

BK-5C

GUIDE TO YOUR YAMAHA ELECTONE



Welcome to the Yamaha world of music. We are sure your selection of a Yamaha Electone was a wise one, and we want you to know that we will do everything possible to help you derive a lifetime of enjoyment from this fine musical instrument.

Please read this manual carefully to be sure you are familiar with each of the Electone's features and their expressive possibilities. In that way you and your Electone can become lifelong partners in musical creativity.

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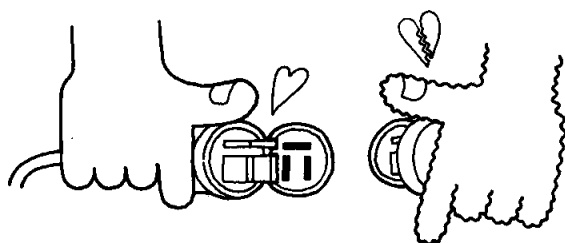
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Read the following before playing

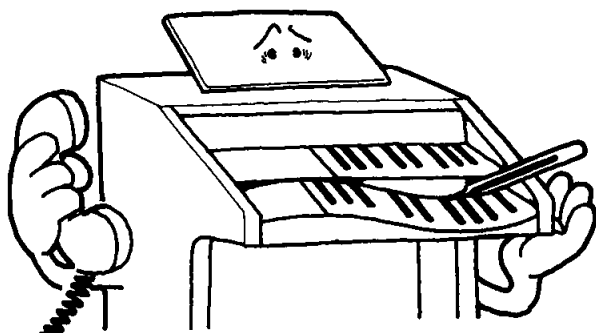
In general, treat your Electone with the same care you would any fine musical instrument. The following points are suggested for optimum enjoyment.

1. Use only proper line voltage. Consult your Yamaha serviceman for changes.

As to British-Standard Model, its information is in 'Specifications' on page 12.

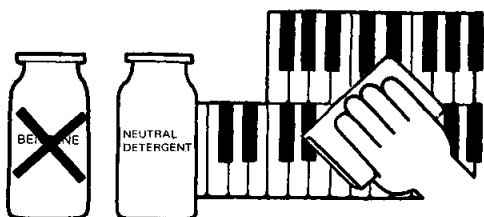


2. Never touch the inside parts yourself.

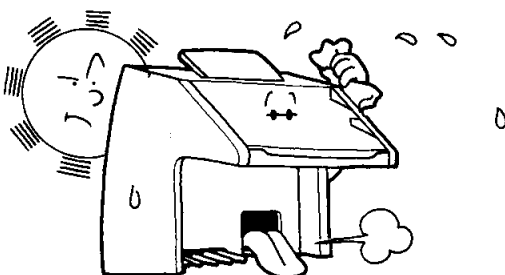


3. Always shut off the power after playing.

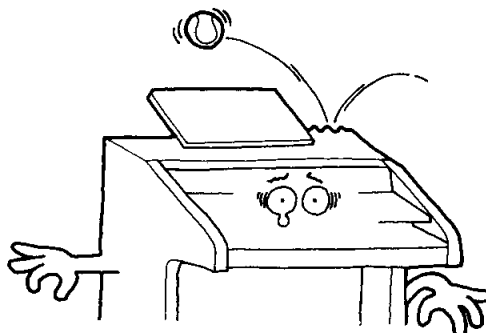
4. Clean keys, etc, with a damp cloth only. Never use solvents such as benzene; they will damage the finish.



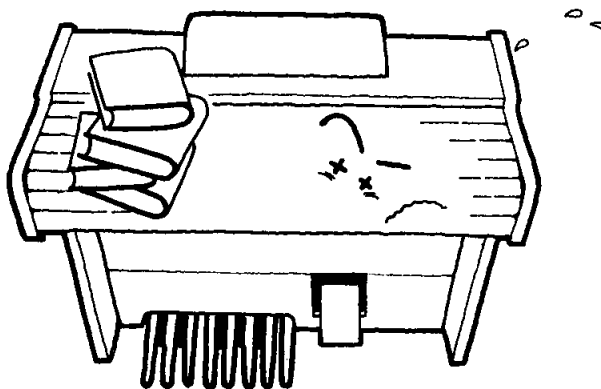
5. Shield the cabinet from direct sunlight, humidity and heat to protect the finish and joints.



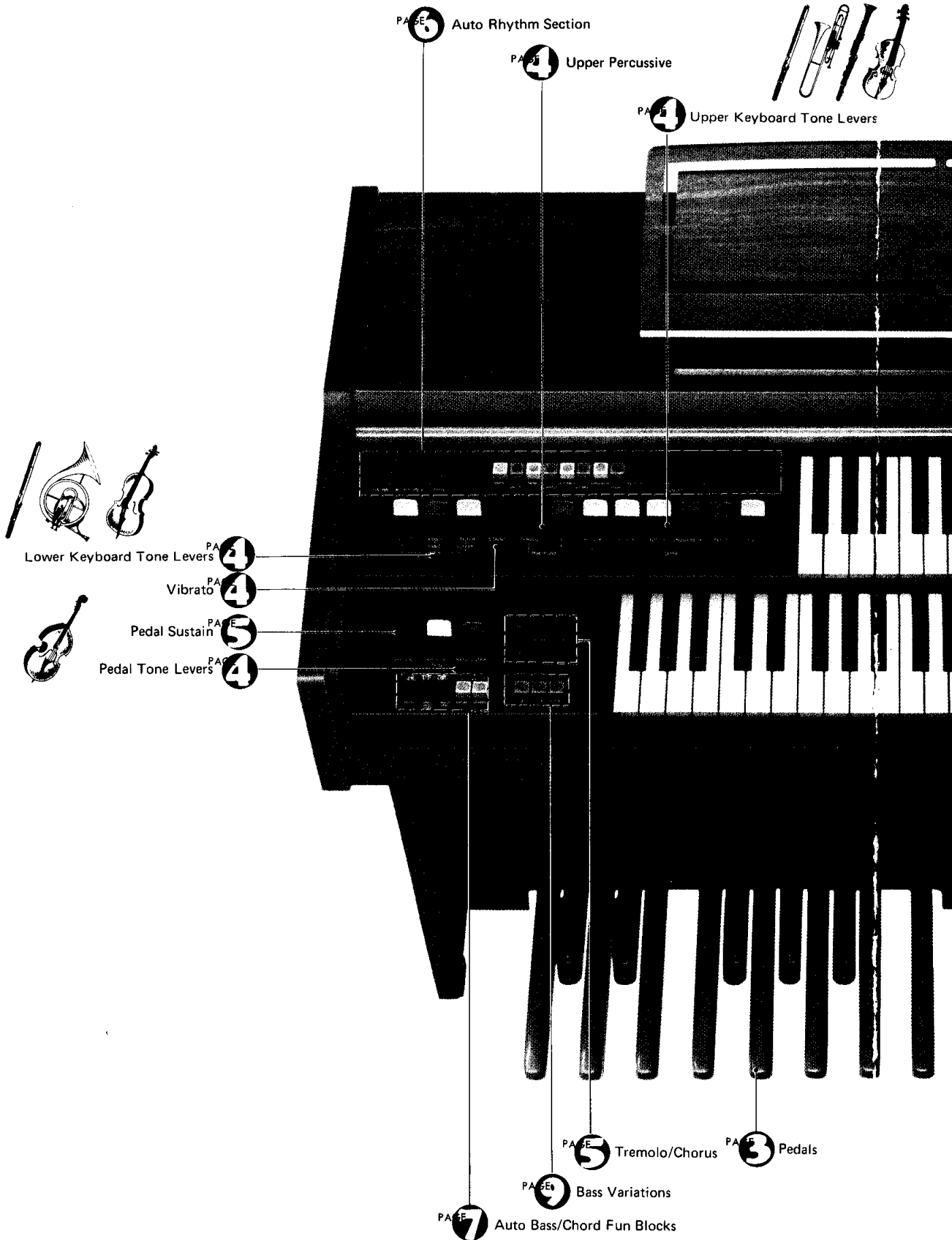
6. Do not hit or scratch the cabinet with a hard object.



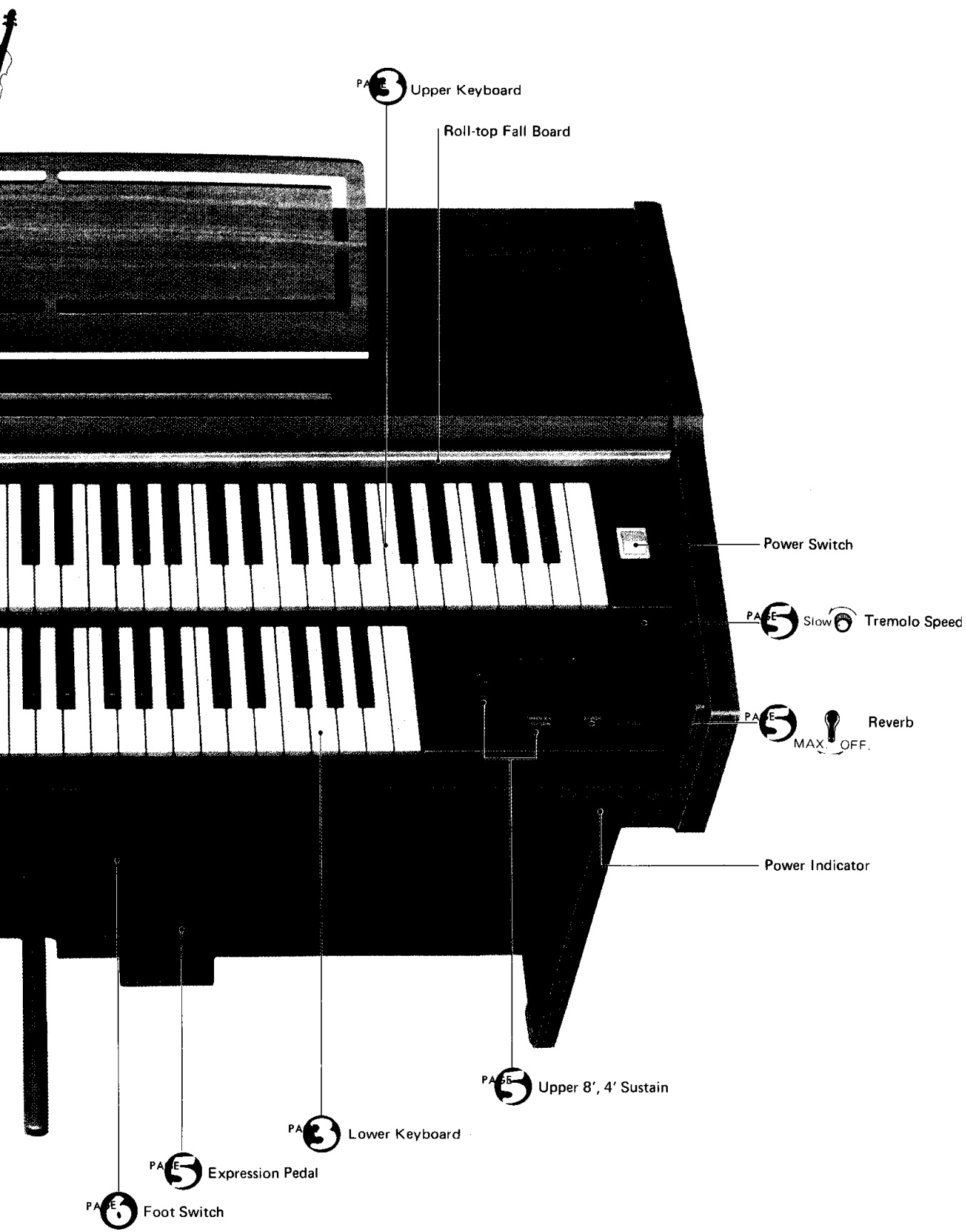
7. To open or close the fallboard grasp the front lip with both hands and slide gently. Never pull directly upwards. Do not place anything heavy on the fallboard.



This is the BK-5C



While reading the manual, keep this page open for reference.



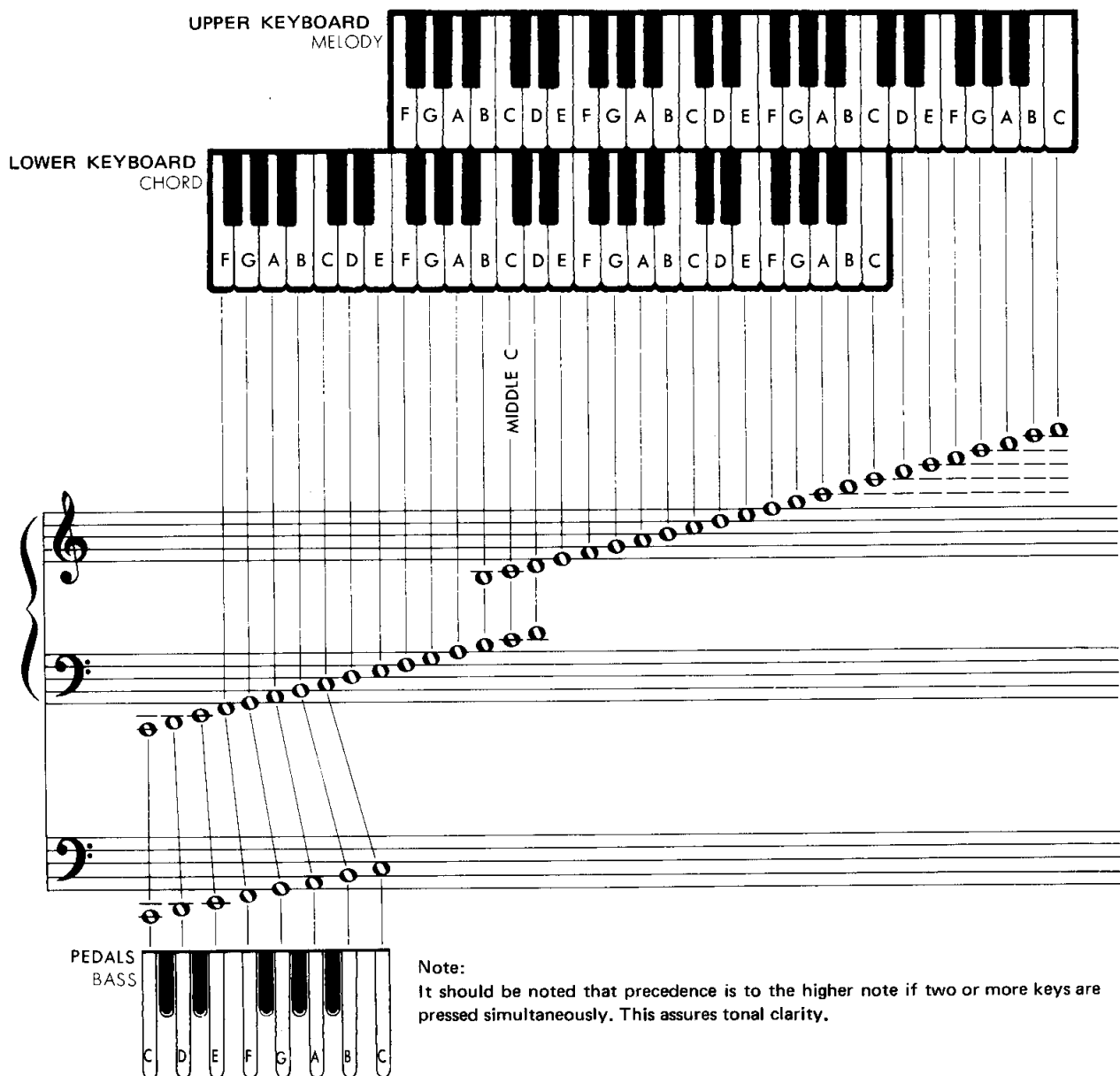
Specifications subject to change without notice.

Keyboards

This Electone has three keyboards. They have keys and octaves as follows:

Upper Keyboard	44 keys (3-2/3 octaves)
Lower Keyboard	44 keys (3-2/3 octaves)
Pedals	13 keys (1 octave)

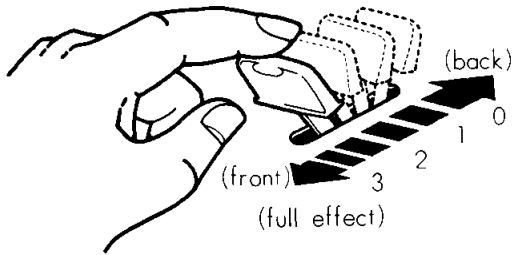
This Electone is designed to permit playing the melody on the upper keyboard with the right hand, the chords on the lower keyboard with the left hand, and bass note on the pedals with the left foot. All keys are arranged in the keyboard method layout shown below. Each white key has a name (from C to B), and the blacks are sharps or flats.



Note:
It should be noted that precedence is to the higher note if two or more keys are pressed simultaneously. This assures tonal clarity.

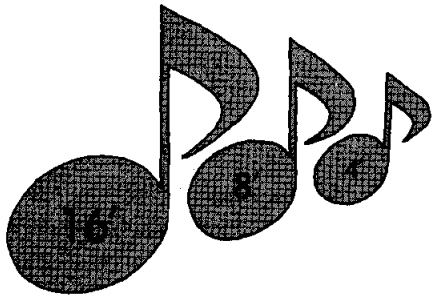
Tone Levers

To the left of the upper and lower keyboards are series of tone levers which control the Electone voices that 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 Keyboard Levers	6 voices
Lower Keyboard Levers	3 voices
Pedal Levers	2 voices

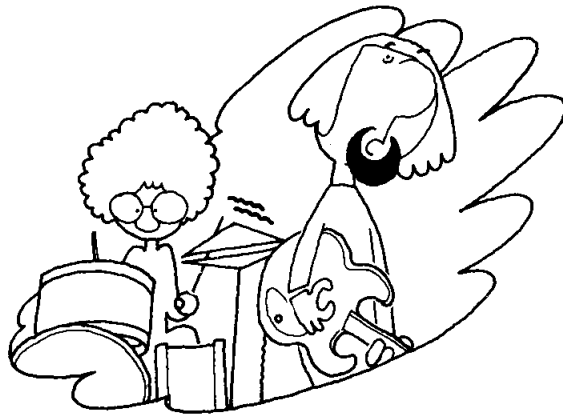
Each lever provides two methods of control. One is by continuously moving the lever from off to full, to achieve the exact setting for that tone, and thus balancing the overall tone setting with perfect precision. Each lever also has two easy-to-feel click stops, at 1/3 and 2/3 positions. This lets you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



PITCHES OR FOOTAGES

The BK-5C has three different pitch levels, indicated by the numbers 16', 8' and 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 will provide a tone exactly one octave lower than the written note. Similarly, 4' tones are one octave higher than the written note.

Upper Percussive



Changing the beginning of some or all notes can do wonders for lively selections. Your Electone'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 keyboard tones with a single variable lever (percussive 4'), and a separate lever (percussive length) regulates the length of decay for this effect.

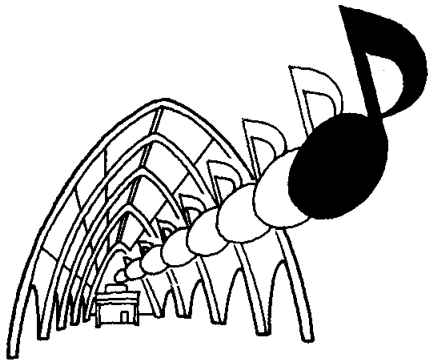
Note: If Upper Percussive 4' is set at the same time as Upper Sustain, no sound will be heard.

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



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.



Upper 8', 4' Sustain

When this is switched on, the sustain effect is evoked. As the name of the tab implies, only 8' and 4' tones are affected. The length of such sustain is set by the Upper Sustain control.

Note: When combined with Upper Percussive 4', all sound is cancelled.

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 taste.

Tremolo/Chorus

The Electone's special tremolo is produced by a rotary speaker that actually spins just behind the rotary speaker grille on the side of the cabinet.

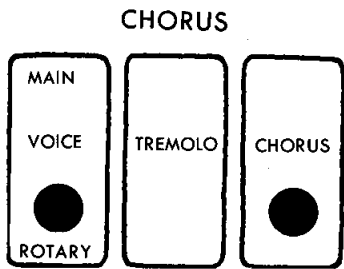
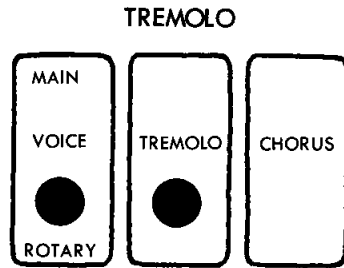
The tremolo selector is complemented by a continuous tremolo speed control knob.

When the speed control is set to its maximum position, the Tremolo will turn the speaker at normal revolution.

The Chorus will turn it at one revolution. 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), 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. For special selections you can use this speed variation by switching the speaker on first, the Tremolo or Chorus switch later.

Note: Only Tremolo is produced when Tremolo and Chorus are switched on simultaneously.



VOICE (Main/Rotary)

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

Pedal Sustain

This control provides continuous adjustment of the sustain effect on the pedals and allows the pedal note to continue to sound a few seconds after you have released it.

Expression Pedal

Push down the pedal to control the volume of each note or phrase. This pedal is extremely important for adding emotion to your playing. The pedal is balanced to stay in any position once set. Rest the entire right foot on the pedal and relax it, pressing with the toe to increase volume, with the heel to decrease it.

Auto Rhythm Section

This section provides eight catchy rhythms, each one called forth by a simple button. You can also create more rhythm variations with the variation 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 keyboard or pedal note is struck. A foot switch fitted in the expression pedal housing lets you stop and restart the rhythm at any point during play.

NORMAL START

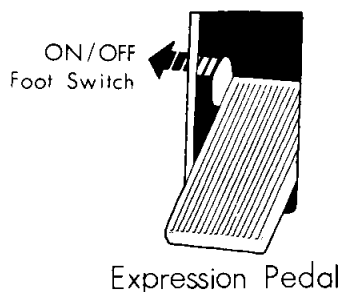
For instant rhythm at the beginning of a selection, push the rhythm selector desired, then flick the Start switch on.

SYNCHRO-START

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

You can switch off the Auto Rhythm with the foot switch.

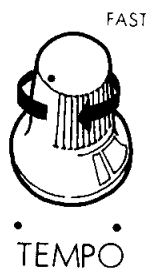
When you wish to continue hearing the Auto Rhythm, be sure to switch on with the foot switch.



RHYTHM FOOT SWITCH

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.

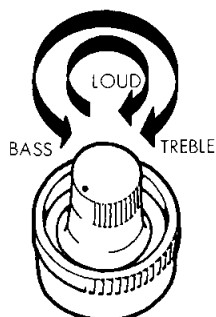
Note: If the foot switch has been used, be sure it is reset to normal after you finish playing your selection, and then make sure both Start and Synchro-Start switches are off. Otherwise you may turn on one of the switches in the middle of a new number only to find the rhythm still canceled.



TEMPO

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.



BALANCE

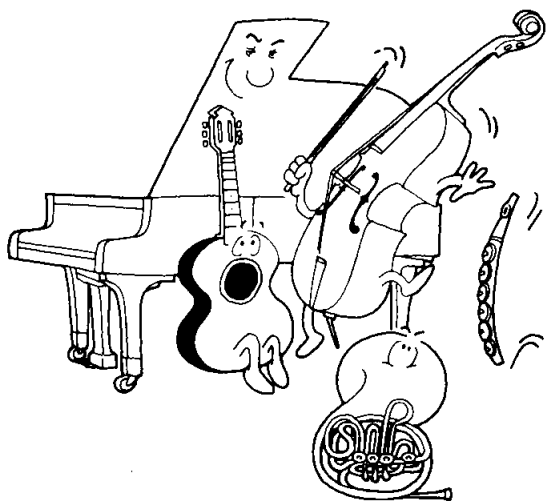
This control lets you balance the low rhythm sounds, such as drums, and the high sounds (i.e., cymbals) according to your taste and the selection. It can make a big difference even when using the same rhythm. Turn the knob to the right to accentuate the higher (treble) sounds, to the left for lower (bass).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

Check the playing hints for specific settings.

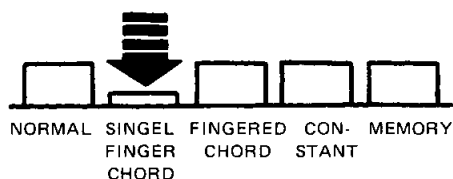
VOLUME

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.

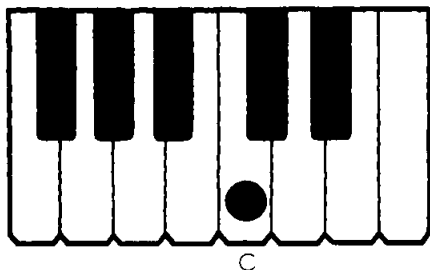
Auto Bass/Chord Fun Blocks



The BK-5C is equipped with a "Fun Block" section of five buttons which can be used in conjunction with the Auto Rhythm section (see p. 6). It enables you to play a variety of alternating bass chord rhythms, with the pedal and chords automatically matching the melody notes simply by holding down either a single key or chord of lower keyboard, according to which fun block button you press. From your very first keyboard attempt, the fun block feature will let you sound like a pro, making full rhythmic use of the lower keyboard and pedals. Here is how it works.



C chord



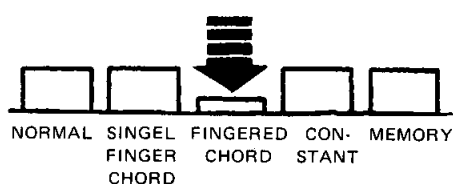
SINGLE FINGER CHORD (THE EASY PLAY WAY)

- Set the tone levers for the tones you want on the lower keyboard both Piano and Guitar sounds are available); use either or both levers to adjust the Auto Bass Chord tone color and volume in the normal way.
- Match the setting of the Pedal tone lever to the lower keyboard tones.
- Select a rhythm pattern and push the corresponding button until it clicks and stays down.
- Set the Rhythm Start switch on.
- Adjust the rhythm tempo and volume.
- Press the Single Finger Chord button.

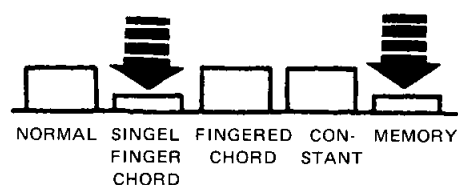
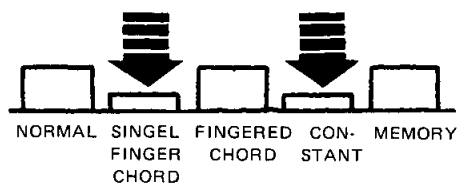
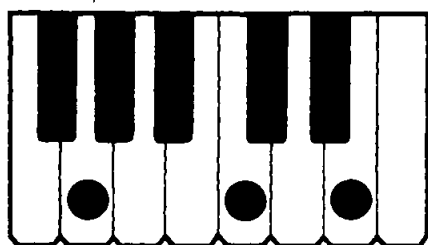
Now, if you press a C key on the lower keyboard, a C major chord will play in an alternating pattern which matches the rhythm pattern and tempo set.

As long as the key is held down, the bass chord rhythm continues. When the Black-key pedal is pressed, the chord changed from major to minor, and when released, the chord returns to major. When the White-key pedal is pressed, the chord changes from major to seventh, and when released, the chord returns to major. When both Black- and White-key pedals are pressed, a minor seventh results.

Note: The bass note will play the root and fifth of any chord pressed, except when the Jazz Rock rhythm is used; in that case the bass sounds the root only.



C Major chord



FINGERED CHORD

- Select the rhythm and set both its tempo and volume as explained earlier.
- Depress the Fingered Chord button.
- Play a desired chord (major, minor, seventh, minor seventh) on the lower keyboard.

Now as long as you hold that chord it will play according to the rhythm and tempo you have set.

If the Single Finger Chord and Fingered Chord buttons are both pressed, the Single Finger Chord takes precedence.

CONSTANT

- Select the rhythm and set both its tempo and volume as explained above.
- Depress the Constant button and either Single Finger Chord button or the Fingered Chord button.
- Press the desired key on the lower keyboard. As long as this key is held down, the chord, as well as a pedal note the same as the root of the chord, will sound as if they were held down during normal play (i.e., without any rhythm pattern). As soon as this key is released the chord stops.

MEMORY

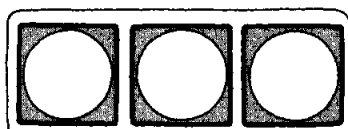
This button can be used in conjunction with the Single Finger Chord button. Press both buttons and set the rhythm (including tempo and volume) as explained above. Now, when a lower keyboard key is held down the bass chord rhythm will play according to the rhythm set, but will also continue to play even when the key is released. The memory function also has another use. When this button is depressed along with both the Single Finger Chord and Constant buttons, it provides a continuing bass chord just as when the latter two buttons are used alone. In this case, however, the bass chord will continue to sound even after the key is released.

NORMAL

This button cancels the other Fun Blocks, returning the lower keyboard and the pedal to normal playing functions.

Note: The Flute voices on the lower keyboard are not affected by the Auto Rhythm rhythm pattern. If it is set on it will sound continuously for any key held down. Use it to soften the mood of the Auto Bass Chord accompaniment.

Bass Variation



1-5 1-3-5 1-7-5

The Electone BK-5C lets you choose one of three bass patterns to match the lower keyboard harmony.

When the Single Finger Chord button is depressed, the three bass variations are created, just as when the Fingered Chord button is depressed.

Note: This bass variation works with Rhumba and Slow Rock beats. If the Rhythm Variation button is pressed, however, then bass variation will be available with Rhumba only.



1-5

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 maintains root (1) pedal and no alternation.

Note: The Slow Rock and Jazz Rock rhythms play only the root (1), when the Rhythm Variation is switched on.



1-3-5

This selector effects the Slow Rock and Rhumba 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.

Note: The Rhumba rhythm will play a root (1), third (3), and fifth (5) pattern, when the Rhythm Variation is switched on.



1-7-5

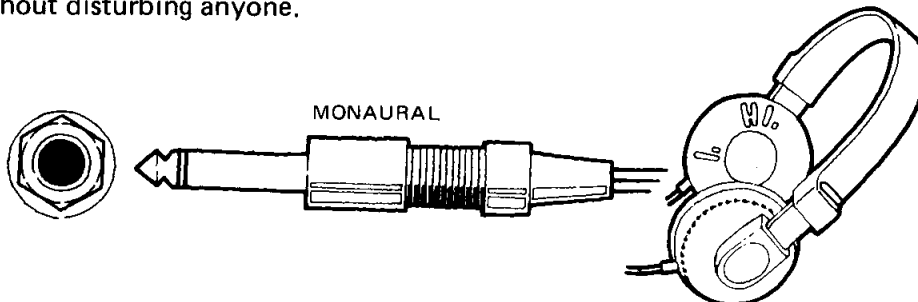
This selector effects the Slow Rock and Rhumba rhythms when a seventh or minor seventh chord is being played, with which you will hear the root (1), seventh (7), and fifth (5) bass notes. When playing a major or minor chord the unit will perform exactly as it does with the second Bass Variation selector (1-3-5).

Note: The Rhumba rhythm will play a root (1), seventh (7), and fifth (5) pattern, when the Rhythm Variation is switched on.

To Fully Enjoy Your Electone

HEADPHONES

A Yamaha headphones set (optional) can be plugged into the jack under the keyboard. With the headphones connected, the speakers are automatically shut off, allowing you to play or practice at any volume level without disturbing anyone.



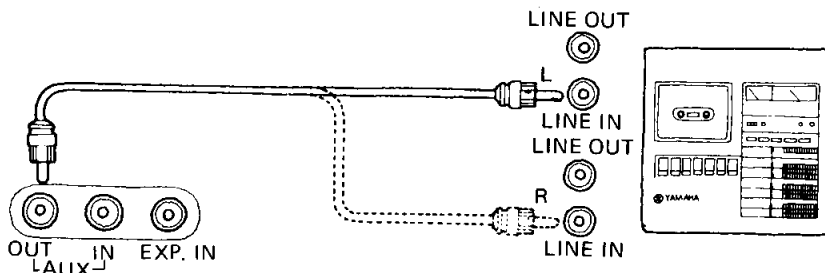
EXP. IN

This jack accepts any sound sources and reproduces them through this Electone's speakers.

Note: The volume of the sound source can be controlled by the expression pedal.

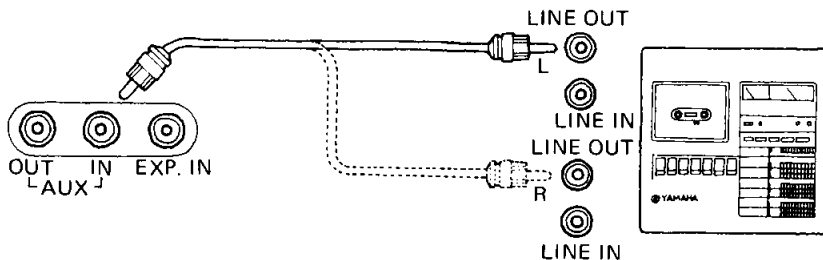
AUX OUT

For recording, connect the AUX OUT jack with the tape deck's LINE IN jack. Control the recording levels on the tape deck.



AUX IN

For playback, connect the AUX IN jack with the tape deck's LINE OUT jack. Control the playback levels on the tape deck.



Note: These sound sources (tape recorder, etc.) are not affected by the expression pedal.

Electone is not out of order If . . .

1. . . .the set does not go on when the power switch is turned on. Check the following.

Is the AC plug fully inserted into the electric wall outlet? Reinsert it to be sure. Is there power coming from that outlet?

If there is power in the outlet but the Electone does not play, unplug the cord and contact your Yamaha dealer. There are NO USER SERVICEABLE PARTS inside.

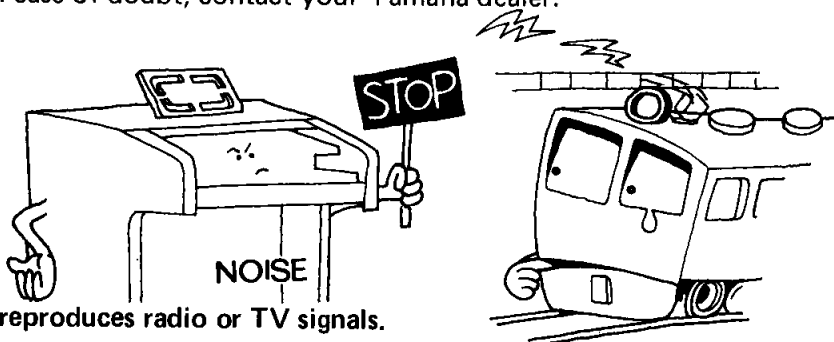
2. . . . a sound should occur the instant you turn on the switch

This merely indicates normal operation consequent on a surge of electricity in the main amplifier.

3. . . .occasional unpleasant static occurs.

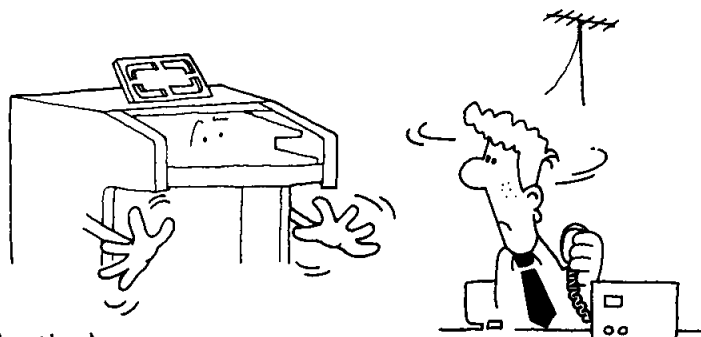
In the majority of such cases, the cause can be traced to the turning on or off of refrigerators, washing machines, electric pumps or other household appliances. Electrical faults in a neighboring outdoor neon sign may also be to blame.

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 Electone reproduces radio or TV signals.

If there is a powerful transmitter such as a radio station in the vicinity this can occur. Contact your Yamaha dealer.



5. . . .rattling (sympathetic vibration) occurs.

All materials have critical resonance frequencies at which they vibrate. The Electone's continuous tones will naturally cause other objects (windows, shelves, etc.) to vibrate.



6. . . .pedal notes sound too high, upper keyboard notes too low. This is especially noticeable when comparing the Electone with piano. Piano tones are combinations of harmonics and must interact with their surroundings, while Electone harmonics are simpler (multiples of the fundamental tone), requiring the Electone to be adjusted differently at the assembly stages.

Specifications

KEYBOARDS

Upper Keyboard	44 keys f ~ c ₄ (3 $\frac{3}{4}$ octaves)
Lower Keyboard	44 keys F ~ c ₃ (3 $\frac{3}{4}$ octaves)
Pedals	13 keys C1 ~ C (1 octave)

TONE LEVERS

Upper Keyboard	Flute	16'
	Flute	8'
	Flute	4'
	Trombone	16'
	Oboe	8'
Lower Keyboard	String	8'
	Flute	8'
	Horn	8'
	(or Piano)	
Pedals	(or Guitar)	8'
	Bass	16'
	Bass Guitar	

EFFECT LEVERS

Vibrato
Percussive 4' (Upper)
Percussive Length
Pedal Sustain

EFFECT CONTROLS

Upper Sustain (8', 4')
Reverb

EFFECT SELECTOR

Upper Sustain (8', 4')

TREMOLO SELECTORS

Voice (Main/Rotary)
Tremolo
Chorus

ABC FUN BLOCKS

ABC Selectors
Normal
Single Finger Chord
Fingered Chord
Constant
Memory
Bass Variation Selectors
1 - 5
1 - 3 - 5
1 - 7 - 5

AUTO RHYTHM SECTION

Rhythm Selectors	
March	Waltz
Swing	Slow Rock
Jazz Rock	Rhumba
Bossanova	Samba
Variation	
Rhythm Controls	
Normal Start	
Synchro-Start	
Rhythm Stop (Foot control)	
Tempo	
Volume	
Tone Balance	
Tempo Indicator	

OTHER CONTROLS

Expression Pedal
Tremolo Speed Control
Power Switch

OTHER FITTINGS

Headphone Jack
Expression Input Jack
AUX IN Jack
AUX OUT Jack
Power Indicator
Roll-top Fallboard
Music Rest
Matching Bench with Music
Storage Space

SPEAKERS

Main (2)	: 30cm (12"), 5cm (2")
Rotary (2)	: 16x23cm (6½ x 9"), 5cm (2")

CIRCUITRY

Solid State (Incl. LSIs and ICs)	
Ourput Power:	15 Watts (RMS)
Power Consumption:	80 Watts
Power Source:	50/60Hz AC

DIMENSIONS

Width:	111cm (43½")
Depth:	56cm (22")
Height:	90cm (35½")


WEIGHT 58kg (125 lbs.)

FINISH American Walnut Grain

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