

YAMAHA



ELECTONE

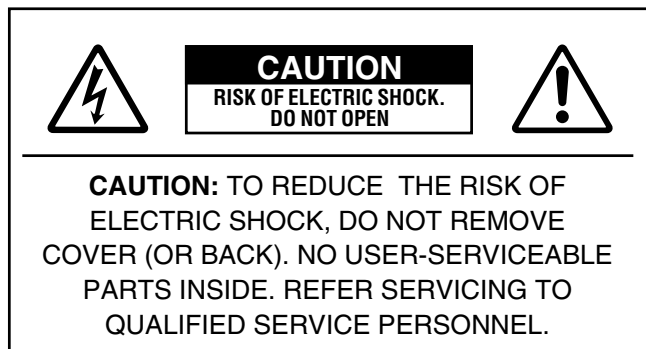
OWNER'S

MANUAL

YAMAHA Electone  
**EL-37**  
OWNER'S MANUAL

# SPECIAL MESSAGE SECTION

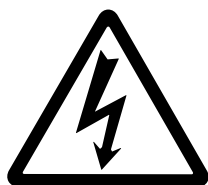
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See the name plate for graphic symbol markings.



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**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:

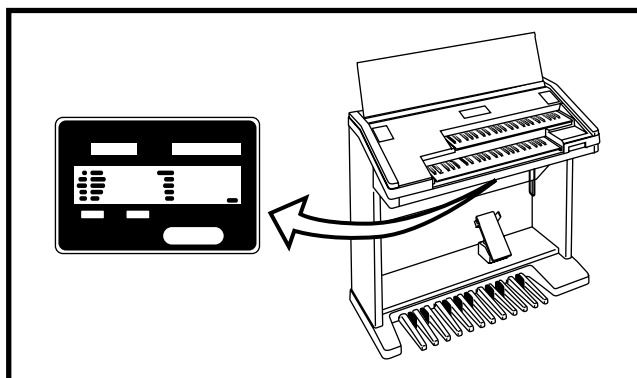
**BATTERY NOTICE:** This product MAY contain a small nonrechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

**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 manufacturer'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 \_\_\_\_\_

# **Congratulations!**

**You are the proud owner of a fine electronic organ, Electone EL-37. The Yamaha EL-37 Electone combines the most advanced AWM tone generation technology with state-of-the-art digital electronics and features to give you stunning sound quality with maximum musical enjoyment.**

**In order to make the most of the Electone and extensive performance potential, we urge you to read the manual thoroughly while trying out the various features described. Keep the manual in a safe place for later reference.**

# Main Features

---

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

## Included among the main features are:

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

The new AWM (Advanced Wave Memory) tone generation technologies combined with authentic touch response for individual instrument voices, make this Electone a truly expressive musical instrument.

### **High-quality Digital Effects**

Electone voices can also be enhanced with a full range of high-quality digital effects, including Tremolo (for reproducing the sound of a rotating speaker), Reverb, and Flanger and Delay. (See page 27.)

### **Dynamic Rhythm Patterns**

The Rhythm section of the Electone features authentic drum and percussion sounds, used by expert rhythm programmers in creating a total of 38 rhythm patterns, ranging across all styles of music. (See page 30.) A Keyboard Percussion function is also provided for playing the realistic percussion sounds from the Lower keyboard and Pedalboard. (See page 39.)

### **Comprehensive Automatic Accompaniment**

The Electone is also equipped with various automatic accompaniment functions, including Auto Bass Chord, Accompaniment and Melody On Chord. (See pages 36, 40.)

### **Sophisticated Rhythm Pattern and Rhythm Sequence Programming**

The Rhythm Pattern Program and Rhythm Sequence Program let you use the realistic Keyboard Percussion sounds, along with additional percussion sounds on the upper keyboard, to create and record your own rhythm patterns, then combine them (and the preset rhythms, if you wish) to make complete automatic rhythm tracks. (See page 68.)

### **Wide Variety of Registration Menus**

The Electone is equipped with convenient Registration Menus that allow you to instantly change all settings for the entire instrument in real time, as you play! The EL-37 has 120 registrations available on disk. (See page 9.)

### **Recording of Performances with the Music Disk Recorder**

The EL-37 also features a Music Disk Recorder for recording your performances. The recording is completely digital and is stored to disk, which means that no matter how many times you play back the recording, it will always sound exactly the same as the original performance. (See page 48.)



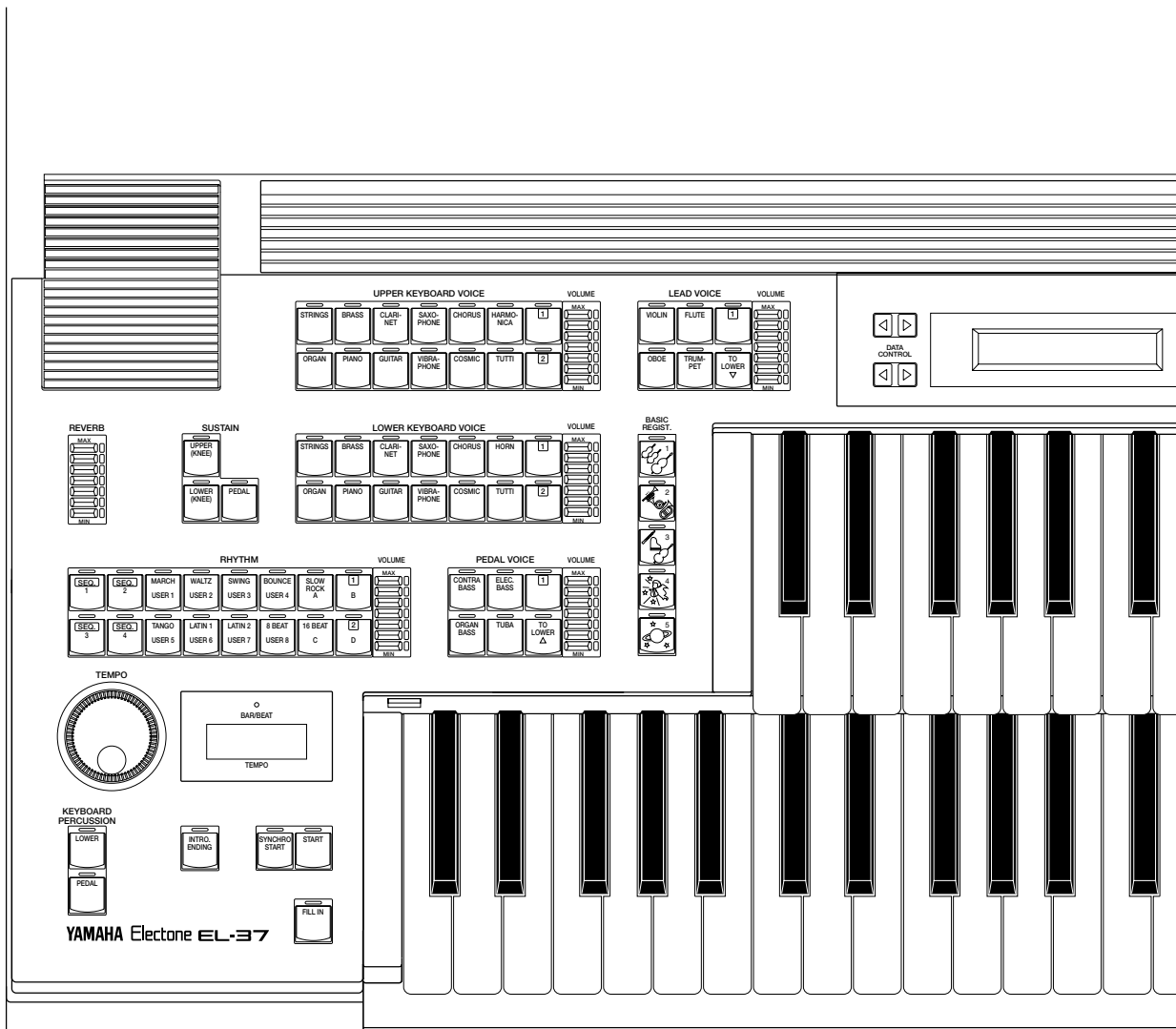
Turning the Electone off erases all panel settings you have made. When the Electone is turned on, Basic Registration 1 is automatically selected. If you have made panel settings you wish to keep, save them to Registration Memory before turning the Electone off.

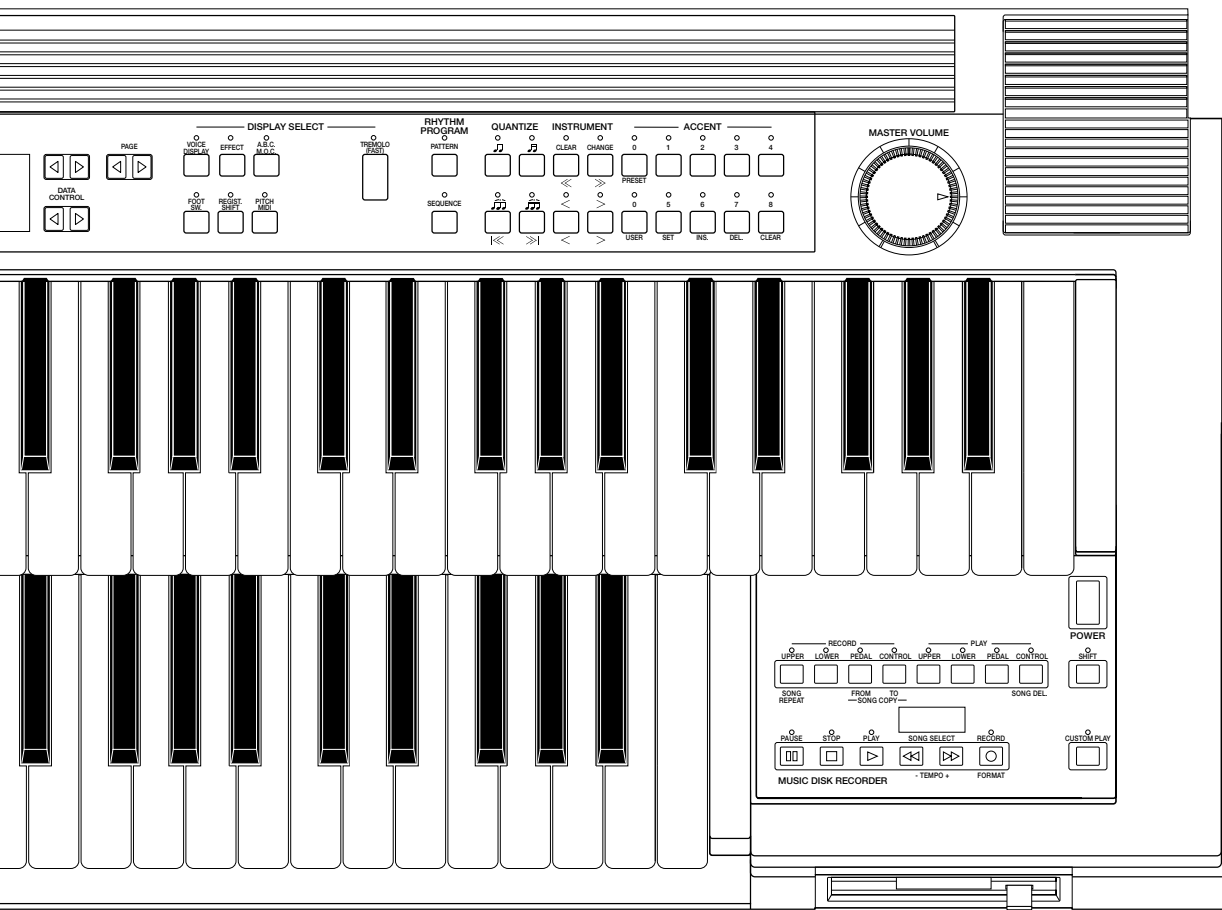
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# Panel Layout





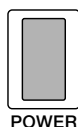
# 1. Quick Introductory Guide

Whether you are an advanced Electone performer or have never touched an electronic keyboard in your life, 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. The basic operations and functions that you learn in this section will also be important when you later use the Electone's more advanced features.

## Getting Started

**1. Plug the power cord in to an appropriate electrical outlet.**

**2. 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.

When you turn on the Electone, the following displays will appear in succession on the LCD:

```
YAMAHA Electone
                EL-37
```



```
▣Strings  ▣Violin
▣Strings  ▣ContBass
```

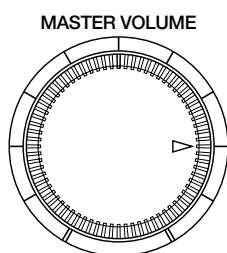
This last display, Voice Display, shows the currently assigned voice settings for each voice section of the instrument, with the abbreviation for each voice section beside the voice name: Upper (▣), Lower (▣), Lead (▣▣), and Pedalboard (▣).

Turning the Electone off erases all panel settings you have made. When the Electone is turned on, Basic Registration 1 is automatically selected. If you have made panel settings you wish to keep, save them to Registration Memory (see page 42.) before turning the Electone off. You can, however, restore the panel settings that were made before the Electone was last turned off. In doing this, first be careful NOT to press any panel buttons (excepting those in Basic Registration) after you turn the Electone back on. Then, to restore the previous settings, hold down the M (Memory) button and press the D (Disable) button.



### 3. Set the MASTER VOLUME control.

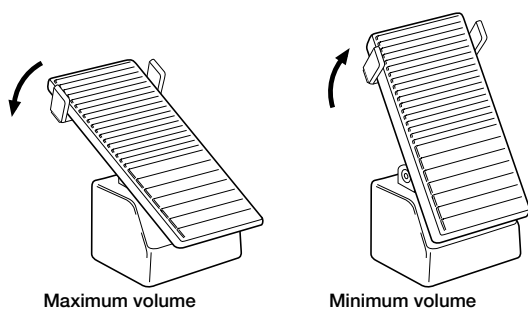
The MASTER VOLUME control is an overall control which affects the volume of the entire instrument.



Set the control to roughly this position.  
This is the normal playing level.

### 4. 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 Your Electone

Your new Electone is fully equipped with an exceptionally wide variety of voice, rhythms, effects and other convenient functions. Since it may take some time to master the wealth of features available, the Electone includes convenient Registrations that let you completely and 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 specially suited for playing in a different music style.

When you turn the Electone 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.



Try playing the melody line of following piece of music on the Upper Keyboard, using the indicated registration.

### Basic Registration 1

From the New World A. Dvořák

Tempo ♩ = 72

Musical notation for 'From the New World' by Antonín Dvořák. The melody is written on a treble clef staff. Above the staff, the following chords are indicated: C, G7, C, G, Am, C, F, C. Below the staff, seven keyboard diagrams illustrate the chord voicings for each of these chords. The first diagram is for C major, the second for G7, the third for C major, the fourth for G major, the fifth for Am, the sixth for F major, and the seventh for C major.

Now, try out the rest of the 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.

### Basic Registration 2

Little Brown Jug American Folk Song

Tempo ♩ = 182

Musical notation for 'Little Brown Jug', an American folk song. The melody is on a treble clef staff. Chords indicated above the staff are: C, F, G7, C, F, G7, C. Below the staff, seven keyboard diagrams show the chord voicings for each of these chords.

### Basic Registration 3

Cradle Song B. Brahms

Tempo ♩ = 106

Musical notation for 'Cradle Song' by Johannes Brahms. The melody is on a treble clef staff in 3/4 time. Chords indicated above the staff are: C, G7, C, F, C. Below the staff, five keyboard diagrams show the chord voicings for each of these chords.

### Basic Registration 4

Twinkle, Twinkle Little Star French Traditional Folk Song

Tempo ♩ = 76

Musical notation for 'Twinkle, Twinkle Little Star', a French traditional folk song. The melody is on a treble clef staff in 2/4 time. Chords indicated above the staff are: C, F, C, G7, C, G7, C. Below the staff, seven keyboard diagrams show the chord voicings for each of these chords.

### Basic Registration 5

Ode to Joy L. V. Beethoven

Tempo ♩ = 123

Musical notation for 'Ode to Joy' by Ludwig van Beethoven. The melody is on a treble clef staff. Chords indicated above the staff are: C, G7, C, G7, C. Below the staff, five keyboard diagrams show the chord voicings for each of these chords.

The chart below lists the voices that have been set for the Upper/Lower keyboards and Pedalboard in each of the five Basic Registrations.

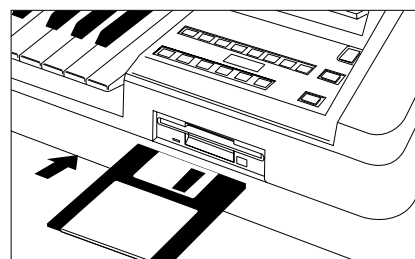
	Basic Registration 1	Basic Registration 2	Basic Registration 3	Basic Registration 4	Basic Registration 5
Upper Keyboard voice	Strings 1	Brass	Flute	Cosmic 1	Synth. Brass
Lower Keyboard voice	Strings 1	Horn	Piano	Cosmic 2	Cosmic 3
Pedal voice	Contrabass	Tuba	Contrabass	Cosmic 2	Synth. Bass

## ● Registration Menu Disk

In addition to the Basic Registrations, many more registrations are available on your Electone; supplied as the Music Disk Recorder data in the included Registration Menu Disk 1 and Disk 2. These registrations include voice and rhythm selections and have been specially created to suit a variety of music styles. With the variety of registrations available, you're certain to find the right registration that perfectly suits any style of music you play.

To select registrations from the Registration Menu Disk:

- 1. Put the Registration Menu Disk (with the label of the disk facing upward and the sliding shutter facing forward) into the Disk slot, located just under the Music Disk Recorder at the right side of the Electone.**



Once you've securely inserted the disk into the slot, the LCD Display on the panel will automatically change to show the available Registration Menu.

- 2. From the display that appears, first press the Page [>] button to select the various menu "pages" of registrations available on the disk...**



...then, select the desired registration from each menu.



The bottom left Data Control buttons step through the various selections, while the top left Data Control buttons are used to jump ahead or back by ten selections.

**NOTE** See page 11 for the complete list of the Registration Menu.

**NOTE** The Registration Menu Disk does not operate when the RHYTHM PROGRAM buttons are on.

### 3. Finally, call up the selected registration by selecting SET in the display.

The message “Completed...!!” briefly appears on the display.



You can now play the registration.

If you wish, try out some of the other selections by repeating the above steps.

If you've selected the registration with a rhythm set, press the START button in the Rhythm section.

Pressing the START button starts up a rhythm pattern appropriate to the music style you have selected. (To turn the pattern off, press the START button again.)

You can also adjust the tempo of the rhythm to your liking by turning the TEMPO dial, as indicated in the illustration below.

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**NOTE** You can use the Automatic Accompaniment (A.B.C.) function. See page 36 for more information on the A.B.C. function.

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#### How to Return to the Registration Menu Display:

If you unintentionally change the display by pressing a button on the panel, you can return to the display of the Registration Menu by pressing the PLAY button in the Music Disk Recorder section.

# ● Registration Menu List

## Disk 1

### Page 1

No.	LCD Display	Sound Image	Upper Keyboard Voice	Lead Voice	Lower Keyboard Voice	Pedal Voice	Rhythm (Tempo)
1	STRINGS1	Orchestra	Strings	Violin	Horn	Contrabass	—
2	STRINGS2	Pop Strings	Strings	Whistle	Strings	Pizzicato Bass	—
3	STRINGS3	Chamber Strings	Strings	Violin	Strings	Pizzicato Bass	—
4	STRINGS4	Solo Violin	—	Violin	Strings	Contrabass	—
5	STRINGS5	Pops Orchestra 1	Strings	Harpsichord	Strings	Elec. Bass	8Beat 1 (115)
6	STRINGS6	Pizzicato Strings	Pizzicato Strings	—	Pizzicato Strings	Pizzicato Strings	—
7	STRINGS7	Pops Orchestra 2	Strings	Trumpet	Brass	Pizzicato Bass	Polka (130)
8	STRINGS8	Strings Ensemble	Strings	Strings (16')	Strings	Contrabass	—
9	BRASS1	Marching Band	Brass	Trombone	Brass	Tuba	March (120)
10	BRASS2	Solo Trumpet	—	Trumpet	Horn	Tuba	—
11	BRASS3	Big Band 1	Brass	Saxophone	Trombone	Pizzicato Bass	Swing 1 (168)
12	BRASS4	Solo Trombone	—	Trombone	Saxophone	Pizzicato Bass	Swing 2 (125)
13	BRASS5	Big Band 2 (Saxophone Ensemble)	Saxophone	Saxophone (8')	Piano	Pizzicato Bass	Swing 1 (136)
14	BRASS6	Jazz Combo 1 (Trumpet)	—	Trumpet	Elec. Bass	Pizzicato Bass	Bossanova 2 (160)
15	BRASS7	Dixieland	—	Clarinet	Piano	Pizzicato Bass	Dixie (96)
16	BRASS8	Fusion Saxophone	—	Saxophone	Elec. Piano	Elec. Bass (16')	16Beat 3 (80)

### Page 2

No.	LCD Display	Sound Image	Upper Keyboard Voice	Lead Voice	Lower Keyboard Voice	Pedal Voice	Rhythm (Tempo)
1	LEAD1	Woodwind Ensemble	Oboe	Flute	Clarinet	Bassoon (8')	—
2	LEAD2	Solo Flute	—	Flute	Pizzicato Strings	Contrabass	—
3	LEAD3	Solo Oboe	—	Oboe	Strings	Contrabass	—
4	LEAD4	Polka	—	Clarinet	Harmonica	Pizzicato Bass	Polka (115)
5	LEAD5	Whistle	—	Whistle	Elec. Piano	Elec. Bass	8Beat 1 (78)
6	LEAD6	Harmonica	—	Harmonica	Strings	Contrabass	—
7	LEAD7	Tango	Harmonica	Harmonica (16')	Strings	Pizzicato Bass	Tango 1 (120)
8	LEAD8	Jazz Organ	Jazz Organ	Jazz Organ (4')	Jazz Organ (8')	Organ Bass	Bossanova 2 (150)
9	DECAY1	Acoustic Piano	Piano	—	Piano	Pizzicato Bass	—
10	DECAY2	Elec. Piano	Elec. Piano	—	Elec. Piano	Elec. Bass	16Beat 3 (78)
11	DECAY3	Honky Tonk Piano	Piano	—	Piano	Piano	Dixie (90)
12	DECAY4	Jazz Guitar	Elec. Bass	Elec. Bass	Strings	Elec. Bass	Bossanova 1 (140)
13	DECAY5	Marimba	Marimba	—	Piano	Elec. Bass	Samba 1 (125)
14	DECAY6	Fantasy 1	Vibraphone (4')	Whistle	Strings	Elec. Bass	Slow Rock 1 (72)
15	DECAY7	Elec. Guitar	Elec. Guitar	—	Elec. Piano	Elec. Bass	8Beat 3 (130)
16	DECAY8	Oriental	Harpsichord	Harpsichord	Strings	Contrabass	—

\* The numbers in the parentheses indicate that the "feet" settings for the assigned voice are different from the default.

\* As for the registrations assigned with rhythm, the Fingered is selected for the A.B.C. function and both Lower and Pedal Memories are set to on.

# Disk 1

## Page 3

No.	LCD Display	Sound Image	Upper Keyboard Voice	Lead Voice	Lower Keyboard Voice	Pedal Voice	Rhythm (Tempo)
1	SYNTH1	Wind Synth.	—	Cosmic 3	Elec. Guitar	Elec. Bass (16')	8Beat 3 (150)
2	SYNTH12	Synth. Brass 1	Synth. Brass	Clarinet (4')	Elec. Guitar	Elec. Bass	8Beat 1 (130)
3	SYNTH3	Cosmic Sound	Cosmic 2	Whistle	Elec. Piano	Elec. Bass	8Beat 2 (120)
4	SYNTH4	Synth. Brass 2	Tutti 2	Brass	Elec. Guitar	Elec. Bass (16')	16Beat 3 (117)
5	SYNTH5	Fusion	—	Elec. Guitar	Elec. Piano	Elec. Bass (16')	16Beat Funk (120)
6	SYNTH6	Fantasy 2	Cosmic 1 (8')	Whistle	Cosmic 2	Contrabass	—
7	SYNTH7	Fantasy 3	Cosmic 2	Marimba (4')	Elec. Piano	Elec. Bass	Dance Pop (125)
8	SYNTH8	Fantasy 4	Cosmic 3	Whistle	Cosmic 3	Elec. Bass	Bounce 1 (125)

No.	LCD Display	Rhythm Tempo	Accompaniment Type	Upper Keyboard Voice	Lead Voice	Pedal Voice
9	March	120	4	Brass	Trumpet	Tuba
10	Polka	110	4	Bassoon	Flute (4')	Pizzicato Bass
11	Country	112	1	—	Harmonica	Pizzicato Bass (16')
12	Broadway	135	4	Vibraphone (4')	Trumpet	Pizzicato Bass
13	Waltz-1	105	4	Strings	Strings (16')	Pizzicato Bass (16')
14	Waltz-2	180	2	Strings	Violin	Pizzicato Bass
15	J. Waltz	140	4	Elec. Bass (16')	Whistle	Pizzicato Bass (16')
16	Bolero	136	1	—	Trumpet	Pizzicato Bass (16')

## Page 4

No.	LCD Display	Rhythm Tempo	Accompaniment Type	Upper Keyboard Voice	Lead Voice	Pedal Voice
1	Swing-1	160	3	Brass	Trumpet	Pizzicato Bass
2	Swing-2	138	4	—	Clarinet	Pizzicato Bass
3	J. Ballad	60	3	—	Trombone	Pizzicato Bass
4	Dixie	108	4	—	Trumpet	Tuba
5	Bounce-1	123	2	Guitar	—	Elec. Bass
6	Bounce-2	140	2	—	Clarinet	Pizzicato Bass
7	Reggae1	132	4	Marimba	—	Elec. Bass
8	Reggae-2	120	4	Cosmic 2	Synth. Bass	Elec. Bass (16')
9	Slow Rock-1	80	1	Elec. Guitar	—	Elec. Bass (16')
10	Slow Rock-2	74	1	—	Trumpet	Elec. Bass (16')
11	Slow Rock-3	92	4	—	Saxophone	Elec. Bass (16')
12	Tango-1	120	1	Harmonica	Harmonica (16')	Pizzicato Bass (16')
13	Tango-2	120	1	Strings	Violin	Pizzicato Bass (16')
14	Tango-3	110	1	Harmonica	Harmonica (16')	Elec. Bass (16')
15	Cha-Cha	126	4	Piano (16')	Piano (4')	Elec. Bass (16')
16	Rhumba	115	1	—	Trombone (8')	Elec. Bass (16')

## Page 5

No.	LCD Display	Rhythm Tempo	Accompaniment Type	Upper Keyboard Voice	Lead Voice	Pedal Voice
1	Beguine	118	4	Strings	Whistke	Elec. Bass (16')
2	Mambo	100	4	Brass	Saxophone	Elec. Bass (16')
3	Samba-1	120	1	Saxophone	Trumpet	Elec. Bass (16')
4	Samba-2	112	1	Elec. Bass (16')	Flute	Elec. Bass (16')
5	Bossanova-1	103	1	—	Flute	Elec. Bass (16')
6	Bossanova-2	124	2	—	Saxophone	Elec. Bass (16')
7	8 Beat-1	100	3	Cosmic 2	Vibraphone (4')	Elec. Bass (16')
8	8 Beat-2	117	2	Elec. Piano	—	Elec. Bass (16')
9	8 Beat-3	152	3	Elec. Guitar	Elec. Guitar	Elec. Bass (16')
10	Dance Pop	130	4	Vibraphone (4')	Elec. Piano	Elec. Bass (16')
11	16 Beat-1	85	4	—	Flute	Elec. Bass (16')
12	16 Beat-2	124	4	Synth. Brass	Synth. Brass (16')	Elec. Bass (16')
13	16 Beat-3	112	4	Brass	Trumpet	Elec. Bass (16')
14	16 Beat Funk	118	4	Elec. Guitar (8')	Cosmic 3	Elec. Bass (16')

No.	LCD Display	Sound Image	Upper Keyboard Voice	Lead Voice	Lower Keyboard Voice	Pedal Voice	Rhythm (Tempo)
15	Wedding	Wedding	Organ	Organ (4')	Organ	Organ (16')	—
16	X'mas	X'mas	Cosmic 2	Vibraphone (4')	Strings	Contrabass	—

# Disk 2

## Page 1

No.	LCD Display	Sound Image	Upper Keyboard Voice	Lead Voice	Lower Keyboard Voice	Pedal Voice
1	STRINGS1	Solo Violin	—	Violin	Strings	Contrabass
2	STRINGS2	Strings Ensemble	Strings	Strings (4')	Horn	Pizzicato Bass
3	STRINGS3	Pop Strings 1	Strings	Vibraphone (4')	Horn	Contrabass
4	STRINGS4	Pop Strings 2	Strings	Clarinet	Strings	Pizzicato Bass
5	STRINGS5	Symphonic Orchestra	Tutti 1	Tutti 2 (16')	Strings	Contrabass
6	BRASS1	Trumpet Ensemble	Brass	Trumpet	Brass	Tuba
7	BRASS2	Solo Trumpet	—	Trumpet	Trombone	Tuba
8	BRASS3	Solo Trombone	—	Trombone	Trombone	Tuba
9	BRASS4	Brass Ensemble	Trumpet	Trombone	Horn	Tuba
10	BRASS5	Big Band	Brass	Trombone	Saxophone	Pizzicato Bass

## Page 2

No.	LCD Display	Sound Image	Upper Keyboard Voice	Lead Voice	Lower Keyboard Voice	Pedal Voice
1	LEAD1	Solo Flute 1	—	Flute	Strings	Contrabass
2	LEAD2	Solo Flute 2	—	Flute	Clarinet	Pizzicato Bass
3	LEAD3	Whistle	—	Flute (4')	Pizzicato Strings	Pizzicato Bass
4	LEAD4	Flute Ensemble	Flute	Flute (4')	Bassoon	Pizzicato Bass
5	LEAD5	Pop Flute	Vibraphone (4')	Flute	Strings	Contrabass
6	LEAD6	Woodwind Ensemble 1	Bassoon	Flute (4')	Clarinet	Pizzicato Bass
7	LEAD7	Solo Oboe	—	Oboe	Bassoon	Pizzicato Bass
8	LEAD8	Woodwind Ensemble 2	—	Clarinet	Bassoon	Clarinet
9	LEAD9	Solo Clarinet	Clarinet	—	Horn	Pizzicato Bass
10	LEAD10	Solo Saxophone	—	Saxophone	Strings	Contrabass

## Page 3

No.	LCD Display	Sound Image	Upper Keyboard Voice	Lead Voice	Lower Keyboard Voice	Pedal Voice
1	DECAY1	Piano	Piano	—	Piano	Piano
2	DECAY2	Harpsichord	Harpsichord	—	Strings	Contrabass
3	DECAY3	Marimba	Marimba	—	Clarinet	Pizzicato Bass
4	DECAY4	Music Box	Vibraphone (4')	—	Vibraphone (4')	Vibraphone (4')
5	DECAY5	Classical Guitar	Guitar	—	Strings	Pizzicato Bass
6	ORGAN1	Organ	Organ	—	Organ	Organ Bass
7	ORGAN2	Jazz Organ	Jazz Organ (8')	—	Jazz Organ (8')	Organ Bass
8	BANDONEON	Bandoneon	Harmonica	Harmonica	Strings	Pizzicato Bass
9	SYNTH1	Cosmic Sound 1	Cosmic 2	Cosmic 1	Chorus	Contrabass
10	SYNTH2	Cosmic Sound 2	Cosmic 3	Synth. Bass (8')	Cosmic 3	Synth. Bass

## Page 4

No.	LCD Display	Rhythm Tempo	Accompaniment Type	Upper Keyboard Voice	Lead Voice	Pedal Voice
1	March	120	4	Brass	Trumpet	Tuba
2	Broadway	135	4	Trombone (8')	Saxophone (8')	Pizzicato Bass
3	Waltz	105	4	Strings	Strings (16')	Pizzicato Bass
4	Swing	160	3	Brass	Trumpet	Pizzicato Bass
5	Slow Rock	80	3	Guitar	Elec. Bass	Elec. Bass (16')
6	Tango	127	3	Harmonica	Harmonica (16')	Pizzicato Bass (16')
7	Cha-Cha	126	4	Piano (16')	Piano (4')	Elec. Bass (16')
8	Samba	120	1	Saxophone	Trumpet	Elec. Bass (16')
9	8Beat	100	3	Cosmic 2	Vibraphone (4')	Elec. Bass (16')
10	16Beat	74	4	Harmonica	Harmonica	Elec. Bass (16')

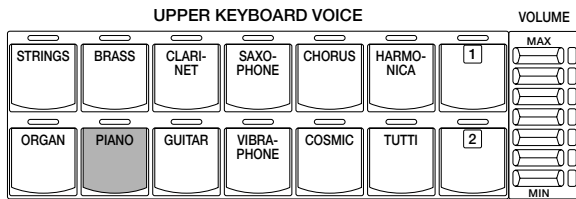
\* The numbers in the parentheses indicate that the "feet" settings for the assigned voice are different from the default.

\* As for the registrations assigned with rhythm, the Fingered is selected for the A.B.C. function and both Lower and Pedal Memories are set to on.

# Using the LCD Display

The many sophisticated functions of the EL-37 are shown and controlled from the LCD display. The LCD display lets you see at-a-glance the current settings of the selected functions. This section introduces you to the control functions and conventions of the LCD display, allowing you to operate your new Electone quickly and effectively.

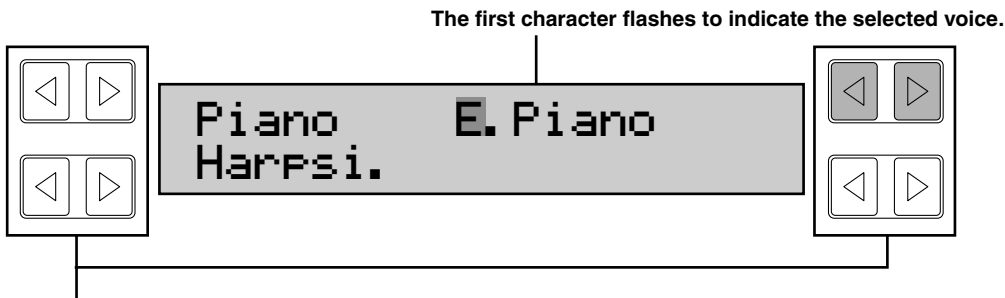
**1. First, call up the Voice Menu LCD display for the Piano voice of the Upper keyboard by pressing the PIANO button in the Upper Keyboard Voice section.**



The following display will appear:



**2. Press either one of the top right Data control buttons (as indicated below) to select the E. Piano voice.**

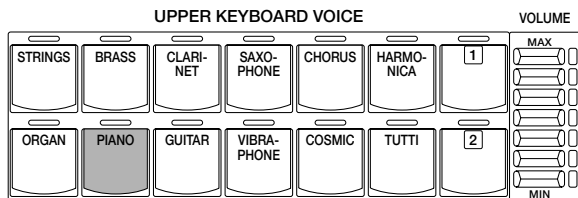


## Data Control Buttons

These buttons are used to select or adjust the settings shown on the display. Generally, each pair of buttons corresponds to the section of the display directly next to it. In this example, the top right Data Control buttons correspond to the top right quarter of the display (E. Piano).



**3.** Let's call up another display to see some of the other uses of the Data Control buttons. Press the **PIANO** button in the Upper Keyboard Voice section once again (the same one you pressed in step #1 above) to call up the Voice Condition display for the Piano voice.



The following display will appear:



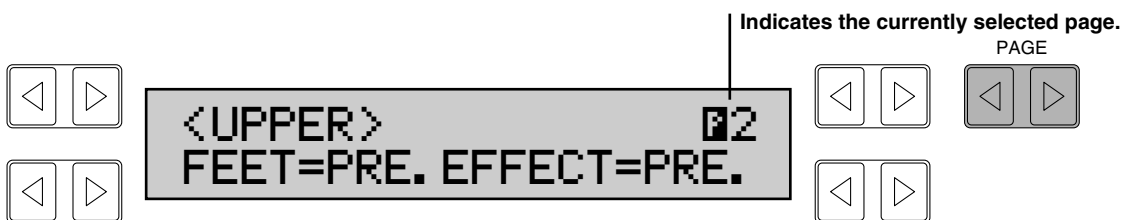
You can change two different settings of the voice from this display: the touch and volume.

**4.** First, let's change the volume value. Press the left button in the bottom right Data Control button pair (indicated below).

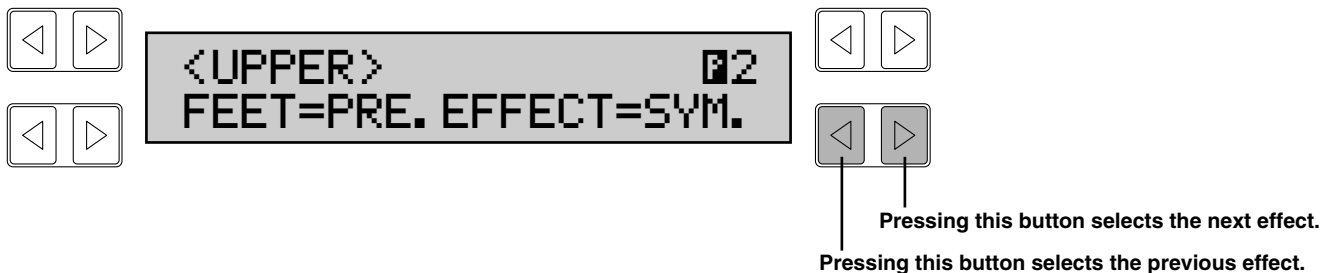
Notice that the value of the volume decreases each time you press the button. Try also pressing the right button in this Data Control button pair and notice that the value increases.



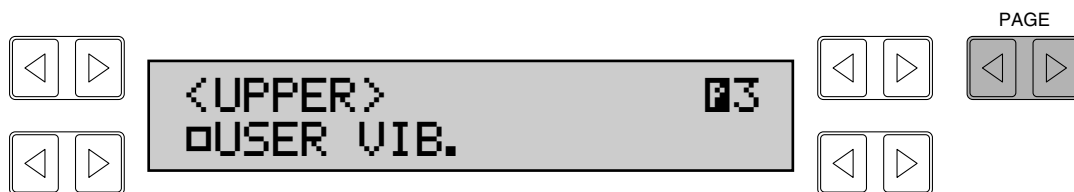
**5.** Next, we'll use the Page buttons. These buttons are used to select (when available) the various "pages" of the display, the numbers of which appear at the top right of the LCD. Press Page [>] to select page 2 shown below.



**6.** Try changing the effect setting now. Use the bottom right Data Control button pair in much the same way as you did with the volume setting above.

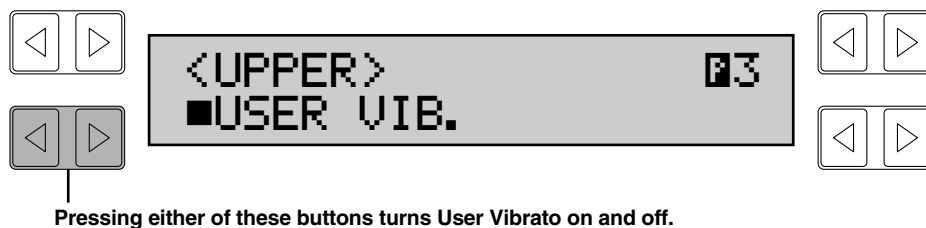


**7.** Press Page [>] to select page 3 which includes the vibrato setting.



**8.** From the page you’ve just selected, try pressing one of the bottom left Data Control buttons (indicated below). These turn the User Vibrato (USER VIB.) function on and off.

The box next to “USER VIB.” in the LCD indicates the on/off status; a solid box means ON, and an outlined box means OFF.



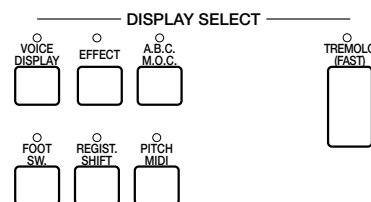
The Data Control buttons are nearly always used in the ways you’ve seen in the above steps. You’ll have noticed that the left button of a Data Control button pair is usually used in a “negative” fashion—for instance, to decrease a value, or select a previous setting or position. The right button is used in a “positive” fashion—to increase a value, or select the next setting or position. In some cases, the buttons are also used to turn functions on and off.

## Display Select Buttons

These buttons access some of the major functions of the Electone and call up their respective LCD displays. The LCD display changes when another function has been selected.

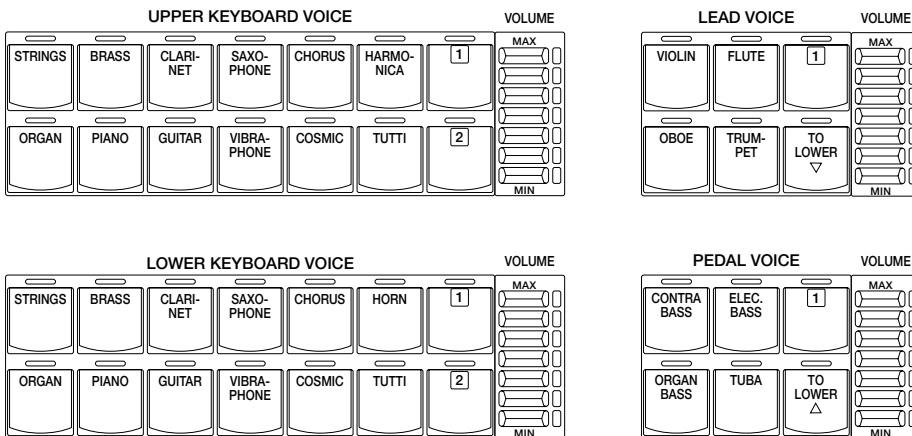
There are two ways to call up LCD displays: One is by pressing the panel’s voice/rhythm buttons or the sustain controls; the other is by pressing the DISPLAY SELECT buttons.

The LEDs above the buttons momentarily flash when the buttons are pressed.



**NOTE** Turning on Tremolo with the TREMOLO button in the DISPLAY SELECT section does not call up an LCD display.

# 2. Voice Sections

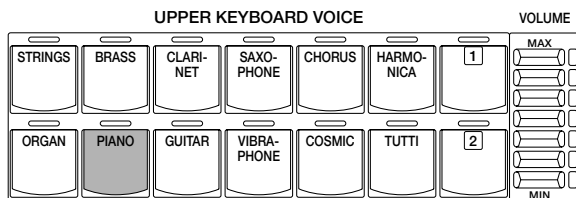


The Electone has four voice sections: Upper Keyboard Voice, Lead Voice, Lower Keyboard Voice, and Pedal Voice. All voices are playable from the Upper or Lower keyboards or Pedalboard.

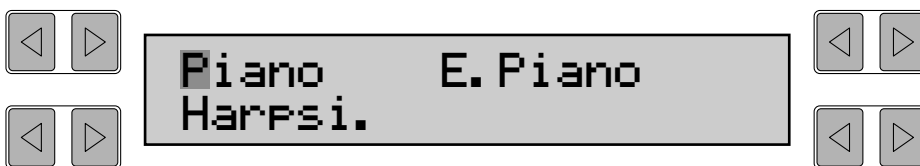
## Selecting Voices from the Panel

Since selection of panel voices follows the same procedure throughout the various voice sections, instructions for only the Upper Keyboard Voice section are given here.

1. Select a voice from the Upper Keyboard Voice section by pressing one of the Voice buttons in that section.



If, for example, you have selected the PIANO voice, the following display will appear:



Notice that several different voice names are shown on this display. These are variations of the basic Piano voice category.

To Select one of these voice variations.

2. Press one of the Data Control buttons that corresponds to the voice you wish to select.

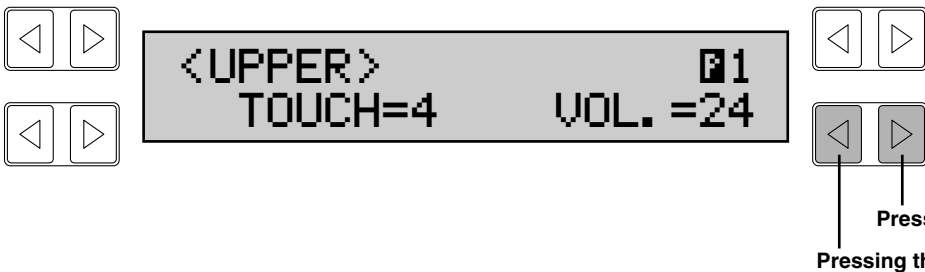
**NOTE** Some voice buttons have only one voice.

### 3. Set the volume for each voice section. There are two volume controls: Coarse and Fine.

**Coarse:** 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.



**Fine:** Pressing the same panel voice button again calls up the Voice Condition display.



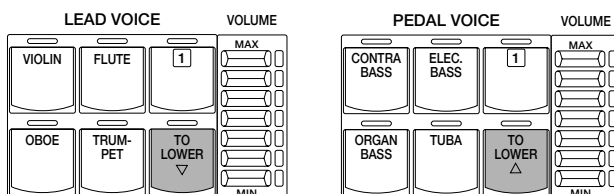
**NOTE** Pressing a voice button once calls up that voice's Voice Menu display. Pressing it a second time calls up the Voice Condition display (as shown in the illustration). Successive presses alternate between the two displays.

Use the Data Control buttons that correspond to the Volume setting to change the level of the desired voice. The relative level is indicated by a numeric value (from 0 – 24).

### 4. Now select voices for the Lower keyboard and Pedalboard as you did for the Upper keyboard above. Also set the volumes of the voices.

**Playing Lead And Bass Voices from the Lower Keyboard:**

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



**About Voice Section Volumes:**

The Upper Keyboard and Lead voices (when not using the “To Lower” function) sound together in a layer, and the balance of the voices in the layer is determined by the VOLUME controls of each section. In order to hear or audition one voice section, set the volume of the other voice section to the minimum level.

**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. As for been Upper and Lower keyboard Voice voices, you can play up to 11 notes simultaneously. (Total polyphonic capacity is 11 notes at one time.)

**!** When the TO LOWER button is turned on, the Lead voices and Pedal voices cannot be played on the Upper keyboard and Pedalboard, respectively.

**!** Turning the Electone off erases all panel settings you have made. When the Electone is turned on, Basic Registration 1 is automatically selected. If you have made panel settings you wish to keep, save them to Registration Memory (See page 42) before turning the Electone off. You can, however, restore the panel settings that were made before the Electone was last turned off. See page 47 for more information.

### About the Voice Display:

You can return to the Voice Display which shows the currently selected voices on each keyboard by pressing the VOICE DISPLAY button in the DISPLAY SELECT section.

**NOTE** When you load the registrations created by the other type Electones, the voice name may not be seen but a solid box may blink. This is because the loaded registration include the voice which EL-37 doesn't contain.

## Selecting Additional Voices—Dotted Buttons and User Voices

The EL-37 Electone has a variety of voices from which you can choose—far greater than what is immediately apparent from the front panel controls. You've already learned in the section above how to select the different voices that are available in the Voice Menu display of each panel voice. The Electone also has dotted buttons in each voice section, giving you access to even more voice. Optional Voice Disk voices are also available for storing to User Voices.

### ● Selecting Voices from the Dotted Buttons

Each voice section has one or two dotted buttons, found on the right side of each voice section. These dotted buttons function as "wild card" Voice Menu selectors; any internal or User voices can be selected from these buttons.

**The dotted buttons have the following basic uses:**

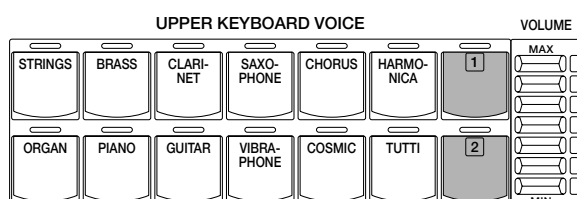
1) For playing any voice of the Voice Menus from any of the keyboards or Pedalboard. You can play on the Upper keyboard, for example, voices from the twenty-two Voice Menu pages (including User), and not be limited to only the twelve buttons (equivalent to twelve Voice Menu pages) that make up the Upper Voice section. Another advantage to this feature is that when the normally monophonic (one note) Lead and Pedal voices are assigned to the Upper or Lower keyboard voice sections, they can be played polyphonically.

2) For having three different voices from the same Voice Menu page available for selection in the same song. For example, you can assign one of the voices to a dotted button in the Upper Keyboard Voice section, the second voice to the other dotted button in the same section, and the third one on the Voice Menu.

3) For storing voices from a Voice Disk. (See page 65.)

**To select a voice from a dotted button:**

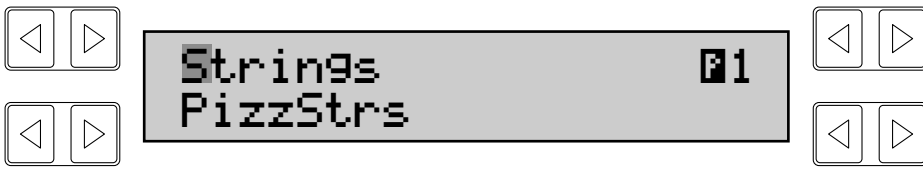
**1** ■ Press one of the dotted buttons in any of the voice sections.



**NOTE** You can directly view and select Voice Menu pages by holding down one of the dotted buttons and simultaneously pressing the desired voice buttons in succession.

## 2. Select one of the pages with the PAGE buttons.

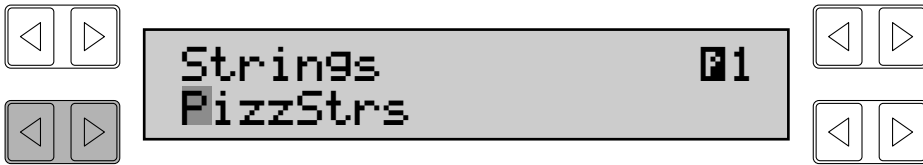
Each voice group appears in the LCD display when the page has been selected.



**NOTE** The first character of the selected voice's name flashes to indicate that the voice has been selected. As long as you do not select a voice, this indication will not appear.

**NOTE** When you load the registrations created by the other type Electones, the voice name may not be seen but a solid box may blink. This is because the loaded registration include the voice which EL-37 doesn't contain.

## 3. Select a voice from the display (PizzStrs, for example).



Select the USER page when you wish to use a voice from a Voice Disk. (See page 65.)



## ● Voice Menus

The following chart lists the voices available and their button/page assignment. The numbers shown in the list correspond to the page numbers shown in the display.

### STRINGS (Upper/Lower)

Strings	01
PizzStrs	

### VIOLIN (Lead)

Violin	02
--------	----

### CONTRABASS (Pedal)

ContBass	PizzBass	03
----------	----------	----

### BRASS (Upper/Lower)

Brass	SynBrass	04
-------	----------	----

### HORN (Lower)

Horn	05
------	----

### TRUMPET (Lead)

Trumpet	06
Trombone	

### TUBA (Pedal)

Tuba	07
------	----

### FLUTE (Lead)

Flute	08
Whistle	

### OBOE (Lead)

Oboe	Bassoon	09
------	---------	----

### CLARINET (Upper/Lower)

Clarinet	010
----------	-----

### SAXOPHONE (Upper/Lower)

Saxophon	011
----------	-----

### TUTTI (Upper/Lower)

Tutti1	Tutti2	012
--------	--------	-----

### CHORUS (Upper/Lower)

Chorus	013
--------	-----

### HARMONICA (Upper)

Harmonic	014
----------	-----

### ORGAN (Upper/Lower)

Organ	JazzOrgn	015
-------	----------	-----

### ORGAN BASS (Pedal)

OrgBass	016
---------	-----

### PIANO (Upper/Lower)

Piano	E. Piano	017
Harpsi.		

### GUITAR (Upper/Lower)

Guitar	018
E. Guitar	

### VIBRAPHONE (Upper/Lower)

Vibrphon	019
Marimba	

### ELACTRIC BASS (Pedal)

E. Bass	020
SynBass	

### COSMIC (Upper/Lower)

Cosmic1	Cosmic2	021
Cosmic3		

USER 1	USER 2	0US
USER 3	USER 4	

# 3. Voice Controls and Effects

The Electone is equipped with two general kinds of functions that can be used to change the sound of the voices: Voice Controls and Effects.

These are used to change various aspects of the voices, such as the volume or octave (footage), or enhance the sound of the voices, such as with Reverb, Tremolo, or Vibrato.

Each voice has been given certain factory-preset effect settings to best enhance its sound. However, you can also change the effect to suit your preferences by using the controls described in this section.

## Voice Controls/Effects Chart

This chart shows all of the Voice Controls and Effects for the various voice sections of the EL-37. A circle (○) indicates that the setting is available. The bottom of the chart shows the relevant LCD titles for each setting.

### Voice Controls & Effects

	Touch Tone (Initial/After)	Reverb	Sustain	Volume Fine	Feet (Octave)	Tremolo/Chorus	Symphonic/Celeste	Delay	Flanger	Vibrato			Glide
										Delay, Depth, Flanger	Depth	Touch	
Upper/Lower	○	○	○	○	○	○	○	○	○	—	○	—	○
Lead	○		—	○	○	○	○	○	○	○	—	○	○
Pedal	—		○	○	○	○	○	—	—	—		—	—
Related LCD Display	Condition LCD	○	—	○	○	*1 ○	*2 ①	*2 ①	*2 ①	○	○	○	—
	Effect LCD	—		—	—	—	*2 ②	*2 ②	*2 ②	—	—	—	
	Sustain LCD	—		○	—	—	—	—	—	—	—	—	
	Foot Switch LCD	—		—	—	—	—	—	—	—	—	—	○

\*1 After setting this, press Tremolo button on the panel.

\*2 After setting 1, adjust the parameter in 2.

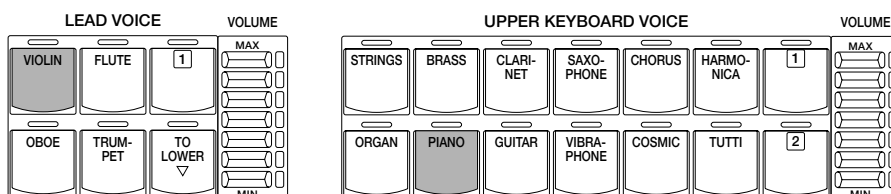
## Voice Controls

### Voice Condition Pages

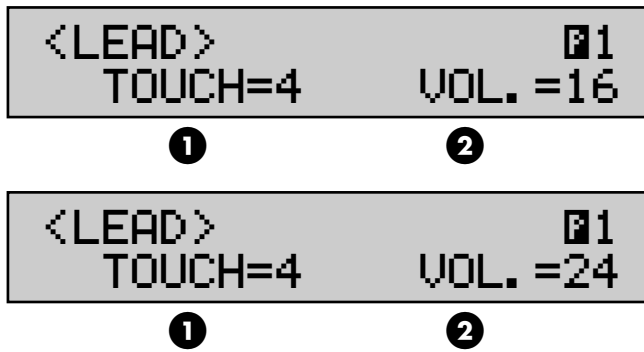
To select the Voice Condition pages for changing the settings: Choose a voice on the panel, then press that voice's panel button twice. Use the Page buttons to change the pages.

**NOTE** There are some differences between the functions in the Lead and Upper/Lower voices. Where appropriate, the different displays are shown.

For the Lead Voice example shown below, press the VIOLIN button in the Lead Voice section twice. To call up the corresponding Upper Voice example, press the PIANO button in the Upper Keyboard Voice section twice.



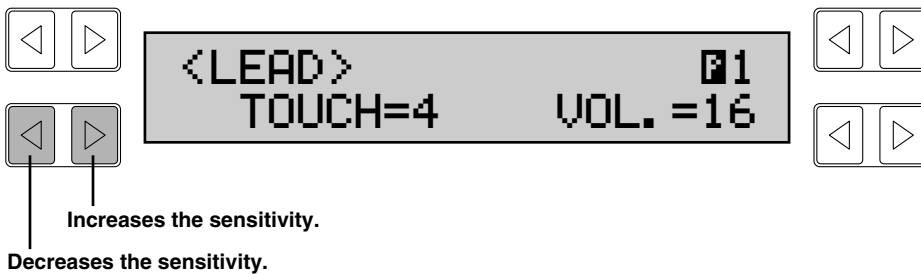




### 1 Touch Tone

The Touch Tone function gives you expressive control over the volume and timbre of a voice. Two types of keyboard touch affect this function: Initial Touch and After Touch. Range: 1-7

**NOTE** Some voices may not have a remarkable effect.



#### Initial Touch

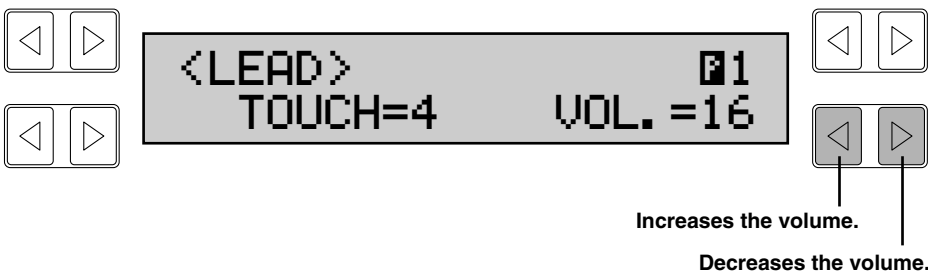
Controls volume and timbre according to the velocity at which you strike the keys. The harder you strike the keys, the greater the volume and the brighter the timbre will become.

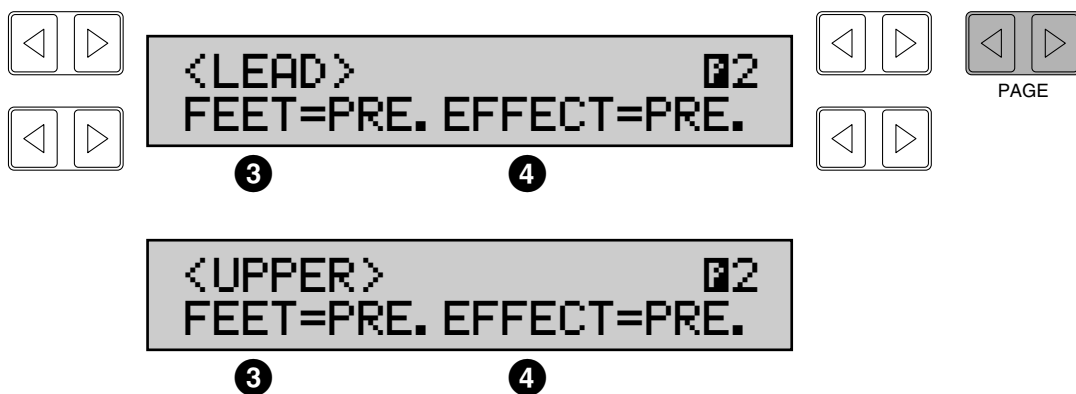
#### After Touch

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.

### 2 Volume

Fine adjustment of the voice volume. (Coarse volume settings are made with the front panel VOLUME controls.) Range: 0-24

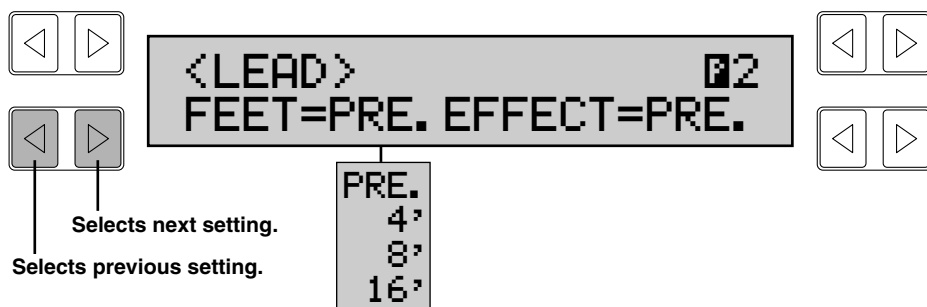




### 3 Feet

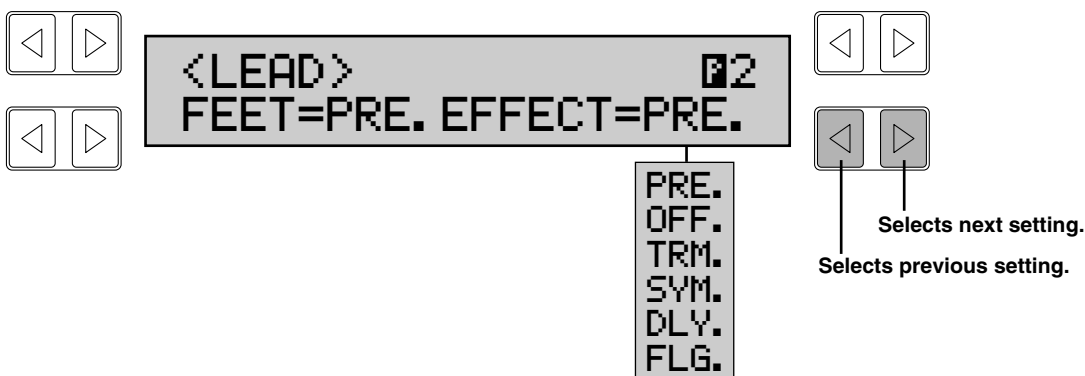
Determines the octave setting of the voice. PRE. (Preset) is the original (factory) setting; 4' is the highest and 16' is the lowest. Settings: PRE., 4', 8', 16'

By using different Feet settings in the Lower and Upper keyboards and Pedalboard, you can duplicate the wide octave range of many instruments. For example, with both the Lower and Upper keyboards set to the Piano voice and Feet set to appropriate values, you can play the voice nearly over the full range of a grand piano.



### 4 Effect

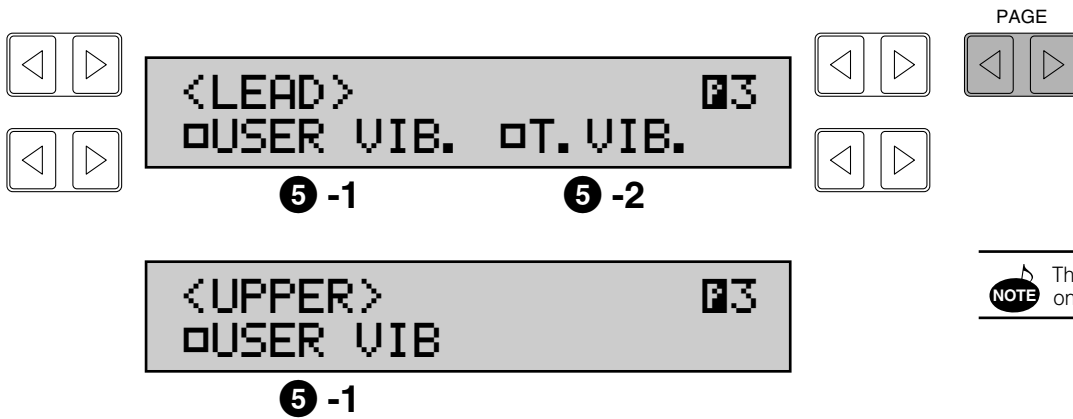
Determines the effect type applied to the voice. PRE. (Preset) selects the original (factory) effect, while OFF cancels the effect. This is essentially an on/off switch for the effects. Settings: PRE., OFF, TRM. (Tremolo), SYM. (Symphonic), DLY. (Delay), FLG. (Flanger).



Though different effects can be applied to different voice sections, only one effect can be selected at a time for each voice section. (In order to actually apply the Tremolo, Symphonic/Celeste, Delay and Flanger effects, one more step is necessary. Refer to the sections on those individual effects below.)

**NOTE** These effects are applied in different degrees depending on the voice selected.

## Voice Condition Page 3

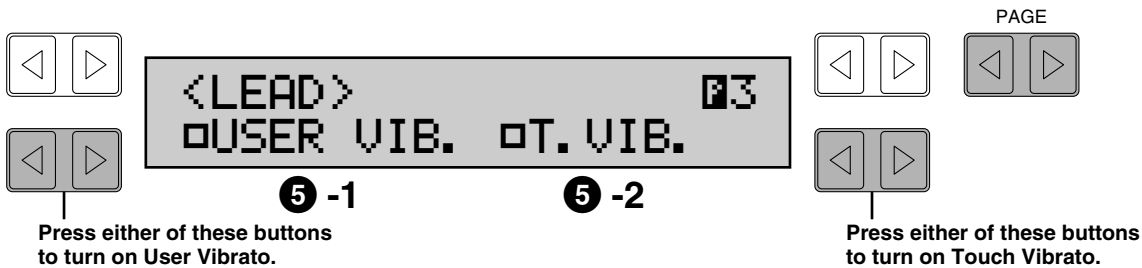


**NOTE** The Pedal Condition display has only two pages.

### 5 Vibrato

Vibrato is an effect that periodically, or regularly, varies the pitch of a voice for a quavering sound. Used properly, it can make a voice sound richer and more natural.

Call up the Vibrato and Touch Vibrato settings on Voice Condition Page 3 by using the Page buttons.



#### 5 -1 User Vibrato (USER VIB.)

When this is turned on, you can adjust the vibrato settings: Delay, Depth and Speed for Lead voices, and Depth for Upper/Lower voices. The Delay, Depth and Speed settings are set in the next page, Voice Condition Page 3. The Delay, Depth and Speed settings are not displayed and cannot be adjusted unless USER VIB. has been turned on in this setting.

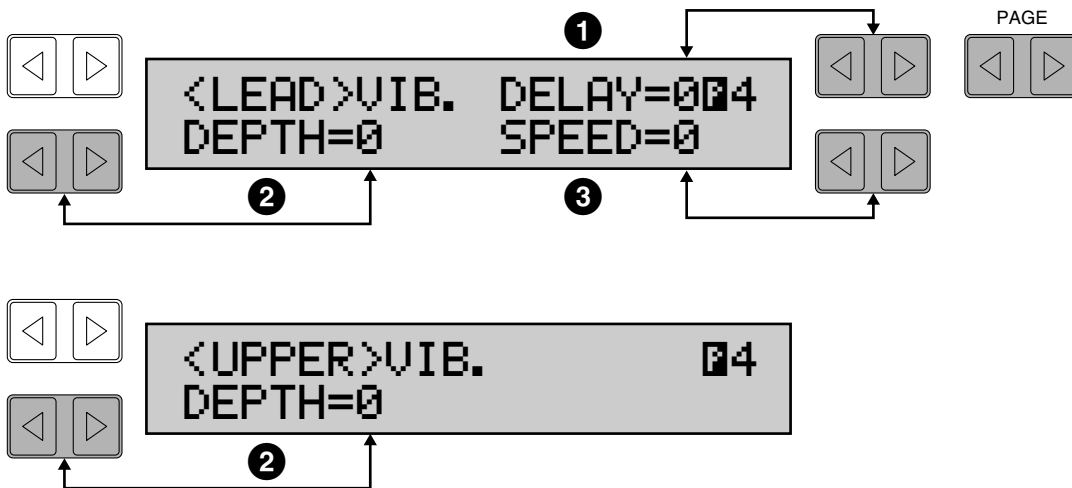
**NOTE** Vibrato cannot be applied to the Pedalboard voices.

#### 5 -2 Touch Vibrato (T. VIB) (Lead Voice only)

On/Off switch for the Touch Vibrato function. Touch Vibrato lets you apply vibrato to individual notes as you play them. While playing a key, press down harder on it to give the note vibrato. The harder you press the key down, the greater the vibrato will be.

**NOTE** The Delay, Depth and Speed setting can be adjusted only when the User Vib. on the Voice Condition Page 3 is turned on. Only the Delay is available for the Upper and Lower keyboard voices.

Call up the User Vibrato settings on Voice Condition Page 4 by using the Page buttons.



**1 Delay (Lead Voice only)**

Determines the amount of time that elapses between the playing of a key and the start of the vibrato effect (see diagram). Higher settings increase the delay of the vibrato onset. Range: 0-7

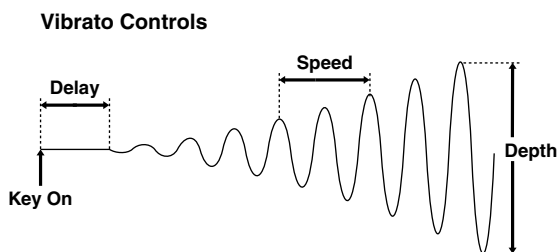
**2 Depth**

Determines the intensity of the vibrato effect (see diagram). Higher settings result in a more pronounced vibrato. Range: 0-7

**3 Speed (Lead Voice only)**

Determines the speed of the vibrato effect (see diagram). Range: 0-7

The following diagram graphically shows the vibrato effect and is related controls.



**NOTE** When you set the DEPTH to 0, the Touch Vibrato function will be inactive.

If User Vib. has not been turned on, the following display appears when Page 3 is selected.



# Effects

The effects include the Tremolo, Symphonic, Delay and Flanger which should first be selected and turned on for the specific voice section(s) on the Voice Condition page 2 above, and Reverb, Sustain and Guide.

## 1 Tremolo/Chorus

Tremolo recreates the rich, swirling sound of the popular rotating speaker effect. Just as with a conventional rotating speaker, you can switch the effect on and off as you play. And like a motor-driven speaker, the characteristic tremolo effect gradually changes speed after it is switched. The Tremolo effect can be switched in real time as you play with the TREMOLO (FAST) button on the panel.

### Tremolo Operation

- 1) Select TRM. (Tremolo) in each Voice Condition display page 2.
- 2) Turn on Tremolo as you play with the panel Tremolo button.

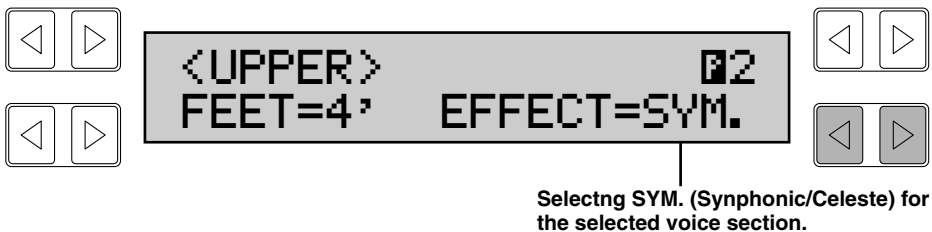
When TREMOLO (FAST) button is turned on while the TRM. is selected in each Voice Condition display, the rotation effect is fast (Tremolo); when off, it is slow (Chorus).

## 2 Symphonic/Celeste

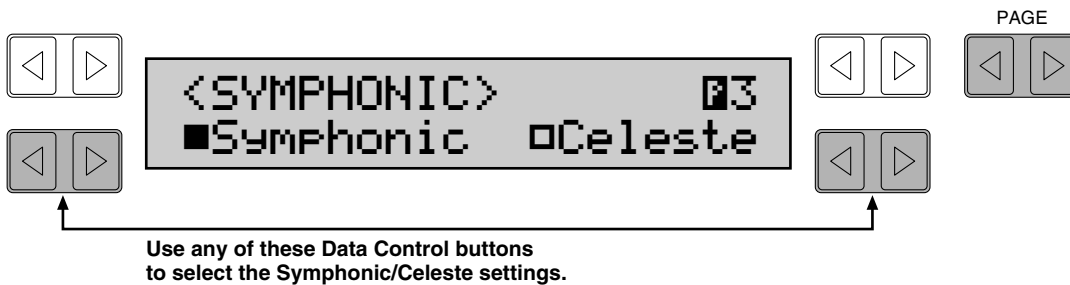
Symphonic simulates the effect of a large ensemble, while Celeste creates the effect of a gradually expanding sound.

### Symphonic/Celeste Operation

- 1) Select SYM. (Symphonic) in each Voice Condition display Page 2.



- 2) Press the EFFECT button in the DISPLAY SELECT section, and call up the Symphonic page 3 (Effect Page 3) by using the Page button. Select Symphonic (or Celeste) by pressing any of the bottom Data Control buttons.



### 3 Delay and Flanger

Delay and Flanger are two unusual effects used often in contemporary music. Like Tremolo and Symphonic, the Delay and Flanger effects are set in two steps, from two different groups of display page: the Voice Condition pages and the Effect pages.

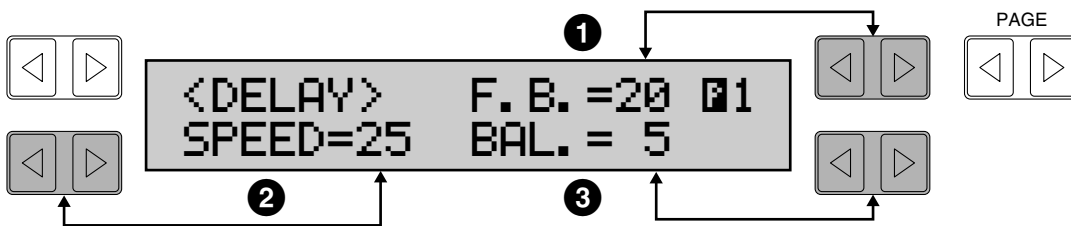
#### Delay and Flanger Operation

- 1) Select **DIY. (Delay)** or **FLG. (Flanger)** in each Voice Condition display page 2.
- 2) Press the **EFFECT** button in the **DISPLAY SELECT** section, and use the **Page** buttons to select the corresponding pages.

**NOTE** The Delay and Flanger effects are available for the Upper, Lower and Lead Voice sections.

#### Delay Page (Effect Page 1)

Delay is a pronounced echo effect, with distinct delayed repeats of the original sound.



#### 1 F.B. (Feedback)

Determines the number of delayed repeats. Range: 0-100

#### 2 SPEED

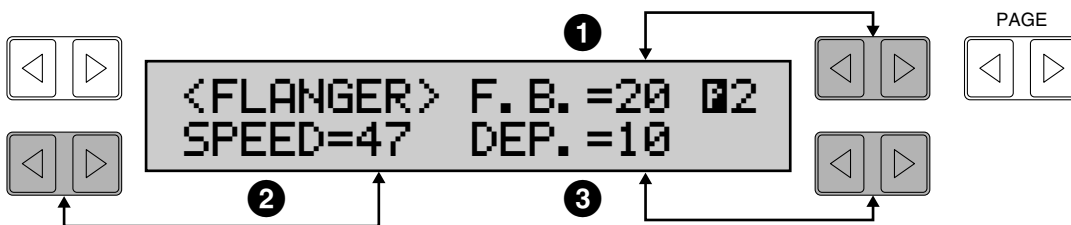
Determines the time between delayed repeats. Range: 0-100

#### 3 BAL. (Balance)

Determines the volume of the delay effect, relative to the original sound. Higher settings produce a louder delay. Range: 0-100

#### Flanger Page (Effect Page 2)

Flanger introduces a swirling, animated modulation effect to the sound.



#### 1 F.B. (Feedback)

Controls the brightness and the metallic sound of the effect. Range: 0-100

#### 2 SPEED

Determines the speed of the modulation. Range: 0-100

#### 3 DEP. (Depth)

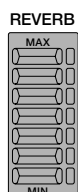
Determines the intensity of the effect. Range: 0-100

## 4 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:**

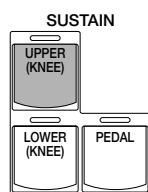
**Press one of the REVERB buttons, located at the far left of the panel. These controls determine the depth of the reverb effect. There are seven settings, from a minimum of 0, or no reverb, to the maximum.**



## 5 Sustain

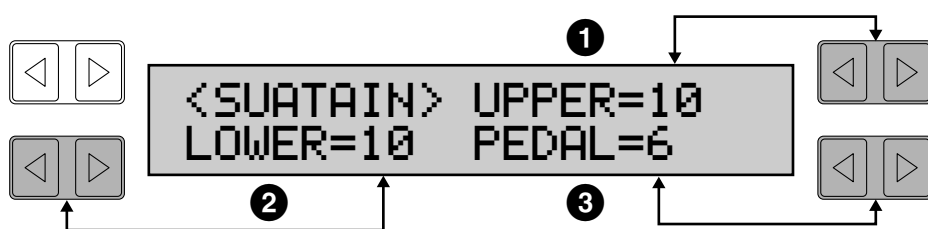
The Sustain effect, selectable for the Upper, Lower and Pedal voices, causes voices to gradually fade out when the keys are released. The sustain on/off and sustain length settings are independent for each keyboard, providing maximum expressive control. Sustain is also independent from the other effects (such as Tremolo or Symphonic) .

**To add sustain to the voices and call up the Sustain Length page: Press the UPPER (appropriate) 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.

### Sustain Length Page



### UPPER, LOWER, PEDAL

Determines the length of sustain applied to each voice section. The display shows the current sustain length values for each voice section. Range: 0- 12

## 6 Glide

Glide is a footswitch-activated effect; pressing the footswitch immediately lowers the pitch of the selected voice or voices by a half-step. (Refer to the footswitch function on page 89.)

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

**NOTE** If knee lever control of the Upper or Lower sustain has been turned on, pressing the Upper or Lower buttons here will not add sustain unless the knee lever is pushed. (See page 90 for more information.)

**NOTE** The values here must be set high enough for the sustain effect to be noticeable.

**NOTE** Remember that the SUSTAIN buttons are on/off switches. If you use them to simply check the sustain length values, you may unintentionally change the on/off status of the effect. Remember to check whether the sustain button lamps are on or off before you start to play.

# 4. Rhythm, Accompaniment and Percussion

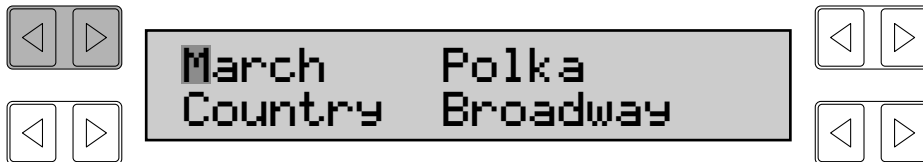
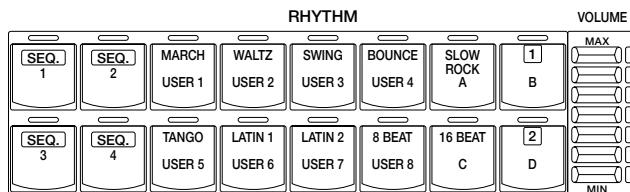
The Rhythm features of the Electone use actual drum and percussion sampled sounds to automatically play various rhythm patterns. Automatic Accompaniment functions are used with the rhythm patterns, providing appropriate and completely automatic accompaniment to match the style of the rhythm pattern selected. Moreover, the Electone has a Keyboard Percussion feature that allows you to play drum and percussion sounds from the Lower keyboard and Pedalboard.

## Rhythm Patterns

Ten different rhythm categories in various styles can be instantly selected from the front panel. The Electone has many more "hidden" rhythm patterns, however. A total of 38 rhythm patterns are available, and can be selected by using the LCD display.

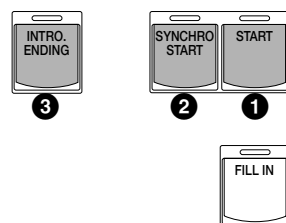
To select and play a rhythm pattern:

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



To select a rhythm pattern from each category in the display, press the Data Control button corresponding to the rhythm you wish to play, as you do with the voices. The first character of the selected rhythm pattern's name flashes. (Refer to the Rhythm Menu list on page 35 for a list of available rhythms.)

**2. Turn the rhythm on. You can use one of three buttons to turn on the rhythm:**



### 1 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.



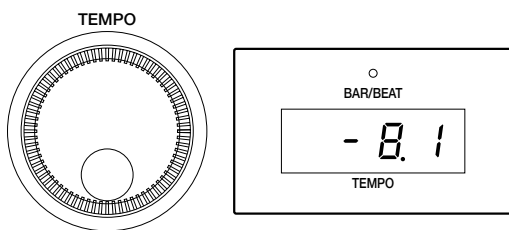
## 2 SYNCHRO START

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.

## 3 INTRO. ENDING

Pressing this button automatically plays a short introduction (of up to eight measures) before starting the actual rhythm pattern. First, press the INTRO. ENDING button, then the START or SYNCHRO START button to actually start the rhythm.

While the introduction is playing, the TEMPO Display shows the countdown to the first measure of the pattern. For example, if there is an eight-measure lead-in for a pattern in 4/4 time, the following display appears:



Pressing the INTRO. ENDING button again while the pattern is being played will automatically add an ending phrase before stopping the rhythm.

### LEAD IN

Pressing the START button while holding down the INTRO. ENDING button automatically plays a special one-measure Lead In, with a click on each beat, to cue you in to the beginning of the song.

## 3. Set the volume. Press 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 not sound, to a maximum of full volume.

Fine adjustments in the volume of the rhythm pattern can also be made from the Rhythm Condition page (See page 33).

## 4. Set the tempo.



Tempo display: shows the current tempo.

### 1 TEMPO Dial

For adjusting the speed of the rhythm. Turn the dial clockwise to increase the tempo, and counter-clockwise to decrease it.

#### ABOUT SYNCHRO START:

The Synchro Start feature functions quite differently when Auto Bass Chord is turned on and Accompaniment Memory is turned off. The rhythm pattern starts when a key on the Lower keyboard is played, but then immediately stops when the key is released. To keep this from happening, turn the Memory function on. (Refer to the A.B.C. section, page 36, for details on Auto Bass Chord and Memory.)



When the Electone is turned on, the rhythm volume is automatically set to 0.



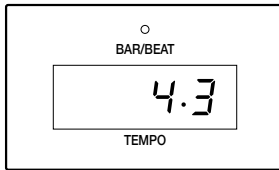
The left footswitch can also be used to turn the rhythm off and on in the middle of a song.

However, it cannot be used to start the rhythm at the beginning of a song. (To assign the footswitch for rhythm control, See page 89.)

## ② TEMPO Display (BAR/BEAT Indicator)

Shows the current tempo. (Displayed values are given in beats per minute, just as on a conventional metronome.) The tempo range is 40 to 240 beats per minute.

When the rhythm pattern begins playing, the TEMPO display changes function to a bar/beat indicator.



**BAR/BEAT Indicator:**  
shows the current position in the measures

The number on the left indicates the current bar or measure and the one on the right indicates the number of the beat in each bar. The beat indicator lamp above the display also indicates the beats.

---

**NOTE** When you turn the TEMPO Dial even while the rhythm is playing, the display momentarily changes to show the current tempo.

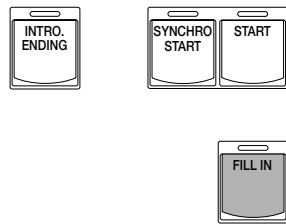
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## Fill In Patterns

Fill In Patterns are designed to be used as temporary and regular rhythmic breaks to spice up a repeating rhythm pattern. Like the regular rhythm patterns, all Fill In patterns have been designed to perfectly match the bass and chord parts of the Automatic Accompaniment feature.

To use the Fill In patterns:

- 1. Select and play a rhythm pattern.**
- 2. As you play the Electone along with the rhythm pattern, occasionally press the FILL IN button.**



For best results, press the FILL IN button just at the beginning or the first beat of a measure.

---

### USING A FILL IN FOR THE START OF A SONG:

Fill In patterns can also be used as introductions; simply press the FILL IN button before starting the rhythm with the START or SYNCHRO START buttons.

---

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### PLAYING PARTIAL FILL IN PATTERNS:

You can also start Fill In patterns within a bar, in order to play only the final one or two beats of the Fill In pattern and create additional rhythmic interest. Since the Fill In feature is very sensitive to bar/beat boundaries, you should be very careful to "play" the FILL IN button precisely on (or just slightly before) the beat that you want the Fill In pattern to begin.

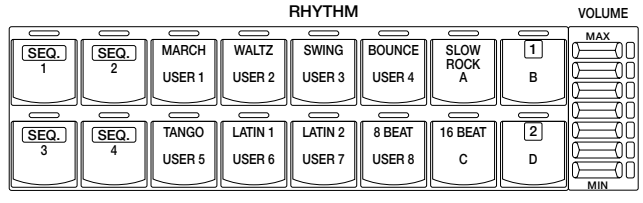
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# Auto Variation and Percussion Volume

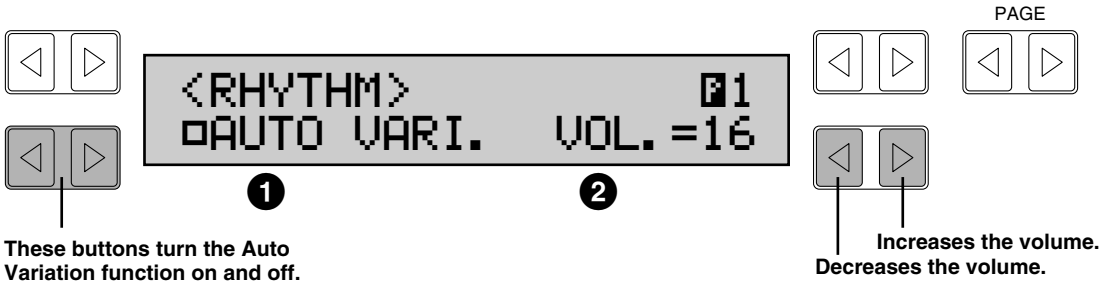
These two settings are controlled from each rhythm's Rhythm Condition pages. There are three Rhythm Condition pages.

## To select the Rhythm Condition pages:

Choose a rhythm pattern, and press that pattern's panel button again. (The button should be pressed only once if the Rhythm display has already been called up; otherwise press the button twice.)



## Rhythm Condition Page 1



### 1 AUTO VARI. (Auto Variation)

The Auto Variation function lets you set pattern variations to be played automatically. When set to on, Auto Variation automatically substitutes additional pattern variations to make the rhythm more interesting and complex.

**NOTE** The Auto Variation function is not applied to some of the rhythm patterns.

### 2 Volume

Fine adjustment of the overall volume of the rhythm patterns and Keyboard Percussion. Range: 0-24

Rhythm Condition Page 2 and 3 are described later in this section. (See page 36.)

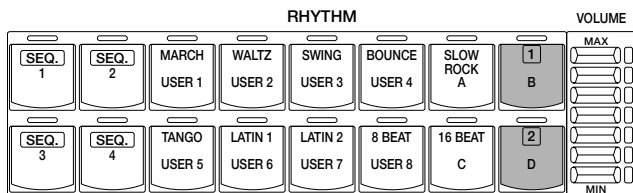
# Dotted Buttons

The Rhythm section also has, like the voice sections, dotted buttons from which rhythm patterns can be selected. These dotted buttons function as "wild card" rhythm pattern selectors; any of the rhythm patterns available from the panel buttons, the Rhythm Menu or User rhythm can be selected from these buttons.

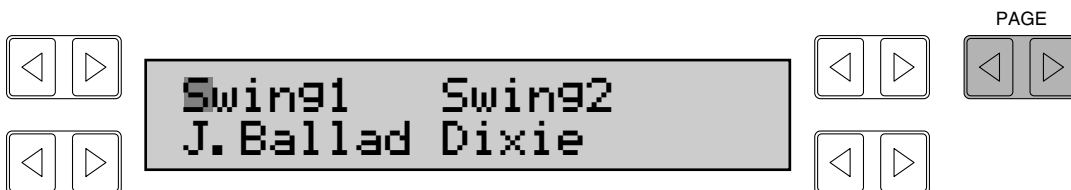
**NOTE** As with the Voice sections' dotted buttons, you can set two or three rhythm patterns from the same page to be selected from different buttons (one from the original Rhythm button, and the others from the dotted buttons).

To select a rhythm pattern from a dotted button:

**1. Press one of the dotted buttons on the right side of the Rhythm section.**

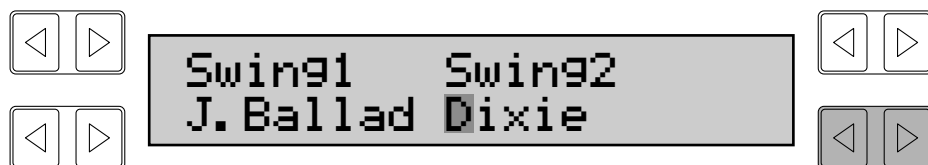


**2. Select one of the pages with the Page buttons.**



**3. Select one of the rhythms by pressing one of the appropriate Data Control buttons.**

For example, select Dixie by pressing one of the bottom right Data Control buttons.



**NOTE** While you scroll through the pages with the Page buttons, the originally selected rhythm pattern will sound until you select another pattern with the Data Control buttons.

**User Pages**

Select the User pages when you wish to play rhythm patterns you've created with the Rhythm Pattern Program function. (See page 68.)

# Rhythm Menu

This chart lists all 38 of the rhythm patterns available on the Electone. The numbers in the chart correspond to the page numbers shown in the display.

## MARCH

March	Polka	01
Country	Broadway	

## LATIN 1

Cha-cha	Rhumba	07
BeGuine	Mambo	

## WALTZ

Waltz 1	Waltz 2	02
J. Waltz	Bolero	

## LATIN 2

Samba 1	Samba 2	08
Bossa. 1	Bossa. 2	

## SWING

Swing 1	Swing 2	03
J. Ballad	Dixie	

## 8 BEAT

8Beat1	8Beat2	09
8Beat3	D. Pop	

## BOUNCE

Bounce 1	Bounce 2	04
Reggae 1	Reggae 2	

## 16 BEAT

16Beat1	16Beat.2	10
16Beat3	Funk	

## SLOW ROCK

S. Rock 1	S. Rock 2	05
S. Rock 3		

## USER

USER1-A	USER1-B	0U1
USER1-C	USER1-D	

⋮

## TANGO

Tango 1	Tango 2	06
Tango 3		

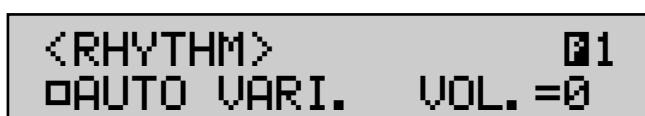
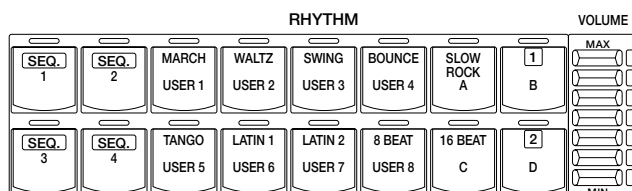
USER8-A	USER8-B	0U8
USER8-C	USER8-D	

# Accompaniment Controls

The Accompaniment function here is independent of the A.B.C. accompaniment and works with the Rhythm section to automatically add arpeggiated chords and other instrumental embellishments. The Accompaniment controls include the setting of the Accompaniment type and its volume.

To select the Accompaniment controls in the Rhythm Condition pages:

1. Press any one of the RHYTHM buttons on the panel twice.

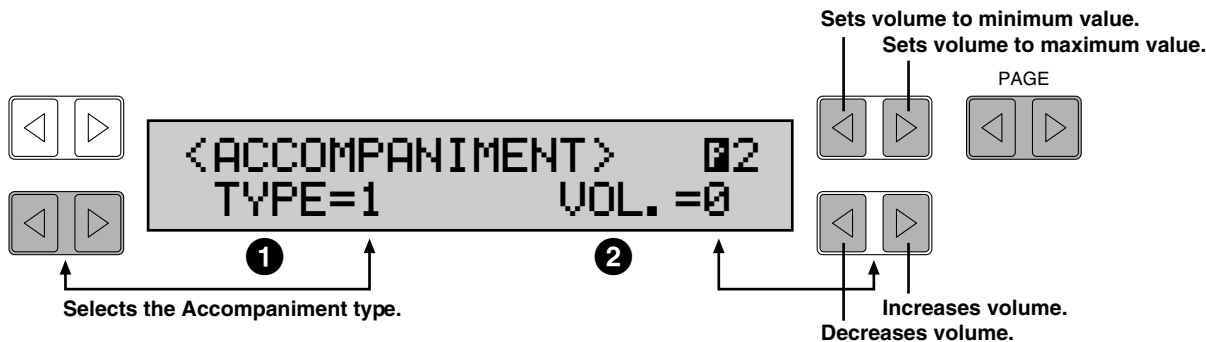


**NOTE** When the Electone is turned on, the Accompaniment Volume is automatically set to 0. Be sure to set the Accompaniment Volume to the appropriate value when using the Accompaniment function.

**NOTE** Even if the Accompaniment Type is changed, the Intro/Ending pattern remains the same.

**2.** Once the Rhythm Condition Page 1 display (above) has been called up, use the Page buttons to select Page 2.

Rhythm Condition Page 2



**1 TYPE (1-4)**

These settings provide types of rhythmic and melodic accompaniment, and become more complex according to the type number (Type 1 is the simplest, Type 4 the most complex).

**2 VOL. (Volume)**

Determines the volume of the Accompaniment. The Accompaniment can be turned off by setting this parameter to the minimum value. Range: 0-24

**Automatic Accompaniment—Auto Bass Chord**

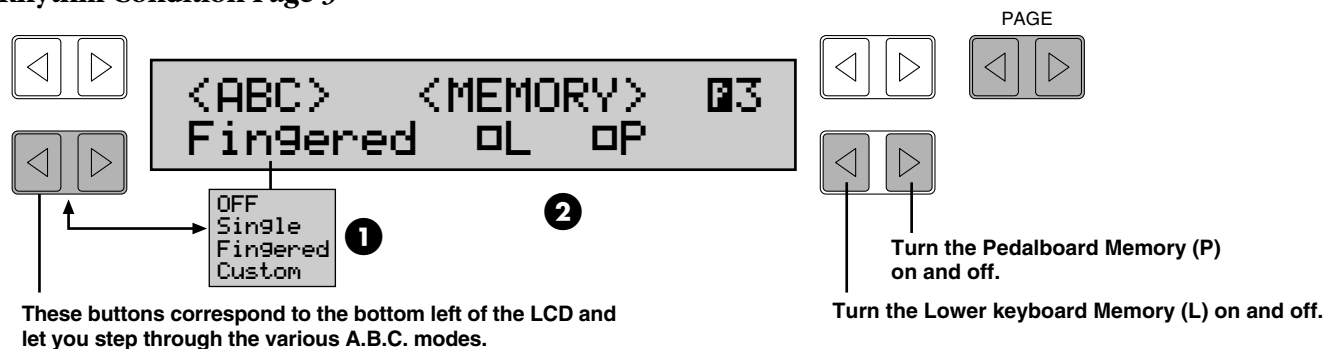
The Auto Bass Chord (A.B.C.) function works with the Rhythm section of the Electone to automatically produce chord and bass accompaniment as you play. It adds a entirely new dimension to your performance by effectively putting a full backing band at your disposal. Depending on the feature or mode selected, you can play anything from a single note to a full chord on the Lower key board and hear complete, rhythmical bass and chord accompaniment.

To select the A.B.C. function and call up Rhythm Condition Page 3:

**1.** Press any of the RHYTHM buttons twice to call up the Rhythm Condition pages.

**2.** Use the Page buttons to select Page 3, the A.B.C. & Memory page.

Rhythm Condition Page 3



## Auto Bass Chord

### ① Mode: Off, Single, Fingered, Custom

#### Off

Cancels the Auto Bass Chord function.

#### Single (Single Finger mode)

The Single Finger mode provides the fastest and easiest means to obtain many different chord/bass combinations, by simply using one, or at most, two or three fingers to play the chords.

Refer to the chart below, Chords Recognized in the Single Finger Mode, for details on playing chords in this mode.

#### Fingered (Fingered Chord mode)


The Fingered Chord mode automatically produces bass and chord accompaniment for chords played in the Lower keyboard. It allows you to use a wider range of chord types than in the Single Finger mode. In the Fingered Chord mode, you play all the notes of the chord while the Auto Bass Chord function automatically selects the appropriate bass pattern and rhythmic accents.

Refer to the chart below, Chords Recognized in the Fingered Chord Mode, for details on playing chords in this mode.

#### Custom (Custom A.B.C. mode)

The Custom A.B.C. mode is a slight variation on the Fingered Chord mode. It allows you to determine what bass notes will be played in the accompaniment by playing a note on the Pedalboard along with the chords you play in the Lower keyboard.

---

 The Auto Bass Chord function can also be selected from the A.B.C./M.O.C. page. To select the A.B.C./M.O.C. page, press the A.B.C./M.O.C. button in the DISPLAY SELECT section.

---

### ② Memory

The Memory function allows you to have the bass and chord accompaniment continue even after you release your fingers from the keyboard. Independent Memory settings are available for the Lower keyboard and Pedalboard, making it possible, for example, to have the bass continue with the rhythm while the chord accompaniment “rests.” The Memory function can also be used independently from the A.B.C. feature.

The bottom right Data Control button pair is used to control the Memory function. The left button corresponds to the Lower keyboard, and the right button corresponds to the Pedalboard.

#### L (Lower)

When Lower is set to on (solid box), the chord accompaniment of the Lower Keyboard voices continues to play even after you release your fingers from the Lower keyboard.

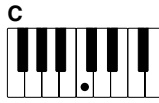
#### P (Pedal)

When Pedal is set to on (solid box), the bass accompaniment of the Pedalboard voices continues to play even after you release your fingers from the Lower keyboard.

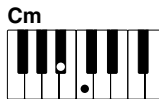
## Chords Recognized in the Single Finger Mode (Key of C)

Major, minor, 7th and minor 7th chords can all be played in the Single Finger mode.

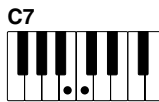
**Major chords:** Press the root of the chord (the note that corresponds to the chord's name).



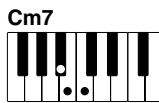
**Minor chords:** Simultaneously press the root and any one black key to the left of it.



**7th chords:** Simultaneously press the root and any one white key to the left of it.



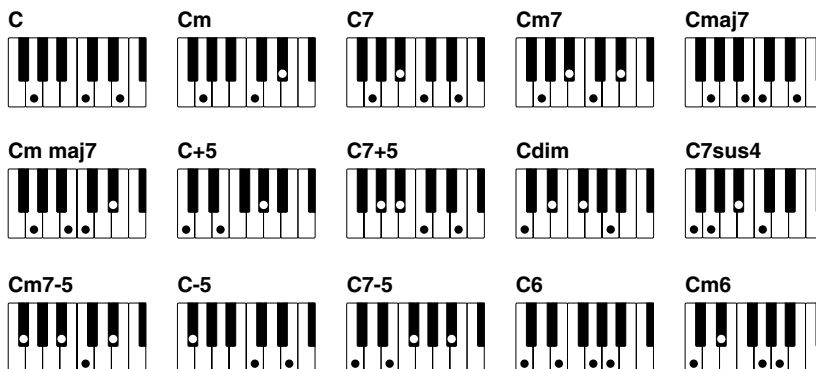
**Minor 7th chords:** Simultaneously press the root as well as any black key and any white key to the left of it.



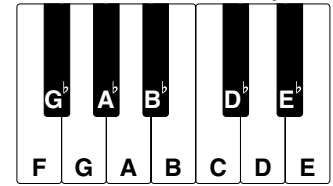
### PLAYING SINGLE FINGER CHORDS WITHOUT RHYTHM:

Auto Bass Chord is generally used with rhythm patterns to create full rhythmic accompaniment, but it can also be used in the Single Finger mode to add full continuous chords to your performance without the use of the rhythm. Simply leave the rhythm off in Single Finger mode, and play Single Finger chords from the Lower keyboard.

## Chords Recognized in the Fingered Chord Mode (Key of C)



### Chord Roots on the Lower Keyboard



**NOTE** Minor, 7th and minor 7th chords with black key roots (such as B<sup>b</sup> or G<sup>b</sup>) are played in the same way as those with white key roots.

**NOTE** With Single Finger, the chord produced will sound in the same octave regardless of where it is played on the Lower keyboard.

**NOTE** If you forget to cancel the Single Finger or Fingered Chord accompaniment functions, single notes that you play will sound as continuous chords.

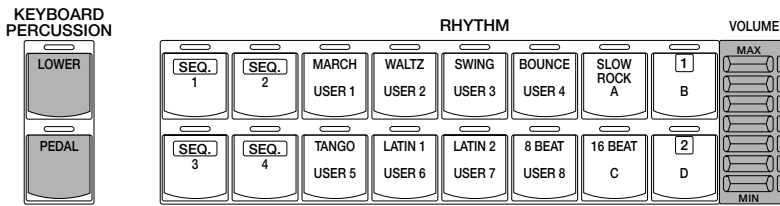


# Keyboard Percussion

The various drum and percussion sounds (a total of 43 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 either or both the LOWER and PEDAL buttons in the KEYBOARD PERCUSSION section. (Keyboard Percussion switches for the Lower keyboard and Pedalboard can be used together or independently as you wish.)



2. Set the volume.

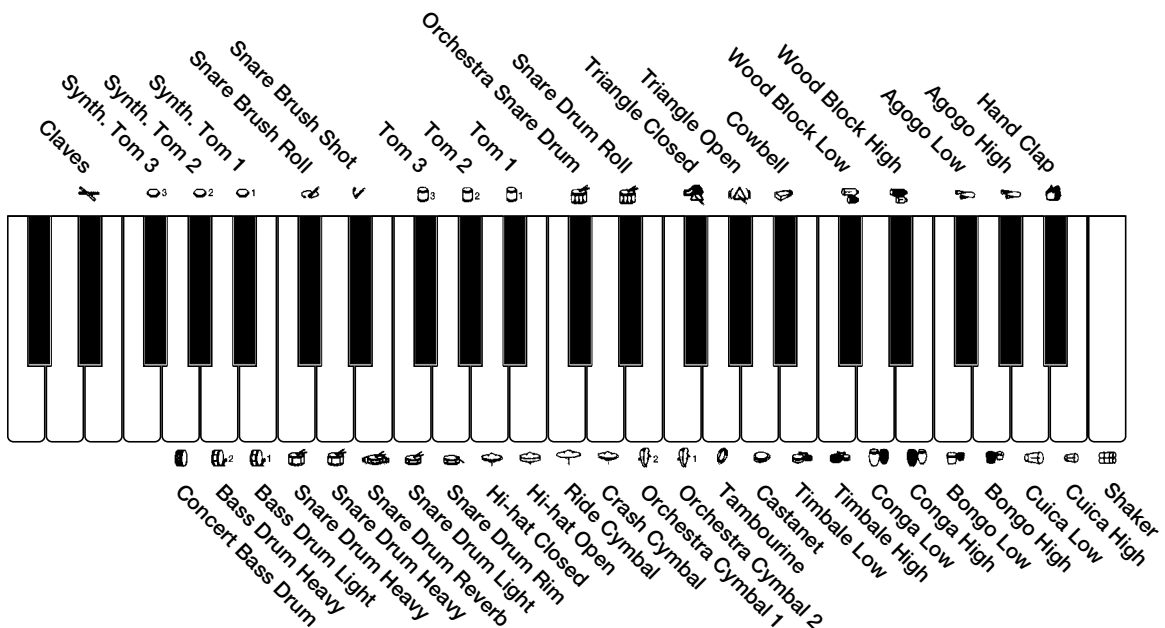
The volume of the percussion sounds is set together with that of the rhythm by using the VOLUME controls in the Rhythm section. Set the volume to the desired level.

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

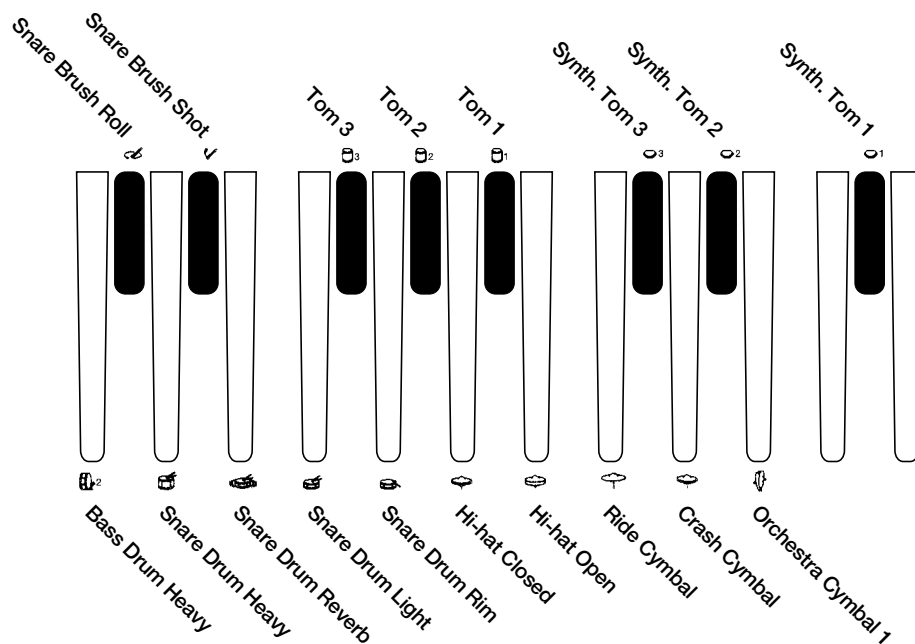
4. Play some notes on the Lower keyboard and Pedalboard. The various percussion sounds have been assigned to the keyboards as shown in the charts below.

**NOTE** Additional percussion sounds are available on the Upper keyboard when using the RHYTHM PATTERN PROGRAM function (See page 71).

## Percussion Assignments for the Lower Keyboard



## Percussion Assignments for the Pedalboard



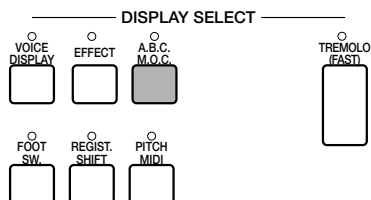
## Melody On Chord

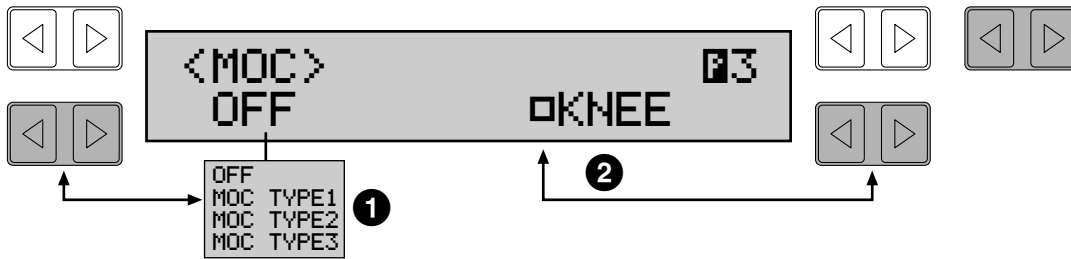
The Melody On Chord (M.O.C.) feature automatically adds a harmony part to the melodies you play on the Upper keyboard. The harmony is derived from the chords you play on the Lower keyboard—or from the chords that are played for you, if you use Automatic Accompaniment.

Melody On Chord has three different modes, each providing a different set of harmonies to accompany the melody played. The modes are selected from the A.B.C./M.O.C. page.

To select the M.O.C. function:

**Press the A.B.C./M.O.C. button in the DISPLAY SELECT section.**





## 1 Type

### OFF

Cancels the Melody On Chord function.

### MOC Type 1

Produces harmonies of up to two notes in a range close to the melody played.

### MOC Type 2

Produces harmonies of up to three notes in a range close to the melody played.

### MOC Type 3

Produces harmonies of up to four notes in a range relatively distant from the melody played.

## 2 Knee

On/off switch for knee lever control over Melody On Chord operation. When this is on, pressing the knee lever to the right activates the Melody On Chord function. (Refer to Knee Lever Control, page 90.)

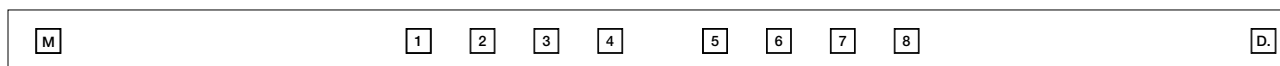
---

**NOTE** Even when Melody On Chord is on, if the Upper keyboard voices are set to 0, the function will not sound.

---

# 5. Registration Memory

Registration Memory allows you to store virtually all the settings you make on the panel and LCD, providing a convenient way to instantly change all voice settings and rhythms while you're playing, with the simple touch of a single button on the Registration Memory panel. The buttons are conveniently located between the upper and lower keyboards for easy access while playing.



The following functions and settings cannot be memorized:

- Registration Shift settings
- Pitch/Transpose settings
- Voice Disk voices
- User rhythms in the Rhythm Pattern Program (except for User rhythms currently assigned to the Dotted buttons)
- Rhythm Sequences
- MIDI settings

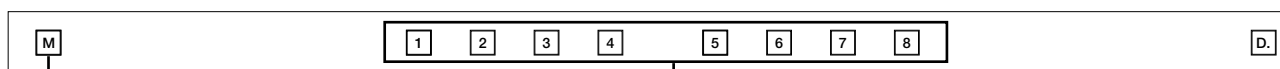
## Storing Registrations

Newly created registrations you make can be stored to the Registration Memory panel buttons. All registrations in Registration Memory can also be saved to floppy disk for future recall.

To store registrations to the Registration Memory:

**1. After creating your original registration, decide which numbered button you wish to store.**

**2. While holding down the M (Memory) button in the Registration Memory section, press the numbered button to which you wish to store your registration.**



When the registration is stored, the numbered button flashes momentarily.

To select registrations from Registration Memory:

Simply press the numbered button that corresponds to the registration you wish to select.

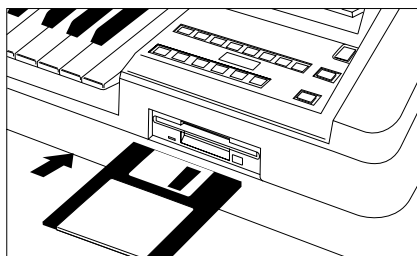
### USING THE D (DISABLE) BUTTON:

Rhythm and automatic accompaniment patterns also change when you select different Registration Memory buttons. Pressing the D (Disable) button allows you to keep the same rhythm and accompaniment patterns throughout all your registration changes, or make your own rhythm pattern selections if you want to.

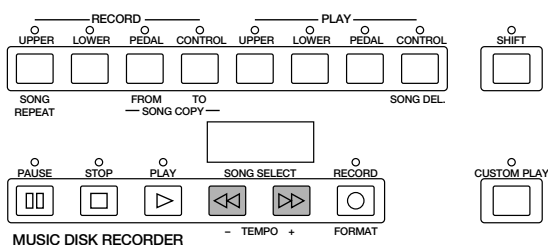
To store all registrations to disk:

# 1. Insert a formatted disk into the disk slot under the Music Disk Recorder (M.D.R.)

Make certain that the disk is either blank or has data you can erase. If the disk is new and unformatted, you will have to format it. Refer to the instructions how to format a disk (See page 50).



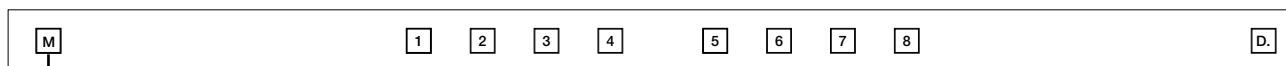
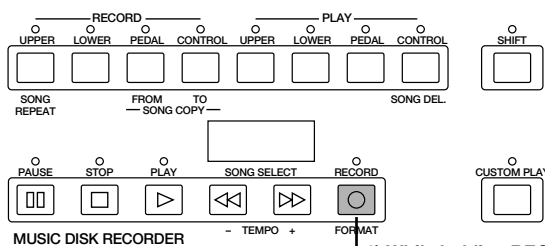
# 2. Select a song number on the M.D.R. by using the SONG SELECT buttons.



There are 40 songs, or memory locations, available on a single disk.

# 3. While holding down the RECORD button on the M.D.R., press the M (Memory) button in Registration Memory.

**NOTE** See pages 56 and 57 for the details on saving/recalling registrations to/from the M.D.R.



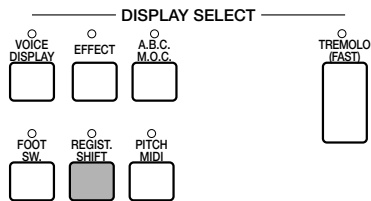
This operation saves all 8 registrations in Registration Memory to one song. The other 39 available songs on the disk can be used for saving additional batches of 8 registrations.

# Registration Shift

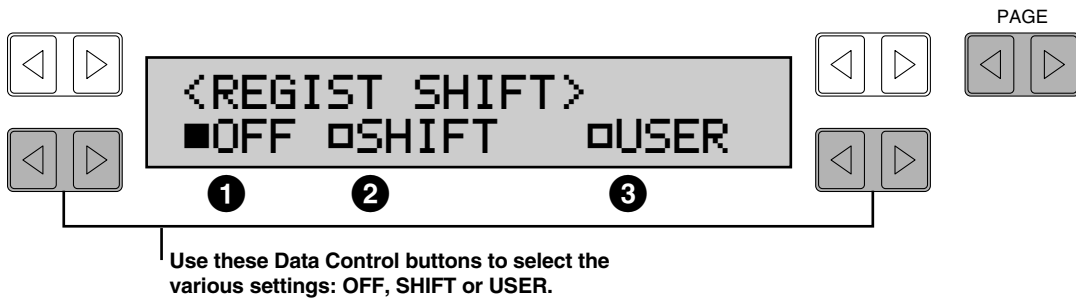
The Registration Shift function allows you to change registrations, all the settings you make on the panel and LCD, without taking your hands from the keyboards. By using the right footswitch on the expression pedal, you can step through the panel registrations in sequence, either in numeric order or in any order you specify. Registration Shift has two modes: Shift and User.

To select the Registration Shift functions:

Press the **REGIST. SHIFT** button in the **DISPLAY SELECT** section.



## Registration Shift Mode Page



### 1 OFF

Turns off the Registration Shift assignment.

### 2 SHIFT

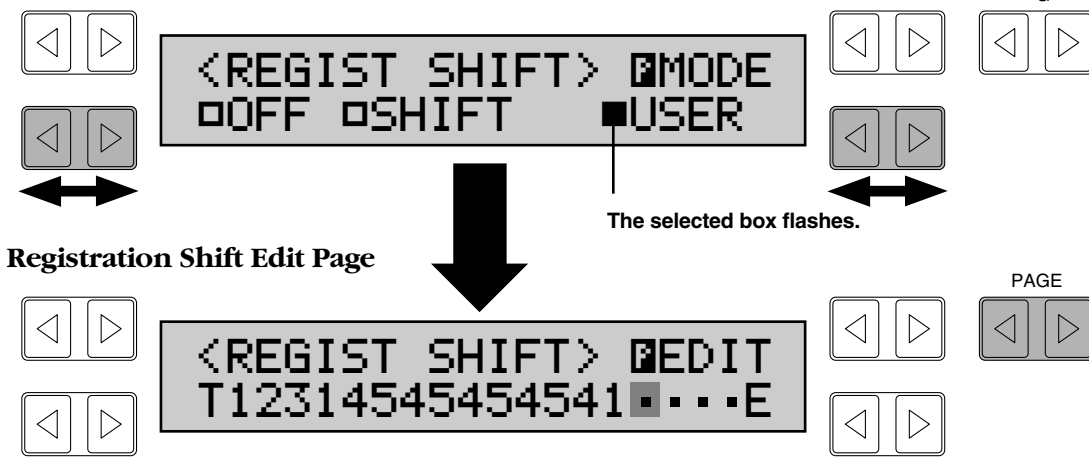
Selection of the Shift mode. In the Shift mode, each press of the right footswitch selects the Registration Memory buttons in their numerical order. After the last preset is reached, the function “wraps around” to select the first button again. The numbered buttons light up as they are selected.

### 3 USER

Selection of the User mode. In the User mode, each press of the right footswitch selects registrations according to the order you specify.

There are two pages: Mode and Edit. (The Edit page can only be called up when the User mode has been selected.)

Once you’ve selected the User mode, call up the Edit page by using the Page buttons.

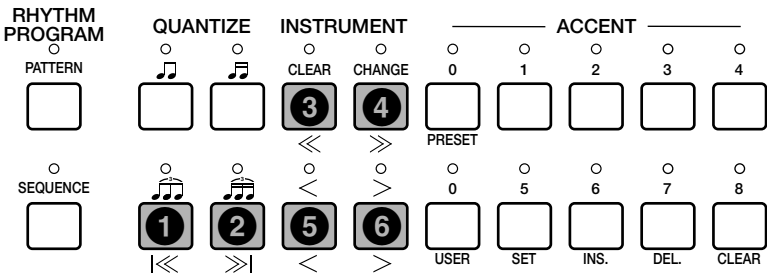


## ● Cursor Controls

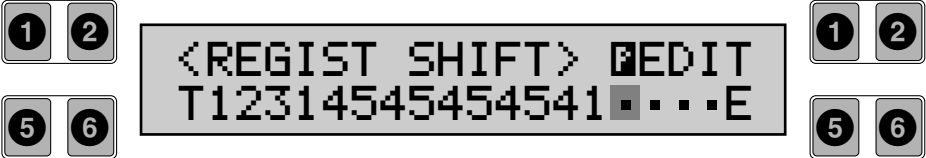
The cursor controls are used to move the cursor (the flashing box in the display) along the registration row in the display. The entered registration numbers are shown in the display; spaces not yet entered are represented by a dot. Move the cursor to the point you wish to edit by using the appropriate Rhythm Sequence buttons (arrows marked in green) on the panel and/or the Data Control buttons.

**NOTE** The cursor cannot be moved unless registration numbers have been entered.

### Cursor Controls-Panel Buttons



### Cursor Controls-Data Control Buttons

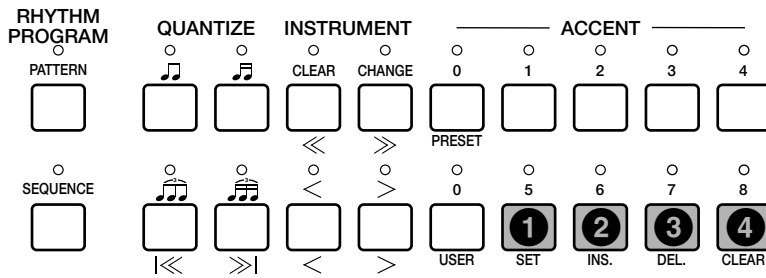


- 1** |<<< Moves the cursor to the first position.
- 2** >>| Moves the cursor to the last position.
- 3** <<< Moves the cursor ten spaces back.
- 4** >>> Moves the cursor ten spaces ahead.
- 5** < Moves the cursor one step to the left.
- 6** > Moves the cursor one step to the right.

**NOTE** There are 18 Registration Shift steps available.

## ● Data Controls

The buttons in the Rhythm Sequence section described below are used to enter and delete registration numbers in the registration row. Move the cursor to the desired position and edit the registration data.



### 1 SET

For initially entering a registration number to a blank space in the registration row, or for replacing a number at the current cursor position. To enter a number, press the desired Registration Memory button (the selected button will light), then press the SET button. After using SET to enter registrations, the cursor can be moved among the numbers.

### 2 INS. (Insert)

For inserting a registration number just before the current cursor position. The new registration number is inserted at the cursor position and all other numbers to the right of the cursor are moved to accommodate the new number. To perform the operation, first move the cursor to a numbered position. Then press the desired Registration Memory button (the selected button will light), and press the INS. button.

### 3 DEL. (Delete)

For deleting a registration number at the current cursor position. To delete the unnecessary number, move the cursor to a numbered position and press the Data Control button corresponding to DEL.

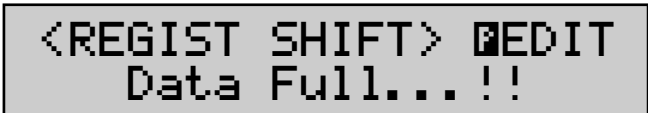
### 4 CLEAR

For erasing all current user Registration Shift settings. After selecting CLEAR, the following display appears:





Registration numbers cannot be entered beyond the Registration Shift function's capacity of 18. The following message momentarily appears when the 18 spaces have been filled:



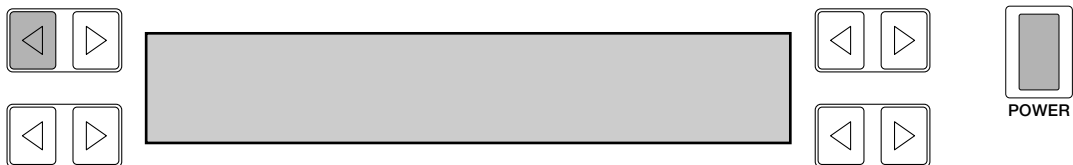
First delete unnecessary registrations, then perform the operation again.

## **Resetting the Registration Memory Buttons (Power On Reset)**

All current settings including Registration Memories and User rhythms can be deleted at once by using the Power On Reset function. To do this:

- 1. Turn off the power.**
- 2. While holding down the top left Data Control button, turn the power back on.**

**!** Be careful when using this operation, since it erases all your existing data. Always save your important data to a floppy disk using M.D.R. (See page 56) in advance.



Turning the Electone off erases all panel settings you have made. When the Electone is turned on, Basic Registration 1 is automatically selected. If you have made panel settings you wish to keep, save them to Registration Memory before turning the Electone off. You can, however, restore the panel settings that were made before the Electone was last turned off. In doing this, first be careful NOT to press any panel buttons (excepting those in Basic Registration) after you turn the Electone back on. Then, to restore the previous settings, hold down the M (Memory) button and press the D (Disable) button.

# 6. Music Disk Recorder

The Music Disk Recorder (M.D.R.) is a sophisticated recording device built into the Electone that lets you record your performances and registration settings. The Music Disk Recorder not only records the notes you play; it also remembers the voices and rhythms you select, the front panel controls you change, as well as all expression pedal, footswitch and knee lever positions, to reproduce your performance exactly as you play it. Moreover, you can separately record different parts of your performance, building up a song part by part.

## Precautions

Be sure to handle floppy disks and treat the disk drive with care. Follow the important precautions below.

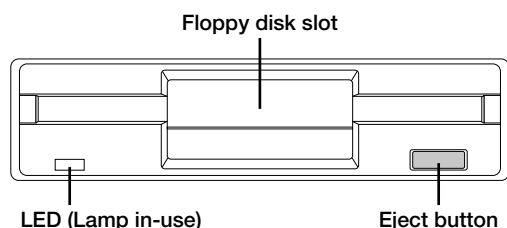
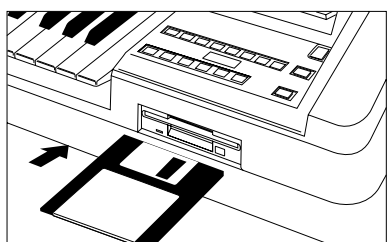
### Compatible Disk Type

3.5" 2DD and 2HD type floppy disks can be used. A blank 2DD floppy disk has been included with your Electone for you to record your performances.

### Inserting/Ejecting Floppy Disks

#### To insert a floppy disk into the disk drive:

Hold the disk so that the label of the disk is facing upward and the sliding shutter is facing forward, towards the disk insertion slot. Carefully insert the disk – shutter first – into the slot, slowly pushing it all the way in until it clicks into place and the eject button pops out.



#### To eject a floppy disk:

! Before ejecting the disk, be sure to confirm that the M.D.R. is stopped (check if the LED above the STOP button in the M.D.R. section is lit and the LED below the disk slot is off).

Press the eject button slowly as far as it will go; the disk will automatically pop out. When the disk is fully ejected, carefully remove it by hand.

⊘ Never attempt to remove the disk or turn the power off during recording, reading and playing back. Doing so can damage the disk and possibly the disk drive.

! If the eject button is pressed too quickly, or if it is not pressed in as far as it will go, the disk may not eject properly. The eject button may become stuck in a half-pressed position with the disk extending from the drive slot by only a few millimeters. If this happens, do not attempt to pull out the partially ejected disk, since using force in this situation can damage the disk drive mechanism or the floppy disk. To remove a partially ejected disk, try pressing the eject button once again, or push the disk back into the slot and then repeat the eject procedure.

! Be sure to remove the floppy disk from the disk drive before turning off the power. A floppy disk left in the drive for extended periods can easily pick up dust and dirt that can cause data read and write errors.

## Cleaning the Disk Drive Read/Write Head

● Clean the read/write head regularly. This instrument employs a precision magnetic read/write head which, after an extended period of use, will pick up a layer of magnetic particles from the disks used that will eventually cause read and write errors.

● To maintain the disk drive in optimum working order Yamaha recommends that you use a commercially-available dry-type head cleaning disk to clean the head about once a month. Ask your Yamaha dealer about the availability of proper head-cleaning disks.

⊘ Never insert anything but floppy disks into the disk drive. Other objects may cause damage to the disk drive or floppy disks.

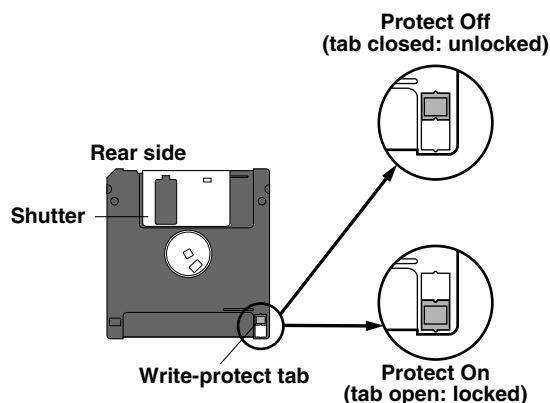
## About the Floppy Disks

To handle floppy disks with care:

- ⊘ Do not place heavy objects on a disk or bend or apply pressure to the disk in any way. Always keep floppy disks in their protective cases when they are not in use.
- ⊘ Do not expose the disk to direct sunlight, extremely high or low temperatures, or excessive humidity, dust or liquids.
- ⊘ Do not open the sliding shutter and touch the exposed surface of the floppy disk inside.
- ⊘ Do not expose the disk to magnetic fields, such as those produced by televisions, speakers, motors, etc., since magnetic fields can partially or completely erase data on the disk, rendering it unreadable.
- ⊘ Never use a floppy disk with a deformed shutter or housing.
- ⊘ Do not attach anything other than the provided labels to a floppy disk. Also make sure that labels are attached in the proper location.

To protect your data (Write-protect Tab):

To prevent accidental erasure of important data, slide the disk's write-protect tab to the "protect" position (tab open). If you attempt to modify the disk when the write-protect tab is set to "on" position, "Prot (Protected)" will appear on the LED display in the M.D.R. section indicating that the operation is not possible.



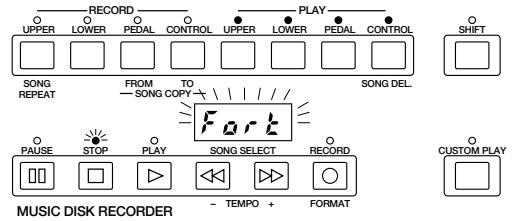
# Formatting a Disk

Before recording a performance to your blank disk, the disk must first be formatted.

To format a disk:

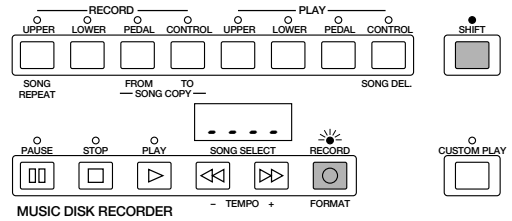
## 1. Put the disk, label facing up, into the disk drive (insertion slot).

"Fort" will appear on the LED display indicating that the inserted disk requires to be formatted.



## 2. While holding down the SHIFT button, press the FORMAT button.

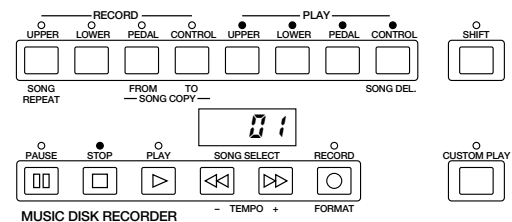
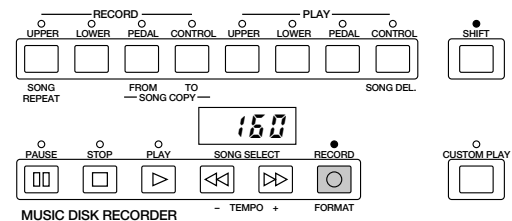
This step puts the format operation on stand-by, indicated by the dashes on the LED display and the flashing LED above the FORMAT button.



**!** If you format a disk that contains previously recorded data, all data on the disk will be erased. To avoid inadvertently formatting a disk after this step, press the STOP button.

## 3. Press the FORMAT button again to begin formatting.

The LED above the FORMAT button stays lit. The number "160" appears on the LED display and counts down to "001" as the disk is being formatted. When formatting is completed, operation returns to the original STOP status.



### About SHIFT button:

You will find the SHIFT button (printed in green) at the top right side of the M.D.R. section. Some buttons in the M.D.R. section have dual functions: the first function is printed in white above each button; the second function is printed in green below each button. The SHIFT button is used to select the second functions by pressing each function button while holding down the SHIFT.

# Recording

## (1) To record a song:

### 1. Set the desired registrations on the Electone.

Make all the Electone settings necessary for the song you will record. This means entering the all registrations you will need for the entire performance in the Registration Memory. Make sure also to select the registration that you will use at the beginning of the song.

### 2. Put a formatted disk into the disk slot.

### 3. Use the SONG SELECT (◀, ▶) buttons to select the song number for recording.

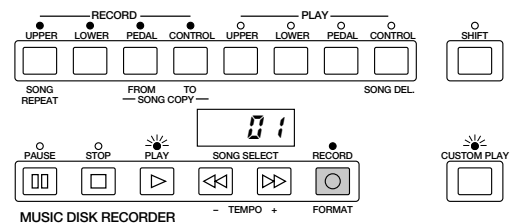
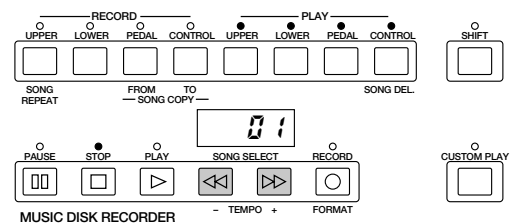
### 4. Press the RECORD button.

The RECORD lamp lights up and the PLAY and CUSTOM PLAY lamps begins blinking, indicating that the Music Disk Recorder is ready to record.

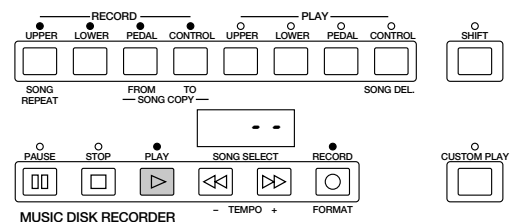
### 5. Press the PLAY button.

The PLAY lamp lights up and small bars flash across the LED display from left to right, indicating that the M.D.R. is reading the registrations and other settings.

**NOTE** When a disk is first inserted, song number 01 is automatically selected. The song numbers 01 through 40 are available and up to 40 songs can be stored on a disk. However, available song numbers may be reduced depending on the amount of the song data you have recorded.

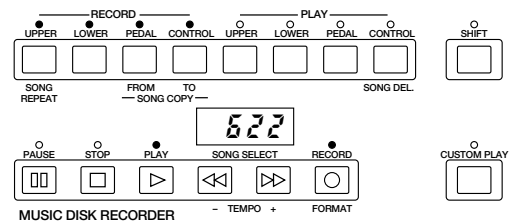


**NOTE** If the selected song number already contains recorded data, small bars ("--") appear at the left part of LED display and flash along with the song number, warning you that the selected song number already contains recorded data. If you want to execute recording operation over the song number, press the RECORD button again. If you don't want, select another song number for recording or press the STOP button to cancel recording.



## 6. After numbers appear on the LED display of the M.D.R., begin playing.

Once the setup operation in step #5 is complete, a number will appear on the LED display indicating that you can begin recording your performance. The number also indicates the amount of memory left on the disk.



The short time it takes to set up for recording is recorded as well, causing a short pause before playback of the song.

### If you make a mistake during recording:

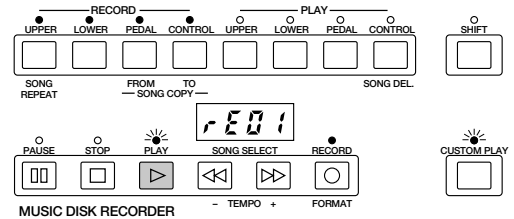
#### 1) Press the PLAY button while the M.D.R. is still running.

This stops the recording and returns you to the starting point of the song.

The letters "rE" (retry) appear on the left side of the LED display and the PLAY and CUSTOM PLAY LEDs start flashing, indicating that you can re-record the song.

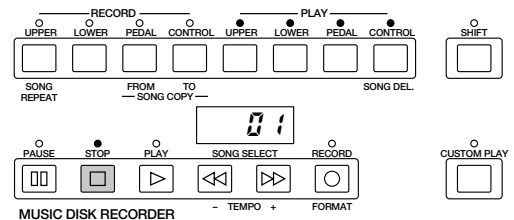
#### 2) Press PLAY again to begin re-recording the song.

Re-recording starts from the beginning of the song and replaces the previously recorded performance with the newly recorded performance.



## 7. When you finish playing, press the STOP button.

When the STOP button is pressed, both the RECORD and PLAY lamps go out, and recording is stopped.



Be sure to remove the floppy disk from the disk drive after the STOP lamp lights up and the LED below the disk slot goes out.



When the available memory reaches "008" or less, the numbers begin flashing to warn you. If this happens, stop recording before the display reaches "000."

## 8. To hear your newly recorded performance, press the PLAY button.

Playback will begin after a couple of seconds. For more information on playback and other playback-related functions, see page 58.



Never attempt to press the eject button or turn the power off during recording, reading and playing back. Doing so can damage the disk and possibly the disk drive. Be sure to remove the floppy disk from the disk drive before turning off the power.

### **Outline of M.D.R. Operation**

Though the M.D.R. is as easy to operate as a cassette tape recorder, it is far more versatile. Since it records all Electone settings and control movements as well as the notes you play as digital data, it allows you much more flexibility and control than even the most sophisticated tape recorder. Basically, the M.D.R. independently records the following three types of data:

#### **1) Registration data (including Bulk data)**

All registrations stored to the Registration Memory numbered buttons as well as the registration currently set to the panel, are recorded at the beginning of a song, before the actual recording of your performance. Bulk data is also saved to the song with the Registration data. Bulk data includes: Registration Shift settings, Rhythm Pattern (User rhythms), Rhythm Sequence data and User voices.

#### **2) Performance data**

The M.D.R. records your performance on the keyboards and pedalboard of the Electone exactly as you play it, even recording the strength at which you play the keys and how hard you press them down while playing. The various types of performance data—Upper, Lower, Pedal and Lead—are recorded to independent "tracks," so that you can change any one of them without affecting the others.

#### **3) Control data**

All changes you make on the Electone during your performance are recorded in real time. These include registration changes, the use of the expression pedals, footswitches and knee lever.

## **(2) To record each part separately:**

You can also record the parts of your performance independently; for example, first recording the chords and bass to the song (using the Lower and Pedalboard), and after that recording the melody. This function also lets you record keyboard percussion and performance control data, such as registration changes and expression pedal operation, separately from the other parts of the song.

### **1 ■ Set up the M.D.R. for recording, as you did in the section above.**

The first steps in recording parts separately are the same as for normal recording on page 51:

- 1) Memorize all the registrations needed for your performance to the Registration Memory numbered buttons, and set the registration that will be used at the beginning of the song.**
- 2) Insert a formatted disk.**
- 3) Select the song number to which you will record your performance.**
- 4) Press the RECORD button to make the Music Disk Recorder ready to record.**

## 2. Select the parts for recording.

Pressing the RECORD in the procedure 1) – 4) above turns on the all parts' LEDs in the upper left row indicating that each part is ready to record.

Press the RECORD buttons for each part in the upper left row to turn off the parts you don't want to record. For this example, press RECORD/UPPER. The PLAY/UPPER lamp in the upper right row lights up.

**RECORD/UPPER** – Records the performance data of the Upper keyboard when turned on.

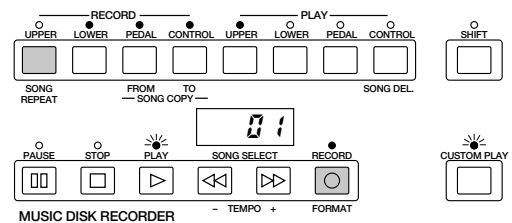
**RECORD/LOWER** – Records the performance data of the Lower keyboard when turned on.

**RECORD/PEDAL** – Records the performance data of the Pedalboard when turned on.

**RECORD/CONTROL** – Records the Control data (see Outline of M.D.R. Operation above) when turned on.

The LED lamps above the buttons indicate the record status of the parts.

This example operation disables recording of the Upper part.



### Separate recording for Lead and/or Keyboard

#### Percussion part:

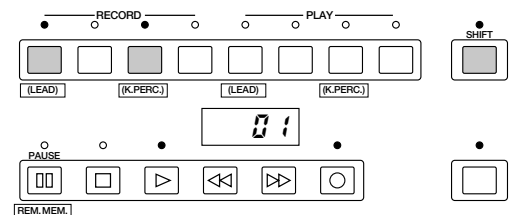
Hold down the SHIFT button and simultaneously press the appropriate button in the top row in the procedure #2. above.

The two buttons (indicated in the illustration at right) functions as Keyboard Percussion selectors in the record mode.

**RECORD/LEAD** - Records the performance data of the Lead voice when turned on.

**RECORD/K.PERC.** - Records the performance data of Keyboard Percussion when turned on. (Keyboard Percussion can be recorded and played independent of the Rhythm patterns.)

Holding down the SHIFT button in the record condition lets you select these "hidden" functions. The lamps above each button will also change to indicate the status of SHIFT-selected parts.



**NOTE** If you don't record the Lead and Keyboard Percussion parts separately, the Lead part will be recorded as the Upper data and the Keyboard Percussion part will be recorded as the Lower/Pedal data.

## 3. Press the PLAY button, and start playing after numbers appear in the display.

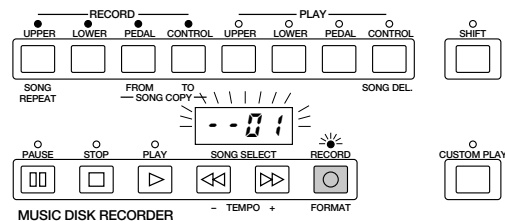
For this example, play the Lower keyboard and Pedalboard.

## 4. Press the STOP button when you are finished with your performance to stop recording. Now that you've recorded the first parts of your performance.



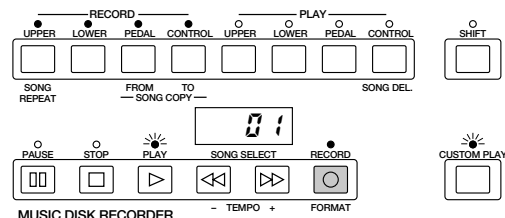
## 5. Press the RECORD button to set up recording of the next part.

In this case, the song (number) contains the performance data of the Lower and Pedal in addition to the registration and setup data. The small bars ("--") appear at the left part of LED display and flash along with the song number, warning you that the selected song number already contains recorded data.



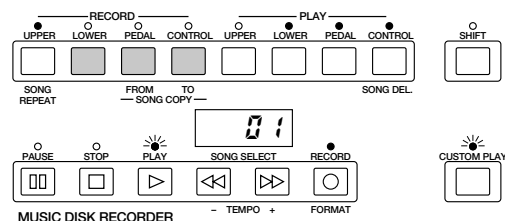
## 6. Press the RECORD button again to record another part. (Upper part.)

The RECORD lamp lights up and the PLAY and CUSTOM PLAY lamps begin blinking, indicating that the Music Disk Recorder is ready to record.



## 7. Press the RECORD buttons for each part in the upper left row to turn off the parts you have already recorded.

In this case, press RECORD/LOWER, RECORD/PEDAL and RECORD/CONTROL to turn off.

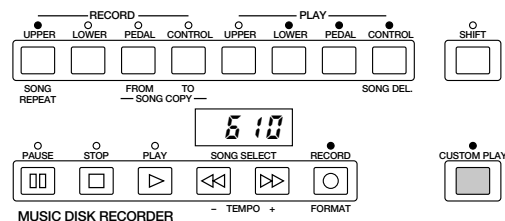


## 8. Press the CUSTOM PLAY button to start recording of the new part or parts. (Upper part.)

Playback of the previously recorded parts starts immediately. The CUSTOM PLAY button is used here to record only the parts that have been selected for recording, and play back only those parts that have been selected for playback. Since registration data has already been recorded with the first parts of the song, recording begins immediately.

While you listen to the parts being played back, start playing the melody on the Upper keyboard.

When the end of the recorded performance is reached, playback is automatically stopped and the STOP status is resumed.



**NOTE** The CUSTOM PLAY button is used to play back the specified track(s).

**NOTE** The length of a subsequently recorded part cannot exceed the length of the previously recorded parts. If you want to change the song length, first delete the existing song (see Song Delete on page 64.) and record again.

# **Recording Registrations (and Bulk Data)**

You can also record registrations by themselves, without recording a performance. Bulk data, including Registration Memory and Registration Shift settings, Rhythm Pattern (User rhythms) and Rhythm Sequence data, and User voices, is also saved in the operation. There are two ways to record the registrations and bulk data:

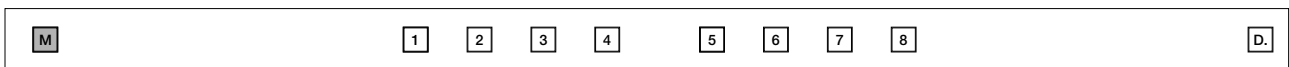
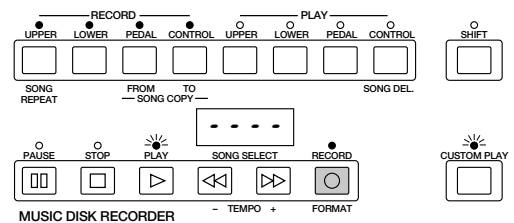
## **(1) To record only the registrations and bulk data:**

**1.** On the Electone, set the registrations and all other data you wish to record.

**2.** Select the song number to which you wish to record the registrations.

**3.** While holding down the RECORD button, press the M (Memory) button on the Registration Memory panel.

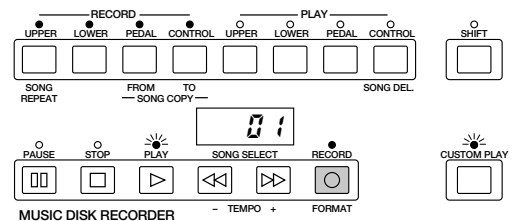
Small bars flash across the LED display from left to right, indicating that the M.D.R. is reading the registrations and other settings. After recording, the M.D.R. is automatically stopped and returns to STOP status.



## **(2) To record only the registrations and bulk data:**

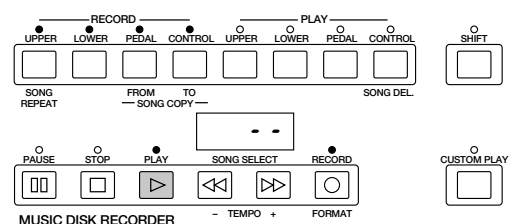
**1.** Set up the registrations and select the song number as you did in steps #1 and #2 above.

**2.** Press the RECORD button.



**3.** Press the PLAY button to record the registrations, then press the STOP button as soon as you see the small bars flash across the LED display from left to right.

The small bars that flash across the display indicate that the M.D.R. is recording the registrations and being set up for normal recording; pressing the STOP button interrupts this process.



---

## ***Recalling Recorded Registrations (and Bulk Data)***

---

The registrations (and bulk data) recorded to song numbers in the above operation can be loaded back to the Electone by simply selecting the appropriate song number and pressing the PLAY button. When the operation has been completed, the M.D.R. returns to STOP status.

The M.D.R. also makes it possible to use more than the 8 Registration Memory registrations in a performance – without having to alter the current panel settings. This would come in handy when performing several songs in succession that use more than 8 registrations.

**To do this:**

**1** ■ **First record the registrations you need into several song numbers on the M.D.R. before the performance. (You should also try to record them in the order that you'll use them, if possible.)**

**2** ■ **During the performance, after all 8 registrations from a certain song number have been used, select the next song number and press the PLAY button on the M.D.R. This replaces all 8 registrations in Registration Memory with the new ones from the selected song number.**

**3** ■ **By repeating the above steps, you can run through an entire performance without having to change the panel settings.**

---

## ***Replacing Registrations***

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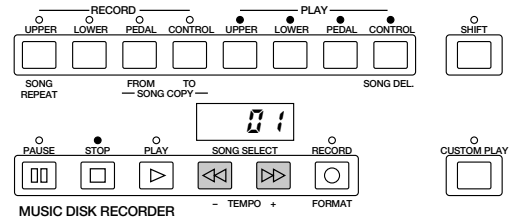
The M.D.R. also lets you change the registrations of an existing song without changing the performance data. The procedure is the same as that of Recording Registrations mentioned in the previous page.

# Playback

You can play back your recorded performance by simply pressing the PLAY button. Registrations and other data will be recalled to the Electone.

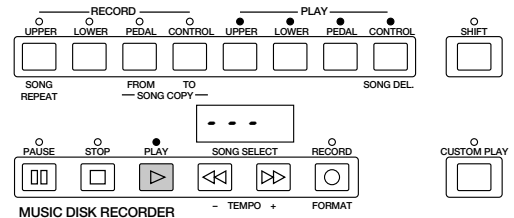
## (1) To play back a song:

**1. Select the number of the song you wish to play back by using the SONG SELECT buttons.**



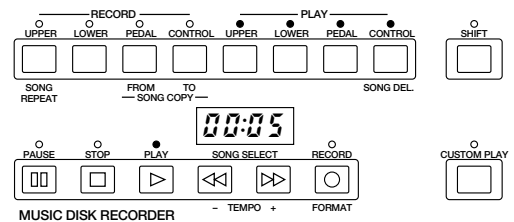
**2. Press the PLAY button.**

The PLAY lamp lights up and small bars move across the display, indicating that the M.D.R. is resetting registrations on the Electone.



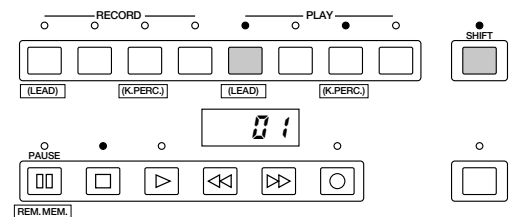
**3. Playback of the song begins after the Electone data is reset and the song time is shown on the M.D.R.'s display.**

Playback automatically stops at the end of a song. You can, however, stop playback in the middle of a song by pressing the STOP button.



### If you have recorded the Lead part separately:

Turn on the Lead part for playback by holding down the SHIFT button and simultaneously pressing the appropriate button in the PLAY section (as shown in the illustration on the right).



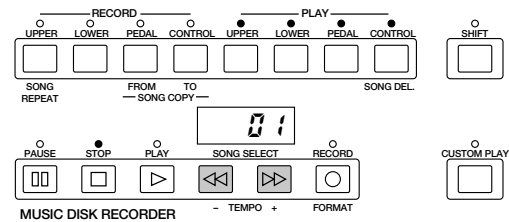
**⊘** Never turn off the power switch when a floppy disk is still engaged in the M.D.R. disk drive slot. Also do not press the Eject button during recording or playback.

## (2) To play back the selected part(s):

You can also play back the selected parts of your recorded performance, while other parts are temporarily turned off. This function is especially useful for playing a single part, such as the melody, over previously recorded accompaniment parts.

To select specific parts for playback:

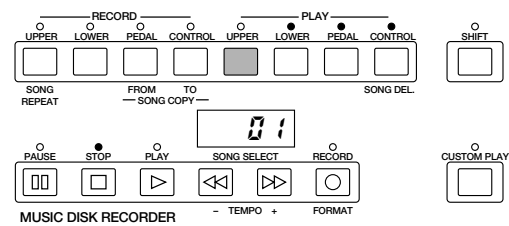
### 1. Select the number of the song to be played back.



### 2. Set the parts you wish to mute to OFF, by pressing the appropriate PLAY button.

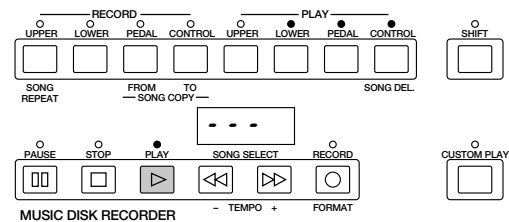
The LED of the selected part should be off.

Make sure to turn on the parts you wish to play back.



### 3. Press the PLAY button.

First the registration and other data are read, then playback of the performance starts (excepting the parts that were turned off in step #2).



### 4. Now perform your new part or parts over the playback parts.

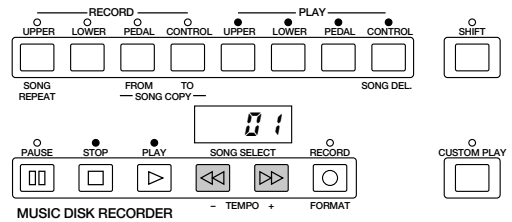
When the end of the recorded performance is reached, playback is automatically stopped and the STOP status is resumed.

### (3) To repeat playback of a song or songs:

This feature allows you to repeatedly play back either all songs on a disk or only one specific song.

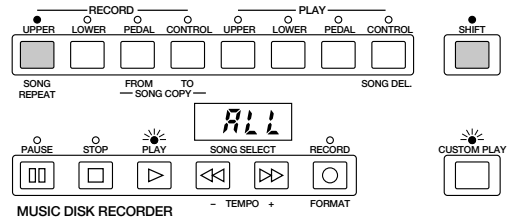
#### 1. Select the song number you wish to play back.

If you wish to play back all songs on a disk, select the first song that will be played back. The others will follow in order.



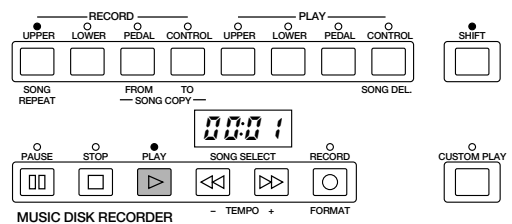
#### 2. Hold down the SHIFT button and simultaneously press the SONG REPEAT button.

The lamps above SHIFT and SONG REPEAT light up, and "ALL" appears on the LED display.



#### 3. To repeatedly playback all songs starting with the selected song: Press the PLAY button.

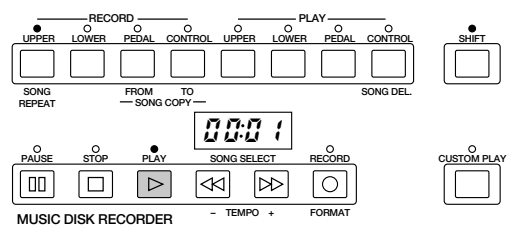
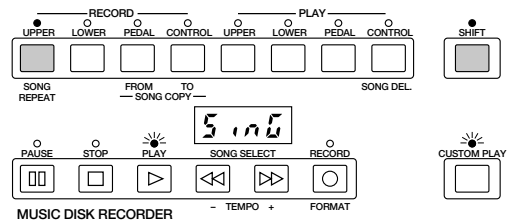
Playback will begin from the song selected and repeat indefinitely. To stop playback, press the STOP button.



#### 3. To repeatedly playback only the selected song:

3.-1 Again hold down the SHIFT button and simultaneously press the SONG REPEAT button. "SinG" appears on the LED display to indicate that a single song will be repeatedly played back.

3.-2 Press the PLAY button to begin playback of the song. Playback of the song selected will begin and repeat indefinitely. To stop playback, press the STOP button.

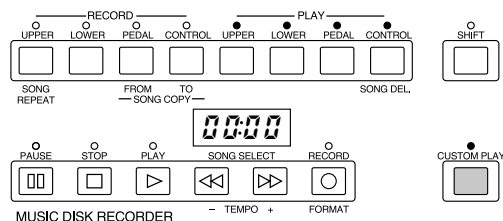


**NOTE** Repeated Playback is not possible if a disk contains two types of songs: one with separately recorded lead voice data and the other without it.

# Other Functions

## (1) Custom Play

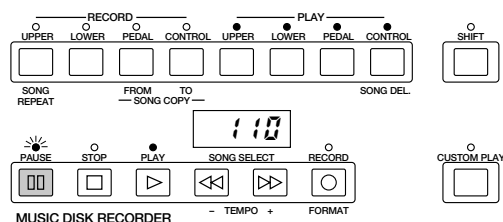
If you want to play back the song without resetting the registrations and other data, press the CUSTOM PLAY button. This displays the song time and starts playback immediately.



**NOTE** If you hold down the SHIFT and press CUSTOM PLAY, all data, except for that of Rhythm Pattern Program and Rhythm Sequence, will be loaded and played back.

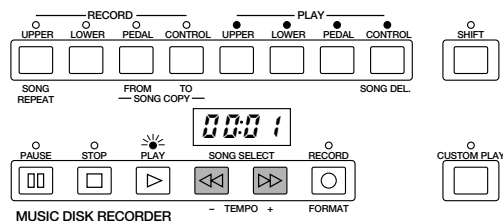
## (2) Pause

If you want to temporarily stop playback of the song or songs, press the PAUSE button. To resume playback from the point at which the song was paused, press the PAUSE button again.



## (3) Fast Forward and Fast Reverse

During playback, these buttons function as fast forward and fast reverse buttons, much like those of a tape recorder. Press [▶▶] to advance to a later point in the song or press [◀◀] to return to an earlier position. While either of these buttons is held down, playback stops and the song time is advanced or reversed accordingly. Hold down the button until the desired song time is shown. When the button is released, playback is paused. To resume playback from the point you've advanced or reversed to, press the PLAY button.



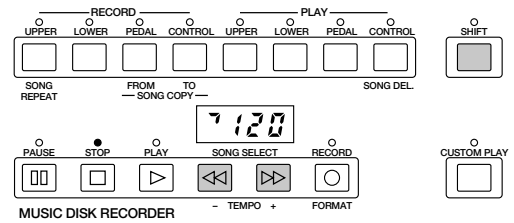
**NOTE** Fast Forward and Fast Reverse operate at five times the normal playback speed.

## (4) Changing the Tempo

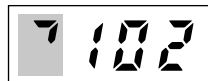
You can change the tempo of the song as the song is playing on the M.D.R. by holding down the SHIFT button and pressing the TEMPO + or TEMPO - button. (The Tempo dial on the Electone panel cannot be used to change the tempo on the Music Disk Recorder.)

Each press of the button slows down or speeds up the tempo by a small amount. Changing the tempo does not change the pitch of the music.

To restore the original recording tempo of a song, hold down the SHIFT button and simultaneously press both TEMPO buttons.



**NOTE** When tempo is changed, the LED display indicates the change as a percentage of the original recording tempo (100). Values less than 100 indicate a slower tempo; values greater than 100 indicate a faster tempo.



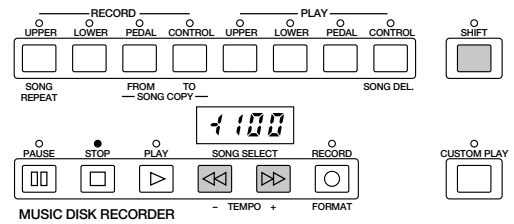
Indicates faster tempo



Indicates original tempo



Indicates slower tempo



**NOTE** Tempo changes remain in effect even through changes in song number. If you have changed the tempo in one song, you should perform the above step to restore the original tempo before playing another song. Turning the power switch off and on again also restores the original tempo.



## (5) Song Copy

This function lets you copy the data recorded at one song number to another song number.

To use the Song Copy function:

**1. Select the song number to be copied with the SONG SELECT buttons.**

**2. While holding down the SHIFT button, press the SONG COPY FROM button.**

The song number to be copied from appears at the left of the LED display.

**3. While holding down the SHIFT button, press the SONG COPY TO button.**

The M.D.R. automatically searches for an empty song number to copy the data to, and displays that number at the right side of the display. The RECORD lamp will start flashing indicating that the M.D.R. is ready to copy. If all songs numbers contain recorded data, "FULL" appears on the LED display. In this case, you should erase one of the songs on the disk by using the Song Delete function (see below).

**4. Use the SONG SELECT buttons to select a destination song number for copying.**

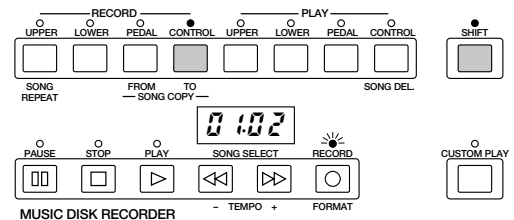
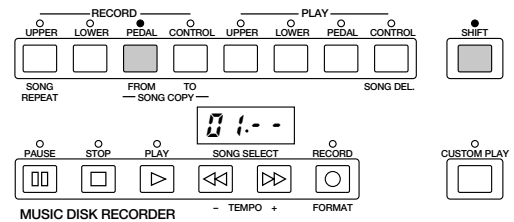
Follow this step if you wish to select a different destination song number than the one displayed. The M.D.R. will display only those song numbers that have no data.

**5. Press the RECORD button to execute the Song Copy function.**

The RECORD lamp stops flashing and remains lit, indicating that the Song Copy function is in process.

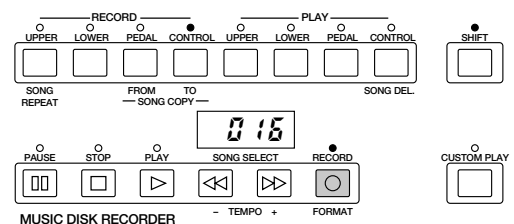
The LED display shows the "size" of the song in numbers, and counts down as the data is being copied. When the display shows "000", the song has been completely copied.

**NOTE** If the specified song number has no recorded data, the M.D.R. automatically searches for and selects the next song that contains recorded data.



**NOTE** The message "FULL" may appear when the available memory is short.

**NOTE** If you want to abort the operation, press STOP button.



## (6) Song Delete

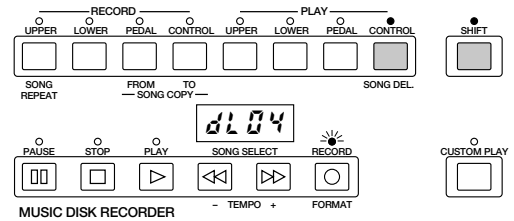
You can delete a song on disk by performing this function.

To use Song Delete:

**1. Use the SONG SELECT buttons to select the number of the song you wish to delete.**

**2. While holding down the SHIFT button, press the SONG DEL. button.**

The letters "dL" appear on the left side of the LED display, next to the selected song number. RECORD lamp flashes to indicate that the M.D.R. is ready to delete the song. If you wish to, you can still select a different song number in this step by using the SONG SELECT buttons.



**3. Press the RECORD button to execute the Song Delete function.**

The RECORD lamp stops flashing and remains lit, indicating that the Song Delete function has begun.

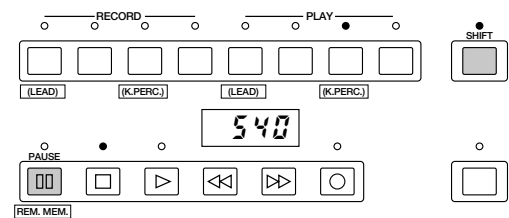
When the Song Delete function is completed, the STOP status is automatically resumed.



If you want to abort the operation, press STOP button.

## (7) Checking the Remaining Memory

While playback is stopped, you can check the amount of memory available for additional recording. To do this, simultaneously hold down the SHIFT button and the PAUSE button (indicated in the illustration at the right as REM. MEM.: Remaining Memory). The maximum amount of memory is 620 for 2DD disks and 1240 for 2HD disks.



## (8) Registration Menus and Voice Disks

The M.D.R. also allows you to select registrations and voices from disks. For more information about Registration Menus, see page 9; for more on Voice Disks, see below.

## (9) Voice Disk (Optional)

The M.D.R. also lets you use voices from optional Voices Disks. You can play these voices and save them to User memory for future recall.

To select voices from the disk and save them to User memory:

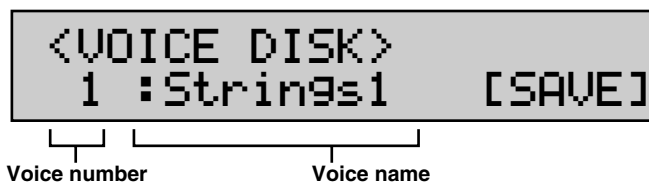
### 1. Insert the optional Voice Disk into the Disk slot under the Music Disk Recorder.

The following display appears, prompting you to select the voice group (Upper, Lower, Lead or Pedal).



### 2. Press one of the panel voice buttons in the voice section in which you wish to use the new voice.

After you've pressed a panel voice button, the Voice Disk's voice name will appear on the LCD.



### 3. Select the desired voice by using the left DATA CONTROL buttons.

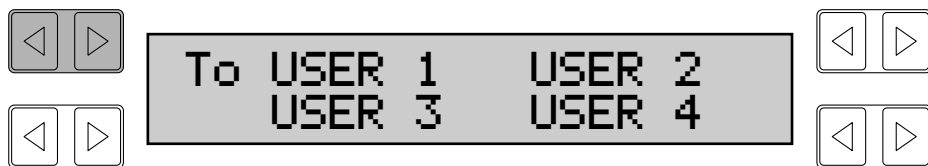


Pressing the bottom left buttons steps through the voice numbers; pressing the top left buttons jumps ten numbers back or forward. The name of each voice appears on the display with the number.

Refer to the list included with your Voice Disk for voice names and numbers. You can audition the voices as you select them by playing them on the appropriate keyboard.

**4. To save the selected voice, press one of the right DATA CONTROL buttons corresponding to SAVE in the display.**

The following display showing User voices 1– 4 appears.



**5. Select the User number to which you wish to save the voice, and press the corresponding DATA CONTROL button.**

**6. The following display appears, prompting you for confirmation of the operation. Select "OK" to actually assign the voice to the specific User number, or "CANCEL" to abort the operation.**



When the voice has been assigned, a "Completed...!!!" message appears.

**NOTE** If you eject the Voice Disk from the M.D.R., the voice you assigned will be lost from the User number.

## (10) Copy Protect

Some of the Disks available for the Electone are purposely protected from being copied or erased. You cannot save the data to another floppy disk. If you try to load data from such a "copy-protected" disk to the Electone, a "Protected Disk" (Pr##) message will appear on the LED display. The data cannot be saved to the disk.

### Messages on the M.D.R. LED Display

Display	Description of the Messages
<i>Inst</i>	No disk is installed. Install a disk.
<i>Prot</i>	1)The installed disk is write-protected, so the Record, Song Copy, and Song Delete jobs cannot be performed. Set the disk's Write-protect tab to OFF. (See page 49.) 2)If you are using a copy-protected playback-only disk, this message may appear when you attempt the Record, Song Copy, or Song Delete operations.
<i>Formt</i>	The installed disk is not formatted. Format the disk. (See page 50.)
<i>FULL</i>	1)The disk's memory capacity is full, so the Record or Song Copy operation cannot be performed. Use another formatted disk. 2)Data is already recorded at all song numbers, so the Song Copy operation cannot be performed. Press the STOP button, then delete any unnecessary songs.
<i>Empty</i>	None of the song numbers contain recorded data, so the Song Copy operation cannot be performed. Press the STOP button.
<i>-out</i>	An error occurred because the disk was removed during recording or playback. Press the STOP button, and replace the disk, then start the operation over again.
<i>disc</i>	The installed disk cannot be played back on the M.D.R. Press the STOP button, then insert a compatible disk.
<i>Lot5</i>	Recording cannot be performed because too much data was received at once. Press the STOP button.
<i>bad</i>	The disk is defective and cannot be formatted. Press the STOP button, then insert another disk.
<i>Error</i>	An error occurred during the transmission or reception of data. Press the STOP button.
<i>- - XX *</i>	You are trying to record to the song number which already contains recorded data. Select the other blank song number by pressing the SONG SELECT buttons. * "XX" indicates a song number (01 through 40).
<i>Pr XX *</i>	When you insert the "copy-protected" disk to the Electone, this message will appear on the LED display. You cannot overwrite or save the changes. * "XX" indicates a song number (01 through 40).
<i>0000</i>	In the case of Voice Disk operation, an incompatible Voice Disk has been inserted.

# 7. Rhythm Pattern Programming and Rhythm Sequence Programming

The EL-37 includes powerful Rhythm Program functions: the Rhythm Pattern Program and the Rhythm Sequence Program. The Rhythm Pattern Program allows you to record your own original rhythm patterns using the high-quality percussion sounds of the Electone. The Rhythm Sequence Program lets you connect your original rhythm patterns together with the Preset rhythm patterns to create complete rhythm tracks, which you can automatically play back during your performance.

## Outline of Rhythm Programming Operation

The following is a brief outline of the steps necessary in programming your own rhythm patterns and rhythm sequences.

### ● Rhythm Pattern Program

Press the **PATTERN** button to call up the Rhythm Pattern Program and select the Rhythm Program pages.



Set the Beat and Quantize values.



Select the Edit page to record percussion sounds and program the pattern.



(Optional) Select the Accompaniment page to determine which accompaniment pattern will be used with your newly created rhythm.



Save your new rhythm pattern to memory.



### ● Rhythm Sequence Program

Press the **SEQUENCE** button to call up the Rhythm Sequence Program for connecting rhythm patterns together in sequence to create songs.



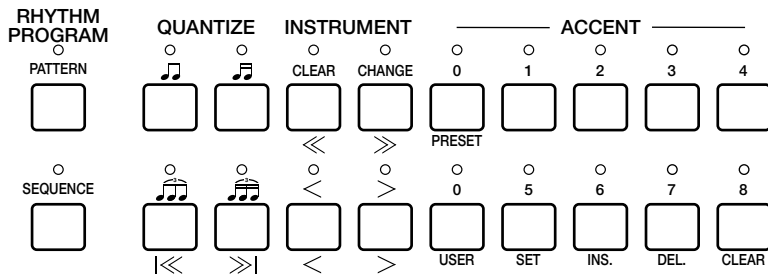
Save your new rhythm sequences to the Sequence buttons.  
(No actual saving procedure is necessary since the rhythm sequences you program will automatically be saved to the selected Sequence button.)



(Optional) Finally, save all the User rhythm data you've created in a floppy disk.

# Panel Controls—Rhythm Pattern Program and Rhythm Sequence Program

The functions of the Rhythm Pattern Program and Rhythm Sequence Program are controlled from the Data Control buttons and a special set of buttons to the right of the DISPLAY SELECT section. The PATTERN and SEQUENCE buttons are used to select those respective programming functions. The other buttons differ in operation depending on the programming mode. The labels above the buttons indicate the functions of the Rhythm Pattern Program, while those below indicate the functions of the Rhythm Sequence Program.



Detailed explanations of these buttons are given below in the instructions that pertain to them.

## Rhythm Pattern Programming

The Rhythm Pattern Program works with the Keyboard Percussion feature to let you use any of 75 different percussion sounds in creating your own rhythm patterns. Up to 16 separate rhythm "tracks" are provided in a single pattern for each instrument part, and up to 40 patterns—eight User numbers, each with five variations—can be memorized.

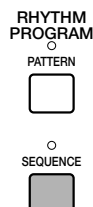
### ● programming Rhythm Patterns

To call up the Rhythm Pattern Program function and select the Rhythm Program pages:

1. Press and hold down the **PATTERN** button in the **RHYTHM PROGRAM** section. The LED of the button lights and the display prompts you to select a rhythm pattern.

**NOTE** Pressing the PATTERN button here also automatically stops the rhythm patterns and rhythm sequences.

**NOTE** Use of the playback and recording functions on the Music Disk Recorder automatically cancels the Rhythm Programming/Rhythm Sequencing operations.




## **2. While holding down the PATTERN button, select a preset rhythm pattern to be copied to the Rhythm Pattern Program. Releasing the PATTERN button without selecting a rhythm loads a blank pattern to the Programmer.**

Copying a preset rhythm lets you make changes to an existing rhythm pattern, saving your time if you want to program a rhythm that is similar to an existing preset pattern. Two measures of the selected rhythm pattern will be copied to the Rhythm Pattern Program.

Loading a blank rhythm pattern allows you to create your own rhythm pattern from scratch.

---

 When preset rhythm patterns are copied to the Rhythm Pattern Program, the copied patterns may differ in volume from the original patterns.

---


### **COPYING A PATTERN FROM THE RHYTHM MENUS:**

You can also copy a specific rhythm pattern from among the choices in a Rhythm Menu. To do this, press the desired panel Rhythm button, then select the desired pattern with the Data Control buttons—BEFORE calling up the Rhythm Pattern Program and performing steps #1 and #2 above. The specified rhythm will be copied once you execute steps #1 and #2.

### **Copying the Fill Ins and Endings:**


The similar procedure can be used with the FILL IN and INTRO. ENDING buttons for copying Fill In and Ending patterns. Select the rhythm to which the desired Fill In or Ending belongs beforehand. Then press the FILL IN or INTRO. ENDING button while holding down the PATTERN button.

---

 The User rhythm you have created can also be copied to the Rhythm Pattern Program. You can edit it again and improve it.


---

---

 Some Ending patterns consists of more than two measures. If you copy such a pattern, only the first two measures can be copied but the rest cannot be copied.

---

---

 The Intro. patterns cannot be copied.

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## ● Step Write and Real Time Write Operation

There are two different methods you can use to program rhythm patterns: Step Write and Real Time Write. Step Write allows you to enter percussion sounds as individual note values. As a method, it is very similar to writing down the notes on a sheet of music paper; each note is entered one at a time, and though you can hear each individual note entered, you cannot actually hear the pattern playing as you create it. Real Time Write on the other hand, is similar to using a multitrack tape recorder; you can hear previously recorded parts of the pattern as you record new parts on top.

Each method has its own advantages and uses. Step Write is good for precision and for entering percussion sounds whose note placement and rhythmic value has been determined, such as a bass drum that plays every beat in a measure. Real Time Write is best for capturing the "feel" of a rhythm, because it allows you to actually play the pattern as you are creating it. Which method you use depends partly on the type of rhythm you intend to create and partly on your own personal preference. You can even switch between the two methods in editing to create a single rhythm pattern by the use of both methods. A typical use for this would be to program the basic beats of a rhythm with Step Write, then using Real Time Write to add percussion accents and embellishments.

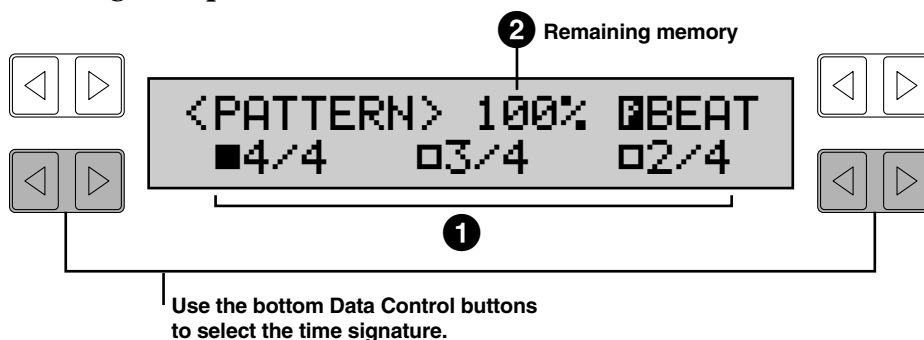
## ● Selecting Step Write or Real Time Write Operation

Step Write and Real Time Write can be selected from the Edit page. Which mode of operation is selected depends on the play status of the rhythm pattern. If the rhythm is stopped, Step Write is automatically selected. If the rhythm is playing, Real Time Write is selected. Simply press the START button in the Rhythm section on the panel to start or stop the rhythm pattern and switch between the two modes

## ● Setting the Beat and Quantize Values

Before recording a pattern, you should set the Beat and Quantize values. These determine the basic timing settings of the pattern. Beat is controlled from the BEAT page, and Quantize is set from the QUANTIZE buttons on the panel.

### BEAT Page—Step Write



### ① Beat

This determines the time signature used for the rhythm pattern, and is selected in the BEAT page. (The BEAT page is automatically displayed when the Rhythm Pattern Program has been called up and a rhythm pattern has been selected.) Available time signatures are 4/4, 3/4 and 2/4.

**NOTE** In Real Time Write, the time signatures are not displayed. Beat can be changed only when the rhythm pattern is stopped.

### ② Remaining Memory

This indicates the amount of memory available for storing rhythm patterns. Remaining memory is expressed as a percentage: 100% indicates the maximum amount of memory available, and 0% indicates that there is no more memory available. (Remaining memory is also displayed in the EDIT page and the SAVE page.)

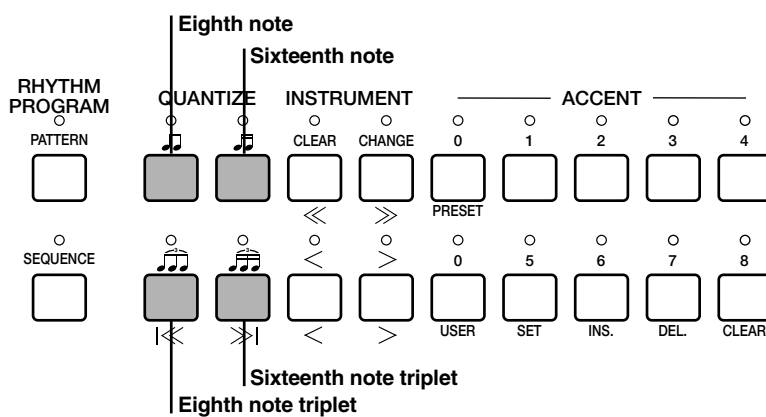
## ● Entering Percussion Sounds to a Rhythm Pattern

Percussion sounds can be entered by either Step Write or Real Time Write from the EDIT page. Select the EDIT page with the Page buttons. The Step Write version of the EDIT page is automatically called up if the rhythm pattern is stopped, and Real Time Write is called up if the pattern is running.

### Quantize

Quantize determines the resolution for entering percussion sounds to a pattern. Since Step Write operations involve advancing in "steps" along regularly spaced points in a measure, Quantize lets you set how many points there will be in the measure. In Step Write, since you can only enter notes to those points, the more points there are in a measure, the more leeway you have in entering notes.

Quantize functions in generally the same way in Real Time Write operation in that it determines the resolution of the pattern. Used with Real Time Write, however, it allows you to automatically "correct" the timing of the notes as you play them, according to the specified Quantize resolution. Use the QUANTIZE buttons on the panel (shown below) to set the Quantize value.



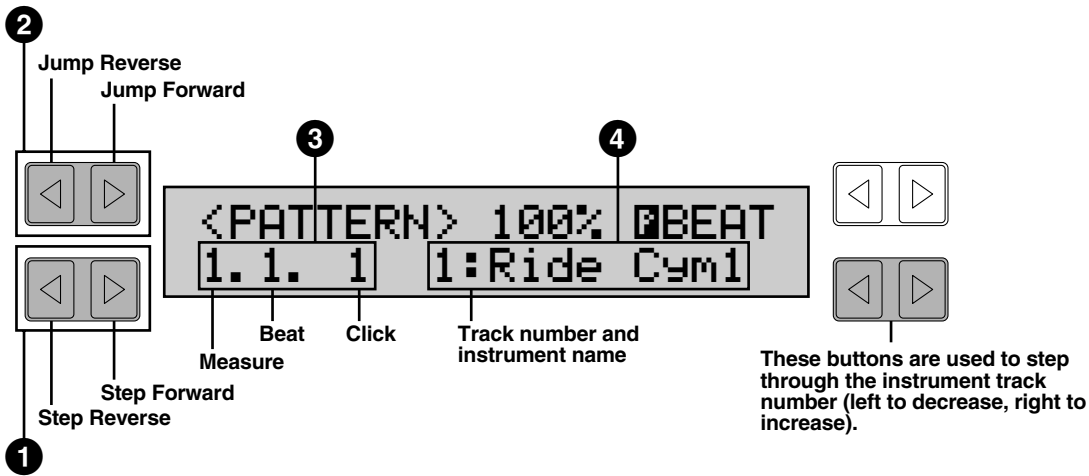
Quantize values are shown above the buttons as note values and represent fractions of a measure; thus, the eighth note ( ♪ ) means that there will be eight points or divisions in the measure.

## ● Editing with Step Write

To enter sounds with Step Write:

- 1** From the **EDIT** page of Step Write, use the step forward and step reverse controls (shown below) to advance or reverse the rhythm clock to the point at which you wish to enter the percussion sound.

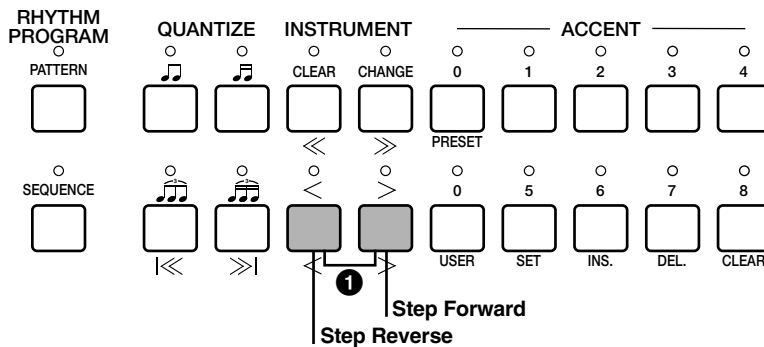
## EDIT Page—Step Write



### 1 Step Forward and Step Reverse Controls

Each press of the corresponding Data Control buttons advances or reverses the rhythm clock by one step. The size of a single step is determined by the Quantize value on the panel.

Step Forward and Step Reverse are also controllable from the panel buttons, as shown below.



**NOTE** When using the Rhythm Pattern Program, the buttons on the panel function according to the indications printed above each button in white.

### 2 Jump Forward and Jump Reverse Controls

Each press of the corresponding Data Control buttons advances or reverses the rhythm clock in one-beat jumps.

### 3 Rhythm Clock

Displays the current position in the pattern, according to the measure, beat, and number of clicks. A click is the smallest division of a pattern, and one beat is made up of 24 clicks.

The rhythm clock advances up to two measure and loops back to the beginning of the rhythm (1.1.1).

### 4 Track

Displays the number of the rhythm track and the instrument recorded to it. Use the bottom right Data Control buttons to step through the tracks. (See step #2 below; also see Change function, page 76.)

**NOTE** You can return to the BEAT page in the middle of editing and change the time signature and/or the Quantize value.

## 2. Select the percussion sound you wish to enter.

**NOTE** You can return to the Beat page in the middle of editing and change the time signature.

There are two ways to select percussion sounds in the Step Write mode:

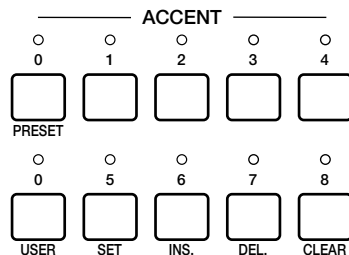
Press the key on the Upper or Lower keyboard that corresponds to the sound.  
The instrument name automatically appears at the bottom right of the LCD when the key is pressed.  
The selected instrument is automatically assigned to an available empty rhythm track.

or

Use the bottom right Data Control buttons corresponding to the instrument name to step through the available sixteen rhythm tracks.

The name of the instrument currently assigned to the selected track is displayed at the bottom right of the LCD. (Since this method allows you to select only from among the assigned instruments, use the Change function described on page 76 to change instrument assignments.)

## 3. Use the ACCENT buttons on the panel to enter the sound to the selected point.



These buttons are used to actually enter or record the instrument and determine its volume or Accent level. Press the button that corresponds to the Accent level you wish to set; the instrument is then automatically inserted at that Accent level to the selected position in the pattern (shown in the rhythm clock). An Accent value of 0 is the minimum, or a rest, and 8 is the maximum.

**NOTE** You can record up to sixteen different instrument sounds in a single rhythm pattern, with each instrument occupying one of the sixteen available tracks. The Rhythm Pattern Program has polyphonic capacity for playing up to eight sounds simultaneously. Instruments can only be entered if there are empty tracks remaining. If all sixteen tracks have been used, no subsequently selected instruments can be heard or recorded.

## ● Clear and Change

The Rhythm Pattern Program is made up of sixteen individual tracks, each capable of recording a different instrument. The Clear function is used to delete the entire contents of an instrument track, while Change is used to assign a different instrument to an already occupied track.

### Clear

The Clear function is used to erase an instrument from the rhythm pattern. All instances of the selected instrument, irrespective of which tracks they occupy, will be erased from the pattern.

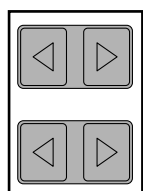
#### There are two ways to use Clear:

One way is to press the key on the keyboard corresponding to the instrument you wish to erase, while simultaneously holding down the CLEAR button. (A short “beep” sound indicates that the instrument has been erased.)

You can erase all of the sounds on all recorded tracks of the pattern by holding down the CLEAR button and simultaneously pressing the lowest key (C1) on the Lower keyboard. Be careful not to do this inadvertently since all sounds will be instantly and permanently erased.

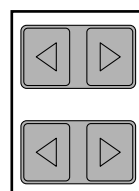
or

The other way is to press, then release the CLEAR button on the panel (in Step Write operation only). The following display appears, prompting confirmation of the operation:



Select OK with any of these buttons to clear all data. A “completed” message momentarily appears on the LCD.

```
<PATTERN> Ride Cym1  
Clear [OK] [Cancel]
```



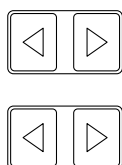
Select Cancel with any of these buttons to abort the operation and return to the original Edit display.

### Change

The Change function allows you to reassign the instrument of a selected track.

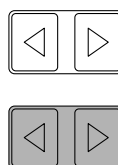
#### To change an instrument assignment:

**1. Select the track's instrument that you want to change from the EDIT page by using the corresponding Data Control buttons.**



```
<PATTERN> 99% EDIT  
1.3. 1 1:Ride Cym1
```

Track number and instrument name.



Use these buttons to select the instrument.

**2. Simultaneously hold down the CHANGE button on the panel and press the key on the Upper or Lower keyboard that corresponds to the instrument.**

## ● Editing with Real Time Write

To enter sounds with Real Time Write:

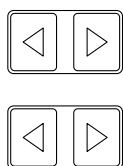
**1.** From the **BEAT/EDIT** page, start the rhythm pattern by pressing the **START** button.

**2.** While the rhythm pattern is running, play the percussion sounds from the **Upper and/or Lower keyboards**.

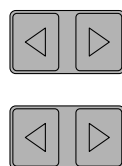
A metronome is provided for rhythmic reference. Listen to the metronome click as you play the sounds, using it as a guide to keep in time and tempo. The pattern will automatically repeat (or “loop”) every two measures.

The metronome can be turned on and off from the Real Time Write EDIT page (shown below).

### Edit Page—Real Time Write



<PATTERN> 100% EDIT  
Real Time ■METRO.



**NOTE** All of the instrument and track recording limitations described in Step Write apply to Real Time Write as well. (See note in Editing with Step Write on page 75.)

### Metronome (METRO.)

Turns the metronome click on or off. When set to ON, the metronome sounds on each beat of the measure (for example, three times per measure in 3/4 time) to serve as a rhythmic guide when programming patterns.

The metronome can be turned on or off while a rhythm pattern is playing. The metronome is automatically set to ON when a blank pattern has been selected, and is set to OFF when an existing pattern is copied.

Each instrument sound is recorded and automatically assigned to a separate track as you play it. All events of a single sound are assigned to the same track; for example, if you alternately play a hi-hat sound with a snare drum, all notes of the hi-hat will be recorded to one track and all notes of the snare drum to another track.

**3.** When you've finished entering instruments to the pattern, stop it by pressing the **START** button again, or by selecting the **ACC. (Accompaniment)** or **SAVE** pages.

### USING THE CLEAR FUNCTION IN REAL TIME WRITE:

As in Step Write, the Clear function is used to erase an instrument from the rhythm pattern. However, the method of the operation is slightly different. Hold down the CLEAR button, and simultaneously press the key on the keyboard corresponding to the instrument you wish to erase. All instances of the selected instrument, irrespective of which tracks they occupy, will be erased from the pattern.

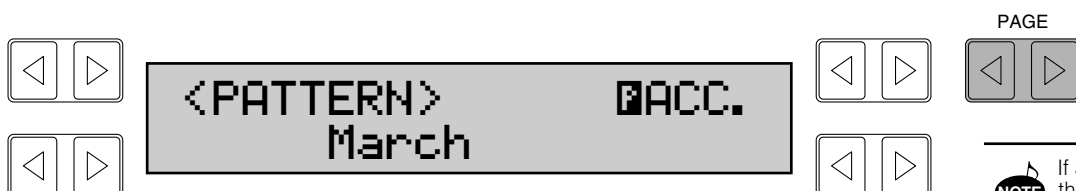
You can erase all of the sounds on all recorded tracks of the pattern by holding down CLEAR and pressing the lowest key (C1) on the Lower keyboard. Be careful not to do this inadvertently since all sounds will be instantly and permanently erased.

## ● Selecting Accompaniment Patterns

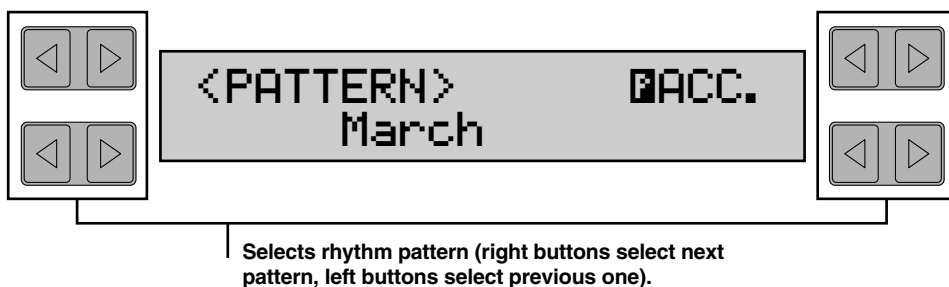
This function of the Rhythm Pattern Program allows you to use one of the Electone's Accompaniment patterns with your original rhythm pattern. You can select the Accompaniment pattern that best matches the rhythm pattern that you have created.

To select an appropriate Accompaniment pattern for your newly created rhythm pattern:

### 1. Select the ACC. (Accompaniment) page with the Page buttons



### 2. Select the desired rhythm group by pressing a Rhythm button on the panel; select the rhythm type by using the Data Control buttons on both sides of the LCD.



**NOTE** If a rhythm pattern is started in the ACC. page, the Accompaniment will also be heard. However, both the rhythm pattern and the Accompaniment will automatically be stopped when you leave the page.

**NOTE** You cannot save the Accompaniment type or the volume setting here.

### 3. Try to audition the Accompaniment type.

You can also audition the Accompaniment type and set its volume from the Rhythm Condition page. Call up this display by pressing the corresponding rhythm button once again.





## ● Saving Rhythm Patterns

To save a newly created rhythm pattern to a User pattern number:

### 1. Select the Save page with the Page buttons.

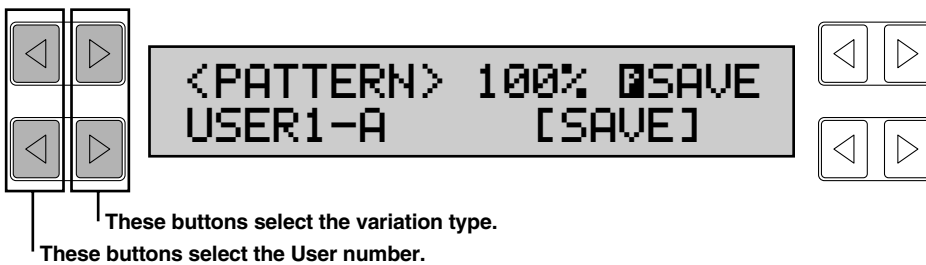
The current rhythm pattern, if playing, will automatically be stopped when this page is selected.



### 2. Using the appropriate Data Control buttons, select both the User number and variation type to which you wish to save the newly created rhythm pattern.

Keep in mind that you cannot save a rhythm pattern by selecting only a User number; you must also select a variation type-A, B, C, D, or FILL (Fill In).

Including the Fill In patterns, up to 40 different rhythm patterns (8 User numbers x 5 variations) can be saved.



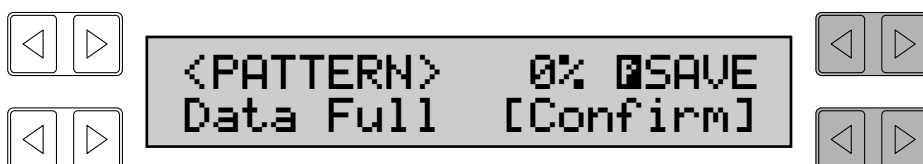
### 3. Use any of the Data Control buttons to the right of the LCD (corresponding to "SAVE") to actually execute the save operation.



When the pattern has been saved, the following display appears momentarily:



When the pattern cannot be saved because of lack of available memory space, the following display appears:



Press any of the right Data Control buttons (corresponding to “Confirm”) to return to the original Save display.

You should periodically save your rhythm pattern as you are making it and check the amount of remaining memory. If the rhythm pattern currently being edited cannot be saved because of a lack of memory space, erase some of the less necessary percussion sounds with the Clear function, and try saving the pattern again.

**NOTE** The Power On Reset function (See page 47) can be used to delete all User rhythm patterns from memory.

## ● Quitting the Rhythm Pattern Programming Functions

You can exit the Rhythm Pattern Program from any of its display pages.

To do this:

### 1. Press the PATTERN button in the RHYTHM PROGRAM section once again.

If a rhythm pattern is playing, it will automatically be stopped. The following display will appear, prompting confirmation of the operation.



### 2. Select “OK” to leave the Rhythm Pattern Program, or “Cancel” to abort the operation and return to the previous display.

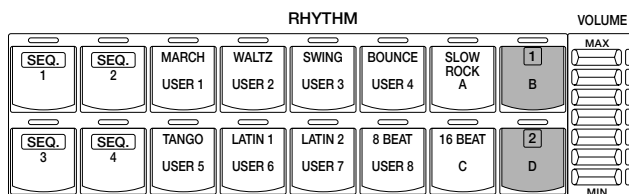
**NOTE** If you leave the Rhythm Pattern Program without having edited a pattern, this display will not appear.

## ● Playing User Rhythm Patterns

The User rhythm patterns you have created in the Rhythm Pattern Program can be selected and played from the panel Rhythm controls.

To play User rhythm patterns:

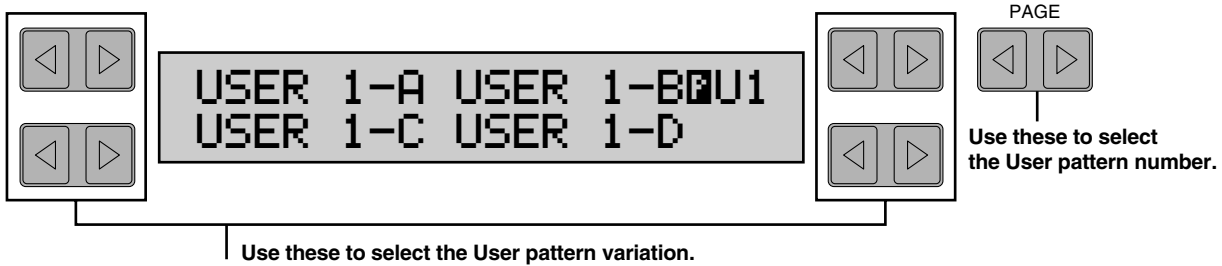
### 1. Press one of the dotted buttons in the Rhythm section.



### 2. Select the USER page with the Page buttons.



**3. Select the desired User rhythm number from the LCD display by using the Page buttons, then select the desired pattern variation with the appropriate Data Control button.**



**PLAYING USER FILL IN PATTERNS:**

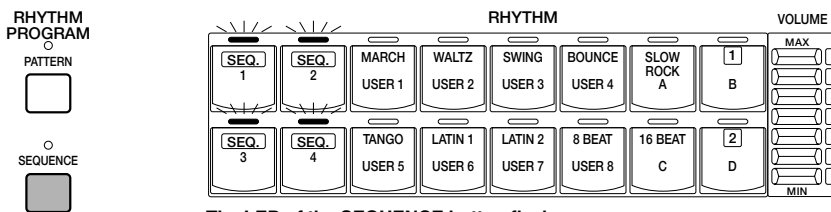
You can play User Fill In patterns by selecting the desired User number and pressing the FILL IN button in the Rhythm section on the panel.

## ***Programming Rhythm Sequences***

With the Rhythm Sequence Program, you can connect any of the Electone's existing rhythm patterns and the rhythm patterns of your own creation together to make complete rhythm compositions. Four rhythm compositions can be saved to the Sequence buttons on the panel for future recall.

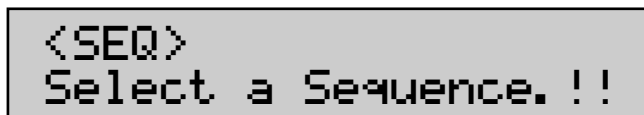
To call up the Rhythm Sequence Program function:

**1. Press the SEQUENCE button in the RHYTHM PROGRAM section.**



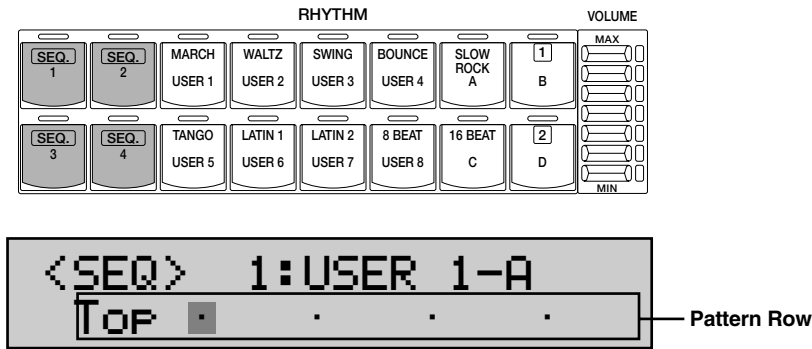
The LED of the SEQUENCE button flashes continuously throughout the operation.

The LEDs of the numbered Sequence buttons in the Rhythm section on the panel will flash and the following display will prompt you to select a sequence number.



**NOTE** When you select one of the sequences in this step, any editing done to that sequence is instantly and automatically saved. This means that if you select a sequence that is already programmed, any editing you do will permanently change the sequence and the original sequence cannot be recovered.

## 2. Press one of the numbered Sequence buttons to call up the Rhythm Sequence display.



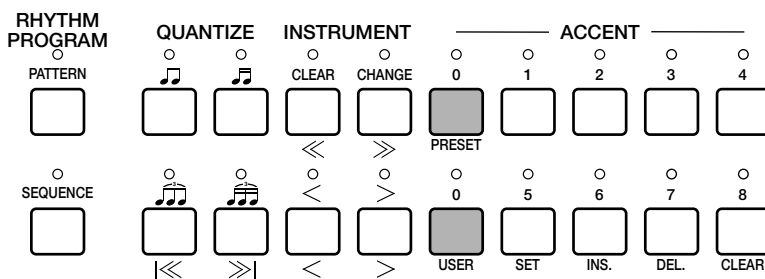
In this display, different rhythm patterns (both Preset rhythm patterns and User rhythm patterns that you created with the Rhythm Pattern Program) can be entered in sequence along the pattern row in the bottom of the display. Entered patterns are indicated by a number/letter code in the LCD.

Up to three-character code indicates the type and number of the rhythm pattern. The preset rhythm patterns of the Electone are indicated by a two-digit number (i.e., [06] or [08]). User patterns are indicated by the “U” prefix as well as a letter suffix representing the type-A,B,C,D, and F (Fill In). Examples of these include [U3C] and [U8F]. The preset patterns also may have a letter suffix: “I” indicates Intro, “F” indicates Fill In, and “E” indicates Ending (i.e., [01I], [20F], and [15E])

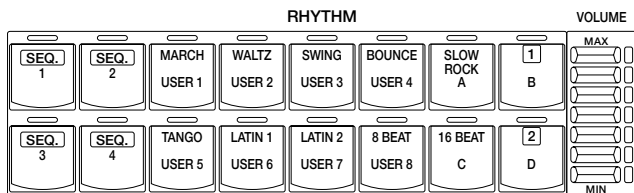
**NOTE** Any rhythm pattern currently playing will automatically be stopped when you call up the Rhythm Sequence Program function. Also, use of the Music Disk Recorder automatically cancels Rhythm Sequence operations.

### To program a rhythm sequence:

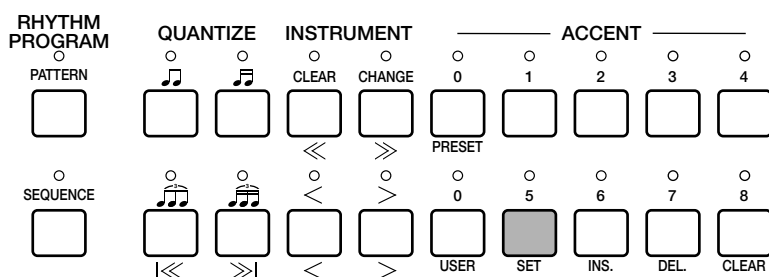
## 1. Select the type of rhythm pattern you wish to enter, Preset or User, from the corresponding buttons on the panel.



**2. Select the desired rhythm pattern by pressing the appropriate button in the panel Rhythm section, then press the SET button on the panel to enter the pattern. (Refer to the Rhythm Pattern Number Table below for a list of the rhythm patterns and their number assignments.)**



1) Press one of the rhythm button...



2) ...then select SET.

When PRESET is selected in step #1 above, the Rhythm buttons are used to select the Preset rhythm names printed at the top of each button. When USER is selected, however, these buttons function according to the User numbers and letters printed at the bottom. Select the User pattern by pressing one of the numbered buttons (1-8), then a lettered button (A, B, C, or D) or FILL (for User Fill In).

**NOTE** When using the Rhythm Sequence Program, the buttons on the panel function according to the indications printed below each button in green.

**!** You can program the rhythm sequence a measure at a time. Every user rhythm consists of two measures. If you want to program two-measure User rhythms, you are required to enter it twice, for the first measure and the second measure.

When entered, the first measure is displayed normally and the second measure is displayed with the R in a negative box at top right corner of the LCD. (The **R** indicates that the pattern number at the current cursor position is the second measure.)

The rhythm patterns can be divided into four groups: Normal such as [01] and [U1A], Intro, Fill In and Ending. When changing the type, for example, from Normal to Fill In and Fill In to Normal while programming a rhythm sequence, the first measure of the newly selected type will always be selected and follow. However, when the same type continues even though you change the rhythm, for example, from [06] to [U1A], the second measure may succeed the sequence. That means some of the User rhythms inserted in a rhythm sequence may begin from its second measure.

To keep this from happening and begin the newly selected rhythm from the first measure, insert a different type, Fill In, before using the new rhythm pattern.

**NOTE** A maximum of 120 patterns can be entered to a single sequence.

## Rhythm Pattern Number Table

01	March 1	25	Jazz Ballad	37	Tango 2	50	8 Beat 1
04	Polka	26	Dixieland	38	Tango 3	51	8 Beat 2
06	Country	28	Bounce 1	39	Cha-cha	52	8 Beat 3
08	Broadway	29	Bounce 2	40	Rhumba	55	Dance Pop
10	Waltz 1	31	Reggae 1	41	Beguine	59	16 Beat 1
11	Waltz 2	32	Reggae 2	42	Mambo	60	16 Beat 2
15	Jazz Waltz	33	Slow Rock 1	44	Samba 1	61	16 Beat 3
18	Bolero	34	Slow Rock 2	45	Samba 2	64	16 Beat Funk
19	Swing 1	35	Slow Rock 3	47	Bossanova 1		
20	Swing 2	36	Tango 1	48	Bossanova 2		

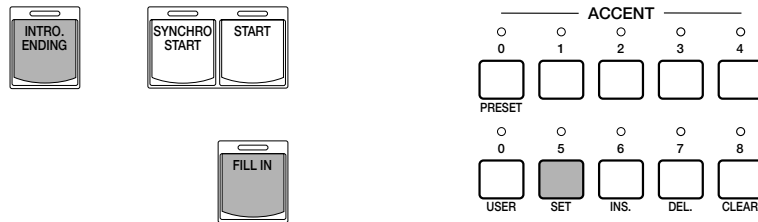
### Fill-in/Intro./Ending

01F	March 1 Fill-in
01I	March 1 Intro.
01E	March 1 Ending

### User

U1A	User 1-A
U1B	User 1-B
U1C	User 1-C
U1D	User 1-D
U1F	User 1-Fill-in

**3. If you wish to enter a Fill In, Intro, or Ending pattern, hold down the appropriate rhythm control button on the panel (INTRO. ENDING or FILL IN) and simultaneously press the SET button**



1) While holding down INTRO. ENDING or FILL IN...

2) ...press SET.

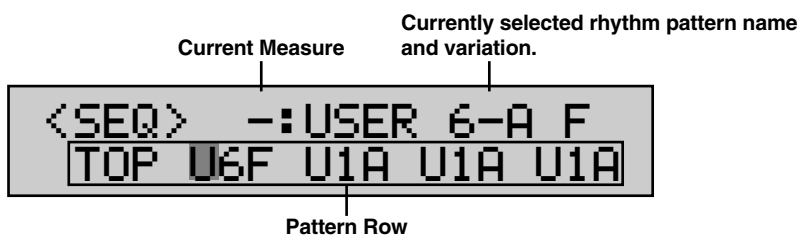
### ABOUT ENTERING INTRO AND ENDING PATTERNS:

Pressing the INTRO. ENDING button when at the first position in the pattern row automatically enters an Intro pattern there. Pressing the INTRO. ENDING button at any other position in the row enters an Ending pattern.

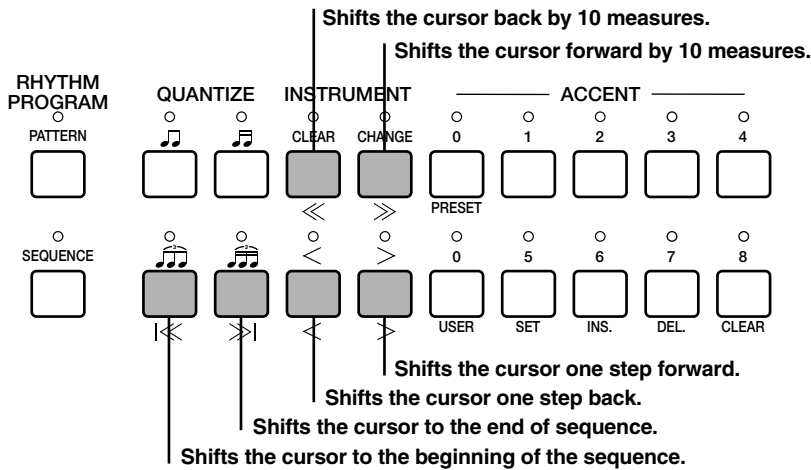
**NOTE** Any existing pattern data that follows an Ending pattern is automatically deleted.

**4. Use the cursor controls (on the panel or the corresponding Data Control buttons) to move the cursor along the pattern row in the display and select the position at which patterns will be entered.**

**NOTE** An Intro or Fill In pattern entered to the first position is not registered as a measure, and the current measure display shows a dash (—), even though a pattern has been entered.



## Cursor Controls on the Panel

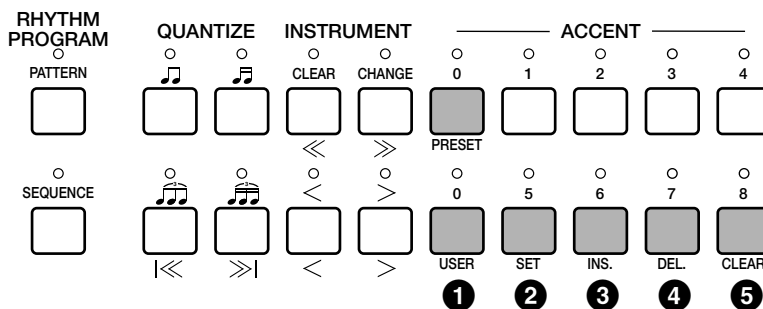


## Cursor Control with the Data Control Buttons



- 1 Shift the cursor to the beginning of the sequence.
- 2 Shift the cursor to the end of the sequence.
- 3 Shift the cursor one step back.
- 4 Shift the cursor one step forward.

## 5. Use the data controls on the panel (SET, INS., DEL., CLEAR) to enter or erase pattern numbers in the pattern row.



## Data Controls

### 1 RESET/USER

Determines the type of rhythm pattern, Preset or User. (See step #1 above.)

### 2 SET

For initially entering a pattern number to an empty position in the pattern row, or for replacing a pattern at the cursor position. (See steps #2 and #3 above.)

### 3 INS. (Insert)

For inserting a pattern number before the current cursor position. The new pattern is entered to the cursor position and all other patterns to the right of the cursor are moved to accommodate the new number. The operation is the same as for SET (see steps #2 and #3 above).

### 4 DEL. (Delete)

For deleting a pattern number at the current cursor position.

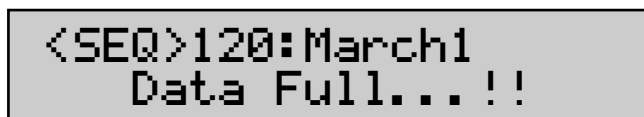
### 5 CLEAR

For erasing all patterns entered to the selected sequence. After selecting CLEAR, the following display appears:



Select "OK" to clear the currently selected rhythm sequence, or "Cancel" to abort the operation and return to the previous display.

When patterns can no longer be entered to the sequence because of lack of available memory space, the following display momentarily appears:



If this happens, use the Delete button to erase selected patterns, or use the Clear button to erase all patterns in the sequence.

#### **AUDITION:**

You can play the rhythm sequence at any time while you are editing or programming it by moving the cursor to the point at which you wish to begin playback and pressing the Rhythm START button.

#### **ABOUT USING REGISTRATIONS WITH THE RHYTHM SEQUENCE PROGRAM:**

The rhythm patterns (Rhythm Menu) assigned to the sequence can be changed during editing by selecting different registrations. This allows you to create a registration that contains the specific rhythm patterns that you will use in a given sequence, and call up that registration when editing the sequence. The type of Accompaniment used with the rhythm patterns also depends on the selected registration.

## ● Quitting the Rhythm Sequence Function

#### **To quit the Rhythm Sequence Program:**

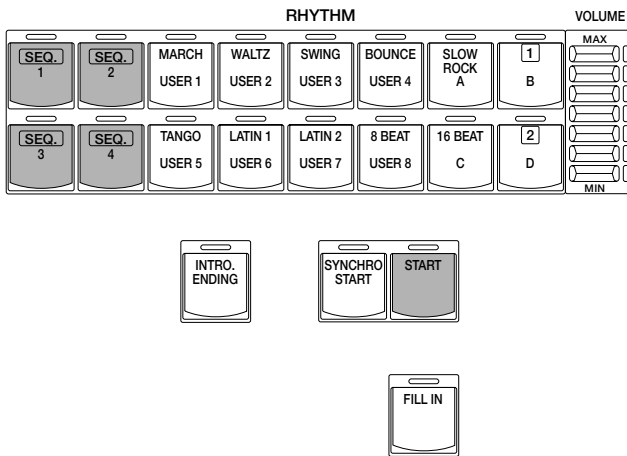
Press the SEQUENCE button in the RHYTHM PROGRAM section once again. (The LED of the button will turn off.)



## ● Playing Rhythm Sequences

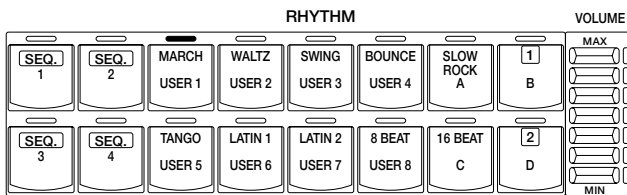
To play any of the rhythm sequences you have created:

Press the appropriate Sequence button on the panel, then press the rhythm START button.

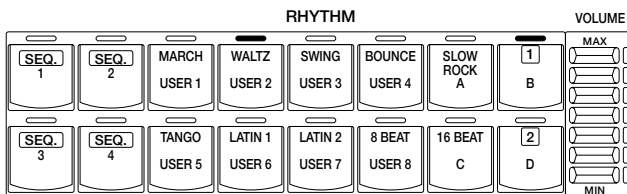


When one of the four rhythm sequences is playing, each programmed rhythm pattern that plays is indicated by the lit LED on the Rhythm panel button.

When a Preset rhythm pattern is playing, the current pattern button's LED is lit:



When a User rhythm pattern is playing, the LEDs of the two pattern buttons (User number and type) are lit:

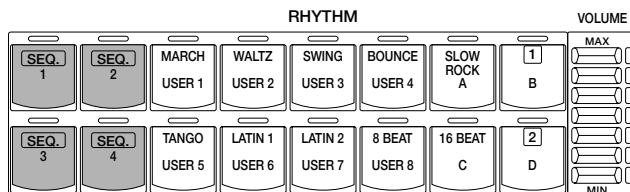


## ● Playing All Sequences In Order

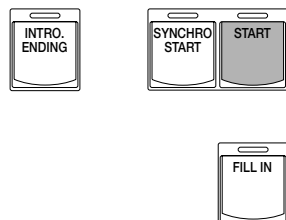
You can also have up to all four rhythm sequences automatically play in order, one after the other.

To do this:

**1** ■ Press the desired Sequence buttons, making sure that their LEDs are all lit.



**2** ■ Press the START button.



The rhythm sequences start from the lowest number and play in order automatically to the highest number. (For example, if you press Sequence buttons 4, 2 and 1 in that order, the sequences will be played back in their numeric order: 1, 2, then 4.) This function effectively allows you to make a long rhythm sequence that exceeds the 120-pattern memory limit of a single sequence.

---

## ***Saving Rhythm Pattern and Rhythm Sequence Data to Disk***

---

Once you have created your own rhythm patterns and rhythm sequences, you'll want to save them to disk. Doing so allows you to free up memory in the Electone for creating additional rhythm patterns and sequences. Also, the User rhythm patterns and sequences you've saved to disk can be loaded back to the Electone any time.

Rhythm Pattern and Rhythm Sequence data is included in the bulk data that is saved when you record registrations to disk. Refer to the section Recording Registrations, page 56, for instructions.

---

## ***Recalling Rhythm Pattern and Rhythm Sequence Data from Disk***

---

The Rhythm Pattern and Rhythm Sequence data saved to disk as part of bulk data, can instantly be loaded back to the Electone. Refer to the section Recalling Recorded Registrations, page 57, for instructions.

---

**NOTE** When loading your original Rhythm Program data back to the Electone, be sure to stop the rhythm pattern if it is playing. Loading cannot be executed when a rhythm pattern is running.

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# 8. Footswitches and Knee Lever

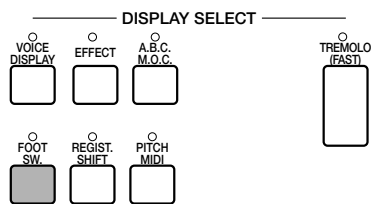
These leg- and foot-operated controls allow you to turn on and execute various performance functions without taking your hands from the keyboards.

## Footswitch Control

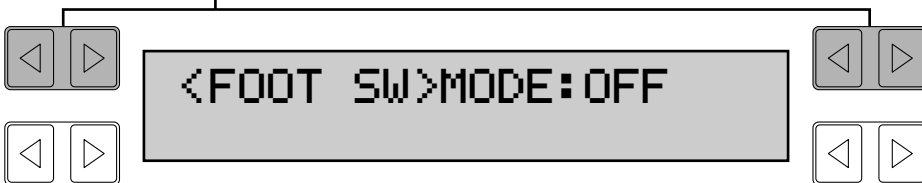
The Electone has two footswitches on the expression pedal that can be used to control various functions. The right footswitch is used for the Registration Shift functions (See page 44). The left footswitch can be set to control one of the following functions: Glide, rhythm stop, rhythm ending, and rhythm Fill In. Assignments of the functions are made in the Footswitch pages.

### To select the Footswitch pages:

Press the FOOT SW. button in the DISPLAY SELECT section.



Use any of these Data Control buttons to select the footswitch mode.



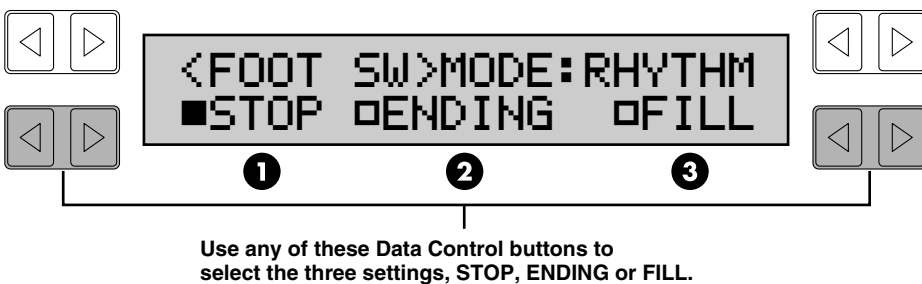
Three modes are available: OFF, RHYTHM, and GLIDE. Select the desired mode with the top right or top left Data Control buttons.

- **OFF**

Cancels left footswitch control.

- **RHYTHM**

Selection of left footswitch control over rhythm functions. When this is chosen, the following display appears:



Select one of the three Rhythm Control functions from this display. Pressing the footswitch executes the corresponding function:

## 1 STOP

Functions as an off/on switch for the rhythm pattern in the middle of rhythm playback.

## 2 ENDING

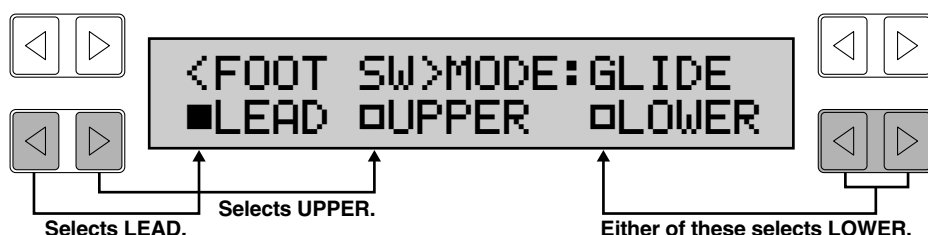
Switches the rhythm to the Ending pattern, after which the rhythm is stopped.

## 3 FILL (Fill In)

Switches the rhythm to the Fill In pattern.

## ● GLIDE

Selection of footswitch control over Glide. Pressing the footswitch immediately lowers the pitch of the selected voice or voices by a half step. When the Glide setting is chosen, the following display appears:



**NOTE** When using the footswitch to control Glide, be careful to keep pressing the footswitch for as long as you want Glide to remain in effect.

**NOTE** When the Glide function is applied, Vibrato is not effective.

The Glide function can be applied to any one or all of the voice sections shown in the display: Lead, Upper, and Lower. Select the desired voice section(s).

## Knee Lever

The knee lever, located on the underside of the keyboard panel, can be used to turn the following functions on and off: Melody On Chord and the Sustain effect.

## ● Sustain

### To select knee lever control over Sustain:

Make sure that the Upper and/or Lower Sustain effect panel controls have been turned on; otherwise, the knee lever will have no effect.

### To use the knee lever:

Fold the knee lever down and press it to the right with your knee when you want to have sustain.

### When the knee lever is vertical:

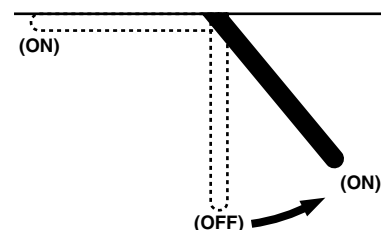
The sustain effect is cancelled.

### When the knee lever is continuously pressed to the right:

The sustain effect is on.

### When the knee lever is folded up:

The sustain effect is applied constantly, as long as the front panel sustain buttons are on.



## ● Melody On Chord

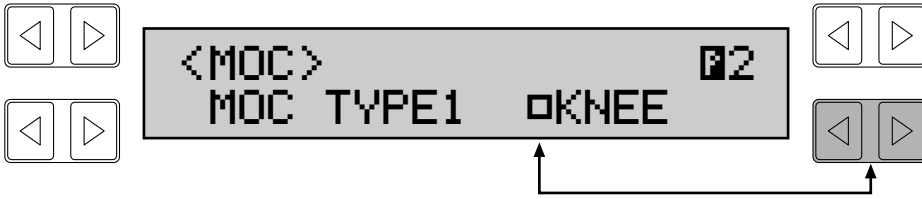
### To select knee lever control over Melody On Chord:

Press the A.B.C./M.O.C. button in the DISPLAY SELECT section and use the Page buttons to select the M.O.C. page (Page 2). Then set the KNEE control to ON, and select one of the modes.

---

**NOTE** If the KNEE is set to ON, the Melody On Chord cannot be applied without using the knee lever.

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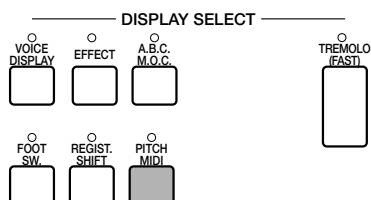
# 9. Pitch Controls

There are two pitch-related controls on the Electone: Transpose and Pitch. Transpose allows you to change the key of the instrument and Pitch lets you finely adjust the tuning.

These features make it easy to change the key of a song to accommodate a vocalist's range or to precisely match the tuning of another instrument. The Pitch controls are located on the Pitch page.

## To select the Pitch page (Page 1):

Press the PITCH/MIDI button in the DISPLAY SELECT section.



## TRNS. (Transpose)

Determines the coarse pitch setting of all the voices, and is adjustable in half-steps (semitones). Range: -6 to +6 (one octave)

## PITCH

Determines the fine pitch setting of all the voices. Range: 438.8Hz to 444.5Hz (Ca. a quarter semitone)

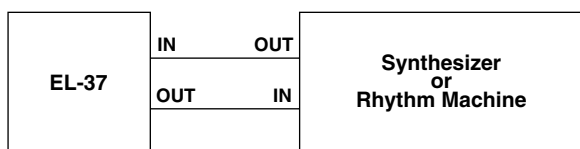
**NOTE** The default Pitch is 440.0Hz (=A3).

**NOTE** The pitch changes cannot be recorded to the Music Disk Recorder.

# 10. MIDI Controls

MIDI (Musical Instrument Digital Interface) is a kind of communication system for electronic musical instruments. It is built into most every modern digital musical instrument and allows different instruments to “talk” to each other and control each other’s functions. For example, the Upper keyboard of your Electone could be used to play sounds on a connected synthesizer. In another application, a rhythm machine can be programmed to play its rhythm patterns in perfect synchronization with the tempo set on the Electone.

To use the MIDI functions you must, of course, have a second MIDI device (such as a synthesizer or rhythm machine), and a set of MIDI cables. Connect the MIDI cables as shown in the illustration below: The MIDI IN/OUT terminals are located on the left underside of the Electone keyboard.

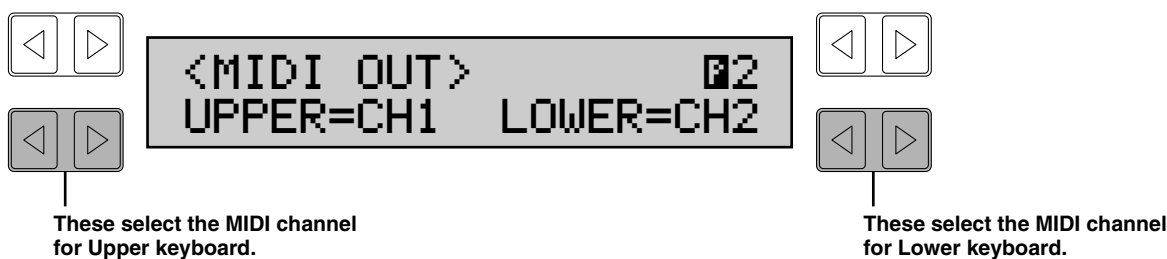


All MIDI functions are controlled from Page 2 and Page 3 of the PITCH/MIDI pages.

## To select the MIDI pages:

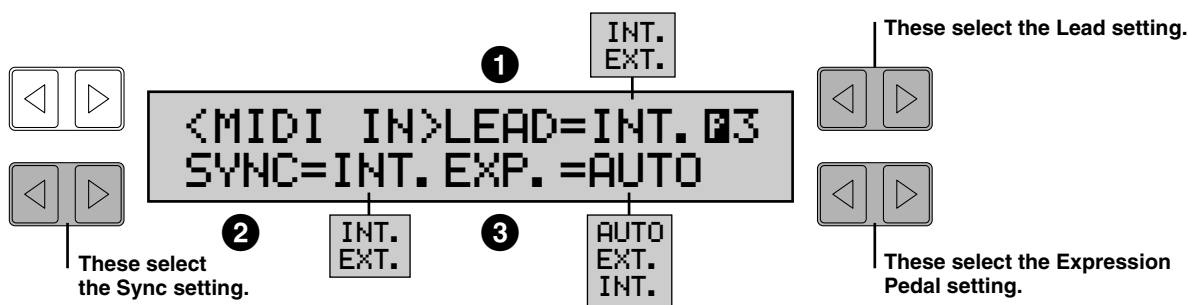
Press the PITCH/MIDI button in the DISPLAY SELECT section, and select Page 2 and Page 3 with the Page buttons.

## Page 2—Output Channels



This determines the channels over which MIDI information will be transmitted. The Upper keyboard can be set to send over channels 1 or 4, while the Lower keyboard can send over 2 or 5. The Pedalboard automatically sends over channel 3. The MIDI receive channel of MIDI device should match the numbers set here.

**NOTE** When using another MIDI device to play the Electone’s voices, you must set the MIDI transmit channel(s) of the connected device to match the receive channel(s) of the Electone. The MIDI receive channels of the Electone are automatically set to the following values:  
Upper: 1  
Lower: 2  
Pedal: 3



### 1 LEAD

Determines Internal or External control of the Lead Voices.

When set to Internal, Lead Voices are played from the Electone and the sounds from a connected MIDI instrument can be played via MIDI channel 1 (or channel 2, when the To Lower function is on). When set to External, the Lead Voices can only be played from the connected instrument via MIDI channel 4.


### 2 SYNC

Determines the source of the timing control, for rhythm synchronization purposes. Setting this to Internal gives the Electone timing control over the connected rhythm machine. This also allows you to start and stop the rhythm patterns of the connected rhythm machine from the Electone’s panel controls. Setting this to External gives timing control to the connected rhythm machine.

### 3 EXP. (Expression)

Determines the control of the expression functions. Ordinarily this control is set to AUTO. However, when it is set to INT., you can manually control the expression pedal during M.D.R. playback. When set to EXT., another (external) Electone can be used to control the expression pedal functions.

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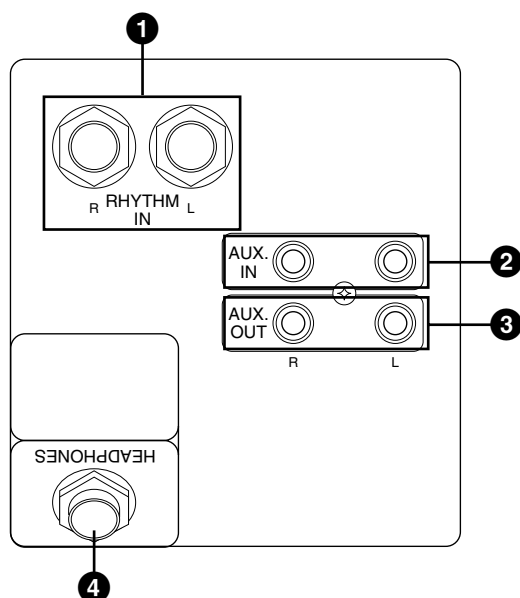
**NOTE**  Accompaniment pattern sounds cannot be controlled via MIDI.

---



# 11. Accessory Jacks and Controls

On the left underside of the Electone keyboard is a separate panel equipped with various input/output terminals, the functions of which are described below.



## ① RHYTHM IN (Phone; L/R)

This pair of phone jacks are for connection to an external rhythm machine. The sound of the connected device is mixed with the sound of the Electone and played through the Electone's speaker system. The volume of the rhythm machine can be controlled by the Expression pedal of the Electone.

## ② AUX. IN (RCA; L/R)

This pair of RCA pin jacks are for connection to an external stereo sound source, such as a cassette deck or home audio system. The sound of the connected device is mixed with the sound of the Electone and played through the Electone's speaker system. Adjust the level by using the control(s) on the connected device.

## ③ AUX. OUT (RCA; L/R)

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.

## ④ HEADPHONES

For connection of a stereo 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.

# 12. Appendix






## Troubleshooting

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

Problem	Possible Cause and Solution
<b>GENERAL OPERATION</b>	
Some of the LEDs in the DISPLAY SELECT section do not light.	The LEDs of on/off buttons [RHYTHM PROGRAM and TREMOLO (FAST)] are lit when those functions are turned on. The LEDs of other function's buttons momentarily flash when the functions are selected.
No sound is produced from the Electone's speakers.	The plug of the cable from the speaker unit is disconnected. Refer to the separate "Assembly Instructions," and reconnect the plug securely.
A cracking noise is sometimes heard.	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.
Interference from radio, TV, or other sources occurs.	This is caused by the proximity of a high-power broadcasting station or amateur ham radio setup.
The sound of the Electone causes surrounding objects to resonate.	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.
The Electone panel does not function normally or the content of the memorized data has changed.	This happens very rarely. Occasionally, power surges and spikes due to electrical storms or other reasons may cause the Electone to malfunction and/or alter the contents of memorized data. If this happens, perform the Power On Reset operation to reset the Electone. (See page 47.)
<b>VOICES/RHYTHMS</b>	
When too many keys are pressed, not all of the notes sound.	Total polyphonic capacity (notes sounding for both Upper and Lower Keyboards) is 11 notes.
When playing a Pedal voice from the Lower keyboard (using the To Lower function), pressing the Lower keyboard's Sustain button does not turn on Sustain.	Even though the Pedal voice is being played from the Lower keyboard, it is still a Pedal voice; turn the Sustain on with the Pedal Sustain button. (See page 29.)
The sound is too soft, despite the volume being set to the maximum.	Check all of the volume controls, making sure that they are set to suitable levels: the panel Volume controls for each voice section, the Master Volume dial, and the Expression Pedal.
Switching voices causes the volume to change, despite their having identical volume settings.	The volume of certain voices may seem lower than that of others. Adjust the balance of the sound with the Volume control within the appropriate Voice Condition display.
When keys on the Lower keyboard or Pedalboard are pressed, the sounds of percussion instruments are also heard.	The keyboard Percussion function has been turned on. When not using the function, be sure to turn it off. (See page 39.)
Only one sound is heard when two notes of the Lead or Pedal voices are simultaneously played.	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 (highest-note priority).
The Pedal voices do not sound, even though the volume is properly set.	The Single Finger or Fingering Chord mode of Auto Bass Chord is on. Turn off the mode in the display. (See page 36.)

<b>Problem</b>	<b>Possible Cause and Solution</b>
<b>VOICES/RHYTHMS</b>	
While an Intro./Ending pattern is automatically playing, the Lower keyboard does not produce any sound, even when the keys are played.	Since the Accompaniment chords play automatically one after another, the Lower keyboard is designed not to produce any sound during the play of an Intro./Ending pattern.
During use of the Rhythm Pattern Program, no sound is produced even when you play a certain percussion sound.	If percussion sounds have been recorded to all 16 rhythm tracks, no subsequently selected instruments can be heard or recorded. If necessary, erase one of the tracks and play the sound.
<b>EFFECTS</b>	
The Tremolo effect cannot be heard, even when the TREMOLO (FAST) button in the DISPLAY SELECT section is on.	Tremolo must be selected first in the Voice Condition display. (See page 27.)
<b>ACCOMPANIMENT AND OTHER FUNCTIONS</b>	
Despite its volume being set to a suitable level, the Accompaniment cannot be heard.	The rhythm has not been started. Be sure to use Accompaniment together with the rhythm.
The pitch in the Single Finger mode does not change, even when pressing different keys of the keyboard.	Single Finger mode will only produce notes when played within a fixed octave interval on the Lower keyboard. If notes with the same letter name are pressed outside of that range, the chords that are sounded will share the same pitch.
The harmony notes of the Melody On Chord function cannot be heard.	The Upper keyboard has been set to sound only Lead voices. Increase the volume of the Upper voices.
<b>REGISTRATION MEMORY</b>	
Certain functions have not been memorized to Registration Memory.	Transposition and Pitch control data, among others, cannot be memorized (except as song data). (See page 42.)
<b>MUSIC DISK RECORDER</b>	
Recording or playback cannot be performed.	1) Problems in recording or playback may be caused by improper operation of the M.D.R. Refer to the LED Display Messages chart on page 67. 2) The PLAY or RECORD section buttons for selecting parts may be turned off. Turn on the appropriate PLAY or RECORD buttons.
A total of 40 songs cannot be recorded.	If some song numbers contain a large amount of recorded data, the disk may not have enough available memory left to record the normal maximum of 40 songs.
Recording is stopped before the performance is finished, or the Song Copy function cannot be executed.	The amount of recorded data on the disk is close to the maximum limit. Either use another disk or delete the data of any unnecessary song number. (See page 64.)
In addition to a recorded performance on the Upper and/or Lower keyboards, a performance using a Lead voice cannot be recorded or played back.	1) When recording, you forgot the following operation: press the RECORD button, then hold down the SHIFT button while you press the UPPER button (selecting Lead). 2) During playback, you forgot to set the LEAD PLAY button to on.
The rhythm does not start at the beginning of a recording, or stops in the middle of the performance.	The M.D.R. is designed so that the rhythm cannot be started at the very beginning of a recording. If you wish to use the rhythm, start it after the available memory display appears on the M.D.R. display.
The notes of the recording are "stuck" and sound continuously.	During playback, you removed the disk by pressing the EJECT button. Whenever you wish to stop playback, always press the STOP button.

# Specifications

KEYBOARD	Keyboards	Upper: 49 keys (C – C), Lower: 49 keys (C – C), Pedal: 20 keys (C – G)
	Touch Tone	Initial/After (Upper, Lead, Lower)
VOICE	Tone Generation	New AWM
	Upper /Lower Keyboard	Strings, Pizz. Strings; Organ, Jazz Organ; Brass, Synth. Brass; Piano, Elec. Piano, Harpsichord; Clarinet; Guitar, Elec. Guitar; Saxophone; Vibraphone, Marimba; Chorus; Cosmic 1, 2, 3; Tutti 1, 2; [Upper] Harmonica; [Lower] Horn; User 1-4; Volume Fine
	Lead (Upper)	Violin; Oboe, Bassoon; Flute, Whistle; Trumpet, Trombone; User 1-4; To Lower; Volume Fine
	Pedalboard	Contrabass, Pizz. Bass; Organ Bass; Elec. Bass, Synth. Bass; Tuba; User 1-4; To Lower; Volume Fine
	Voice Display	Upper, Lower, Lead, Pedal
MELODY ON CHORD		Mode: Off, MOC 1, 2, 3; Knee: On/Off
EFFECT/CONDITION	Digital Reverb	Depth
	Sustain	Upper (Knee), Lower (Knee), Pedal: Length
	Tremolo/Chorus	Upper, Lead, Lower, Pedal; Tremolo (Fast)/Chorus
	Symphonic/Celeste	Symphonic/Celeste (Upper, Lead, Lower, Pedal)
	Vibrato	Upper/Lower: Preset/User (Depth); Lead: Preset/User (Delay, Depth, Speed); Touch Vibrato
	Delay/Flanger	Upper, Lead, Lower; Delay: Speed, Feedback, Balance; Flanger: Speed, Feedback, Depth
	Feet	Upper, Lead, Lower, Pedal: Preset/4'/8'/16'
	Glide	Upper, Lower, Lead
RHYTHM	Rhythms	March, Polka, Country, Broadway; Waltz 1, 2, Jazz Waltz, Bolero; Swing 1, 2, Jazz Ballad, Dixie; Bounce 1, 2, Reggae 1, 2; Slow Rock 1, 2, 3; 8 Beat 1, 2, 3, Dance Pop; Tango 1, 2, 3; Mambo, Cha-cha, Rhumba, Beguine; Samba 1, 2, Bossanova 1, 2; 16 Beat 1, 2, 3, Funk; User 1-8 (A-D); Volume Fine
	Variations	Fill-In; Intro. Ending; Lead In; Auto Variation: On/Off
	Others	Start; Synchro Start; Tempo; Bar/Beat LED; Volume
RHYTHM PROGRAM	Pattern Program	On/Off; Step Write/Real Time Write; Beat (4/4, 3/4, 2/4); Quantize (  ,  ,  ,  ,  Off); Metronome (On/Off); Edit: Instruments 1-16 (Change, Clear; Cursor); Accent Level 0-8; 75 Percussion Sounds; Accompaniment Select; Save: User 1-8 (A-D, Fill-In); Remaining Memory
	Rhythm Sequence	On/Off; Sequence 1-4; 120 Poitions (Bar); Cursor Controls; Data: Preset/User (Set, Insert, Delete, Clear)
KEYBOARD PERCUSSION		On/Off: Lower, Pedal; 43 Sounds
ACCOMPANIMENT	Auto Bass Chord	Mode: Off; Single Finger; Fingered Chord; Custom ABC; Memory: Lower/Pedal
	Accompaniments	Type 1, 2, 3, 4
REGISTRATION MEMORY		M/To Disk, 1-8; Disable Button; Mode: Off; Shift; User (18 Positions; Cursor Controls; Data: Set, Insert, Delete, Clear)
BASIC REGISTRATION		1 – 5
REGISTRATION MENU		120 (Provided in the Included Disks)
MUSIC DISK RECORDER		Play/Record: Upper, Lower, Pedal, Lead, Keyboard Percussion, Control; Pause; Stop; Song Select; Song Repeat; Song Delete; Song Copy: From/To; Tempo; Shift; Format; Custom Play; Remaining Memory; LED Display; Eject
FOOTSWITCH		[Left] Mode: Off; Rhythm (Stop, Ending, Fill-In); Glide (Upper, Lower, Lead); [Right] Regist. Shift Mode: Off, Shift, User
KNEE LEVER		On/Off: Sustain (Upper, Lower); MOC
LCD DISPLAY		20 x 2 Characters
OTHER CONTROLS		Power On/Off; Exp. Pedal; Pitch Control; Transpose; Master Volume; Display Select; Data Controls; Page; MIDI (Output; Upper, Lower; Int./Ext.: Lead, Sync., Exp.)
OTHER FITTINGS		Registration Menu Disk x 2; 3.5" Floppy Disk; Matching Bench; Keyboard Cover/Music Stand; MIDI In/Out; Headphone Jack; Rhythm In (Phone; R/L); Aux In/Out (RCA; R/L)
OPTIONAL ACCESSORIES		Voice Disks; Registration Menu Disk; 3.5" Floppy Disks; HPE-170 Headphones
SOUND SYSTEM	Power Amplifiers	30W
	Speakers	20 cm; 5 cm: Monitor x 2
DIMENSIONS (Width x Depth x Height)		109 cm x 52 cm x 99 cm *With Keyboard Cover Closed
WEIGHT		70 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. As specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

# MIDI Specifications

## ■ Channel Messages

Code (Hexadecimal)	Message	Transmit	Receive	Remarks
8n nn (Note No.) 00-7F	Note OFF	×	CH 1 CH 2 CH 3 (CH 4)* CH 15	UK LK PK LEAD Keyboard Percussion
9n nn (Note No.) 00 01-7F	Note OFF ON	CH 1** CH 2*** CH 3**** × ×	CH 1 CH 2 CH 3 (CH 4)* CH 15	UK LK PK LEAD Keyboard Percussion
Bn 04 00-7F	2nd Expression Pedal	×	×	CONTROL
BF 0B 00-7F	Expression Pedal	CH 16	CH 16	CONTROL
Bn 40 00 7F	Sustain OFF ON	×	×	UK LK PK
Bn 7B 00	All Notes OFF	×	×	UK LK PK LEAD CONTROL
Cn nn (Regist. No.)	Program Change	×	CH 1 CH 2 CH 3 CH 16	UK LK PK CONTROL
Dn 00-07	After Touch	CH 1** CH 2*** × ×	CH 1 CH 2 × (CH 4)*	UK LK PK LEAD

\* Received only when in the Ext. mode.

\*\* Can be changed to CH4.

\*\*\* Can be changed to CH5.

\*\*\*\* The velocity is fixed to 40H in the Note ON mode.

## ■ System Realtime Messages

Code	Function	Transmit	Receive	Remarks
F8	Clock	○	○*	
FA	Start	○	○	
FC	Stop	○	○	
FE	Active Sensing	○	○	
FF	Reset	×	○	

\* Received only when in the Ext. mode

## System Exclusive Messages

### Electone Common Messages

#### ■ Bulk Dump Related Messages

Code	Messages	Transmit	Receive
F0 43 70 70 00 ... (Data)*... F7	Bulk Dump data	×	○
01 F7	Request-to-Send Voice parameter data	×	○
02 F7	Request-to-Receive Voice parameter data	×	○
F0 43 70 70 10 F7	Request-to-Send all RAM data	×	○
11	Request-to-Send all Registration memory data	×	○
12	Request-to-Send R.S.P. data	×	○
14	Request-to-Send User pattern data	×	○
15	Request-to-Send User pattern data	×	○
16	Request-to-Send User Voice data	×	○
F0 43 70 70 20 F7	Request-to-Receive all RAM data	×	○
21	Request-to-Receive Registration memory data	×	○
22	Request-to-Receive R.S.P. data	×	○
24	Request-to-Receive User pattern data	×	○
25	Request-to-Receive User pattern data	×	○
26	Request-to-Receive User Voice data	×	○
F0 43 70 70 30 F7	Request-to-Send Model ID data	×	○
F0 43 70 70 38 7F F7	Bulk Dump Acknowledge	○	×
00	Bulk Dump Unacknowledge	○	×

(Data)\* = Exclusive data

#### ■ Control Change

Code	Messages	Transmit	Receive
F0 43 70 70 40 45 7F F7	LEFT FOOTSWITCH ON	○	○
00	OFF	○	○
47 7F F7	KNEE LEVER ON	○	○
00	OFF	○	○
48 7F F7	FILL IN ON	○	○
00	OFF	○	○
4B 7F F7	INTRO./ENDING ON	○	○
00	OFF	○	○
50 TI* Th** F7	TEMPO	○	○

\*l=Low byte \*\*h=High byte

#### ■ MDR-Related Status

Code	Messages	Transmit	Receive
F0 43 70 70 70 01 F7	PLAY Start	×	○
02	Stop	×	○
03	RECORD Start	×	○
04	Stop	×	○
05	FF Start	×	○
06	Stop	×	○
09	Rhythm Pointer Reset	×	○

#### ■ Others

Code	Messages	Transmit	Receive
F0 43 70 70 78 SC NC F7	Bar signal	○	○

### ■ EL Series Common Messages

Code	Messages	Transmit	Receive
F0 43 70 78 00 ... (Data)*... F7	Bulk Dump data	○	○
01 F7	Request-to-Send Voice parameter data	×	○
02	Request-to-Receive Voice parameter data	×	○
F0 43 70 78 10 F7	Request-to-Send all RAM data	×	○
11	Request-to-Send all Registration memory data	×	○
12	Request-to-Send R.S.P. data	×	○
14	Request-to-Send User pattern data	×	○
15	Request-to-Send User pattern data	×	○
16	Request-to-Send User voice data	×	○
F0 43 70 78 20 F7	Request-to-Receive all RAM data	×	○
21	Request-to-Receive all Registration memory data	×	○
22	Request-to-Receive R.S.P. data	×	○
24	Request-to-Receive User pattern data	×	○
25	Request-to-Receive User pattern data	×	○
26	Request-to-Receive User voice data	×	○
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 Panel Operation Messages

### ■ Model-Specific Messages

Code	Messages	Transmit	Receive
F0 43 70 3D* 00 ... (Data)... F7	Bulk Dump data	×	○
00 F7	Mpdel ID data	○	×
01	Request-to-Send Voice parameter data	×	○
02	Request-to-Receive Voice parameter data	×	○
F0 43 70 3D* 10 F7	Request-to-Send all RAM data	×	○
11	Request-to-Send all Registration Memory data	×	○
12	Request-to-Send R.S.P. data	×	○
14	Request-to-Send User pattern data	×	○
15	Request-to-Send User pattern data	×	○
16	Request-to-Send User voice data	×	○
F0 43 70 3D* 20 F7	Request-to-Receive all RAM data	×	○
21	Request-to-Receive Registration data	×	○
22	Request-to-Receive R.S.P. data	×	○
24	Request-to-Receive User pattern data	×	○
25	Request-to-Receive User pattern data	×	○
26	Request-to-Receive User voice data	×	○

"3D"\* is the ID code of EL-37.

### ■ Electone/Single Keyboard Common Messages

Code	Messages	Transmit	Receive
F0 43 73 01 02 F7	Request for Internal Clock mode	×	○
03	Request for External Clock mode	×	○

■ Panel Operation Messages

Functions	Switches	Code	Data	Remarks
Selector	UK Voices	02	00-0D	SW No.
	LK Voices	03	00-0D	SW No.
	LEAD	06	00-04	SW No.
	PK Voice	07	00-04	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
Disable	Disable	5F	00-01	00=OFF 01=ON
Tremolo (Fast)	Tremolo	60	00-01	00=Chorus 01=Tremolo*
Rhythm Sequence Program	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

\* Even if the 1:00 Chorus is received, Tremolo (Fast) will be turned OFF.



# **MIDI Implementation Chart**

Function		Transmit	Receive	Remarks
Basic Channel	Default Changed	1, 2, 3, 16 4, 5	1, 2, 3, 15, 16 4	***
Mode	Default Messages Altered	Mode 3 × *****	Mode 3 × ×	
Note Number	True Voice	36-96 * *****	36-96 **	
Velocity	Note ON Note OFF	○ 9nH, v=0-127 ×	○ 9nH, v=0-127 ○ 8nH,	v=0 (OFF)****
After Touch	Key's Ch's	× ○	× ○	
Pitch Bend		×	×	
Control Change	1 4 11 64	× × ○ ×	× × ○ (Received only in External mode) ×	Modulation Wheel 2nd Expression Pedal Expression Pedal Sustain Pedal
Program Change	Range	○ 0-7, 112-116 *****	○ 0-7, 112-116 0-7, 112-116	
System Exclusive		○	○	Refer to MIDI Specifications
System Common	Song Position Song Select Tune	× × ×	× × ×	
System Real Time	Clock Commands	○ ○	○ (Received only in External mode) ○	FAH, FCH
Aux Messages	Local ON/OFF All Notes OFF Active Sense Reset	× × ○ ×	× × ○ ×	
Notes		* CH 1: 48-96, CH2: 36-84, CH3: 36-55 ** CH15: 36-127, Others: 36-96 *** CH1: UK, CH2: LK, CH3: PK, CH4: LEAD, CH15: Keyboard Percussion, CH16: CONTROL **** The Note ON velocity is fixed to 40H in the PK's transmit mode.		

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

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

○: YES  
×: NO

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# 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

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