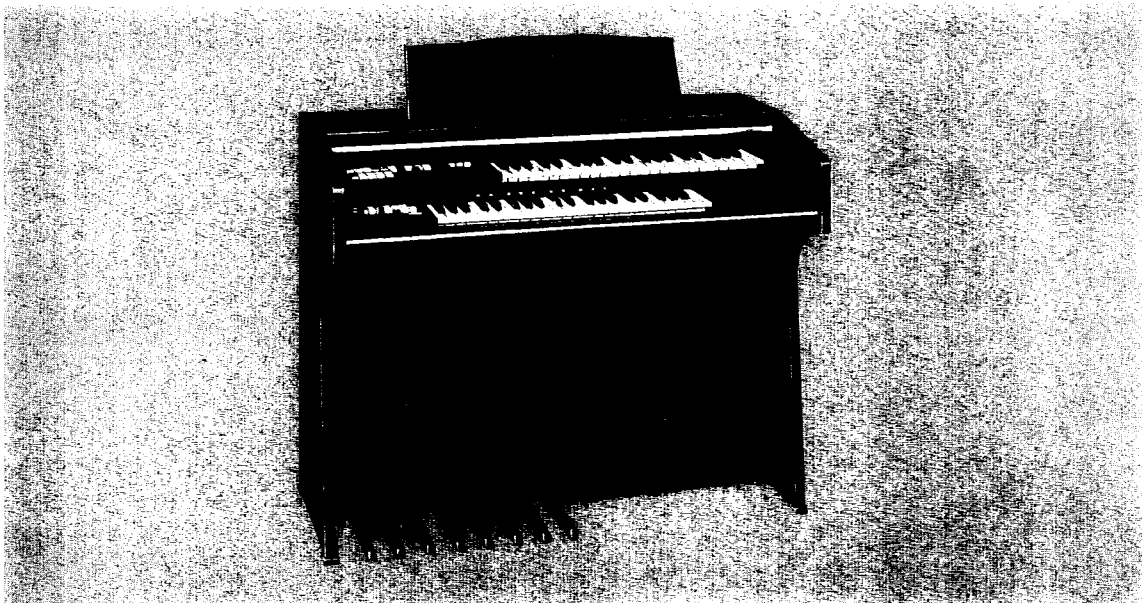


Operating Instructions

Electronic Organ
SX-2800A



Technitone

Before operating this unit, please read these instructions completely.



OPERATING INSTRUCTIONS

Thank you very much for selecting this Organ. We are sure you will enjoy many happy hours of entertainment from this excellent musical instrument.

This organ is a unique musical instrument designed for playing performances from the simplest to the most complex music, and can be easily played by anyone, from the beginner to the most competent musician.

Read this booklet carefully to get the best results from your organ.

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MAIN FEATURES

Auto-Play-Chord

The auto-play-chord (automatic accompaniment) is designed so that accompaniment by the left hand and the left foot (which is so often difficult for beginners) can be played with just one finger. Beginners can first use the [one finger chord] and when this has been mastered proceed to the complete [fingered chord] system. In this way they can improve gradually their proficiency of achieving an organ technique. In addition the [separated pedal] which is a unique feature from MATSUSHITA enables you to separate the pedal from the auto-play-chord according to your musical requirement.

Tremolo & Chorus

In a conventional mechanism, a tremolo or chorus effect can be obtained by turning a speaker itself or by rotating a fan in front of the speaker, which is often accompanied with mechanical noise and troubles. In SX-2800A, this effect can be electronically obtained due to the Matsushita's unique technique which brings about an effect similar to that obtained by slowly rotating the speaker.

Delay Vibrato

The delay vibrato is the effect that vibrato begins slightly after the keys are depressed. This effect can be used with beautiful results to create the richness of the violin.

Glide Control

Operated by a switch attached to the left side of the expression pedal, the pitch of the organ glides down a half tone. When the switch is released, portamento is added and the sound of the organ is returned to the original pitch. This operation produces the effect of a steel guitar or the portamento sound similar to that of a slide trombone.

NAMES OF PARTS

Tremolo Buttons

Vibrato Tabs

Upper Manual Tone Tabs

Lower Manual
Tone Tabs &
Effect Tabs

Auto-Play-Chord
& Automatic
Rhythm Controls

Phones Jack
Aux Input Jack
Microphone Jack
Microphone Volume
Line Out Terminal

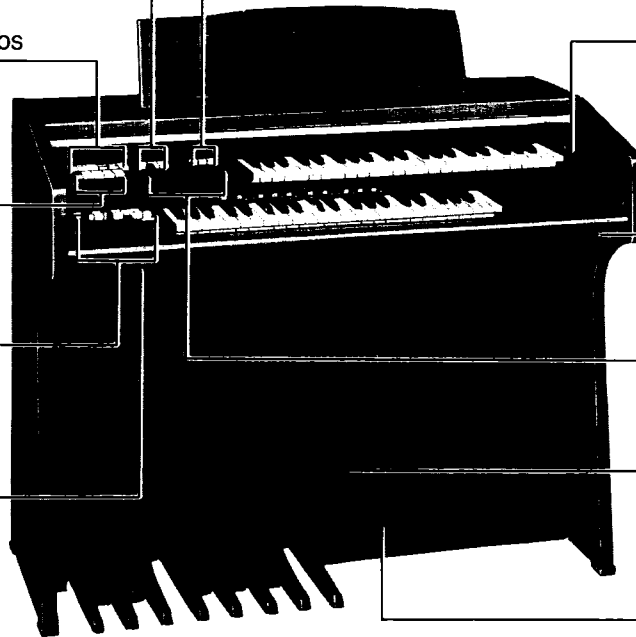
Power Switch & Main
Volume Knob

Pilot Lamp

Effect Levers

Glide Control Switch

Expression Pedal



KEYBOARDS & COMPASS CHART

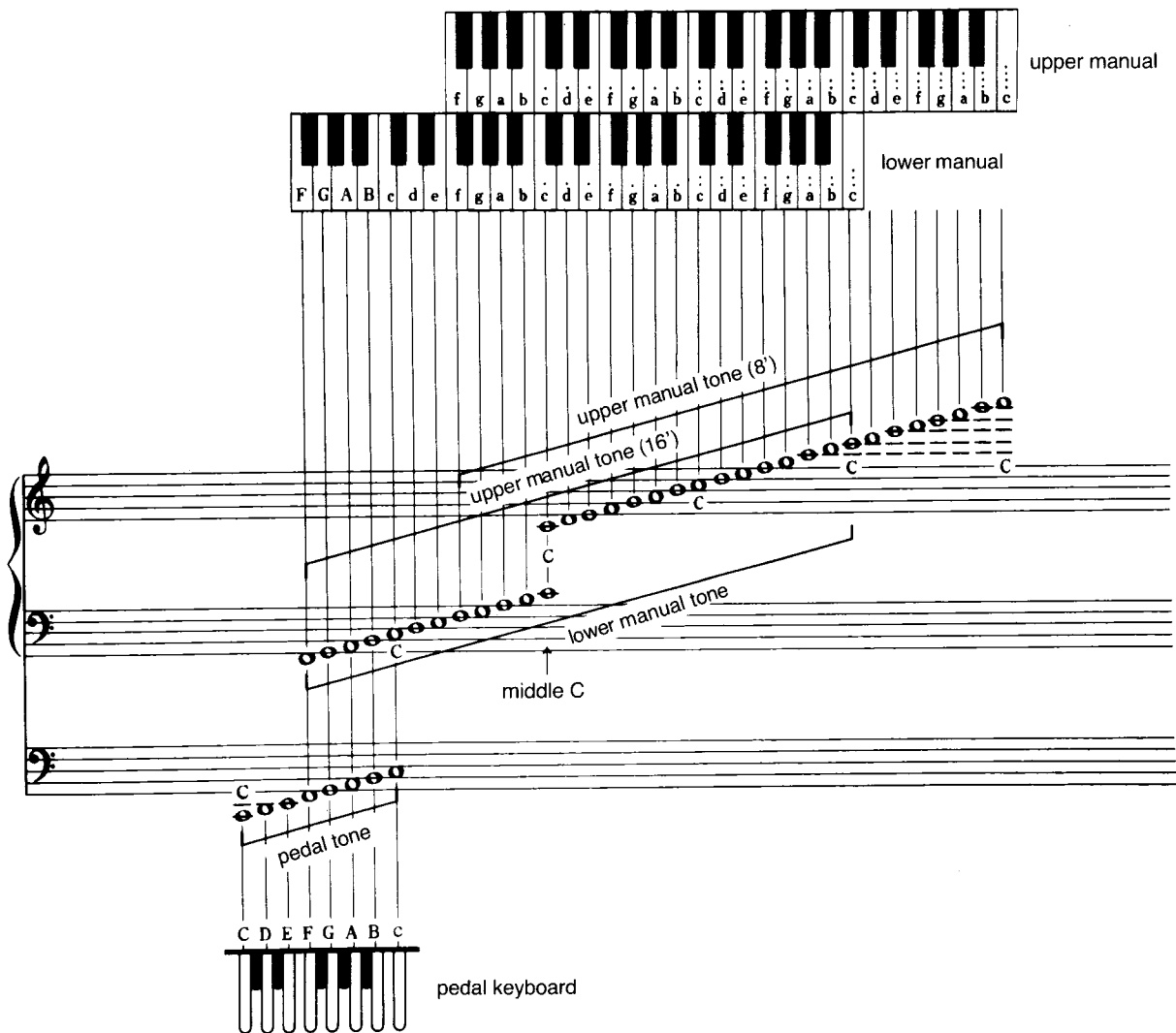
Keyboards

There are three keyboards—**Upper Manual, Lower Manual** and **Pedal Keyboards**.

The upper manual keys are depressed (with the right fingers) mainly for melodies; the lower manual keys (with the left fingers) mainly for accompaniments; and the pedal keys (with the toe of the left foot) mainly for bass.

Range

| | | |
|----------------|---------------------|------------------------|
| upper manual | extends from f to c | 44 keys, 3-1/2 octaves |
| lower manual | extends from F to c | 44 keys, 3-1/2 octaves |
| pedal keyboard | extends from C to c | 13 keys, 1 octave |

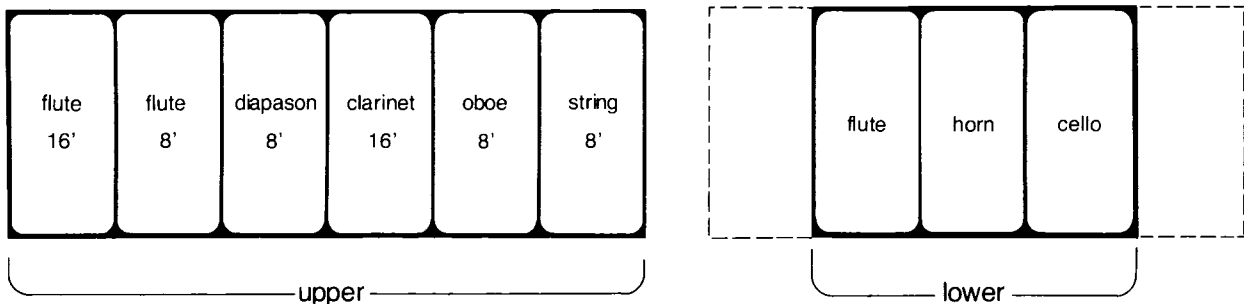


TONE TABS

Before we start explaining this organ in detail, it is important to examine the make-up of an organ in order that you may fully understand what is meant by Tones, Manuals, Footages, etc.

First, an organ obtains its 'big sound' from the various pitch levels, which can be produced by depressing one key. For example, when you depress a note, say middle C, on a piano, the sound produced in musical terms is one note only in one pitch. If you depress the same note on an organ and select, for example, 16', 8' and 4' tone tabs, the sound produced by that one key is in fact three C notes of three octaves.

In this organ, you can reproduce two pitch levels: 16' and 8'. The footage classification, by the way, stems from the pipe organ; i.e., the length of pipe required to produce a particular frequency or note. 16' pipe would produce the sound an octave lower than 8' pipe, simply because it is twice in length.



Upper Manual Tone Tabs

The upper manual provides four 8' and two 16' voices:— **flute 16'**, **flute 8'**, **diapason 8'**, **clarinet 16'**, **oboe 8'** and **string 8'**.

These tabs can be used as solo voices individually or in any combination, creating various kinds of brilliant tones.

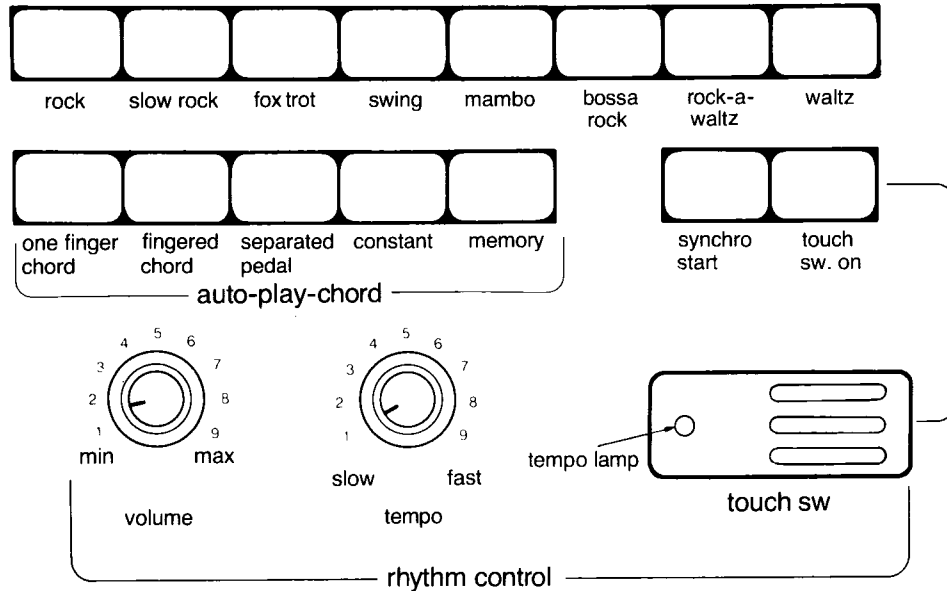
Lower Manual Tone Tabs

The lower manual provides three 8' voices:— **flute**, **horn** and **cello**. These tones can be played as solo voices but are usually combined to provide a suitable accompaniment to the upper manual voices. In using these tones for solo work, ensure that the [manual balance] lever is set to the 'lower' position, otherwise the volume of the upper manual tones will be in excess of the lower manual solo voices.

- The pedal keyboard provides only one 8' voice, and this is controlled by the [pedal volume] lever (mentioned later).

AUTOMATIC RHYTHM CONTROLS

The automatic rhythm section has two rhythm control knobs, eight rhythm selector buttons, two rhythm start switches, one tempo lamp and touch switch.



Rhythm Selector Buttons

The rhythm section has eight selector buttons. They are:—**rock, slow rock, fox-trot, swing, mambo, bossa rock, rock-a-waltz** and **waltz**. Select your rhythm to suit the music played and push the corresponding button. The selected rhythm can be started by the operation of the rhythm start switches. The rhythm selector buttons are interlocking switches so that, when a new rhythm is selected, the previous selection turns off automatically. By pushing two or more rhythm selector buttons simultaneously, many interesting rhythm patterns can be created.

Rhythm Start Switches

There are two starting methods for the rhythm as shown below. In each case the rhythm begins always on the first beat.

synchronous start

When this button is depressed, the rhythm will start when either the lower manual or the pedal keyboard is played. By using the [touch switch], you can stop the rhythm.

If a performance is conducted without using the [synchronous start] button, this button should be pressed again and set to the "off" position. Note that the rhythm will stop by pushing this button during a performance.

touch switch

This switch is especially convenient because on-off control of the rhythm can be quickly accomplished by simply touching it (when the [touch switch on] button is set to the "on" position). Note that, even when the [synchronous start] button is "on", the [touch switch] can be used to control on-off operation.

touch switch on

This button is to prevent mistaken operation of the [touch switch]. When not using the rhythm, it should be set to the "off" position. When so set, the rhythm cannot be started even if the [touch switch] is accidentally touched. To start the rhythm, press this button to the "on" position and then use the [touch switch].

Rhythm Control Knobs

volume

When this knob is turned to the right (clockwise) the volume of the rhythm increases. Adjust the volume of the rhythm to suit the overall volume of the organ.

It should be noted that the [main volume] and the [expression pedal] of the organ effect the volume of the rhythm.

tempo

If you turn this knob clockwise, the tempo of the rhythm increases. Set the tempo of the rhythm to suit the music you are playing.

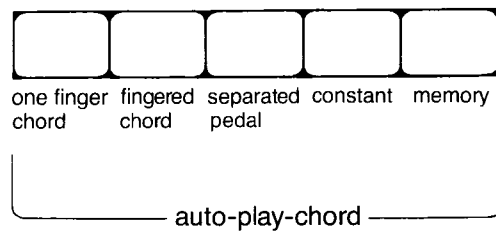
- The tempo lamp in the [touch switch] is designed to illuminate on the first beat. You can easily preset the tempo by watching the tempo lamp when the [synchronous start] button is depressed to the "on" position. In this situation the tempo lamp indicates a beat interval even though the rhythm is not sounding.

AUTO-PLAY-CHORD CONTROLS

The auto-play-chord is a function which makes the rhythm accompaniment (lower manual and pedal) fully automatic.

By simply depressing single note or a chord on the lower manual, the rhythm accompaniment can be automatically played with the pre-selected rhythm. Accordingly, even those who are just beginners can play the organ easily and effectively within a short space of time.

Because this auto-play-chord is connected to the automatic rhythm, if any of the rhythm selector buttons is not pushed, the automatic accompaniment will not be obtained. In other words only when the automatic rhythm is operating does the auto-play-chord function. When you don't require the tones of the automatic rhythm, turn the [rhythm volume] knob completely counterclockwise (min.) and only the lower manual and pedal tones will play the rhythm. Control the speed with the [tempo] knob. The starting function of the auto-play-chord is the same as that of the automatic rhythm.

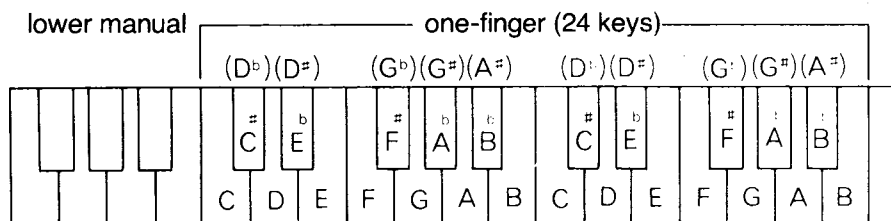


Auto-Play-Chord Controls

MATSUSHITA engineers have designed the auto-play-chord system in such a way as to ensure a) the easy and rapid progress of the beginner and b) a most satisfying automatic accompaniment to the advanced organist. Therefore with this organ all the family can enjoy creative music, even the youngest member of the family will quickly learn to play the SX-2800A even if he or she cannot reach the pedal keys.

●When the auto-play-chord is in use, pressing keys other than the 24 keys shown in the figure below will not cause any sound to be created.

lower manual one-finger (24 keys)



one finger chord

With this button "on" and when only one key of the lower manual is depressed, a triad (a chord of doh me soh or in the Key of C—C E G) and the bass note doh or pedal C will be played fully automatically. The chord, in this instance, is a major chord, but it becomes minor when any black pedal of the pedal keyboard is depressed simultaneously. In other words it is possible to produce two different types of chords with pedal notes as follows:—

Major chord—depress only one key (lower manual)

Minor chord—and depress any black pedal key (pedal keyboard)

examples of chord

| | | | | | |
|-------------|---|---|-------------|----|----|
| major chord | | | minor chord | | |
| C | F | G | Am | Dm | Gm |

lower manual

pedal

When you select the 'rock' rhythm for example with the auto-play-chord, the sound from the lower manual and pedal is as follows:

4/4

lower manual sound

pedal sound

fingered chord

With this button on, any chord, that is, a combination of keys played on the lower manual will sound automatically. In addition the corresponding pedal note C, if the chord of C is being played with the left hand, will also be heard. Once one has mastered a performance by using the [one finger chord] method the [fingered chord] system can be used to practice the playing of fuller chords such as Major 7th, augmented and diminished chords, etc.

separated pedal

There will be occasions when you prefer to play the pedal keyboard separately but still have the use of the auto-play-chord on the lower manual. To do this. Simply depress the [separated pedal] button, and the pedal is separated from the auto-play-chord.

constant

This function can be used either with the [one finger chord] or the [fingered chord].

When used with the [one finger chord], sustained sounds of a chord of the lower manual and the corresponding bass sound can be played by simply depressing one key.

When used with the [fingered chord], sustained sounds of a chord which is played on the lower manual and the corresponding bass sound can be played.

memory

This button is used together with the [one finger chord].

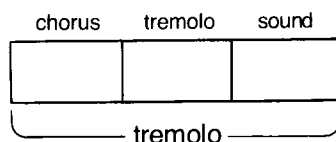
When this button is "on", the sound of the chord produced by depressing one key on the lower manual can be memorized. This will give an automatic accompaniment even when the finger is released from the key.

If another key is depressed, the sound of the corresponding chord is newly memorized.

When a button other than the [one finger chord] is used with the [memory] function, only bass sound can be memorized.

With the MATSUSHITA auto-play-chord system, it is easy to progress rapidly by starting with the [one finger chord] method and the [fingered chord], and finally reach the stage where you have mastered the electronic organ.

EFFECT CONTROLS



Tremolo Buttons

These produce an electronic tremolo effect using the phase modulation, which adds three-dimensional quivering effect to various sounds such as flute and string, thus creating thick and expansive sounds.

Also, impressive sounds can be obtained by using the chorus effect.

tremolo

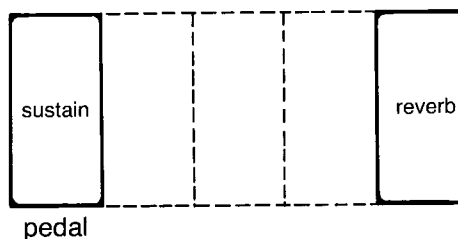
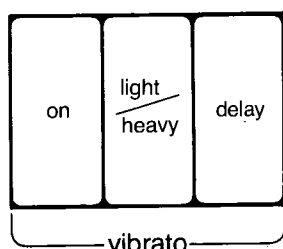
When the [sound] and this buttons are pushed, the tremolo effect is given to the sound as if the speaker is slowly rotating.

chorus

When the [sound] and this button are pushed, the chorus effect or the very, very slow tremolo effect is obtained, making the sound rather solid and magnificent.

sound

When this button is pushed, and the [tremolo] or [chorus] button is pushed while playing music, the effect as if a real speaker slowly starts rotating is obtained. Note that when this button is not pushed, [tremolo] or [chorus] button is not available.



Vibrato Tabs

on

This tab gives vibrato to the music when depressed at the bottom, and eliminates it when depressed at the top.

light-heavy

This tab can change the depth of vibrato by making vibrato heavier (when depressed at the bottom) or lighter (when depressed at the top).

delay

This tab gives the effect of the delay vibrato to the music. When the [on] and this tab are both depressed at the bottom, vibrato is applied slightly after depressing the key on the upper manual. In this case, the depth of the vibrato can be also controlled by the [light-heavy] tab.

This delay effect works on the individual sounds when the performance is staccato but only on the initial sound when the performance is legato.

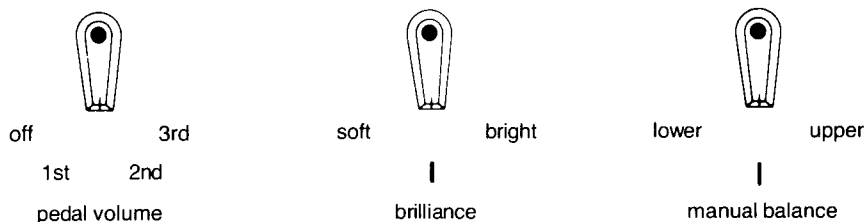
Effect Tabs

pedal sustain

This tab gives sustain to the pedal notes. Pedal sustain means that a bass tone produced by the pedal keyboard decays gradually after the pedal key is released.

reverberation

This tab gives the moderate reverberation effect to the sound, which adds a spaciousness and warmth to the music.



Effect Levers

pedal volume

This lever can control the volume of the sound of the pedal keyboard from "off" to "3rd" degree. Set this lever to the proper position to balance the sound volume of the pedal keyboard with that of the upper and lower manuals.

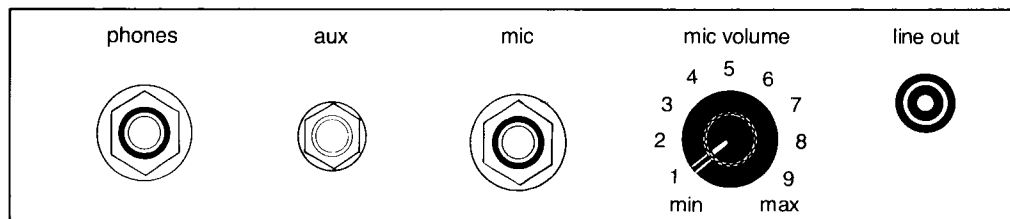
brilliance

This lever is similar to the brilliance knob or the tone control knob of a good amplifier system. It can control the upper harmonics of tones from "soft" to "bright", and its normal position is the center point. When turned to the "bright" position, the brilliance of tones of the manual keyboards is emphasized, and when turned to the "soft" position, the brilliance is reduced. This lever is particularly effective in making the string tone and the oboe tone more brilliant.

manual balance

This lever can control the volume balance between the upper manual and the lower manual at the discretion of the player. When this lever is set to the center point, the volume of both manuals becomes nearly equal. With the lever set to the "upper" position, the volume of the upper manual exceeds that of the lower manual, and vice versa with the lever set to the "lower" position.

OTHER CONTROLS & FACILITIES



phones jack

For silent practice, headphones can be used. When plugged in, the organ speaker system is automatically cut off; sound is heard only through headphones.

aux input jack (input level 25 mV, 20 kΩ)

If the organ is to be used in conjunction with other electronic equipment, the auxiliary input jack will be a useful advantage. Among the many items which can be connected to this are tape/disc pre-amp, portable synthesizer, etc.

microphone jack (input level 5 mV 20 kΩ)

For singing a song while playing the organ, a dynamic microphone of uni-directional type can be used.

microphone volume

There is a volume control by the microphone jack in order to balance the voice with the organ volume. Increase the volume of the microphone by turning the control knob to the right (clockwise).

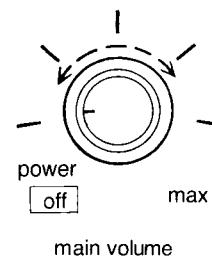
line out terminal (output level 360 mV, 600Ω)

By connecting a high-power amplifier to the line out terminal, the complete organ sound, including microphone and auxiliary instruments, can be reproduced at a very high volume level. Furthermore, the sound of this organ can be tape recorded most successfully by using this method of connection.

power switch & main volume knob

You will have found that by turning the knob to the right, the organ is switched on and, by continuing to turn the control, the volume of the organ increases.

This knob is to allow you to preset the maximum volume of the organ to suit the room in which the organ is being played, or the conditions under which the organ is used. After playing the organ, this knob is turned counterclockwise to the position at which the power is switched off.

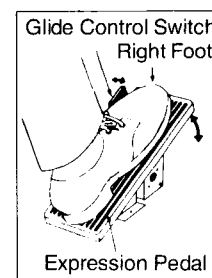


expression pedal

The volume control pedal operated by the right foot is the expression pedal. This enables the player to express a feeling for the music by controlling the volume of the organ.

glide control switch

This switch is on the left of the expression pedal. (Refer to the figure at the right.) This switch is operated by the toe of the right foot. If this switch is pushed to the left, the sound glides down approximately one half of a tone. When the switch is released, the sound will return to the original tone with portamento.



MAINTENANCE & SPECIFICATIONS

Maintenance

This organ is a very high quality product and built to a standard to ensure good performance, long life and high reliability. Nevertheless, even the finest merchandise requires service occasionally. In the unlikely event of failure, please insist, when contacting your organ dealer, that genuine replacement parts are used so that your instrument will continue to give you many years of trouble-free pleasure.

However, the following do's and don't's will assist you in keeping the organ in top condition:

- Be sure to switch the instrument off after use, and do not switch the organ on and off in quick succession, as this places an undue load on the electronic components.
- Do not, under any circumstances, remove the back from the organ and tamper with the electronic circuitry. If a fault does develop, switch the organ off, unplug it from the electrical outlet and contact your nearest organ dealer. To assist your dealer, please explain the nature of the fault.
- To keep the lustre of the keys and tabs, simply use a damp cloth to clean and finish with a soft duster. Polish may be used but do not use thinners or petrol chemical based polishes.
- The cabinet may be polished with a wax polish, although you will find that a rub with a soft cloth will normally suffice.

Specifications

| | | |
|--------------------|--|---|
| Keyboards: | Upper Manual | 44 keys |
| | Lower Manual | 44 keys |
| | Pedal Keyboard | 13 keys |
| Tones: | Upper Manual | Flute 16', Flute 8', Diapason 8', Clarinet 16', Oboe 8', String 8' |
| | Lower Manual | Flute, Horn, Cello |
| Effects: | Tremolo | Tremolo, Chorus, Sound |
| | Vibrato | On, Light-Heavy, Delay |
| | Reverberation, Pedal Sustain, Manual Balance, Brilliance, Pedal Volume, Glide Control. | |
| Automatic Rhythm: | Rhythm Selectors | Rock, Slow Rock, Fox Trot, Swing, Mambo, Bossa Rock, Rock-a-Walz, Waltz, |
| | Rhythm Volume, Tempo, Synchronous Start, Touch Switch, Touch Switch On Tempo Lamp. | |
| Auto-Play-Chord: | One Finger Chord, Fingered Chord, Separated Pedal, Constant, Memory Power, Switch & Main Volume, Expression Pedal, Phones Jack, Aux Input Jack Microphone Jack (with Volume), Line Out Terminal, Pilot Lamp, | |
| Output: | 35 W (Peak power) | |
| Speakers: | 20 cm (8'')×2, 6.5 cm (2.6'')×1 | |
| L.S.I.: | 2 | |
| IC's: | 14 | |
| Transistors: | 159 (FET 4) | |
| Diodes: | 206 | |
| Power Requirement: | 80 W AC 110/120/220/240 V 50-60 Hz | |
| Cabinet: | Simulated Oceanian Rosewood: 111cm (43.9'') (W)×92cm (36.4'') (H)× 59cm (23.3'') (D) | |
| Net Weight: | 62 kg. (136 lbs.) | |

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