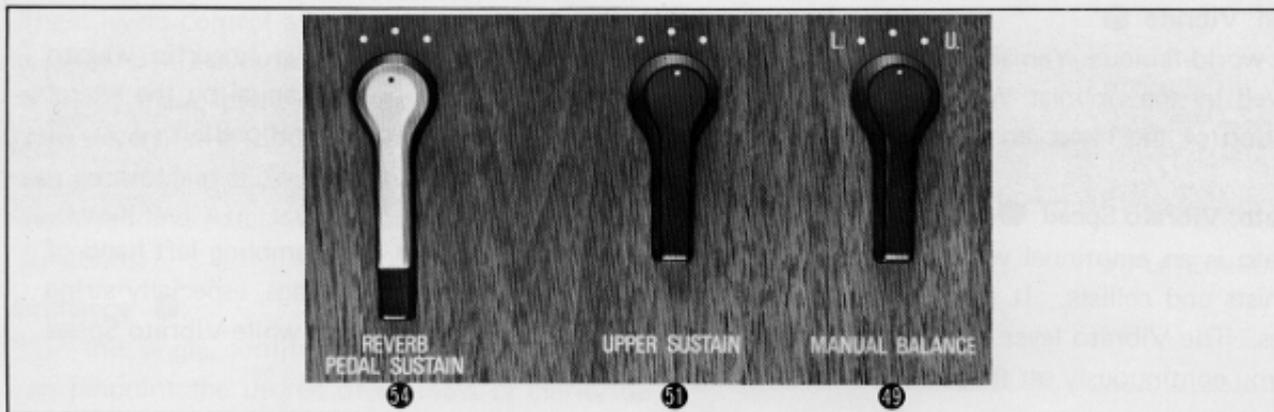


# Effect Controls



## Reverb 54

Reverberation is the quality that makes your playing sound full and rich, as if you were on the stage of a large hall or auditorium. This control is continuous, so that the reverberatory effect can be set to any degree of strength, as the music requires.

## Pedal Sustain 54

Works with the bass voices, with the exception of Bass Guitar, to provide cutoff effects from lingering to pizzicato. Release the note and the sound will hang in the air for as long as you want, thanks to the continuous adjustment.

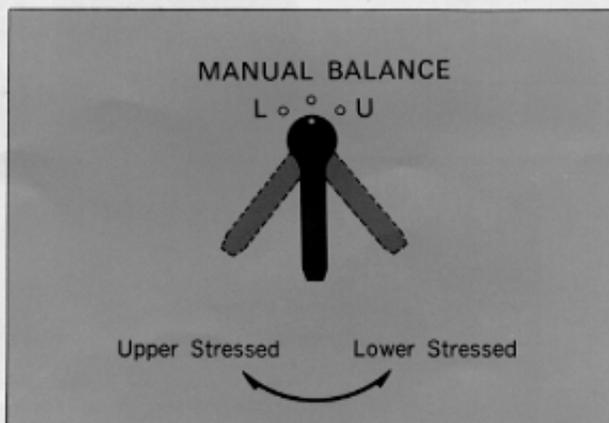
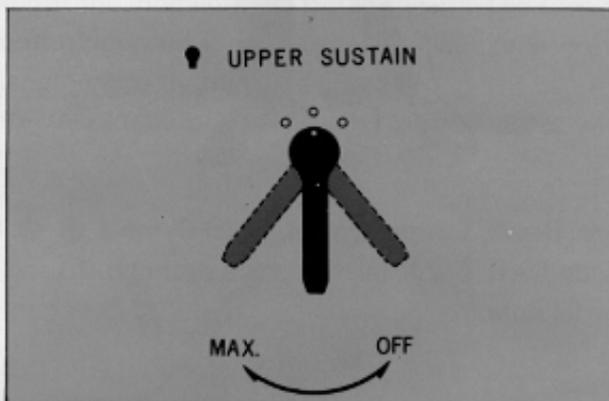
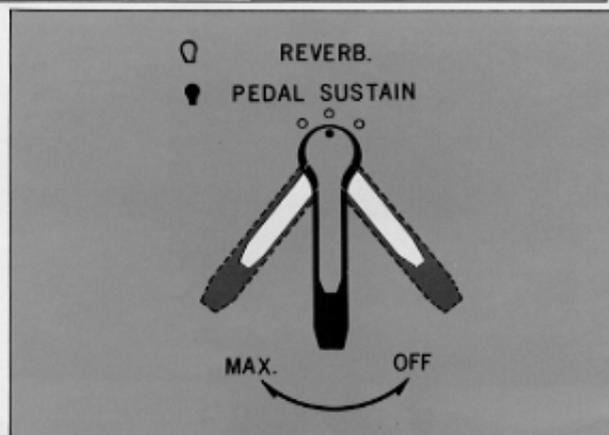
## Upper Manual Sustain 51

This permits sharp upper tones to be produced simultaneously with a smoother lower treatment, thereby further increasing the expressive range. The control provides continuous adjustment, and works together with the Upper 8', 4' Sustain Selector (see p. 13).

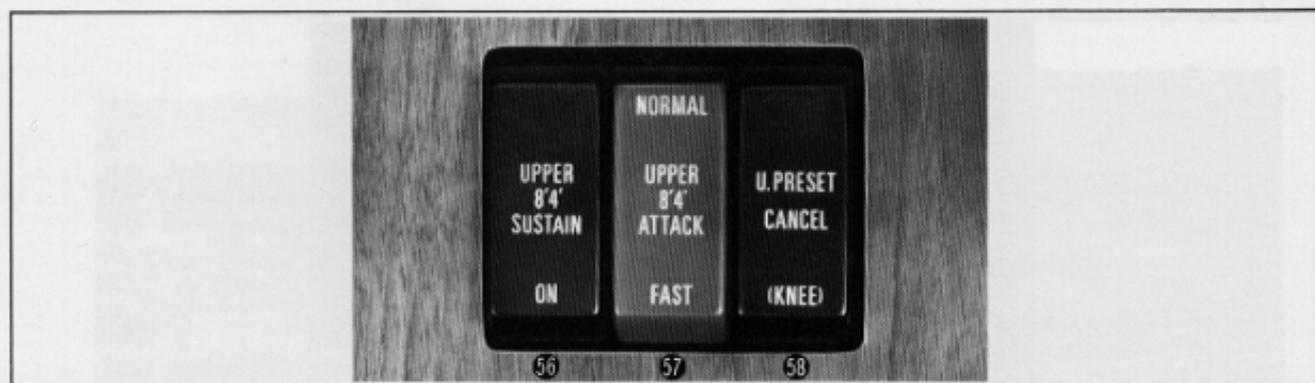
## Manual Balance 49

This control governs the relative strength of the upper and lower manuals. It is normally left in the center position, but can be shifted to stress the melody or accompaniment in a selection or phrase.

This control can also be used to compensate for a higher number of total tone lever settings (which would ordinarily result in higher volume) on either of the two manuals.



# Effect Selectors



## Upper 8', 4' Sustain 56

When this is switched on the sustain effect is then called forth.

As the name of the tablet implies, only 8' and 4' tones are affected.

The length of such sustain is set by the upper manual sustain control.

## 8', 4' Attack 57

This lever provides an effective rhythmical element, reminiscent of the string bass played pizzicato.

It is particularly impressive in rhythmic works, and gives greater definition to the beginning and end of notes. The 8', 4' Attack tablet affects all upper manual 8' and 4' voices.

When combined with the Upper 8', 4' sustain tablet, the Upper 8', 4' sustain takes precedence.

## Upper Preset Cancel 58

This tablet works in a dual arrangement with the knee lever (see p. 17) to allow instantaneous switching during the performance from the preset piston voices to those registered on the tone levers.

If the tablet is first set to on you can instantly switch back and forth between upper manual tone lever settings and the selected piston combination by simply pressing the knee lever.



# Foot Switch and Tablets



## **Glide 52**

Setting the Glide tablet on and depressing any key, all notes will sound slightly lower (approx. 100 cents) than the true pitch when the foot switch at the side of the expression pedal is pushed. When this foot switch is released the pitch will gradually return to normal. This effect adds a great deal to some selections, especially Hawaiian music.

## **Rhythm Stop 50**

This tablet activates the click-switch located at the left side of the expression pedal. When the tablet is on and the rhythm section operating, touch the foot switch once and the rhythm automatically stops.

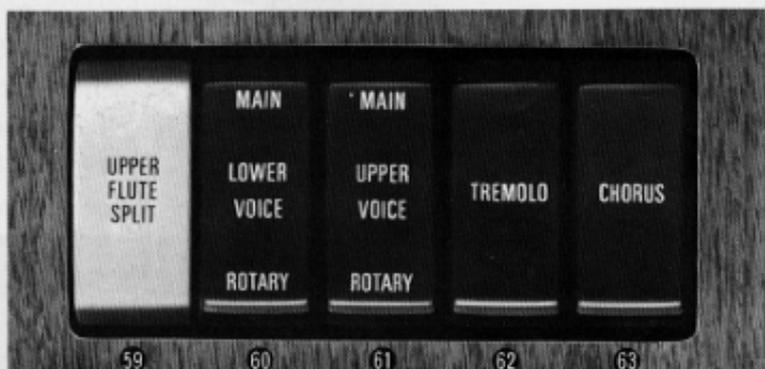
Touch it again to switch back on (see page 17).

## **Damper 53**

This effect works with the expression pedal foot switch (see p. 17). Set the control, then press the foot switch for a selective sustain just like the piano damper pedal.

The damper effect is especially suited to the preset Hawaiian Guitar, Piano, Harpsichord and Vibraphone tones.

# Sound-in-Motion Tremolo



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

On the E-10AR there are five tremolo selectors, located on the right side of the lower manual, each with an on/off function. They are complemented by a continuous tremolo speed control knob. When the 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 rotary speaker to attain the standard speed. This is also true when switching to a slower speed (Tremolo to Chorus). If one of the tremolo voice control tablets is switched on during this speed change period, the speed variation will be heard in the music.

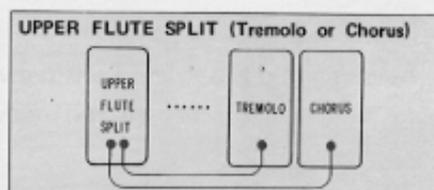
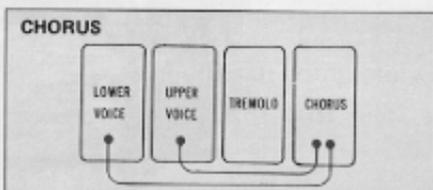
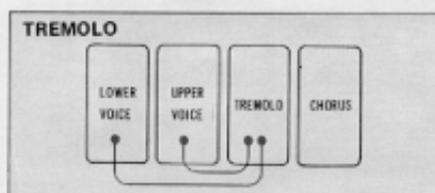
If you wish an instant tremolo or chorus sound, be sure to switch on that tablet well in advance of one of the speaker selectors (59), (60), (61). For special selections you can use this Tremolo speed variation by switching the speaker and Tremolo 62 or Chorus 63 tablets on.



**Upper Voice (Main/Rotary) 61** Lets you divert upper manual tones from the main to the tremolo speaker.

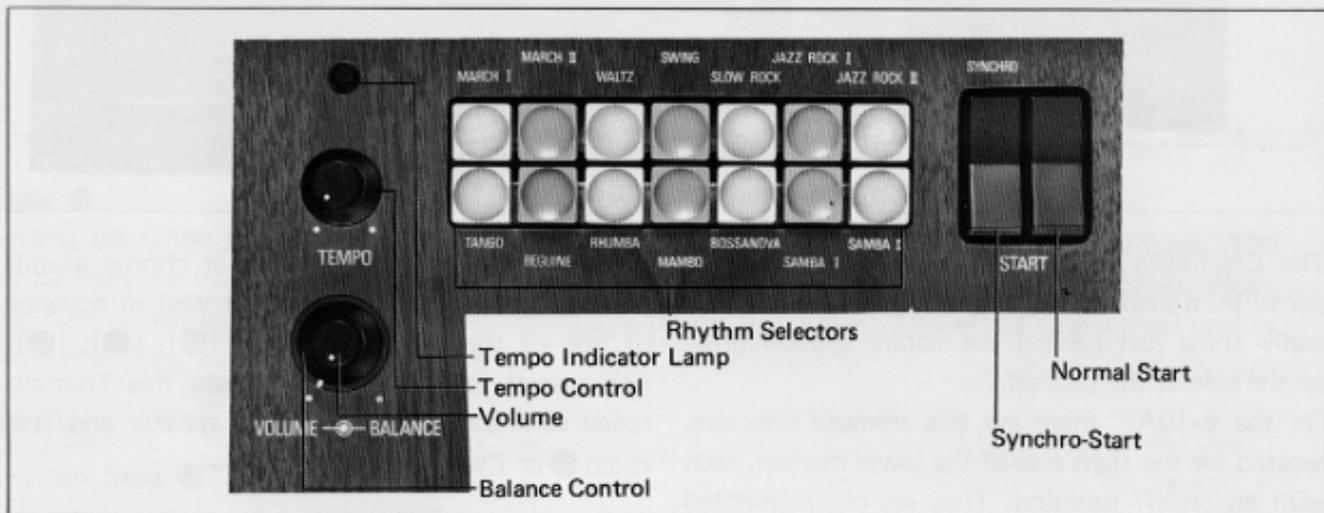
**Lower Voice (Main/Rotary) 60** Does the same for lower manual tones.

**Upper Flute Split 59** This tablet feeds only the upper manual Flute tones to the tremolo speakers. Combined with other upper manual tones through the main speaker it creates a rich, singing blend.



# Auto Rhythm Section

This section provides 14 catchy rhythms, each one called forth by a simple button. 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. The special expression pedal foot switch lets you cut and restart the rhythm at any point during play.



## How to Use the Auto Rhythm

First select which rhythm you want, and set the correct tempo, volume and balance. The balance control is the outside part of the volume/balance knob. Turn to the right to stress higher rhythm sounds (snare drum, etc.) or to the left to accentuate lower percussion sounds (bass drum, etc.). Once everything is set, turn the Start switches off. The tempo indicator lamp will continue to flash as long as any of the rhythm selectors is pressed.

### Normal 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, and then 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.



## Other Controls

### Knee Lever **R**

Press your right knee against this lever to activate the Upper Preset Cancel once the selector is set.

### Foot Switch **T**

Located to the left of the expression pedal inside the pedal housing, it provides click-on, click-off control of Damper (see p. 14), Glide (p. 14) and Rhythm Stop (p. 14) effects once the proper selector(s) are set.

### Master Volume **M**

Determine the maximum volume obtainable by depressing the expression pedal.

### Expression Pedal **S**

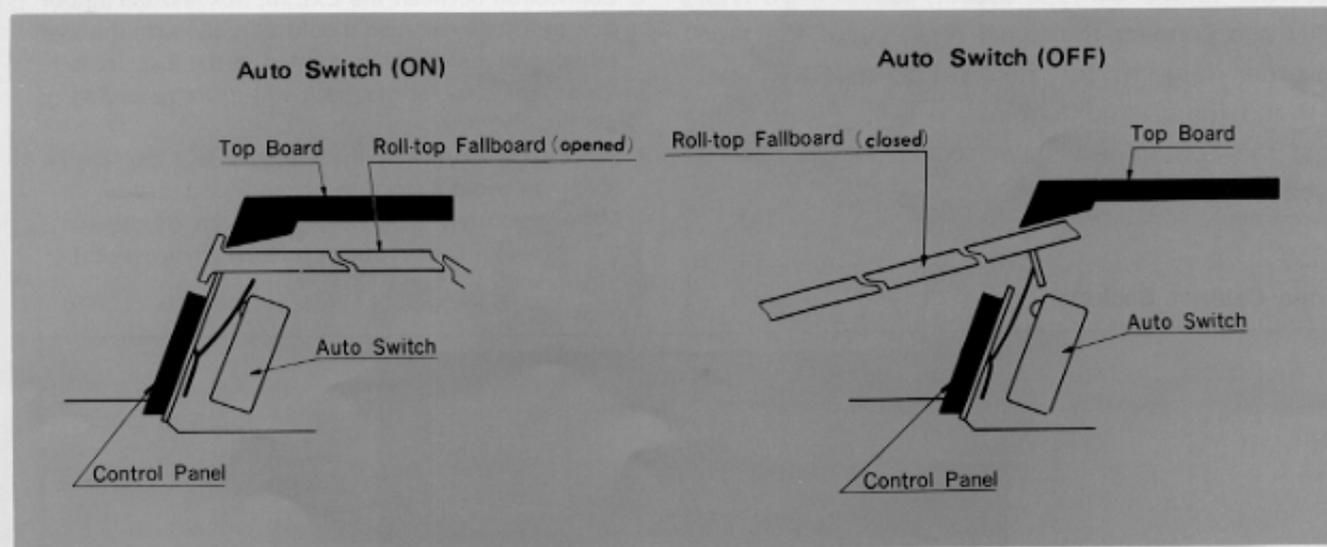
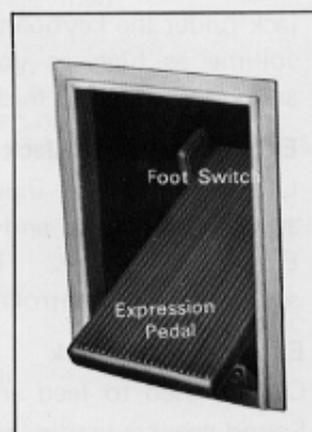
Affects the emotional mood of every note by letting you vary the volume continuously with your right foot. Works within the range set by the master volume control.

### Power Switch **N**

Incorporates a pilot lamp which lights whenever the power is on.

### Automatic Power Switch

The automatic power switch is linked to the roll-top fallboard. When the fallboard is closed, it automatically switches off the Electone and on again when reopened. There is thus no danger of the organ being left on inadvertently. This feature is designed as a safeguard only; the power should normally be turned on and off using the main switch.



### Roll-Top Fallboard **F**

A unique slide-away design lets the fallboard disappear completely when the Electone is being played, slides down to protect the keys and controls against dust, etc., when not in use.

# To Fully Enjoy Your Electone

## Headphone Jack

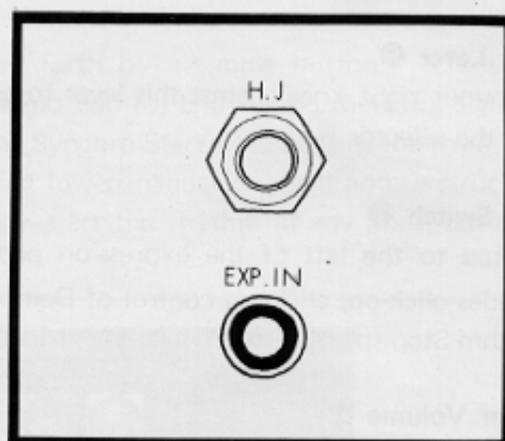
Plug a headphone set (optional accessory) into the jack under the keyboard and you can play with the volume as high as you like without disturbing anyone, even in the middle of the night.

## Expression Input Jack

Like the external input jack, this jack accepts any sound source and reproduces it through the E-10AR's speakers. The volume of the sound source can be controlled by the expression pedal.

## External Input Jack

Can be used to feed any sound source through the Electone Natural Sound 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. This jack can also be used to connect a Mini Pops rhythm unit for a wider selection of accompanying rhythms.



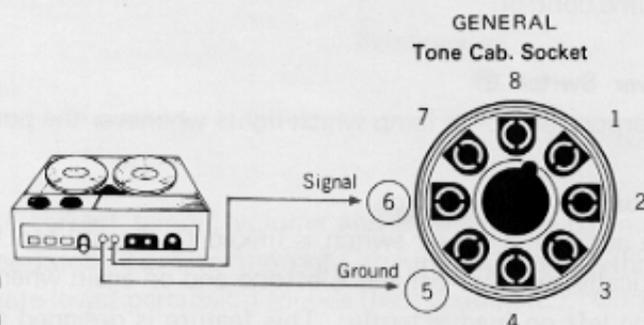
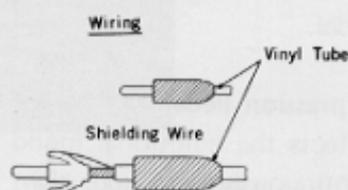
## Recording and Playback

You can record your Electone selections through the General tone cabinet socket then play them back via the Ext. In jack. To connect a tape recorder to the US-type socket, obtain a US-type plug and connect the signal terminal of the tape recorder Line In (or Rec. In) jack to terminal #6 and the ground terminal to #5. Please note that the Split tone cabinet socket should not be used for recording.

## Tone Cabinet Sockets



These sockets are on the rear panel. Use it to connect a Yamaha Tone Cabinet, without any rewiring required.



### Note:

1. Connection between the Ext. In. jack and the output jack of a tape recorder should be made with shielded cable. Use a spare plug inserted in the Ext. In. jack.
2. Volume setting for playback will differ according to the tape recorder.
3. Adjust the volume of the Electone and the tape recorder to avoid distortion of the sound quality.
4. Make absolutely sure never to touch or otherwise interfere with the circuits or internal elements of the Electone.

# Care of Your Electone

In general you should treat your Electone 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 Electone 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 Electone 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 gasoline, for they will damage the material.
5. Do not expose the Electone 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.
7. In opening and closing the fallboard, grasp the front lip with both hands and slide it gently in its groove. Never attempt to raise the fallboard directly upwards. Do not place heavy objects on it.
8. During a thunderstorm be sure to turn off the Electone power switch. Unplug the set if possible.



# 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.

When the pedal sustain effect is used, notes overlap following notes. In order to achieve tonal clarity, the Electone 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. Flute 2' voice is not obtainable from keys above C# in the highest octave.

Any keys played above F# will not be heard.

4. Neighboring objects resonate.

Since the Electone produces a continuous stream of sound, windows, china or other such objects may resonate. To prevent this, reduce the volume or take other steps to stop the resonance.

5. 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 Electone to an outlet as far as possible away from the offending appliance. This phenomenon, although annoying, poses no danger to the Electone circuitry.

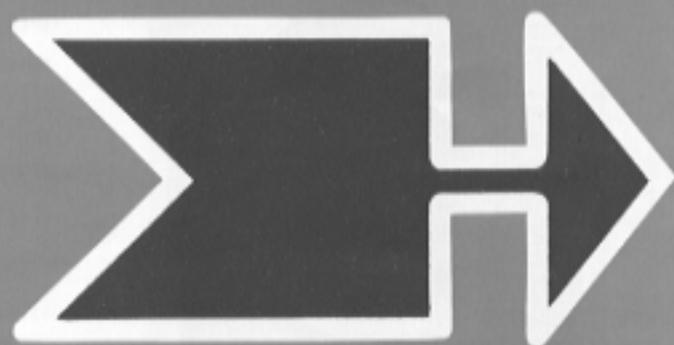
If the cause is a fault in neon or fluorescent lighting fixtures, it should be repaired. When the cause is unknown, or in case of doubt, contact your Yamaha dealer.

6. The Electone reproduces 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.



# Playing the Yamaha Electone



# Posture

1. Sit in the middle of the seat somewhat towards the front. Your weight should be shifted slightly to the right in order to allow the left leg greater freedom of movement.
2. The right hand generally fingers the upper manual (*melody*) and the left hand fingers the lower manual (*harmony*); the pedals (*rhythm*) are played with the left foot. Check that you can reach all the keys and pedals conveniently.



3. Relax the muscles of the left leg, and with the knee joint loose, move the foot left and right. Keeping the ankle loose, push the pedals just short of the point where the black pedals begin.

4. Relax the right ankle and place the full length of the foot onto the Expression pedal. Check that you can push the pedal down fully with comfort, and that you are equally comfortable with the Expression pedal in any position.



# Technique

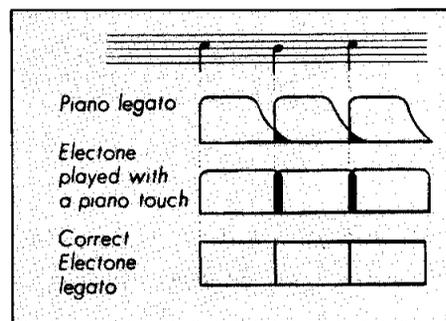
## How to Play the Manuals

Clench both fists and then relax, extending the fingers naturally. This allows the fingers to move more quickly and easily, and is therefore applicable to all keyboard instruments.

The melody should in general be played with *an organ legato touch*. In order to achieve this touch it is necessary to poise the finger in readiness above the key to be struck next. Many rules may be applied to the correct fingering, but in any case the most economical and rationalized use of the fingers is desirable.

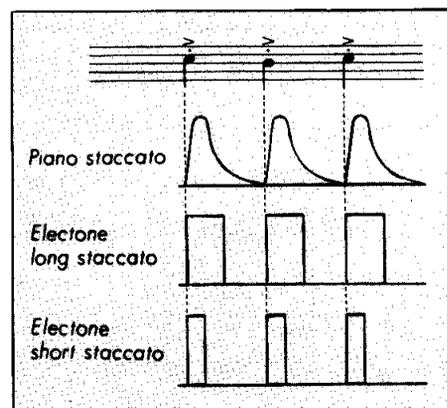
### Legato

1. It is important to practice to achieve the organ touch that will produce a smoothly continued legato without distracting overlap.
2. The melody part should in general be played legato. But in order to emphasize the legato it is necessary to take "breaths" at the ends of phrases.
3. Passages involving duet harmony often require difficult modification of legato fingering. In this case it will be useful to practice these parts separately.



### Staccato

1. Since the duration of the note can be regulated very easily by the length of time the key is depressed, it is possible to obtain a wide variation in staccato treatment.
2. Generally a rhythm accompaniment with the left hand should be played staccato. A shorter staccato will generally be suited to rhythmical compositions, a longer one to slow pieces. You should always try to choose the precise length that fits the work best.



**Note:** The habit should be formed early of holding the hands correctly, and striking the keys to the bottom of their travel.

\* In order to play *Legato* and *Staccato*, the following techniques are often used and should be learned.

### Exercise No. 1 Legato (normal fingering)

Right Hand 1 2 3 4 5 4 3 2 1 3 5 3 1

Left Hand 5 4 3 2 1 2 3 4 5 3 1 3 5

### Exercise No. 2 Legato (finger substitution)

While depressing a key, keep one key activated without stopping, by quickly substituting the finger on the key with another finger.

1 1 2 3 4 2 3 5 4 3 2 5 1 3 4 1 5 4 3 2 3

### Exercise No. 3 Legato (finger passing)

With one finger on a key, bring another finger over or under the first and depress the next key.

5 2 1 2 1 2 3 1 2 5 2 1 2 1 2 3 5 1 2

### Exercise No. 4 Depressing the same key successively several times

When you strike the same key repeatedly, do not remove your finger completely from the key. Practice striking it again as soon as the sound stops.

Right Hand 1 2 1 3 4 5 2 3 1 2 1

### Exercise No. 5 Staccato

Right Hand 1 3 5 3 4 2 1 2

Left Hand 5 3 1 3 2 3 5 4

## How to Play the Pedals

1. Sitting always to the right and in the same position will enable you to play the correct pedal notes without looking at the pedals. (See 'Posture' on page 22).
2. The best approach to the pedals is to allow the lower leg to swing freely from the knee.
3. Pedals should be struck with a light movement of the ankle. Be careful not to beat them with unnatural movement of your whole leg.

Do your best to achieve pedal command without looking at the pedals.

5. Before commencing actual performance, it will be very effective to practice rhythms and scales on the pedals. In pedal exercises give a slightly greater tone lever emphasis to the pedals.
6. Flat and light shoes are desirable. It is not a good idea play the pedals with high-heeled shoes.



## How to Use the Expression Pedal

The Expression Pedal controls the volume of the Electone during performance, within the overall range set by the Master Volume control. It should be depressed gently for *crescendo* released gradually for *diminuendo*. Be careful to use this pedal with discretion. The expression should follow the natural course of the work, and should never be intrusive.



### Phrasing

1. Natural phrasing usually indicates a soft entry to a passage and a subsequent softening at the end.
2. Variety of phrasing is attained with gradual, not sudden, movements of the expression pedal.
3. The melody requires a musical expression which can best be judged by paying close attention to the melodic line.
4. It is relatively easy to achieve a gradual *crescendo*, but the gentle release of the expression pedal in *diminuendo* requires more care.

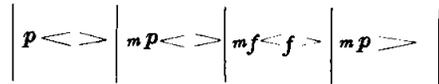
### Exercise No.6



## Throughout a Composition

1. Each musical composition is composed of a number of phrases. A phrase marked *f* would be played somewhat more loudly; one marked *p* more softly. It is important to keep the overall balance in mind.
2. The full range of the expression pedal should be used, but not so excessively that it becomes intrusive or unnatural.

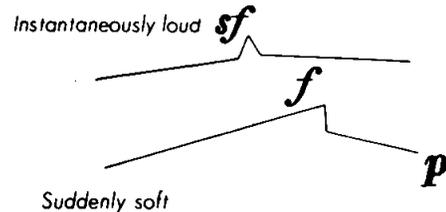
1st phrase. 2nd phrase 3rd phrase 4th phrase



**Note:** Unnatural sounds are the result of not using the right foot smoothly enough. Listen closely as you progress to eliminate these errors.

## Accent

1. Suddenly depressing the expression pedal and then partially releasing it will add accent.
2. If accents are used too freely, their effectiveness will be diminished.
3. The pedal should be released smartly.
4. In the beginning, it is better to master the nuances of phrasing before attempting accents.



## Note:

1. Do not give in to the temptation to accent one beat in every bar.
2. Crescendo passages should peak at the point where notation indicates.
3. At first, it is necessary to give conscious attention to expression, but this aspect should eventually become entirely automatic and instinctive.
4. Even the same composition may require differing expressive treatments depending on the tempo at which it is played.
5. Rhythmical works will be enhanced with a little accent.
6. Expressive treatment can be truly effective only when the organist has truly grasped the essence of the composer's musical intentions.

## How to Reset Levers, Controls and Selectors

When the notation calls for resetting the tone levers, effect levers, effect controls, etc. midway through a piece, this should be accomplished with either hand as convenient, in such a way as to avoid interrupting the melodic line.

Changes in tone lever settings may influence the relative volume of the upper and lower manuals. This can be corrected using the Manual Balance control.

# Specifications

## KEYBOARDS

|              |                            |
|--------------|----------------------------|
| Upper Manual | 61 keys C ~ c4 (5 octaves) |
| Lower Manual | 61 keys C ~ c4 (5 octaves) |
| Pedalboard   | 25 keys C1 ~ c (2 octaves) |

## TONE LEVERS

|              |             |                                 |
|--------------|-------------|---------------------------------|
| Upper Manual | Flute       | 16'                             |
|              | Flute       | 8'                              |
|              | Flute       | 5 <sup>1</sup> / <sub>3</sub> ' |
|              | Flute       | 4'                              |
|              | Flute       | 2 <sup>2</sup> / <sub>3</sub> ' |
|              | Flute       | 2'                              |
|              | Trombone    | 16'                             |
|              | Bassoon     | 16'                             |
|              | Clarinet    | 8'                              |
|              | Brass       | 8'                              |
|              | Oboe        | 8'                              |
|              | Kinura      | 8'                              |
|              | String      | 8'                              |
|              | String      | 4'                              |
|              | String      | 2 <sup>2</sup> / <sub>3</sub> ' |
| Lower Manual | Flute       | 8'                              |
|              | Flute       | 4'                              |
|              | Flute       | 2 <sup>2</sup> / <sub>3</sub> ' |
|              | Diapason    | 8'                              |
|              | Horn        | 8'                              |
| Pedalboard   | Cello       | 8'                              |
|              | Cello       | 4'                              |
|              | Bass        | 16'                             |
|              | Bass        | 8'                              |
|              | Tuba        | 16'                             |
|              | Bass Guitar |                                 |

## PRESET TONE SELECTORS (UPPER)

|                 |            |
|-----------------|------------|
| Chimes          | Accordion  |
| Hawaiian Guitar | Piano      |
| Harpichord      | Vibraphone |

## PRESET PISTONS

|           |                     |
|-----------|---------------------|
| 1 · 2 · 3 | Upper (Factory set) |
| C         | Cancel              |

## EFFECT LEVERS

|  |
|--|
| Brilliance   |
| Touch Vibrato                                      |
| Vibrato  |
| Vibrato Speed                                      |
| Percussive 4' (Upper)                              |
| Percussive 2 <sup>2</sup> / <sub>3</sub> ' (Upper) |
| Percussive Length (Upper)                          |
| Touch Wah-Wah (Upper)                              |
| Attack Wah-Wah (Upper)                             |
| Repeat Speed (Upper)                               |
| Organ Preset Ensemble (Upper)                      |

## PERCUSSION LEVERS

|              |
|--------------|
| Lower Brush  |
| Lower Cymbal |
| Pedal Cymbal |

## EFFECT CONTROLS

|                              |
|------------------------------|
| Upper Sustain                |
| Pedal Sustain                |
| Reverb                       |
| Manual Balance (Upper/Lower) |

## EFFECT SELECTORS

|                            |
|----------------------------|
| Upper Sustain              |
| Upper Attack               |
| Upper Preset Cancel        |
| Solo Damper (Foot control) |
| Glide (Foot control)       |

## TREMOLO SELECTORS

|                           |
|---------------------------|
| Upper Flute Split         |
| Upper Voice (Main/Rotary) |
| Lower Voice (Main/Rotary) |
| Tremolo                   |
| Chorus                    |

## AUTO RHYTHM SECTION

|                  |           |
|------------------|-----------|
| Rhythm Selectors |           |
| March I          | Tango     |
| March II         | Beguine   |
| Waltz            | Rhumba    |
| Swing            | Mambo     |
| Slow Rock        | Bossanova |
| Jazz Rock I      | Samba I   |
| Jazz Rock II     | Samba II  |

## Rhythm Controls

|                            |
|----------------------------|
| Rhythm Start               |
| Synchro-Start              |
| Rhythm Stop (Foot control) |
| Tempo                      |
| Volume                     |
| Tone Balance               |
| Tempo Indicator Lamp       |

## OTHER CONTROLS

|                              |
|------------------------------|
| Master Volume                |
| Expression Pedal             |
| Foot Effect Switch           |
| Knee Lever                   |
| Tremolo Speed Control        |
| Power Switch with Pilot Lamp |

## OTHER FITTINGS

|  |
|--|
| Headphone Jack                               |
| Expression Input Jack                        |
| External Input Jack                          |
| Tone Cabinet Sockets (Gen., Split)           |
| Roll-top Fallboard with Auto Switch and Lock |
| Music Rest                                   |
| Matching Bench with Music Storage Space      |

## NATURAL SOUND SPEAKERS

|                 |  |
|-----------------|--|
| Main: JA-5101A  | 59 x 48cm  |
|                 | (23 <sup>3</sup> / <sub>4</sub> x 14 <sup>1</sup> / <sub>2</sub> " ) |
| JA-2053         | 20cm (8")  |
| Rotary: JA1701B | 16 x 23cm  |
|                 | (6 <sup>1</sup> / <sub>2</sub> x 9")                                 |
|                 | Electro-control 2-speed  |

## CIRCUITRY

|   |
|---|
| Solid State (Incl. ICs and FETs)                      |
| Main Amplifier: OCL Dual-channel System               |
| Total Output Power: 120 Watts (RMS)                   |
| Power Consumption: 170 Watts                          |
| Power Source: 100/110/117/125/220/<br>240V AC 50/60Hz |

## DIMENSIONS

|         |   |   |
|---------|---|---|
|         | Cabinet                                   | Bench                                     |
| Width:  | 130cm (51 <sup>1</sup> / <sub>4</sub> " ) | 106cm (41 <sup>3</sup> / <sub>4</sub> " ) |
| Depth:  | 72cm (28 <sup>3</sup> / <sub>4</sub> " )  | 35cm (14" )                               |
|         | w/pedals 114cm (45" )                     |   |
| Height: | 105cm (41 <sup>1</sup> / <sub>4</sub> " ) | 60cm (23 <sup>3</sup> / <sub>4</sub> " )  |

## WEIGHT

|                    |                  |
|--------------------|------------------|
| 123 kgs (271 lbs.) | 17 kgs (37 lbs.) |
|--------------------|------------------|

## FINISH

|                                     |
|-------------------------------------|
| Natural American walnut, oil finish |
|-------------------------------------|

*Specifications subject to change without notice.*

### Special Instructions for British-Standard Model

As the colours of the wires in the mains lead of the apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  or coloured GREEN or GREEN-and-YELLOW.

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

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

### IMPORTANT

THE WIRES IN THE MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

|                   |         |
|-------------------|---------|
| GREEN-AND-YELLOW: | EARTH   |
| BLUE:             | NEUTRAL |
| BROWN:            | LIVE    |

### WARNING:

THIS APPARATUS MUST BE EARTHED.

SINCE 1887



**YAMAHA**

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN