

YAMAHA

ELECTONE

OWNER'S

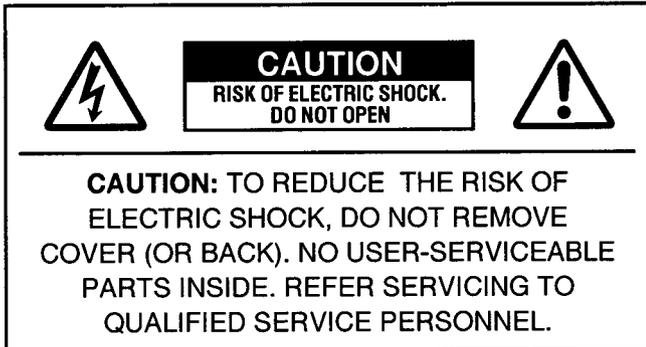
MANUAL

YAMAHA Electone  
**EL-17**  
OWNER'S MANUAL

# SPECIAL MESSAGE SECTION

**PRODUCT SAFETY MARKINGS:** Yamaha electronic products may have either labels similar to the graphics shown below or molded / stamped facsimiles of these graphics on the enclosure. The explanation of these graphics appears on this page.

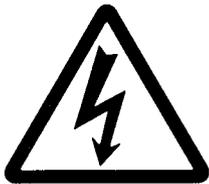
Please observe all cautions indicated on this page and those indicated in the safety instruction section.



See the name plate for graphic symbol markings.



The exclamation point within the equilateral triangle is intended to alert the user to the present of important operating and maintenance (servicing) instructions in the literature accompanying the product.



The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock.

**IMPORTANT NOTICE:** All Yamaha electronic products are tested and approved by an independent safety testing laboratory in order that you may be sure that when it is properly installed and used in its normal and customary manner, all foreseeable risks have been eliminated. DO NOT modify this unit or commission others to do so unless specifically authorized by Yamaha.

Product performance and/or safety standards may be diminished. Claims filed under the expressed warranty may be denied if the unit is/has been modified. Implied warranties may also be affected.

**SPECIFICATIONS SUBJECT TO CHANGE:** The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

**ENVIRONMENTAL ISSUES:** Yamaha strives to produce products that are both user safe and environmentally friendly.

We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

**BATTERY NOTICE:** This product MAY contain a small nonrechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

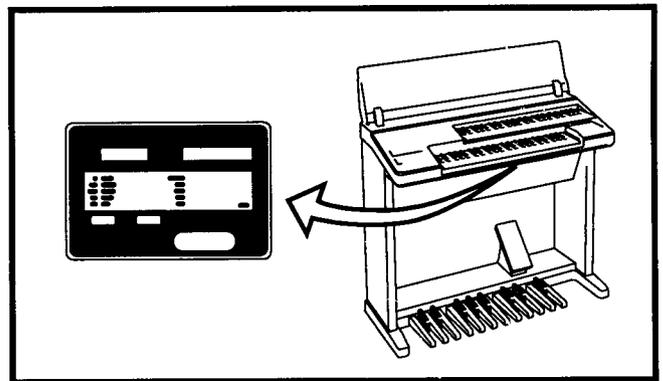
**WARNING:** Do not attempt to recharge, disassemble, or incinerate this type of battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by applicable laws. Note: In some areas, the servicer is required by law to return the defective parts. However, you do have the option of having the servicer dispose of these parts for you.

**DISPOSAL NOTICE:** Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc.

**NOTICE:** Service charges incurred due to lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacture's warranty, and are therefore the owner's responsibility.

Please study this manual carefully and consult your dealer before requesting service.

**NAME PLATE LOCATION:** The graphic below indicates the location of the name plate. The model number, serial number, power requirements, etc., are located on this plate. You should record the model number, serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.



Model \_\_\_\_\_

Serial No. \_\_\_\_\_

Purchase Date \_\_\_\_\_

# IMPORTANT SAFETY INSTRUCTIONS

INFORMATION RELATING TO PERSONAL INJURY, ELECTRICAL SHOCK, AND FIRE HAZARD POSSIBILITIES HAS BEEN INCLUDED IN THIS LIST.

**WARNING-** When using any electrical or electronic product, basic precautions should always be followed. These precautions include, but are not limited to, the following:

**1.** Read all Safety Instructions, Installation Instructions, Special Message Section items, and any Assembly Instructions found in this manual BEFORE making any connections, including connections to the main supply.

**2.** Main Power Supply Verification: Yamaha products are manufactured specifically for the supply voltage in the area where they are to be sold. If you should move, or if any doubt exists about the supply voltage in your area, please contact your dealer for supply voltage verification and (if applicable) instructions. The required supply voltage is printed on the name plate. For name plate location, please refer to the graphic found in the Special Message Section of this manual.

**3.** This product may be equipped with a polarized plug (one blade wider than the other). If you are unable to insert the plug into the outlet, turn the plug over and try again. If the problem persists, contact an electrician to have the obsolete outlet replaced. DO NOT defeat the safety purpose of the plug.

**4.** Some electronic products utilize external power supplies or adapters. DO NOT connect this type of product to any power supply or adapter other than one described in the owners manual, on the name plate, or specifically recommended by Yamaha.

**5. WARNING:** Do not place this product or any other objects on the power cord or place it in a position where anyone could walk on, trip over, or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! IF you must use an extension cord, the minimum wire size for a 25' cord (or less) is 18 AWG. NOTE: The smaller the AWG number, the larger the current handling capacity. For longer extension cords, consult a local electrician.

**6.** Ventilation: Electronic products, unless specifically designed for enclosed installations, should be placed in locations that do not interfere with proper ventilation. If instructions for enclosed installations are not provided, it must be assumed that unobstructed ventilation is required.

**7.** Temperature considerations: Electronic products should be installed in locations that do not significantly contribute to their operating temperature. Placement of this product close to heat sources such as; radiators, heat registers and other devices that produce heat should be avoided.

**8.** This product was NOT designed for use in wet/damp locations and should not be used near water or exposed to rain. Examples of wet /damp locations are; near a swimming pool, spa, tub, sink, or wet basement.

**9.** This product should be used only with the components supplied or; a cart, rack, or stand that is recommended by the manufacturer. If a cart, rack, or stand is used, please observe all safety markings and instructions that accompany the accessory product.

**10.** The power supply cord (plug) should be disconnected from the outlet when electronic products are to be left unused for extended periods of time. Cords should also be disconnected when there is a high probability of lightning and/or electrical storm activity.

**11.** Care should be taken that objects do not fall and liquids are not spilled into the enclosure through any openings that may exist.

**12.** Electrical/electronic products should be serviced by a qualified service person when:

- a. The power supply cord has been damaged; or
- b. Objects have fallen, been inserted, or liquids have been spilled into the enclosure through openings; or
- c. The product has been exposed to rain; or
- d. The product does not operate, exhibits a marked change in performance; or
- e. The product has been dropped, or the enclosure of the product has been damaged.

**13.** Do not attempt to service this product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

**14.** This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

**IMPORTANT:** The louder the sound, the shorter the time period before damage occurs.

**15.** Some Yamaha products may have benches and/or accessory mounting fixtures that are either supplied as a part of the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured BEFORE using. Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

## PLEASE KEEP THIS MANUAL

# Main Features

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Your Yamaha Electone is packed with many sophisticated functions. Yet it is amazingly easy to use. The main features are described here so that you can quickly understand the capabilities of your Electone.

Included among the main features are:

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## **Astoundingly True-to-life Sounds**

The new AWM (Advanced Wave Memory) tone generation system provides authentic, dynamic voices, making the Electone a truly expressive musical instrument. (See page 13.)

## **Expressive Touch Tone**

The Touch Tone function provides you with expressive control over the volume and timbre of a voice, making it possible to perfectly reproduce the subtle dynamic and tonal changes of actual instruments. (See page 15.)

## **Dynamic Rhythm Patterns**

The Rhythm section of the Electone features authentic drum and percussion sounds, ranging from Waltz to 16 Beat including convenient metronome function. (See page 16.) The Keyboard Percussion function is also provided for you to play the realistic percussion sounds from the Lower keyboard and pedalboard. (See page 18.)

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1. Basic Operation

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2. Voice Sections

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3. Effects

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4. Rhythms

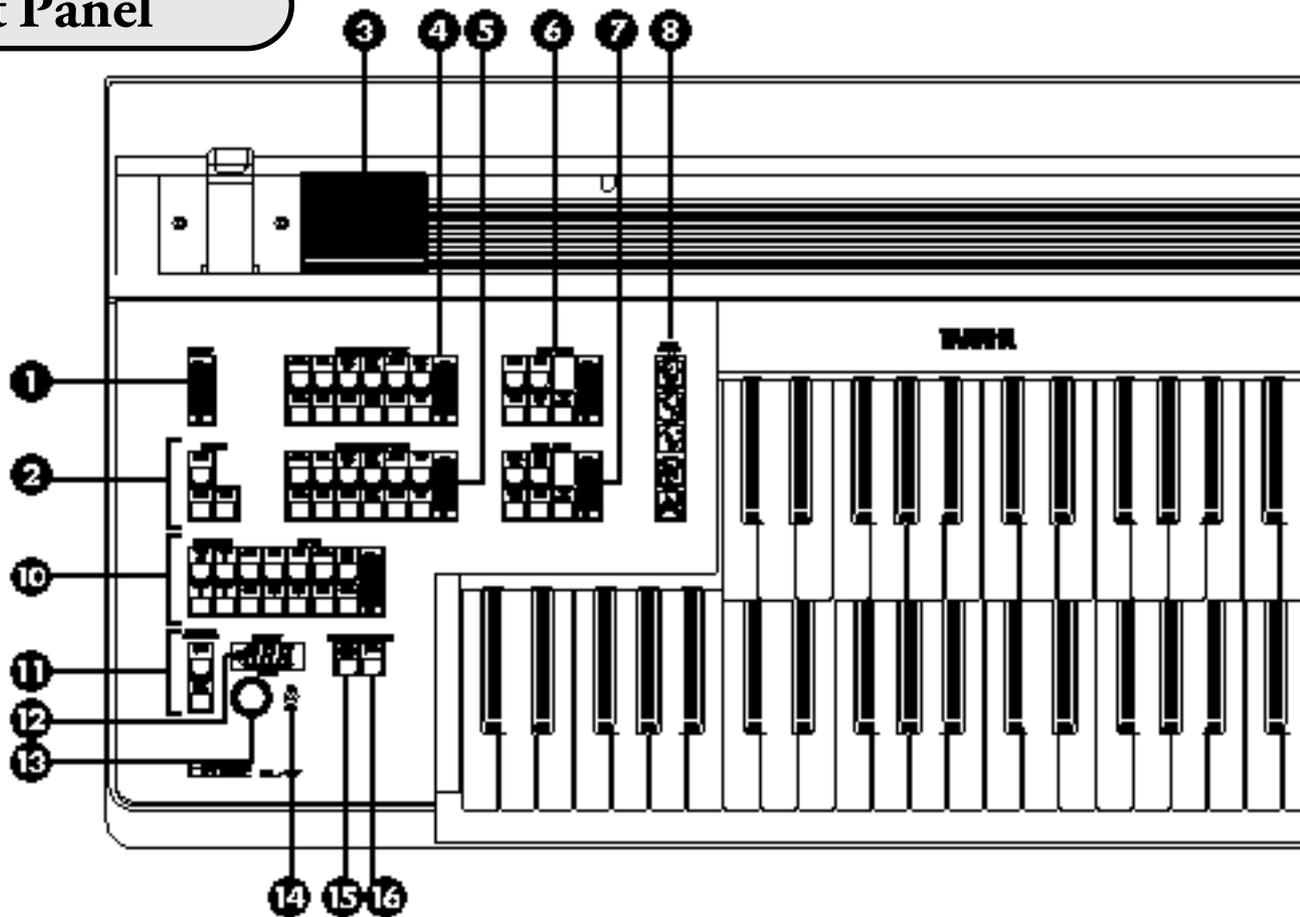
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Appendix

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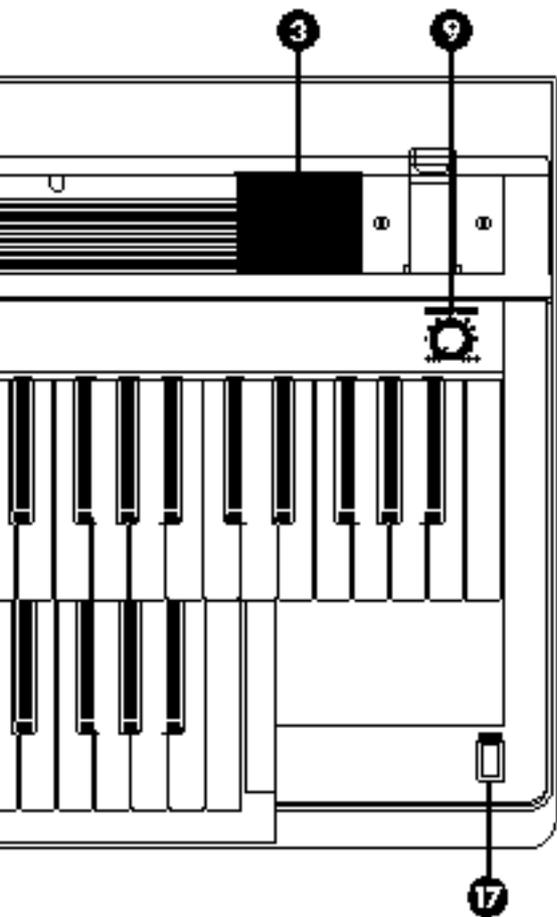
# Panel Controls

## Front Panel

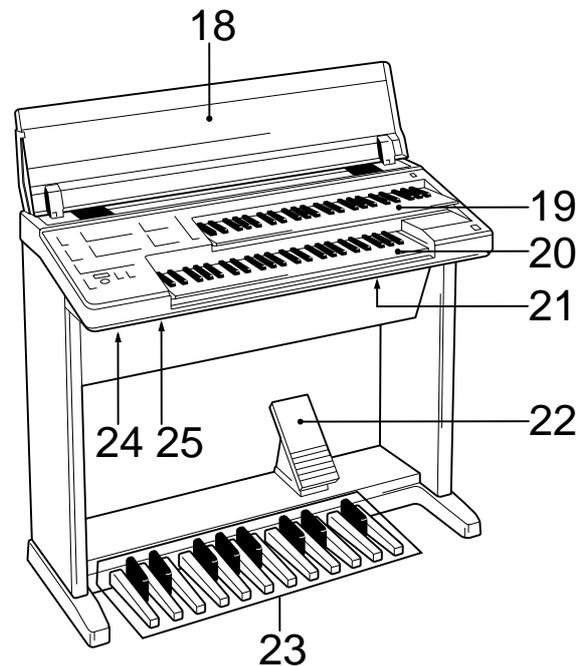


- 1 REVERB Buttons** (See page 15.)  
Adjust the Reverb effect for the entire sounds.
- 2 SUSTAIN Buttons** (See page 15.)  
Add the Sustain effects to Upper/Lower Keyboard and Pedalboard.
- 3 Monitor Speakers**  
Built-in speakers for your monitoring.
- 4 UPPER KEYBOARD VOICE Section**  
(See page 13.)  
Selects the Upper Keyboard voices and adjusts the volume.
- 5 LOWER KEYBOARD VOICE Section**  
(See page 13.)  
Selects the Lower Keyboard voices and adjust the volume.
- 6 LEAD VOICE Section** (See page 13.)  
Selects the LEAD voices and adjusts the volume.
- 7 PEDAL VOICE Section** (See page 13.)  
Selects the Pedal voices and adjusts the volume.
- 8 BASIC REGIST. (Basic Registration) Buttons** (See page 6.)  
Select the Basic Registrations.
- 9 MASTER VOLUME Control** (See page 4.)  
Adjusts the entire volume.
- 10 METRONOME/RHYTHM Section**  
(See page 16.)  
Selects a rhythm or metronome pattern and adjusts its volume level.
- 11 KEYBOARD PERCUSSION Buttons**  
(See page 18.)  
Used to play the percussion sounds with Lower Keyboard or Pedalboard.
- 12 BAR/BEAT / TEMPO Display** (See page 17.)  
Displays the rhythm tempo or bar/beat.

## Other Parts, Controls and Terminals



- 13 TEMPO Dial (See page 17.)**  
Adjusts the rhythm tempo.
- 14 BAR/BEAT Indicator (See page 17.)**  
Flashes to the first beat of every measure (or every beat).
- 15 SYNCRO START Button (See page 16.)**  
Puts the rhythm pattern in "stand-by" and enables the Lower keyboard or Pedalboard to start the rhythm.
- 16 START Button (See page 16.)**  
Used to start or stop the rhythm pattern.
- 17 POWER Switch (See page 4.)**  
Turns the EL-17 on/off.



- 18 Key Cover/Music Stand**
- 19 Upper Keyboard**
- 20 Lower Keyboard**
- 21 MIDI Jacks**
- 22 Expression Pedal (See page 4.)**  
Used to adjust the entire volume level during the performance.
- 23 Pedalboard**
- 24 AUX. OUT Jack (RCA/Mono)**  
This set of stereo outputs (RCA pin jacks) is for connection to external amplification/speaker systems. Typically, they are for direct connection to a home audio system or cassette deck.
- 25 HEADPHONES Jack**  
For connection of a stereo or monaural headphone set. When headphones are connected to this jack, sound to the Electone's built-in speaker system is automatically cut off, allowing you to play without disturbing others.

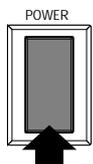
# 1. Basic Operation

No matter what your level of playing experience, we recommend that you take the time to go through this basic section. It shows you in the simplest possible manner how to start playing your Electone.

## Getting Started

Once you've set up your Electone and plugged the power cord into an electrical outlet, you're ready to get started and play.

- 1** Turn on the Electone by pressing the **POWER** switch.



**!** Yamaha products are manufactured specifically for the supply voltage in the area where they are to be sold. If you should move, or if any doubt exists about the supply voltage, please consult with a qualified technician.

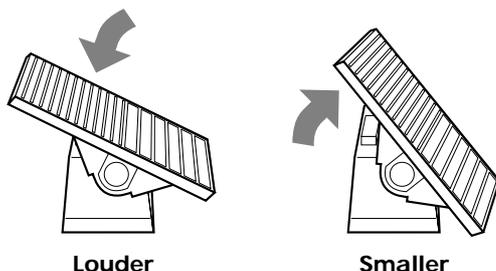
- 2** Set the **MASTER VOLUME** control. The **MASTER VOLUME** control is an overall control which affects the volume of the entire instrument.



**!** Turning the Electone off erases all panel settings you have made. When the Electone is turned on, Basic Registration 1 is automatically selected.

- 3** Press the **Expression pedal** down with your foot.

The Expression pedal also controls the entire volume of the Electone. Once you have set the **MASTER VOLUME** control to a suitable level, you can use the Expression pedal to change the volume with your foot as you play.



For now, press the pedal down slightly beyond the halfway point.

# Playing Back the Demonstration Songs

The Electone has five demonstration music pieces for your listening enjoyment. Try playing back the demos before you start to play.

**1 Press and hold down the PEDAL/DEMO button.**  
The five lamps in the BASIC REGIST. section will start blinking.

**2 Release the PEDAL/DEMO button.**  
The lamps above the Basic Registration buttons will go on blinking, indicating the Electone has entered the stand-by mode for playing back a demonstration song.

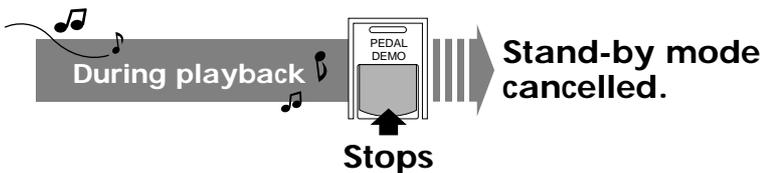
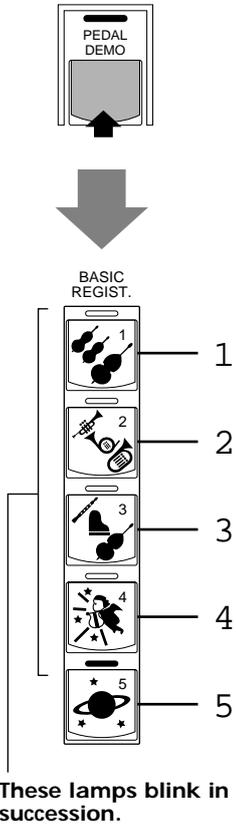
**3 Press the Basic Registration button you want to play back.**

The followings are the demo songs assigned to each Basic Registration Button:

- Basic Registration Button 1: **Eine Kleine Nachtmusik** W. A. Mozart
- Basic Registration Button 2: **London Bridge** English Folk Song
- Basic Registration Button 3: **To a Wild Rose** E. MacDowell
- Basic Registration Button 4: **Twinkle, Twinkle Little Star** French Folk Song
- Basic Registration Button 5: **Comical Train** M. Watanabe

The demo song you have selected will start.  
When playback of the demo song is completed, the lamps will start blinking again, indicating that the Electone is ready to play the demo songs again.

**4 Press the PEDAL/DEMO button again to cancel the stand-by mode.**  
You can also cancel the stand-by mode and stop the playback while a demo is being played back.



**NOTE** During demo playback, only the Basic Registration buttons and PEDAL/DEMO button can be used. All other controls, as well as the keyboard, are temporarily disabled.

**NOTE** The demo function does not operate while the MDR-4 (the optional Music Disk Recorder), if installed, is played back.

# Playing Your Electone

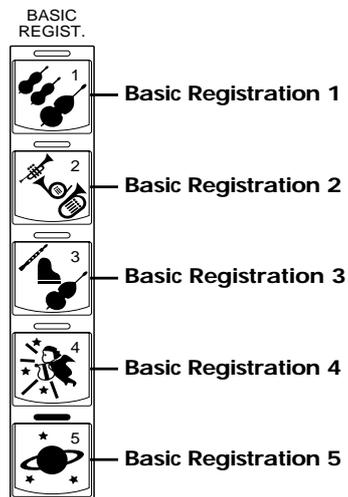
As a performance aid, the Electone includes convenient Basic Registrations that let you instantly change the voices and other settings for all of the keyboards, even as you play. Each registration is pre-programmed to be used for a specific music style or instrumental combination.

## Basic Registrations

The Basic Registration section has five factory preset registrations, each with a different set of voices for the Upper/Lower keyboards and Pedalboard, and each of which is specially suited for playing in a different music style.

When you turn the power on, the Electone automatically selects Basic Registration 1. If another registration has been selected (the lamp on the button will be lit), press the button for Basic Registration 1.

The chart below lists the voices that have been set for the Upper/Lower keyboards and Pedalboard.



	Basic Registration 1	Basic Registration 2	Basic Registration 3	Basic Registration 4	Basic Registration 5
Upper Keyboard Voice	Strings	Brass	Flute	Cosmic(1)	Synth.Brass
Lower Keyboard Voice	Strings	Horn	Piano	Cosmic2	Cosmic3
Pedal Voice	Contrabass	Tuba	Contrabass	Cosmic2	Synth.Bass

Now, try out all five Basic Registrations with the following music examples. Press the appropriate buttons to select the registrations. Each music example has been chosen to best suit its companion registration.

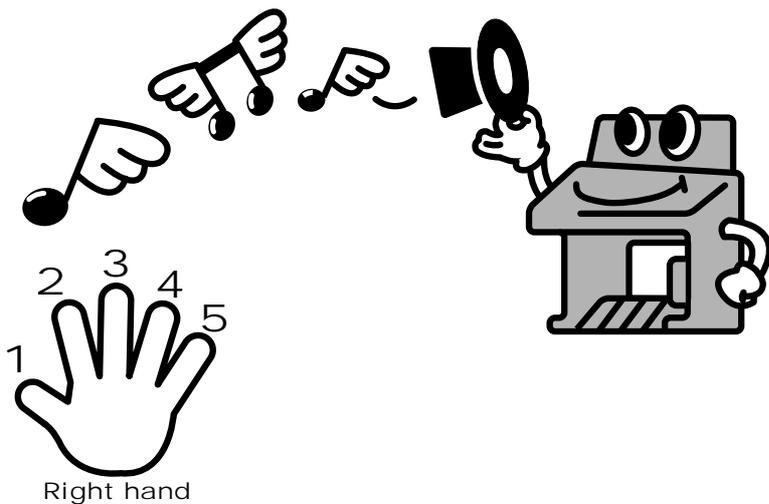
**NOTE** When the Electone is turned on, Basic Registration 1 is automatically selected.

**NOTE** The voices, Cosmic 2, Cosmic 3, Synth. Brass and Synth. Bass, used in the Basic Registrations are not selectable from the panel voice buttons.

**NOTE** The rhythm (except for metronome) volume and tempo will be reset to each default value (volume: 0, tempo: 120) when one of the Basic Registrations is selected.

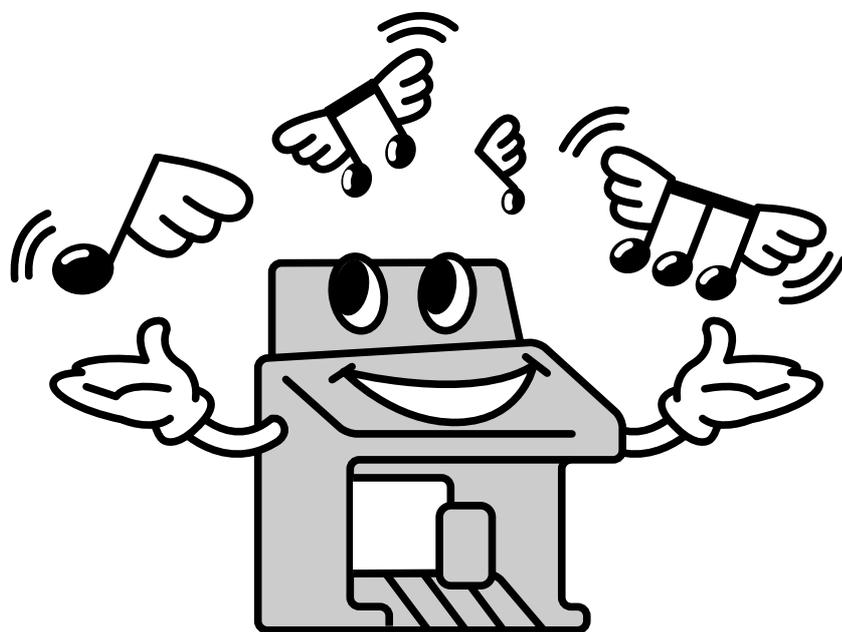
# Symphonie No.9 L. Beethoven

Try playing with your right hand.



A musical staff in treble clef with a common time signature. The notes are: E4 (finger 3), E4 (finger 3), F4 (finger 4), G4 (finger 5), G4 (finger 5), F4 (finger 4), E4 (finger 3), D4 (finger 2), C4 (finger 1), C4 (finger 1), D4 (finger 2), E4 (finger 3), E4 (finger 3), D4 (finger 2), D4 (finger 2). Chords C and G7 are indicated above the staff.

A musical staff in treble clef with a common time signature. The notes are: E4 (finger 3), E4 (finger 3), F4 (finger 4), G4 (finger 5), G4 (finger 5), F4 (finger 4), E4 (finger 3), D4 (finger 2), C4 (finger 1), C4 (finger 1), D4 (finger 2), E4 (finger 3), E4 (finger 2), C4 (finger 1), C4 (finger 1). Chords C, G7, and C are indicated above the staff.



Next, play the accompaniment parts with your left hand and foot in addition to playing the melody line.



# When the Saints Go Marchin' in American Folk Song

Accompaniment pattern

# Romance de L'amour

Spanish Folk Song

## Accompaniment pattern

5 4 3 2 1  
Left hand

3/4

Pedal  
Left foot

Am

Am 5 3 1

Am 5 4 3 Dm E7

Am 5 3 1

Dm 5 2 1

E7 5 2 1

Am E7 Am

Am 5 3 1

E7 5 2 1

Am 5 3 1

# Twinkle, Twinkle Little Star

French Folk Song

## Accompaniment pattern

The diagram illustrates the accompaniment pattern. On the left, a hand is shown with fingers numbered 1 to 5, labeled "Left hand". Below it, a foot is shown with the left foot labeled "Left foot". The main part of the diagram shows a piano keyboard with a sequence of chords: C, F, C, G7, C, G7, C. The left hand plays a steady eighth-note accompaniment pattern: C (5 2 1), F (5 3 1), C (5 2 1), G7 (5 3 1), C (5 2 1), G7 (5 3 1), C (5 2 1). The right hand plays a melody of quarter notes: C (1), C (1), G (4), G (4), F (5), F (5), C (4), G7 (4), C (3), C (3), G7 (2), G7 (2), C (1).

The first system of musical notation shows the right hand melody and the left hand accompaniment. The right hand melody is written on a treble clef staff in 2/4 time, with notes: C (quarter), C (quarter), G (quarter), G (quarter), F (quarter), F (quarter), C (quarter), G7 (quarter), C (quarter), C (quarter), G7 (quarter), G7 (quarter), C (quarter). The left hand accompaniment is shown below the staff with fingerings: C (5 2 1), F (5 3 1), C (5 2 1), G7 (5 3 1), C (5 2 1), G7 (5 3 1), C (5 2 1). Chord symbols C, F, C, G7, C, G7, C are placed above the right hand staff.

The second system of musical notation shows the right hand melody and the left hand accompaniment. The right hand melody is written on a treble clef staff in 2/4 time, with notes: C (quarter), G7 (quarter), C (quarter), G7 (quarter), C (quarter), G7 (quarter), C (quarter), G7 (quarter), C (quarter), C (quarter), G7 (quarter), G7 (quarter), C (quarter). The left hand accompaniment is shown below the staff with fingerings: C (5 2 1), G7 (5 3 1), C (5 2 1), G7 (5 3 1). Chord symbols C, G7, C, G7, C, G7, C, G7 are placed above the right hand staff.

The third system of musical notation shows the right hand melody and the left hand accompaniment. The right hand melody is written on a treble clef staff in 2/4 time, with notes: C (quarter), C (quarter), G (quarter), G (quarter), F (quarter), F (quarter), C (quarter), G7 (quarter), C (quarter), C (quarter), G7 (quarter), G7 (quarter), C (quarter). The left hand accompaniment is shown below the staff with fingerings: C (5 2 1), F (5 3 1), C (5 2 1), G7 (5 3 1). Chord symbols C, F, C, G7, C, G7, C are placed above the right hand staff.

# Chopsticks Hilster

Accompaniment pattern

The diagram illustrates the Chopsticks accompaniment pattern. On the left, a hand is shown with fingers numbered 1 to 5. Below it, a foot is shown with the label 'Left foot'. The main part of the diagram is a musical staff with 14 vertical stems. The stems alternate between being solid black and having a wavy line through them, representing the rhythmic pattern of the Chopsticks accompaniment.

Musical staff 1: Treble clef, 4/4 time signature. Chords: G7, C, G7. Fingerings: 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 4, 4, 4.

Three piano keyboard diagrams showing the fingering for G7, C, and G7 chords. The G7 chord is shown with fingers 5, 3, 1. The C chord is shown with fingers 5, 2, 1. The G7 chord is shown with fingers 5, 3, 1.

Musical staff 2: Treble clef, 4/4 time signature. Chords: G7, C, G7. Fingerings: 4, 4, 4, 5, 5, 5, 4, 3, 2, 2, 2, 2, 2, 2, 2.

Three piano keyboard diagrams showing the fingering for G7, C, and G7 chords. The G7 chord is shown with fingers 5, 3, 1. The C chord is shown with fingers 5, 2, 1. The G7 chord is shown with fingers 5, 3, 1.

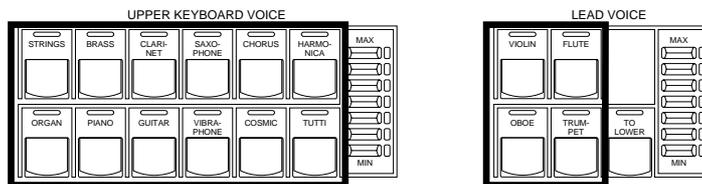
Musical staff 3: Treble clef, 4/4 time signature. Chords: C, G7, C. Fingerings: 2, 2, 2, 2, 2, 3, 4, 4, 4, 4, 4, 4, 5, 5, 5.

Three piano keyboard diagrams showing the fingering for C, G7, and C chords. The C chord is shown with fingers 5, 2, 1. The G7 chord is shown with fingers 5, 3, 1. The C chord is shown with fingers 5, 2, 1.

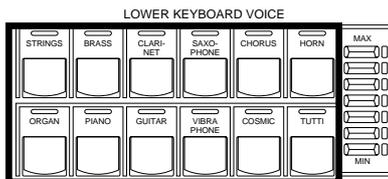
## Selecting Voices

Try playing the voices not assigned in the Basic Registration section.

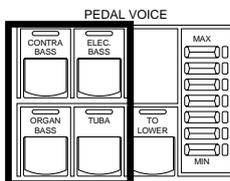
Select the voice to play on the Upper Keyboards from the Upper Keyboard voices/Lead voices. The LED (s) will be lit above the selected voice button.



Select the voices to play on the Lower Keyboards from the Lower Keyboard voices.



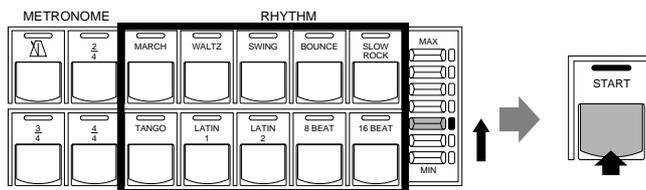
Select the voices to play on the Pedalboards from the Pedalboard voices.



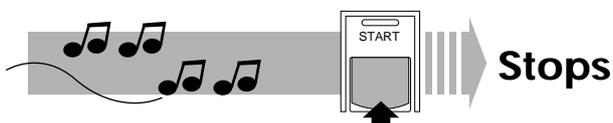
**NOTE** You can play the Lead/Pedal voices on the Lower Keyboards. (See page 14.)

## Selecting Rhythm Patterns

Try playing the Electone to the rhythm or metronome. When one of the Basic Registration is selected, the rhythm volume is automatically set to "0". Set the rhythm volume to any value but 0 before starting the rhythm. After pressing the desired rhythm button to select the rhythm, press the START button in the Rhythm section.



The rhythm starts to play. Pressing the START button again stops the rhythm.



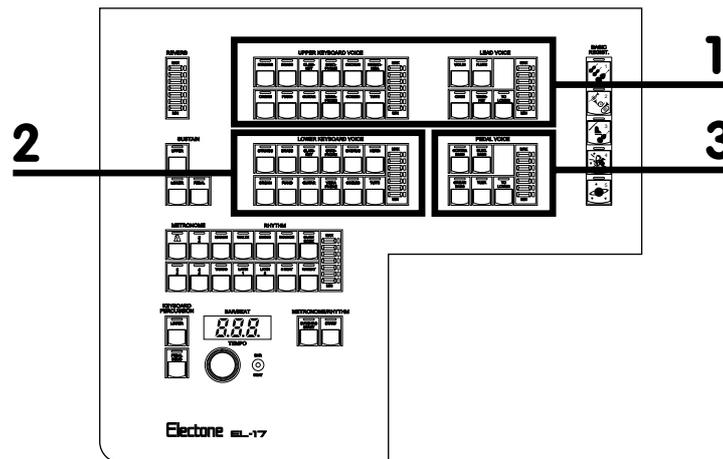
You can also adjust the rhythm tempo by turning the TEMPO dial, as indicated in the illustration below. Turning the dial clockwise makes it faster and turning it counterclockwise slower. (See page 17 for details.)



# 2. Voice Sections

The Electone has four voice sections: Upper Keyboard Voice, Lead Voice, Lower Keyboard Voice, and Pedal Voice. The Lead voices are playable from the Upper keyboard.

## Selecting Voices from the Panel



**1** Select a voice from the Upper Keyboard Voice or the Lead Voice sections for the Upper Keyboard by pressing one of the Voice buttons in those sections.

The LED above the selected voice lights up.

**NOTE** The LED (s) may not be lit, when the Basic Registration 3, 4 or 5 that contains the voices not selectable from the EL-17 panel is selected.

**2** Select a voice from the Lower Keyboard Voice section by pressing one of the Voice buttons in that section.

The LED above the selected voice lights up.

**NOTE** The Lead voice and Pedal voice sounds one note at a time; when you simultaneously press two or more keys, only the highest note will sound.

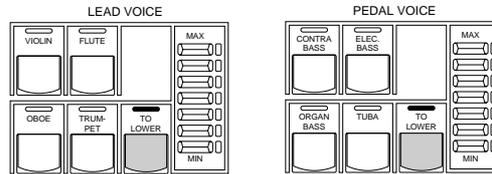
**3** Select a voice from the Pedalboard Voice section by pressing one of the Voice buttons in that section.

The LED above the selected voice lights up.

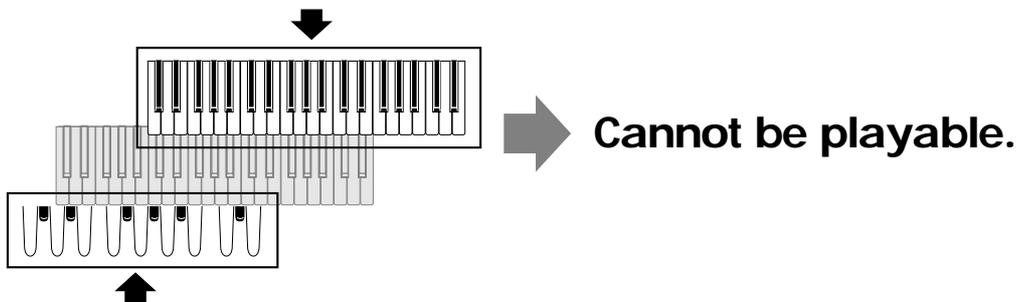
**!** Turning the Electone off erases all panel settings you have made. When the Electone is turned on, Basic Registration 1 is automatically selected.

## PLAYING LEAD AND PEDAL VOICES FROM THE LOWER KEYBOARD:

The Electone has a special "To Lower" function that lets you assign Lead or Pedal voices to the Lower keyboard. Simply press the TO LOWER button in the voice section you wish to assign, and that voice will be playable from the Lower keyboard.

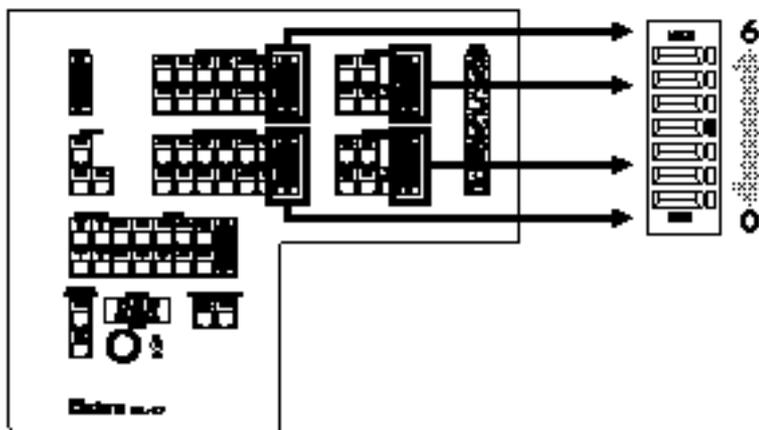


- If the sustain is set to the original Pedal voices, the voices assigned to the Lower keyboards are playable with sustain as well.
- The Lead Voice/Pedal voice cannot be played on the Upper keyboard/Pedalboard, if the Lead voice or Pedal voice is assigned to the Lower keyboard.



## Setting the volume for the voice sections

Use the VOLUME controls of each voice section on the panel to set the desired level for each voice. The controls have seven volume settings, from a minimum of 0, or no sound, to a maximum of full volume.



**NOTE** Depending on the Basic Registration selected, the two LEDs may be lit, indicating the volume is set to the middle of the two positions.

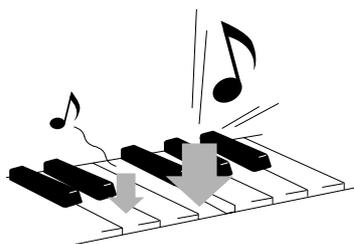
**NOTE** The volume of the voice assigned to the Lower Keyboard is adjusted by the volume controls of the original voice section.

# 3. Effects

The effects equipped with your Electone can be applied to each voice.

## Touch Tone

The Touch Tone function gives you expressive control over the volume and timbre of a voice. All voices are provided with this expressive function, making it possible to perfectly reproduce the subtle dynamic and tonal changes of actual instruments.



The volume or timbre will change depending on how hard you press down the keys.

**NOTE** Two types of keyboard touch affect this function: Initial Touch and After Touch. The Initial Touch controls volume and timbre according to the velocity at which you strike the keys. The harder you strike the keys, the greater the volume and the brighter the timbre will become. The After Touch controls volume and timbre according to the pressure you apply to the keys after playing them. The harder you press down on the keys, the greater the volume and the brighter the timbre will become. However, these are preset to each voice and cannot be adjusted.

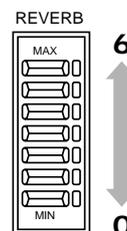
**NOTE** The Touch Tone cannot be applied to the Pedal voices. It is also ineffective for the Organ voice. The After Touch cannot be applied to the Percussive voices such as Piano and Vibraphone.

## Reverb

Reverb adds an echo-like effect to the sound, giving the impression of a performance in a large room or concert hall. The effect is applied equally and simultaneously to all voice sections.

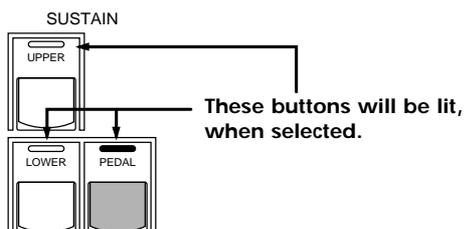
**To adjust the reverb effect:**

Press one of the REVERB buttons, located at the far left of the panel. These controls determine the depth of the reverb effect. There are seven settings, from a minimum of 0, or no reverb, to the maximum.



## Sustain

Sustain is selectable for the Upper, Lower and Pedal voices and makes the sound gradually fade out when the keys are released. The sustain on/off settings are independent for each keyboard, providing maximum expressive control.



**NOTE** Sustain cannot be applied to the Lead voices.

**NOTE** The Sustain length depends on the selected voices.

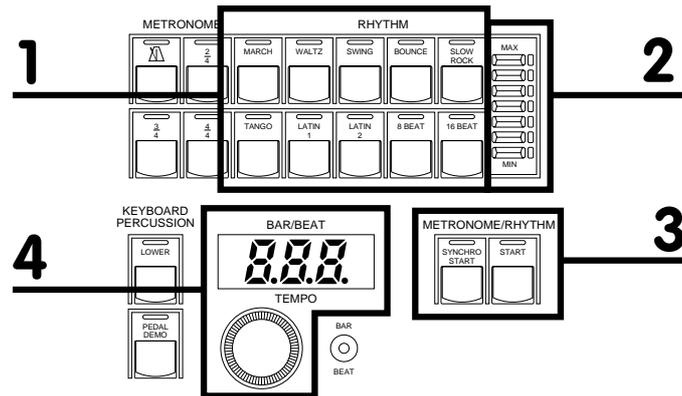
**To add Sustain to the voices:**

Press the desired button in the SUSTAIN section.  
The lamp of the button lights up to indicate that Sustain is on.  
Press the button again to turn Sustain off.

# 4. Rhythms

The Electone features various rhythm patterns and metronomes that can be instantly selected from the panel.

## Selecting Rhythm Patterns



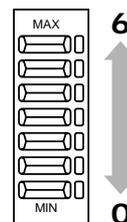
**1** Choose a rhythm pattern by pressing one of the buttons in the Rhythm section on the panel.

The selected Rhythm button's LED lights up.

**NOTE** When turned on, the rhythm volume and its tempo will be reset to 0 and 120, respectively.

**2** Set the volume.

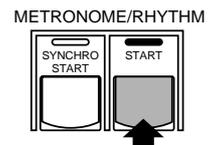
Use the VOLUME controls to the right of the Rhythm buttons to set the desired level of the rhythm. The controls have seven volume settings, from a minimum of 0, or no sound, to a maximum of full volume.



**3** Turn the rhythm on. You can use one of two buttons to turn on the rhythm:

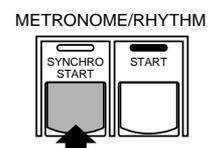
**START:**

This button does as its name indicates; the rhythm begins as soon as the button is pressed. To stop the rhythm, press this button again.



**SYNCHROSTART:**

This button puts the rhythm pattern in "stand-by"; the rhythm will start when you press a note on the Lower keyboard or Pedalboard. To stop the rhythm, press this button again.

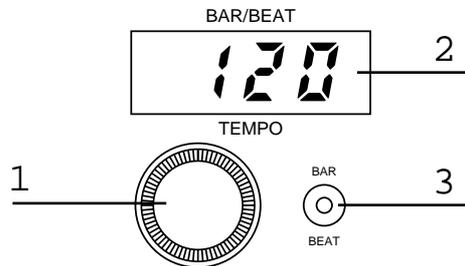


# 4 Set the tempo.

Set the tempo of the rhythm by turning the TEMPO dial.  
The tempo is automatically set to 120 when the Electone is turned on.



## About the Rhythm Tempo



### 1 TEMPO Dial

Adjusts the rhythm tempo. Turn the dial clockwise to increase the tempo, and turn it counterclockwise to decrease it. The tempo range is 40 to 240 beats per minute.

### 2 TEMPO Display / BAR/BEAT Display

Shows the current tempo while the rhythm is stopped.



When the rhythm pattern begins playing, the TEMPO display changes function to a BAR/BEAT display.



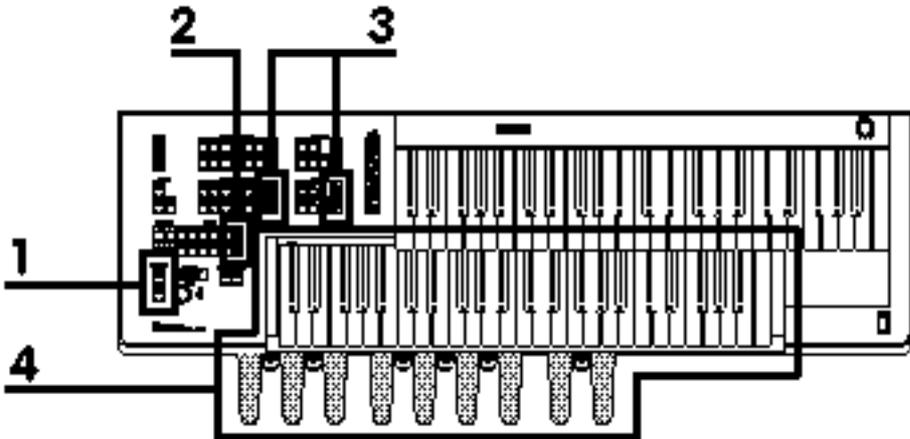
### 3 BAR/BEAT Indicator

Flashes every first beat in each bar during playback. Flashes every beat until the rhythm actually starts after the SYNCROSTART button has been pressed.

**NOTE** When one of the Basic Registration is selected, the rhythm volume and its tempo will be reset to 0 and 120, respectively.

# Playing Keyboard Percussion

The various drum and percussion sounds (a total of 43 are available) have been assigned to the Lower keyboard and Pedalboard for you to play.

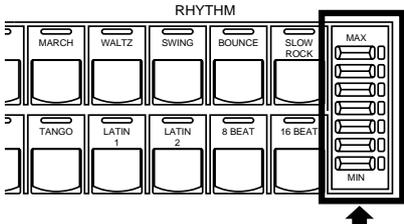


To play the Keyboard Percussion sounds:

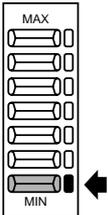
**1** Turn on the Keyboard Percussion function by pressing one of the LOWER or PEDAL buttons in the KEYBOARD PERCUSSION section.



**2** Set the volume. The volume of the percussion sounds is set together with that of the rhythm by using the VOLUME controls in the Rhythm section. Set the volume to the desired level.



**3** Turn off the Lower/Pedal voices by setting each voice's volume to MIN.



**4** Play some notes on the Lower keyboard/Pedalboard. The various percussion sounds (a total of 43 are available) have been assigned to the keyboards as shown in the illustration below.



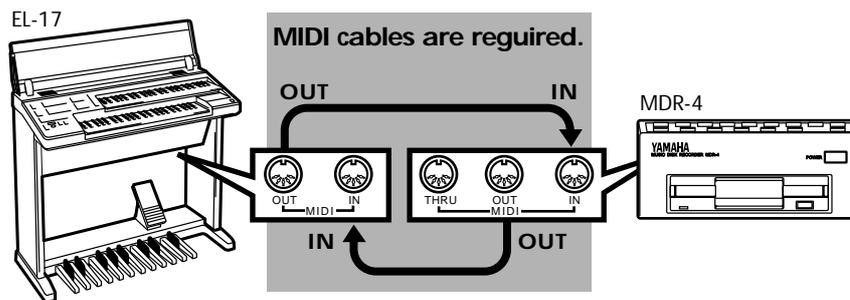
# Appendix

## MIDI

MIDI is an acronym that stands for Musical Instrument Digital Interface, which allows electronic musical instruments to communicate with each other, by sending and receiving MIDI messages.

On the right underside of the Electone keyboard you will find the MIDI IN/OUT jacks. If your Electone is connected with external devices via these MIDI jacks and appropriate MIDI settings are done, you can play an external MIDI device such as synthesizer from your Electone keyboard or your Electone can be played by an external device such as sequencer.

The optional Yamaha Music Disk Recorder MDR-4 is also connected with EL-17 via MIDI jacks using commercially available MIDI cables.



To communicate with each other, the MIDI transmit/receive channels of the external MIDI device must match the receive/transmit channels of your EL-17 since the MIDI channels of the EL-17 are preset to the following numbers.

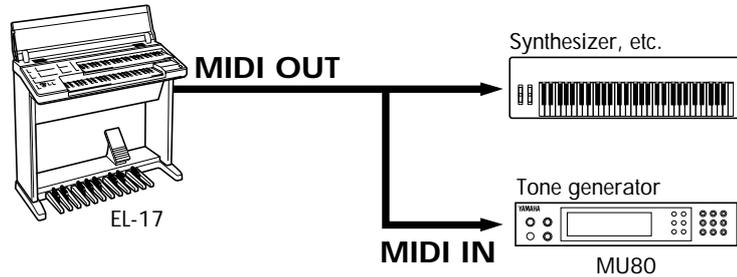
External MIDI Devices	Trasmit/Receive
Upper keyboard	Channel 1
Lower keyboard	Channel 2
Pedalboard	Channel 3
Keyboard Percussion (receive only)	Channel 15
Control (Operation data including the Expression pedal controls and Basic Registration changes.)	Channel 16

**NOTE** See page 25 for more detailed information on the MIDI messages.

## Setting Examples

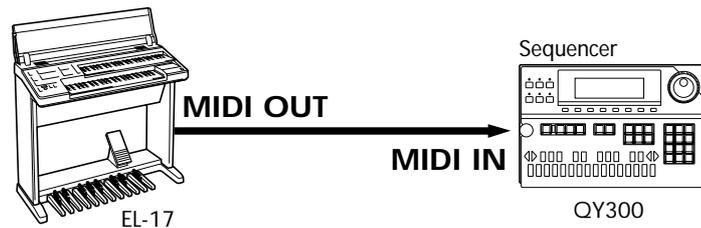
### 1. Using MIDI OUT jack

If a MIDI keyboard or tone generator is properly connected:



- Playing your Electone can cause the MIDI keyboard (or tone generator) to be played using its own voices, accomplishing thick sound layers. (The MIDI receive channel of the MIDI keyboard must match the transmit channel of your Electone.)
- Various messages including the values how far the expression pedal is pressed down and how hard you play the Electone keyboard can be transmitted as digital data. However, whether and how the external device responds or not depends on the external device you have connected.

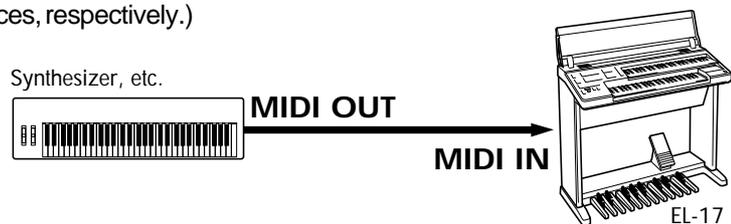
If a MIDI sequencer is properly connected:



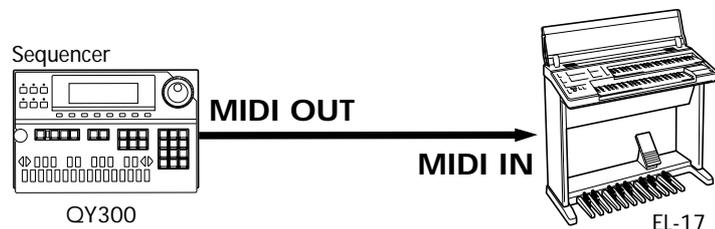
- Your performance data on the EL-17 can be recorded onto an external MIDI sequencer.
- The various messages including the program changes and control changes can be recorded onto an external MIDI sequencer.

### 2. Using MIDI IN jack

- Playing the external MIDI keyboard can cause your Electone to be played using Electone's voices. (The MIDI transmit channel of the MIDI keyboard must match the receive channel of your Electone. The channels 1, 2 and 3 for the Upper, Lower and pedal voices, respectively.)

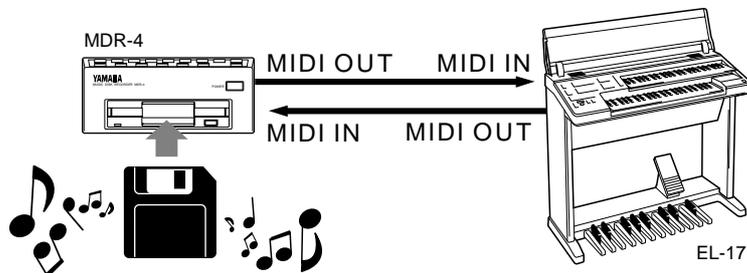


- The performance data recorded to the external MIDI sequencer can be played back using the EL-17.



## About MDR-4

The optional Music Disk Recorder MDR-4 is a sophisticated recording device that lets you record your performances and play back them at any time. It works like a cassette tape recorder, but it records performance data instead of sounds.



The main features of the MDR-4 are as follows:

- Recording your performance and playing back it.
- Separate recordings for each voice section: Upper/Lower keyboard and Pedalboard.
- Canceling the recording and retrying it from scratch.
- Making recording of the keyboard percussion.
- Enabling you to pause, fast-forward and fast-reverse during playback.
- Playing back the specified parts only.
- Playing back all of the songs (or a specified song) saved in the floppy disk repeatedly.
  
- Changing the tempo of the recorded songs.
- Restoring to the original tempo if the tempo has been changed.
- Copying the recorded song to the other song number.
- Deleting the recorded songs.

The data created by the EL-17 using MDR-4 can be played back with the upper models such as EL-37.

Data created by the upper models such as EL-37 may not be properly played back by the EL-17 using the MDR-4, since the number of voices, rhythms and functions of the EL-17 are fewer than the ones of the upper models.

# Troubleshooting

Please note that the appearance of any of following phenomena does not indicate a mechanical failure of the Electone.

<b>Problem</b>	<b>Possible Cause and Solution</b>
<b>No sound is produced from the Electone's speakers.</b>	The plug of the cable from the speaker unit is disconnected. Refer to the separate "Assembly Instructions", and reconnect the plug securely.
<b>A cracking noise is sometimes heard.</b>	Noise may be produced when either an electrical appliance is turned on or off, or an electric power tool (such as drill) is used in the proximity of the Electone. If this occurs, plug the Electone into an electrical outlet located as far as possible from the device that seems to be the source of the problem.
<b>Interference from radio, TV, or other sources occurs.</b>	This is caused by the proximity of a high-power broadcasting station or amateur ham radio setup.
<b>The sound of the Electone causes surrounding objects to resonate.</b>	Because the Electone is capable of producing powerful bass sounds, resonance may be caused in surrounding objects, such as cabinets or glass windows. To avoid this, relocate the objects or lower the Electone's volume.
<b>When too many keys are pressed, not all of the notes sound.</b>	Total polyphonic capacity (notes sounding for both Upper and Lower Keyboards) is 10 notes.
<b>When keys on the Lower keyboard or Pedalboard are pressed, the sounds of percussion instruments are also heard.</b>	The Keyboard Percussion function has been turned on. When not using the function, be sure to turn it off. (See page 18.)
<b>Only one sound is heard when two notes of the Lead or Pedal voices are simultaneously played.</b>	For practical performance reasons, the Electone has been designed so that one note of the Lead or Pedal voices can be played at a time. If several keys are pressed at once, only the highest note will be sounded (high-note priority).
<b>The Pedal voices, or the Lead voices from the Upper keyboard do not sound, even though the volume is properly set.</b>	To Lower function is on. Turn off the function by pressing the appropriate buttons in the Pedalboard or Lower keyboard section.
<b>The rhythm does not start.</b>	Check the volume level of the RHYTHM Section.

# Specifications

<b>KEYBOARD</b>		Upper: 49 keys (C-C), Lower: 49keys (C-C), Pedal: 20 keys (C-G)
<b>TOUCH TONE</b>		Upper/Lower keyboard voice, Lead Voice
<b>VOICE</b>	<b>Tone Generation</b>	New AWM
	<b>Upper/Lower</b>	Strings, Brass, Clarinet, Saxophone, Chorus, Organ, Piano, Guitar, Vibraphone, Cosmic, Tutti, [Upper] Harmonica, [Lower] Horn; (Synth. Brass, Cosmic 2 & 3 = Basic Registration); Volume
	<b>Lead</b>	Violin, Flute, Oboe, Trumpet; To Lower; Volume
	<b>Pedal</b>	ContraBass, Elec.Bass, Organ Bass, Tuba, (Synth. Bass = Basic Registration); To Lower; Volume
<b>EFFECT</b>	<b>Reverb</b>	Depth
	<b>Sustain</b>	Upper, Lower, Pedal; ON/OFF
<b>RHYTHM</b>	<b>Rhythms</b>	March, Waltz, Swing, Bounce, Slow Rock, Tango, Latin 1 (Cha-cha), Latin 2 (Samba), 8 Beat, 16 Beat; Metronomes (4); Volume
	<b>Others</b>	Start/Stop, Synchro Start, Tempo Dial, LED Display
<b>KEYBOARD PERCUSSION</b>		Lower, Pedal; ON/OFF
<b>BASIC REGISTRATION</b>		1-5
<b>OTHER CONTROLS</b>		Power On/Off, Expression Pedal, Master Volume, Demo Songs (5)
<b>OTHER FITTINGS</b>		Matching Bench, Key Cover/Music Stand, Headphones Jack, MIDI IN /OUT jacks, AUX OUT jack (RCA; Mono)
<b>OPTIONAL ACCESSORIES</b>		MDR-4 Music Disk Recorder, HPE-170 Headphones
<b>SOUND SYSTEM</b>	<b>Amplifier</b>	30 W
	<b>Speaker</b>	(2-way ) Woofer 20cm x 1, Tweeter 5cm x 1, Monitor x 2
<b>DIMENSIONS</b> (Width x Depth x Height)		107.7 cm x 46.5 cm x 89.5 cm
<b>WEIGHT</b>		48 kg

Specifications and descriptions in this Owner's Manual are for information purposes only. Yamaha Corp. reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

# MIDI Messages

## Channel Messages

Code	Function	Transmit	Receive	Remarks
8n, nn*, 00-7F	Note OFF	× × × ×	CH 1 CH 2 CH 3 CH 15	UK LK PK Keyboard Percussion
9n, nn*, 00 01-7F	Note OFF ON	CH 1 CH 2 CH 3 ×	CH 1 CH 2 CH 3 CH 15	UK LK PK Keyboard Percussion
BF, 0B, 00-7F	Expression Pedal	CH 16	CH 16	Control
Cn,70-74**	Program Change	× × × CH 16	CH 1 CH 2 CH 3 CH 16	UK LK PK Control
Dn, 00-7F	After Touch	CH 1 CH 2	CH 1 CH 2	UK LK

\* Note No.

\*\* Basic Regist No.

## System Realtime Messages

Code	Function	Transmit	Receive	Remarks
F8	Clock		*	
FA	Start			
FC	Stop			
FE	Active Sensing			

\* Receive = Ext. mode only.

# System Exclusive Messages

## 1. Electone Common Messages

	Code	Messages	Transmit	Receive
<b>Bulk Dump Related Messages</b>	F0, 43, 70, 70, 30, F7	Request-to-send Model ID Data	×	×
<b>Control Change Messages</b>	F0, 43, 70, 70, 40, 50, Tl*, Th** F7	TEMPO		
<b>MDR Related Messages</b>	F0, 43, 70, 70, 01, F7	Play	×	
	02	Stop	×	
	03	Record	×	
	04	Stop	×	
	05	Fastforward	×	
	06	Stop	×	
	09	Rhythm Pointer Reset***	×	
<b>Others</b>	F0, 43, 70, 70, 78, SC, NC, F7	Bar signal		

\*l=Low byte

\*\*h=High byte

\*\*\* In fast-reverse, the Rhythm Pointer Reset and fast-forward signals are transmitted.

## 2. EL Series Common Messages

Code	Messages	Transmit	Receive
F0, 43, 70, 78, 41 ...(Data)*... F7	Panel Switch Event Data**		
F0, 43, 70, 78, 42 ...(Data)*... F7	Current Registration Data		

(Data)\* = Exclusive data

\*\* Refer to the Switch Cord

## 3. Model-Specific Messages

Code	Messages	Transmit	Receive
F0, 43, 70, nn*, 00, F7	Mpdel ID Data		×

\* nn can be sent/received by 44 (EL-17).

## 4. Electone/Single Keyboard Common Messages

Code	Messages	Transmit	Receive
F0, 43, 73, 01, 02, F7	Request for Internal Synchronous Mode	×	
03	Request for External Synchronous Mode	×	

## Switch Code

F0, 43, 70, 78, 41, Code, Data, F7

Functions	Switches	Code	Data	Remarks
Selector	UK Voices	02	02-0D	SW No.
	LK Voices	03	02-0D	SW No.
	LEAD	06	01-04	SW No.
	PK Voice	07	01-04	SW No.
	Rhythm	0B	00-0B	SW No.
Volume	UK Voices	12	00-7F	Volume Data
	LK Voices	13	00-7F	Volume Data
	LEAD	16	00-7F	Volume Data
	PK Voice	17	00-7F	Volume Data
	Rhythm	1A	00-7F	Volume Data
	Reverb	1B	00-7F	Depth Data
To Lower	LEAD	36	00-01	00=OFF 01=ON
	PK Voice	37	00-01	00=OFF 01=ON
Sustain	UK	50	00-01	00=OFF 01=ON
	LK	51	00-01	00=OFF 01=ON
	PK	52	00-01	00=OFF 01=ON
Keyboard Percussion	LK	5B	00-01	00=OFF 01=ON
	PK	5C	00-01	00=OFF 01=ON
Metronome (Rhythm Sequence)	1	61	00-01	00=OFF 01=ON
	2	62	00-01	00=OFF 01=ON
	3	63	00-01	00=OFF 01=ON
	4	64	00-01	00=OFF 01=ON

# EL-17 MIDI Implementation Chart

Date:1. AUG.1995  
Version: 1.0

Function		Transmit	Receive	Remarks
Basic Channel	Default Changed	1, 2, 3, 16 *****	1, 2, 3, 15, 16 *****	***
Mode	Default Messages Altered	Mode 3 x *****	Mode 3 x x	
Note Number	True Voice	36-96 * *****	36-96 **	
Velocity	Note ON Note OFF	9nH, v=1-127 9nH, v=0	9nH, v=1-127 9nH, v=0, 8nH	
After Touch	Key's Ch's	x 1, 2	x 1, 2	
Pitch Bend		x	x	
Control Change	1 4 11 64	x x  x	x x (Received only in External mode) x	Modulation Wheel 2nd Expression Pedal Expression Pedal  Sustain
Program Change	Range	112-116 *****	112-116 *****	
System Exclusive				Refer to MIDI Messages
System Common	Song Position Song Select Tune	x x x	x x x	
System Real Time	Clock Commands		(Received only in External mode)	(FAH, FCH)
Aux Messages	Local ON/OFF All Notes OFF Active Sense Reset	x x  x	x x  x	
Notes		* CH 1: 48-96, CH2: 36-84, CH3: 36-55 ** CH15: 36-127, Others: 36-96 *** CH1: UK, CH2: LK, CH3: PK, CH15: KEYBOARD PERCUSSION, CH16: CONTROL		

Mode 1: OMNI ON, POLY  
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO  
Mode 4: OMNI OFF, MONO

: YES  
x : NO

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