lower keyboard.

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

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

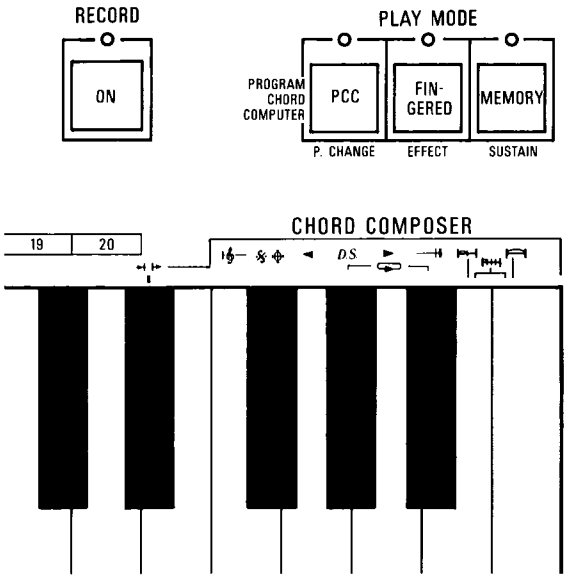
The 9 keys are used for the actual process of storing chords in the computer. Here is what they do:

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

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

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

Amend keys (► ◄) are used to correct individual chords in a sequence, or to change chords already in the memory bank.



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

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

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

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

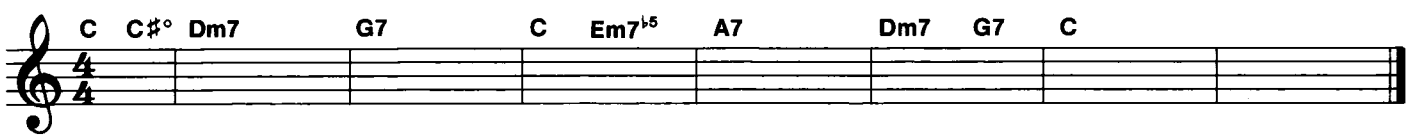
The use of the 𝄋 and *D.S.* keys allows you to store chords according to the music, making storage operation easy. This is explained later in detail.

It's possible to store these types of chords:

Major	Minor	Seventh	Minor Seventh	Augmented	Diminished Seventh	Minor Seventh Flat Fifth	Major Seventh	Minor Major Seventh	Seventh Suspended Fourth
C	Cm	C7	Cm7	Caug	C°7 or C dim.7	C^{ϕ} or $Cm7^{\flat5}$	CM7 or C maj. 7	CmM7	C7sus4

Some of these chord types are not available as a one-finger chord; no matter, however, since your computer easily mixes one-finger and fingered chords.

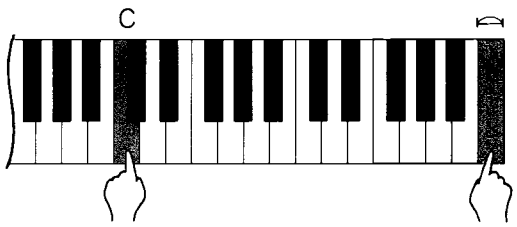
Use the following example to learn operations of the **PROGRAM CHORD COMPUTER**. The variety of chords presented will help you do this.



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 in the one-finger or fingered mode. DON'T PRESS THE **FINGERED** BUTTON however, since doing so cancels the record feature. While holding the C chord key(s), press the key marked . The chord sounds while you're holding it; as you press the key, you'll hear a "beep"—this tells you the chord is now in the memory. ALWAYS REMEMBER: When you hear the chord you want, THEN press or .



   Since the C♯ diminished chord is not available in the 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$^{\flat 5}$ chord are E-G-B♭-D. The last chord, C, is played for two measures. As you hold down the key(s), press the key twice—once for each measure.

2. Press the (end) key. This closes the memory to further storage, and turns off the **RECORD** button. The indicator for the **PCC** button stays on, however.

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 keys (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 **2** 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.

ENGLISH

Playing the Programmed Chords

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

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

Modifying or Correcting Programmed Chords

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

Using the Rhythm

1. Press the **RECORD** and **PCC** buttons.
2. Press **START/STOP** to begin the chord sequence with the rhythm.
3. Stop the rhythm when the sequence reaches the A7 chord.
4. Play and hold the new chord (E♭7) and press the key. The new chord is now in the position of the original chord.
5. Press **PCC** again.

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

Step 1 as above.

2. Press the ► key once for each chord from the start of the program. In this case, the A7 is the seventh chord in the sequence; watch the example and press ► seven times.
3. Stop when you hear the chord you want to change.

Steps 4 and 5 as above.

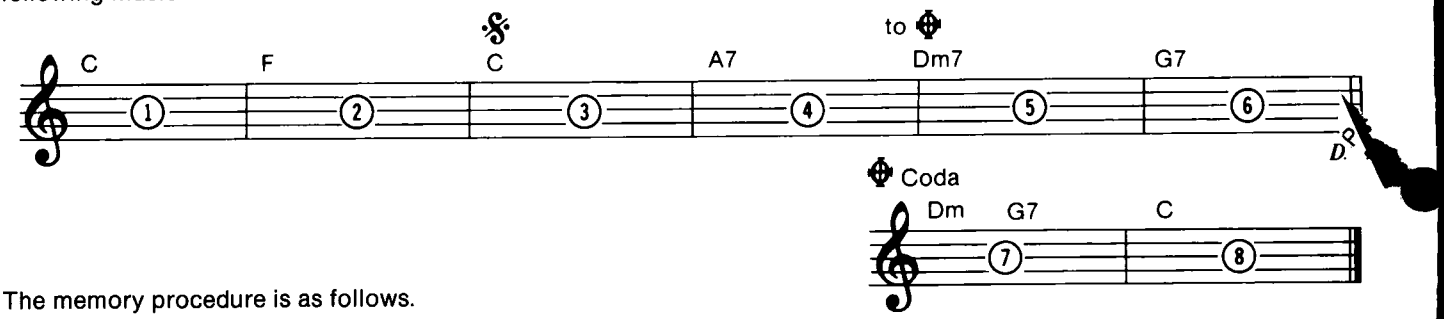
The ◄ key is used the same way when you want to move one chord at a time from the end of the program to the beginning.

Other facts you should know about changing chords...

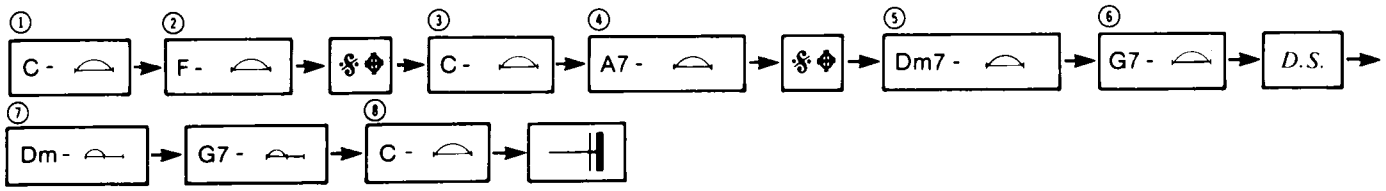
- The ► and ◄ keys operate only when the rhythm is stopped and the **RECORD** and **PCC** buttons are pressed.
- Each press of the ► key advances one unit and each press of the ◄ key moves sequence back one unit, whether the unit is a whole measure, a half-measure, or a quarter-measure.
- Should you enter the wrong chord, press the ◄ key once and enter the correct chord.

Using the 𝄋 𝄌, *D.S.* Keys

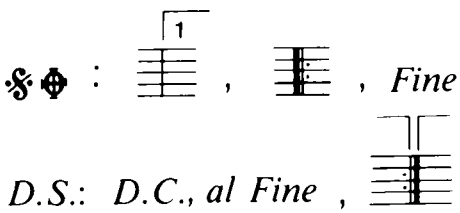
After pressing the symbol keys according to the music sheet, the chord of the measure is stored. Let's try to store the following music.



The memory procedure is as follows.

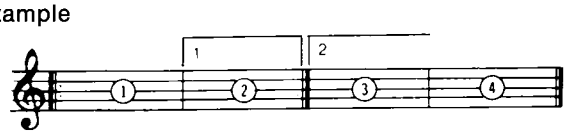


Music written with repeat marks other than 𝄋, 𝄌, and *D.S.* can be stored with the following correspondence.

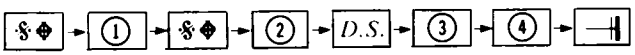


(For , press the 𝄋 𝄌, *D.S.* keys in succession.)

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 two repeats overlap.
- When the positions of and *D.C.* or *D.S.* are the same.

Voice, Fill in & Intro, Ending Storage

This **PROGRAM CHORD COMPUTER** stores not only chords but also the **FILL IN & INTRO** and **ENDING**.

On the EX20/EX30, voices from the **VOICE SETTING COMPUTER** can also be stored.

■ For FILL IN & INTRO, ENDING Storage

INTRO

Storage can be done by pressing the **FILL IN & INTRO** button at the beginning of a tune.

- When the **FILL IN & INTRO I** and **II** buttons are simultaneously pressed for storage, eight measures of a drum solo are stored as the intro (EX20/EX30).

FILL IN

After storing a chord, press the **FILL IN & INTRO** button, and one measure of that chord will be stored as the fill-in.

- When the **I** and **II** buttons are pressed simultaneously, a drum solo will be stored until **I** or **II** is pressed a second time (EX20/EX30).

ENDING

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

■ For Voice Storage (EX20/EX30)

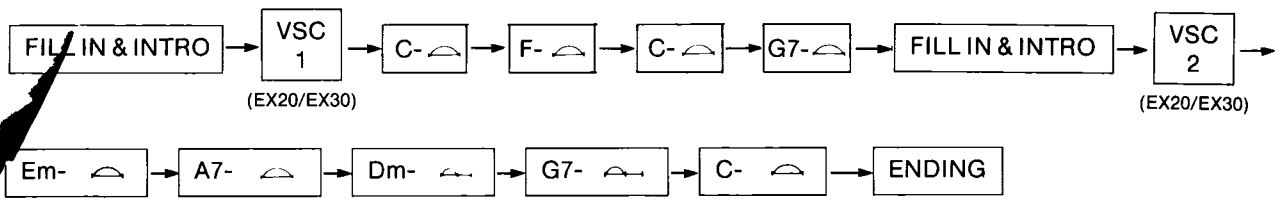
Before storing a chord, press a **VOICE SETTING COMPUTER** number button. This stores the selected voice at the beginning of the next measure. The voice will continue until the next voice is selected.

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

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

chord		C	F	C	G7	Em	A7	Dm G7	C
FILL IN & INTRO, ENDING	INTRO				FILL IN				ENDING
VSC (EX20/EX30)		1				2			

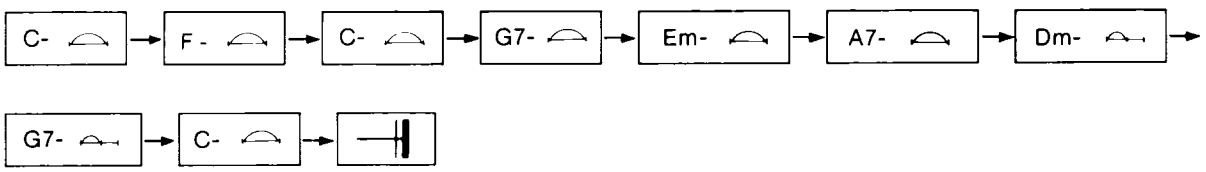
After first pressing the **RECORD** button then the **PCC** button, perform the storage operation as follows:



- Up to 10 selections of the voice, **FILL IN & INTRO** and **ENDING** can be stored. (Storing voice, **FILL IN & INTRO** and **ENDING** in sequence is counted as one selection.)
- It is also possible to store voices, **FILL IN & INTRO** and **ENDING** after a chord sequence has been entered.

Let's store the previous example using the following procedure.

1. First, store only the chords.



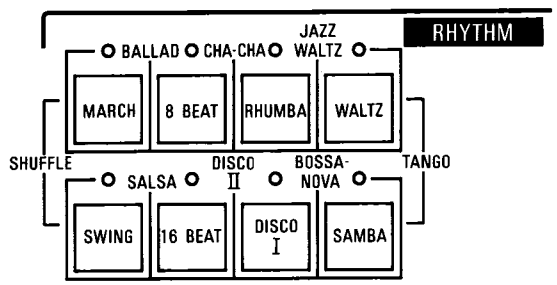
2. Press the **RECORD** button and then the **PCC** button.
3. Press the **FILL IN & INTRO** button.
4. Press the **1** button of the **VOICE SETTING COMPUTER** (EX20/EX30).
5. Press the forward key (►) four times to advance the chord to the G7 position.
6. Press the **FILL IN & INTRO** button.
7. Press the **2** button of the **VOICE SETTING COMPUTER** (EX20/EX30).
8. Press the forward key (►) six times.
9. Press the **ENDING** button.

㉓ Voice Setting Computer (⑭) (EX20/EX30)

How to Use the Factory-Preset VSC

In addition to your own registrations, the 32 factory-preset voice combinations (16×2) allow you to choose your favorites for storage in **VOICE SETTING COMPUTER** buttons **1**~**4** (EX20) or **1**~**7** (EX30).

1. Press the **RECORD** button.
2. Press the **1** button to store the desired voices.
3. If you press **RHYTHM** button(s), a registration appropriate for the rhythm is selected.



- Playing the upper and pedal keyboards lets you check the voices and effects.
- With the **I/II** button of the **BASS & ACCOMP**, a total of 32 combinations is available.

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

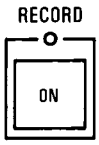
- In step **4**, when the **2** button is pressed instead of the **1** button, the selected voice is stored in the **1** button and the storage operation can be immediately continued for the **2** button.

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

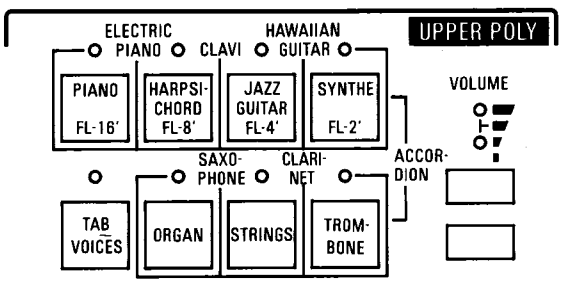
㉔ Organ (②) (EX30 only)

You can choose from among 10 preset sounds by using the lower keyboard keys **1**~**10** and storing the selected sound in the **ORGAN** button(s) of **UPPER POLY** and **LOWER POLY**.

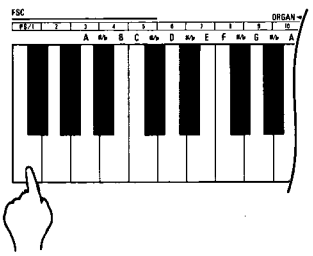
1. Press the **RECORD** button. Its indicator will flash.



2. Press the **ORGAN** button of **UPPER POLY** or **LOWER POLY**. Its indicator will flash slowly.



3. Select your favorite sounds using the keys marked 1 to **10** on the lower keyboard.
   - Playing the upper keyboard lets you check the sou and effects since the upper keyboard splits in funct.



4. Press the **RECORD** button to turn it off.

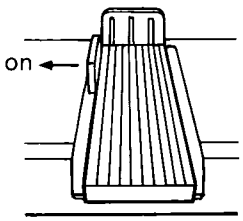
The following organ tone groups are preset in keys **1** to **10**.

1~3: Classical organs
4~10: Jazz and rock organs

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

㉕ Program Function Switch (⑬)

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



- The switch normally works as a glide switch.
- Functions for storage
  START/STOP
  VOICE SETTING COMPUTER (EX20: **1**~**4**, EX30: **1**~**7**)
  CHORUS/TREMOLO
  - When the **CELESTE** is selected, **CHORUS** and **TREMOLO** cannot be interchanged using the foot switch (EX20/EX30).

  TECHNI-CHORD
  FILL IN & INTRO (EX10: **ON**, EX20/EX30: **I**, **II**, **SOLO**)
  ENDING

For Storage

1. Press the **RECORD** button.
2. Press the foot switch to the left.
   - This causes a short beep to sound, and the indicators of the buttons available for recording flash.
3. Press the button of the function you wish to store. (Press tne **START/STOP** button, for example.) This automatically turns the **RECORD** button off and completes storage of the selected function in the foot switch. (In this example, the rhythm will start when the foot switch is pressed to the left.)

- Press the foot switch once again to return to the original state.
- To return the foot switch to the original function (glide switch), press the **INITIAL** key on the lower keyboard instead of the button described in step **3** above.

㉖ Techni-Chord (⑧) (EX20/EX30)

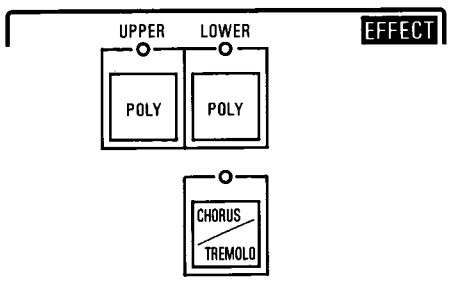
When the **CLOSE/PROGRAM** button is on, you can store the harmony by choosing one of the four factory-preset harmony style patterns.

1. Press the **RECORD** button (its indicator will flash).
2. Press the **CLOSE/PROGRAM** button of the **TECHNI-CHORD** (its indicator will flash slowly).
3. Select the desired harmony style from keys **1**~**4** on the lower keyboard.
   - The harmonic style selected can be monitored on the upper keyboard. (The chord is played on the lower 19 keys, the melody on the upper 25 keys.)
   - The following four harmony styles are available.

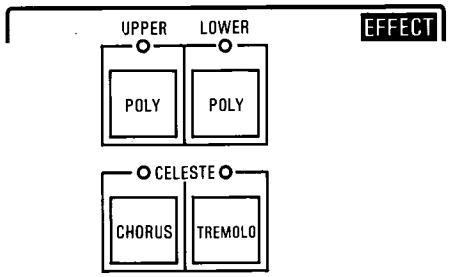
Lower keyboard	Style
1	open 1
2	open 2
3	duet 1
4	duet 2

4. Press the **RECORD** button.

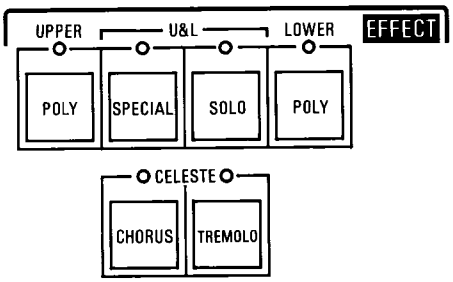
㉗ Tremolo Speed Adjustment (⑨)



(EX10)



(EX20)



(EX30)

The Technics organ allows the **TREMOLO** speed to be adjusted. The **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 POLY** button of the **EFFECT** section. The indicator above the button will flash slowly.
3. ■ **EX10**
   Each time you press the **CHORUS/TREMOLO** button, the frequency is increased. If the button is pressed again after the maximum frequency is reached, the frequency returns to the minimum.
   ■ **EX20/EX30**
   Tap the **TREMOLO** button to increase the frequency. Tap the **CHORUS** button to decrease it.

- During speed adjustment, the **TREMOLO** is automatically turned on. This allows you to carefully check on the upper keyboard how the tremolo effect is applied.

4. **Slow speed adjustment:**
   Press the **LOWER POLY** button of the **EFFECT** section.
5. Adjust the frequency using the **CHORUS/TREMOLO** button (EX10) or the **CHORUS** and **TREMOLO** buttons (EX20/EX30).
6. When the adjustment is completed, press the **RECORD** button to turn it off.

- The **CHORUS** and **CELESTE** (EX20/EX30) 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 (20.3 Hz and 6.4 Hz), press the **INITIAL** key in step **3** or **5** above.

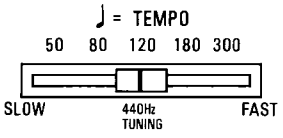
㉘ Tuning

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

1. Press the **RECORD** button. The indicator flashes.
2. Press the **MODE SET** (**ONE TOUCH PLAY**) button. The indicator flashes slowly.
3. Adjust the pitch with the sliding **TEMPO** control (to the right to raise the pitch, to the left to lower it). The center position is 440 Hz.

- The initial setting is 440 Hz.

4. Press the **RECORD** button to turn it off.

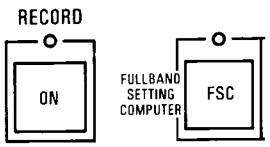


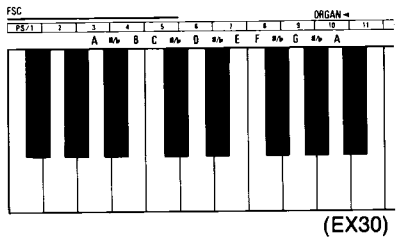
Part III Storage of Performance Contents

㉙ Fullband Setting Computer (EX20/EX30)

The **FULLBAND SETTING COMPUTER** (**FSC**) is used to set tones, effects and rhythm combinations. It also allows storage in the memory of information needed to play songs such as the contents stored in the **PROGRAM CHORD COMPUTER**. The stored contents can be freely retrieved for use whenever required.

- The contents for up to five tunes, excluding the performance, can be stored.





(EX30)

■ EX30 only

For the EX30, in addition to the **FSC** mode, the **PS** (**PLAY SEQUENCER**) mode is available so that you can use the internal memory to store one entire song you played. (Refer to ㉚.)
Therefore, first change the mode to the **FSC** mode following the procedure below.

Changing the Mode

1. Press the **RECORD** button (its indicator will flash).
2. Press the **FSC** button (its indicator will flash slowly).
3. Press the **FSC/PS** button (the **LOWER** button of the **PLAY SEQUENCER** section) to change the mode.
   - The mode is indicated by the **FSC/PS** button indicator. **PS** mode is indicated by the lit indicator; **FSC** mode when the indicator is not lit.
   - The mode also changes when the **INITIAL** key on the lower keyboard is pressed.
4. Turn off the **RECORD** button when the desired mode is set.

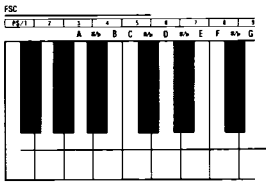
- These contents can be stored in either the **PS** or **FSC** mode. After the contents are stored in the **FSC** mode, if the mode is changed to **PS** and other contents are stored, the contents stored in the **FSC** mode are erased.
- When the optional digital disk recorder is used, the contents of the internal memory cannot be stored or played back.

For Storage

1. Set the internal memory to the **FSC** mode (EX30 only).
2. The tone and effect combinations registered for playing the song should be stored in the **VOICE SETTING COMPUTER**.
3. Store the functions, such as the **PROGRAM CHORD COMPUTER**, that you require.
4. Set the tones, effects and rhythms at the beginning of the song being played.
   - If you desire an "intro," press the **FILL IN & INTRO I** or **II** button after stopping the rhythm.

Now you can store the above contents in the memory.

5. First press the **RECORD** button and then the **FSC** button.
6. Press key **1**, **2**, **3**, **4** or **5** on the lower keyboard within 5 seconds. This stores the contents in the track of the memory that corresponds with the key number pressed.
   - At this time, the **FSC** indicator flashes and a confirming beep sounds once. (If a beep-beep-beep is heard, an error is indicated and storage cannot be performed.)



(EX30)

Pressing this key stores the contents in track 1 of the memory.

In a similar manner, store the contents of your favorite songs in the remaining tracks of the memory.

- Steps **2** to **6** above remove the contents of the stored memory and store the new song.

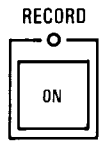
Let's read out the stored FSC contents to set the tones and effects

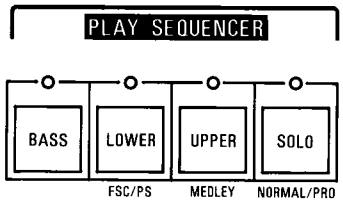
1. Press the **FSC** button.
2. Press the key on the lower keyboard that corresponds to the number of the song you wish to play. The tones and effects played at the beginning of the song will be indicated by the button indicators.

- At this time, the **FSC** indicator flashes to show that settings have been made correctly. If the **VOICE SETTING COMPUTER** indicators flash, an error is indicated.
- At the same time, the contents stored in the **PROGRAM CHORD COMPUTER** and **VOICE SETTING COMPUTER**, etc. are also set automatically.
- **TRANSPOSE** is also played back, but once the slide control is moved, the key indicated by the position of the slide control is set.

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

㉚ Play Sequencer (EX30 only)





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

Solo Button

A different melody from that stored in the **UPPER** button can be stored in the **SOLO** button using one of the **SOLO** sounds from the **ORCHESTRAL CONDUCTOR** section. Automatic performance using the **LOWER, UPPER,** and **SOLO** buttons of the **PLAY SEQUENCER** produces the sound of three keyboards played at once.

For Storage:

I. Setting Modes and Registration

1. Set the internal memory to the **PS** mode. (See "Changing the Mode" in ㉙ Fullband Setting Computer.)
2. Set the voices and effects for the song to be stored.

- If an introduction is needed, turn on the **FILL IN & INTRO I** or II button.
- If **PLAY SEQUENCER** storage operation is performed, this setting will be automatically stored in the memory.
- If necessary, store in advance the **VOICE SETTING COMPUTER**, the **PROGRAM CHORD COMPUTER**, etc.

II. For Storage of Ordinary Performances

1. Press the **RECORD** button. Its indicator will flash.
2. Press the **PLAY SEQUENCER** buttons one at a time for the parts you wish to store (for example, the **BASS, LOWER** and **UPPER**.) The button indicators will then flash slowly.

- Check that the buttons for the parts you wish to store flash slowly.
- At this time, turn off the **SOLO** button.

3. Play the song to be stored.

- Start the rhythm if desired and play the parts you wish to store. You can turn the rhythm on and off while playing the song.

4. After playing, press the **RECORD** button to turn it off.

- Instead of the **RECORD** button, you may press the **PLAY SEQUENCER** button which turns off the **PLAY SEQUENCER** and ends the recording.

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

1. Turn off all four **PLAY SEQUENCER** buttons.
2. Press the **RECORD** button. Its indicator will flash.
3. Press the **PLAY SEQUENCER** button for the part to be stored first. Its indicator will flash slowly.
4. Play the part to be stored.
5. After playing the part, press the **PLAY SEQUENCER** button for the next part to be stored. Its indicator will flash slowly.
   - The rhythm automatically stops.
   - Check at this time that the indicator for the previously stored part is still lit.
   - Instead of step **5**, you may press the **RECORD** button to turn it off. Then press the button again (the indicator will flash), and press the **PLAY SEQUENCER** button for the part you wish to store next. This button's indicator will then flash slowly.
6. Pressing the **START/STOP** button begins the automatic performance of the previously stored part, to which you can add a second part.
   - You can also begin a song which has no rhythm by pressing the **START/STOP** button.
   - To store one portion of a song, press the button for the part to be stored next. You need not wait for the automatic performance to be completed. In this case, do not stop the rhythm.
7. Repeat steps **5** and **6** to complete storage in the other **PLAY SEQUENCER** buttons.
8. Press the **RECORD** button to turn it off.
   - For storage in the **SOLO** button, the **UPPER SOLO** button of the **ORCHESTRAL CONDUCTOR** is automatically turned on. Play a melody on the upper keyboard and it will be stored.

ENGLISH

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

1. Turn on the **PLAY SEQUENCER** button for the part to be automatically played.
2. Press the **RECORD** button. Its indicator will flash slowly.
3. Press the **PLAY SEQUENCER** button for the part to be replaced. The button's indicator will flash slowly.
   - Check at this time that the indicator for the part to be automatically played is still lit.
4. Pressing the **START/STOP** button begins automatic performance of the stored part which may be modified or added to.
   - You can also begin a song which has no rhythm by pressing the **START/STOP** button.
5. After playing, press the **RECORD** button to turn it off.

- The storage capacity is as follows:

UPPER **LOWER**	200 notes 200 notes	} *400 notes
SOLO **BASS**	150 notes 150 notes	} *300 notes
Control	**35 steps	

* The storage capacity of **UPPER** or **LOWER** is doubled if either is used alone without the other.
The same also applies to **SOLO** and **BASS**.

In this case, follow the storage procedure below.

1. Press the **RECORD** button.
2. Press the **PLAY SEQUENCER** button to be used.
3. Press the **FSC** button.
4. Press the white key **2** on the lower keyboard.
   - The flash time of the indicator for the part with double storage capacity becomes longer.
   - Pressing the white key **1** returns the display to the original mode.
5. Press the **FSC** button.

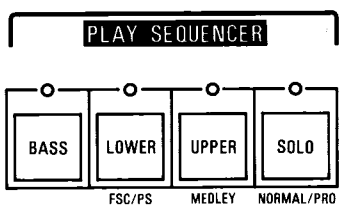
**During storage using the upper keyboard, control data such as changes in the tones and effects being played can also be stored.

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

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

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

- When one of the **PLAY SEQUENCER** indicators flashes rapidly, it indicates that the remaining storage capacity for that part is less than 50 notes.



V. Registration Storage

■ **Registration Storage**
When **PLAY SEQUENCER** storage operation is performed, the contents set before the **RECORD** button is pressed are automatically stored in the memory.

■ **Checking and modifying registration before performance**
When the **RECORD** and **PLAY SEQUENCER** indicators flash before performance, no modification or addition can be stored. If you wish to check or modify the registration, turn on the **FSC** button. After checking and modifying the contents, turn off the **FSC** button.

■ **Readout of the stored registration**
Turn on the **FSC** button and press the **PS/1** key on the lower keyboard. This will set the stored registrations.

■ **Modification of the stored registration**
To modify the registration for a song already stored in the **PLAY SEQUENCER** buttons:
1. Set the registration you wish to store.
2. Press the **RECORD** button. Its indicator will flash.
3. Press the **FSC** button. Its indicator will flash slowly.
4. Press the **PS/1** key on the lower keyboard.

■ **Storage of changes in registration during performance**
The **UPPER** button of the **PLAY SEQUENCER** stores changes in registration in the buttons on the control panel, excluding the **MAIN VOLUME**, **PLAY SEQUENCER**, and **FSC** buttons. This information is stored along with the upper manual keyboard information.

For Automatic Performance of the Stored Contents

- To use the stored tones and effects, turn on the **FSC** button and then press the **PS/1** key on the lower keyboard.

1. Press the **PLAY SEQUENCER** button to turn on the part you wish to perform automatically.

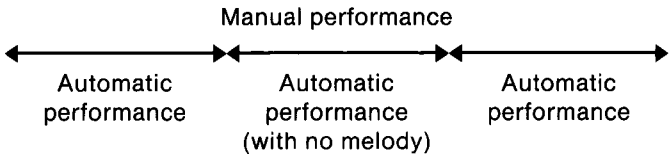
- Make sure that only the **PLAY SEQUENCER** indicator for the part you wish to perform automatically is lit. (If the **PLAY SEQUENCER** indicator for any other part is turned on, the wrong melody may be played or the rhythm may stop during performance.)
- If a **SOLO** button of the **ORCHESTRAL CONDUCTOR** is turned on during automatic performance of the melody stored in the **SOLO** button of the **PLAY SEQUENCER**, manually played voices will also be produced. This may adversely affect the **SOLO** sounds.

2. Start the rhythm for automatic performance of the selected part.

- Press the **START/STOP** button to begin a song which has no rhythm.

■ **Ensemble-like playing during manual performance**

- **UPPER** and **LOWER**
During an automatic performance, you can also play the upper and lower keyboards to produce an ensemble-like effect. The maximum number of tones that can be simultaneously created by the upper and lower keyboards is 8. For more than 8 tones, top priority is always given to those manually played.
- **BASS** and **SOLO**
These parts are monotone and do not allow simultaneous automatic and manual performance. However, you can play these parts during automatic performance without a melody. (For the **SOLO** part, manual performance is possible only when the **SOLO** button of the **ORCHESTRAL CONDUCTOR** is selected.)



Solo

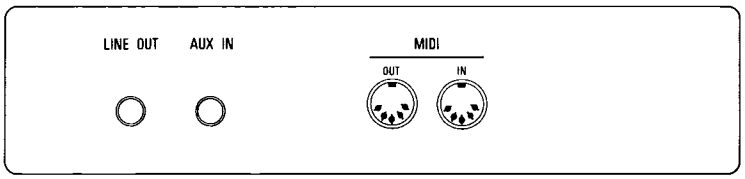
■ When the **PLAY SEQUENCER SOLO** button is off:
If the **SOLO** button of the **ORCHESTRAL CONDUCTOR** is turned on, the **SOLO** sounds can be performed by the **PLAY SEQUENCER UPPER** or **LOWER** button as in ordinary performances.

■ When the **PLAY SEQUENCER SOLO** button is on:
SOLO sounds can be performed as independent melodies.

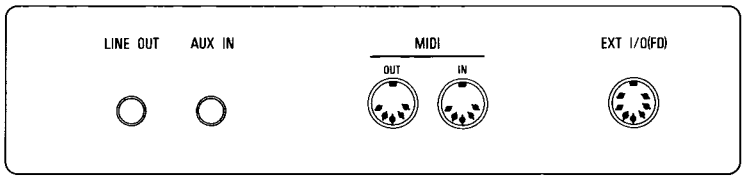
- In this case, the **SOLO** button of the **ORCHESTRAL CONDUCTOR** need not be selected.
- If the **SOLO** button of the **ORCHESTRAL CONDUCTOR** is also selected, priority is given to manually played tones.
- **SOLO** sounds cannot be performed by the **PLAY SEQUENCER UPPER** or **LOWER** button.

㉛ Connection Terminals

(On the rear of the organ)



(EX10/EX20)



(EX30)

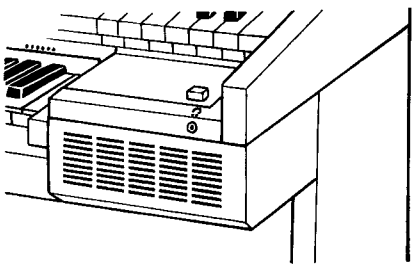
LINE OUT (output level 300 mV, 600Ω)
By plugging into a high-power amplifier, the organ sound, including microphone and auxiliary instruments, can be reproduced at a very high volume level. The organ can also be tape recorded by using this method of connection.

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

EXT I/O (FD) (EX30 only)
An optional digital disk recorder (SY-FD5) may be connected to this terminal for the storage of longer music performances or groupings of songs.

- For an explanation of the **MIDI** terminals, refer to the separate **MIDI** manual.

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



㉜ Symptoms which appear to be signs of trouble

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

Phenomenon	Remedy
The buttons, keyboards, etc. malfunction.	■ **EX10:** Press the **RECORD** button and then **MODE SET** button. Then press the **INITIAL** key on the lower keyboard. ■ **EX20/EX30:** Press the **FSC** button first to turn it on and then press the **INITIAL** key on the lower keyboard. •If the buttons, keyboards, etc. do not return to normal, turn the **POWER** switch off once, then turn on again.
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 **DRUMS VOLUME** button is turned off. •The rhythm does not start when you turn on a **PLAY SEQUENCER** button in which a tune with no rhythm is stored (EX30).
The foot switch does not operate properly.	Any functional on and off operation other than the glide is storable in the foot switch. (Refer to ㉕.)

Phenomenon	Remedy
The **TREMOLO** speed is improper.	The **TREMOLO** speed is adjustable. Adjust to your favorite speed. (Refer to ㉗.)
The contents of the **PROGRAM CHORD COMPUTER**, **FULLBAND SETTING COMPUTER** (EX20/EX30), etc. cannot be stored.	After pressing the **RECORD** button, press the necessary buttons within 5 seconds. The **RECORD** button turns off after a lapse of 5 seconds, making storage operation impossible. Press the **RECORD** button again.
When storing the created tones and effects in the **VOICE SETTING COMPUTER**, voices other than those desired are stored (EX20/EX30).	•To store your created tones and effects, press the **1**~**4** (EX20) or **1**~**7** (EX30) buttons of the **VOICE SETTING COMPUTER** while the **SET** button is held down. •To select your favorite voice from the 32 factory-preset voices, press the **RECORD** button and depress one of the number buttons of the **VOICE SETTING COMPUTER** within 5 seconds. Then press **RHYTHM** button(s). Finally, press the selected number button again.
Storage is not possible with the **PROGRAM CHORD COMPUTER**.	•Check that the **PCC** indicator is slowly flashing. Pressing the **FINGERED** button turns off the **RECORD** button, making storage operation impossible. •Do not release the left hand (chord designation) before pressing the measure keys (, , and).
The stored registration cannot be used when performance is started with the **PLAY SEQUENCER** button turned on (EX30).	To use the stored registration, turn on the **FSC** button and then press the **1** key on the lower keyboard.
The stored introduction is not reproduced during automatic performance (EX30).	•Set the beginning of a song, such as an introduction, before turning on the **RECORD** button. •To add an introduction after the **RECORD** indicator and **PLAY SEQUENCER** indicator flash, set it after turning on the **FSC** button. Then turn off the **FSC** button.
No storage is possible even when the **RECORD** indicator and **PLAY SEQUENCER** indicator are slowly flashing (EX30).	•No storage is possible when the **FSC** button is turned on. Turn it off before playing. •If any **PLAY SEQUENCER** indicator 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 (EX30).	This occurs when too many tones are played at one time. Slow down the tempo (to about ♩=180) or reduce the number of tones played at a time.
Different tones and effects are stored in the **FULLBAND SETTING COMPUTER** (**FSC**) (EX20/EX30).	If the **VOICE SETTING COMPUTER** (**VSC**) function is selected, the stored contents in this button are stored into the **FSC**. When the tones and effects selected by the **VSC** are changed, store them in the **VSC** again before storage in the **FSC**.
The cabinet becomes heated to some degree.	The Technics organ has a built-in power source that heats the cabinet to some degree. This is not an indication of trouble.

㉝ Cautions for Safest Use of This Unit

Installation location

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

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

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

Power source

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

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

Handling the power cord

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

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

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

Do not permit metal articles to get inside the unit.

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

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

If water gets into the unit . . .

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

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

If operation seems abnormal . . .

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

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

A word about the power cord . . .

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

Don't touch the inside parts of this unit.

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

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

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

MAINTENANCE

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

- Be sure to switch the instrument off after use, and do not switch the unit on and off in quick succession, as this places an undue load on the electronic components.
- To keep the luster of the keys and buttons, simply use a clean, damp cloth; polish with a soft, dry cloth. Polish may be used but do not use thinners or petro-chemical-based polishes.
- A wax-based polish may be used on the cabinet, although you will find that rubbing with a soft cloth will suffice.

ENGLISH

Teil I Grundfunktionen

In diesem Abschnitt werden die Grundfunktionen für Klangfarben, Effekte und Rhythmen erklärt. Die Beschreibung verschiedener Speicherfunktionen mit der Taste **RECORD** finden Sie in Teil II.

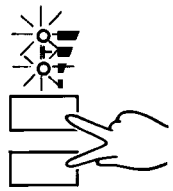
Die meisten Tasten sind mit Anzeigen ausgerüstet, die bei betätigter Taste aufleuchten.

Bedienungselemente

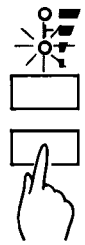
Lautstärke und Effekte werden bei dieser Orgel mit 4-stufigen Tasten geregelt, mit Ausnahme des Reglers **TRANSPOSE** und des **RHYTHM TEMPO**.

Volum, Reverb (nur EX30)

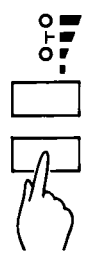
•Beim Drücken der oberen Taste leuchtet die obere Anzeige und die Lautstärke bzw. der Effekt wird auf den Maximalpegel gestellt.



•Beim gleichzeitigen Drücken der beiden Tasten wird die Lautstärke bzw. der Effekt auf den Normal- oder Mittelwert gestellt und beide Anzeigen leuchten.



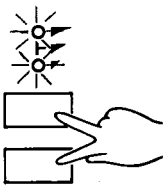
•Beim Drücken der unteren Taste leuchtet die untere Anzeige und der Lautstärke- bzw. der Effektpegel wird verringert.



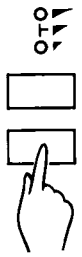
•Wenn die untere Taste nochmals gedrückt wird, wird die Lautstärke bzw. der Effekt auf den Minimalwert gestellt (im Fall von **DRUMS**, **ACCOMP** und **REVERB** [EX30] ausgeschaltet) und beide Anzeigen verlöschen.

Sustain

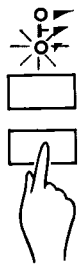
•Beim Drücken der oberen Taste leuchtet die obere Anzeige und der Sustain-Effekt wird auf den Maximalwert gestellt.



•Beim gleichzeitigen Drücken der beiden Tasten wird die Lautstärke bzw. der Sustain-Effekt auf den Normal- oder Mittelwert gestellt und beide Anzeigen leuchten.



•Beim Drücken der unteren Taste, wenn eine oder beide Anzeigen leuchten, wird der Sustain-Effekt ausgeschaltet und beide Anzeigen verlöschen.

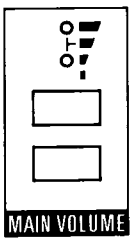


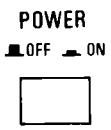
•Wenn die untere Taste nochmals gedrückt wird, leuchtet die untere Anzeige und Sustain-Effekt wird auf den Minimalwert gestellt.

Netzschalter und Lautstärkeregler

Durch Drücken des Netzschalters (**POWER**) wird die Orgel eingeschaltet.

Mit dem Knopf **MAIN VOLUME** können Sie die Gesamtlautstärke der Orgel einstellen.





MEMO

SPECIFICATIONS

		SX-EX10L	SX-EX20(L)	SX-EX30(L)
KEYBOARD		UPPER MANUAL 44 KEYS, LOWER MANUAL 44 KEYS, PEDAL KEYBOARD 13 KEYS		
ONE TOUCH PLAY		○		
FULLBAND SETTING COMPUTER		—	FSC, RECORD*	
PLAY SEQUENCER		—		BASS, LOWER, UPPER, SOLO, RECORD*
VOICE SETTING COMPUTER		—	SET, 1~4, CANCEL, 16X2 COMBINATION (RHYTHM)	SET, 1~7, CANCEL, 16X2 COMBINATION (RHYTHM)
ORCHESTRAL CONDUCTOR		UPPER...2		UPPER...3, LOWER...3
UPPER TONES	POLY	PIANO, ELECTRIC PIANO, TROMBONE, ACCORDION, STRINGS, SAXOPHONE, ORGAN, HAWAIIAN GUITAR, TAB VOICES (FLUTE 16', 8', 4', 2'), VOLUME	PIANO, ELECTRIC PIANO, HARPSICHORD, CLAVI, JAZZ GUITAR, HAWAIIAN GUITAR, SYNTHE, ACCORDION, TROMBONE, CLARINET, STRINGS, SAXOPHONE, ORGAN, TAB VOICES (FLUTE 16', 8', 4', 2'), VOLUME	PIANO, ELECTRIC PIANO, HARPSICHORD, CLAVI, JAZZ GUITAR, HAWAIIAN GUITAR, SYNTHE, ACCORDION, TROMBONE, CLARINET, STRINGS, SAXOPHONE, ORGAN (RECORD*, 10 ORGAN PRESETS), TAB VOICES (FLUTE 16', 8', 4', 2'), VOLUME
	SPECIAL	—		PIANO, ELECTRIC PIANO, HARPSICHORD, CLAVI, JAZZ GUITAR, GUITAR, SYNTHE, FRENCH HORN, SAXOPHONE, TROMBONE, TRUMPET, VIBRAPHONE, VOLUME
	SOLO	FLUTE, PAN FLUTE, SYNTHE, CLARINET, SAXOPHONE, TROMBONE, TRUMPET, VIOLIN, VOLUME		
LOWER TONES	POLY	PIANO, ELECTRIC PIANO, HARPSICHORD, SYNTHE, STRINGS, SAXOPHONE, ORGAN, JAZZ GUITAR, TAB VOICES (FLUTE 8', 4'), VOLUME	PIANO, ELECTRIC PIANO, HARPSICHORD, SYNTHE, JAZZ GUITAR, TROMBONE, STRINGS, SAXOPHONE, ORGAN, TAB VOICES (FLUTE 8', 4', 2'), VOLUME	PIANO, ELECTRIC PIANO, HARPSICHORD, SYNTHE, JAZZ GUITAR, TROMBONE, STRINGS, SAXOPHONE, ORGAN (RECORD*, 10 ORGAN PRESETS), TAB VOICES (FLUTE 8', 4', 2'), VOLUME
	SPECIAL	—		○ (U/L)
	SOLO	—		○ (U/L)
BASS TONES		BASS 16', ACOUSTIC BASS, ELECTRIC BASS, VOLUME	BASS 16', BASS 16'+8', BASS 8', SYNTHE BASS, ACOUSTIC BASS, CHOPPER BASS, ELECTRIC BASS, TUBA, VOLUME	
EFFECT	SUSTAIN	UPPER, BASS	UPPER, LOWER, BASS	UPPER, U/L SPECIAL, LOWER, BASS
	CHORUS/TREMOLO	UPPER POLY, LOWER POLY	UPPER POLY, LOWER POLY	UPPER POLY, U/L SPECIAL, U/L SOLO, LOWER POLY
	CELESTE	—		
	REVERB	—		CONTROL
GLIDE		FOOT SWITCH		
TECHNI-CHORD		ON	ON, CLOSE/PROGRAM, RECORD*	
RHYTHM (SELECTORS)		MARCH, BALLAD, 8 BEAT, CHA-CHA, RHUMBA, JAZZ WALTZ, WALTZ, TANGO, SAMBA, BOSSA NOVA, DISCO I, II, 16 BEAT, SALSA, SWING, SHUFFLE		
(CONTROLS)		SYNCHRO & BREAK, START/STOP, DRUMS VOLUME, TEMPO		
FILL IN & INTRO		ON	I, II, SOLO	
ENDING		ON		
BASS & ACCOMP		I, II, MELODIC, VOLUME		
PLAY MODE		PCC, FINGERED, MEMORY		
PROGRAM CHORD COMPUTER		PCC, RECORD*, 𝄞, ◄, ►, ⊢𝄋, 𝄋⊣, ⊢𝄋⊣, 𝄋 𝄌, *D.S.*, —⊣, 𝄐, ⊣⊢ (LOWER KEYBOARD)		
TRANSPOSE		CONTROL (G ~ C ~ F♯)		
TUNING		○		
PROGRAM FUNCTION SWITCH		FOOT SWITCH, RECORD*		
MODE SET		MODE SET, RECORD*, MIDI CLOCK, START/STOP, SUSTAIN, EFFECT, P. CHANGE, OCTAVE	MODE SET, RECORD*, MIDI CLOCK, START/STOP, SONG SELECT, SUSTAIN, EFFECT, P. CHANGE, OCTAVE	MODE SET, RECORD*, MIDI CLOCK, START/STOP, SONG SELECT, SUSTAIN, EFFECT, P. CHANGE, OCTAVE, MEDLEY
OTHERS		POWER SWITCH, MAIN VOLUME, EXPRESSION PEDAL, HEADPHONE JACK, INPUT JACK, OUTPUT JACK, MIDI TERMINALS (IN, OUT), AC CORD INPUT, INITIAL KEY (LOWER KEYBOARD)		POWER SWITCH, MAIN VOLUME, EXPRESSION PEDAL, HEADPHONE JACK, INPUT JACK, OUTPUT JACK, EXT I/O (FD), MIDI TERMINALS (IN, OUT), AC CORD INPUT, INITIAL KEY (LOWER KEYBOARD)
OUTPUT		40 W		50 W
SPEAKERS		16 cm X 1, 6.5 cm X 2		20 cm X 1, 6.5 cm X 2
POWER REQUIREMENT		100 W		
		AC 120/220/240V 50/60 Hz, AC 120V 60 Hz—NORTH AMERICA AC 220 V 50/60 Hz—EUROPE (EXCEPT FOR ENGLAND)		
CABINET (WXHXD)		105.2 cm X 87,3 cm X 39.1 cm (41-13/32" X 34-3/8" X 15-13/32")	(EX20L) 105.2 cm X 87,3 cm X 39.1 cm (41-13/32" X 34-3/8" X 15-13/32") (EX20) 105.2 cm X 87,6 cm X 40.9 cm (41-13/32" X 34-1/2" X 16-3/32")	(EX30L) 105.2 cm X 87,3 cm X 39.1 cm (41-13/32" X 34-3/8" X 15-13/32") (EX30) 105.2 cm X 87,6 cm X 40.9 cm (41-13/32" X 34-1/2" X 16-3/32")
NET WEIGHT WITHOUT BENCH		36 kg (79.4 lbs)	(EX20L) 36 kg (79.4 lbs) (EX20) 39 kg (86.0 lbs)	(EX30L) 36 kg (79.4 lbs) (EX30) 39 kg (86.0 lbs)

*Common RECORD button is used for these buttons.