

GUIDE TO YOUR YAMAHA ELECTONE ORGAN CSY-1 with SOLO SYNTHESIZER



INTRODUCTION

Congratulations on your selection of a Yamaha Electone Organ Model CSY-1 with Solo Synthesizer. It's the world's most advanced and newest musical instrument, carefully designed and built to provide a lifetime of musical enjoyment. In addition to the familiar Electone voices, 13 realistic instrumental voices and one more creative sound effect, "Funny", are available.

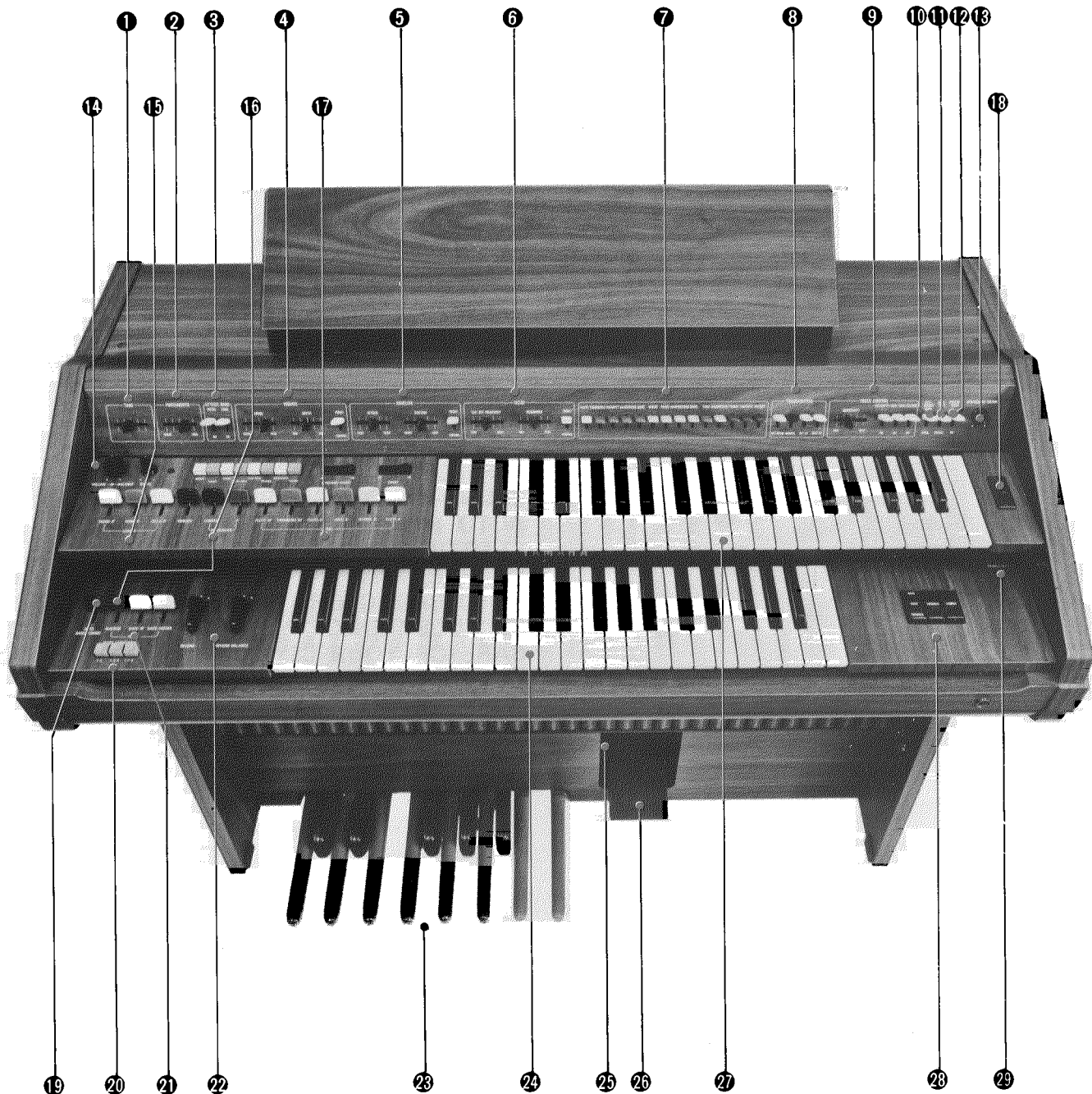
To make sure you get the most from its many features and electronic circuitry, please read this manual thoroughly before attempting to play your Yamaha CSY-1.

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THIS IS YOUR YAMAHA ELECTONE ORGAN CSY-1 WITH SOLO SYNTHESIZER



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- ③ Attack Bend Levers
- ④ Vibrato Controls
- ⑤ Envelope Controls
- ⑥ Filter Controls
- ⑦ Preset Tone Levers
- ⑧ Transposition Levers
- ⑨ Touch Controls
- ⑩ Keyboard Selector Lever

- ⑪ Electone Selector Lever
- ⑫ Synthesizer Selector Lever
- ⑬ Synthesizer Volume Control
- ⑭ Auto Rhythm Section
- ⑮ Lower Manual Tone Levers
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- ⑰ Upper Manual Tone Levers
- ⑱ Power Switch
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- ㉑ Pedal Tone Levers
- ㉒ Effect Controls
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- ㉔ Lower Manual
- ㉕ Rhythm Foot Switch
- ㉖ Expression Pedal
- ㉗ Upper Manual
- ㉘ Tremolo Selectors
- ㉙ Tremolo Speed Control

NOTE: The circled numbers refer to explanatory sections in the text to follow.

KEYBOARDS

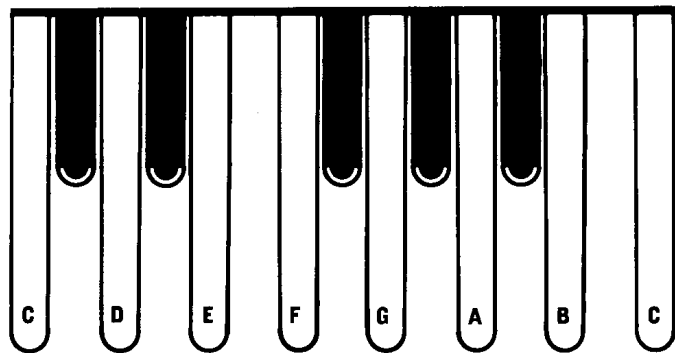
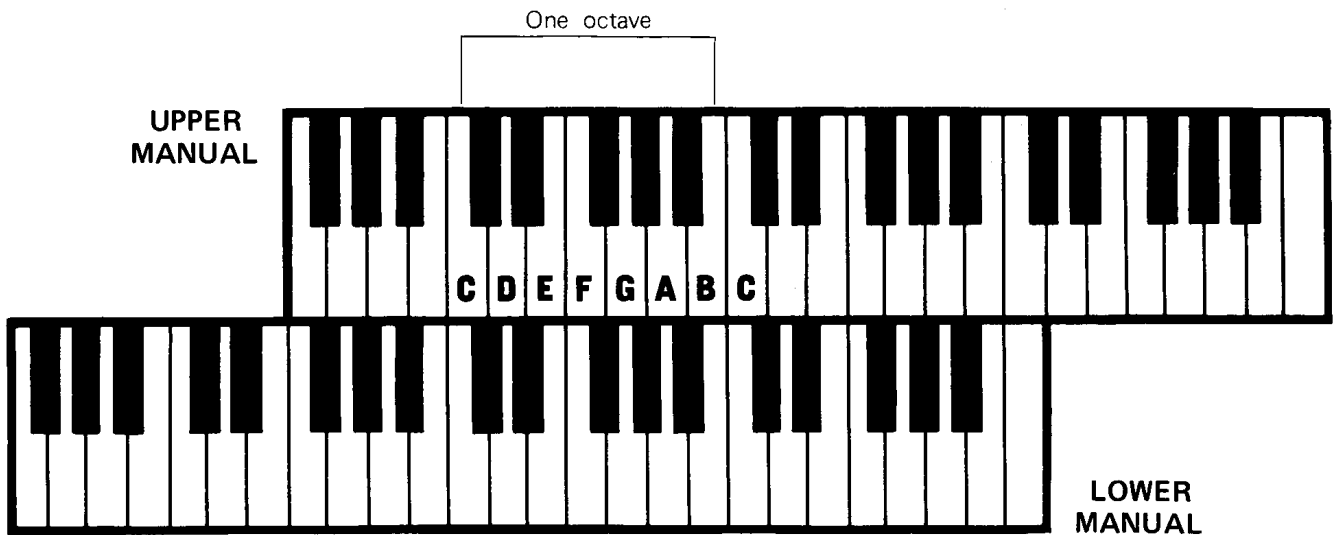
The CSY-1 has three keyboards. The upper two are called "manuals" and the lower one, played with the feet, "pedals." They have keys and octaves as follows:

- Upper Manual 44 keys (3 $\frac{2}{3}$ octaves)
- Lower Manual 44 keys (3 $\frac{2}{3}$ octaves)
- Pedals 13 keys (1 octave)

The CSY-1 is designed to permit playing the melody on the upper manual with the right hand, the chords

on the lower manual with the left hand, and bass notes on the pedals with the left or right foot.

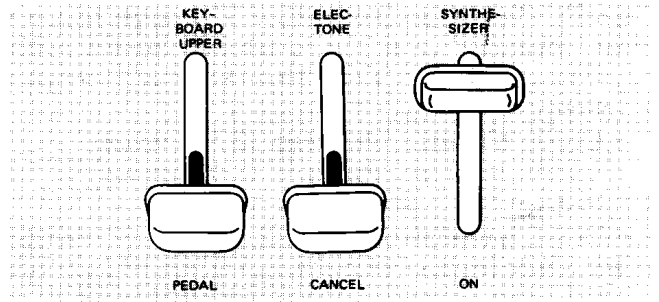
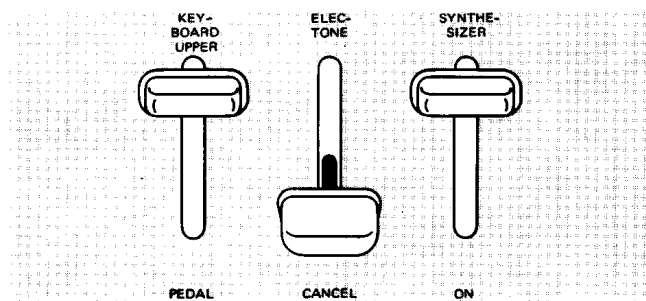
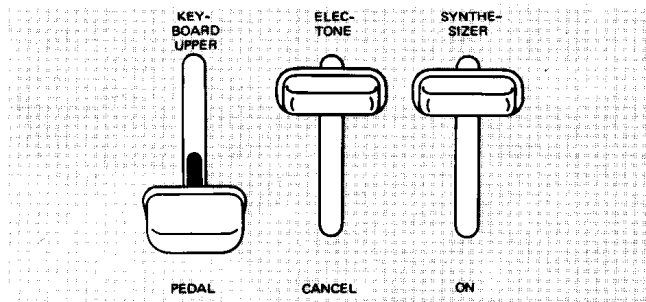
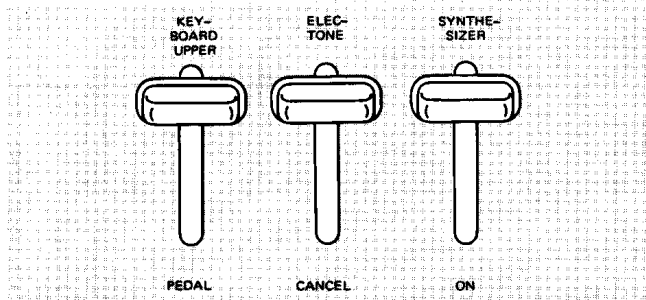
All keys are arranged in the traditional keyboard method: two black keys, three black keys. Each white key has a name (from A to G), and the blacks are sharps or flats. "C" is always the white key just below the left black key in the two-black-key group. Any complete set of seven white keys and five black keys is called an "octave."



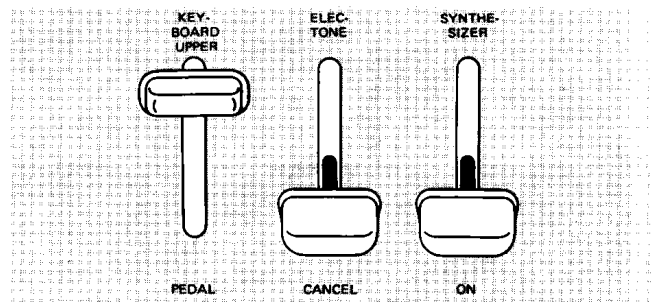
PEDALS

You can play synthesizer voices on either the upper manual or the pedals. Many combinations can be made by combining the positions of the three levers at the right of the panel: Keyboard **10**, Electone **11**, and Synthesizer Selector **12** levers.

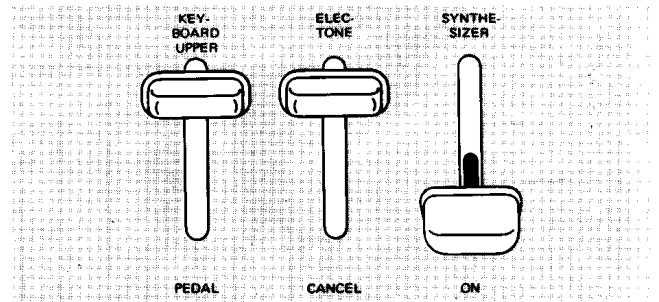
1. When you use the CSY-1 as an Electone organ: Unless the synthesizer selector lever is depressed, you hear no synthesized voices regardless of the positions of the other two levers.



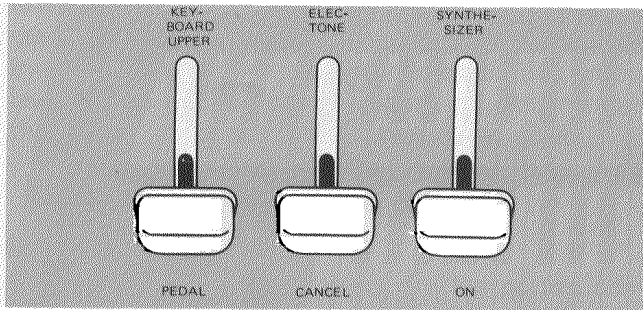
2. When you want to play the synthesized voices, but not the Electone voices, on the upper manual:



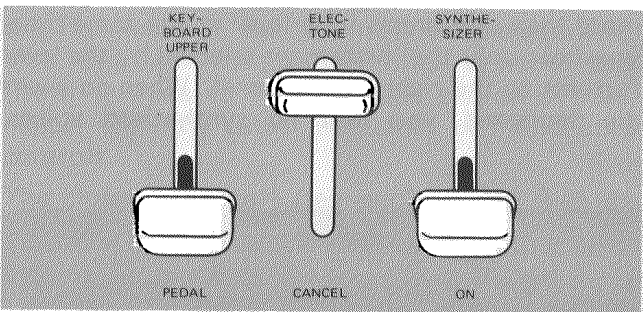
3. When you want to play both the synthesized and the Electone voices on the upper manual:



4. When you want to play the synthesized voices, but not the Electone voices, on the pedals:



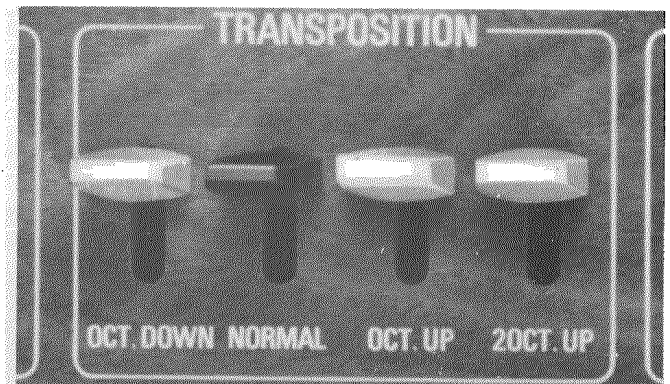
5. When you want to play both the synthesized and the Electone voices on the pedals:



On the front panel, to the right of the preset tone levers, there are four transposition levers 8. These levers shift the synthesized voices up one or two octaves, or down one octave. When you depress two or more transposition levers at the same time, you hear only the one furthest to the right on the panel. When no transposition lever is depressed, you hear the keyboard as if the "normal" transposition lever was depressed.

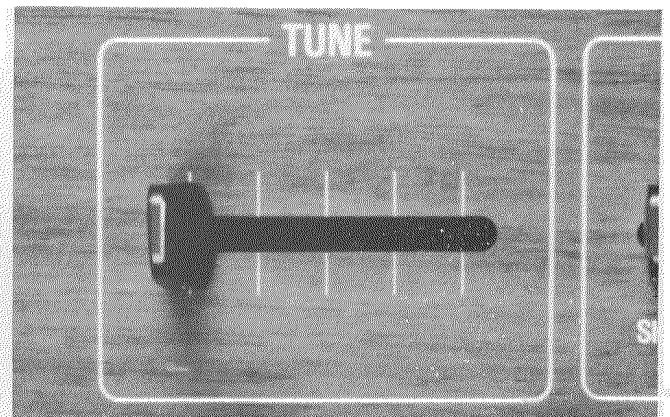
The Solo Synthesizer section of the CSY-1 is designed to sound one note at a time; if you depress more than one key at the same time, you will always hear the highest note.

The volume of the synthesized voices is affected by the expression pedal 26.



TUNING

To tune the Solo Synthesizer section of the CSY-1 with the Electone or another instrument, wait about one minute after it is turned on. Then push down the Flute preset tone lever and the vibrato lever to the "control" position, and slide the vibrato depth control to the "minimum" position to eliminate the vibrato. Slide the "tuning control" 1 (at the extreme left of the panel) to the left (flat) or right (sharp) until you obtain the right pitch; the pitch can be increased or lowered about 100 cents (one semitone) in relation to the standard pitch.



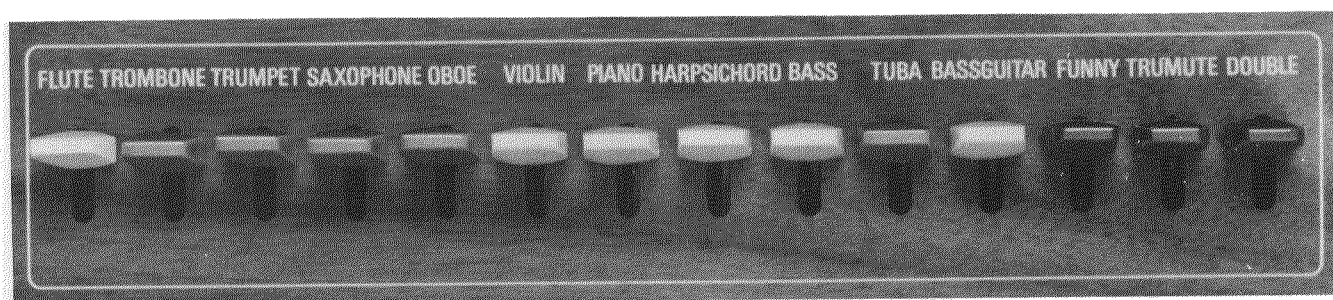
SYNTHESIZER SECTION

PRESET TONE LEVERS



Your CSY-1 has 14 preset tone levers on the front panel **7**. When you depress one of the levers and push a note, you hear the sound of the instrument voice identified by name on the lever panel. It is designed to create the sound of

only one instrument at a time. If you depress more than one preset tone lever at the same time, you hear only the instrument selected by the lever furthest to the right on the panel. When no levers are depressed, you hear no synthesized voices.



VARIABLE EFFECT CONTROLS

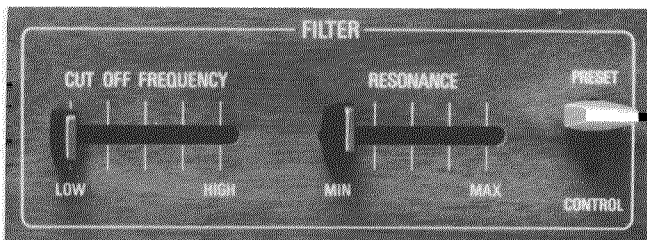
The synthesizer of your CSY-1 has a number of variable effect controls to permit you to vary the effects of the preset synthesizer voices and to create a new world of musical expression. To introduce them, depress the corresponding effect lever down to the "control" position; this cancels the preset amount of that particular effect.

FILTER ⑥

Simply stated, a filter alters the harmonics contained in a note to change its color or timbre. Each of the preset tones has as a design feature the characteristic harmonic structure and resonant points that identify a particular instrument.

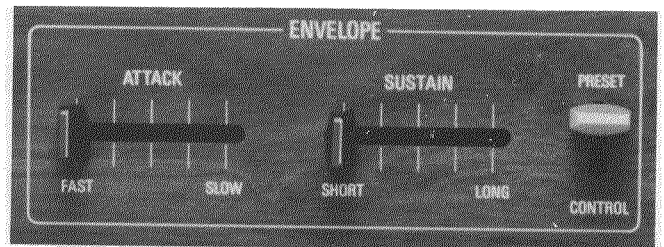
Switch the filter to manual control by putting the filter lever in the "control" position (down). You can now control the filter characteristics (from lowpass to highpass, and degree of resonance) with the cutoff frequency and resonance controls.

The closer the cutoff frequency control is to the high position, the more harmonics are allowed to pass through the filter resulting in a very brilliant sound. When you slide the cutoff frequency control from the "low" to "high" while holding a key down, the sound you hear changes from soft and muted to bright and crisp. In the meantime, the closer the resonance control is to the maximum position, the more nasal the sound becomes, emphasizing the frequency just before cutoff. When you set the resonance control in its center position, you can create a wah-wah effect by sliding the cutoff frequency control left and right.



ENVELOPE ⑤

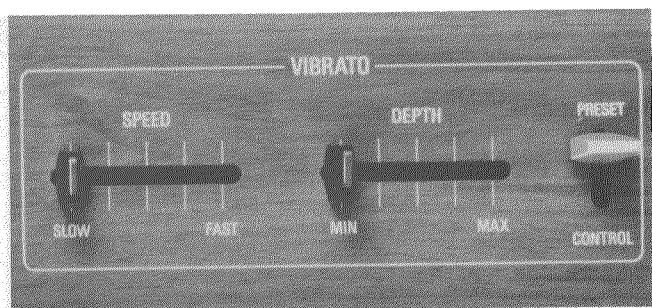
The term "envelope" may seem strange, however, every sound event has an envelope. If you draw a heavy line connecting the peaks of the sound's waveform, you would have the event, or "envelope" waveform. Synthesizers employ separate envelope generators with a varying number of controls to adjust the different portions of the envelope wave shape. The Yamaha CSY-1 preset voices all have preset attack and sustain envelope patterns. In the preset position, the "attack" (the time required for a note to reach full volume) and the length of time the note sounds (sustain and release) are adjusted for you in advance. By placing the envelope lever in the control position, the preset envelope is cancelled and the variable attack and sustain controls are now functional. When the attack control is set to "slow", a long rise time results. When the sustain control is set to "long" the tone will continue to sound for quite some time after the key is released. Conversely, when the controls are set to fast and short, a staccato tone will result.



VIBRATO ④

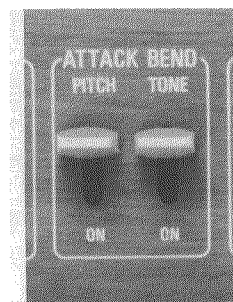
The effect called "vibrato" is a familiar one to almost every one involved in music. The term actually indicates a change in frequency, both above and below the normal pitch of the note. This change is quite small and is not to be confused with other effects. The vibrato lever (section ④) cancels the preset vibrato included in some of the preset voices, i.e., flute, trumpet, oboe, etc., and enables the performer to adjust the rate (speed) and depth to their own taste. There are controls for speed (right-hand slide causes a faster vibrato rate) and for depth (right-hand slide increases the amount of change in pitch).

Note: The rate of "wah-wah" included in the tone of "funny" as a preset part of the voice, can be altered using the vibrato controls. Place the vibrato lever to "control" position, set the vibrato depth control to the minimum (extreme left) position. You can now adjust the vibrato speed control to obtain the desired rate of wah without introducing a vibrato effect.



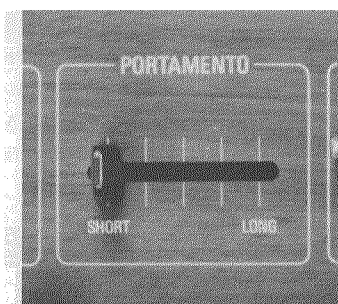
ATTACK BEND ③

Attack bend has two levers: the pitch bend that lowers a note a little in pitch the moment it is pressed and the tone bend that changes the timbre. With the pitch bend lever depressed, a note will be lower by about 100 cents (one semitone) in pitch the moment a key is depressed, then return to the normal pitch gradually. The tone bend lever alters timbre by adjusting the extent to which a note changes in tone to sound its intended sound after the key is pressed. Since the levers are independent, you can introduce pitch bend or tone bend, or both at any time.



PORTAMENTO ②

The term "Portamento" is a latin musical notation used to indicate a sound gliding continuously from some selected note (frequency) to a second selectable point, sounding all the intermediate frequencies. This effect is designed to function between any two keys played in sequence, either higher or lower. The time required for the pitch to shift from the first note played to the second (oscillator slew rate) is controlled by the portamento control. Sliding the control to the right increases the time required for the pitch to reach the normal pitch of the second key played. Conversely, sliding it to the left results in a very short period (fast slew rate).



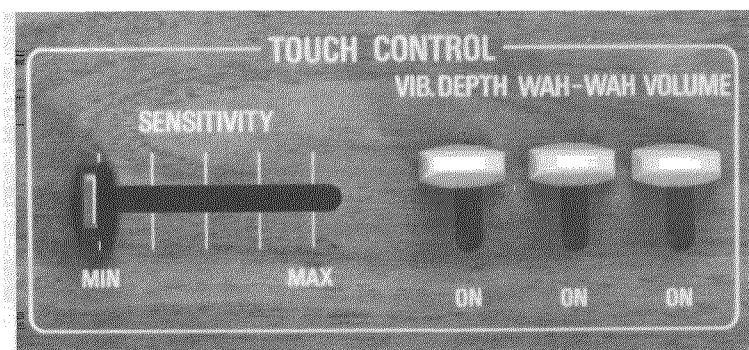
TOUCH CONTROLS

Your Yamaha Electone Organ with Solo Synthesizer is equipped with special touch controls that adjust the vibrato depth, wah-wah and volume in direct proportion to the downward pressure on the keys.

There are three levers to the right of the panel and next to the transposition levers: vibrato depth, wah-wah and volume (section 9). There is also a sensitivity control that adjusts the overall effect of the touch controls. (These controls do not function when the synthesizer is being used on the

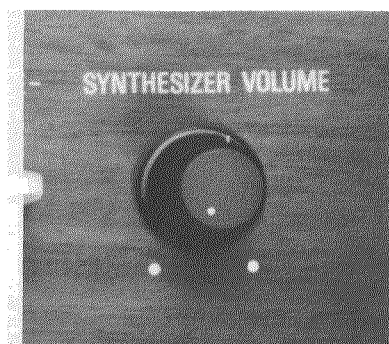
pedals.) When the vibrato depth lever is depressed, and a key is played lightly, you hear almost no vibrato. When you press the key harder, the vibrato effect will increase. You can adjust the sensitivity of this effect with the sensitivity control.

All of the touch-sensitive effects can be used in combination with each other. For example, when the vibrato depth and volume levers are depressed, a subtle change in finger pressure on a note alters both the vibrato depth and the volume.



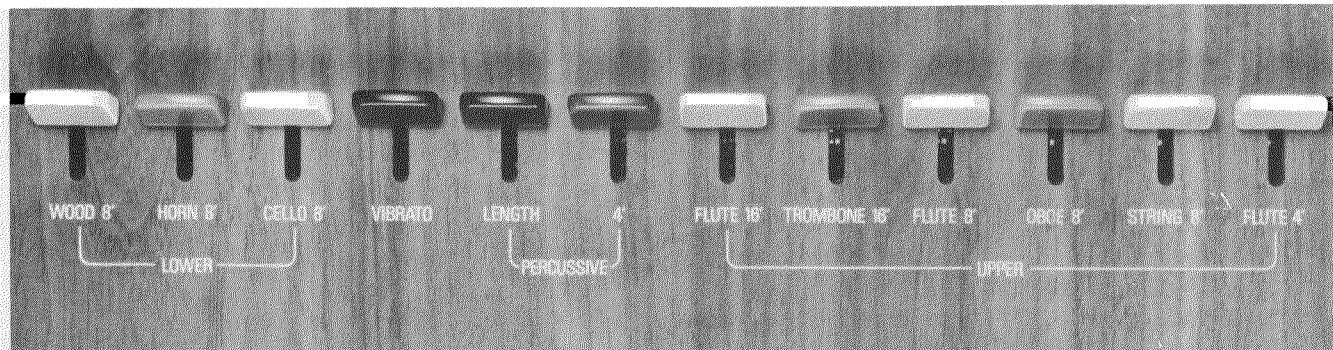
SYNTHESIZER VOLUME

The synthesizer volume control 13 adjusts the overall volume of the synthesized voices, so you can achieve a balance in volume between the synthesized and Electone voices or other instrument.



ELECTONE SECTION

TONE LEVERS



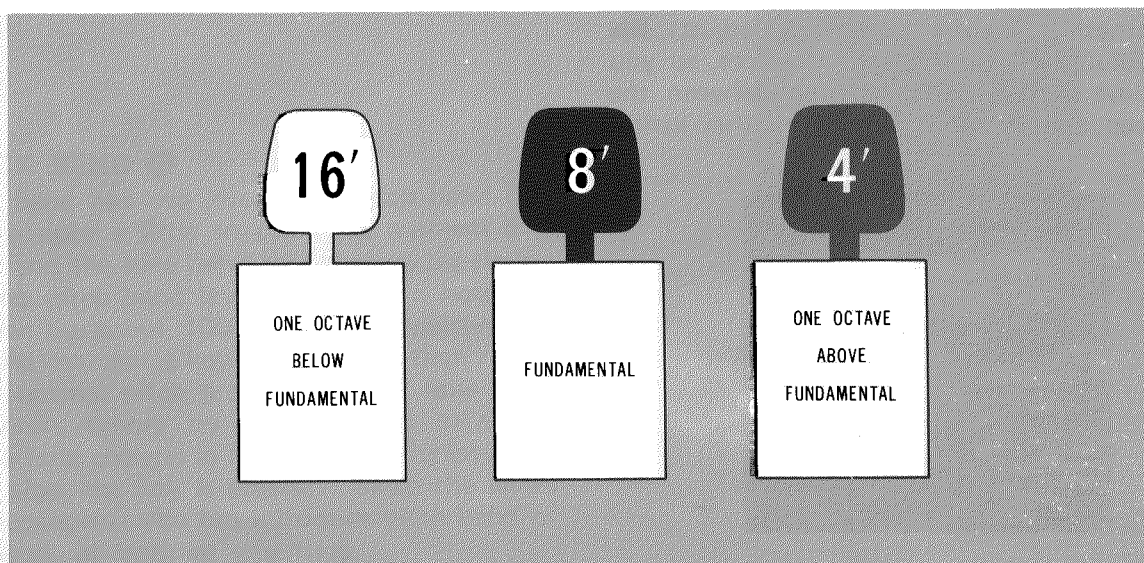
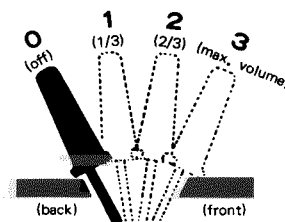
To the left of the upper and lower manuals are a series of tone levers which control the Electone voices which will sound when the keys are depressed. They are divided into groups for upper, lower and pedals, so that different registrations can be set for each.

- Upper Manual Levers ⑰ 6 voices
- Lower Manual Levers ⑮ 3 voices
- Pedal Levers ② 2 voices

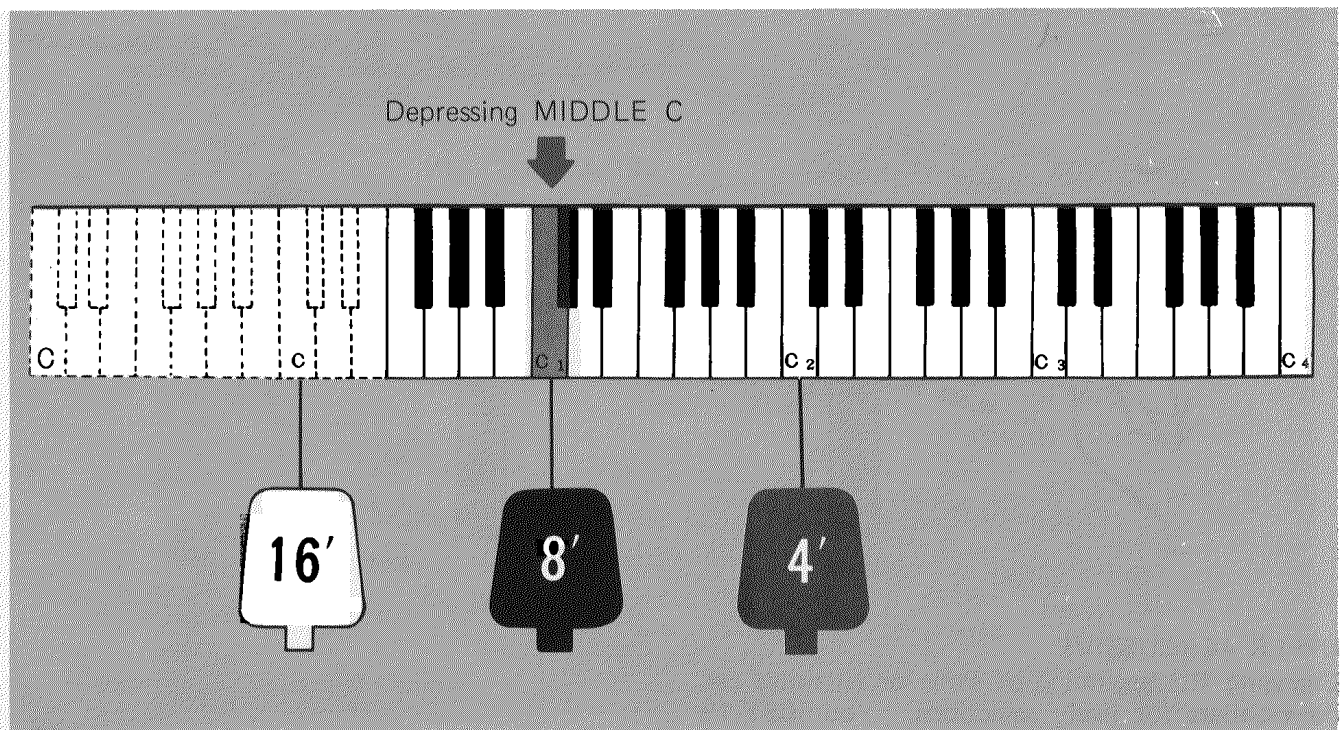
Each lever provides two methods of control. One is by continuously moving the lever from off to full, to achieve the exact setting for that tone, and thus balancing the overall tone setting with perfect precision. Each lever also has two easy-to-feel click stops, at 1/3 and 2/3 positions. This lets you refind any setting with mathematical precision and no guesswork in a matter of seconds.

PITCHES OR FOOTAGES

The Electone section of your CSY-1 has three different pitch levels, indicated by the numbers 16', 8', 4'. These are standard organ abbreviations showing the tone's pitch in relation to the fundamental (written note). An 8' tone will sound just as it has been written. A 16' tone (meaning that the wave length of the vibrations are twice as long as 8', or half as fast) will provide a tone exactly one octave lower than the written note. Similarly, 4' tones are one octave higher than the written note.

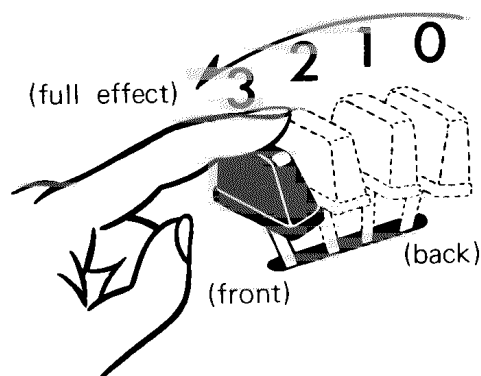


For example, if you press middle C, sound will be produced corresponding to the keys in the chart below.



EFFECT LEVERS

These levers ⑩ control a variety of effects which add a host of tonal variations to the Electone's voices. Each lever works in the same way as the tone levers, with both infinitely-variable continuous control and click-stop settings.



VIBRATO

Vibrato is a waving of the tone. You will see violin and cello players use it freely by an oscillating motion of the left hand. It increases the emotional quality of the violin tone. This vibrato lever produces the same vibrato effect.

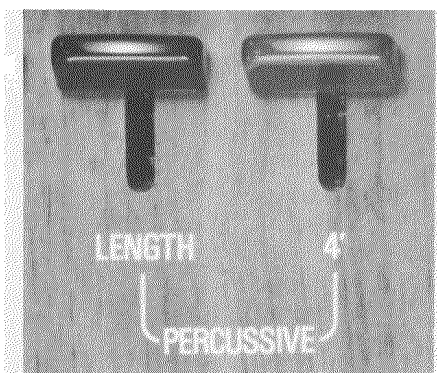
PEDAL SUSTAIN

This control provides continuous adjustment of the sustain effect on the pedals. For the pedals, this is the only sustain control, and it affects all pedal tones with the exception of Bass Guitar, which sustains automatically.

UPPER PERCUSSIVE

Changing the beginning of some or all notes can do wonders for lively selections. Your CSY-1's percussive effects provide subtle but important shading at the moment each note is heard. The special popping 4' percussive drive can be smoothly blended into all upper manual tones with a single variable lever (percussive 4'), and a separate lever (percussive length) regulates the length of decay for this effect.

With percussive, use a detached fingering. Each note should be played cleanly; slurred notes will diminish the percussive impact.



EFFECT CONTROLS

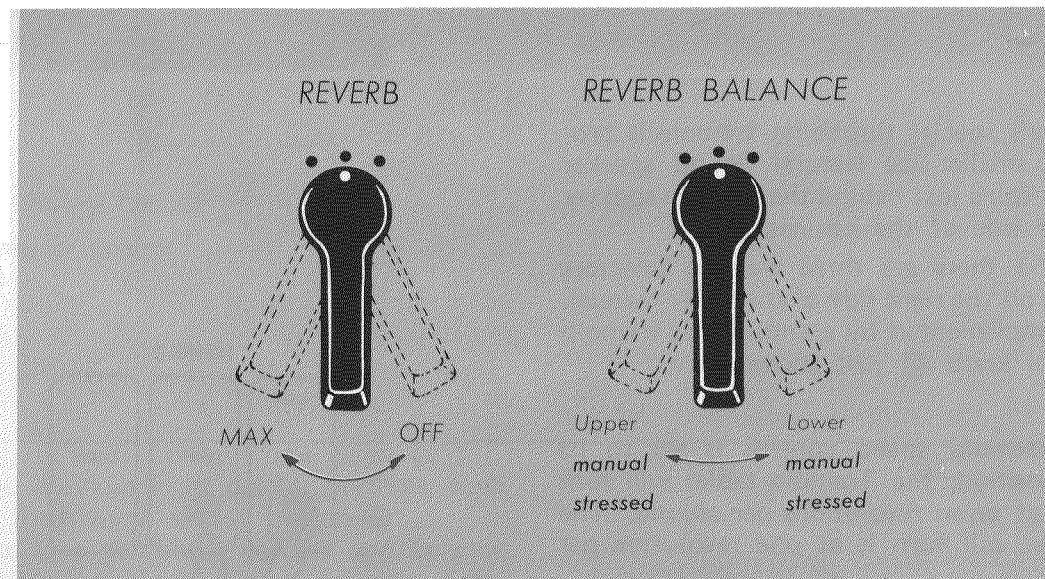
REVERB

The reverberation effect, which makes your playing sound full and rich as if you were playing in a large hall, can be adjusted continuously and smoothly to suit your interpretation.

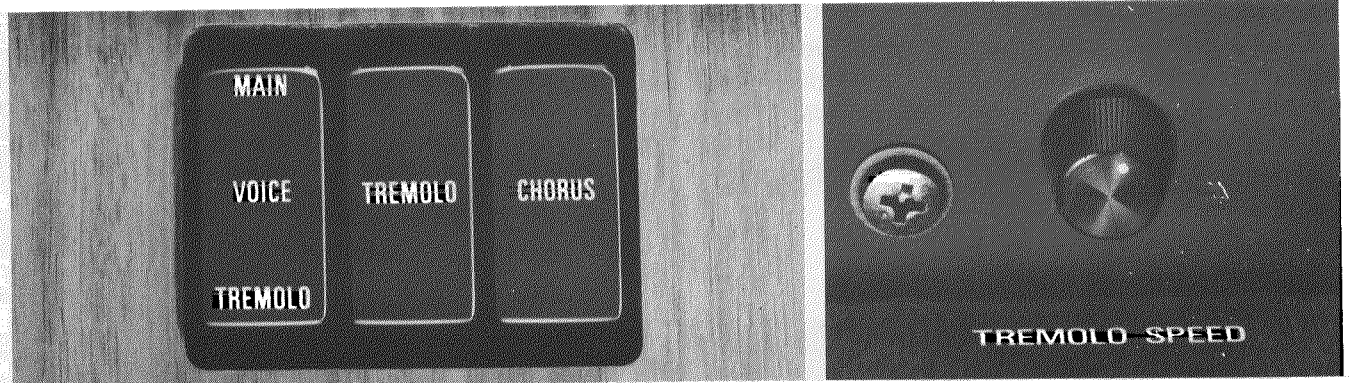
Note: You can add reverberation to the synthesized voices, too.

REVERB BALANCE

To balance the Reverb effect between the upper and lower manuals; when used to strengthen the upper manual, it brings you an effect similar to SUSTAIN on more expensive models.



SOUND-IN-MOTION TREMOLO



The Electone's special throbbing tremolo is produced by a smaller-size Natural Sound speaker that actually spins just behind the tremolo speaker grille on the side of the cabinet.

On the CSY-1 there are three tremolo selectors 28, located on the right side of the lower manual. They are complemented by a continuous tremolo speed control knob 29 just above them.

When the tremolo speed control is set to its maximum position, the Tremolo tablet will turn the speaker at seven revolutions per second. The Chorus tablet will turn it at one revolution per second.

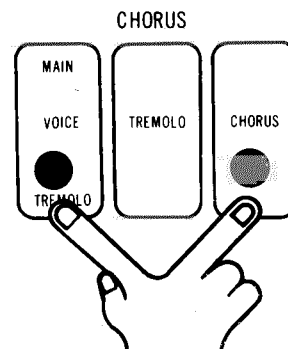
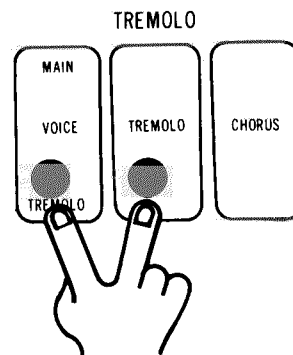
Once either tablet is switched on, it takes several seconds for the tremolo speaker to attain the standard speed. This is also true when switching to a slower speed (Tremolo to Chorus). If one of the other tremolo control tablets is switched on during this speed change period, the speed variation will be heard in the music.

If you wish an instant tremolo or chorus sound, be sure to switch on that tablet well in advance of the speaker selector (the left of the three tablets). For special selections you can use this speed variation by switching the speaker on first, the Tremolo or Chorus switch later.

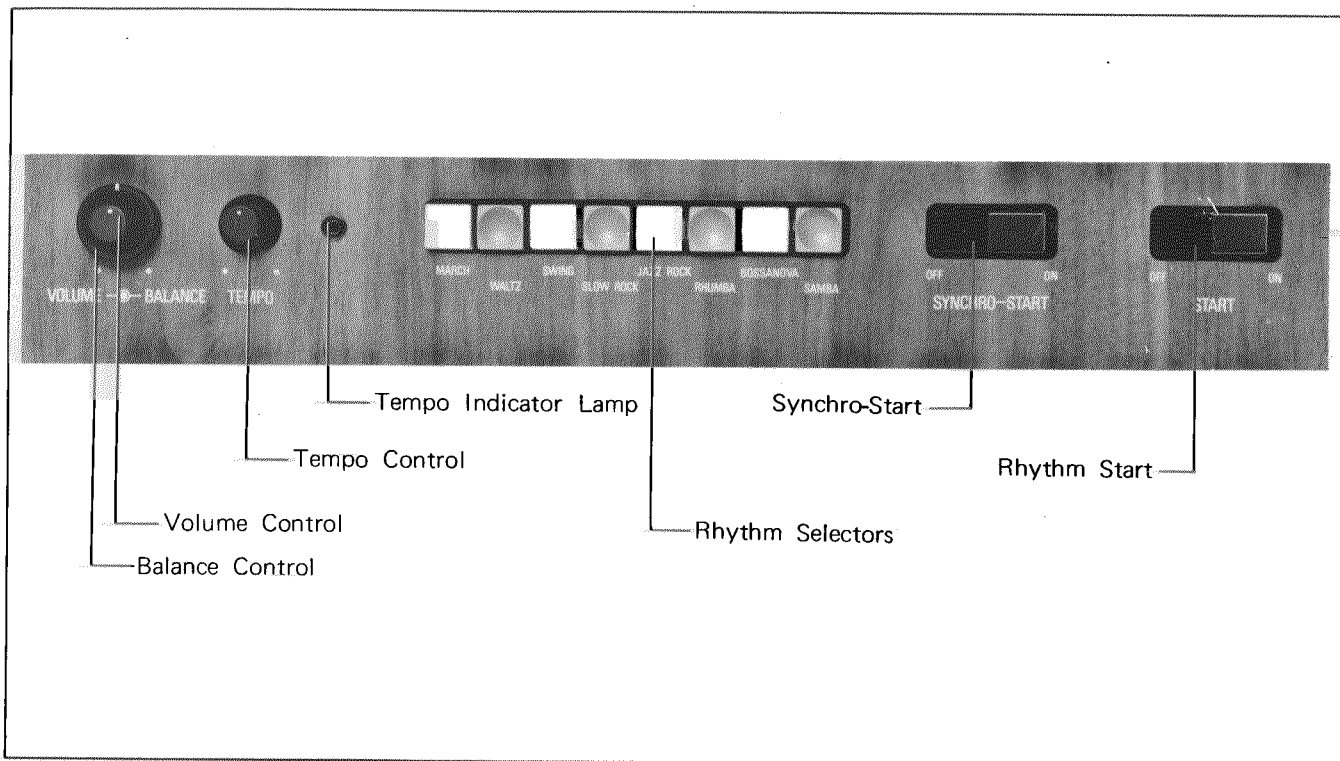
Note: You can add tremolo to the synthesized voices, too.

VOICE (MAIN/TREMOLO)

Lets you divert the sound from the main to the tremolo speaker.



AUTO RHYTHM SECTION



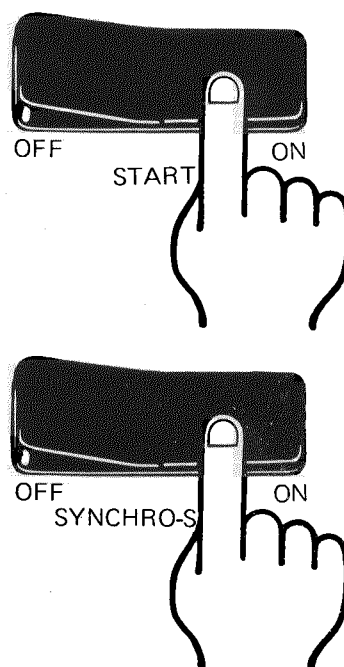
This section provides eight catchy rhythms, each one called forth by a simple button 14. In addition to a combined volume and balance knob, tempo control and tempo indicator light, there are two other switches: ordinary Start and the Yamaha Synchro-Start which begins the rhythm accompaniment on the first beat of a measure when the first lower manual or pedal note is struck. A foot switch fitted on the expression pedal lets you cut and restart the rhythm at any point during play.

RHYTHM START

For instant rhythm at the beginning of a selection. Push the rhythm selector desired, get the beat set in your mind by watching the indicator lamp, (when the Synchro-Start switch is on) and then turn the Start switch on.

SYNCHRO-START

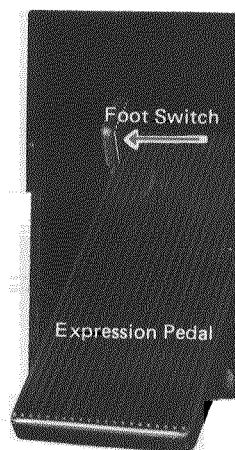
Select the rhythm, switch on the Synchro-Start and begin to play once you have the beat established. The rhythm will begin as soon as you strike a lower manual or pedal note. This switch permits you to lead in with a rhythm-free melody at first if so desired.



RHYTHM STOP (FOOT SWITCH) 25

This switch is located in the expression pedal housing to the left of the pedal. Once the rhythm is on, push this switch once to instantly stop it, once again to restart. It lets you stop and restart the rhythm in the middle of a selection without using your hand.

Note: After the foot switch has been used, be sure it is reset to normal after you finish playing your selection, and then make sure both Start and Synchro-Start switches are off. Otherwise you may turn on one of the switches in the middle of a new number only to find the rhythm still canceled.



TEMPO CONTROL

The tempo of the Auto Rhythm section can be adjusted by a continuous control knob. This is best accomplished by turning on the Synchro-Start switch. Although no sound will be produced, the indicator lamp will flash each quarter note letting you visually check the tempo while you adjust.

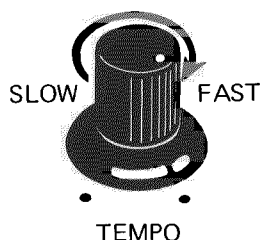
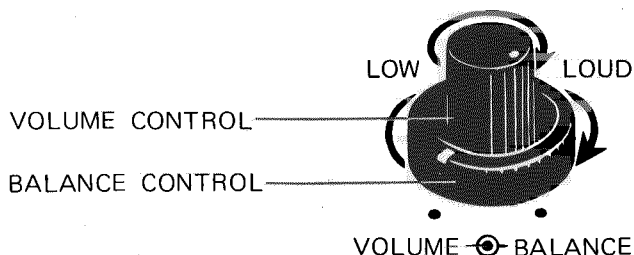
VOLUME CONTROL

Use it to balance the volume of the rhythm section and the manuals. This volume is then varied during the selection by the expression pedal, just like that of the other tones.

BALANCE CONTROL

This control lets you balance the low rhythm sounds, such as drums, and the high sounds (i.e., cymbals) according to your mood and the selection. It can make a big difference even when using the same rhythm. Turn the knob to the right to accentuate the higher (treble) sounds, to the left for lower (bass). If you accentuate the treble sounds the rhythm becomes brighter and more cheerful.

Check the playing hints for specific settings.

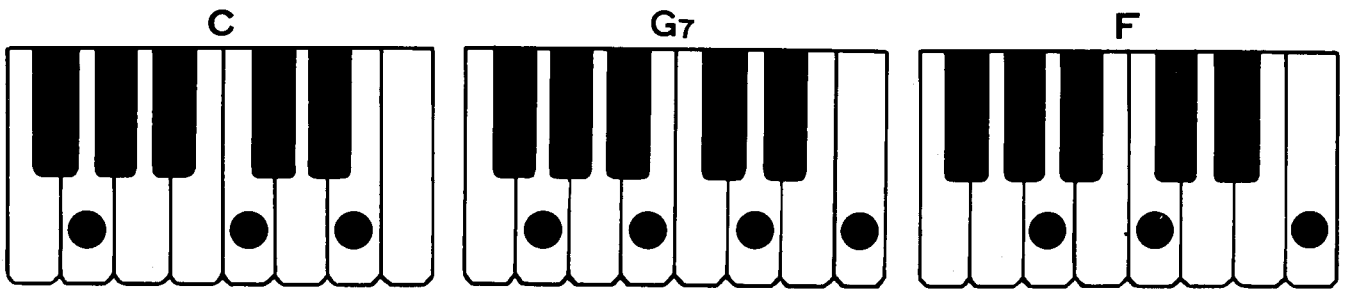


STARTING RHYTHM WITH THE FOOT SWITCH

Although the foot switch is mainly for stopping and then restarting the rhythm, you can turn on the rhythm with either start switch, then shut it off with the foot switch before beginning to play. This way, when you are ready for the rhythm you can switch it on with your foot.

Lets you stop and then restart the rhythm in the middle of a selection without using your hands. For this reason, be sure that both Start and Synchro-Start switches are turned off after each selection.

WHEN THE SAINTS GO MARCHING IN



Rhythm: Swing

Moderately Traditional

start with Foot Switch

C

Oh, WHEN THE SAINTS, GO MARCH-ING IN, Oh, WHEN THE

G7 C

SAINTS GO MARCH - ING IN, Oh, Lord, I want to be in that .

F C G7 C

num - ber, WHEN THE SAINTS GO MARCH - ING IN.

stop with Foot Switch

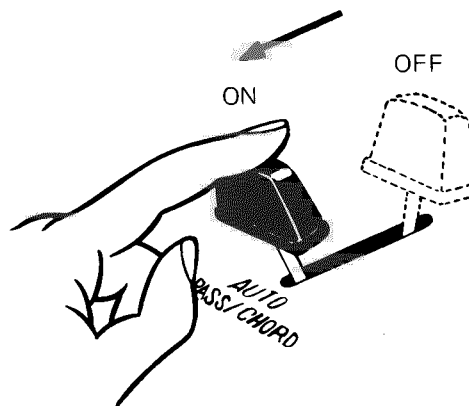
AUTO BASS/CHORD SECTION

Your new Yamaha Electone Organ with Solo Synthesizer is equipped with a lever marked "Auto Bass/Chord." When used in conjunction with the "Automatic Rhythm" (see page 15), it enables you to play just about any combination of alternating bass-chord rhythms simply by sustaining (holding down constantly) a chord on the lower manual. From your very first, simple melody, you will be sounding like a pro. Here is all you have to do.

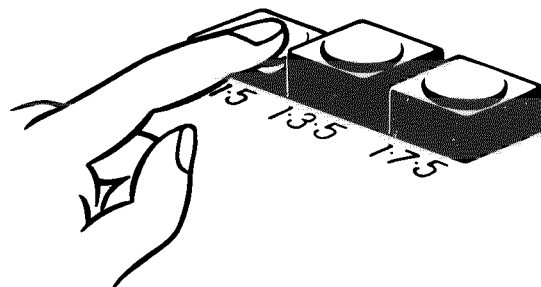
Note: You cannot add synthesized voices to the Auto Bass/Chords. When the Auto Bass/Chord lever is in its on position, pressing the pedals produces no bass, unless the keyboard, electone and synthesizer selector levers are properly arranged. To do so, move all the pedal tone levers to their "OFF" positions and depress the synthesizer selector lever to its "ON" position. Then play chords with your left hand and depress the pedals; you will hear the Auto Bass/Chords and the synthesized bass voices.

MOVE THE AUTO BASS/CHORD

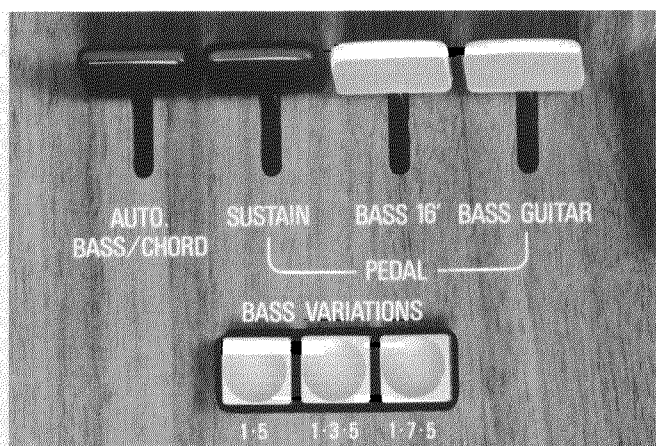
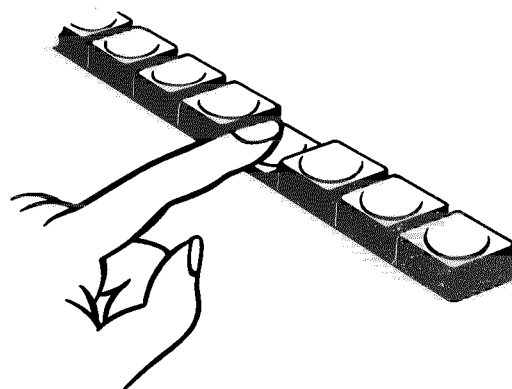
Move the "Auto Bass/Chord" lever toward you. You have now engaged the memory system and deactivated the pedals (as long as this lever is in the on position, you cannot play your CSY-1 as a conventional organ).



Push the Bass variation button marked "1.5" right below the Auto Bass/Chord lever.



Select one of the automatic rhythm patterns and push the corresponding button down until it clicks and stays down.



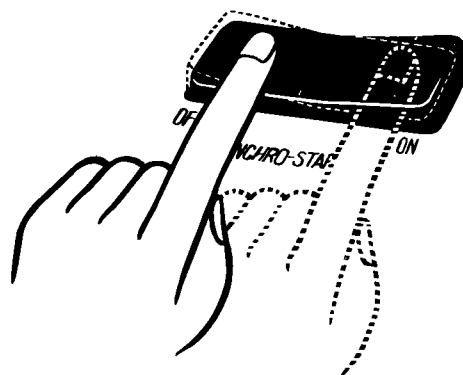
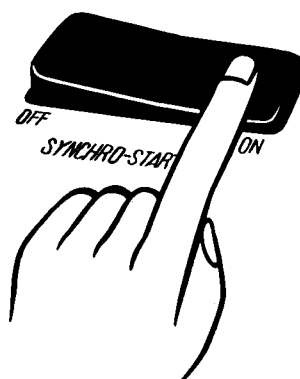
Immediately to the right of the automatic rhythm buttons you will find two rocker type switches. Push the "ON" side (right) of the one marked "Synchro-Start." (The one marked simply "start" is to be used when you wish to continue hearing the automatic rhythm even after releasing your chord on the lower manual.) Now be sure you have at least one stop for each: Upper Manual, Lower Manual, and Pedals. You are now ready to play.

Form one of the following type of chords on the lower manual with your left hand in any inversion:

Major	Seventh
Minor	Minor Seventh

(These are the only chord types for which the memory unit can supply the proper bass note.) Play all the notes in the chord at the same time. The unit should now be working. Adjustments may be necessary to the "Tempo" and "Volume" knob to the left of the "Automatic Rhythm" unit.


Adjustments may also be required to balance the relative volume of bass, chords, and solo (upper) manual; do this in the same way you would if playing conventionally. When the first chord is played, the unit will begin to operate on the downbeat, or first beat of the measure. When the chord is released you will not hear any more sound. When a new chord is played, the unit will again begin on the downbeat.




BASS VARIATION BUTTONS ⑩

Just below the pedal tone lever are three "Bass Variation Buttons", marked "1 · 5" (left) "1 · 3 · 5" (center), and "1 · 7 · 5" (right). The numbers under the buttons correspond to the notes on the musical scale in any given key and indicate what bass notes are available in the memory unit when a particular button is depressed. The type of chord and the automatic rhythm used will determine the actual note (and their sequence) that you hear.


The chart on the next page which indicates by scale step what bass notes will sound with each possible combination (Note: for the unit to perform correctly, one and only one button should be down in "Bass Variation" and "Automatic Rhythm" sections).

Bass Variation	Type of Chord	Rhythms Effected	Bass Notes Played
 1-5	[Major Minor Seventh Minor Seventh]	[March, Waltz, Swing, Slow Rock, Rhumba, Bossanova, Samba]	1-5

Explanation: This is the basic pattern; it alternates the root (1) and fifth (5) in the bass regardless of rhythm chosen or type of chord. The one exception is the Jazz Rock rhythm, which never plays anything but the root in the bass.

Bass Variation	Type of Chord	Rhythms Effected	Bass Notes Played
 1-3-5	[Major Minor Seventh Minor Seventh]	[March, Waltz, Swing, Bossanova] [Slow Rock, Rhumba, Samba]	1-5 1-3-5

Explanation: This selector effects only the Slow Rock, Rhumba and Samba rhythms, with which it will play a root (1), third (3), and fifth (5) pattern. All other rhythms function as with the (1-5) selector.

Bass Variation	Type of Chord	Rhythms Effected	Bass Notes Played
 1-7-5	[Major Minor Seventh Minor Seventh]	[March, Waltz, Swing, Bossanova] [Slow Rock, Rhumba, Samba] [March, Waltz, Swing, Bossanova] [Slow Rock, Rhumba, Samba]	1-5 1-3-5 1-5 1-7-5

Explanation: This selector effects only the Slow Rock, Rhumba and Samba rhythms when a seventh or minor seventh chord is being played, with which you will hear the root (1), seventh (7), and fifth (5) bass notes. When playing a major or minor chord the unit will perform exactly as it does with the second Bass Variation selector (1-3-5). Remember, the Jazz Rock rhythm is not affected by the Bass Variation selector; it plays only the root (1).

SOUNDS AND EFFECTS

To completely familiarize yourself with the various sounds and effects possible with the Auto Bass/Chord, hold the G7 chord down and try changing the Rhythm buttons (*example: Swing to Bossanova to Samba*). With each change, try each of the three Bass Variation buttons and listen to the bass pedal pattern changes. While you're experimenting with the rhythm patterns, use the Volume knob (*upper left*) to increase and reduce the volume of the Auto Rhythm Section and listen to the changing balance between the percussive rhythms and the chords and pedals. Strive for a good balance. The speed of your rhythm accompaniments can be controlled precisely with the use of the Tempo control and will depend on your musical taste and ability to maintain the tempo (*speed*) of the right hand melody.

SYNCHRO-START

When the Synchro-Start selector is in the "ON" position, the red light will blink the speed of the rhythm. When the rhythm is playing, the red light will blink on the first and sometimes the first and third beats of the measure depending on the rhythm chosen.

RHYTHM AND REGISTRATIONS

The suggested rhythms and registrations are only suggestions and other rhythms and registrations may be used. It is fun to experiment with rhythm and sound. However, when the fraction at the beginning of the song is 3/4, only the Waltz rhythm can be used.

Try changing rhythms in the same song. When changing rhythm in a song the rhythm used must remain at the same tempo (*speed*). Both Swing and Slow Rock are the same speed and can be used interchangeably. The Jazz Rock, Bossanova, Rhumba and Samba are all the same speed and can be used interchangeably.

The rhythms that use three bass pedals (*notes*) are Slow Rock, Rhumba and Samba. To use the three bass pedals, the Bass Variations selector must be or with the Auto Bass/Chord lever placed in the "ON" position.

TO PLAY A MELODY

Pull forward all the tone levers for both the lower and upper manuals and add the Bass 16' for the pedals. (NOTE: *The Auto Bass/Chord should be "OFF" at this time.*) Play the melody on the upper manual by following either the numbers or letters. (NOTE: *Both "play by number" and "play by letter" systems are used to permit non music readers to enjoy playing the different types of chord organ books available.*)

Add the left hand chords, shown over the melody, on the lower manual and hold each chord until the next chord is shown. (NOTE: *When the Auto Bass/Chord is added, the left hand chords will play in rhythm.*)

TO PLAY IN RHYTHM

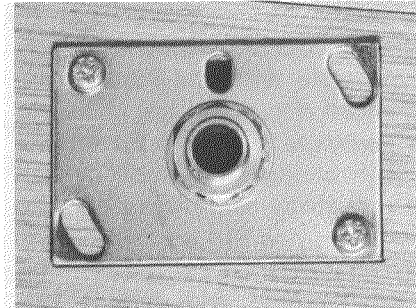
Press the "Swing" selector button on the Auto Rhythm Section. To play with the Auto Bass/Chord, pull the Auto Bass/Chord lever forward to "ON". Set the Synchro-Start switch to "ON" and the Start switch to "OFF".

Watch the blinking red light to determine the Tempo of the rhythm. Adjust the Tempo to "slow" in the beginning. Play the melody and when you play the left hand chord C, both the left hand and bass pedal will start to play in rhythm.

TO FULLY ENJOY YOUR CSY-1

HEADPHONE JACK

Plug a headphone set (optional accessory) into the jack under the keyboard and you can play with the volume as high as you like without disturbing anyone, even in the middle of the night.

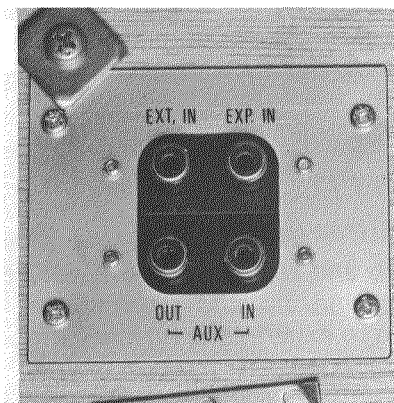


EXTERNAL INPUT JACK (EXT. IN)

Can be used to feed any sound source through the Electone speaker: radio, record player or tape recorder. Since the volume of these sound sources is not affected by the expression pedal, you can play along on the Electone with any other performance.

EXPRESSION INPUT JACK (EXP. IN)

Like the external input jack, this jack accepts any sound source and reproduce it through the CSY-1's speakers. The volume of the sound source can be controlled by the expression pedal.



AUXILIARY INPUT/OUTPUT JACKS (AUX. IN/OUT)

Use these jacks for connection with a tape deck. For recording, connect the AUX OUT jack with the tape deck's LINE IN jack; for playback, connect the AUX IN jack with the tape deck's LINE OUT jack. Control the recording and playback levels on the tape deck.

CARE OF YOUR CSY-1

In general you should treat your Electone Organ with Solo Synthesizer with the same care you would give any fine musical instrument. However, the following points are suggested to assure optimum enjoyment.

1. Be sure to use your CSY-1 only on the correct voltage. If any changes are required, please consult your Yamaha Electone service agent.
2. If any trouble develops, contact your service agent. Never touch the circuits or the internal elements of the CSY-1 yourself.
3. When you have finished playing, be sure to turn off the power switch.
4. In order to clean the keys, tabs, etc., use a damp cloth. Never apply organic solvents such as alcohol, for they will damage the materials.
5. Do not expose the CSY-1's cabinet to the direct rays of the sun. This can bleach the finish and lead to separation along the joints. It is also best to choose a location free of humidity and currents of heated air.
6. Be careful not to strike or scratch the cabinet with a hard object.

DO NOT BE ALARMED IF...

1. A note should sound the instant you turn on the switch.
This merely indicates normal operation consequent to a surge of electricity in the main amplifier.
2. Only one note is produced even when two pedals are depressed simultaneously.
In order to achieve tonal clarity, the CSY-1 is designed so that a note is electronically suppressed the instant the next note is struck. If two pedals are struck simultaneously, only the higher one sounds.
3. Occasional unpleasant static occurs.
In the majority of such cases, the cause can be traced to the turning on or off of refrigerators, washing machines, electric pumps or other household appliances. Electrical fault in a neighboring outdoor neon sign may also be to blame.
When the cause is a home appliance, connect the CSY-1 to an outlet as far as possible away from the offending appliance. This phenomenon, although annoying, poses no danger to the CSY-1's circuitry. If the cause is a fault in a neon or fluorescent lighting fixture, it should be repaired. When the cause is unknown, or in case of doubt, contact your Yamaha dealer.
4. The CSY-1 can at times reproduce radio or TV sound signals.
This can occur when there is a powerful radio or TV transmitter, or an amateur radio operator located in the vicinity. If the situation is distracting, contact your Yamaha dealer.
5. Sound rattling (sympathetic vibration) occurs.
All materials have critical resonance frequencies at which they vibrate. Since the CSY-1 produces continuous tones, it is only normal that some will cause windows, shelves, etc. to rattle.
6. Pedal notes sound too high, and upper manual notes too low.
This feeling may be especially strong for players who switch from the piano, because of the difference in tonal construction. Each piano note is a combination of complicated harmonics, and can be heard only in its interaction with the surroundings. But Electone harmonics are only multiples of the integral (base) tone, and so the instrument cannot be tuned in the same way as a piano.
7. There is a bit of noise when the tremolo speaker is switched on.
This too is a mechanical noise stemming from the spinning speaker. Special mountings help keep this sound at an absolute minimum.

SPECIFICATIONS

KEYBOARDS

Upper Manual 44 keys f~c4
(3 $\frac{2}{3}$ octaves)
Lower Manual 44 keys F~c3
(3 $\frac{2}{3}$ octaves)
Pedals 13 keys C1~C
(1 octave)

SOLO SYNTHESIZER SECTION

(Operated by Upper Manual or Pedals)

PRESET TONE LEVERS

Flute
Trombone
Trumpet
Saxophone
Oboe
Violin
Piano
Harpsichord
Bass
Tuba
Bass Guitar
Funny
Trumute
Double

FILTER CONTROLS

Preset/Control Selector
Cutoff Frequency
Resonance

ENVELOPE CONTROLS

Preset/Control Selector
Attack
Sustain

VIBRATO CONTROLS

Preset/Control Selector
Speed
Depth

TRANSPOSITION LEVERS

One Octave Down
Normal
One Octave Up
Two Octaves Up

TOUCH CONTROLS

Vibrato Depth (On/Off)
Wah-Wah (On/Off)
Volume (On/Off)

Sensitivity

ATTACK BEND CONTROLS

Pitch (On/Off)
Tone (On/Off)

OTHER CONTROLS

Tune
Portamento
Synthesizer Volume

OTHER SELECTORS

Keyboard (Upper/Pedal)
Electone (On/Cancel)
Synthesizer (On/Off)

ELECTONE ORGAN SECTION

TONE LEVERS

Upper Manual	Flute	16'
	Trombone	16'
	Flute	8'
	Oboe	8'
	String	8'
	Flute	4'
Lower Manual	Wood	8'
	Horn	8'
	Cello	8'
Pedals	Bass	16'
	Bass Guitar	

EFFECT LEVERS

Vibrato
Percussive 4' (Upper)
Percussive Length (Upper)
Pedal Sustain

EFFECT CONTROLS

Reverb
Reverb Balance (Upper/Lower)

TREMOLO SELECTORS

Voice (Main/Tremolo)
Tremolo
Chorus

AUTO RHYTHM SECTION

Rhythm Selectors
March Jazz Rock
Waltz Rhumba
Swing Bossanova
Slow Rock Samba
Rhythm Controls
Rhythm Start

Syncho-Start

Rhythm Stop (foot control)

Tempo

Volume

Tone Balance

Tempo Indicator Lamp

AUTO BASS/CHORD SECTION

Auto Bass/Chord Lever
Bass Variation Selectors
1 · 5
1 · 3 · 5
1 · 7 · 5

GENERAL

CONTROLS

Expression Pedal
Tremolo Speed Control
Power Switch

FITTINGS

Headphone Jack
External Input Jack
Expression Input Jack
AUX IN Jack
AUX OUT Jack
Pilot Lamp
Music Rest
Matching Bench with Music Storage
Space

SPEAKERS

Main: Yamaha JA-3055, JA-2057
Tremolo: Yamaha JA-1701A
Electro-control 2-speed

CIRCUITRY

Solid State
Output Power: 15 Watts (RMS)
Power Consumption: 120 Watts
Power Source: AC, 50/60 Hz

DIMENSIONS

Width: 110cm (43 $\frac{1}{4}$ "")
Depth: 57cm (22 $\frac{1}{2}$ "")
Height: 91cm (35 $\frac{3}{4}$ "")

WEIGHT 63kg (139 lbs.)

FINISH American Walnut Grain

Specifications subject to change without notice.

SINCE 1887  **YAMAHA**
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN