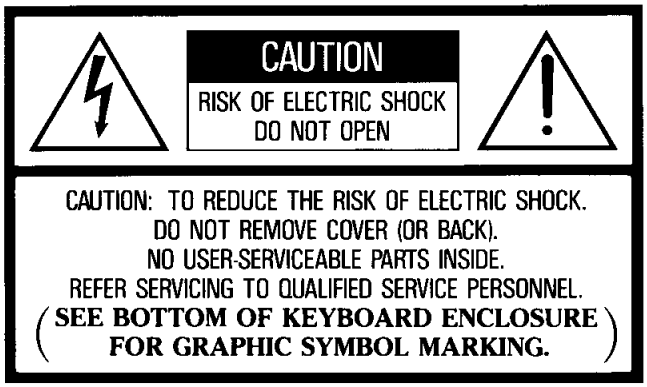
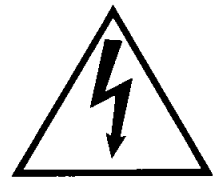
YAMAHA ELECTONE®

HS

USER'S GUIDE



Explanation of Graphical Symbols



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

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

IMPORTANT SAFETY AND INSTALLATION INSTRUCTIONS

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

WARNING—When using electronic products, basic precautions should always be followed, including the following:

1. Read all Safety and Installation Instructions, Supplemental Marking and Special Message Section data, and assembly instructions (where applicable) BEFORE using your Yamaha electronic product. Check unit weight specifications before you attempt to move this instrument!

2. Main Power Supply Verification: Your Yamaha electronic product has been manufactured specifically for the main supply voltage used in your area. If you should move, or if any doubt exists, please contact your dealer for instructions. The main supply voltage required by your electronic product is printed on the name plate. For name plate location, see graphic in Special Message Section.

3. This product may be equipped with a polarized line plug (one blade wider than the other). If you are unable to insert the plug into the outlet, contact an electrician to have your obsolete outlet replaced. Do NOT defeat the safety purpose of the plug. Yamaha products not having polarized plugs incorporate construction methods and designs that do not require line plug polarization.

4. **WARNING**—Do NOT place objects on your electronic product's power cord or place the unit in a position where anyone could trip over, walk over, or roll anything over cords of any kind. Do NOT allow your electronic product or its bench to rest on or be installed over cords of any type. Improper installations of this type create the possibility of a fire hazard and/or personal injury.

5. Environment: Your electronic product should be installed away from heat sources such as a radiator, heat registers and/or other products that produce heat. Additionally, the unit should not be located in a position that exposes the cabinet to direct sunlight, or air currents having high humidity or heat levels.

6. Your Yamaha electronic product should be placed so that its location or position does not interfere with its proper ventilation.

7. Some Yamaha electronic products may have benches that are either a part of the product or supplied as an optional accessory. Some of these benches are designed to be dealer assembled. Please make sure that the bench is stable before using it. The bench supplied by Yamaha was designed for seating only. No other uses are recommended.

8. Some Yamaha electronic products can be made to operate with or without the side panels or other components that constitute a stand. These products should be used only with the components supplied or a cart or stand that is recommended by the manufacturer.

9. 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.

10. Do not use your Yamaha electronic product near water or in wet environments. For example, near a swimming pool, spa, or in a wet basement.

11. Care should be taken so that objects do not fall, and liquids are not spilled, into the enclosure through openings.

12. Your Yamaha electronic product should be serviced by a qualified service person when:
a. The power-supply cord or plug has been damaged: or
b. Objects have fallen, or liquid has been spilled into the product: 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. When not in use, always turn your Yamaha electronic product "OFF". The power-supply cord of the product should be unplugged from the outlet when it is to be left unused for a long period of time. Notes: In this case, some units may lose some user programmed data. Factory programmed memories will not be affected.

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

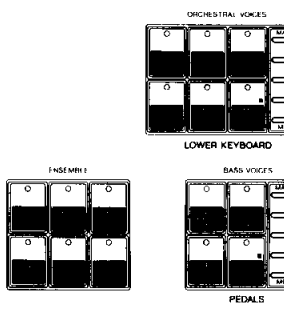
15. Electromagnetic Interference (RFI). This series of Yamaha electronic products utilizes digital (high frequency pulse) technology that may adversely affect Radio/TV reception or the operation of other devices that utilize digital technology. Please read FCC Information (Page 71) for additional information.

PLEASE KEEP THIS MANUAL
FOR FUTURE REFERENCE!

CONTENTS

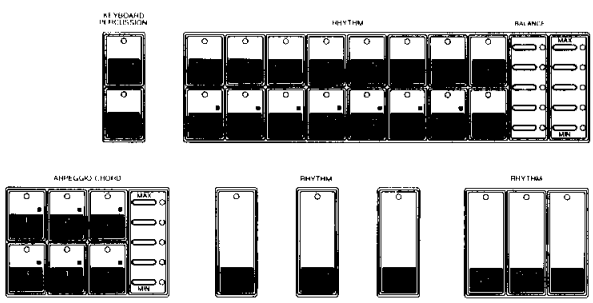
HS SERIES SYSTEM CONFIGURATION

I. THE BASIC FEATURES



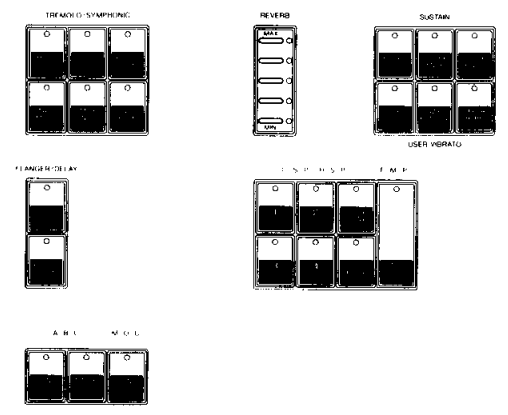
1. VOICE SECTION

- VOICE SECTIONS FOR UPPER KEYBOARD
- VOICE SECTIONS FOR UPPER OR LOWER KBD
- VOICE SECTIONS FOR LOWER KEYBOARD
- VOICE SECTIONS FOR PEDAL KEYBOARD



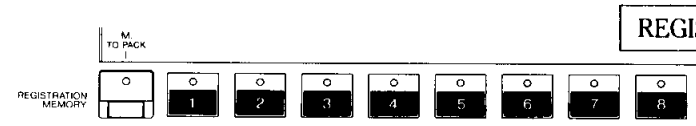
2. RHYTHM SECTION

- RHYTHM
- FILL IN , INTRO./ENDING
- ARPEGGIO CHORD
- KEYBOARD PERCUSSION



3. EFFECTS & OTHERS

TREMOLO/SYMPHONIC	REVERB
USER VIBRATO	SUSTAIN
FLANGER/DELAY	
C.S.P./ R.S.P.	
F.M.P.	
A.B.C.	M.O.C.



4-(1) MEMORY SECTION

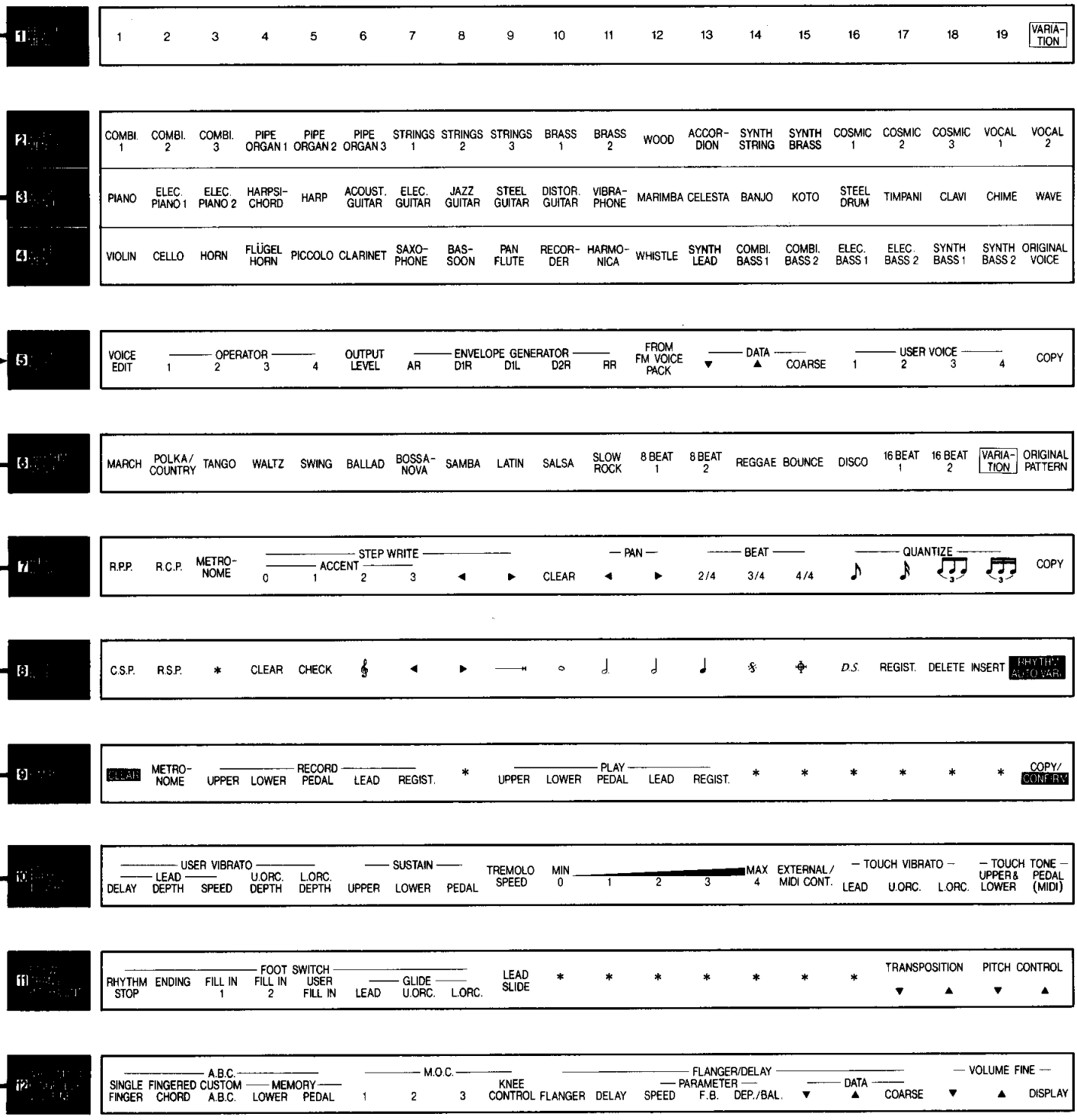
- REGISTRATION MEMORY

4-(2) MEMORY SECTION

- RAM PACK
- CASSETTE TAPE

*The below illustration depicts the system configuration of the HS Series Electones. Please note that some of the functions do function strictly in accordance with the relationships depicted below.
*This illustration of system configuration is an example based on the HS-5 Model. Consequently, a number of the functions shown herein is not provided for all models.

II. MULTI MENU



EXTERNAL DEVICES

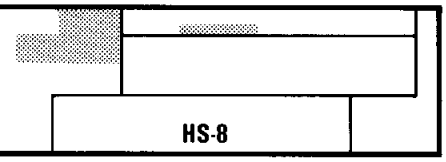
MUSIC DISK RECORDER (MDR-2)

OTHE INSTRUMENTS/DEVICES

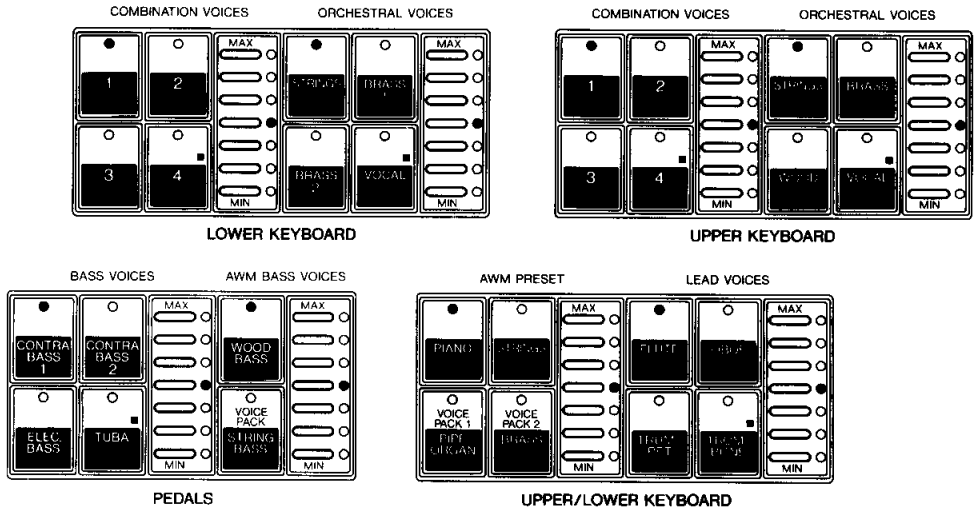
1. VOICE SECTIONS

1-(1) Voice Sections of HS-8

HS-8 is provided with eight Voice sections: two for the upper keyboard, two for use by either the upper or lower keyboard, two for the lower keyboard, and two for the pedal keyboard.



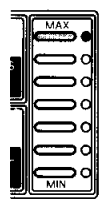
1 Select one voice at each Voice section.



[Voice Sections for the Upper Keyboard]
ORCHESTRAL VOICES: To select the sounds of the main instruments of an orchestra.
COMBINATION VOICES: To select the various organ sounds.
[Voice Sections for the Upper or Lower Keyboard]
LEAD VOICES: To select the sound of the solo instrument, such as a flute or oboe. All sounds of this Voice section are monophonic.
AWM PRESET: To select various instrument sounds according to the AWM Tone Generator method.
[Voice Sections for the Lower Keyboard]
ORCHESTRAL VOICES: To select the sounds of the main instruments of an orchestra.
COMBINATION VOICES: To select various organ sounds.
[Voice Sections for the Pedal Keyboard]
BASS VOICES: To select the sounds of various bass instruments.
AWM BASS VOICES: To select bass instrument sounds according to the AWM Tone Generator method.

2 Set the volume level at each Voice section.

The volume can be set to seven different levels. Pressing the top button (MAX) sets the maximum volume and pressing the bottom button (MIN) sets the volume to zero.



NOTES: Use of the Volume Fine function of the MULTI MENU allows you to set the volume to a finer level. (➡ Page 67)
If two Volume buttons are pressed at the same time, the higher volume level has priority and is set to ON.

[Number of Concurrently Sounded Notes]
ORCHESTRAL VOICES/COMBINATION VOICES: These are polyphonic Voice sections from which a total of seven notes from the upper and lower keyboards can be respectively sounded at the same time.
LEAD VOICES: This is a monophonic Voice section from which only one note can be sounded at a time.
AWM PRESET: This is a polyphonic Voice section from which up to 15 notes can be sounded at the same time.
BASS VOICES/AWM BASS VOICES: These are monophonic Voice sections from which only one note can be respectively sounded at a time.

[Sounding Priority of LEAD VOICES]
When used in ensemble with other Voice sections: If multiple keys are concurrently pressed, only the highest note is sounded (high-note priority).
When used alone on the upper or lower keyboard: If multiple keys are concurrently pressed, only the last note pressed is sounded (last-note priority).

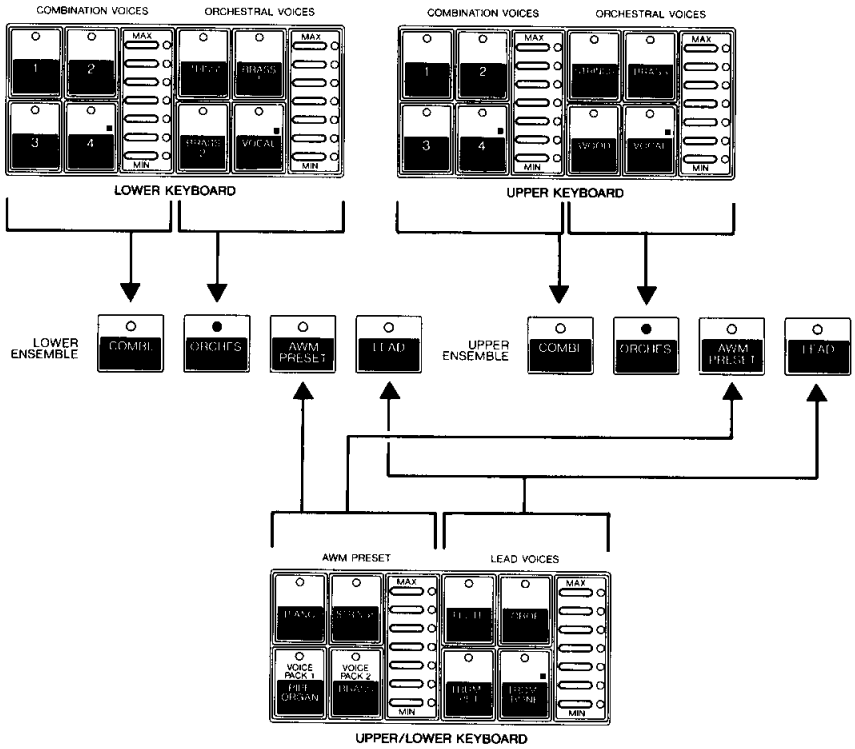
[Dotted Buttons]
Each Voice section (excluding AWM PRESET and AWM BASS VOICES) is provided with dotted buttons which can be assigned with the voices of the VOICE MENUs provided on the MULTI MENU. (➡ Page 23)

[Voice Editing Functions]
For all voices of each Voice section (excluding AWM PRESET and AWM BASS VOICES), the Voice Edit functions of the MULTI MENU can be used to change their parameters for altering the expression of the voices. (➡Page 25)

[Sounds of the COMBINATION VOICES]

UPPER	LOWER
1: Organ 8′	1: Organ 8′
2: Flute 8′	2: Flute 8′
3: Flute coupler	3: Flute coupler
4: Full organ	4: Organ coupler

3 At the ENSEMBLE section, select the Voice sections to be set at the upper and lower keyboards.



The ENSEMBLE section is used to select the ON/OFF status of the Voice sections of the upper and lower keyboards. Referring to the figure above, light up the buttons corresponding to the Voice sections you wish to set. The notes of the Voice sections which remain unlit will not be sounded even if their volume levels are set to maximum.

NOTES: Use the ENSEMBLE section to select whether the LEAD VOICES will be sounded from the UPPER or LOWER keyboard. A LEAD voice cannot be concurrently sounded from both keyboards.
AWM PRESET can be set to ON for both the UPPER and LOWER keyboards and concurrently sounded from both keyboards.
The ON/OFF status of the Voice sections of the pedal keyboard is set by the volume level. If you wish to set BASS VOICES and/or AWM BASS VOICES to OFF, set the corresponding volume level to MIN.

4 Now, let's play the upper, lower, and pedal keyboards.

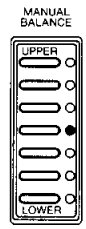
The set voices will be sounded from the respective keyboards. Try creating a variety of sounds by replacing a set voice with another voice and changing the settings at the ENSEMBLE section.

NOTE: By setting TOUCH TONE of the MULTI MENU to ON, you can minutely control the volume and timbre of each voice by the intensity with which you press the keys of the upper, lower, and pedal keyboards. (➡Page 57).

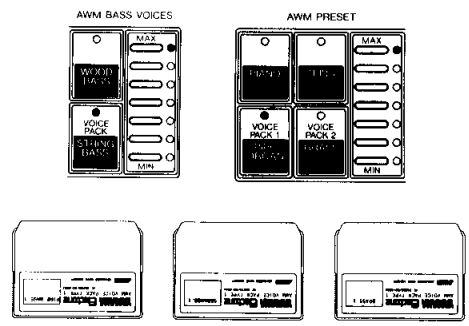
CAUTION: *If you select SINGLE FINGER or FINGERED CHORD from A.B.C. of the MULTI MENU and light up the ON button of A.B.C. on the panel, bass notes cannot be sounded by playing the pedal keyboard.* (➡Page 62).

MANUAL BALANCE

This function allows you to set the balance between the volume levels of the upper and lower keyboards. By setting MANUAL BALANCE in the UPPER range, the volume of the upper keyboard becomes greater than that of the lower keyboard. By setting it in the LOWER range, the volume of the lower keyboard becomes greater than that of the upper keyboard.



[AWM VOICE PACK]



PIPE ORGAN and BRASS of AWM PRESET as well as STRING BASS of AWM BASS VOICES correspond to the voices stored in the AWM VOICE PACKs which are respectively inserted in the PACK inlets provided at the front left side of the lower keyboard. By replacing the AWM VOICE PACKs, therefore, you can achieve different voices through the use of the PIPE ORGAN, BRASS or STRING BASS buttons. A PACK can be replaced by simply inserting another PACK, with no need to press any buttons or perform other operations.

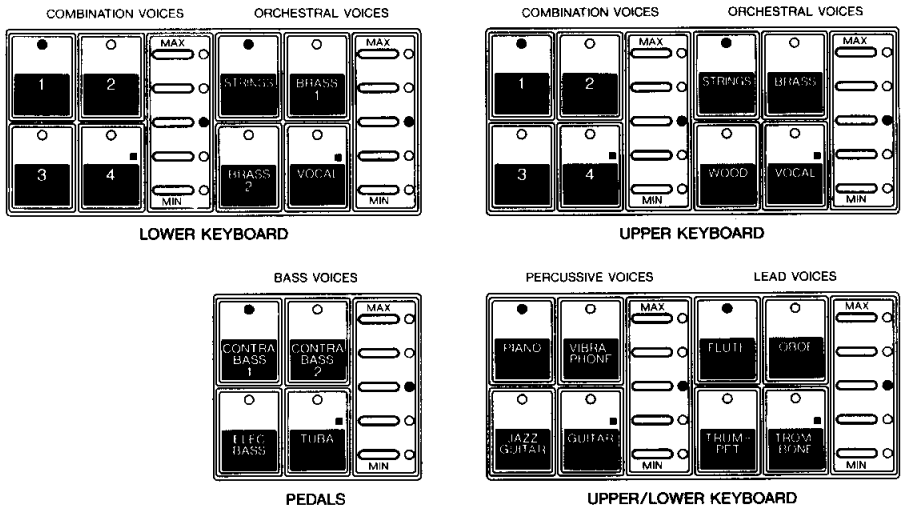
[FM VOICE PACK]

The dotted buttons provided at all Voice sections, excluding AWM PRESET and AWM BASS VOICES, can also be assigned with voices of an FM VOICE PACK. In this case, each voice of the FM VOICE PACK must first be copied to a USER voice button using the VOICE EDIT before being assigned to a dotted button.
(➡Page 31)

1-(2) Voice Sections of HS-7 and HS-6

HS-7 and HS-6 are respectively provided with seven and six Voice sections: two for the upper keyboard, two for use by either the upper or lower keyboard, two for the lower keyboard (one in case of HS-6), and one for the pedal keyboard.

1 Select one voice at each Voice section.



(Illustration of HS-7)

[Voice Sections for the Upper Keyboard]
ORCHESTRAL VOICES: To select the sounds of the main instruments of an orchestra.
COMBINATION VOICES: To select the various organ sounds.

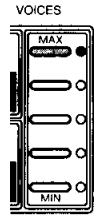
[Voice Sections for the Upper or Lower Keyboard]
LEAD VOICES: To select the sound of the solo instrument, such as a flute or oboe. All sounds of this Voice section are monophonic.
PERCUSSIVE VOICES: To select the sounds of such percussion instruments as the piano or vibraphone.

[Voice Sections for the Lower Keyboard]
ORCHESTRAL VOICES (HS-7): To select the sounds of the main instruments of an orchestra.
COMBINATION VOICES (HS-7): To select various organ sounds.
ORCHESTRAL VOICES (HS-6): To select the sounds of the main instruments of an orchestra or the organ sounds.

[Voice Section for the Pedal Keyboard]
BASS VOICES: To select the sounds of various bass instruments.

2 Set the volume level at each Voice section.

The volume can be set to five different levels. Pressing the top button (MAX) sets the maximum volume and pressing the bottom button (MIN) sets the volume to zero.



NOTES: Use of the Volume Fine function of the MULTI MENU allows you to set the volume to a finer level. (➡ Page 67)
If two Volume buttons are pressed at the same time, the higher volume level has priority and is set to ON.

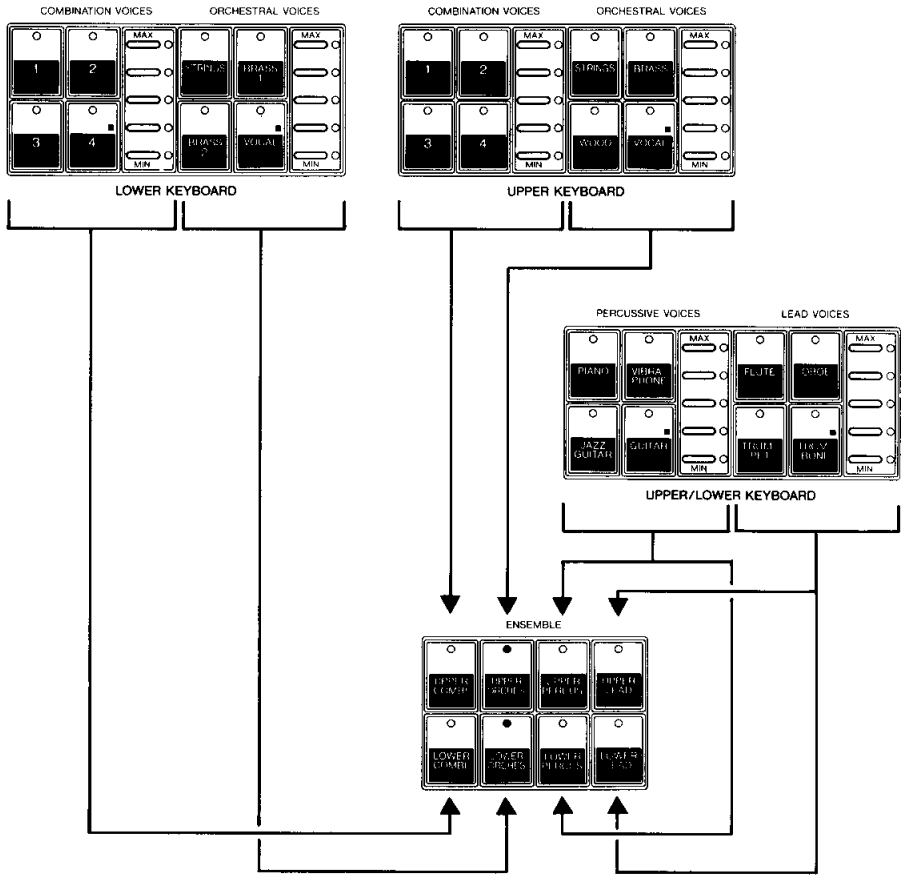
[Number of Concurrently Sounded Notes]
ORCHESTRAL VOICES/COMBINATION VOICES: These are polyphonic Voice sections from which a total of seven notes from the upper and lower keyboards can be respectively sounded at the same time.
LEAD VOICES: This is a monophonic Voice section from which only one note can be sounded at a time.
PERCUSSIVE VOICES: This is a polyphonic Voice section from which up to seven notes can be sounded at the same time.
BASS VOICES: This is a monophonic Voice section from which only one note can be sounded at a time.

[Sounding Priority of LEAD VOICES]
When used in ensemble with other Voice sections: If multiple keys are concurrently pressed, only the highest note is sounded (high-note priority).
When used alone on the upper or lower keyboard: If multiple keys are concurrently pressed, only the last note pressed is sounded (last-note priority).

[Dotted Buttons]
Each Voice section is provided with dotted buttons which can be assigned with the voices of the VOICE MENUs provided on the MULTI MENU. (➡Page 23)

[Voice Editing Functions]
For all voices of each Voice section, the Voice Edit functions of the MULTI MENU can be used to change their parameters for altering the expression of the voices.
(➡ Page 25)

3 At the ENSEMBLE section, select the Voice sections to be set at the upper and lower keyboards.



(Illustration of HS-7)

The ENSEMBLE section is used to select the ON/OFF status of the Voice sections of the upper and lower keyboards. Referring to the figure above, light up the buttons corresponding to the Voice sections you wish to set. The notes of the Voice sections which remain unlit will not be sounded even if their volume levels are set to maximum.

NOTE: Use the ENSEMBLE sections to select whether the LEAD VOICES and PERCUSSIVE VOICES will be sounded from the UPPER or LOWER keyboard. A LEAD or PERCUSSIVE voice cannot be concurrently sounded from both keyboards.

4 Now, let's play the upper, lower, and pedal keyboards.

The set voices will be sounded from the respective keyboards. Try creating a variety of sounds by replacing a set voice with another voice and changing the settings at the ENSEMBLE section.

NOTE: By setting TOUCH TONE of the MULTI MENU to ON, you can minutely control the volume and timbre of each voice by the intensity with which you press the keys of the upper, lower, and pedal keyboards. (➡Page 57).

CAUTION: *If you select SINGLE FINGER or FINGERED CHORD from A.B.C. of the MULTI MENU and light up the ON button of A.B.C. on the panel, bass notes cannot be sounded by playing the pedal keyboard. (➡Page 62).*

[Sounds of the COMBINATION VOICES]

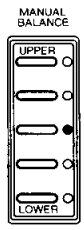
UPPER 1: Organ 8′
2: Flute 8′
3: Flute coupler
4: Full organ
LOWER 1: Organ 8′
2: Flute 8′
3: (HS-7): Flute coupler
4: (HS-7): Organ coupler

[FM VOICE PACK]

The dotted buttons provided at all Voice sections can also be assigned with voices of an FM VOICE PACK. In this case, each voice of the FM VOICE PACK must first be copied to a USER voice button using the VOICE EDIT before being assigned to a dotted button. (➡Page 31)

MANUAL BALANCE

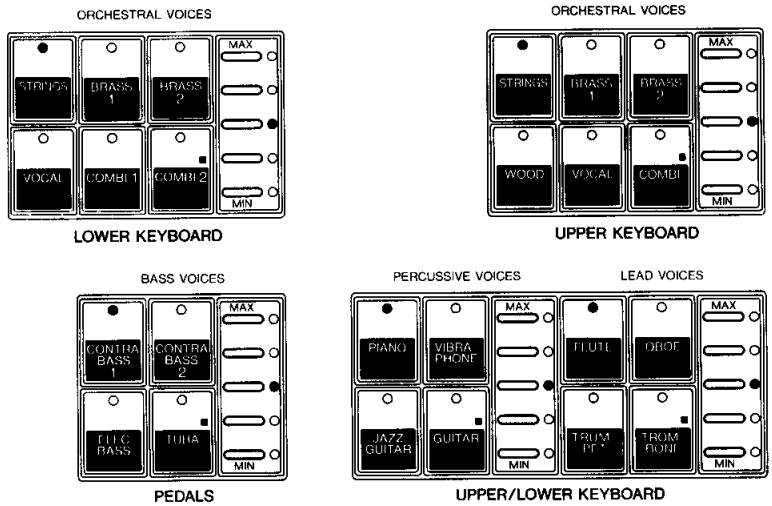
This function allows you to set the balance between the volume levels of the upper and lower keyboards. By setting MANUAL BALANCE in the UPPER range, the volume of the upper keyboard becomes greater than that of the lower keyboard. By setting it in the LOWER range, the volume of the lower keyboard becomes greater than that of the upper keyboard.



1-(3) Voice Sections of HS-5

HS-5 is provided with five Voice sections: one for the upper keyboard, two for use by either the upper or lower keyboard, one for the lower keyboard, and one for the pedal keyboard.

1 Select one voice at each Voice section.



[Voice Section for the Upper Keyboard]
ORCHESTRAL VOICES: To select the sounds of the main instruments of an orchestra or the organ sounds.

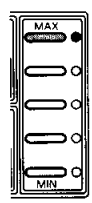
[Voice Sections for the Upper or Lower Keyboard]
LEAD VOICES: To select the sound of the solo instrument, such as a flute or oboe. All sounds of this Voice section are monophonic.
PERCUSSIVE VOICES: To select the sounds of such percussion instruments as the piano or vibraphone.

[Voice Section for the Lower Keyboard]
ORCHESTRAL VOICES: To select the sounds of the main instruments of an orchestra or the organ sounds.

[Voice Section for the Pedal Keyboard]
BASS VOICES: To select the sounds of various bass instruments.

2 Set the volume level at each Voice section.

The volume can be set to five different levels. Pressing the top button (MAX) sets the maximum volume and pressing the bottom button (MIN) sets the volume to zero.



NOTES: Use of the Volume Fine function of the MULTI MENU allows you to set the volume to a finer level. (➡ Page 67)
If two Volume buttons are pressed at the same time, the higher volume level has priority and is set to ON.

[Number of Concurrently Sounded Notes]
ORCHESTRAL VOICES: These are polyphonic Voice sections from which a total of seven notes from the upper and lower keyboards can be respectively sounded at the same time.
LEAD VOICES: This is a monophonic Voice section from which only one note can be sounded at a time.
PERCUSSIVE VOICES: This is a polyphonic Voice section from which up to seven notes can be sounded at the same time.
BASS VOICES: This is a monophonic Voice section from which only one note can be sounded at a time.

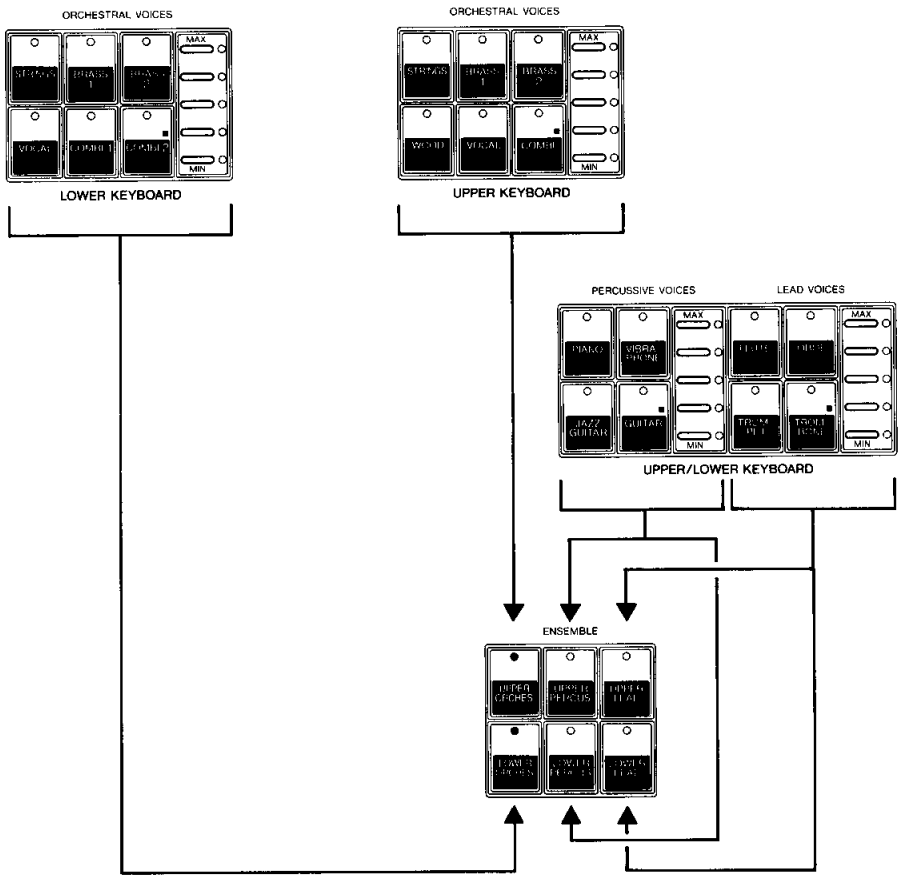
[Sounding Priority of LEAD VOICES]
When used in ensemble with other Voice sections: If multiple keys are concurrently pressed, only the highest note is sounded (high-note priority).
When used alone on the upper or lower keyboard: If multiple keys are concurrently pressed, only the last note pressed is sounded (last-note priority).

[Dotted Buttons]
Each Voice section is provided with dotted buttons which can be assigned with the voices of the VOICE MENUs provided on the MULTI MENU. (➡Page 23)

[Voice Editing Functions]
For all voices of each Voice section, the Voice Edit functions of the MULTI MENU can be used to change their parameters for altering the expression of the voices. (➡Page 25)

[Sounds of the COMBINATION VOICES]
UPPER COMBI. : Organ 8′
LOWER COMBI.1: Organ 8′
COMBI.2: Flute 8′

3 At the ENSEMBLE section, select the Voice sections to be set at the upper and lower keyboards.



The ENSEMBLE section is used to select the ON/OFF status of the Voice sections of the upper and lower keyboards. Referring to the figure above, light up the buttons corresponding to the Voice sections you wish to set. The notes of the Voice sections which remain unlit will not be sounded even if their volume levels are set to maximum.

NOTE: Use the ENSEMBLE sections to select whether the LEAD VOICES and PERCUSSIVE VOICES will be sounded from the UPPER or LOWER keyboard. A LEAD or PERCUSSIVE voice cannot be concurrently sounded from both keyboards.

4 Now, let's play the upper, lower, and pedal keyboards.

The set voices will be sounded from the respective keyboards. Try creating a variety of sounds by replacing a set voice with another voice and changing the settings at the ENSEMBLE section.

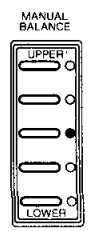
NOTE: By setting TOUCH TONE of the MULTI MENU to ON, you can minutely control the volume and timbre of each voice by the intensity with which you press the keys of the upper and lower, and pedal keyboards. (➡Page 57)

CAUTION: *If you select SINGLE FINGER or FINGERED CHORD from A.B.C. of the MULTI MENU and light up the ON button of A.B.C. on the panel, bass notes cannot be sounded by playing the pedal keyboard.* (*➡Page 62*)

[FM VOICE PACK]
The dotted buttons provided at all Voice sections can also be assigned with voices of an FM VOICE PACK. In this case, each voice of the FM VOICE PACK must first be copied to a USER voice button using the VOICE EDIT before being assigned to a dotted button. (➡Page 31)

MANUAL BALANCE

This function allows you to set the balance between the volume levels of the upper and lower keyboards. By setting MANUAL BALANCE in the UPPER range, the volume of the upper keyboard becomes greater than that of the lower keyboard. By setting it in the LOWER range, the volume of the lower keyboard becomes greater than that of the upper keyboard.

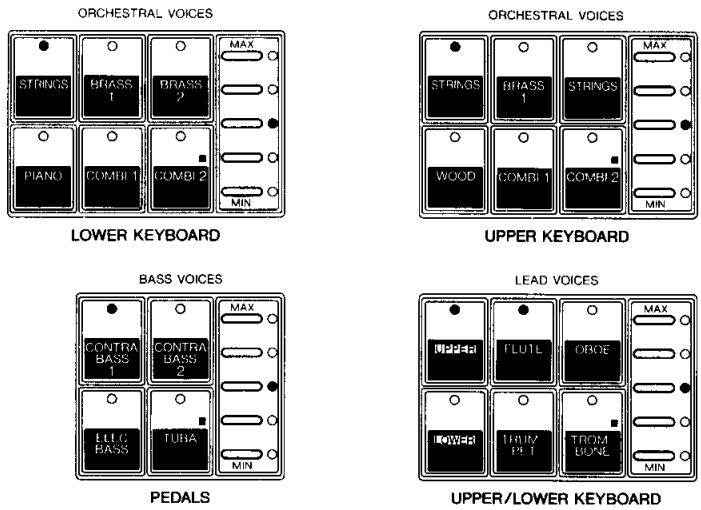


1-(4) Voice Sections of HS-4

HS-4 is provided with four Voice sections: one for the upper keyboard, one for use by either the upper or lower keyboard, one for the lower keyboard, and one for the pedal keyboard.

HS-4

1 Select one voice at each Voice section.



[Voice Section for the Upper Keyboard]
ORCHESTRAL VOICES: To select the sounds of the main instruments of an orchestra or the organ sounds.

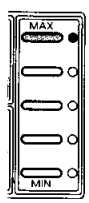
[Voice Sections for the Upper or Lower Keyboard]
LEAD VOICES: To select the sound of the solo instrument, such as a flute or oboe. All sounds of this Voice section are monophonic.

[Voice Section for the Lower Keyboard]
ORCHESTRAL VOICES: To select the sounds of the main instruments of an orchestra or the organ sounds.

[Voice Section for the Pedal Keyboard]
BASS VOICES: To select the sounds of various bass instruments.

2 Set the volume level at each Voice section.

The volume can be set to five different levels. Pressing the top button (MAX) sets the maximum volume and pressing the bottom button (MIN) sets the volume to zero.



NOTES: If you wish to cancel the sound of a specific Voice section, set its volume level to MIN.
Use of the Volume Fine function of the MULTI MENU allows you to set the volume to a finer level. (➡Page 67)
If two Volume buttons are pressed at the same time, the higher volume level has priority and is set to ON.

[Number of Concurrently Sounded Notes]
ORCHESTRAL VOICES: These are polyphonic Voice sections from which a total of seven notes from the upper and lower keyboards can be respectively sounded at the same time.
LEAD VOICES: This is a monophonic Voice section from which only one note can be sounded at a time.
BASS VOICES: This is a monophonic Voice section from which only one note can be sounded at a time.

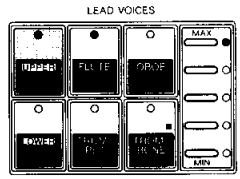
[Sounding Priority of LEAD VOICES]
If multiple keys are concurrently pressed, only the highest note is sounded (high-note priority).

[Dotted Buttons]
Each Voice section is provided with dotted buttons which can be assigned with the voices of the VOICE MENUs provided on the MULTI MENU. (➡Page 23)

[Voice Editing Functions]
For all voices of each Voice section, the Voice Edit functions of the MULTI MENU can be used to change their parameters for altering the expression of the voices. (➡Page 25)

[Sounds of the COMBINATION VOICES]
UPPER COMBI.1: Organ 8′
COMBI.2: Flute 8′
LOWER COMBI.1: Organ 8′
COMBI.2: Flute 8′

3 Select whether the LEAD VOICES will be used at the upper or lower keyboard.



UPPER/LOWER KEYBOARD

If you will be using a LEAD voice, select whether it will be sounded from the upper or lower keyboard.

UPPER: When this button is set to ON, the LEAD voice will be sounded from the upper keyboard. If the volume for ORCHESTRAL VOICES of the upper keyboard has been set at this time, the LEAD VOICES and ORCHESTRAL VOICES can be sounded in ensemble from the upper keyboard.

LOWER: When this button is set to ON, the LEAD voice will be sounded from the lower keyboard. If the volume for ORCHESTRAL VOICES of the lower keyboard has been set at this time, the LEAD VOICES and ORCHESTRAL VOICES can be sounded in ensemble from the lower keyboard.

NOTE: If you wish to cancel the sound of LEAD VOICES, set both the UPPER and LOWER buttons to OFF.

4 Now, let's play the upper, lower, and pedal keyboards.

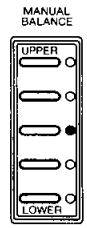
The set voices will be sounded from the respective keyboards. Try creating a variety of sounds by replacing a set voice with another voice and changing the combination of voices.

NOTE: By setting TOUCH TONE of the MULTI MENU to ON, you can minutely control the volume and timbre of each voice by the intensity with which you press the keys of the upper and lower keyboards. (➡Page 57).

CAUTION: *If you select SINGLE FINGER or FINGERED CHORD from A.B.C. of the MULTI MENU and light up the ON button of A.B.C. on the panel, bass notes cannot be sounded by playing the pedal keyboard. (➡Page 62).*

MANUAL BALANCE

This function allows you to set the balance between the volume levels of the upper and lower keyboards. By setting MANUAL BALANCE in the UPPER range, the volume of the upper keyboard becomes greater than that of the lower keyboard. By setting it in the LOWER range, the volume of the lower keyboard becomes greater than that of the upper keyboard.



[FM VOICE PACK]

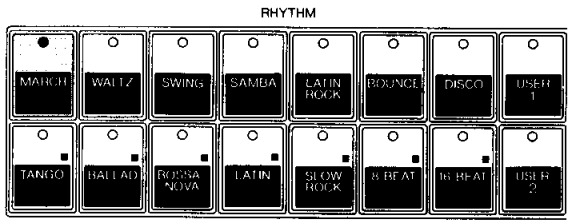
The dotted buttons provided at all Voice sections can also be assigned with voices of an FM VOICE PACK. In this case, each voice of the FM VOICE PACK must first be copied to a USER voice button using the VOICE EDIT before being assigned to a dotted button. (➡Page 31)

2. RHYTHM SECTION

2-(1) RHYTHM

Using the realistic sounds of percussion instruments created by the AWM Tone Generator, the rhythm can be automatically sounded. Furthermore, various RHYTHM functions are provided, such as the FILL IN function which adds a rhythmic variation.

1 Select a Rhythm pattern.

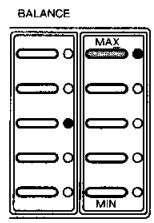


The preset Rhythm patterns provided on the panel consist of 14 types from MARCH to 16 BEAT. Choose one of these 14 preset patterns.

CAUTION: *When you wish to set a preset Rhythm pattern, be sure to set both the USER 1 and USER 2 buttons to OFF. If a USER button is left ON, the preset pattern will not be sounded.*

2 Set the volume level.

The volume of HS-8 can be set to seven levels and that of the other HS-Series models can be set to five levels. Pressing the top button (MAX) sets the maximum volume, and pressing the bottom button (MIN) sets the volume to zero.

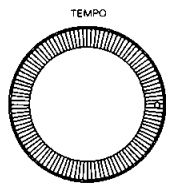


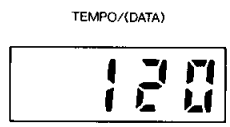
(Illustration of HS-7/6/5)

NOTE: Use of the Volume Fine function of the MULTI MENU allows you to set the volume to a finer level. (➡Page 67)

3 Set the tempo.

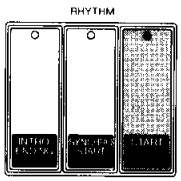
The tempo you have set can be confirmed by the numeral shown on the TEMPO display (which corresponds to the values of a metronome).

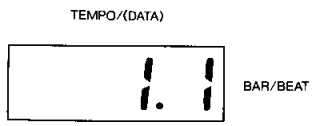




Clockwise rotation: The displayed numeral is incremented one at a time and the tempo becomes quicker. (Max.: 240)
Counter-clockwise rotation: The displayed numeral is decremented one at a time and the tempo becomes slower. (Min.: 40)

4 Start the rhythm.



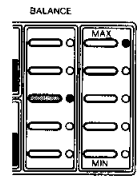


START: Pressing this switch starts the rhythm, and pressing it once more stops the rhythm. From the moment the rhythm is started until it is stopped, the display shows the number of bars since the start of rhythm (Max.: 255) as well as the number of the beat in each bar.
SYNCHRO START: When this switch is pressed instead of the START switch, the rhythm is started at the same time that the lower or pedal keyboard is pressed rather than being started immediately. SYNCHRO START is very convenient when you will play the accompaniment using A.B.C. (Auto Bass Chord) or ARPEGGIO CHORD. (➡Pages 14 & 62)

[Dotted Buttons]
The seven dotted buttons on the lower row (from TANGO to 16 BEAT) can be assigned with Rhythm patterns from the RHYTHM MENU provided on the MULTI MENU. (➡Page 32)

[USER Patterns]
While USER 1 or USER 2 is set to ON, a Rhythm pattern can be newly created or edited by the R.P.P. functions of the MULTI MENU to obtain an original registered Rhythm pattern.

[BALANCE]



(Illustration of HS-7/6/5)

It is possible to set the volume balance of the sounds of the percussion instruments comprising a Rhythm pattern (except for HS-4).
Toward the top: Increases the volume of the cymbal-related sounds.
Toward the bottom: Increases the volume of the drum-related sounds.

[Beat Lamps]

While the rhythm is playing: The lamps are lit up from left to right in quarter-note units according to the set tempo. The illumination of the red lamp at the very left position indicates the first beat of a rhythm bar.
After SYNCHRO START is set to ON but before the rhythm is started: The lamp at the very left position flashes in quarter-note units to indicate the set tempo.

[Realtime Control of Tempo (HS-8)]
With HS-8, assigning the TEMPO function to the PITCH Wheel enables you to achieve realtime control of the tempo during a performance by using the PITCH Wheel. Realtime control of the tempo can also be achieved by using the optional 2nd Expression Pedal. (➡Page 59)

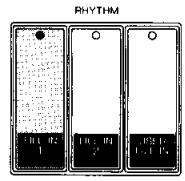
[AUTO VARIATION]
Use of the AUTO VARIATION function, located on the C.S.P./R.S.P. screen of MULTI MENU, enables the preset Rhythm patterns to be varied automatically. (➡Page 48)
AUTO VARIATION OFF: Provides Rhythm patterns that will be repeated in two-bar unit.
AUTO VARIATION ON: Provides Rhythm patterns that will be automatically varied at their fourth and eighth bar.

FILL IN

1 Start the rhythm.

Set the pattern, volume, tempo, etc., of the rhythm, then start the rhythm.

2 Press the FILL IN 1 or FILL IN 2 switch.



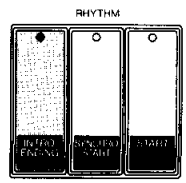
Press the FILL IN 1 or FILL IN 2 switch at the end of a phrase, for example. When the switch is pressed, the Rhythm pattern is switched over to a Fill In pattern. The Fill In pattern continues to the end of that bar, then the original Rhythm pattern is restored from the beginning of the next bar.

There are two types of preset Fill In patterns for each Rhythm pattern corresponding to FILL IN 1 and FILL IN 2, and the Fill In function is designed to provide the Fill In patterns best suited to each Rhythm pattern.

INTRO./ENDING

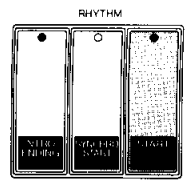
1 Before starting the rhythm, set the INTRO./ ENDING switch to ON.

Set the pattern, volume, tempo, etc.,of the rhythm, then set the INTRO./ENDING switch to ON.



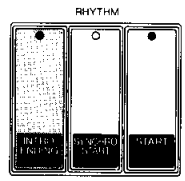
2 Start the rhythm.

When the START switch is pressed, a one-bar Introductory pattern is sounded followed by the start of the Rhythm pattern. The Intro function is also designed to provide the Intro pattern best suited to each Rhythm pattern.



3 Set the INTRO./ENDING switch to ON at the beginning of the second bar from the end of the song.

When the INTRO/ENDING switch is pressed after the rhythm is started, the Rhythm pattern is switched over to an Ending pattern. Since the Ending pattern consists of two bars, be sure to press this switch at the beginning of the second bar from the end of the song. After the Ending pattern is sounded, the rhythm is automatically stopped.



[USER FILL IN]

While this switch is set to ON, a Fill In pattern can be newly created or edited by the R.P.P. functions of the MULTI MENU to obtain an original registered Fill In pattern. (➡Page 38)

[Blank FILL IN]

The USER FILL IN switch is blank until you register the Fill In pattern of your creation. If the USER FILL IN switch is pressed in this status while the rhythm is playing, you can achieve a blank Fill In with no rhythm sounds being sounded. Even after USER FILL IN has been registered with a pattern, it can be returned to its blank status by performing the registration procedure once more without inputting any notes.

[To Continue a Fill In Pattern over Multiple Bars]

If a FILL IN switch is released immediately after it is pressed, its Fill In pattern will sound for one bar at maximum. By pressing the switch continuously, however, you can sound a Fill In pattern over multiple bars. Note that USER FILL IN can be registered with a pattern having maximum length of two bars. If you wish to sound the USER Fill In pattern for a longer time, just press that switch continuously. (➡Page 34)

[To Use FILL IN in Place of INTRO]

If you set a FILL IN switch to ON before starting the rhythm, the Fill In pattern will be sounded in place of the Intro pattern.

[Relation between FILL IN and the Accompaniment Pattern]

While a Fill In or Ending pattern is being sounded, the Arpeggio Chord pattern and the Bass pattern of AUTO BASS CHORD are designed to also change along with the Fill In or Ending pattern. (➡Pages 14 & 62)

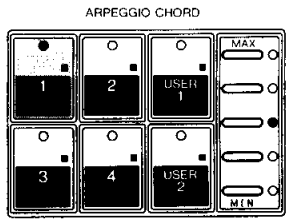
[Rhythm Control by the Foot Switch]

The Foot Switch at the left of the Expression Pedal can be used to control the START/STOP, Ending, Fill In, and other functions of the rhythm. Determine which Rhythm functions are to be controlled by the Foot Switch by selecting from the MULTI MENU. (➡Page 58)

2-(2) ARPEGGIO CHORD

On the basis of the notes played on the lower keyboard, an accompaniment pattern can be automatically obtained which is synchronized with the rhythm.

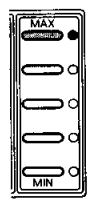
1 Select one Arpeggio Chord pattern.



Four buttons are provided for selecting a preset Arpeggio Chord pattern: 1, 2, 3, and 4. Please select one accompaniment pattern from 1 to 4.
1 or 2: Mainly produces a rhythmic chord pattern in a timing closely synchronized with the rhythm.
3 or 4: Produces a melodious arpeggio pattern which is synchronized with the rhythm.

CAUTION: *Be sure to set both the USER 1 and USER 2 buttons to OFF before setting a preset Arpeggio Chord pattern. While a USER button is ON, no preset patterns will be sounded.*

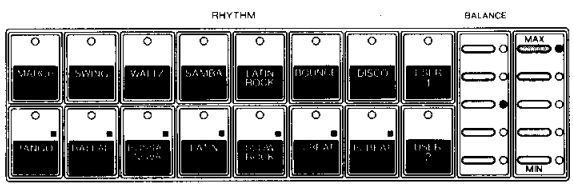
2 Set the volume.



The volume of HS-8 can be set to seven levels and that of the other HS-Series models can be set to five levels.

NOTES: If you don't want an Arpeggio chord pattern to be sounded, set the volume to MIN.
Use of the Volume Fine function of the MULTI MENU allows you to set the volume to a finer level. (➡Page 67)

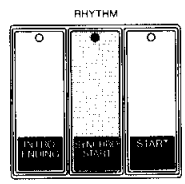
3 Set the rhythm.



Set the pattern, volume, tempo, etc., of the rhythm.

CAUTION: *ARPEGGIO CHORD functions in synchronization with the rhythm, so be sure to set the rhythm too.*

4 Set the SYNCHRO START switch to ON.



To start the rhythm, you can also press the START switch in place of the SYNCHRO START switch.

5 Press a chord on the lower keyboard.

By merely continuously pressing a chord on the lower keyboard, an accompaniment pattern that is synchronized with the rhythm will be sounded. Try changing the Arpeggio Chord pattern or the Rhythm pattern, then compare the differences in the sound.

[Patterns and Voices of ARPEGGIO CHORD]
The ARPEGGIO CHORD 1, 2, 3, and 4 buttons are designed to produce the Arpeggio Chord patterns best suited to each Rhythm pattern. The buttons have also been preset with the Arpeggio Chord voices best suited to each Rhythm pattern.

[VOICE MENU Assignment]
The preset voices of the ARPEGGIO CHORD 1, 2, 3, and 4 buttons as well as the USER 1 and 2 buttons can be replaced by assigning the voices of the VOICE MENUs provided on the MULTI MENU to those buttons. (➡Page 23)

[Voice Edit Functions]
With respect to the preset Arpeggio Chord voices and the assigned voices of the VOICE MENUs, the Voice Edit functions can be used to change their parameters to alter the expression of the voices.

[USER Patterns]
While the USER 1 or USER 2 button is set to ON, a rhythmic Arpeggio Chord pattern can be newly created or edited by the R.C.P. functions of the MULTI MENU to obtain an original registered Arpeggio Chord pattern. (➡Page 41)

[Operation of the A.B.C. Memory]
If you set LOWER MEMORY of A.B.C. (AUTO BASS CHORD) on the MULTI MENU to ON and also set A.B.C. MEMORY on the panel to ON, the sound of the Arpeggio Chord pattern will continue to sound even after you have released your fingers from the lower keyboard. (➡Page 62)

[Synchronization with the A.B.C. Bass Patterns]
When a preset Arpeggio Chord pattern is switched over to another preset Arpeggio Chord pattern, the Bass pattern of A.B.C. is designed to also change accordingly. (➡Page 62)

[Pattern Change by FILL IN or ENDING]
While a Fill In or Ending pattern of rhythm is being sounded, the Arpeggio Chord pattern will also change accordingly.

[Pattern Change by Chord Type]
The Arpeggio Chord pattern will also change according to the type of chord played on the lower keyboard.

[Arpeggio Chord Patterns during Use of a USER Rhythm Pattern]
The preset Arpeggio Chord patterns are designed not to synchronize with the USER Rhythm patterns. The preset Arpeggio Chord will assume the pattern corresponding to the preset Rhythm pattern that is lit at that time.

2-(3) KEYBOARD PERCUSSION

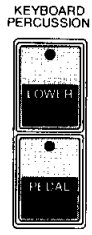
By pressing keys of the lower or pedal keyboard, you can sound a variety of percussion sounds.

1 Set KEYBOARD PERCUSSION to ON.

At the left of the Rhythm Pattern Selector, set both the LOWER and PEDAL buttons to ON. It is also permitted to set only one of these buttons to ON.

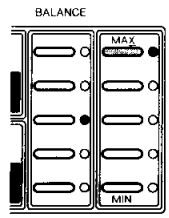
LOWER: Setting this button to ON enables percussion sounds to be sounded using the lower keyboard.

PEDAL: Setting this button to ON enables percussion sounds to be sounded using the pedal keyboard.



2 Set the volume.

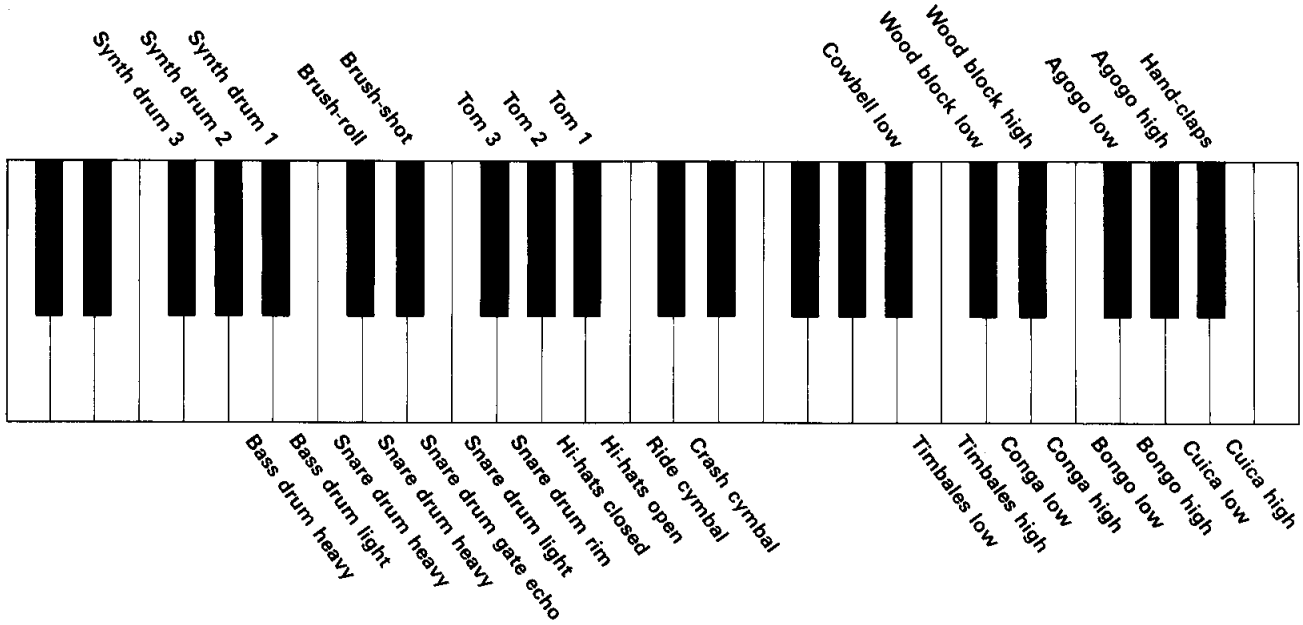
The volume of the percussion sounds can be controlled using the VOLUME of the Rhythm section. Set the volume to the desired level.



3 Press keys on the lower and pedal keyboards.

Regarding the correspondence between the keys of the lower and pedal keyboards with the percussion sounds, see the graphic images below the keys of the lower keyboard.

[Relationship between the Lower Keyboard and Percussion]



[Relationship between the Pedal Keyboard and Percussion]

[Forming an Ensemble with Other Voices]

If voices have been set for the lower and pedal keyboards, they will be sounded together with the percussion sounds. If you wish to sound only the percussion sounds, set each of the voices to OFF.

[Touch Control]

The volume of the percussion sounds can be finely controlled using the Initial Touch function when pressing the lower keyboard (with HS-8, this also applies to the pedal keyboard). This Touch Control function operates regardless of the ON/OFF status of the TOUCH TONE function on the MULTI MENU.

[Volume Fluctuation by BALANCE Control]

The volume balance of each percussion sound can also be set by setting BALANCE. (➡Page 12).

3. EFFECTS

3-(1) TREMOLO and SYMPHONIC

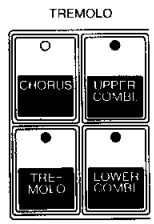
It is possible to add an expansive sensation to the ORCHESTRAL VOICES and COMBINATION VOICES of the upper and lower keyboards.

HS-8, HS-7, and HS-6

1 Set the ORCHESTRAL VOICES and COMBINATION VOICES of the upper and lower keyboards.

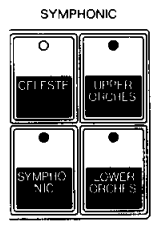
Select a voice at each Voice section then set its volume. Also set the ENSEMBLE section. (➡Pages 4-7)

2 Set UPPER COMBI. and LOWER COMBI. to ON, then select CHORUS or TREMOLO.



UPPER COMBI.: This switch applies the effects to the COMBINATION VOICES of the upper keyboard.
LOWER COMBI.: This switch applies the effects to the COMBINATION VOICES of the lower keyboard. (For HS-6, the LOWER ORCHES. switch applies the effects to the ORCHESTRAL VOICES of the lower keyboard.)
CHORUS: This switch applies an effect of a slowly rotating sound.
TREMOLO: This switch applies an effect of a quickly rotating sound.

3 Set UPPER ORCHES. and LOWER ORCHES. to ON, then select CELESTE or SYMPHONIC.



UPPER ORCHES.: This switch applies the effects to the ORCHESTRAL VOICES of the upper keyboard.
LOWER ORCHES.: This switch applies the effects to the ORCHESTRAL VOICES of the lower keyboard.
CELESTE: This switch applies an effect of a slowly expanding sound.
SYMPHONIC: This switch applies an effect of a performance using multiple instruments.

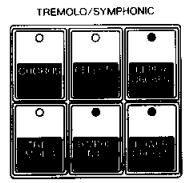
NOTE: Either CELESTE or SYMPHONIC is always in ON status.

HS-5 and HS-4

1 Set the ORCHESTRAL VOICES of the upper and lower keyboards.

Select a voice at each Voice section then set its volume. Also set the ENSEMBLE section of HS-5. (➡Pages 8-11)

2 Set UPPER ORCHES. and LOWER ORCHES. to ON, then select an effect.



UPPER ORCHES.: This switch applies the effects to the ORCHESTRAL VOICES of the upper keyboard.
LOWER ORCHES.: This switch applies the effects to the ORCHESTRAL VOICES of the lower keyboard.
CHORUS: This switch applies an effect of a slowly rotating sound.
TREMOLO: This switch applies an effect of a quickly rotating sound.
CELESTE: This switch applies an effect of a slowly expanding sound.
SYMPHONIC: This switch applies an effect of a performance using multiple instruments.

[TREMOLO SPEED]
While selecting the Tremolo effect, the sound's rotating speed can be changed by use of the TREMOLO SPEED function on the MULTI MENU. (➡Page 56)

[Tremolo Effect without the Rotating Sensation]
By performing the settings below, you can achieve a Tremolo effect that is expansive but has no rotating sensation.
HS-8, HS-7, and HS-6: Set both CHORUS and TREMOLO to OFF.
HS-5 and HS-4: Set CHORUS, TREMOLO, CELESTE, and SYMPHONIC all to OFF.

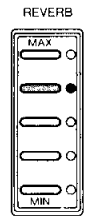
[Damping the Tremolo Speed]
When TREMOLO is set to OFF while a voice having the Tremolo effect is being sounded, the Tremolo Speed is gradually slowed down until its rotating sensation disappears.

[Regarding the Use of TREMOLO and SYMPHONIC]
- If the voice of a stringed instrument, such as STRINGS, is selected, SYMPHONIC is automatically set to ON.
- HS-5 is designed so that you must select whether to apply a Tremolo effect (CHORUS or TREMOLO) or a Symphonic effect (CELESTE or SYMPHONIC) to the ORCHESTRAL VOICES of the lower keyboard.
- The Tremolo and Symphonic effects also function for the voices of the VOICE MENUs assigned to the dotted buttons of ORCHESTRAL VOICES or COMBINATION VOICES.

3-(2) REVERB and other Effects

REVERB adds a reverberation to the sound, giving the impression of a performance in a large hall.

Set the duration of the reverberation at REVERB.
The Reverb duration can be set to seven different levels on HS-8 or to five different levels for the other HS-Series models.
Pressing the top REVERB button (MAX) sets the maximum Reverb duration, and pressing the bottom button (MIN) cancels the Reverb effect.

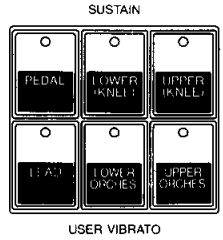


[Scope of the Reverb Effect]
The Reverb effect is applied to all voices of the Voice sections and all Arpeggio Chord voices, but is not applied to Rhythm patterns and the sounds of keyboard percussion.

[Reverb Effect of HS-8]
The Reverb effect of HS-8 employs a digital method.

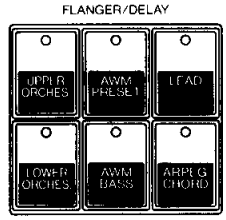
Other Effects on the Panel

SUSTAIN
This effect applies an aftersound to the notes of each keyboard. Three panel buttons serve as the switch for the SUSTAIN ON/OFF status, and its duration is set using the MULTI MENU. (➡Page 56)



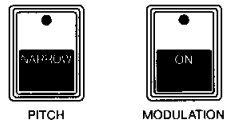
USER VIBRATO
The Vibrato effect which you have set can be applied to the LEAD VOICES and to the ORCHESTRAL VOICES of the upper and lower keyboard. The manner in which Vibrato will be applied is set using the MULTI MENU. (➡Page 55)

FLANGER/DELAY (excluding HS-4)
It is possible to select the Voice sections which are to be subjected to the Flanger and Delay effects. Use the MULTI MENU to select the effect and to set its parameters. (➡Page 65)



(Illustration of HS-8)

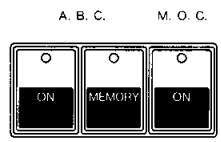
PITCH/MODULATION (HS-8)
These two wheels are used for performing control in realtime. Use the MULTI MENU to select which effects are to be controlled. (➡Pages 59 & 60)



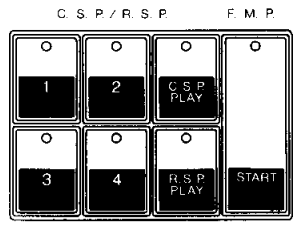
[Effects and Controls that are Set Only by MULTI MENU]
TOUCH TONE: Enables fine control of the volume and timbre according to the intensity of your touch on the keyboard. (➡Page 57)
TOUCH VIBRATO: Enables you to control how the Vibrato effect is applied according to the intensity of your touch on the upper and lower keyboards.
GLIDE: Can temporarily lower the pitch a half-step by operation of the Foot Switch. (➡Page 58)
LEAD SLIDE: Enables Portamento to be applied to the LEAD VOICES. (➡Page 58)
TRANSPOSITION: Lets you change the key of the entire Electone. (➡Page 61)
PITCH CONTROL: Lets you change the pitch of the entire Electone. (➡Page 61)

Other Functions on the Panel

A.B.C./M.O.C.
These are the AUTO BASS CHORD and MELODY ON CHORD switches. Selection of each mode is performed using the MULTI MENU. (➡Pages 62 & 64)



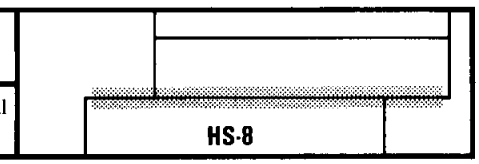
C.S.P./R.S.P. and F.M.P.
These are the CHORD SEQUENCE PROGRAMMER, RHYTHM SEQUENCE PROGRAMMER, and FULL MUSIC PROGRAMMER switches which are used during playback. Recording in the respective modes is performed using the MULTI MENU. (➡Pages 42 & 50)

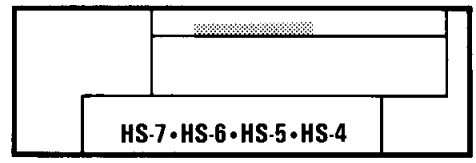


4. MEMORY SECTION

4-(1) REGISTRATION MEMORY

Use of REGISTRATION MEMORY allows you to memorize a registration set at the panel and to also recall the memorized registration for use at another time.





Procedure for Memorizing a Registration

1 At the panel, set the registration that you wish to memorize.

Practically all of the panel settings can be memorized, including the Voice sections, Rhythm patterns and tempo, various effects, and so on.

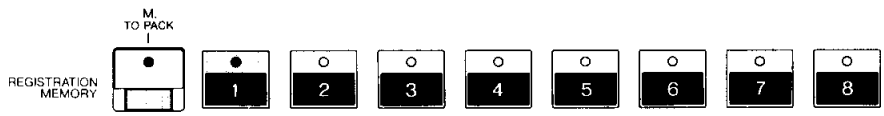
[Functions which can be Memorized]

- Voice sections (Voice selection and volume settings)
- ENSEMBLE section (HS-8, HS-7, HS-6, and HS-5)
- UPPER/LOWER LEAD VOICES (HS-4)
- Manual Balance
- Rhythm section (Pattern selection and volume/balance settings)
- Rhythm Tempo
- Arpeggio Chord (Pattern selection and volume settings)
- Keyboard Percussion
- Tremolo and Symphonic
- Reverb
- Sustain
- User Vibrato
- Flanger/Delay (HS-8, HS-7, HS-6, and HS-5)
- Pitch/Modulation (HS-8)
- Auto Bass Chord (A.B.C.)
- Melody On Chord (M.O.C.)

2 While depressing the MEMORY button, press a numeric button.

HS-8

HS-7•HS-6•HS-5•HS-4



The lamp of the pressed numeric button will flash, indicating that the registration set at the panel has been memorized. Now, try memorizing various registrations at the other numeric buttons by using the same procedure.

HS-8: The numeric buttons 1 to 16 are provided between the upper and lower keyboards, permitting a maximum of 16 different registrations to be memorized.

HS-7, HS-6, HS-5, and HS-4: The numeric buttons 1 to 8 are provided below the TEMPO/(DATA) display, permitting a maximum of eight different registrations to be memorized.

[MULTI MENU Functions which can be Memorized]

Besides the settings of the panel, the below data that is set using the MULTI MENU can also be memorized at the REGISTRATION MEMORY.

- Data of the VOICE MENUs that is assigned to the dotted buttons of the Voice sections and ARPEGGIO CHORD. (➡Page 23)
- Data of the RHYTHM MENU that is assigned to the dotted buttons of the Rhythm section. (➡Page 32)
- User Vibrato data (➡Page 55)
- Sustain data (➡Page 56)
- Tremolo Speed data (➡Page 56)
- ON/OFF data of Touch Vibrato (➡Page 57)
- ON/OFF data of Touch Tone (➡Page 57)
- Assignment data of the Foot Switch (➡Page 58)
- ON/OFF data of Lead Slide (➡Page 58)
- Assignment data of the HS-8 Pitch Wheel (➡Page 59)
- Assignment data of the HS-8 Modulation Wheel (➡Page 60)
- Mode Select data and Memory ON/OFF data of Auto Bass Chord (➡Page 62)
- Mode Select data and Knee Control ON/OFF data of Melody On Chord (➡Page 63)
- Flanger/Delay Select data and parameter data of HS-8, HS-7, HS-6, and HS-5 (➡Page 65)
- Volume Fine data (➡Page 67)

[Regarding Memory Operation and Lamp Illumination]

Though one of the lamps of the numeric buttons for REGISTRATION MEMORY is constantly lit, the procedure for memorizing registrations can be performed regardless of the ON/OFF status of the lamps.

When a memory operation is performed for a lit numeric button: A new registration is memorized at the lit numeric button. After flashing, its lamp returns to the lit status.

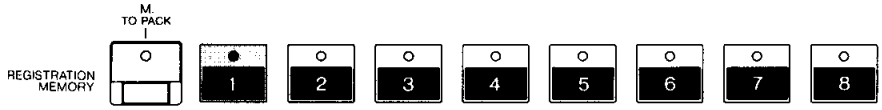
When a memory operation is performed for an unlit numeric button: A new registration is memorized at the numeric button specified during the memory operation, but the contents of the lit numeric button remain unchanged. The lamp of the button specified during the memory operation flashes, then goes off.

Procedure for Recalling a Memorized Registration

1 Press one of the numeric buttons.

HS-8

HS-7•HS-6•HS-5•HS-4

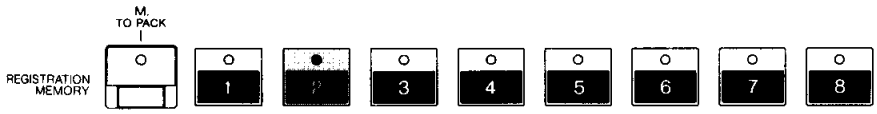


The lamp of the pressed button lights up, indicating that the registration memorized at that button has been recalled to the panel.

2 Press another numeric button.

HS-8

HS-7•HS-6•HS-5•HS-4



Each time another numeric button is pressed, the panel settings are changed accordingly. Since the registrations can be changed by pressing a single button, the voices and Rhythm patterns can easily be changed even during a performance.

NOTE: With HS-8, the registrations can be changed using the Foot Switch (right) instead of manually pressing the numeric buttons. (➡Page 58)

User Pattern Memory

In addition to memorizing the Registration data, the numeric buttons of REGISTRATION MEMORY can also be used when registering the various types of User patterns.

User Rhythm patterns: With HS-8, 16 User Rhythm patterns can be respectively registered to USER 1 and USER 2; with the other models, eight patterns can be respectively registered to USER 1 and 2. (➡Page 38)

User Fill In patterns: With HS-8, 16 User Fill In patterns can be registered to USER FILL IN; with the other models, eight patterns can be registered to USER FILL IN. (➡Page 38)

User Arpeggio Chord patterns: With HS-8, 16 User Arpeggio Chord patterns can be respectively registered to USER 1 and USER 2; with the other models, eight patterns can be respectively registered to USER 1 and 2. (➡Page 41)

[Changing a Recalled Registration]
If you recall a registration by pressing its numeric button then change its panel settings, you can perform a partial change of that registration. In this case, the contents memorized for that numeric button remain unchanged despite any changes made in the panel settings.

[Regarding the Operation of the MEMORY Button]
Besides being used for memorizing registrations, the red MEMORY button (MEMORY/TO PACK) is also used when transferring data of the Electone to a RAM Pack or other media. (➡Page 20)

[Storage of Memorized Data]
The data memorized in REGISTRATION MEMORY can be stored by transferring it to a RAM Pack or a cassette. (➡Page 20)

[Protection of Memorized Data]
The data of REGISTRATION MEMORY is backed up (the minimum back-up period is one week) by an internal battery even while the Electone power is switched OFF (Power OFF status). If the back-up period is exceeded with the Electone left in Power OFF status, the contents of the REGISTRATION MEMORY will be replaced by the contents of the REGISTRATION MENU.

[Back-Up of Settings While in Power OFF Status]
Independently of the back-up of REGISTRATION MEMORY, the registration that is set at the panel when the Power OFF status is assumed will also be backed up. When the Electone power is switched ON, the backed-up registration will be recalled.

4-(2) PACK

The various data memorized at the Electone can be transferred to a RAM Pack or cassette for storage, and the transferred data can be recalled to the Electone whenever you wish.

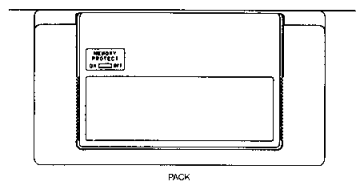
Electone Data➡RAM Pack (TO PACK Operation)

1 Memorize the various data at the Electone.

The data memorized at REGISTRATION MEMORY, C.S.P., and so on can be transferred to a RAM Pack as one group of data. (See "[Data which can be Transferred to a RAM Pack]" on the right.)

2 Insert a RAM Pack into the Electone.

Insert the Ram Pack securely into the Electone, with its label side facing upward. The green READY lamp will light up, indicating that the RAM Pack is ready to memorize the Electone data.



3 While depressing the CONFIRM button, press the TO PACK button of the REGISTRATION MEMORY section.

(Illustration of non-HS-8 models)

The TO PACK lamp will flash then light up, indicating that the Electone data has been transferred to the RAM Pack. After this step has been completed, the RAM Pack may be removed from the Electone.

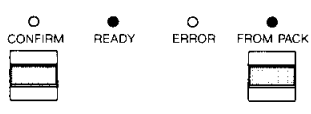
CAUTION: *When the TO PACK operation is performed, all previously memorized data in the RAM Pack will be erased and replaced with the Electone data.*

RAM Pack Data➡Electone (FROM PACK Operation)

1 Insert the RAM Pack which contains the transferred data into the Electone.

The green READY lamp will light up, indicating that the Electone is ready to memorize data from the RAM Pack.

2 While depressing the CONFIRM button, press the FROM PACK button.



The FROM PACK lamp will flash then light up, indicating that the RAM Pack data has been transferred to the Electone. After this step has been completed, the RAM Pack may be removed from the Electone.

CAUTION: *Neither a To Pack nor From Pack operation can be performed in the following cases: after the Rhythm has been started: during playback or editing of C.S.P. or R.S.P.; or while MDR-2 is in operation.*

[Data you can Transfer to a RAM Pack by the To Pack Operation]

- All data of REGISTRATION MEMORY
- All User Voice data (➡Page 30)
- All User data for Rhythm, Fill In, and Arpeggio Chord patterns (➡Pages 38 & 41)
- All data of C.S.P. and R.S.P. (➡Pages 43 & 47)
- The TRANSPOSITION data (➡Page 61)

[Partial Copying]

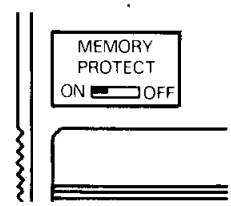
The above-mentioned data will be memorized as one group to a RAM Pack, but the following data can be exclusively transferred to a RAM Pack or recalled from a RAM Pack to the Electone:

- All User Voice data (➡Page 30)
- All User data for Rhythm, Fill In, and Arpeggio Chord patterns (➡Pages 38 & 41)

[Usable RAM Packs]

Two types of RAM Packs can be used: the 8-kilobyte RP-3 or the 32-kilobyte RP-5.

[Memory Protection]



If you wish to prevent the erasure of data transferred to a RAM Pack, just set the MEMORY PROTECT switch on the RAM Pack to ON. Even if a TO PACK operation is later unintentionally performed, the RAM Pack data will be protected without being written over by new data. (The FROM PACK operation, however, can still be performed.) If you later wish to memorize new data in that RAM Pack, set its MEMORY PROTECT switch to OFF.

[In Case the ERROR Lamp Flashes]

In the cases below, the red ERROR lamp will flash and an alarm will sound three times, so be sure to check that you are using the correct operating procedures.

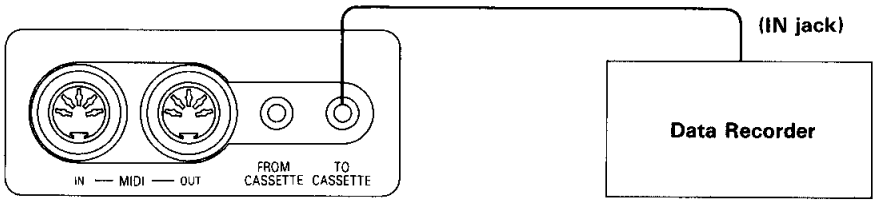
- When the RAM Pack (or ROM Pack) has not been securely inserted.
- When an unused RAM Pack is inserted into the Electone for the first time. (If you press the CONFIRM button in this case, it will become possible to perform a TO PACK operation.)
- When a TO PACK operation is attempted while the MEMORY PROTECT switch of the RAM Pack is set to ON.
- When the F.M.P. data has exceeded the memory capacity of the RAM Pack.

Electone Data➡Cassette Tape (TO CASSETTE Operation)

1 Memorize the various data at the Electone.

The data memorized at REGISTRATION MEMORY, C.S.P., and so on can be transferred to a Cassette Tape as one group of data. (See "[Data which can be Transferred to a Cassette Tape]" on the right.)

2 Connect the data recorder to the Electone, then set it to RECORD status.

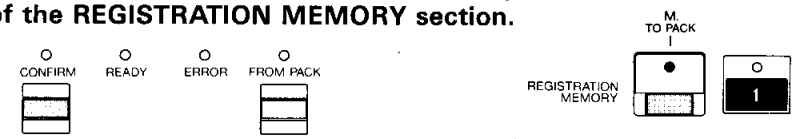


First of all, use the pin-plug connector cable to connect the TO CASSETTE jack on the back of the Electone and the IN jack of the data recorder. Next, insert a cassette tape into the data recorder and set the data recorder to RECORD status.

NOTE: Be sure to look at the counter of the data recorder, taking notes of the numeric values displayed at the start and end of recording.

CAUTION: *Though an ordinary cassette recorder can be used instead of a data recorder, the use of a dedicated data recorder is strongly recommended, if at all possible.*

3 While depressing the CONFIRM button, press the TO PACK button of the REGISTRATION MEMORY section.



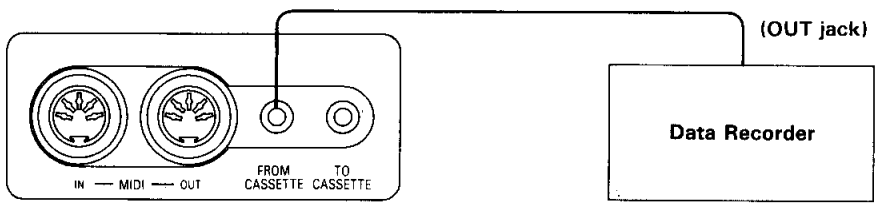
(Illustration of non-HS-8 models)

The TO PACK lamp remains lit from the start of data recording until recording is completed. The recording of data requires a maximum of about 4 minutes. When recording is completed, the TO PACK lamp will flash then go off. After confirming that the lamp has gone off, stop the data recorder.

CAUTION: *During the recording of data, neither Electone operation nor performance can be conducted. This is also true during the reading of data described below.*

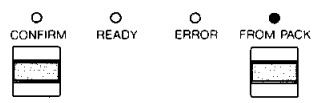
Cassette Tape Data➡Electone (FROM CASSETTE Operation)

1 Connect the data recorder to the Electone.



Connect the FROM CASSETTE jack of the Electone and the OUT jack of the data recorder, then rewind the cassette tape to the position at which you wish to begin reading the data from the cassette. Also be sure to set the volume of the data recorder to a position slightly above center.

2 While depressing the CONFIRM button, press the FROM PACK button.



3 Set the data recorder to PLAY status.

The FROM PACK lamp remains lit from the start of data reading until reading is completed. The reading of data requires a maximum of about 4 minutes. When reading is completed, the FROM PACK lamp will flash then go off. After confirming that the lamp has gone off, stop the data recorder.

[Data which can be Transferred to a Cassette Tape]

- All data of REGISTRATION MEMORY
- All User Voice data (➡Page 30)
- All User data for Rhythm, Fill In, and Arpeggio Chord patterns (➡Pages 38 & 41)
- All data of C.S.P. and R.S.P. (➡Pages 43 & 47)
- All data of F.M.P. (➡Page 54)
- The TRANSPOSITION data (➡Page 61)

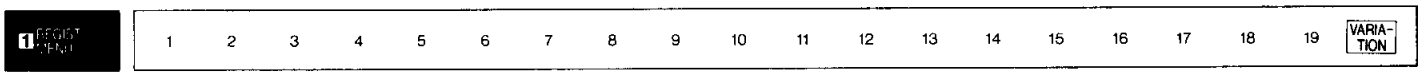
[In Case the Data cannot be Transferred]

In case the data of the Cassette Tape cannot be properly read to the Electone, an alarm will be sounded three times and the FROM PACK lamp will remain lit.. You can confirm whether the Electone data has been properly recorded to a Cassette Tape by performing the FROM CASSETTE operation after the TO CASSETTE operation. If the data has not been transferred, confirm the following check points then perform the operation once more.

- Is the connector cable securely inserted into the Electone and the recorder?
- Are the connected jacks and operating procedure correct?
  Disconnect the connector cable and play back the portion recorded with data. If a signal sound is heard, the data is recorded.
- Is the playback volume of the recorder at the proper level?
  In case of a 10-level volume scale, set the volume from 6-8. The data cannot be read if the volume is too high or too low.
- Has the head of the recorder become soiled?
- Is the proper cassette tape being used?
  Be sure to use an audio tape of normal, low-noise type (30 or 40 min.).
- Is the cassette tape twisted or wrinkled?
  If at all possible, use a new cassette tape. If the tape will be used from its leading edge, feed it forward a bit to leave an unrecorded section before beginning recording.
- Is the proper recorder being used?
  The characteristics of certain ordinary recorders may result in difficulties during recording. If at all possible, use a dedicated data recorder. (Certain data recorders may not match the Electone satisfactorily.)

[Precautions on Data Recording and Reading]

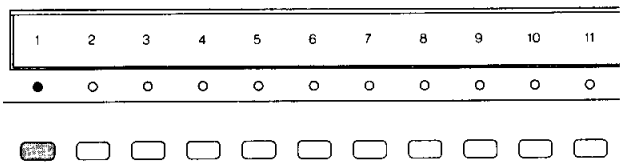
- Never press the keyboards nor start the rhythm at the time of beginning a TO CASSETTE or FROM CASSETTE operation.
- When a FROM CASSETTE operation is performed, all data previously recorded at the Electone will be erased and replaced by the Cassette Tape data.



1 REGISTRATION MENU

Registrations for performing a variety of musical genres can each be recalled to the panel by merely pressing a single button.

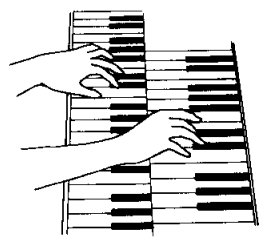
1 Press one numeric button form 1 to 19.



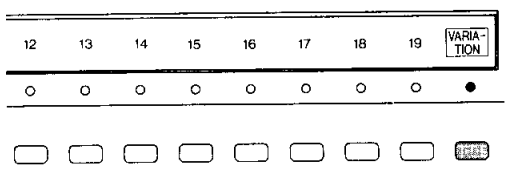
Referring to the below table which lists "[The Preset Registrations]," set one button from 1 to 19 to ON. The registration that has been preset for the ON button will be recalled to the panel.

2 Start the rhythm, then begin performing.

Set the tempo of the rhythm to suit the song to be performed, start the rhythm, then begin performing. Next, also try recalling the various preset registrations by setting other buttons to ON.



3 Set the VARIATION button to ON, as required.



When the VARIATION button at the right is set to ON, the registrations that have been preset to buttons 1 to 19 will all be changed to their respective variations. Please try comparing the differences in sound while the VARIATION button is ON and OFF.

[Scope of the Preset Functions]

The scope of the functions that have been preset in the REGISTRATION MENU is practically identical to the scope of the functions which can be memorized in REGISTRATION MEMORY. (➡Page 18)

- The voices of the VOICE MENUs are also included among the preset voices. (➡Page 23)
- The tempo of the rhythm is not preset, allowing you to set the tempo to best suit the song to be performed.
- The A.B.C. (AUTO BASS CHORD) settings are not preset. When you wish to use A.B.C., select the A.B.C. Mode using the MULTI MENU, and light up the A.B.C. ON button on the panel. (➡Page 62)

[Changing a Recalled Registration]

By manipulating the panel and MULTI MENU after setting a REGISTRATION MENU button to ON and recalling a registration to the panel, you can perform partial changes in that registration. Try changing the voices, Rhythm pattern, Arpeggio Chord pattern, and so on. Note that a registration that has been partially changed can also be memorized in REGISTRATION MEMORY.

[The Preset Registrations]

No.	Sound Image	Rhythm Pattern	
		Normal	Variation
1	March	MARCH	MARCH
2	Pipe organ	8 BEAT	MARCH
3	Woodwind ensemble	MARCH	8 BEAT
4	Jazz organ	BALLAD	SLOW ROCK
5	Jazz combo 1	SWING	SWING
6	Jazz combo 2	BOSSANOVA	BOSSANOVA
7	Big band 1	SWING	SWING
8	Big band 2	BALLAD	BALLAD
9	Country/Latin	COUNTRY	LATIN
10	String/Vocal ensemble	WALTZ	WALTZ

No.	Sound Image	Rhythm Pattern	
		Normal	Variation
11	Pops ensemble 1	8 BEAT	8 BEAT
12	Pops ensemble 2	SALSA	TANGO
13	Pops ensemble 3	SAMBA	SAMBA
14	Contemporary 1	16 BEAT 1	16 BEAT 1
15	Contemporary 2	DISCO	DISCO
16	Contemporary 3	BOUNCE	REGGAE
17	Contemporary 4	8 BEAT 2	16 BEAT 2
18	Contemporary 5	8 BEAT 1	BOUNCE
19	Family music	WALTZ	COUNTRY

(Illustration of HS-8/7/6/5)

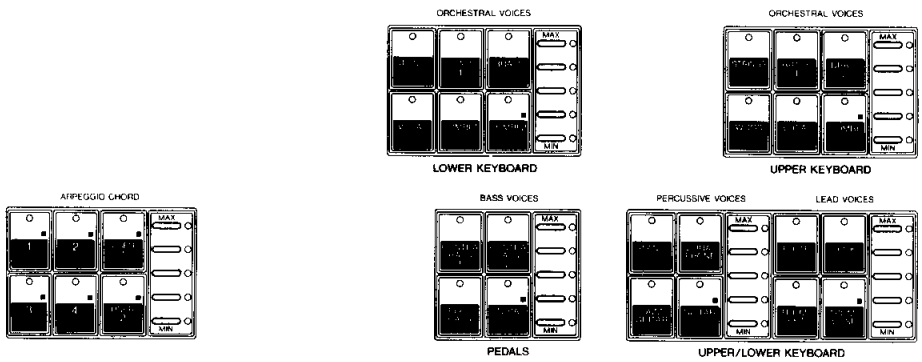
2 VOICE MENU 1	COMBI. 1	COMBI. 2	COMBI. 3	PIPE ORGAN 1	PIPE ORGAN 2	PIPE ORGAN 3	STRINGS 1	STRINGS 2	STRINGS 3	BRASS 1	BRASS 2	WOOD	ACCOR-DION	SYNTH STRING	SYNTH BRASS	COSMIC 1	COSMIC 2	COSMIC 3	VOCAL 1	VOCAL 2
3 VOICE MENU 2	PIANO	ELEC. PIANO 1	ELEC. PIANO 2	HARPSI-CHORD	HARP	ACOUST. GUITAR	ELEC. GUITAR	JAZZ GUITAR	STEEL GUITAR	DISTOR. GUITAR	VIBRA-PHONE	MARIMBA	CELESTA	BANJO	KOTO	STEEL DRUM	TIMPANI	CLAVI	CHIME	WAVE
4 VOICE MENU 3	VIOLIN	CELLO	HORN	FLÜGEL HORN	PICCOLO	CLARINET	SAXO-PHONE	BAS-SOON	PAN FLUTE	RECOR-DER	HARMO-NICA	WHISTLE	SYNTH LEAD	COMBI. BASS 1	COMBI. BASS 2	ELEC. BASS 1	ELEC. BASS 2	SYNTH BASS 1	SYNTH BASS 2	ORIGINAL VOICE

2 VOICE MENU 1 | 3 VOICE MENU 2 | 4 VOICE MENU 3

It is possible to assign a variety of voices to the dotted buttons of each Voice section and the ARPEGGIO CHORD section.

Assignment Procedure

1 Decide the voice to be assigned and the Voice section to which it will be assigned.



(Illustration of HS-5)

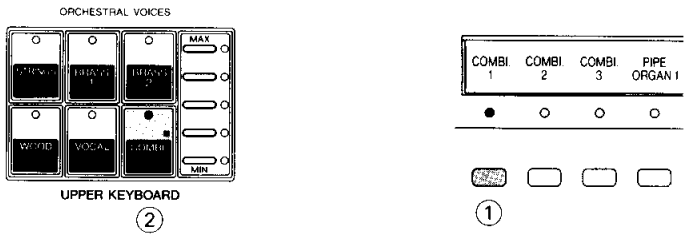
Each of the Voice sections (excluding AWM PRESET and AWM BASS VOICES of HS-8) is provided with one dotted button, and ARPEGGIO CHORD is provided with six dotted buttons. The voices of the VOICE MENUs, which are displayed on three screens of the MULTI MENU, are used for assignment to these dotted buttons.

VOICE MENU 1	Consists of 20 voices starting from COMBI.1.
VOICE MENU 2	Consists of 20 voices starting from PIANO.
VOICE MENU 3	Consists of 19 voices starting from VIOLIN. For Original Voice, please see the next page.

You can freely choose which of these 59 voices of the VOICE MENUs will be assigned to which Voice (or ARPEGGIO CHORD) section.

NOTE: The voices on the panel and on the VOICE MENUs share identical names, but their contents differ.

2 While pressing one button of a VOICE MENU ①, press one dotted button ②.



The lamp of the pressed dotted button will flash, indicating that the voice of the VOICE MENU has been assigned to that button. Now, also try assigning various voices to the other dotted buttons using the same procedure as above.

[The Voice Sections Suitable for Assignment]
The 59 voices of the VOICE MENUs may be assigned to any of the Voice sections, but are most effectively assigned as follows:

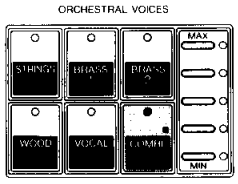
- **VOICE MENU 1:** Assign to the ORCHESTRAL VOICES of the upper and lower keyboard and the COMBINATION VOICES (HS-8, HS-7, and HS-6) of the upper and lower keyboards.
- **VOICE MENU 2:** Assign to the PERCUSSIVE VOICES (HS-7, HS-6, and HS-5), the ORCHESTRAL VOICES (HS-8 and HS-4) of the upper and lower keyboards, the COMBINATION VOICES (HS-8) of the upper and lower keyboards, and to ARPEGGIO CHORD.
- **From VIOLIN to SYNTH LEAD of VOICE MENU 3:** Assign to the LEAD VOICES.
- **From COMBI. BASS 1 to SYNTH BASS 2 of VOICE MENU 3:** Assign to the BASS VOICES.

[Memory of the Assigned Data]
The data describing which voices have been assigned to the dotted buttons can be memorized in REGISTRATION MEMORY, so try memorizing a registration consisting of the assignment of various voices of the VOICE MENUs to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can easily switch the voices which are assigned to the dotted buttons. (➡Page 18)

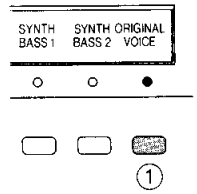
[Preset COMBINATION Voices]
COMBI. 1: Jazz Organ
COMBI. 2: Flute coupler
COMBI. 3: Flute coupler

Procedure for Restoring the Panel Voices

While depressing the ORIGINAL VOICE button ①, press a dotted button ②.



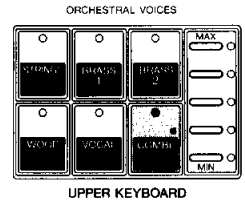
②



①

If you wish to cancel the assignment of the VOICE MENU voice to a dotted button and restore the voice displayed at the panel, press that dotted button while depressing the ORIGINAL VOICE button at the right of VOICE MENU 3. The lamp of the pressed dotted button will flash, indicating that the voice displayed at the panel has been restored.
In the case you wish to return the VOICE MENU voices assigned to multiple dotted buttons to the voices displayed at the panel, sequentially press the pertinent dotted buttons while keeping the ORIGINAL VOICE button depressed.

[Checking the Voice Assigned to a Dotted Button]



When you wish to check which voice has been assigned to a dotted button, just press that dotted button.
When a voice of a VOICE MENU has been assigned: While the dotted button is being pressed, the lamp of the corresponding button (except the ORIGINAL VOICE button) from either VOICE MENU 1, 2 or 3 will remain lit, so you can check which voice has been assigned.
With HS-8, the voice name will also be shown on the GUIDE Display.
When a voice of a VOICE MENU has not been assigned: While the dotted button is being pressed, the ORIGINAL VOICE lamp on VOICE MENU 3 will remain lit. With HS-8, "ORIGINAL" will also be shown on the GUIDE Display.

- During the assignment of a voice that was registered using the Voice Edit functions (a User voice) to a dotted button, the corresponding USER VOICE numeric button will light up on the VOICE EDIT screen of MULTI MENU. (➡Page 30)

[Voice Edit Functions]
The parameters of the voices of the VOICE MENUs can be changed using the Voice Edit functions, permitting you to change the expression of each voice. In this case, be sure to assign the desired voice of a VOICE MENU to a dotted button at the panel before performing editing. (➡Page 26)

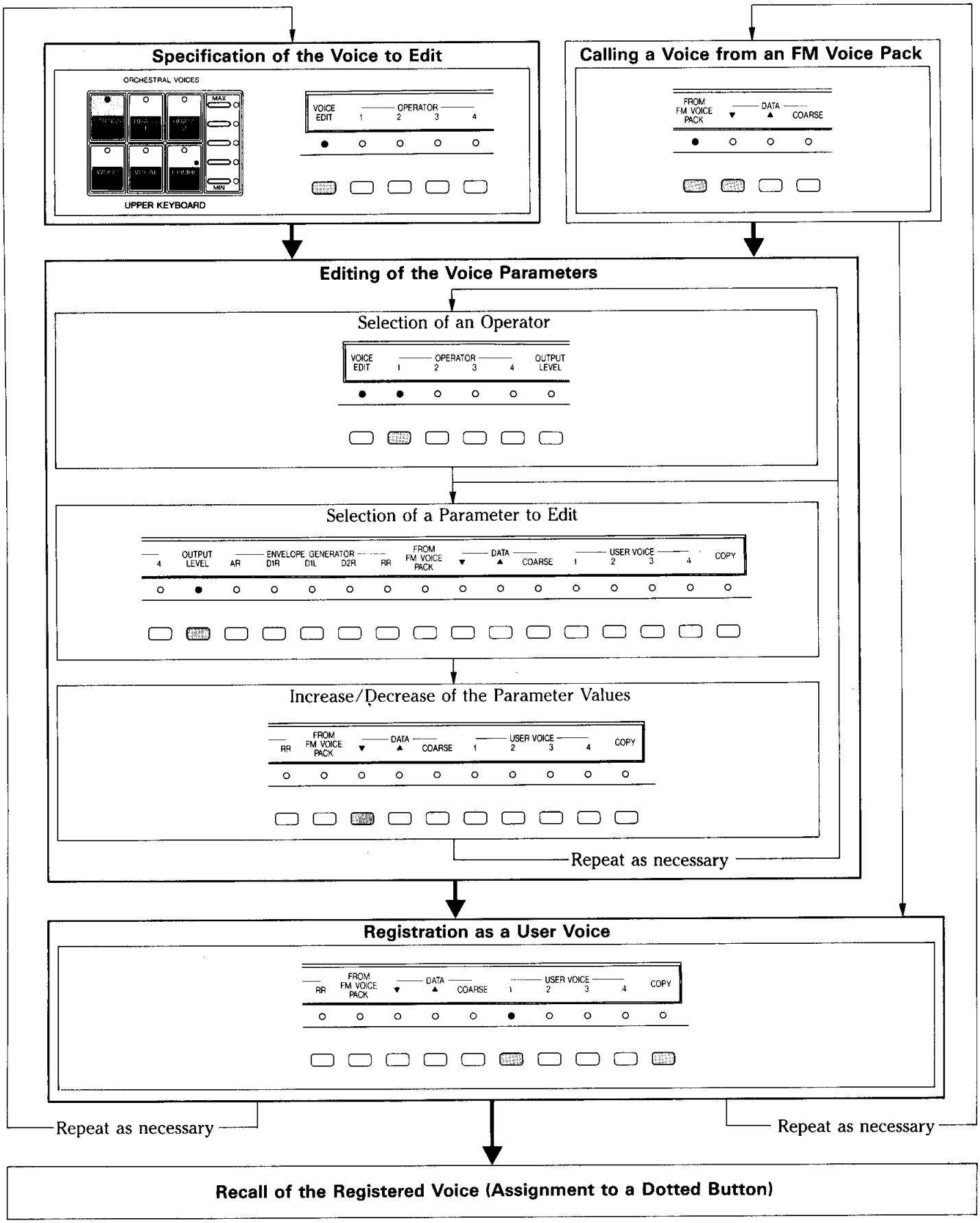
[Regarding VOICE MENU Assignment]

- The same voice can be assigned to multiple dotted buttons.
- Any voices assigned to the LEAD VOICES or BASS VOICES will be produced as monophonic sound.
- In some cases, the voices of the VOICE MENUs may sound different depending on the Voice section to which they have been assigned. In this case, try using the User Vibrato function of the MULTI MENU to adjust their Vibrato effect.
- The data describing the assignment of VOICE MENU voices to the dotted buttons will be backed up even during Power OFF status. (The minimum back-up period is one week.)

5 VOICE EDIT

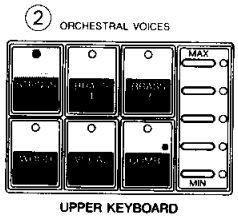
You can edit the parameters of a preset voice, then register that edited voice as a User voice.

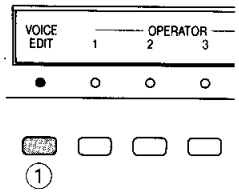
[Overview of VOICE EDIT Functions]



Specification of the Voice to be Edited

1 While depressing the VOICE EDIT button ①, press the button of the voice you wish to edit ②.





The VOICE EDIT lamp will light up, indicating that the data of the specified voice can be edited. The Voices that can be specified for editing are: all voices of each VOICES section of the panel (excluding those of the AWM PRESET and AWM BASS VOICES sections on HS-8), all voices of the VOICE MENUs, and the preset Arpeggio Chord voices.

Panel Voices	You can specify the voice to edit simply by pressing the button of that voice while depressing the VOICE EDIT button. A preset Arpeggio Chord voice can also be specified by the same procedure.
VOICE MENU Voices	First, the VOICE MENU voice must be assigned to a dotted button at the panel. Next, while depressing the VOICE EDIT button, press that assigned dotted button. (➡Page 23)

NOTES: To call the voice that is shown at a dotted button (its Original voice), cancel its VOICE MENU assignment by pressing that dotted button while depressing the ORIGINAL VOICE button on VOICE MENU 3. (➡Page 24)
From the time the VOICE EDIT button is pressed until the button of the voice to be edited is pressed, "SEL" will be shown on the TEMPO/(DATA) Display, indicating that the voice to be edited can be selected.

CAUTION: *Performing editing of a voice while sounding and checking its notes. To sound the specified voice, set its VOLUME control and ENSEMBLE section at the panel.*

Editing of the Voice Parameters

2 Confirm the Algorithm of the voice you wish to edit.

TEMPO/(DATA)

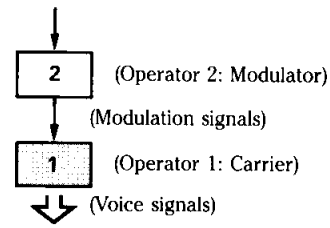
Upon selecting the voice to be edited, a numeral ranging from 1 to 7 will be shown at the left side of the TEMPO/(DATA) Display. This numeral represents the Algorithm No. of the voice specified for editing. First, confirm the basic configuration of the voice to be edited by comparing the displayed Algorithm No. with the illustrations on the following page. (➡Page 27)

NOTE: The FM Tone Generator System, which is used for the voices of the HS Electones (excluding those of the AWM PRESET and AWM BASS VOICES sections on HS-8), creates a variety of voices by the combination of four "Operators." An Operator is a unit which generates the signals forming the basis of a voice, and the arrangement pattern of the Operators is referred to as an "Algorithm." (See "[Operators and Algorithms]" at the right.)

[The Voices that are Preset as User Voices]
Although the edited voices can be respectively registered at the numeric buttons 1-4 of the USER VOICES section, these buttons are preset with four types of COSMIC voices (image sounds).
- Each of the preset voices can be used, using an operation identical to that for the VOICE MENUs, by assignment to a dotted button at one of the panel Voice sections. (➡Page 24)
- Upon registering of the edited voices, the data of these preset voices will be replaced by the registered voice data. If you wish to store to preset COSMIC data, be sure to transfer it to a RAM Pack prior to commencing voice editing. (➡Page 20)

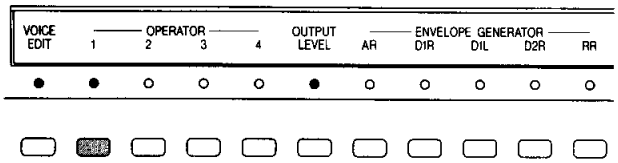
[Operators and Algorithms]
- With the FM Tone Generator System, an "Operator" generates the signals corresponding to the pressed keys and forms the unit for voice creation.
- Each Voice section of the HS Electones is provided with four Operators.
- The Operators consist of two types, the Carrier or the Modulator as described below:

Carrier	This Operator type outputs the Voice signals (the actual voice).
Modulator	This Operator type outputs Modulation signals to other Operators.



- As shown in the figure above, the basic operating principle of the FM Tone Generator consists of an Operator (Modulator) which modulates another Operator (Carrier), and the modulated Operator which outputs the Voice signals.
- All of the Operators share the same operating principle. That is, each Operator can be used as a Carrier or a Modulator.
- The arrangement of the Operators determines whether the Operators function as a Carrier or Modulator. This arrangement pattern is called an "Algorithm."
- The HS Electones employ seven types of Algorithms, each assigned with a number from 1 to 7. (➡Page 27)

3 Select the Operator for which you wish to change the parameters.



After checking the Algorithm of the voice to be edited, press a numeric button from 1 to 4 at the OPERATOR section to select the Operator for which you wish to change the parameters. (Regarding which Operator to select, see "[General Rules for Selecting an Operator]" at the right.) With HS Electones, Operators having the same Nos. are designed to fulfill—as much as possible—the same function, even within different Algorithms.

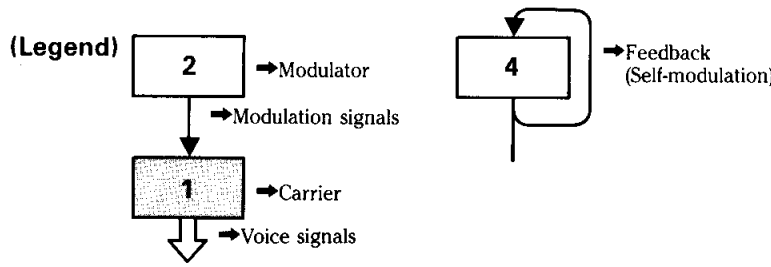
OPERATOR	Function
1	This Operator functions as a Carrier for all Algorithms.
2	This Operator functions either as a Modulator in Algorithm Nos. 1 to 5 or as a Carrier in Algorithm Nos. 6 and 7.
3	This Operator functions either as a Modulator in Algorithm Nos. 1 to 4 or as a Carrier in Algorithm Nos. 5 to 7.
4	This Operator functions as a Modulator for all Algorithms, and can also modulate itself by feedback.

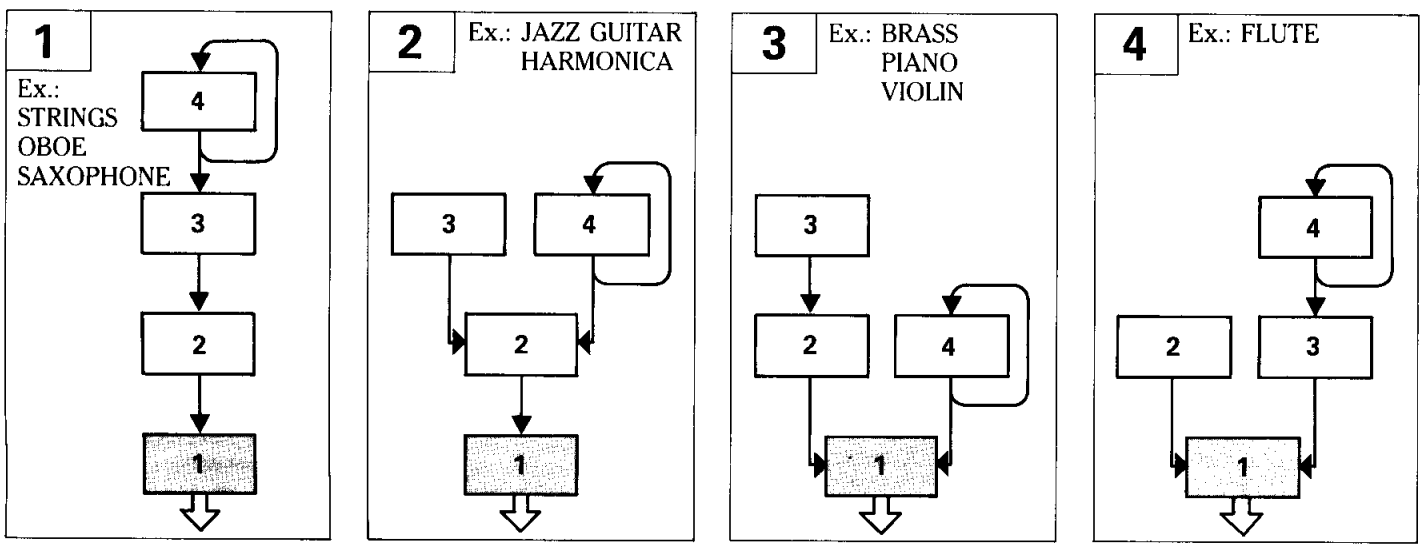
NOTE: As soon as VOICE EDIT Mode is entered, the OPERATOR 1 button will automatically go ON.

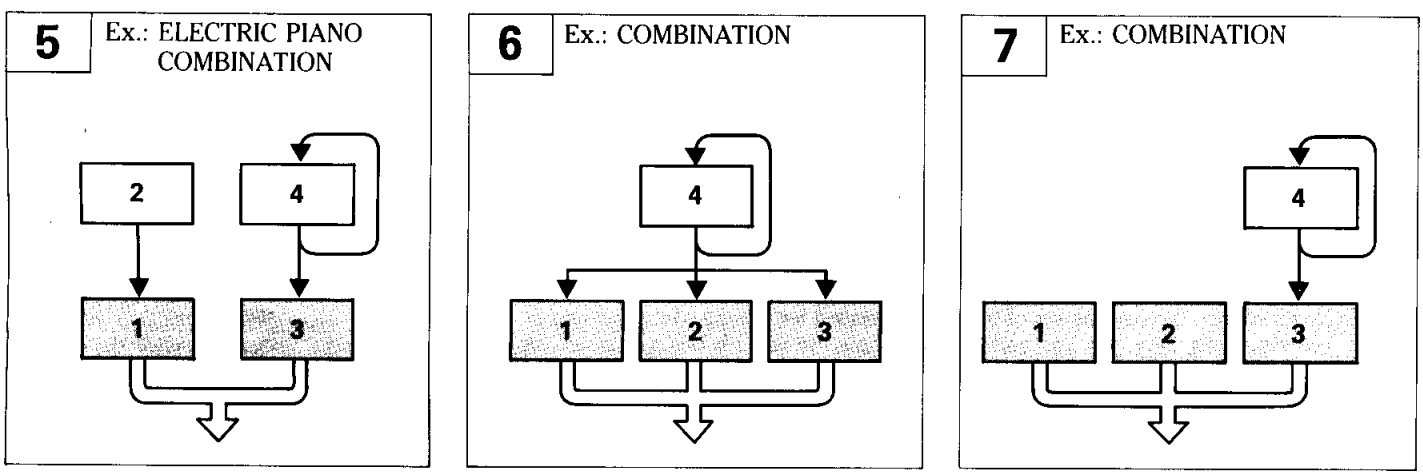
[General Rules for Selecting an Operator]
Prior to editing a voice, you must first check its Algorithm No. to understand the role played by each of its Operators. After checking whether each Operator acts as a Carrier or Modulator, select the voice to be edited as well as its parameters in accordance with how you wish to change the expression of that voice. The parameters which can be edited may be broadly divided into two types: Output Level parameters and Envelope Generator parameters. These parameters function differently, however, depending on whether the Operator to be edited is a Carrier or Modulator.

- **To change the volume:** Select a Carrier, then change its Output Level data.
- **To change the timbre:** Select a Modulator, then change its Output Level data.
- **To change the periodic variation in volume:** Select a Carrier, then change its Envelope Generator data.
- **To change the periodic variation in timbre:** Select a Modulator, then change its Envelope Generator data.

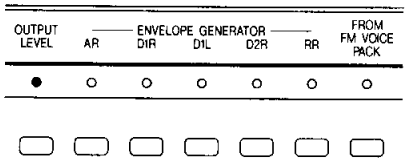
[The Seven Algorithm Types (Operator Arrangement Patterns)]

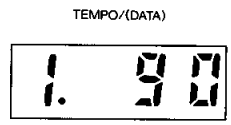




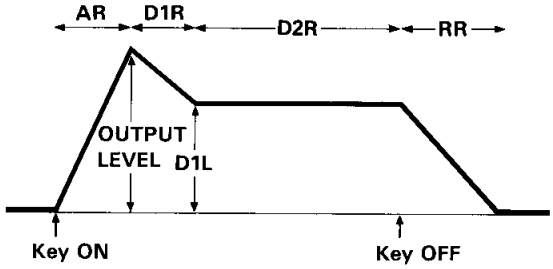


4 Select the parameter you wish to change.





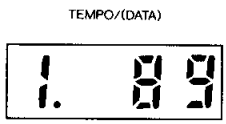
As soon as an Operator is selected, the OUTPUT LEVEL button will go ON and the numeric value of the preset Output Level for that Operator will be shown at the right side of the TEMPO/(DATA) Display. If you first wish to change the Output Level parameter, directly proceed to increase or decrease its numeric value in this status.
If you wish to change the Envelope Generator parameters, press one of the five ENVELOPE GENERATOR buttons to ON. The preset value of the ON parameter will be shown on the TEMPO/(DATA) Display, enabling the value of that parameter to be changed. (The below figure depicts the envelope for a sustained sound.)

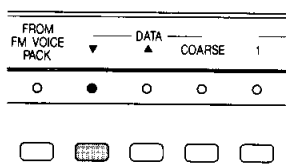


Parameter	Description	Variable Width
OUTPUT LEVEL	The peak level for output	0-99
AR (Attack Rate)	The speed at which the envelope rises to the peak level after a key is pressed.	0-31
D1R (Decay 1 Rate)	The speed at which the envelope falls from the peak level to the Decay 1 Level.	0-31
D1L (Decay 1 Level)	The level at which the Sustain Level begins.	0-15
D2R (Decay 2 Rate)	The speed at which the envelope falls from the Decay 1 Level to its original start position. (When this value is "0", the Sustain Level will be maintained.)	0-31
RR (Release Rate)	The speed at which the envelope falls to its original starting value after the key is released.	1-15

NOTE: Regarding the way in which changing the parameter values will affect the expression of the voices, see "[General Rules for Changing the Output Level Parameter]" and "[General Rules for Changing the Envelope Generator Parameters]" on the right.

5 Use the DATA buttons to increase or decrease the numeric value of the parameter.





While sounding the voice being edited, press the "▼" or "▲" button of the DATA section to respectively decrease or increase the numeric value of the selected parameter.

▼	Decreases the displayed numeric value by one each time it is pressed.
▲	Increases the displayed numeric value by one each time it is pressed.
COARSE	Pressing the ▼ or ▲ button while depressing the COARSE button will result in a coarse decrease or increase in the displayed value; the Output Level value will change by 10 units at a time, and the Envelope Generator value will change by 5 units at a time.

NOTE: If you change the parameters of the voice specified for editing while pressing its corresponding keys, you can audibly check how the voice is being changed. In this case, you can simplify checking by setting the ENSEMBLE section so that only the voice being edited will be sounded.

[General Rules for Changing the Output Level Parameter]
The Output Level parameter plays an important role in determining the volume of a Carrier and the timbre of a Modulator.

For Carriers: Changes in volume

OUTPUT LEVEL	▼	Decreases the volume level (Decreases the pulse width of the Voice signals)
	▲	Increases the volume level (Increases the pulse width of the Voice signals)

- If the numeric value is lowered excessively, the notes will become practically inaudible, so be sure not to set the Carrier Output Level too low.

For Modulators: Changes in timbre

OUTPUT LEVEL	▼	Adds a mellowness to the timbre (Makes the modulation shallower)
	▲	Increases the brilliance of the timbre (Deepens the modulation)

- If the numeric value is raised, the noise component will be emphasized. To ensure a natural timbre, be sure not to set the Modulator Output Level too high.
- In case of a Modulator that is being subjected to feedback (Operator 4), the degree in which the timbre changes will be multiplied even more, so increasing the numeric value will increase the sharpness of the timbre.

[General Rules for Changing the Envelope Generator Parameters]
For the Envelope Generator parameters as well, the controlled element will vary according to whether the Operator is a Carrier or Modulator:

For Carriers: Changes in the periodic variation of volume

ATTACK RATE	▼	Delays the attack of the notes.
	▲	Speeds up the attack of the notes.
DECAY 1 RATE	▼	Lengthens the time before the Sustain Level is reached.
	▲	Shortens the time before the Sustain Level is reached.
DECAY 1 LEVEL	▼	Decreases the volume of the Sustain Level.
	▲	Increases the volume of the Sustain Level.
DECAY 2 RATE	▼	Lengthens the duration of the Sustain Level. ("0": Maximum)
	▲	Shortens the duration of the Sustain Level for quick attenuation.
RELEASE RATE	▼	Slowly returns the notes to their original starting values after their keys are released.
	▲	Quickly and cleanly returns the notes to their original starting values.

For Modulators: Changes in the periodic variation of timbre

ATTACK RATE	▼	Slowly varies the timbre during the attack.
	▲	Quickly varies the timbre during the attack.
DECAY 1 RATE	▼	Slowly varies the timbre until the Sustain Level is reached.
	▲	Quickly varies the timbre until the Sustain Level is reached.

6 If necessary, increase or decrease the values of the other parameters.

Set the button of another parameter to ON, then change its numeric value according to the preceding Steps 4 and 5.

7 If necessary, change the parameters of another Operator.

Set the button for another Operator to ON at the OPERATOR section, then change the required parameters.

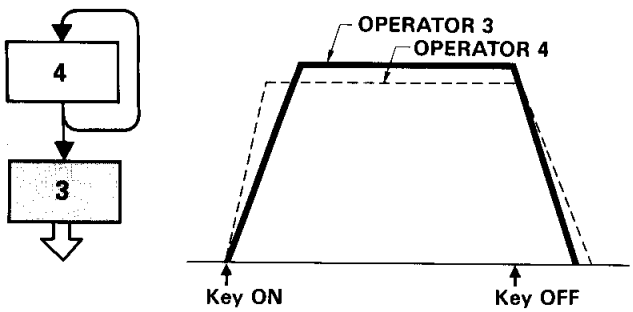
DECAY 1 LEVEL	▼	Provides the timbre during Sustain Level with mellowness.
	▲	Provides the timbre during Sustain Level with brilliance.
DECAY 2 RATE	▼	Slowly varies the timbre during Sustain Level.
	▲	Quickly varies the timbre during Sustain Level.
RELEASE RATE	▼	Slowly varies the timbre after the keys are released.
	▲	Quickly varies the timbre after the keys are released.

- The Decay 1 Level (D1L) parameter is determined relative to the Output Level value of that Operator.
- If the Envelope Generator parameters are set to extremely different values for the Carriers and Modulators, the variations in volume and timbre will deviate over time. Except in cases where you wish to produce a special timbre effect, be sure to set the Carrier and Modulator envelopes so that they match as much as possible.

[VOICE EDIT Examples]

Ex. 1: Editing of COMBINATION 1

The Algorithm of COMBINATION 1 is No. 5, but the Output Level of Operator 1 is an exception in that it is set to "0". That is, only two Operators, Operators 3 (Carrier) and 4 (Modulator) are valid, so COMBINATION 1 can be most easily edited.



① First, change the timbre by changing the Output Level of the Modulator. While sounding the notes as a confirmation, perform the below procedure.

Procedure: Set the OPERATOR 4 and OUTPUT LEVEL buttons to ON.
Each time ▲ is pressed, the brightness and tautness of the timbre will be increased.
Each time ▼ is pressed, the mellowness of the timbre will be increased.

② Next, change the Attack Rate of the notes. Because this speed is determined mainly by a variation in volume, an Envelope Generator parameter for Carriers must be changed.

Procedure: Set the OPERATOR 3 and AR (Attack Rate) buttons to ON.
Each time ▲ is pressed, the Attack Rate is increased.
Each time ▼ is pressed, the Attack Rate is reduced.

*Although the Output Level of Operator 4 is set to "0", its other parameters as well as all Operator 2 parameters are set so that the 4′ notes (one octave higher) can be added. To use an organ sound with the additional 4′ notes, try raising the Output Level of Operator 1.

Ex. 2: Emphasizing the breathy sound of FLUTE

With the FLUTE voice of Algorithm No. 4, the noise representing the breathy flute sound can be emphasized by simply changing the Output Level of the Modulator.

Procedure: Set the OPERATOR 2 and OUTPUT LEVEL buttons to ON.
Each time ▲ is pressed, the noise will be increased.

Ex. 3: Changing ELECTRIC PIANO to a "harder" timbre

With the ELECTRIC PIANO voice of Algorithm No. 5, the below procedure will emphasize the "striking sound" to produce a harder sensation. In this case, the Output Level parameter of the Modulator being subjected to feedback must be changed.

Procedure: Set the OPERATOR 4 and OUTPUT LEVEL buttons to ON.
Each time ▲ is pressed, the hard sensation will be increased.

Ex. 4: Applying a WOW effect to the attack of BRASS

This example changes an Envelope Generator parameter of a Modulator to change the manner in which the timbre varies with time. Specify BRASS of Algorithm No. 3, then perform the below procedure.

Procedure: Set the OPERATOR 4 and D1L (Decay 1 Level) buttons to ON.
Each time ▼ is pressed, the degree to which the timbre varies will be increased.

When the Decay 1 Level parameter is lowered using the above procedure, BRASS will be provided with a sensation similar to a WOW effect, but its timing will seem slightly delayed. To speed up this timing, perform the below procedure.

Procedure: Set the OPERATOR 4 and D1R (Decay 1 Rate) buttons to ON.
Each time ▲ is pressed, the speed at which the timbre varies will be increased.

Ex. 5: Shortening the notes of TIMPANI

By changing an Envelope Generator parameter of a Carrier, it is possible to change the manner in which the volume varies with time. With TIMPANI of Algorithm No. 3, performing the below procedure will cause notes to seem to fade out immediately.

Procedure: Set the OPERATOR 1 and D2R (Decay 2 Rate) buttons to ON.
Press ▲ to achieve a large increase in the D2R value.

While a key is being continuously depressed, the Decay 2 Rate parameter determines the speed at which the volume falls away to "0". Since the Decay 2 Rate has been speeded up in this example, continuously pressing the keys will cause their notes to fade out immediately. Because the RR (Release Rate) value has been left to a low value, however, the notes will be sustained if you quickly release your finger from the keys.

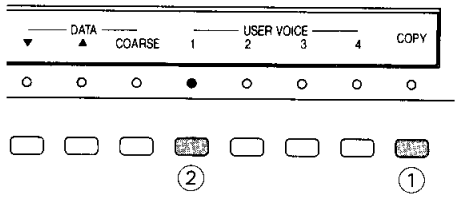
Ex. 6: Changing ELECTRIC PIANO to a voice resembling an ensemble consisting of two instruments

Although the Algorithm of ELECTRIC PIANO is No. 5, this Algorithm consists of two Carriers, each which output Voice signals as illustrated on Page 27. Changing the parameters of the two Carriers, therefore, will also enable a voice which seems to sound the notes of two different instruments. The preset data of all Operators as well as their editing samples are shown below for your reference.

OP	O.L.	AR	D1R	D1L	D2R	RR
1	95➡91	26➡15	13➡16	14➡14	7➡0	8➡6
2	75➡82	30➡13	6➡ 8	14➡13	5➡0	6➡6
3	79➡75	24➡24	10➡10	11➡13	7➡3	7➡2
4	59➡71	31➡31	13➡10	9➡14	8➡5	9➡3

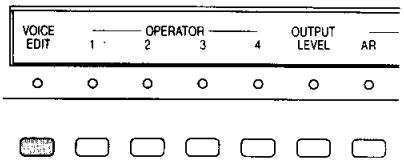
Registering a User Voice

8 While depressing the COPY button ①, press a numeric button ② of the USER VOICE section.



The pressed numeric button will flash, indicating that the data of the edited voice has been registered to that numeric button.

9 After completing registration, set the VOICE EDIT button to OFF.



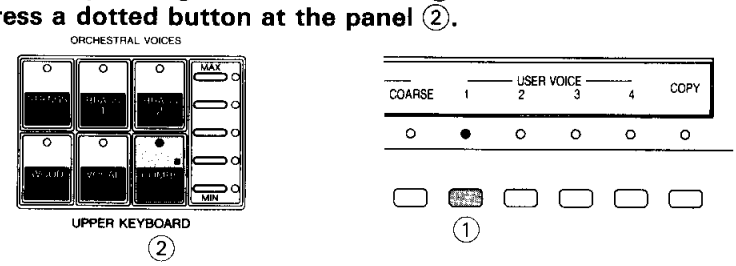
If necessary, use the same procedure to edit and register another voice.

NOTE: When the keys are played after the VOICE EDIT button is set to OFF, the voice will be sounded in its pre-edited status. Listen to the pre-edited voice to compare the sound of the notes.

CAUTION: *Never set the VOICE EDIT button to OFF before completing registration. Once the VOICE EDIT button is set to OFF, all the edited data will be erased. This point requires careful attention because the VOICE EDIT button will go OFF even by changing the displayed screen of the MULTI MENU.*

Recalling a Registered User Voice

10 While depressing a numeric button ① of the USER VOICE section, press a dotted button at the panel ②.



The lamp of the pressed dotted button will flash, indicating that the User voice (the edited voice) that was registered at the pressed numeric button has been assigned to that dotted button. (➡Page 24)

NOTE: The User voices can be handled in the same way as the voices of the VOICE MENUs. Consequently, the registered User voices can be freely assigned to the dotted buttons of any Voice section.

11 Set the assigned dotted button to ON, then play the keys.

If you set the assigned dotted button to ON, set its volume level and ENSEMBLE section, then play the keys, and the registered User voice will be sounded.

NOTE: To cancel the User voice assignment and restore the Original voice shown at the dotted button, display the VOICE MENU 3 screen of MULTI MENU, then press that dotted button while depressing the ORIGINAL VOICE button on the right. Furthermore, when pressing a dotted button that has been assigned with a User voice, one of the USER VOICE numeric buttons will light up, so you can check which User voice has been assigned.

[Re-Editing a Registered User Voice]
To re-edit the data of a User voice that has been registered, perform the following procedure:

(a) Assign the registered User voice to a dotted button at the panel.

(b) While depressing the VOICE EDIT button, press the dotted button assigned with that User voice.
The above procedure will specify the registered User voice so that its Voice parameters can be changed.

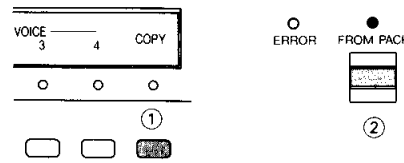
[Registering a Voice without Editing]
A specified voice can also be registered without first being edited. This feature allows you to transfer a voice to another Voice section for use. Its procedure is as follows:

(a) After specifying a voice at the panel, register it as a User voice without changing its parameters.

(b) Next, assign the registered panel voice to the dotted button of another Voice section.

[Memorization to a RAM Pack]
The To Pack operation lets you to transfer the data of registered User voices together with the REGISTRATION MEMORY data and/or C.S.P./R.S.P. data to a RAM Pack. In addition, the From Pack operation lets you recall the data from the RAM Pack to the Electone. (➡Page 20)

[Partial Copying from a RAM Pack]
From among the data transferred to the RAM Pack, you can exclusively recall only the User voice data.

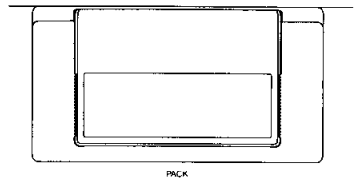


After inserting the RAM Pack, keep the COPY button ① of the VOICE EDIT screen of MULTI MENU depressed and press the FROM PACK button ②. Only the User voice data will be recalled to the Electone.
Furthermore, by keeping the COPY button depressed and pressing the TO PACK button, you can transfer only the User voice data to the RAM Pack.

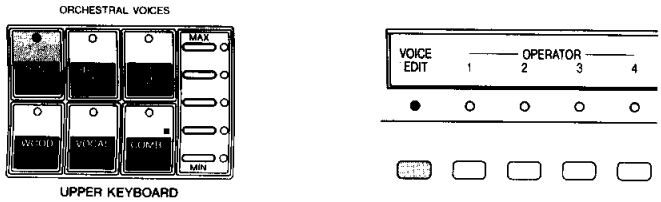
Calling and Registering a Voice from an FM Voice Pack

1 Insert the FM VOICE Pack into the Electone.

Insert the optional FM VOICE Pack with its label side facing upward. The green READY lamp will light up.

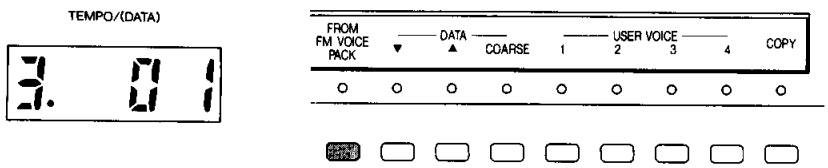


2 While depressing the VOICE EDIT button, press the button of one of the panel voices.



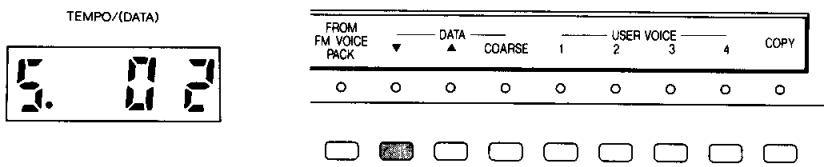
Before calling a voice from the FM VOICE Pack, specify one of the panel voices in order to enter VOICE EDIT Mode. A panel voice is specified to determine from which Voice section the called FM VOICE Pack voice will be sounded when being checked. Also be sure to set the volume level and ENSEMBLE section according to the specified voice.

3 Press the FROM FM VOICE PACK button.



Pressing the FROM FM VOICE PACK button will call the first item of the Voice data.

4 Use the DATA buttons to select the number of the voice you wish to call.



While referring to the Voice List that accompanies the FM VOICE Pack, check the number of the voice you wish to call. After confirming its number, press the "▼" and "▲" buttons of the DATA section until that number is shown on the TEMPO/(DATA) Display. (The numeral at the left of the Display is the Algorithm No. of that voice.)

▼	Increases the displayed Voice No. by one each time it is pressed.
▲	Decreases the displayed Voice No. by one each time it is pressed.
COARSE	Decreases or increases the displayed Voice No. by 10 each time it is pressed together with the ▼ or ▲ button, respectively.

5 Sound the called voice and decide whether or not to register it.

Pressing the keys of the keyboard corresponding to the initially specified panel voice will sound the called voice. Listen to its sound and decide whether or not to register it.

NOTE: Before registering the called voice, you can also edit its parameters to change the expression of that voice. (See "[Editing a Voice of an FM VOICE Pack]" at the top right.)

6 While depressing the COPY button, press a numeric button of the USER VOICE section to register the called voice.

The procedure for registering the called FM VOICE Pack voice is identical to that for editing a preset voice of the Electone. (➡Page 30)
If necessary, use the same procedure to call and register another voice from the FM VOICE Pack.

[Editing a Voice of an FM VOICE Pack]
An FM VOICE Pack voice that has been called using the procedure described on the left can be edited in the same way as a preset voice of the Electone. If necessary, change the parameters of that voice before registering it. (➡Page 28)

- When an FM VOICE Pack voice is called, the Algorithm No. of that voice is shown at the left of the TEMPO/(DATA) Display. After checking the Algorithm, decide which Operator(s) you wish to change the parameters for.
- As soon as the voice is called, all OPERATOR lamps will go OFF. When you press the button of the Operator for which you wish to change the parameters, its lamp will light up and the numeric value of the preset parameter will be shown at the right of the TEMPO/(DATA) Display.

[Recalling a Registered FM VOICE PACK Voice]
The procedure for recalling a registered voice of an FM VOICE Pack is identical to that for editing and registering a preset Electone voice as a User voice. While depressing the numeric button of the registered User voice, press a dotted button at the panel. The lamp of the dotted button will flash, indicating that it has been assigned with the registered voice. If you later set the assigned dotted button to ON, set its volume level and ENSEMBLE section, then play the keyboard, and the registered voice will be sounded. (➡Page 30)

[Memorizing the Registered FM VOICE Pack Voices]
Similar to the case of editing and registering the preset Electone voices, the To Pack operation lets you transfer the data of registered FM VOICE Pack voices to a RAM Pack. Furthermore, use of the COPY button will allow you to copy only the User voice data. (➡Page 30)

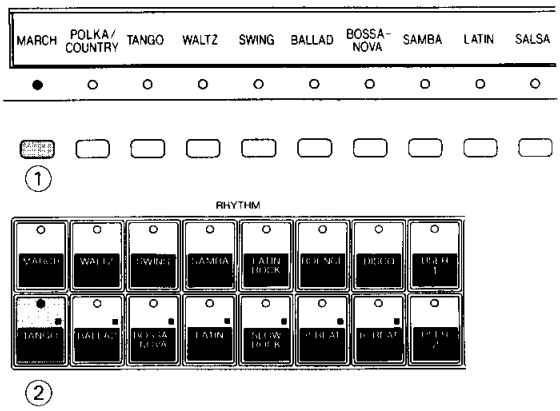
[Receiving Voice Data by MIDI]
Instead of calling the data of a voice from an FM VOICE Pack and then registering it, it is also possible to create the Voice data using a personal computer, etc., and to receive that data at the Electone via MIDI. The data received at the Electone can be directly registered at a numeric button of the USER VOICE section.

6 RHYTHM MENU

An incredible variety of Rhythm patterns can be assigned to the dotted buttons of the RHYTHM section.

How to Assign a Pattern

1 While depressing a button of the RHYTHM MENU ①, press a dotted button ②.



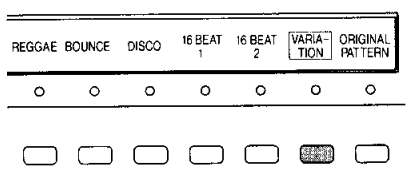
The lamp of the pressed dotted button will flash, indicating that the RHYTHM MENU pattern has been assigned to that dotted button. Now, try using the same procedure to assign various patterns to the other dotted buttons.

Buttons you can assign: The seven dotted buttons on the panel from TANGO to 16 BEAT.

Patterns you can assign: The 18 Rhythm patterns of RHYTHM MENU and their corresponding Variation patterns.

NOTE: Some of the Rhythm patterns of the panel and those of RHYTHM MENU share the same names, but the contents of their patterns differ.

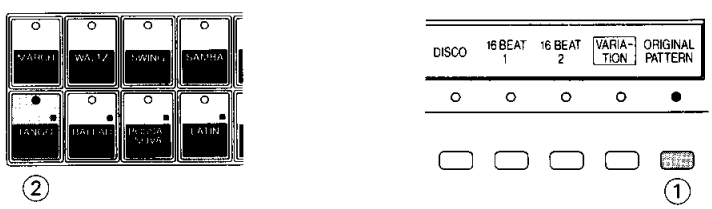
2 If so required, set the VARIATION button to ON, then perform Step 1 above.



By setting the VARIATION button to ON and then performing Step 1, you can assign a Variation pattern to a dotted button.

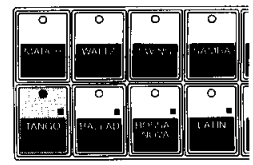
How to Restore a Panel Pattern

While depressing the ORIGINAL PATTERN button ①, press the dotted button ②.



To cancel the RHYTHM MENU pattern assigned to a dotted button and restore the button's panel pattern, keep the ORIGINAL PATTERN button on the right depressed then press the pertinent dotted button. The lamp of the dotted button will flash, indicating that the panel pattern has been restored. To cancel the RHYTHM MENU patterns assigned to multiple dotted buttons and restore the panel patterns, keep the ORIGINAL PATTERN button depressed then sequentially press each of the dotted buttons concerned.

[Checking the Pattern Assigned to a Dotted Button]



To check which pattern has been assigned to a dotted button, just press the dotted button.

When a RHYTHM MENU pattern has been assigned: As long as the dotted button is pressed, the lamp of the assigned pattern from among the 18 Rhythm patterns of the RHYTHM MENU will remain lit. If a Variation pattern has been assigned, the VARIATION lamp will also light up. With HS-8, the pattern name is shown on the GUIDE Display.

When a RHYTHM MENU pattern has not been assigned: As long as the dotted button is pressed, the ORIGINAL PATTERN lamp on the right will remain lit.
With HS-8, "ORIGINAL" is shown on the GUIDE Display.

[Memorization of the Assigned Data]
The data describing which patterns are assigned to the dotted buttons can be memorized in REGISTRATION MEMORY. Try assigning various patterns of RHYTHM MENU to different numeric buttons of REGISTRATION MEMORY, being sure to memorize each registration. Since the registration can be changed by pressing a single button, you can also conveniently change the Rhythm patterns assigned to the dotted buttons. (➡Page 18)

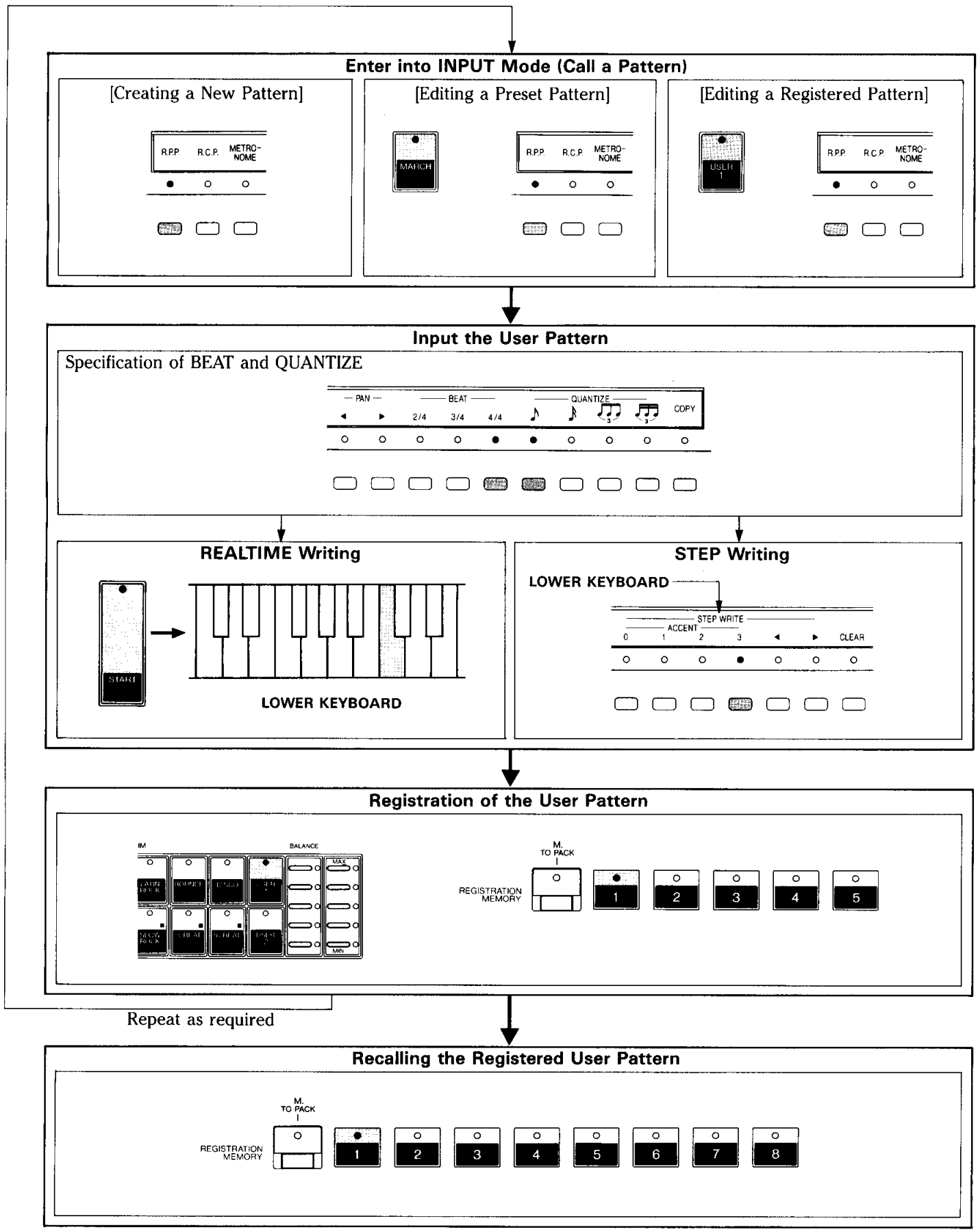
[To Edit Rhythm Patterns]
The patterns of RHYTHM MENU of the panel can be edited using R.P.P. (RHYTHM PATTERN PROGRAMMER). Before editing a RHYTHM MENU pattern, make sure to first assign it to a dotted button of the panel. (➡Page 34)

[Regarding the Use of the RHYTHM MENU]
- Upon setting a RHYTHM MENU pattern which has been assigned to a dotted button, FILL IN 1, FILL IN 2, ARPEGGIO CHORD, and the Bass pattern of AUTO BASS CHORD will each produce the pattern most suited to that Rhythm pattern.
- The data describing the assignment of RHYTHM MENU patterns to the dotted buttons will be backed up (for at least one week) even during Power OFF status.

7-(1) R.P.P.(Rhythm Pattern Programmer)

A Rhythm pattern, Fill In pattern, etc., can be either newly created or edited, then registered as a User pattern.

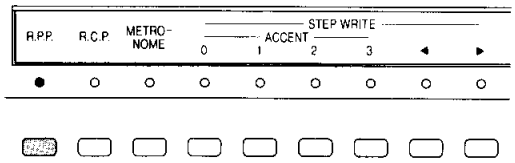
[Functional Overview of R.P.P.]



How to Enter INPUT Mode

To create a new pattern

1-(a) Press the R.P.P. button.

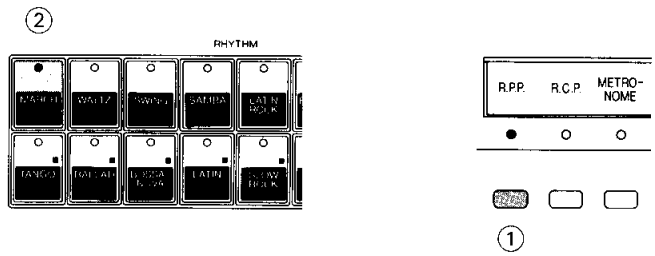


To input a Rhythm pattern or Fill In pattern from a completely blank state, just press the R.P.P. button. The R.P.P. lamp will light up, indicating that the new pattern can be input.

NOTE: In case a new pattern will be created, the pattern will be completely blank prior to input, so you can freely input your original pattern using the desired instrument sounds.

To edit a preset pattern

1-(b) While depressing the R.P.P. button ①, press the button of the pattern to be edited ②.



To edit (add, revise, delete, etc.) a preset pattern, call that pattern by keeping the R.P.P. button depressed and pressing the button corresponding to that preset pattern. The R.P.P. lamp will light up, indicating that editing can be performed. The preset patterns which can be called and their respective calling procedures are described below.

Panel Rhythm pattern	While depressing the R.P.P. button, press the button of the pattern you wish to edit.
RHYTHM MENU pattern	Assign a RHYTHM MENU pattern (one of 18 Normal patterns and their corresponding 18 Variation patterns) to a dotted button. Next, while depressing the R.P.P. button, press the dotted button assigned with the pattern you wish to edit. (➡Page 32)
Fill In pattern	Select a Rhythm pattern from the panel or RHYTHM MENU. Next, while depressing the R.P.P. button, press the FILL IN 1 or FILL IN 2 switch.
Ending pattern	Select a Rhythm pattern from the panel or RHYTHM MENU. Next, while depressing the R.P.P. button, press the INTRO./ENDING switch.

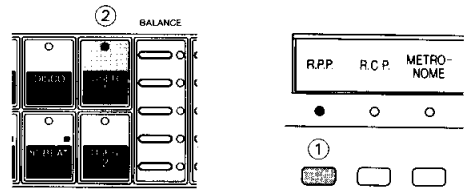
NOTES: If you wish to call the Rhythm pattern shown on the dotted button (its Original pattern), first display the RHYTHM MENU of MULTI MENU, then press the dotted button and check if the ORIGINAL PATTERN lamp lights up. The illumination of a lamp other than ORIGINAL PATTERN indicates that a RHYTHM MENU pattern has been assigned to that dotted button. In this case, press the dotted button while depressing ORIGINAL PATTERN to clear its assignment, then perform Step 1-(b). (➡Page 32)

From the time the R.P.P. button is pressed until the button of the pattern to be edited is pressed, "SEL" is shown on the TEMPO/(DATA) Display, indicating that the pattern to be edited can be selected.

[To Edit a Registered Pattern]

A newly created or edited pattern will be registered at a numeric button of REGISTRATION MEMORY. If you wish to edit a previously registered pattern, call the pattern as follows:

(a) Press the numeric button of the desired registration to assign the pattern you wish to edit to a USER button. (➡Page 38)
(b) While depressing the R.P.P. button ①, press a USER button (USER 1, USER 2 or USER FILL IN) ②.



[If You Call the Wrong Preset Pattern]

If you call the wrong pattern by mistake, set the R.P.P. button to OFF then perform Step 1-(b) again to call the pattern. The R.P.P. lamp will light up, indicating that INPUT Mode has been entered and that you can change the Rhythm pattern from the panel.

[The Number of Bars You can Input]

When newly creating a pattern or editing a preset one, a maximum of two bars can be input. During playback, your two-bar input pattern will be repeatedly played.

- The preset Rhythm pattern consists of eight bars, but only its first two bars can be called for editing.
- The preset Fill In pattern consists of one bar, but editing can be performed for two bars and a two-bar pattern can be registered.
- If you create and register a two-bar Fill In pattern, you can recall the entire pattern you created by continuously pressing the USER FILL IN switch over two bars.

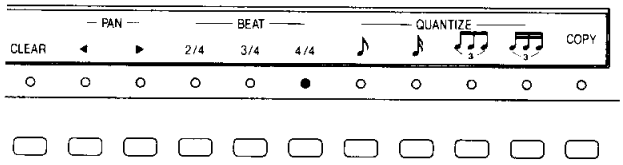
[Regarding the Registration of an Input Pattern]

A newly created pattern or an edited preset pattern can be registered as a User Rhythm pattern or User Fill In pattern. (➡Page 38)

- You can freely choose whether to register a newly created pattern as a User Rhythm pattern or User Fill In pattern.
- Also, in the case a preset Rhythm pattern, Fill In pattern or Ending pattern has been edited, you can freely choose whether to register the edited pattern as a User Rhythm pattern or User Fill In pattern.

Input of the User Pattern

2 Specify the BEAT value.

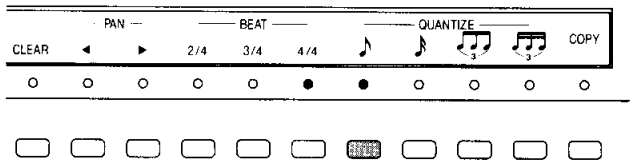


At the BEAT section, you can specify the BEAT value (the number of beats in one bar) for the pattern to be input.

To create a new pattern: "4/4" is automatically set to ON as soon as INPUT Mode is entered. To create a pattern in 3/4 or 2/4, press the corresponding button.

To call a preset pattern: When INPUT Mode is entered, either "4/4" (non-WALTZ) or "3/4" (WALTZ) is automatically set to ON, according to the BEAT value of the specified preset pattern. If a Fill In or Ending pattern has been called, the BEAT button that goes ON will correspond to the BEAT value of the preset Rhythm pattern that is currently ON. After the pattern is called, the BEAT value can be changed as required.

3 Specify the QUANTIZE value.



At the QUANTIZE section, you can specify the resolution of the notes to be input, but the operation of this section varies according to whether REALTIME Writing or STEP Writing is being performed.

For input by REALTIME Writing: The positions where each note is actually input are automatically corrected. When you input notes by pressing keys of the lower keyboard, even if your timing deviates slightly from the desired timing, the notes will be corrected to the proper timing as long as the deviation is approximately ±50% of the note duration specified by QUANTIZE.

The resolution of each button is listed below. Upon entering INPUT Mode, however, all buttons are set to OFF and the smallest resolution becomes valid.

♪	1/2 of a quarter-note
♪	1/4 of a quarter-note
♫	1/3 of a quarter-note
♫	1/6 of a quarter-note
OFF	1/24 of a quarter-note

NOTE: When all QUANTIZE buttons are set to OFF while a pattern is input by REALTIME Writing, the function which corrects the input positions will not operate properly. Until you become more familiar with inputting patterns yourself, it is best that you specify the QUANTIZE value before starting input.

For input by STEP writing: Specify the duration of each note to be input. By pressing one ACCENT button of the STEP WRITE section, the input position of the note will be shifted according to the set QUANTIZE value.

[PAN]

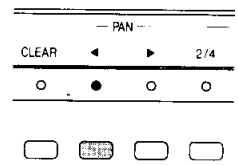
This function enables the panning (the orientation of the sound coming from the speakers) of each rhythm instrument to be separately changed. After input of a pattern is completed, also change its PAN value as required.

(a) Stop the rhythm, then press one key of the lower keyboard corresponding to the instrument sound for which you wish to change the PAN value.

The currently set PAN value of that instrument sound can be checked by the ON/OFF status of the ◀ and ▶ lamps. When the PAN value is set left of center, the ◀ lamp will light up; when it is set right of center, the ▶ lamp will light up; and when it is set to center, both lamps will light up.

With HS-8, note that the instrument name and its PAN value will be shown on the GUIDE Display.

(b) Press the ◀ or ▶ button to change the PAN value.



Pressing the ◀ or ▶ button respectively shifts the PAN value to the left or right, and the instrument sound will later be sounded from that shifted PAN position. The PAN value can be set to one of seven positions with the value being shifted one position each time a button is pressed.

◀ (Center) ▶

L3←L2←L1← C →R1→R2→R3

If the key of the lower keyboard corresponding to that instrument sound is pressed after its PAN value is shifted, the instrument sound will be sounded at the changed PAN position.

(c) Change the PAN position of other instrument sounds as required, then register the pattern.

The changed PAN position of Rhythm instruments can be set for each User pattern to be registered.

- Models HS-5 and HS-4 are designed so that the PAN function will not operate while sound is being output from the Electone's built-in speakers, but can operate while sound is being output to external speakers from the AUX. OUT Jack.

[Regarding the QUANTIZE Setting]

- To use REALTIME Writing to input a pattern that will have a subtle driving sensation (such as the CYMBAL pattern of SWING), set all the QUANTIZE buttons to OFF.
- As long as the rhythm is stopped, the QUANTIZE value can be set at any time.
- Whenever the QUANTIZE value is changed during STEP Writing, the input position will return to the beginning of the first bar.

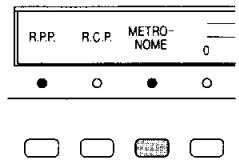
[The Progression of Input Positions within One Bar during STEP WRITE Input]

♪	1												13											
♪	1						7						13						19					
♫	1								9								17							
♫	1				5				9				13				17				21			
OFF	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

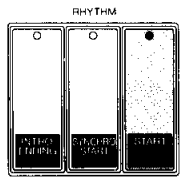
To create new pattern by REALTIME Write

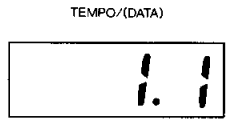
4-(a) Set METRONOME to ON.

To provide a guideline for your input timing, set METRONOME to ON. When the START switch is set to ON, this metronome sound is audible but is not input as a pattern.



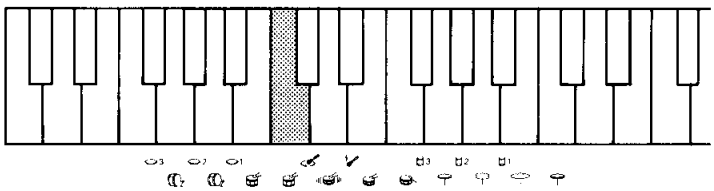
5-(a) Start the rhythm.





The metronome sound is begun and the number of the bar and beat is displayed at the TEMPO/(DATA) Display. Before starting input, use the Tempo Control to set the tempo to a speed at which you can perform input easily.

6-(a) Press the desired key of the lower keyboard to input a pattern.



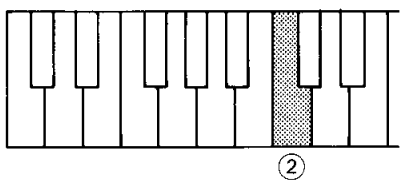
First, check the graphic images below the lower keyboard to see which key corresponds to the Rhythm instrument you wish to input. After confirming that key of the lower keyboard, strike it as if you were hitting drums with a drumstick, while viewing the displayed number of bars and beats. The instrument sound corresponding to the struck key will be sounded and input as a pattern.

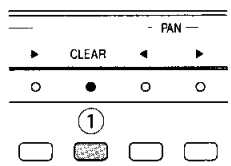
NOTES: If input exceeds the last beat of the second bar, it returns to the first beat of the first bar, permitting you to continue to add missing notes in the input pattern.

By striking two or more keys, you can simultaneously input a pattern consisting of multiple instrument sounds.

The Initial Touch function of the lower keyboard can be used to minutely control the volume of the instrument sounds, letting you add accents to the pattern to be input. (This function operates regardless of the ON/OFF status of the TOUCH TONE section.)

7-(a) If you make a mistake during input, keep CLEAR ① depressed and press the key of the lower keyboard that corresponds to the instrument sound you wish to delete ②.





Only the pattern of the instrument sound corresponding to the pressed key will be erased.

8-(a) Press another key of the lower keyboard to input the pattern of another instrument sound.

Change the instrument sound to be input and sequentially write another pattern. A maximum of eight instrument sounds can be input.

NOTE: At first, QUANTIZE is best set to a large value so you can input the instrument sound that will function to maintain a simple rhythm. Next, QUANTIZE should be changed to a finer value so you can input the instrument sounds which represent the more complex patterns. (➡Page 35)

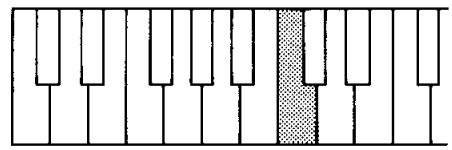
CAUTION: *When all eight instrument sounds have been input, no further instrument sounds can be input. If one of the eight sounds is cleared, however, you will be able to input another instrument sound.*

9-(a) Stop the rhythm to terminate the REALTIME Write operation.

[To create a new pattern by STEP Write]

First enter INPUT Mode, then specify the BEAT and QUANTIZE values. (➡Pages 34 & 35)

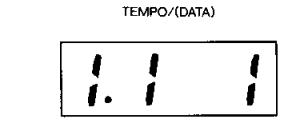
(a) Press one key of the lower keyboard to specify the instrument sound to be input.

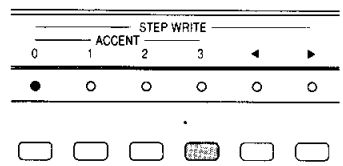


The instrument sound corresponding to the pressed key will be sounded and you will only be able to input the specified instrument sound.

With HS-8, specification of an instrument sound will cause its name to be shown on the GUIDE Display.

(b) Press one of the ACCENT buttons to input the pattern.





The TEMPO/(DATA) Display shows the position at which input will be performed, indicating the current bar and beat plus the position within that beat (from left to right). While checking the input position, press one ACCENT button to input a note or a rest. (During creation of new pattern, the "0" lamp will light up when notes are input, because no data has yet been input at each input position.)

1, 2 or 3: By pressing one of these buttons, a note of the specified instrument sound is input to the current position. Since "3" specifies maximum volume and "1" specifies minimum volume, try changing the volume according to the input position to apply lively accents to the pattern.

0: By pressing this button, a rest (blank) is input. Press "0" if you do not wish to input a note at the current position.

When one ACCENT button is pressed, the input position is automatically advanced according to the current QUANTIZE setting, so simply repeat sequential input. Note that you can use the ◀ and ▶ buttons to advance or reverse the input position.

(c) Specify another instrument sound on the lower keyboard, then input another pattern using the same procedure.

The input pattern can be audibly checked at any time by starting the rhythm.

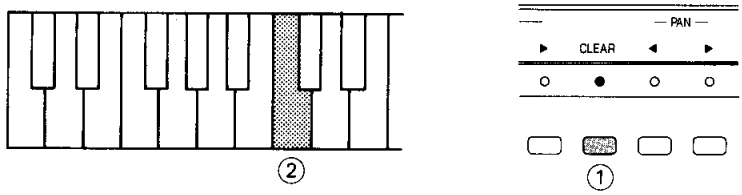
- The input pattern can be audibly checked at any time by starting the rhythm.
- After the maximum eight instrument sounds have been input, no further instrument sounds can be input.

[The All Clear Operation]

When the C key at the left of the lower keyboard is pressed while depressing the CLEAR button, the input patterns of all instruments will be cleared. This function is convenient if you wish to redo input from the beginning.

To edit a preset pattern (or registered User pattern) by REALTIME Write

4-(b) While depressing the CLEAR button ①, press the key of the lower keyboard ② corresponding to the instrument sound that you wish to edit.



A preset pattern consists of eight instrument sounds at maximum. Out of those eight sounds, erase the pattern of the instrument sound you wish to edit. (Regarding the instrument sounds which comprise each preset pattern, see the separate "Rhythm Instrument List.")

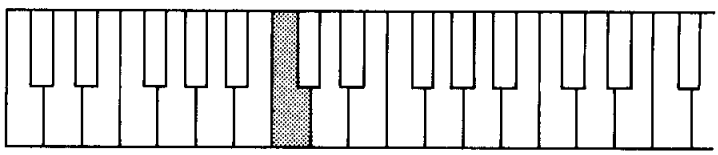
NOTE: To merely add notes using the same instrument sound without erasing the preset pattern, it is not necessary to perform the CLEAR operation.

CAUTION: *After having preset a pattern that consists of eight instrument sounds, the patterns of further instrument sounds cannot be input. To input the pattern of another instrument sound, first erase one of the existing instrument sounds.*

5-(b) Start the rhythm.

Set the tempo to a speed at which you can perform input easily.

6-(b) Press the keys of the lower keyboard to input a pattern.



While listening to the patterns of the instrument sounds which have not been erased, strike the key of the lower keyboard in the desired timing. The instrument sound corresponding to the struck key will be sounded and will be input as a new pattern.

NOTES: If input exceeds the last beat of the second bar, it returns to the first beat of the first bar, permitting you to continue to add missing notes in the input pattern.

The newly input instrument sound need not be the same as the erased instrument sound. Try performing input with an instrument sound other than the preset one.

The Initial Touch function of the lower keyboard can be used to minutely control the volume of the instrument sounds, letting you add accents to the pattern to be input. (This function operates regardless of the ON/OFF status of the TOUCH TONE section.)

7-(b) If you make a mistake during input, keep CLEAR depressed and press the key of the lower keyboard that corresponds to the instrument sound you wish to delete.

Only the pattern of the instrument sound corresponding to the pressed key will be erased.

8-(b) Edit the pattern of other instrument sounds as required.

9-(b) Stop the rhythm to terminate the REALTIME Write operation.

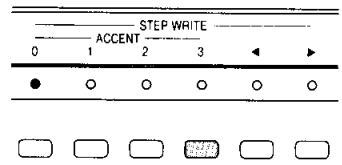
[To edit a preset pattern or registered User pattern by STEP Write]

(a) Press a key on the lower keyboard to specify the instrument sound to be edited.
Press only one key which corresponds to the instrument sound you wish to edit. The instrument sound corresponding to the pressed key will be sounded and the status enabling editing will be assumed. (Regarding the instrument sounds which comprise each preset pattern, see the separate "Rhythm Instrument List.")
With HS-8, note that specification of an instrument sound will cause its name to be shown on the GUIDE Display.

(b) Set QUANTIZE to OFF.
The TEMPO/(DATA) Display shows numerals which represent the current bar and beat plus the position within that beat (from left to right). The numeral representing the position within one beat advances according to the current QUANTIZE setting, but QUANTIZE must be set to OFF when performing editing by STEP Writing.

(c) Press the ▶ button to advance to the position to be edited.
At positions where no note is written, the "0" ACCENT button will light up. At positions where a note is written, an ACCENT button from "1" to "3" will light up and the instrument sound will be sounded. Note that you can return the input position to a previous position by pressing the ▶ button.

(d) Press an ACCENT button to perform editing.



To erase a note: Press the "0" button at a position where a button from "1" to "3" is lit up.
To add a note: Press a button from "1" to "3" at a position where the "0" button is lit up.
To change the volume: Press a button from "1" to "3" at a position where a button from "1" to "3" is lit up.
Pressing the ▶ button advances the input position, so repeat sequential input.
If an instrument sound is erased in advance, note that a pattern can be input using the same procedure used for creating a new pattern.

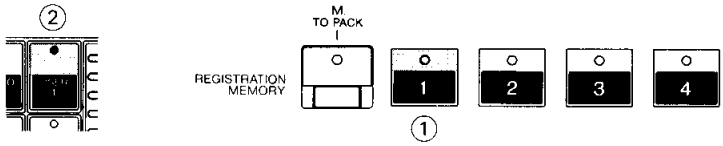
(e) Specify another instrument sound on the lower keyboard as required, and edit its pattern using the same procedure.
The edited pattern can be audibly checked by starting the rhythm.

[Combined Input by REALTIME Write and STEP Write]

- If the rhythm is stopped after REALTIME Writing is completed, you will be able to perform input by STEP Writing. Try using STEP Writing to input the fine notes which could not be input by REALTIME Writing.
- Conversely, if the rhythm is started during a STEP Write operation, you will able to input a pattern by REALTIME Writing.
- During either REALTIME and STEP Writing, it is possible to erase a specific instrument sound.

Registration of the User Pattern

10 While depressing a numeric button of REGISTRATION MEMORY ①, press a USER button ②.



The input pattern will be registered to a numeric button of REGISTRATION MEMORY. To register a User Rhythm pattern, press the USER 1 or USER 2 button of the RHYTHM section while depressing one of the numeric buttons. To register a User Fill In pattern, press a USER FILL IN switch while depressing a numeric button.

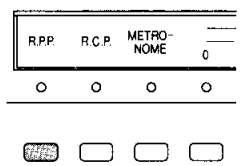
NOTES: The quantity of User patterns which can be registered is as follows:

	HS-8	HS-7•HS-6•HS-5•HS-4
RHYTHM	32 (USER 1×16, USER 2×16)	16 (USER 1×8, USER 2×8)
FILL IN	16 (USER FILL IN×16)	8 (USER FILL IN×8)

By pressing the same USER button while depressing another numeric button, the same pattern can be registered at multiple numeric buttons. The User pattern will be recalled together with the registration data. In case you wish to change only the registration by pressing a numeric button but continue to use the same User pattern, therefore, register the same pattern to multiple numeric buttons. numeric buttons.

11 Press the R.P.P. button to set it to OFF.

After pattern registration is completed, set the R.P.P. button to OFF to exit INPUT Mode.



CAUTION: *Be sure never to set the R.P.P. button to OFF prior to registering a pattern. Setting the R.P.P. to OFF will completely erase that input pattern.*

Recalling the User Pattern

12 Press one numeric button of REGISTRATION MEMORY.

The User patterns registered at the pressed button are respectively assigned to USER 1 and USER 2 of RHYTHM and to USER FILL IN.

13 Set a USER button to ON, then start the rhythm.

When the USER 1 or USER 2 button of RHYTHM is set to ON and the rhythm is started, the registered User Rhythm pattern will be recalled.
If a USER FILL IN switch is pressed after the rhythm is started, the registered User Fill In pattern will be recalled.

NOTE: While the USER 1 or USER 2 button is ON, its User pattern has priority even if the button of a preset pattern is pressed. If you wish to call a preset pattern, be sure to set the USER buttons to OFF.

[Memory Area of the Numeric Buttons]
Each numeric button of REGISTRATION MEMORY has six memory areas. As soon as a numeric button is pressed, the data memorized at that button is recalled.

REGISTRATION MEMORY Area (➡Page 18)	
R.P.P.	Memory area of USER 1
	Memory area of USER 2
	Memory area of USER FILL IN
R.C.P. (➡Page 41)	Memory area of USER 1
	Memory area of USER 2

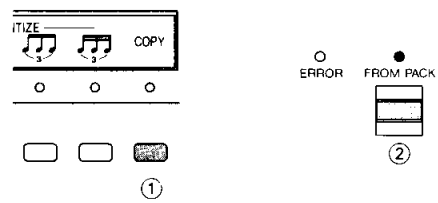
[If Pattern Registration cannot be Performed]
If you attempt to register numerous patterns consisting of detailed notes, restrictions of the memory capacity may prevent you from being able to register the patterns. If you attempt registration after the memory capacity is exceeded, three warning sounds will be heard. In this case, erase the unnecessary patterns (blank registration) or reduce the number of notes.

[Relationship between User Patterns and the Patterns of Other Functions]
- When a preset Fill In or Intro./Ending pattern is set to ON while a User Rhythm pattern is ON, it will synchronize with the preset Rhythm pattern that is currently lit up.
  In addition, both the preset Arpeggio Chord pattern and the Bass pattern of Auto Bass Chord will synchronize with the preset Rhythm pattern that is currently lit up.
- While a User Fill In pattern is being sounded, the Arpeggio Chord pattern and ABC Bass pattern will not be sounded.

[Programming the R.S.P.]
Though a registered User pattern can be recalled in a manner similar to a preset pattern, its application can be greatly expanded by programming the R.S.P. (Rhythm Sequence Programmer). To register a User pattern which is to be programmed to R.S.P., a pattern can be more efficiently created if you partially change a pattern that has been registered at one numeric button, then register the changed pattern at another numeric button. (➡Page 46)

[Memorization to a RAM Pack]
By performing a TO PACK operation, the data of a registered User pattern can be transferred to a RAM Pack together with the registration data and C.S.P./R.S.P. data.
And if the FROM PACK operation is performed, you can also recall the data from the RAM Pack. (➡Page 20)

[Partial Copying from a RAM Pack]
It is also possible to partially recall only the User pattern data from among the data transferred to a RAM Pack.

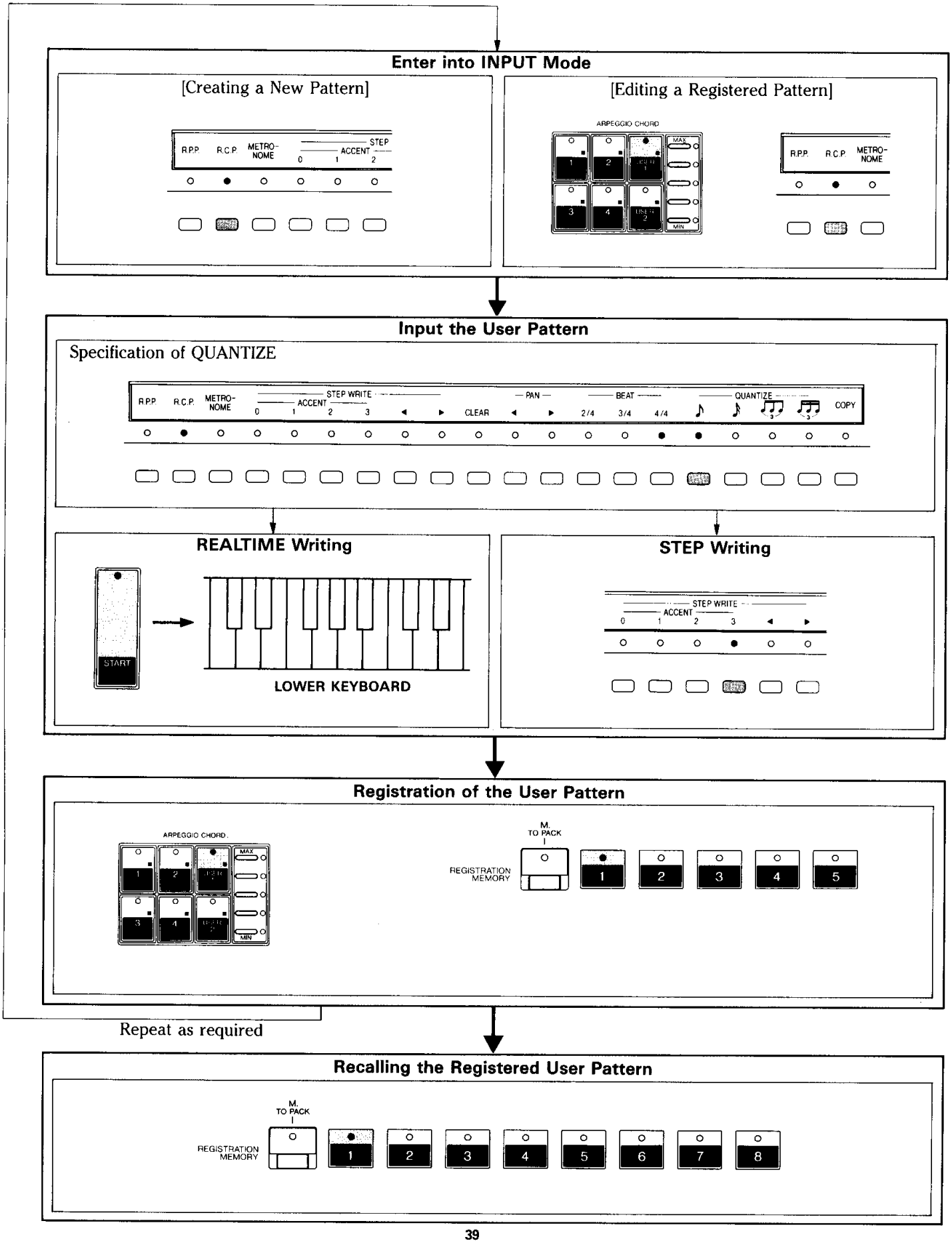


After inserting the RAM Pack, press the FROM PACK button ② while depressing the COPY button ①. Only the User pattern data will be recalled to the Electone.
And if you press the TO PACK button while depressing the COPY button, you can partially transfer only the User pattern data to the RAM Pack.

7-(2) R.C.P. (Rhythmic Chord Programmer)

A Rhythmic Chord of ARPEGGIO CHORD can be newly created or edited, then registered as a User pattern.

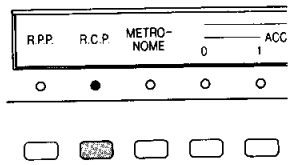
[Functional Overview of R.C.P.]



How to Enter INPUT Mode

To create a new pattern

1 Press the R.C.P. button.

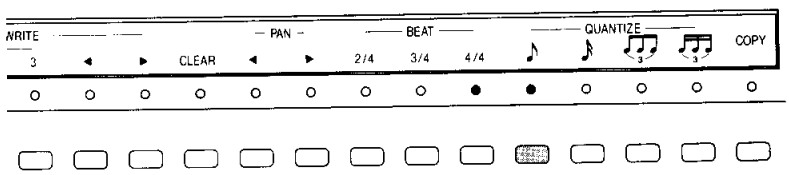


When the R.C.P. button is pressed, its lamp will light up and INPUT Mode will be entered, thus allowing you to newly create a Rhythmic Chord (Strumming Chord) pattern.

NOTES: Since the Rhythm pattern cannot be changed after entering INPUT Mode, be sure to set in advance the Rhythm pattern best suited to the Strumming Chord pattern you will create.
R.C.P. cannot be used to edit preset Arpeggio Chord patterns.

Input of the User Pattern

2 Specify the QUANTIZE value.

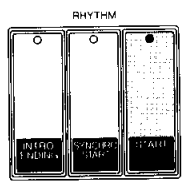


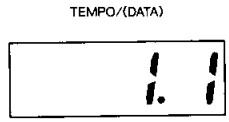
QUANTIZE functions in the same way as during R.P.P. input, so set the QUANTIZE value with reference to Page 35. When the entire QUANTIZE section is OFF, however, the resolution becomes 1/12 of a quarter-note.

NOTE: The BEAT value will be fixed to the BEAT value of the Rhythm pattern which is currently ON at the time INPUT Mode is entered. The BEAT value cannot be changed during input.

To create a new pattern by REALTIME Write

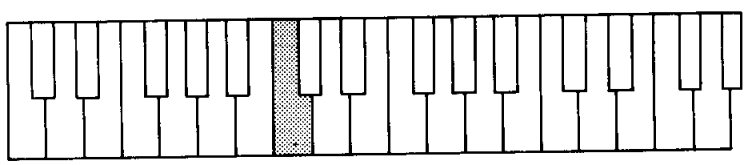
3 Start the rhythm.





Set the tempo to a speed at which you can easily perform input.

4 Play the lower keyboard to input a pattern.



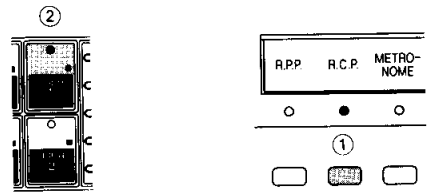
While listening to the Rhythm pattern, play the keys of the lower keyboard (excluding the C key on the left) in the proper timing. Your playing will be input as a Rhythmic Chord pattern.

CAUTION: *With R.C.P., the pattern is written regardless of the key in which the lower keyboard is played. For that reason, a melodious Arpeggio pattern cannot be created.*

NOTES: A maximum of two bars can be input. Since the input position returns from the last beat of the second bar to the first beat of the first bar, you can continue to input any missing notes.
The Initial Touch function of the lower keyboard can be used to add accents to your input pattern. (This function operates regardless of the ON/OFF status of the TOUCH TONE section.)

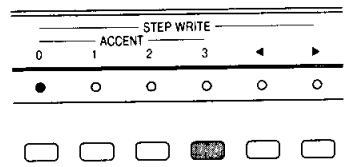
[To Edit a Registered Pattern]
A newly created User pattern will be registered at a numeric button of REGISTRATION MEMORY. If you wish to edit a registered pattern, call that pattern as follows:

(a) Press the numeric button which contains the pertinent registration to assign the pattern to be edited to a USER button. (➡Page 41)
(b) While depressing the R.C.P. button ①, press the USER (1 or 2) button ②.



During the time after the R.C.P. button is pressed and until a USER button is pressed, "SEL" is shown on the TEMPO/(DATA) Display, indicating that the pattern to be edited can be selected.

[To create a new pattern by STEP Write]
(a) Enter INPUT Mode and set the QUANTIZE value.
When the entire QUANTIZE section is OFF, the resolution becomes 1/12 of a quarter-note.
(b) Press an ACCENT button to input the pattern.



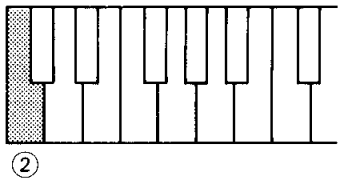
The TEMPO/(DATA) Display shows the position at which input will be performed (the current bar and beat plus the position within that beat). While checking the input position, press one ACCENT button to input a note ("1", "2" or "3") or a rest ("0"). When an ACCENT button is pressed, the input position is automatically advanced according to the current QUANTIZE setting, so simply repeat sequential input. (During creation of a new pattern, the "0" will light up at each input position when notes are input, because no data has yet been input.)
The input pattern can be audibly checked by starting the rhythm. Note that the ◀ and ▶ buttons function in the same way as during R.P.P. input. (➡Page 36)

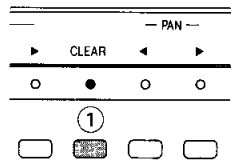
[To Edit a Registered User Pattern Using STEP Write]
(a) Enter INPUT Mode, then set QUANTIZE to OFF.

(b) Press the ▶ button to advance to the position to be edited.
At positions where no note is written, the "0" ACCENT button will light up. At positions where a note is written, an ACCENT button from "1" to "3" will light up.

(c) Press an ACCENT button to perform editing.
The editing procedure is the same as that for R.P.P. (➡Page 37)
After the pattern is edited, it can be audibly checked at any time by starting the rhythm.

5 If you make a mistake during input, press the key at the left of the lower keyboard ②while depressing CLEAR ①.





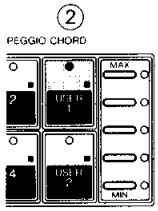
The entire input pattern will be erased.

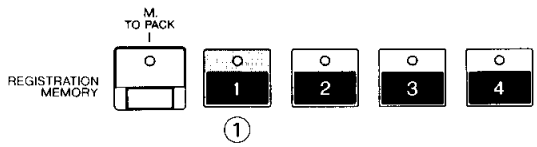
6 Stop the rhythm to terminate the REALTIME Write operation.

Now input a pattern by STEP Writing if required.

Registration of the User Pattern

7 While depressing a numeric button of REGISTRATION MEMORY ①, press a USER Arpeggio Chord button ②.





The input pattern will be registered at a numeric button of REGISTRATION MEMORY. The quantity of User patterns which can be registered is as follows:

HS-8	HS-7•HS-6•HS-5•HS-4
32 (USER 1×16, USER 2×16)	16 (USER 1×8, USER 2×8)

NOTE: If the same USER button is pressed while depressing another numeric button, the same pattern can be registered at multiple numeric buttons. The pattern that was input by R.C.P. will be recalled together with the registration data and R.P.P. data. In case you wish to change only the registration by pressing a numeric button but continue to use the same R.C.P. pattern, therefore, register the same pattern to multiple numeric buttons.

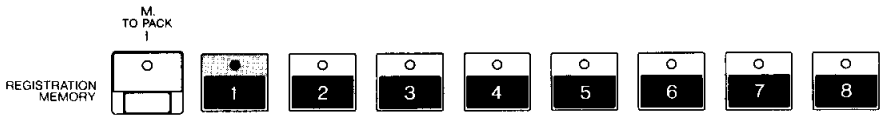
8 Press the R.C.P. button to OFF.

After the pattern is registered, set R.C.P. to OFF in order to exit INPUT Mode.

CAUTION: *Never set the R.C.P. button to OFF before the pattern is registered. If the R.C.P. button is set to OFF, the input pattern will be erased.*

Recalling the User Pattern

9 Press one numeric button of REGISTRATION MEMORY.



The User patterns that are registered at the pressed numeric button will be respectively assigned to USER 1 and 2 of the ARPEGGIO CHORD section.

10 Set a USER button to ON, start the rhythm, then play the lower keyboard.

If you set the USER 1 or 2 button to ON at the ARPEGGIO CHORD section, then start the rhythm and press chords on the lower keyboard, the registered User Rhythmic Chord pattern will be recalled.

NOTE: While a USER 1 or 2 button is ON, the User pattern will have priority even if the button of a preset pattern is pressed. If you wish to call a preset pattern, be sure to set the USER buttons to OFF.

[User Pattern Voices]

During the creation of a new pattern, the voices in ON status at the ARPEGGIO CHORD section upon entering INPUT Mode will be valid but their data will not be registered. Because the voices for use with a recalled User pattern must be assigned to the USER buttons, use the VOICE MENU to perform assignment as required. (➡Page 23)

[Relationship between User Patterns and the Patterns of Other Functions]

The relationship of the User patterns of the ARPEGGIO CHORD section with the Rhythm pattern and the Bass pattern of Auto Bass Chord is as follows:

- The User Rhythmic Chord pattern will not be changed by a change in the Rhythm pattern. When a User pattern will be used, use the Rhythm pattern that was set during pattern creation.
- The Arpeggio Chord pattern during operation of a Fill In or Ending pattern will synchronize with the preset Rhythm pattern having lamps currently in lit status.
- The Bass pattern of Auto Bass Chord will also synchronize with the preset Rhythm pattern and the preset Arpeggio Chord pattern having lamps currently in lit status.

[Progamming the C.S.P.]

Though a registered User pattern can be recalled in a manner similar to a preset pattern, its application can be greatly expanded by programming the C.S.P. (Chord Sequence Programmer). To register a User pattern which is to be programmed to C.S.P., a pattern can be more efficiently created if you partially change a pattern that has been registered at one numeric button, then register the changed pattern at another numeric button. (➡Page 42)

[Memorization to a RAM Pack]

By performing a TO PACK operation, the data of a registered User pattern can be transferred to a RAM Pack together with the registration data and C.S.P./R.S.P. data.
And if the FROM PACK operation is performed, you can also recall the data from the RAM Pack. (➡Page 20)

[Partial Copying from a RAM Pack]

It is also possible to partially recall only the User pattern data from among the data transferred to a RAM Pack. (➡Page 38)
And if you press the TO PACK button while depressing the COPY button, you can partially transfer only the User pattern data to the RAM Pack.

8-(1) C.S.P. (Chord Sequence Programmer)

The sequence information on chords and registrations can be programmed and played back.

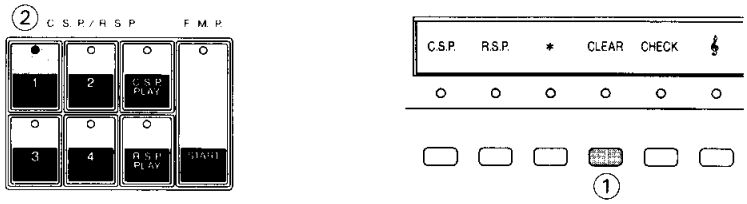
How to Create a New Program (RECORD Mode)

1 In advance, memorize the registrations you will be using for your performance.

To REGISTRATION MEMORY, memorize only the registrations that you will need for your performance. With C.S.P., programming is performed using the chords of the SINGLE FINGER or FINGERED CHORD Mode of AUTO BASS CHORD. Before you start programming, select a mode at the MULTI MENU, then light up the A.B.C. ON button at the panel. (➡Page 62)

NOTE: In case either CUSTOM A.B.C. is selected or AUTO BASS CHORD is set to OFF, progamming will be performed as if FINGERED CHORD Mode has been selected.

2 While depressing the CLEAR button ①, press a numeric button ②.

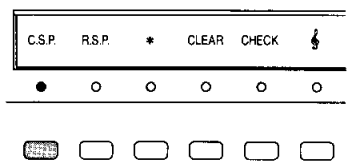


When the CLEAR button is pressed, the numeric buttons 1-4 at the panel will begin flashing and "SEL" will be shown at the TEMPO/(DATA) Display. While depressing the CLEAR button, press a numeric button. The C.S.P. and R.S.P. lamps will begin flashing.

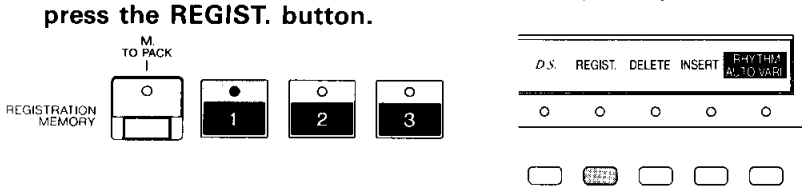
CAUTION: *In case C.S.P. and/or R.S.P. data has been registered at the pressed numeric button, such data will be completely erased.*

3 Press the C.S.P. button.

The C.S.P. lamp will light up, indicating that a Chord sequence can now be programmed.

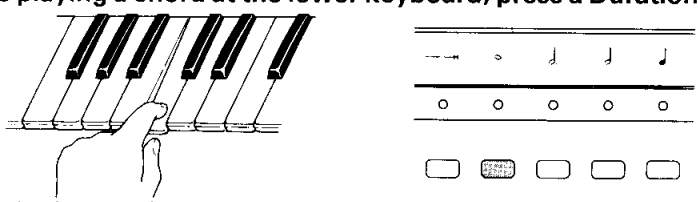


4 Set the registration you will use at the beginning of the song, then press the REGIST. button.



Set one numeric button of REGISTRATION MEMORY to ON, then press the REGIST. button. The number of that numeric button will be programmed to the beginning of the sequence data.

5 While playing a chord at the lower keyboard, press a Duration button.



While pressing keys on the lower keyboard according to the set Auto Bass Chord Mode to sound a chord, press one of the Duration buttons. A signal will be sounded, indicating that the sounded chord has been programmed.
While reading your musical score, continue to sequentially program the desired chords.

𝅝	Programs a duration equal to four quarter notes (for 4/4 time, one bar).
𝅗𝅥.	Programs a duration equal to three quarter notes (for 3/4 time, one bar).
𝅗𝅥	Programs a duration equal to two quarter notes.
♩	Programs a duration equal to one quarter note.

NOTE: With HS-8, the name of the chord pressed on the lower keyboard is shown at the GUIDE Display.

[The Two Channels of the Numeric Buttons]
Each numeric button (1-4) of the C.S.P./R.S.P section has a channel for programming the C.S.P. data and another channel for programming the R.S.P. (Rhythm Sequence Programmer) data.
The channel to be used for programming is selected at the beginning of programming by pressing either the C.S.P. or R.S.P. button of the MULTI MENU.

C.S.P. Channel	Chord sequence Registration sequence
R.S.P. Channel	Rhythm sequence

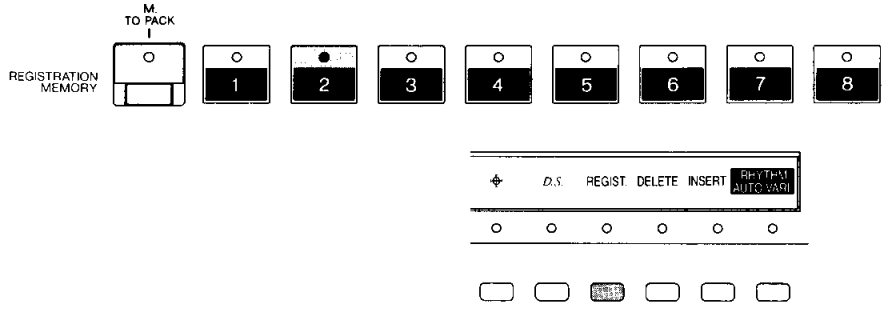
[To Create a New Program Only at C.S.P. without Erasing R.S.P. Data]
(a) While depressing the CLEAR button, press the C.S.P. button.
(b) Press one of the flashing numeric buttons from 1-4. Then, program the Chord sequence, and so on.

[The Scope of Registration Data You Can Record to C.S.P.]
With C.S.P., the data describing the Registration sequence can be programmed together with the Chord sequence to each numeric button.
- The programmable data consists of the data describing which button of REGISTRATION MEMORY has been pressed as well as the ON data for the Fill In and Intro./Ending switches.
- Neither the actual contents stored within REGISTRATION MEMORY nor any registration that has been revised at the panel will be programmed.
- If the memorized contents of REGISTRATION MEMORY are not the same during programming and play back, the played back registrations will differ from the programmed registrations. If you wish to playback the programmed registrations, transfer the programmed data to a RAM Pack or other media after programming is completed. (➡Page 20)

[Memory Capacity of C.S.P.]
The C.S.P. memory capacity is counted by the quantity of the input data (the number of times the Duration, REGIST. and/or Repetition buttons have been pressed). Approximately 120 sets of data can be programmed to each numeric button 1-4.
- The volume of programmed data is shown on the TEMPO/(DATA) Display.
- When data is input while the remaining memory capacity is low, three fast alarms are sounded. If you attempt to input data while no free memory area remains, three slow alarms are sounded to indicate that no further data can be input.
- In case the remaining memory capacity of one numeric button becomes low, terminate the programming, then continue programming the remaining data to another numeric button. You can achieve consecutive playback by setting multiple numeric buttons to ON at playback. (➡Page 44)

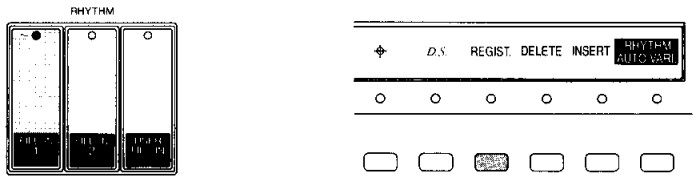
[No-Chord Programming]
If you press a Duration button without pressing any keys on the lower keyboard, a no-chord interval can be programmed. This procedure is handy when, for example, you wish to program a bar containing only a Rhythm pattern. It is also possible to perform no-chord programming from the beginning to the end of a song or to program only the REGISTRATION MEMORY or the Fill In, Intro and Ending sequences.

6 Press another numeric button of REGISTRATION MEMORY, then press the REGIST. button.



After programming up to the position where you wish to change the registration, press another numeric button of REGISTRATION MEMORY, then press the REGIST. button. The number of that pressed button will be programmed so that the numeric buttons of REGISTRATION MEMORY will be automatically switched during playback.

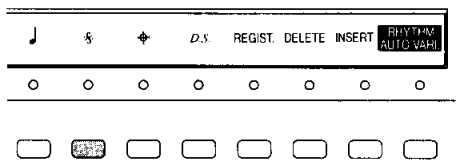
7 If necessary, program the Fill In, Intro, and Ending patterns.



The Fill In, Intro, and Ending patterns of the RHYTHM section can also be programmed. At the position where you wish to insert the desired pattern, press the REGIST. button while depressing the pertinent switch. For details on the programming procedure, see "[How to Program the Fill In, Intro, and Ending Patterns]" at the right.

NOTE: The Fill In, Intro, and Ending patterns can also be programmed using R.S.P. (Rhythm Sequence Programmer). (➡Page 47)

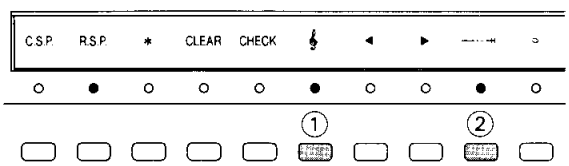
8 If necessary, program the Repetition symbols.



If the song you are programming includes a repetition of the same chord progression, try using the three types of Repetition symbols for more efficient programming.

𝄋 Button	Press at the position where " 𝄋 " or "𝄇——" is written. It need not be pressed if the song will be repeated from its beginning.
𝄎 Button	Press at the position where "to 𝄎 ", "1.——2." or "Fine" is written. It need not be pressed at the position of the second " 𝄎 ".
D.S. Button	Press at the position where "*D.S.*", "——𝄇" or "D.C." is written. If " 𝄋 " has not been input, playback will return to the beginning of the song.

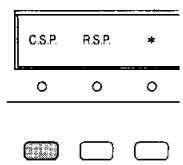
9 After you complete programming to the end of the song, keep the button ① depressed while you press the button ②.



This procedure inputs a Cadence symbol at the end of programming, thereby determining the entire length of the sequence data.

10 Press the C.S.P. button to OFF.

Now, try using the above procedure to program data to the other numeric buttons.

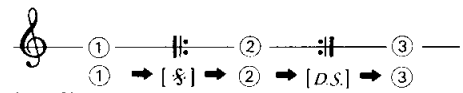


[How to Program the Fill In, Intro, and Ending Patterns]

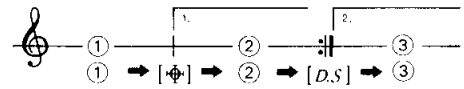
INTRO	After setting the first registration, press the REGIST. button while depressing the INTRO./ENDING switch. Next, press the " 𝅝 " button (the " 𝅗𝅥 " button for 3/4 time) once to program the length of the data.
FILL IN	At the position where you wish the Fill In pattern to begin sounding, press the REGIST. button while depressing the FILL IN 1, FILL IN 2 or USER FILL IN switch.
ENDING	At the beginning of the second bar from the end of the song, press the REGIST. button while depressing the INTRO./ENDING switch. Next, program a two-bar chord progression.

[Sample Uses of the Repetition Buttons]

(Ex. 1)

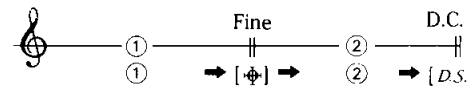


(Ex. 2)

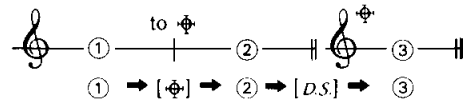


(Ex. 3)

(Ex. 4)



(Ex. 5)



[Memorization to a RAM Pack]

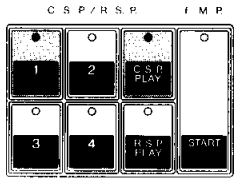
By performing a To Pack operation, the programmed sequence data can be transferred to a RAM Pack together with the data of REGISTRATION MEMORY. The contents of REGISTRATION MEMORY cannot be programmed to C.S.P., so if you wish to save the registration data created during recording, be sure to transfer it to a RAM Pack. In addition, you can recall the data from a RAM Pack to the Electone by performing a From Pack operation. (➡Page 20)

[Regarding Recording with C.S.P.]

- It is not possible to consecutively program the switching of REGISTRATION MEMORY and a Fill In, Intro or Ending pattern. If you wish to program REGISTRATION MEMORY switching and one of the above Rhythm patterns at the same position, set them both to ON at the same time to program them concurrently.
- If you have not yet set the C.S.P. button to OFF, the programmed data can be edited just as during editing. (➡Page 44)
- In case TACET is present at, for example, the beginning of a song, if you program one bar consisting of an Intro pattern or a no-chord interval, your performance will be simplified during playback.
- If you do not program a Cadence symbol at the end of the song and instead press the C.S.P. button at the ending position, the Cadence symbol will be automatically programmed.
- The data programmed to the numeric buttons 1-4 will be backed up (for at least one week) even during Power OFF status (or while that numeric button is OFF).

How to Perform Playback (PLAY Mode)

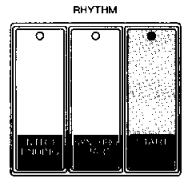
1 Set one numeric button to ON, then set the C.S.P. PLAY button to ON.



If you have transferred the REGISTRATION MEMORY data to a RAM Pack after completing recording, perform the From Pack operation to recall the data to the Electone before performing Step 1.

2 Start the rhythm.

Set the tempo then start the rhythm. The numeric button of REGISTRATION MEMORY that was programmed at the beginning of the sequence will go ON and playback will start.



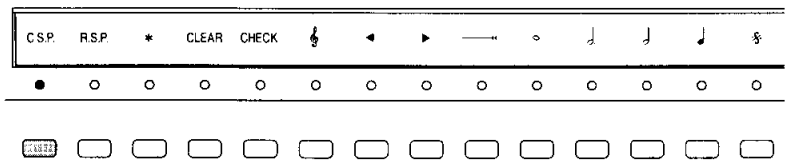
3 Play the melody in time with the played back accompaniment.

The chord accompaniment of the lower keyboard and the bass accompaniment of the pedal keyboard will be automatically played back, so play the melody on the upper keyboard along with the accompaniment. If you have programmed switching of the REGISTRATION MEMORY and Fill In, Intro, and Ending patterns, they will also be played back. When playback ends, the rhythm is automatically stopped and the lamp of the lit numeric button will go off.

CAUTION: *While a numeric button 1-4 is ON, neither RECORD nor EDIT Mode can be entered. Unless you are in PLAY Mode, be sure to set the numeric buttons to OFF.*

How to Edit Registered Data (EDIT Mode)

1 Press the C.S.P. button.

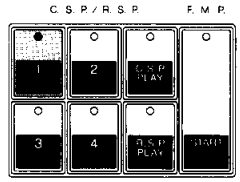


When the C.S.P. button is pressed, the numeric buttons from 1-4 will begin flashing and "SEL" will be shown on the TEMPO/(DATA) Display.

CAUTION: *If you wish to edit the programmed data, do not press the CLEAR button. Pressing the CLEAR button will completely erase the data registered to the numeric button.*

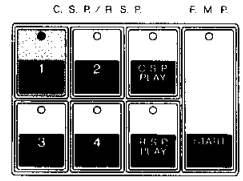
2 Press one of the flashing numeric buttons.

Press the numeric button that is programmed with the data you wish to edit. The pressed numeric button will light up, indicating that editing can be performed. (The C.S.P. button of MULTI MENU will also light up.)



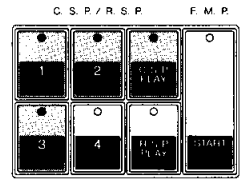
NOTE: Upon entering EDIT Mode, both the REGIST. button and the numeric button of REGISTRATION MEMORY that is programmed at the beginning of the sequence data will light up. If a numeric button has not been programmed, no lamps will light up. In such case, press the INSERT button at that position, then program the number of the REGISTRATION MEMORY you wish to use at the beginning of the song. (➡Page 42)

[Playback of Only the Registration Sequence]
It is possible to play back the Registration sequence exclusively by setting only the numeric buttons 1-4 to ON, setting the C.S.P PLAY button (and the R.S.P. PLAY button) to OFF, then starting the rhythm.



- The switching of REGISTRATION MEMORY, and any programmed Fill In, Intro, and Ending patterns will also be played back.
- Since the chords will not be played back, you can play the accompaniment on the lower and pedal keyboards.

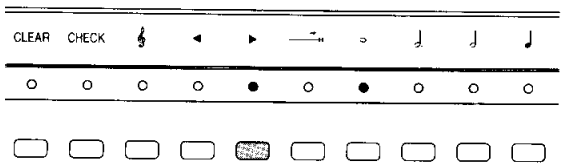
[Consecutive Playback]
By concurrently setting two or more numeric buttons 1-4 to ON, the sequences programmed to the pressed numeric buttons can be consecutively played back.



- You can freely decide which and how many numeric buttons to set to ON. (Consecutive playback of up to four buttons is possible.)
- Playback will be sequentially performed from the numeric button of the lowest number to that of the highest number.

[Regarding Playback with C.S.P.]
- While C.S.P. is being played back, the notes played at the lower and pedal keyboards will not be sounded. If you wish to play the accompaniment on the lower and pedal keyboards, play back only the Registration sequence.
- It is possible to operate the panel to change the voices or rhythm during the course of C.S.P. playback. If the programmed playback includes switching of REGISTRATION MEMORY, Fill In patterns, etc., the setting changed at the panel will be canceled at the position where the programmed switching occurs.

3 Press the ▶ button to confirm the data.



The data position is advanced one position each time the ▶ button is pressed, so you can sequentially check the data. If you wish to return to a previous data position, press the ◀ button. The methods for checking each data type are listed below:

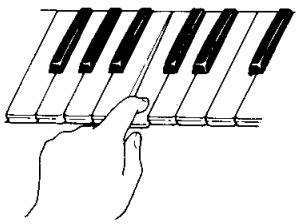
Chord Check	Sounds the input chord from the lower keyboard and lights up one Duration button. (With HS-8, the chord name is shown at the GUIDE Display.)
REGISTRATION MEMORY Check	The REGIST. button and the newly selected numeric button light up at the position where a switching of REGISTRATION MEMORY was input.
Fill In, INTRO./ENDING Check	The FILL IN or INTRO./ENDING switch lights up at the input position.
Repetition Symbol Check	The Repetition button lights up at the input position.

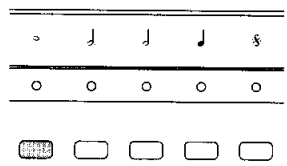
NOTE: To check the data at a certain position, set the CHECK button to ON and start the rhythm, thereby sounding the Rhythm pattern programmed at that data position. (➡Page 49)

4 Edit the data.

[To Revise Data]

To revise the data, program the correct data at the position of the mistaken data.

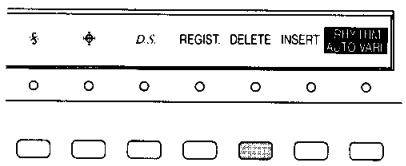




In addition to chord contents, it is also possible to revise the data describing chord duration, Repetition symbols, REGISTRATION MEMORY switching, as well as Fill In, Intro, and Ending patterns.

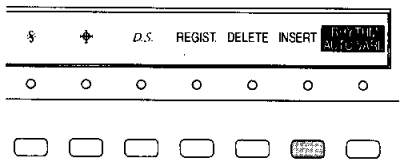
[To Delete Data]

To delete unnecessary data, press the DELETE button at the position of the data you wish to delete. Any kind of data can be deleted.



[To Insert Data]

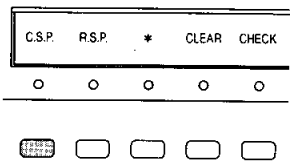
To insert new data, advance to the next position after the position were you wish to insert data, then press the INSERT button. If you then program new data, it will be inserted in front of the current position.



In addition to chord data, it is also possible to insert the data describing Repetition symbols, REGISTRATION MEMORY switching, as well as Fill In, Intro, and Ending patterns.

5 After editing is completed, press the C.S.P. button to OFF.

Now, try using the above procedure to edit the data programmed to the other numeric buttons.



[How to Shift the Data Position]

Besides the ▶ button, the data position can be shifted by pressing the ◀ button and 𝄞 button as follows:

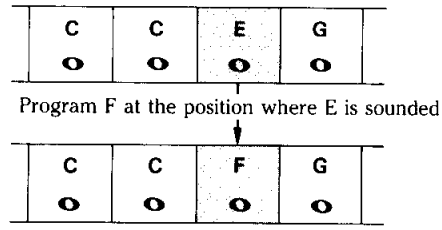
[▶]	Advances one position each time it is pressed.
[◀]	Moves backward one position each time it is pressed.
[𝄞]+[▶]	Advances directly to the end of the song.
[𝄞]+[◀]	Moves backward directly to the beginning of the song.

[To Check the Data by Starting the Rhythm]

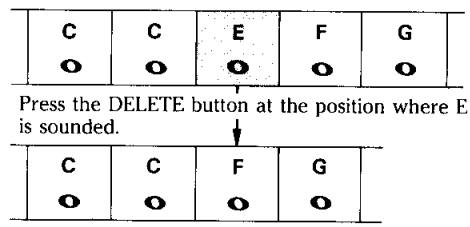
Instead of checking the datum at each position by pressing the [▶] and [◀] buttons, the data can also be checked by starting the rhythm. In this case, the chords and rhythm will be sounded exactly the same as during playback and the REGISTRATION MEMORY will also be switched. (The Repetition data, however, will not be played back.)
If you wish to edit the data during the check, stop the rhythm, use the ◀ button to return to the position of the data to be edited, then perform editing.

[Editing Samples of C.S.P.]

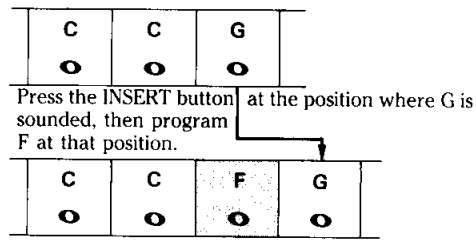
(Ex. 1) Revising a mistaken E Chord to F:



(Ex. 2) Deleting an unnecessary E Chord:



(Ex. 3) Inserting a new F Chord:



[Regarding Editing with C.S.P.]

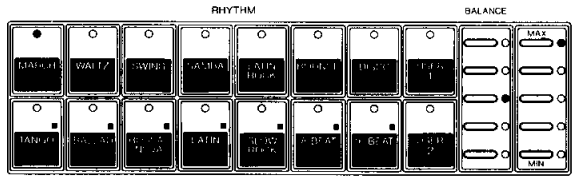
- If you wish to add the data of a Fill In, Intro or Ending pattern at the position where the REGISTRATION MEMORY is switched (or vice versa), simultaneously set the pertinent switch (or numeric button) to ON, then program the desired addition at the position where the REGIST. button is lit up.

8-(2) R.S.P. (Rhythm Sequence Programmer)

The various types of sequence information of the RHYTHM section can be exclusively programmed and played back.

How to Create a New Program (RECORD Mode)

1 In advance, prepare the Rhythm patterns you will use for programming, then set the first pattern you will program.



Use of R.S.P. lets you program the various preset Rhythm patterns or original User patterns of your own creation. Before entering RECORD Mode, call all the patterns you wish to use for programming, then set only the first Rhythm pattern you will program to ON.

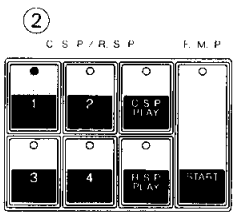
[Preset Patterns]

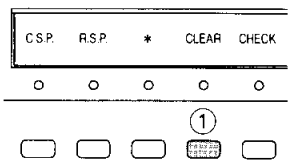
Panel Rhythm pattern	To program a Rhythm pattern that is displayed at a dotted button (its Original pattern), cancel its RHYTHM MENU assignment to restore its Original pattern. (➡Page 32)
RHYTHM MENU Rhythm pattern	To program any of the 18 Rhythm patterns of MULTI MENU and/or the 18 Variation patterns, first assign the desired pattern to a dotted button of the panel. (➡Page 32)
Fill In, Intro, and Ending patterns	The preset Fill In, Intro, and Ending patterns provide patterns corresponding to the respective preset patterns. To program a pattern corresponding to the RHYTHM MENU, first assign the RHYTHM MENU pattern to a dotted button.

[User Patterns]

Rhythm pattern	Use R.P.P. to create a new pattern or edit a preset pattern, then register that pattern to USER 1 or USER 2. (➡Page 38)
Fill In pattern	Use R.P.P. to create a new pattern or edit a preset pattern, then register that pattern to USER FILL IN. (➡Page 38)

2 While depressing the CLEAR button ①, press a numeric button ②.





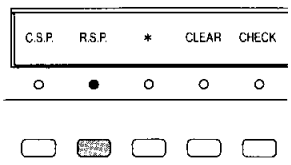
When the CLEAR button is pressed, the numeric buttons will begin flashing and "SEL" will be shown on the TEMPO/(DATA) Display. Press one numeric button while depressing the CLEAR button. Both the C.S.P. and R.S.P. lamps will begin flashing.

CAUTION: *In case C.S.P. and/or R.S.P. data has been registered at the pressed numeric button, such data will be completely erased.*

NOTE: If C.S.P. data has also been programmed to the same numeric button, playback of R.S.P. will result in the recalling of only the registration data when R.S.P. is played back, and the desired sound will not be achieved. To playback only R.S.P., be sure to use the above procedure to clear all of the C.S.P. and R.S.P. data.

3 Press the R.S.P. button.

The R.S.P. lamp lights up, indicating that a Rhythm sequence can now be programmed.



NOTE: If the C.S.P. button is pressed instead of the R.S.P. button, it will become possible to program a Chord sequence. (➡Page 42)

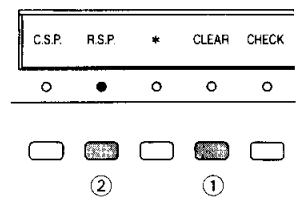
[To Create a New Program Only at R.S.P. without Erasing C.S.P. Data]

Although each numeric button 1-4 has one channel each for C.S.P. and R.S.P., playback of R.S.P. also results in playback of the Registration sequence data of C.S.P. that is programmed to that numeric button. If you thus program R.S.P. in accordance with the C.S.P. program, the registrations (excluding the RHYTHM section) will also be switched during playback. It is also possible to concurrently play back the Chord sequence data. (➡Page 48)

C.S.P. Channel	Chord sequence
	Registration sequence
R.S.P. Channel	**Rhythm sequence**

To program R.S.P. according to the previously programmed C.S.P. data, perform the below procedure to clear only the R.S.P. channel without performing the ALL CLEAR operation:

(a) While depressing the CLEAR button ①, press the R.S.P. button ②.



(b) Press one of the flashing numeric buttons 1-4.

[The Scope of User Pattern Data You Can Record to R.S.P.]

With R.S.P., the preset patterns and the sequence data of User patterns created using R.P.P. can be programmed to each numeric button.

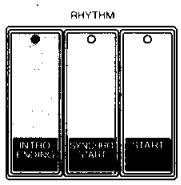
- The programmable data consists of the ON/OFF data of the USER buttons and the data describing which button of REGISTRATION MEMORY is ON at that time.
- The actual contents of a registered User pattern cannot be programmed.
- If the contents of a registered User pattern are not the same during programming and playback, the played back pattern will differ from the programmed one. If you wish to play back the registered pattern used in programming, transfer the User pattern data to a RAM Pack or other media after programming is completed. (➡Pages 20 & 38)

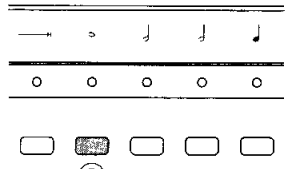
[Memory Capacity of R.S.P.]

The R.S.P. memory capacity is counted by the quantity of the input data (the number of times the Duration and/or Repetition buttons have been pressed). Approximately 120 sets of data can be programmed to each numeric button.

- The amount of programmed data is shown on the TEMPO/(DATA) Display.
- When data is input while the remaining memory capacity is low, three fast alarms are sounded. If you attempt to input data while no free memory area remains, three slow alarms are sounded to indicate that no further data can be input.
- In case the remaining memory capacity of one numeric button becomes low, terminate the programming, then continue programming the remaining data to another numeric button. You can achieve consecutive playback by setting multiple numeric buttons to ON at playback. (➡Page 48)

4 If necessary, program an Intro pattern.

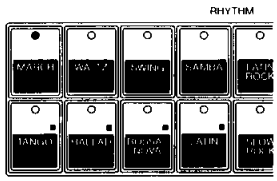


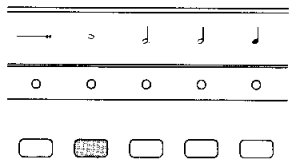


① ②

To program an Intro pattern at the beginning of the song, keep the INTRO./ENDING switch ① depressed and press the ● button ② (or the 𝅗𝅥 button for 3/4 time).

5 Press a Duration button to program a Rhythm pattern.



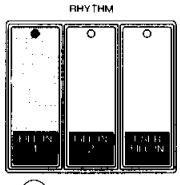


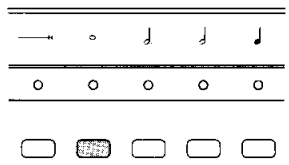
After checking that the first Rhythm pattern to be programmed is set to ON, press the ● button (or the 𝅗𝅥 button for 3/4 time) once for each bar you wish to program.

NOTE: By setting the CHECK button to ON then starting the rhythm, you can monitor the Rhythm pattern to be programmed a datum at a time.

CAUTION: *Make sure the USER button is set to OFF before programming a preset pattern.*

6 If necessary, program a Fill In pattern.





① ②

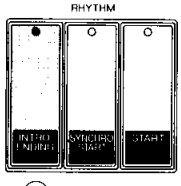
To program a Fill In pattern at the position, for example, prior to a change in the Rhythm pattern, keep the pertinent FILL IN switch ① depressed and press the ● button ② (or the 𝅗𝅥).

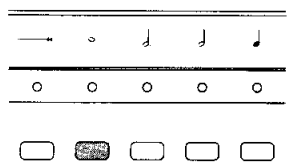
7 Change the Rhythm pattern, then press a Duration button.

Set another Rhythm pattern at the panel, then sequentially continue programming by pressing a Duration button once for each bar you wish to program. The Rhythm pattern can be switched as many times as you wish.

NOTE: When programming a switching of the Rhythm pattern to R.S.P., it is not necessary to press the REGIST. button as during C.S.P. programming.

8 If necessary, program an Ending pattern.





① ②

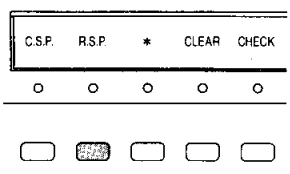
To program an Ending pattern at the end of the song, keep the INTRO./ENDING switch ① depressed and press the ● button (or 𝅗𝅥 button) ② twice.

9 After you complete programming, input a Cadence symbol.

While depressing the 𝄞 button, press the ⟶ button to input a Cadence symbol at the end of the sequence data.

10 Press the R.S.P. button to OFF.

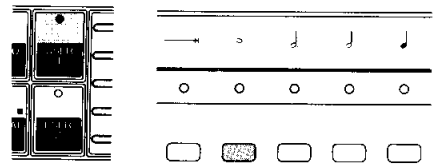
Now, try using the above procedure to program data to the other numeric buttons.



[How to Program the User Patterns]
Use the below procedure to program the User patterns that have been created and registered using R.P.P.:

(a) Press the numeric button of REGISTRATION MEMORY that is registered with the User pattern to be programmed.

(b) Set USER 1 or USER 2 to ON, then press a Duration button to program the required pattern duration.



(c) Change to another User pattern, then press a Duration button.

- It is possible to program a User pattern that has been combined with a preset pattern.
- To program a User Fill In pattern, set the numeric button that is registered with the desired Fill In pattern to ON, then press a Duration button while depressing the USER FILL IN switch.
- When registering the User patterns you have created, it is convenient to register them in the same order you will be using during programming.
- It is possible to press the 𝅗𝅥 and ♩ buttons to program a duration shorter than one 4/4 bar, then switch to another pattern. In this case, be sure to create a User pattern that will connect smoothly when the Rhythm pattern is changed during the bar. You can also achieve an interesting effect by registering the same pattern to multiple numeric buttons after changing only the PAN value for a specific instrument, then alternately programming those patterns for a variation in the panning of that instrument according to the desired rhythm.
- While a USER button of the RHYTHM section is ON, the programming of the preset Fill In (USER 1 and 2), Intro, and/or Ending patterns will result in patterns which correspond to the currently lit preset Rhythm patterns.

[Programming the Repetition Symbols]
At positions where the same Rhythm sequence will be repeatedly programmed, input can be performed more efficiently by using the Repetition buttons (𝄋 , 𝄎 , and D.S.). Each button functions in the same way as during C.S.P. programming. (➡Page 43)

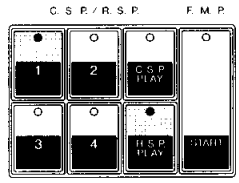
[Memorization to a RAM Pack]
By performing a To Pack operation, the programmed sequence data can be transferred to a RAM Pack together with the data of REGISTRATION MEMORY, R.P.P. data, and so on. The contents of the User patterns cannot be programmed to R.S.P., so if you wish to save the User pattern data created during recording, be sure to transfer it to a RAM Pack. In addition, you can recall the data from a RAM Pack to the Electone by performing a From Pack operation. (➡Page 20)

[Regarding Recording with C.S.P.]
- The numeric value of the TEMPO/(DATA) Display is incremented by one each time a datum is input. If you are inputting the Rhythm pattern in bar units, the Display value will serve as a reference to the input position.
- After inputting a two-bar Ending pattern, it is still possible to program a Rhythm pattern.
- If you have not yet set the R.S.P. button to OFF, the programmed data can be edited just as during EDIT Mode. (➡Page 48)
- Even if you forget to program a Cadence symbol at the end of the song, the Cadence symbol will be automatically programmed at the ending position.
- The data programmed to the numeric buttons 1-4 will be backed up (for at least one week) even during Power OFF status (or while the pertinent numeric buttons are OFF).

How to Perform Playback (PLAY Mode)

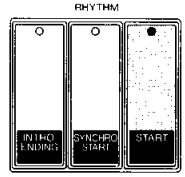
1 Set one numeric button to ON, then set the R.S.P. PLAY button to ON.

NOTE: If you have transferred data of R.P.P. or REGISTRATION MEMORY to a RAM Pack after completing recording, perform the From Pack operation to recall the data to the Electone before performing Step 1.



2 Start the rhythm.

Set the tempo then start the rhythm. Playback will now begin.



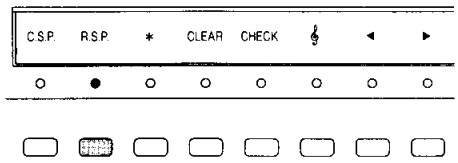
3 Play the melody in time with the played back Rhythm pattern.

The Rhythm pattern will be automatically switched in the programmed sequence and the Fill In, Intro, and Ending patterns will also be played back if they have been programmed. When playback ends, the rhythm is automatically stopped and the lamp of the lit numeric button will go off.

CAUTION: *While a numeric button from 1-4 is ON, neither RECORD nor EDIT Mode can be entered. Unless you are in PLAY Mode, be sure to set the numeric buttons to OFF.*

How to Edit Registered Data (EDIT Mode)

1 Press the R.S.P. button.

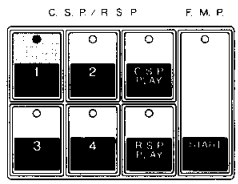


When the R.S.P. button is pressed, the numeric buttons 1-4 will begin flashing and "SEL" will be shown on the TEMPO/(DATA) Display.

CAUTION: *If you wish to edit the programmed data, do not press the CLEAR button. Pressing the CLEAR button will completely erase the data registered to the numeric button.*

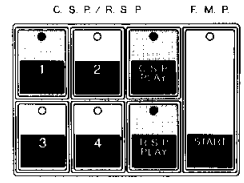
2 Press one of the flashing numeric buttons.

Press the numeric button that is programmed with the data you wish to edit. The pressed numeric button will light up, indicating that editing can be performed. (The R.S.P. button of MULTI MENU will also light up.)



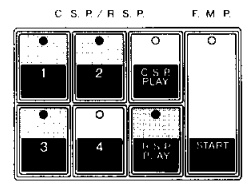
NOTE: Upon entering EDIT Mode, the button of the Rhythm pattern that is programmed at the beginning of the sequence data will light up. If an Intro pattern has been programmed at the beginning, the INTRO./ENDING switch will also light up.

[Simultaneous Playback of R.S.P. and C.S.P.]
By setting both the R.S.P. PLAY and C.S.P. PLAY buttons to ON and then starting the rhythm, you can achieve simultaneous playback of the Chord sequence and Rhythm sequence.



- When R.S.P. and C.S.P. are simultaneously played back, only the RHYTHM section data of the Registration sequence data of C.S.P. will be replaced by the R.S.P. sequence data.
- The numeric buttons of REGISTRATION MEMORY will light up according to the C.S.P. data. In case a User pattern has been programmed to R.S.P., the numeric button will not light up as programmed but the User pattern will be played back as programmed.
- When programming data that is to be simultaneously played back, make sure that the bars of both R.S.P. and C.S.P. are properly synchronized.
- For simultaneous playback of R.S.P. and only the Registration sequence data of C.S.P., set only the R.S.P. PLAY button to ON.

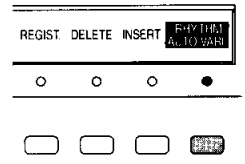
[Consecutive Playback]
By concurrently setting two or more numeric buttons from 1-4 to ON, the sequences programmed to the pressed numeric buttons can be consecutively played back.



- You can freely decide which and how many numeric buttons to set to ON. (Consecutive playback of up to four buttons is possible.)
- Playback will be sequentially performed from the numeric button of the lowest number to that of the highest number.
- Consecutive playback is even possible during simultaneous playback of R.S.P. and C.S.P.

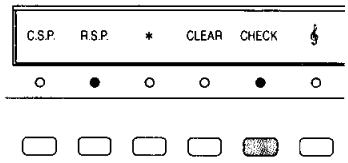
[Regarding Playback with C.S.P.]
- If the C.S.P. data of another song has been programmed to the same numeric button, R.S.P. playback will produce that C.S.P. registration sequence and the desired results will not be achieved. In this case, transfer the C.S.P. data to a RAM Pack, then clear the C.S.P. channel.
- Even during R.S.P., it is possible to operate the panel to change the Rhythm pattern or set ON a Fill In, Intro, and/or Ending pattern. In case the Rhythm pattern is changed, however, the Rhythm pattern that was changed at the panel will be canceled at the position where another Rhythm or Fill In pattern has been programmed.

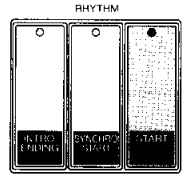
[AUTO VARIATION]



Setting this button to ON or OFF lets you select whether or not the (preset) Rhythm patterns will be automatically varied.
OFF: Each Rhythm pattern will be repeated as a two-bar unit.
ON: The fourth and eighth bar of the Rhythm pattern will automatically be varied slightly. (Each Rhythm pattern will be repeated as an eight-bar unit.)

3 Press the CHECK button to ON, then start the rhythm.

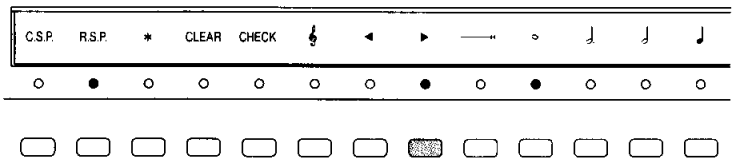




The pattern (Rhythm pattern, Intro, etc.) that is currently ON at the panel will be sounded. If you set the CHECK button to ON, start the rhythm, then use the button to advance to a data position, and the pattern that is programmed at only that current position will be sounded.

NOTE: Although the data can also be checked by leaving the CHECK button set to off and without starting the rhythm, the rhythm will not be sounded in that case.

4 Press the button to sequentially check the data.



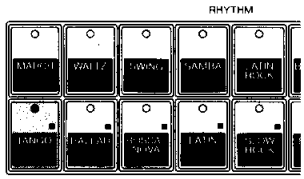
The data position is advanced one position each time the ▶ button is pressed, so you can sequentially check the data. If you wish to return to a previous data position, press the ◀ button. The methods for checking each data type are listed below:

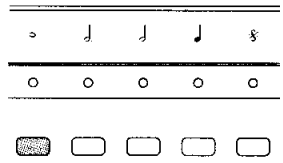
Rhythm Pattern Check	Lights up one Duration button and the button of the programmed Rhythm pattern, and sounds that Rhythm pattern.
Fill In, INTRO./ ENDING Check	The FILL IN or INTRO./ENDING switch lights up at the input position, and the pertinent pattern is sounded.
Repetition Symbol Check	One Repetition button lights up at the input position.

5 Edit the data.

[To Revise Data]

To revise the data, program the correct data at the position of the mistaken data.

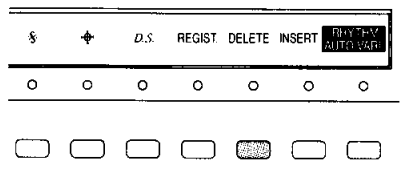




In addition to revising Rhythm patterns, it is also possible to revise Repetition symbol data, add or revise Fill In pattern data, and add Intro./Ending pattern data.

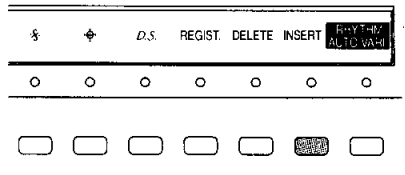
[To Delete Data]

To delete unnecessary data (in case there are too many input bars, for example), press the DELETE button at the position of the data you wish to delete.



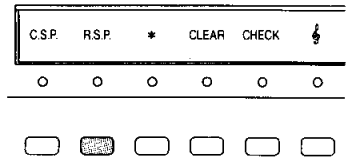
[To Insert Data]

To insert new data, (in case there are not enough bars or a Repetition symbol is required, for example), first advance to the next position after the position where you wish to insert data, then press the INSERT button. If you next program new data, it will be inserted in front of the current position.



6 After editing is completed, press the R.S.P. button to OFF.

Now, try using the above procedure to edit the data programmed to the other numeric buttons.



[How to Shift the Data Position]

Besides the ▶ button, the data position can also be shifted by using the ◀ button and 𝄞 button as follows:

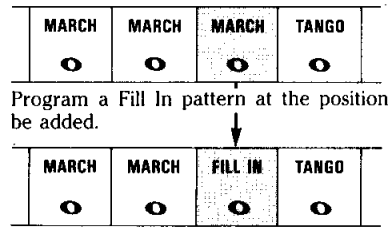
[▶]	Advances one position each time it is pressed.
[◀]	Moves backward one position each time it is pressed.
[𝄞]+[▶]	Advances directly to the end of the song.
[𝄞]+[◀]	Moves backward directly to the beginning of the song.

[To Check by Starting the Rhythm]

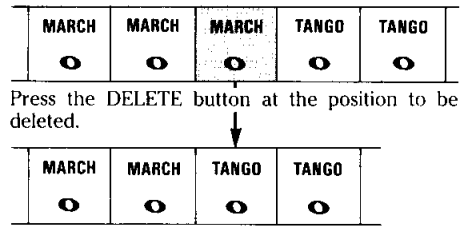
If you leave the CHECK button set to OFF and start the rhythm, the programmed Rhythm sequences will be played back in their programmed order. Instead of setting CHECK to ON and checking one datum at a time, this procedure permits a realtime check of the programmed data. If you wish to edit the data during the course of the check, stop the rhythm, use the ◀ button to return to the position of the data to be edited, then perform editing.

[Editing Samples of R.S.P.]

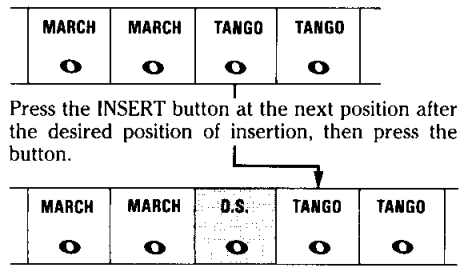
(Ex. 1) Adding a Fill In pattern:



(Ex. 2) Deleting an unnecessary bar:

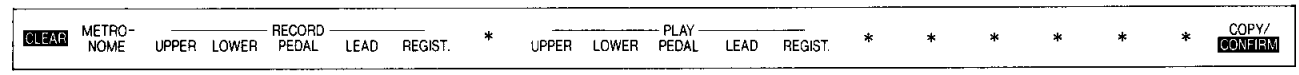


(Ex. 3) Inserting a D.S. symbol:



[Regarding Editing with R.S.P.]

- The preset Rhythm patterns that can be revised are limited to those that have been assigned to panel buttons during RECORD Mode.



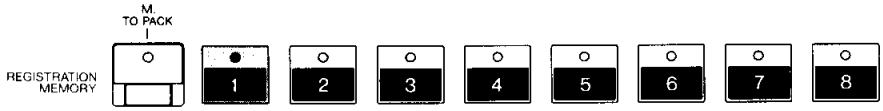
9 F.M.P. (Full Music Programmer)

Your performance can be recorded and played back in realtime.

How to Record the Performance (RECORD Mode)

Entering RECORD Mode

1 Set into REGISTRATION MEMORY, the registrations you will be using for your performance in advance.

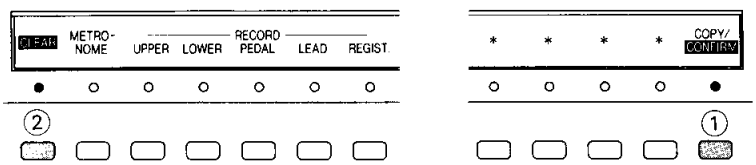


Before entering RECORD Mode, be sure to memorize the registrations you will require for your performance to the numeric buttons of REGISTRATION MEMORY, then set to ON the numeric button of REGISTRATION MEMORY that corresponds to the registration you will use at the beginning of the song. (➡Page 18)

NOTE: F.M.P. can record the accompaniment regardless of the ON/OFF status of AUTO BASS CHORD. If you wish to simplify recording, select the AUTO BASS CHORD mode at the MULTI MENU, light up the ON button of the panel A.B.C. section, then memorize that setting to REGISTRATION MEMORY. (➡Page 62)

CAUTION: *Any registration that has been changed at the panel prior to starting recording will not be recorded to F.M.P. Be sure to memorize any registration that has been set at the panel to REGISTRATION MEMORY.*
Furthermore, the actual contents of the Registration data memorized to REGISTRATION MEMORY will not be recorded to F.M.P., so be sure to transfer that data to a RAM Pack.

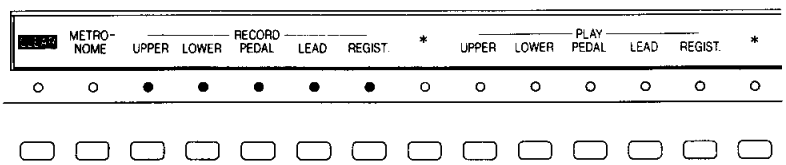
2 While depressing the COPY/CONFIRM button ①, press the CLEAR button ②.



All buttons of the RECORD section will light up, indicating that RECORD Mode has been entered.

CAUTION: *If a performance has already been recorded, that data will be completely erased. If you wish to save the data, be sure to transfer it to a RAM Pack or Cassette Tape. (➡Page 54)*

3 Select the part to be recorded.



The five buttons of the RECORD section control the ON/OFF status of the tracks for recording the corresponding parts.

UPPER	Track for recording the performance data of the upper keyboard.
LOWER	Track for recording the performance data of the lower keyboard. If SINGLE FINGER or FINGERED CHORD of AUTO BASS CHORD has been selected, the bass accompaniment data will also be recorded.
PEDAL	Track for recording the performance data of the pedal keyboard (in case of recording with AUTO BASS CHORD set to OFF or using CUSTOM A.B.C.)
LEAD	Track capable of recording only the performance data of LEAD VOICES independently of the performance data of the upper keyboards.
REGIST.	Track for recording the data describing the switching of REGISTRATION MEMORY, etc., independently of the performance data of the keyboards.

Each of these five buttons are automatically set to ON upon entering RECORD Mode. Though it is possible to play the three keyboards to simultaneously record all the parts together, first try recording by starting with the accompaniment part.

[Entering RECORD Mode without Clearing the Data]
When Steps 1 and 2 are performed to enter RECORD Mode, all previously memorized F.M.P. data at the Electone will be erased. To redo the recording of a specific part without erasing all the previously recorded data, perform the below procedure without performing the Clear operation:

(a) At the RECORD section, set the button corresponding to the part you wish to record to ON.
(b) At the PLAY section, set the button corresponding to the other parts to ON.
(c) Set the F.M.P. START switch to ON to perform recording.
When the F.M.P. START switch is set to ON, only the data of the track that is set to ON at the RECORD section will be erased and only that track will be recorded.

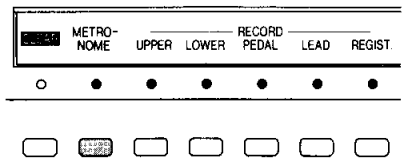
[Memory Capacity of F.M.P]
The maximum recording period of F.M.P. will vary with the contents of the performance (the quantity of notes and of the registration data).

- For normal performances, a song approximately three minutes in length can be recorded.
- The memory capacity is counted for each of the five tracks. When the memory capacity of one track becomes full, the lamp of the button corresponding to that track will light up and then go off.
- If the memory capacity for one track becomes full during recording, reduce its amount of data by reducing the number of notes, etc., then redo the recording of that track.

[Simultaneous Recording of All Parts]
In case you wish to play the three keyboards to simultaneously sound all parts and play back that recording as is, perform the below procedure:

(a) While depressing the COPY/CONFIRM button, press the CLEAR button.
All five buttons of the RECORD section will automatically be set to ON.
(b) Set the F.M.P. START switch to ON, start your performance, then set the F.M.P. START switch to OFF when your performance is completed.
If you make a mistake while playing a certain part, you can redo the recording of only that part.
(c) Set the F.M.P. START switch to ON.
All five buttons of the PLAY section will automatically be set to ON and your recorded performance will be played back.

[The METRONOME Button]

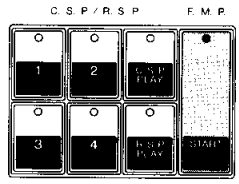


When this button is set to ON after entering RECORD Mode, a metronome will be sounded from the time the F.M.P. START switch is pressed until the rhythm is started. This button is very helpful when recording the accompaniment without inserting a beginning Intro pattern, recording a performance without using rhythm, and so on.

Recording the Accompaniment

4 Set the F.M.P. START switch at the panel to ON.

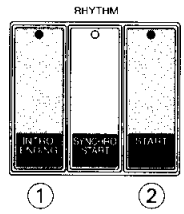
Since RECORD Mode will be entered by setting the F.M.P. START switch to ON, you can start your performance at any time.



NOTE: Recording will begin from the moment the START switch is set to ON. After the switch is set to ON, therefore, the interval prior to starting the performance will be recorded as a blank interval.

5 If necessary, keep the INTRO./ENDING switch ① of the RHYTHM section depressed and press the START switch ②.

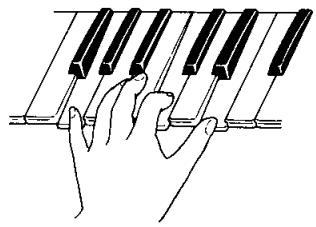
To record only the accompaniment first, be sure to record the Intro pattern of the RHYTHM section at the beginning of the song. When you later record the melody part, it will be easy to determine the timing for starting your performance.



NOTE: In case of recording the registration to be used at the beginning of the song when recording the accompaniment, make sure that the REGIST. button of the RECORD section is ON, set the F.M.P. START switch to ON, then press the pertinent numeric button of REGISTRATION MEMORY. (➡Page 53)

6 Play the lower keyboard and record the accompaniment.

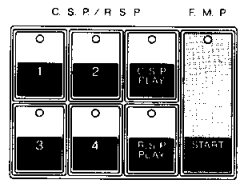
The Rhythm pattern will start after the one-bar Intro pattern is over, so play the lower keyboard and record the accompaniment.
When using AUTO BASS CHORD to simplify the playing of the accompaniment, press the keys of the lower keyboard according to the requirements of the mode selected at MULTI MENU. (➡Page 62)



NOTE: When recording the accompaniment in CUSTOM A.B.C. Mode of AUTO BASS CHORD, make sure that the LOWER and PEDAL buttons of the RECORD section are ON before playing the lower and pedal keyboards.

7 After recording until the end of the song, press the F.M.P. START switch to OFF.

After completing recording of the accompaniment, stop the rhythm and press the F.M.P. START switch to OFF. All five buttons of the RECORD section will automatically be set to OFF.



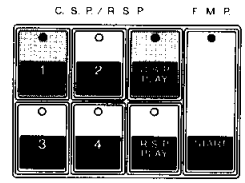
NOTE: In case you make a mistake playing chords during recording, set the LOWER button of the RECORD section to ON, set the F.M.P. START switch to ON, then redo the recording.

[Recording the Accompaniment Programmed at C.S.P.]

Instead of playing the accompaniment yourself, you can play back and record the accompaniment that has been programmed at C.S.P. (Chord Sequence Programmer). (➡Page 44)
After entering RECORD Mode, perform the below procedure:

(a) Set the F.M.P. START switch to ON.

(b) At the C.S.P./R.S.P. section, set a numeric button and the C.S.P. PLAY button to ON.



(c) When the rhythm is started, the accompaniment programmed at C.S.P. will be played back and recorded to F.M.P.

- When C.S.P. is played back, the programmed registration data will be reproduced together with the accompaniment. If the REGIST. button of the RECORD section has been set to ON, the reproduced registrations will also be recorded to F.M.P. (➡Page 53)

[Recording a Performance without Using Rhythm]

F.M.P. lets you record the accompaniment even if the rhythm is not started. Set the F.M.P. START switch to ON, then start your performance without starting the rhythm. Until the F.M.P. START switch is set to OFF, your performance will be recorded exactly as you play it.
For recording a performance without using rhythm, it is convenient to set the METRONOME button to ON so you can keep time with the proper tempo.

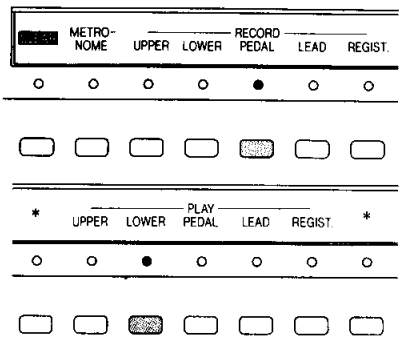
[If You Play the Pedal Keyboard and Record the Bass Accompaniment]

The accompaniment of the lower and pedal keyboards can be separately recorded without using AUTO BASS CHORD.

(a) Set the A.B.C. ON button at the panel to OFF.

(b) Make sure that the LOWER button of the RECORD section is ON, then set the F.M.P. START switch to ON and record your performance at the lower keyboard.
After completing recording of the lower keyboard accompaniment, set the F.M.P. START switch to OFF.

(c) Set the PEDAL button of the RECORD section to ON, then set the LOWER button of the PLAY section to ON.

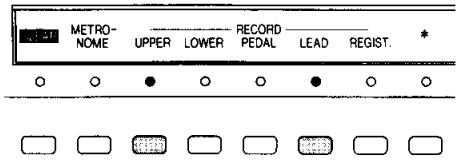


(d) Set the F.M.P. START switch to ON and play the pedal keyboard along with the played back accompaniment of the lower keyboards.
After completing recording of the pedal keyboard, set the F.M.P. START switch to OFF.

- It is also possible to set the LOWER and PEDAL buttons of the RECORD section to ON, then simultaneously record your performance on the lower and pedal keyboards.
- You can also record your performance on the pedal keyboard first, then next record your performance on the lower keyboard.

Recording the Melody

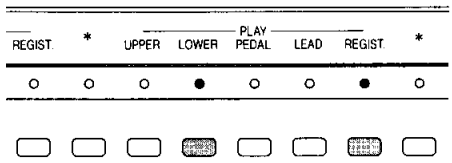
8 Set the UPPER and LEAD buttons of the RECORD section to ON.



In order to play the melody on the upper keyboard, set either the UPPER or LEAD button to ON, depending on which Voice section has been set at the ENSEMBLE section.

To play the melody using a non-LEAD VOICES Voice section	Set only the UPPER button to ON.
To play the melody using LEAD VOICES	Set only the LEAD button to ON.
To play the melody using a non-LEAD VOICES Voice section with LEAD VOICES	Set both the UPPER and LEAD buttons to ON.

9 Set the LOWER and REGIST. buttons of the PLAY section to ON.

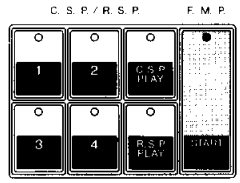


By setting the LOWER button of the PLAY section to ON, the melody can be recorded while the previously recorded accompaniment is being played back.
By setting the REGIST. button to ON, the Intro pattern and Rhythm patterns that were recorded during the recording of the accompaniment can be played back. Also, if a numeric button of REGISTRATION MEMORY was pressed at the beginning of the song, its corresponding registration will also be recalled.

NOTE: In case you have recorded your performance on the pedal keyboard with either the CUSTOM A.B.C. Mode or AUTO BASS CHORD set to OFF, be sure to also set the PEDAL button of the PLAY section to ON.

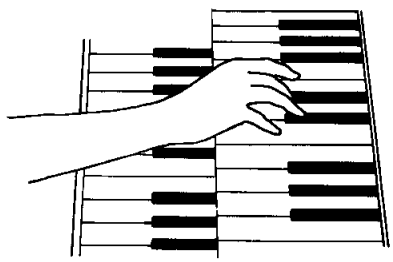
10 Set the F.M.P. START switch to ON.

After the recorded Intro pattern has sounded, start the rhythm to play back the recorded accompaniment.



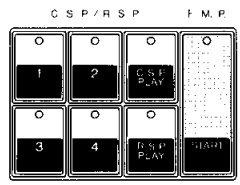
11 Play the upper keyboard and record the melody.

Play the melody, being sure to keep time with the rhythm and accompaniment that are being played back.



12 After playing the melody to the end of the song, press the F.M.P. START switch to OFF.

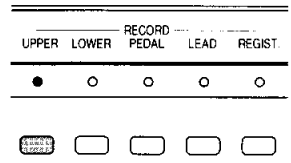
After completing recording of the melody, set the F.M.P. START switch to OFF. All the buttons of the RECORD and PLAY sections will automatically be set to OFF.



NOTE: If you make a mistake while playing the melody, set the UPPER and LEAD buttons of the RECORD section to ON then re-do the recording.

[Recording the Obbligato]
With F.M.P., you can record only the performance of LEAD VOICES on a track separate from the UPPER track, thereby enabling you to record the melody and next record the obbligato (or a counter melody).

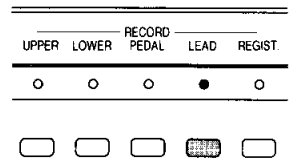
(a) Set a Voice section other than LEAD VOICES, then set the UPPER button of the RECORD section to ON.



If necessary, also set a button of the PLAY section to ON.

(b) Set the F.M.P. START switch to ON, then play and record the melody on the upper keyboard.
After completing recording, set the F.M.P. START switch to OFF.

(c) Set a LEAD voice, then set the LEAD button of the RECORD sections to ON.



If necessary, set the UPPER button, etc., of the PLAY section to ON.

(d) Set the F.M.P. START switch to ON, then play and record the obbligato on the upper keyboard.
After completing recording, set the F.M.P. START switch to OFF.

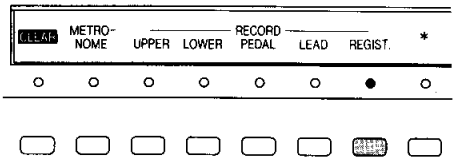
- You can also record the melody using a LEAD voice first, then later record the obbligato using a non-LEAD voice.
- In case you have separately recorded your LEAD VOICES performance and your performance of another Voice section, set the ENSEMBLE section to enable simultaneous sounding of the LEAD voice and a non-LEAD upper keyboard voice, then record that registration. (➡Page 53)
- Recording of the LEAD VOICES section can also be performed using only the upper keyboard, but not using the lower keyboard.

[In Case TOUCH TONE is Set to ON]
If you set TOUCH TONE of MULTI MENU to ON for recording with F.M.P., you can record the minute fluctuations of the volume and timbre that are controlled by Initial Touch of the keys (the intensity with which the keys are initially pressed). (➡Page 57)

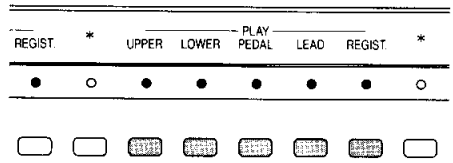
- Only fluctuations due to Initial Touch can be recorded to F.M.P., and fluctuations due to After Touch cannot be recorded.

Recording the Registrations

13 Set the REGIST. button of the RECORD section to ON.



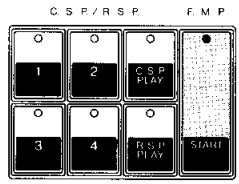
14 Set the buttons of the PLAY section to ON.

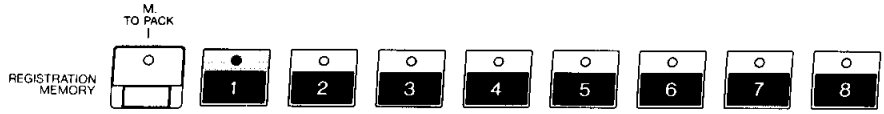


By setting the buttons corresponding to the recorded parts to ON, the registration part will be recorded during playback of the performance. In addition, by setting the REGIST. button of the PLAY section to ON, the Intro and Rhythm patterns that were recorded during the recording of the accompaniment can be played back.

NOTE: Only in case of the registration part, the REGIST. buttons of the RECORD and PLAY sections can be simultaneously set to ON, so you can edit a previously recorded basic registration while it is being played back.

15 Set the F.M.P. START switch to ON, then press the numeric button corresponding to the registration you will use at the beginning of the song.

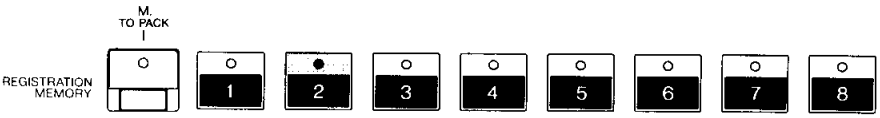




In case a numeric button of REGISTRATION MEMORY was not recorded at the beginning of the song, press one of the numeric buttons during the interval after setting the F.M.P. START switch to ON and before the start of playback.

NOTE: Only in case of the registration to be programmed at the beginning of a song, the numeric button that is currently ON at that time will be automatically programmed even if a numeric button has not been pressed.

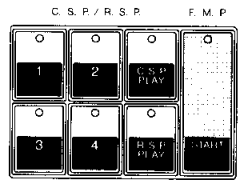
16 While listening to the playback, change the registration.



After the recorded Intro pattern has sounded, start the rhythm to play back the recorded accompaniment and melody. While listening to the playback, press another numeric button of REGISTRATION MEMORY in the proper timing.

NOTES: A registration that has been changed by pressing a panel button or switch will also be recorded. If necessary, perform such changes as adding a Fill In or Ending pattern, changing a voice, Rhythm pattern or volume level, and so on. As long as the range of memory capacity is not exceeded, the registration may be switched any number of times.

17 After completing the recording of registrations to the end of the song, press the F.M.P. START switch to OFF.



NOTE: If you make a mistake while changing a registration or making other changes, you need not redo the recording from the very beginning. Simply edit the mistaken section using the above procedure.

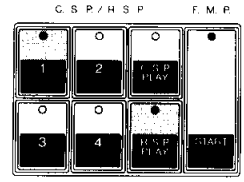
[Recording the Rhythm Sequences Programmed at R.S.P.]

The Rhythm sequences programmed to R.S.P. can be recorded to F.M.P. while they are being played back. (➡Page 48)

After setting the REGIST. button of the RECORD section to ON, perform the below procedure:

(a) Set the F.M.P. START switch to ON.

(b) Set a numeric button and R.S.P. PLAY button to ON at the C.S.P./R.S.P. section.



(c) Start the rhythm to play back the Rhythm sequences programmed at R.S.P. and they will be recorded to the registration part of F.M.P.

- When performing the above playback, if the sequence data of C.S.P. has been programmed to the same numeric button, the registration at sections other than the RHYTHM section will also be switched. If you do not need the C.S.P. Registration sequence, be sure to erase the C.S.P. channel. (➡Page 46)
- If you wish to play back and record to F.M.P. only the Registration sequence of C.S.P., set only the numeric button to ON and not the R.S.P. PLAY button.

[The Scope of the Registration Data You Can Record to F.M.P.]

- The data that can be recorded consists of the data describing which button of REGISTRATION MEMORY has been pressed as well as the data describing which of the panel buttons and switches have been pressed.
- The actual contents stored within REGISTRATION MEMORY will not be recorded.
- If the memorized contents of REGISTRATION MEMORY are not the same during recording and playback, the played back registrations will differ from the recorded registrations. If you wish to play back the recorded registrations, transfer the programmed data to a RAM Pack or other media after programming is completed. (➡Page 20)

[Regarding Recording with F.M.P.]

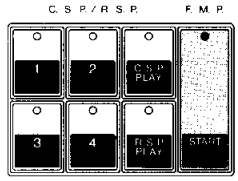
- Recording to each track will be terminated upon setting the F.M.P. START switch to OFF. The RECORD Mode will remain valid even if the rhythm is stopped.
- If the performances recorded at each track are of different lengths, playback will continue until the longest performance is over. When performing recording separately to multiple tracks, maintain as much consistency as possible in the timing for stopping the rhythm and the timing for setting the F.M.P. START switch to OFF.
- The data recorded to F.M.P. will be backed up (for at least one week) even during Power OFF status.

- **CAUTION:** In case you record your performance to an external device, such as MDR-2, the F.M.P. data that is currently memorized at the Electone will be transmitted at the start of the recording operation. Its memorization to the external device, however, will require about 40 seconds or more.
  If the F.M.P. data need not be memorized to an external device, you can use the External/MIDI Control function to switch to a status which excludes only the F.M.P. data from transmission to the external device. (➡Page 76)

How to Playback Your Performance (PLAY Mode)

1 Set the F.M.P. START switch to ON.

Set all five buttons of the PLAY section to ON to start playback of all the parts.



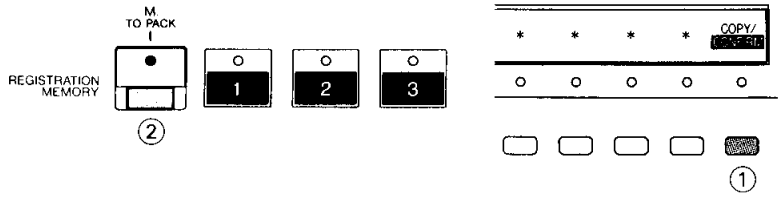
NOTE: If you have transferred data of REGISTRATION MEMORY to a RAM Pack after complating recording, perform the From Pack operation to recall the data to the Electone before performing Step 1.

2 If necessary, perform on top of the played back music.

Besides the pleasure of simply listening to the played back performance, it is also delightful to play along with it. Try playing the obbligato or a counter melody on either the upper or lower keyboard along with the playback sounds.
When the playback is completed, the F.M.P. START switch will automatically be set to OFF.

How to Store the Recorded Data (TO PACK)

While depressing the COPY/CONFIRM button ①, press the TO PACK button ②.

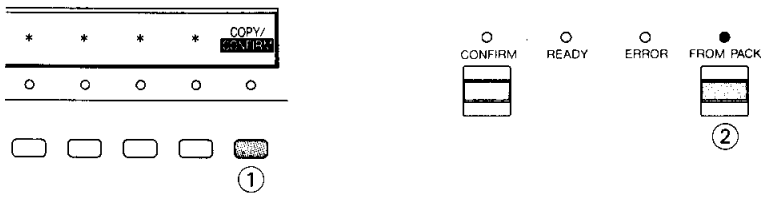


First, insert a RAM Pack into the Electone and confirm that the READY lamp has lit up. Next, while depressing the COPY/CONFIRM button at the right of F.M.P. on the MULTI MENU, press the TO PACK button at the REGISTRATION MEMORY section. The TO PACK lamp will flash, indicating that the F.M.P. data has been transferred to the RAM Pack.

CAUTION:
- *RAM Pack RP-3 is designed to prevent the transfer of the recorded data to the Registration track.*
- *When the above procedure is performed, all data that was previously memorized in the RAM Pack will be erased and replaced by the F.M.P. data.*

How to Recall the Transferred Data (FROM PACK)

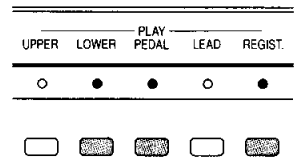
While depressing the COPY/CONFIRM button ①, press the FROM PACK button ②.



To recall to the Electone the F.M.P. data that was transferred to a RAM Pack, keep the COPY/CONFIRM button depressed and press the FROM PACK button. The FROM PACK lamp will flash, indicating that the data of the RAM Pack has been transferred to the Electone.

[Minus One Playback]
If you wish to play back only a specific part while playing the other parts yourself, perform the below procedure for Minus One playback:

(a) At the PLAY section, set the button of the part you wish to play back.



(b) Set the F.M.P. START switch to ON.
(c) Perform the parts that are not being played back.

[Regarding Playback with F.M.P.]
- The F.M.P. START switch can be set to ON even when the F.M.P. screen of the MULTI MENU is not being displayed, enabling playback to be executed at any time.
- The number of notes that can be simultaneously sounded when you are performing along with a played back performance consists of a combined maximum of seven notes for the upper and lower keyboards, including the played back notes. Furthermore, during the playback of a LEAD voice, your performance of a LEAD voice will not be sounded.

[Precautions on Using RAM Pack RP-3]
- The F.M.P. data that can be transferred to RAM Pack RP-3 using the procedure on the left consists of the performance data recorded to the UPPER, LOWER, PEDAL, and LEAD tracks.
- In the case a rather long song has been recorded to F.M.P., an Error status may occur so that the data cannot be transferred to RP-3.
- An Error status may occur in other cases as well, so always make sure to use the correct operating procedures. (➡Page 20)

[How to Store All of the F.M.P. Data]
If you wish to store all of the F.M.P. data as well as the Registration data, transfer the data to either RAM Pack RP-5 or to a Cassette Tape.
- The operating procedure for using RP-5 is identical to that for using RP-3.
- When the F.M.P. data is transferred to RP-5, all of the F.M.P. data will be transferred together with all data currently memorized at the Electone (REGISTRATION MEMORY data, USER VOICES data, User pattern data, and C.S.P./R.S.P. data).
- To transfer the data to a Cassette Tape, keep the CONFIRM button at the panel depressed and press the TO PACK button. (➡Page 21)

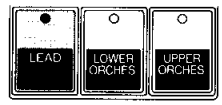
10-(1) USER VIBRATO

You can set the manner in which the Vibrato effect will be applied to the LEAD VOICES and ORCHESTRAL VOICES to best suit the song you will be performing.

Setting the User Vibrato of a Lead Voice

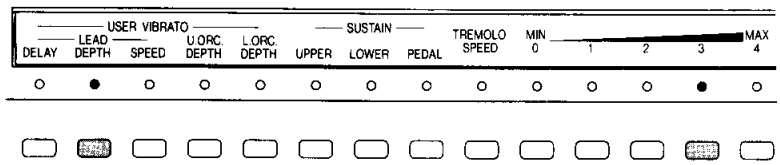
1 Set a Lead Voice at the panel, then set the LEAD button of the USER VIBRATO section to ON.

Set the LEAD VOICES volume, set the LEAD button of the ENSEMBLE section to ON, then set the LEAD button of the USER VIBRATO section to ON. (➡Page 17)



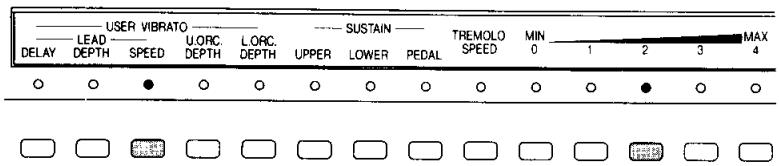
USER VIBRATO

2 Set the depth of Vibrato.



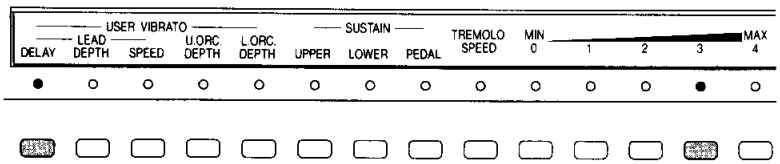
When the DEPTH button (second from the left) is set to ON, a lamp from "0" to "4" will light up to indicate the currently set Vibrato depth. While sounding the Lead voice, press one button from "0" to "4" to set the Vibrato depth. Selecting "0" practically cancels the Vibrato effect and selecting "4" sets the maximum Vibrato depth.

3 Set the speed of Vibrato.

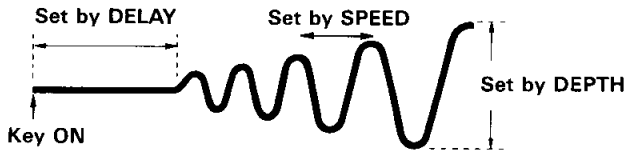


Next, set the SPEED button to ON, then press one button from "0" to "4" (as for the Vibrato depth setting) to set the Vibrato speed. Selecting "0" sets the slowest speed and selecting "4" sets the fastest speed.

4 Set the delay of Vibrato.



Next, set the DELAY button and press one button from "0" to "4" to set the Vibrato delay (the delay period from the time a key is pressed until the Vibrato effect becomes valid). Selecting "0" practically eliminates the delay time and selecting "4" sets the maximum delay time.



5 When a keyboard is played, the set Vibrato effect will be applied to the notes sounded.

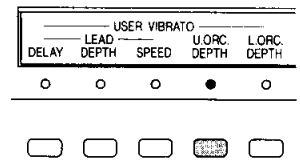
Since the data of the User Vibrato setting will be memorized, the set Vibrato effect can be produced at any time by setting the READ button of the panel USER VIBRATO section to ON.

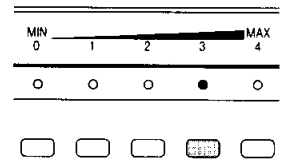
[Setting the User Vibrato of an Orchestral Voice]

(a) Set an Orchestral voice at the panel, then set the UPPER ORCHES. and LOWER ORCHES. buttons at the VIBRATO section to ON.


USER VIBRATO

(b) Set the Vibrato depth.





First, set the UPPER ORCHES. DEPTH button to ON, then press one button from "0" to "4" to set the depth of the Vibrato effect to be applied to the ORCHESTRAL VOICES of the upper keyboard.
To set the Vibrato depth for the ORCHESTRAL VOICES of the lower keyboard, set the LOWER ORCHES. DEPTH button to ON then press one button from "0" to "4".

(c) When a keyboard is played, the set Vibrato effect will be applied to the notes sounded.
The set Vibrato effect can be produced at any time by setting the UPPER ORCHES. and LOWER ORCHES. buttons at the panel USER VIBRATO section to ON.

[Memorizing the Vibrato Data]
The Vibrato effect set at the MULTI MENU can be memorized in REGISTRATION MEMORY. Try memorizing various sets of User Vibrato data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the manner in which the Vibrato effect will be applied. (➡Page 18)

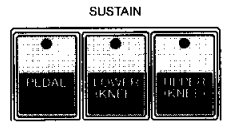
[Regarding the Use of User Vibrato]
- The User Vibrato values that have been set at the MULTI MENU will also be applied to any VOICE MENU voices that are assigned to the LEAD VOICES and to the ORCHESTRAL VOICES of the upper and lower keyboards.
- The User Vibrato data that has been set at the MULTI MENU will be backed up (for at least one week) even during Power OFF status (or while the panel USER VIBRATO section is OFF).

10-(2) SUSTAIN

The duration of the Sustain effect to be applied to the notes of each keyboard can be freely set.

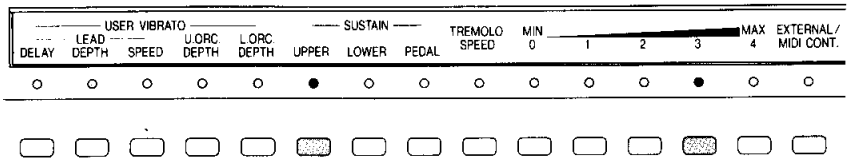
1 Set the voices of each keyboard at the panel, then set the UPPER, LOWER, and PEDAL buttons to ON.

Set the volume at each Voice section. At the ENSEMBLE section, set the button of each Voice section you wish to sound. Next, set the UPPER, LOWER, and PEDAL buttons of the SUSTAIN section to ON. (➡Page 17)

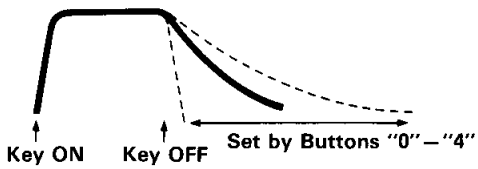


NOTE: The LEAD VOICES section is designed not to be affected by the Sustain effect.

2 Set the duration of Sustain.



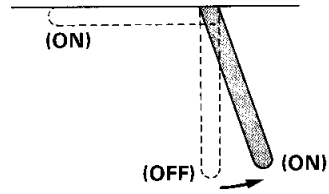
Setting SUSTAIN for the upper keyboard: Set the UPPER button to ON, then press a button from "0" to "4" to set the duration of the Sustain effect.
Setting SUSTAIN for the lower keyboard: Set the LOWER button to ON, then press a button from "0" to "4" to set the duration of the Sustain effect.
Setting SUSTAIN for the pedal keyboard: Set the PEDAL button to ON, then press a button from "0" to "4" to set the duration of the Sustain effect.



3 A Sustain effect which lasts the set duration will be applied to the notes of each keyboard after you release your fingers or feet from the keyboard.

Since the Sustain data that was set at the MULTI MENU will be memorized, the set Sustain effect can be produced at any time by setting the UPPER, LOWER or PEDAL button of the panel SUSTAIN section to ON.

[Control by the Knee Lever]
Use of the Knee Lever provided below the lower keyboard lets you perform realtime control of the ON/OFF status of the Sustain effect for the upper and lower keyboards. First, use the MULTI MENU to set the duration of Sustain, then set the UPPER and LOWER buttons of the panel SUSTAIN section to ON.



When the Knee Lever is perfectly vertical: The Sustain effect is completely canceled.
When the Knee Lever is pressed to the right: As long as the lever is being pressed, the Sustain effect is applied to any keyboard having a lit button at the panel SUSTAIN section.
When the Knee Lever is folded up: The Sustain effect is constantly applied to any keyboard having a lit button at the panel SUSTAIN section.

[Memorizing the Sustain Data]
The Sustain effect set at the MULTI MENU can be memorized in REGISTRATION MEMORY. Try memorizing various sets of Sustain data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the manner in which the Sustain effect will be applied. (➡Page 18)

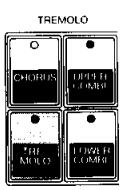
[Regarding the Use of the Sustain Effect]
- The Sustain values that have been set at the MULTI MENU will also be applied to any VOICE MENU voices that are assigned to the dotted buttons of each Voice Section.
- The Sustain data that has been set at the MULTI MENU will be backed up (for at least one week) even during Power OFF status (or while the panel SUSTAIN section is OFF).

10-(3) TREMOLO SPEED

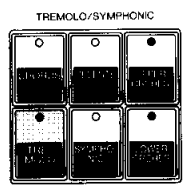
The rotating speed of the Tremolo effect can be freely set.

1 Set the Tremolo effect at the panel. (➡Page 16)

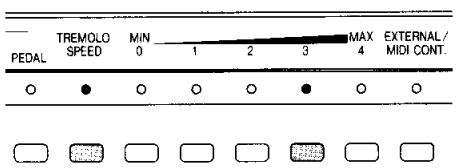
[HS-8•HS-7•HS-6]



[HS-5•HS-4]



2 Set the Tremolo Speed.



Set the TREMOLO SPEED button to ON, then press one button from "0" to "4" to set the rotating speed of Tremolo.

[Memorizing the Tremolo Speed Data]
The Tremolo Speed data set at the MULTI MENU can be memorized in REGISTRATION MEMORY. Try memorizing various sets of Tremolo Speed data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the Tremolo Speed. (➡Page 18)

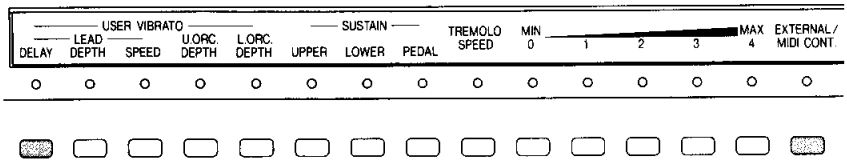
[Regarding the Use of Tremolo Speed]
- The Tremolo Speed data that has been set at the MULTI MENU will be backed up (for at least one week) even during Power OFF status (or while the panel TREMOLO section is OFF).

10-(4) EXTERNAL/MIDI CONT.

When transferring MIDI data between the Electone and an external device, it is possible to change modes or transmit specific signals as required.

1 Use the MIDI jack to connect the Electone with an external device. (➡Page 76)

2 While depressing the EXTERNAL/MIDI CONT. button, press any button on the same MULTI MENU screen.



[How You can Use the EXTERNAL/MIDI Control Functions]

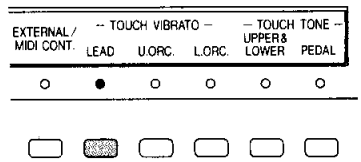
- Signal transmission for remote control of external devices
- Switching to a status that excludes F.M.P. data from transmission
- Switching the RHYTHM SYNCHRONOUS Modes
- Separating the Reception channels of LEAD VOICES
- Separating the Reception channels of ARPEGGIO CHORD
- Switching the Receive Enable/Disable Status for Expression Pedal data
- Changing the transmission channels for the upper and lower keyboards

10-(5) TOUCH VIBRATO

By the intensity of your touch on the keyboards, you can control the Vibrato effect on the LEAD VOICES and on the ORCHESTRAL VOICES of the upper and lower keyboards.

1 Set the TOUCH VIBRATO button(s) to ON.

LEAD: Is the Touch Vibrato switch for LEAD VOICES.
U. ORC.: Is the Touch Vibrato switch for ORCHESTRAL VOICES of the upper keyboard.
L. ORC.: Is the Touch Vibrato switch for ORCHESTRAL VOICES of the lower keyboard.



2 Play the upper or lower keyboard while controlling the manner in which the Vibrato effect is applied.

By use of the Keyboard After Touch function, you can control the Vibrato depth applied to any Voice section which has its TOUCH VIBRATO button in ON status. The harder you press the keyboard, the deeper the Vibrato depth (but the Vibrato speed remains constant).

NOTE: The maximum value of Vibrato depth that can be controlled by the Touch Vibrato function will correspond to the Depth value set at the USER VIBRATO section. Please note that Touch Vibrato will become invalid if DEPTH at the USER VIBRATO section is set to "0". (➡Page 55)

[Memorizing Touch Vibrato]

The Touch Vibrato ON/OFF data set at the MULTI MENU can be memorized in REGISTRATION MEMORY. Try memorizing various sets of Touch Vibrato ON or OFF data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the ON/OFF status of Touch Vibrato. (➡Page 18)

[Regarding the Use of Touch Vibrato]

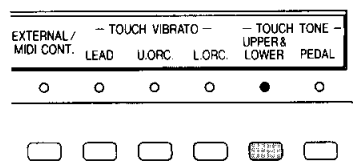
- The Touch Vibrato function data that has been set at the MULTI MENU will also be applied to any VOICE MENU voices that are assigned to the dotted buttons of each Voice Section.
- The Touch Vibrato ON/OFF data that has been set at the MULTI MENU will be backed up (for at least one week) even during Power OFF status.

10-(6) TOUCH TONE

By the intensity of your touch on the keyboards, you can minutely control the volume and timbre.

1 Set the TOUCH TONE button(s) to ON.

UPPER & LOWER: Are the respective Touch Tone switches for the upper and lower keyboards.
PEDAL: Is the Touch Tone switch for the pedal keyboard.



CAUTION: *With respect to the pedal keyboard, the Touch Tone function only operates for the HS-8 pedal keyboard. To operate the Touch Tone function of the pedal keyboard with the other models, use a remote MIDI keyboard, etc.*

2 Play the keyboards while controlling the volume and timbre of the notes.

The volume and timbre are minutely fluctuated by using the two types of keyboard touch below:

Initial Touch: Performs control according to the intensity (speed) with which the keys are pressed. The harder you strike the keys, the larger the volume and the brighter the timbre.

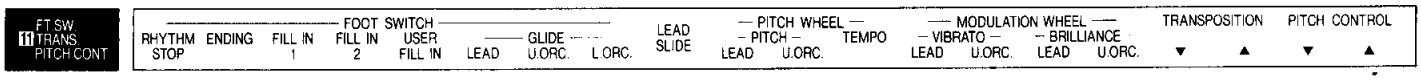
After Touch: Performs control according to the intensity with which the keys are additionally pressed after being initially pressed. The harder you press down on the keys, the larger the volume and the brighter the timbre. (After Touch is not applicable to percussion-related voices.)

[Memorizing the Touch Tone Data]

The Touch Tone ON/OFF data set at the MULTI MENU can be memorized in REGISTRATION MEMORY. Try memorizing various sets of Touch Tone ON or OFF data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the ON/OFF status of Touch Tone. (➡Page 18)

[Regarding the Use of Touch Tone]

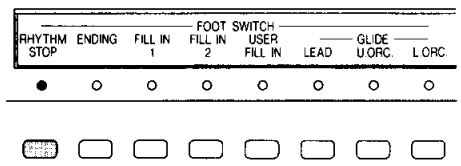
- The Touch Tone status that has been set at the MULTI MENU will also be applied to any VOICE MENU voices that are assigned to the dotted buttons of each Voice Section.
- The ON/OFF data of Touch Tone that has been set at the MULTI MENU will be backed up (for at least one week) even during Power OFF status.



11-(1) FOOT SWITCH

You can select the function for the Foot Switch which is attached to the left of the Expression Pedal.

1 Select a function from among the FOOT SWITCH buttons.



The functions which can be controlled by operating the Foot Switch may be broadly divided into two types:

Rhythm control: Enables the Foot Switch to be used for controlling the below functions of the RHYTHM section. (➡Pages 12 & 13)

RHYTHM STOP	Pressing the Foot Switch stops the rhythm, and pressing it once more starts the rhythm.
ENDING	Pressing the Foot Switch switches the rhythm to the Ending pattern, and the rhythm is stopped after the Ending is played.
FILL IN 1	Pressing the Foot Switch switches the rhythm to the FILL IN 1 pattern.
FILL IN 2	Pressing the Foot Switch switches the rhythm to the FILL IN 2 pattern.
USER FILL IN	Pressing the Foot Switch switches the rhythm to the USER FILL IN pattern.

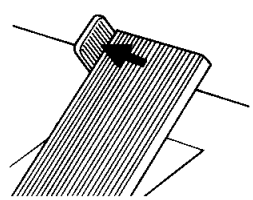
Glide effect: When the Foot Switch is pressed, the pitch of a specific voice is lowered a half-step. When you release your foot from the Foot Switch, the original pitch is gradually restored.

GLIDE	**LEAD**	The Glide effect switch for the LEAD VOICES.
	U. ORC.	The Glide effect switch for the ORCHESTRAL VOICES of the upper keyboard.
	L. ORC.	The Glide effect switch for the ORCHESTRAL VOICES of the lower keyboard.

NOTE: The LEAD, U. ORC., and L. ORC. buttons of the GLIDE section can all be set to ON at the same time.

2 Operate the Foot Switch.

While performing, press your toes against the Foot Switch provided at the left of the Expression Pedal. This will cause the function selected at the MULTI MENU to begin operating.



[The Right Foot Switch of HS-8]

HS-8 is equipped with one Foot Switch on each side of the Expression Pedal. The Foot Switch on the left controls the operation of the functions described on the left, while the right Foot Switch has two functions for controlling the numeric buttons of REGISTRATION MEMORY. (➡Page 19)

- **Shift function:** Each time the Foot Switch is pressed, the numeric button to the right of the currently lit numeric button becomes lit. After numeric button "16", the illumination status shifts to numeric button "1".
  This function is activated by pressing the right Foot Switch while pressing the M. button of the REGISTRATION MEMORY section.
- **Jump function:** Pressing the Foot Switch lets you jump at any time to a specific numeric button. This function is activated by pressing the right Foot Switch while pressing the numeric button to which you wish to jump.
- OFF: If you wish to disable all of the above-mentioned functions, press the Right Foot Switch while depressing the CONFIRM button.

[Memorizing the Selection of Foot Switch Functions]

The data describing the Foot Switch functions selected at the MULTI MENU can be memorized in REGISTRATION MEMORY. Try memorizing various sets of "Function ON" data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the functions of the Foot Switch. (➡Page 18)

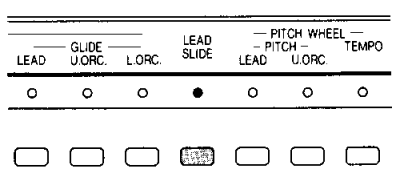
[Regarding the Use of the Foot Switch]

- While the Glide effect is operating due to manipulation of the Foot Switch, the Vibrato effect applied to that voice will be canceled.
- The Glide effect will also be applied to any VOICE MENU voices that are assigned to the dotted buttons of each Voice Section.
- The data describing the selected Foot Switch function that has been selected at the MULTI MENU will be backed up (for at least one week) even during Power OFF status.

11-(2) LEAD SLIDE

It is possible to add a Portamento effect to the LEAD VOICES.

1 Set the LEAD SLIDE button to ON.



2 Set a Lead voice at the panel, then play the keys in legato.

Try playing the upper or lower keyboard in legato. The Portamento effect will only be applied to the LEAD VOICES.

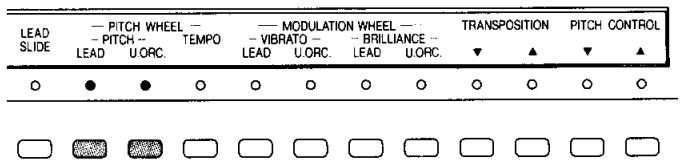
[Regarding the Use of Lead Slide]

- The Lead Slide ON/OFF data that was set at the MULTI MENU can be memorized in REGISTRATION MEMORY. Try memorizing various sets of Lead Slide ON or OFF data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the ON/OFF status of Lead Slide. (➡Page 18)
- The Lead Slide effect will also be applied to any VOICE MENU voices that are assigned to the dotted buttons of the LEAD VOICES.
- The Lead Slide ON/OFF data that has been set at the MULTI MENU will be backed up (for at least one week) even during Power OFF status.

11-(3) PITCH WHEEL (HS-8)

You can select the function to be controlled by the Pitch Wheel provided on the HS-8 panel (or the 2nd Expression Pedal).

1 Select a function from among the PITCH WHEEL buttons.



Pitch Bend function: Enables you to "bend" the pitch of a specific voice upward or downward.

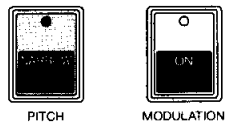
PITCH	**LEAD**	The Pitch Bend switch for LEAD VOICES.
	U. ORC.	The Pitch Bend switch for ORCHESTRAL VOICES of the upper keyboard.

Tempo function: Enables you to gradually speed up or slow down the tempo of the rhythm.

TEMPO	The Tempo function switch.

NOTE: Both the LEAD and U. ORC. buttons of PITCH can simultaneously be set to ON. Also, the PITCH and TEMPO buttons can simultaneously be set to ON.

2 Use the panel NARROW button to select the scope of the function's application.



The ON/OFF status of the NARROW button selects the scope of its application.

[When the Pitch Bend Function is Selected]
OFF: The pitch can be "bent" within an upward or downward range of one octave at maximum.
ON: The pitch can be "bent" within an upward or downward range of a major second at maximum.

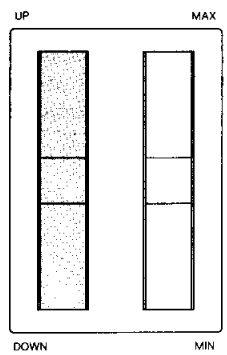
[When the Tempo Function is Selected]
OFF: The maximum fluctuation of the tempo is wide, and the tempo fluctuates rather quickly.
ON: The maximum fluctuation of the tempo is narrow, and the tempo fluctuates slowly.

3 Operate the Pitch Wheel while performing.

[When Pitch Bend is Selected]
Rotation toward UP: The pitch is bent upward.
Rotation toward DOWN: The pitch is bent downward.

[When the Tempo Function is Selected]
Rotation toward UP: The tempo speeds up gradually.
Rotation toward DOWN: The tempo slows down gradually.

NOTE: When you release your hand from the Pitch Wheel, it automatically returns to its center position.



[Control by the 2nd Expression Pedal (Optional)]
The Pitch Bend and Tempo function can be controlled by operating the 2nd Expression Pedal by foot instead of manually operating the Pitch Wheel.
Pressing the pedal with your toes: Enables the same control achieved by rotating the Pitch Wheel upward. That is, the pitch is bent upward (when the Pitch Bend function is selected) or the tempo is gradually speeded up (when the Tempo function is selected).
Pressing the pedal with your heel: Enables the same control achieved by rotating the Pitch Wheel downward. That is, the pitch is bent downward (when the Pitch Bend function is selected) or the tempo is gradually slowed down (when the Tempo function is selected).
Note that the 2nd Expression Pedal automatically returns to its center position when you release your foot.

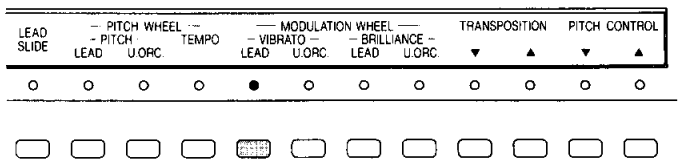
[Memorizing the Pitch Wheel Functions]
The data describing which Pitch Wheel function was selected at the MULTI MENU as well as the Wide/Narrow data set using the NARROW button can be memorized in REGISTRATION MEMORY. Try memorizing various sets of Pitch Wheel function data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the Pitch Wheel functions. (➡Page 18)

[Regarding the Use of the Pitch Wheel Functions]
- The Pitch Wheel and 2nd Expression Pedal can be operated concurrently to perform control.
- The Pitch Bend function will also be applied to any VOICE MENU voices that are assigned to the dotted buttons.
- The data describing the Pitch Wheel function that has been selected at the MULTI MENU will be backed up (for at least one week) even during Power OFF status.

11-(4) MODULATION WHEEL (HS-8)

You can select the function to be controlled by the Modulation Wheel provided on the HS-8 panel.

1 Select a function from among the MODULATION WHEEL buttons.



Vibrato: Lets you use the Modulation Wheel to control how the Vibrato effect will be applied to vibrate the notes.

VIBRATO	**LEAD**	The Vibrato switch for LEAD VOICES.
	U. ORC.	The Vibrato switch for ORCHESTRAL VOICES of the upper keyboard.

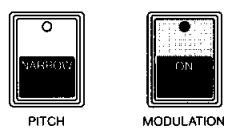
Brilliance: Lets you use the Modulation Wheel to control how the Brilliance effect will be applied to add brilliance to the notes.

BRILLIANCE	**LEAD**	The Brilliance switch for LEAD VOICES.
	U. ORC.	The Brilliance switch for ORCHESTRAL VOICES of the upper keyboard.

NOTE: The LEAD and U. ORC. buttons of either VIBRATO or BRILLIANCE can simultaneously be set to ON. Also, VIBRATO and BRILLIANCE can simultaneously be set to ON.

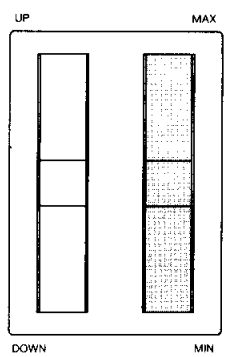
2 Set the panel MODULATION button to ON.

ON: Enables the effect selected at the MULTI MENU to be controlled by the Modulation Wheel.
OFF: Disables all Modulation Wheel functions despite operation of the Modulation Wheel.



3 Operate the Modulation Wheel while performing.

[When VIBRATO is Selected]
Rotation toward MAX: Increases the Vibrato depth.
Rotation toward MIN: Decreases the Vibrato depth.



NOTE: The maximum value of Vibrato depth that can be controlled by the Modulation Wheel will correspond to the Depth value set at the USER VIBRATO section. Please note that the Vibrato effect cannot be controlled if DEPTH at the USER VIBRATO section is set to "0".

[When BRILLIANCE is Selected]
Rotation toward MAX: The impression of brilliance is intensified.
Rotation toward MIN: The impression of brilliance is weakened.

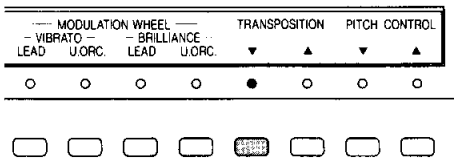
[Memorizing the Modulation Wheel Functions]
The data describing which Modulation Wheel function was selected at the MULTI MENU as well as the ON/OFF data set using the MODULATION button can be memorized in REGISTRATION MEMORY. Try memorizing various sets of Modulation Wheel function data to different numeric buttons of REGISTRATION MEMORY. By merely pressing a different numeric button of REGISTRATION MEMORY, you can very conveniently change the Modulation Wheel functions. (➡Page 18)

[Regarding the Use of the Modulation Wheel Functions]
- The Vibrato and Brilliance effects as controlled by the Modulation Wheel will also be applied to any VOICE MENU voices that are assigned to the dotted buttons.
- The data describing the Modulation Wheel function that has been selected at the MULTI MENU will be backed up (for at least one week) even during Power OFF status.

11-(5) TRANSPOSITION

The key of the entire Electone can be raised or lowered a half-octave at maximum in half-step units.

1 Press the ▼ or ▲ button to change the key.



▼ button: Lowers the key a half-step each time it is pressed. In case the Normal Key is "C" and the Transposition function has not been used, the keys that can be achieved with each press of the ▼ button are as follows: (Maximum of six steps)

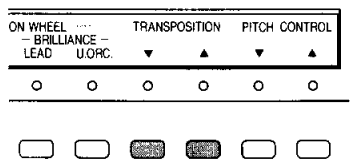
Normal Key	▼×1	▼×2	▼×3	▼×4	▼×5	▼×6
C	B	B♭ (A♯)	A	A♭ (G♯)	G	G♭ (F♯)

▲ button: Raises the key a half-step each time it is pressed. In case the Normal Key is "C", the keys that can be achieved with each press of the ▲ button are as follows: (Maximum of six steps)

Normal Key	▲×1	▲×2	▲×3	▲×4	▲×5	▲×6
C	C♯ (D♭)	D	D♯ (E♭)	E	F	F♯ (G♭)

2 Press the ▼ and ▲ buttons simultaneously to return to Normal Key.

Both lamps will go off, indicating that the Normal Key has been restored.



NOTE: You can also restore the Normal Key by switching the POWER switch to OFF and then to ON.

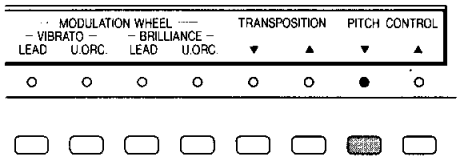
[Regarding the Use of Transposition]

- The Transposition setting cannot be memorized in REGISTRATION MEMORY. When you wish to change the key during a song, press the ▼ or ▲ button at the moment you wish to change keys to achieve your desired key.
- The currently set Transposition data can be transferred to a RAM Pack for storage.
- When the ▼ or ▲ button is pressed, its lamp will not always light up. If the currently set key is lower than Normal Key, the ▼ button will remain lit; if it is higher than Normal key, the ▲ button will remain lit. Therefore, the lamp of the ▼ button may remain lit even if you press the ▲ button.
- When a chord progression has been programmed using C.S.P., the key in which the chords have actually been programmed will remain unchanged even if you use Transposition to change the chord during the song. During C.S.P. playback, however, the key can be changed using Transposition.

11-(6) PITCH CONTROL

The pitch of the entire Electone can be finely adjusted.

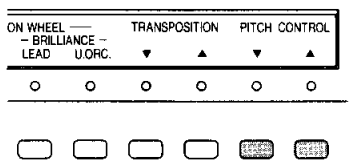
1 Press the ▼ or ▲ button to change the pitch.



▼ button: Slightly lowers the pitch each time it is pressed. (When A=440Hz, one step is about 0.3 Hz with a maximum of four steps.)
▲ button: Slightly raises the pitch each time it is pressed. (When A=440 Hz, one step is about 0.3 Hz with a maximum of 15 steps.)

2 Press the ▼ and ▲ buttons simultaneously to return to the normal pitch.

Both lamps will go off, indicating that the Normal Pitch has been restored.



NOTE: You can also restore the Normal Pitch by switching the POWER switch to OFF and then to ON.

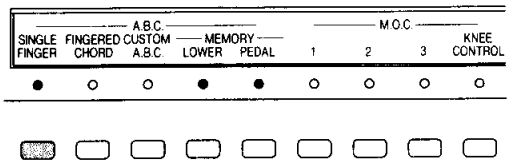
[Regarding the Use of Pitch Control]

- The Pitch Control setting is designed not to be memorized in REGISTRATION MEMORY.
- When the ▼ or ▲ button is pressed, its lamp will not always light up. If the currently set pitch is lower than Normal Pitch, the ▼ button will remain lit; if it is higher than Normal Pitch, the ▲ button will remain lit. Therefore, the lamp of the ▼ button may remain lit even if you press the ▲ button.

12-(1) A.B.C. (Auto Bass Chord)

This function provides automatic accompaniment from the lower and pedal keyboards, and has three different modes.

1 Use the AUTO BASS CHORD buttons of MULTI MENU to select a mode.

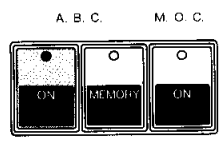


There are three AUTO BASS CHORD Modes, so please select one.

SINGLE FINGER	Major chords will be detected by merely pressing single keys of the lower keyboard, producing an automatic Chord and Bass accompaniment. Automatic accompaniments consisting of minor, 7th and/or minor 7th chords are also possible. (➡Page 63)
FINGERED CHORD	The chords pressed at the lower keyboard are detected to produce an automatic Bass accompaniment.
CUSTOM A.B.C.	The chord type pressed at the lower keyboard and the single notes played at the pedal keyboard are detected to produce an automatic Bass accompaniment.

NOTE: Either the SINGLE FINGER, FINGERED CHORD or CUSTOM A.B.C. Mode will always be ON.

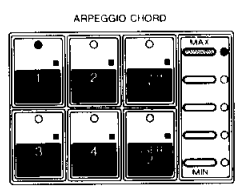
2 Set the A.B.C. ON button at the panel to ON.



While A.B.C. ON is lit up: The A.B.C. Mode selected at the MULTI MENU will be valid.
While A.B.C. ON is unlit: The A.B.C. function will not operate.

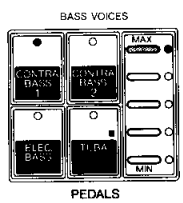
3 Set the Arpeggio Chord pattern.

If necessary, also set the Voice sections of the lower keyboard for patterns or voices other than Arpeggio Chord.



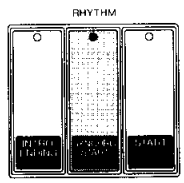
4 Set the Voice section of the pedal keyboard.

With HS-8, also set the AWM BASS VOICES section if necessary.



5 Set the RHYTHM section.

Select a Rhythm pattern, set its volume level, volume balance, and tempo, then set the SYNCHRO START switch to ON. SYNCHRO START is a very convenient function that synchronizes the rhythm and automatic accompaniment to start at the same time.



[The Bass Patterns of A.B.C.]

The Bass Accompaniment patterns which are automatically sounded by Auto Bass Chord have been designed to offer the patterns most suitable for each (preset) Rhythm pattern.

- When the (preset) Arpeggio Chord pattern is changed, the Bass pattern will also be changed to suit the new Arpeggio Chord pattern.
- While the Fill In 1, Fill In 2 or Ending pattern is being sounded, the Bass pattern will also change.
- The Bass pattern will also change according to the type of chord played at the lower keyboard.
- While a User Rhythm pattern or User Arpeggio Chord pattern is ON, the Bass pattern will synchronize with the currently lit preset pattern.
- The Bass notes are designed not to sound while a User Fill In pattern is being sounded.

[In Case No Rhythm will be Used]

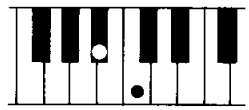
When SINGLE FINGER Mode is selected, the Chord and Bass notes will be automatically produced. When FINGERED CHORD Mode is selected, the Bass notes will be automatically produced. Any Arpeggio Chord pattern that operates in time with the rhythm, however, will not be sounded. Moreover, the Bass notes will not form a pattern.

6 Perform the accompaniment according to the selected mode.

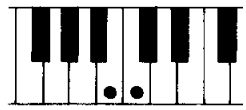
[SINGLE FINGER Mode]
By pressing the keys of the lower keyboard as follows, four types of chords are detected to produce automatic Chords and Bass accompaniments.

Major chords: Press the root of the chord. (Example on right: C)

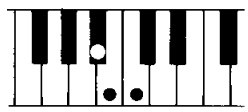
Minor chords: Simultaneously press the root of the chord and the black key to its left. (Example on right: Cm)



7th chords: Simultaneously press the root of the chord and the white key to its left. (Example on right: C_7)



Minor 7th chords: Simultaneously press the root of the chord plus the black and white keys to its left. (Example on right: Cm_7)

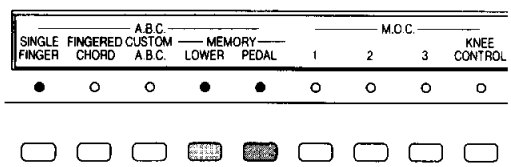


[FINGERED CHORD Mode]
By simply pressing chords on the lower keyboard, you can produce a Bass accompaniment which corresponds to those chords. (See "[The Chords that can be Detected in FINGER CHORD and CUSTOM A.B.C. Modes]" on the right.)

[CUSTOM A.B.C. Mode]
Play chords on the lower keyboard and press single keys on the pedal keyboard. The resulting Bass accompaniment will be automatically produced on the basis of the types of chords pressed on the lower keyboard and the notes played on the pedal keyboard.

The MEMORY Buttons

1 Set the MEMORY button(s) of MULTI MENU to ON.

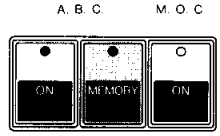


LOWER: Continues the accompaniment of the lower keyboard even after you release your fingers from the keys of the lower keyboard.
PEDAL: Continues the accompaniment of the pedal keyboard even after you release your fingers from the keys of the lower keyboard.

NOTE: When CUSTOM A.B.C. Mode has been selected and the PEDAL button of the MEMORY section is ON, the Bass accompaniment will continue even after you release your feet from the pedal keyboard.

2 Set the panel MEMORY button to ON, then press the keys of the lower keyboard, being sure to release them immediately.

Even after you release your fingers from the lower keyboard, the automatic Chords and Bass accompaniment will continue sounding together with the rhythm. Afterward, you will need to press keys on the lower keyboard only when you wish to change the chords.



[Precautions on Use of SINGLE FINGER Mode]
- The range of the keys you press on the lower keyboard will not affect the range of the automatic accompaniment that is actually sounded.
- When keys are played in legato, the chords may not change properly in some cases. When changing chords, be sure to completely release your fingers from the keys before pressing another chord.
- During SINGLE FINGER Mode, LEAD voices cannot be sounded from the lower keyboard.

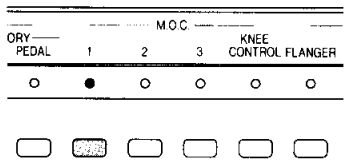
[The Chords that can be Detected in FINGER CHORD and CUSTOM A.B.C. Modes]
During FINGER CHORD or CUSTOM A.B.C. Mode, the following 15 chord types can be detected and will form the basis for producing the automatic Bass accompaniment: major, minor, 7th, minor 7th, major 7th, minor major 7th, aug (+5), aug 7th (7+5), dim, 7th sus4, minor 7th-5, major-5, 7th-5, 6th, and minor 6th.

[Regarding the Use of MEMORY]
- The MEMORY function is designed to operate in time with the rhythm, so be sure to always use the rhythm with MEMORY.
- MEMORY will function after the rhythm is started, even if the A.B.C. function is OFF. While the accompaniment of the lower keyboard is being continued, take advantage of the MEMORY function by operating the panel with your left hand, playing the upper keyboard with both hands, and so on.
- If you want the automatic accompaniment to be continued during SINGLE FINGER or FINGERED CHORD Mode, set both the LOWER and PEDAL buttons to ON.
- In CUSTOM A.B.C. Mode, you can perform with only the PEDAL button set to ON.

12-(2) M.O.C. (Melody On Chord)

A Harmony line is automatically added to the Melody line that you play on the upper keyboard.

1 Use the MELODY ON CHORD buttons of MULTI MENU to select the mode.

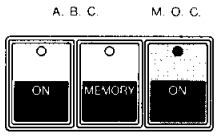


There are three MELODY ON CHORD Modes, so please select one.

1	A Harmony of a two-note maximum will be sounded in a range close to the Melody line.
2	A Harmony of a three-note maximum will be sounded in a range close to the Melody line.
3	A Harmony of a three-note maximum will be sounded in a range somewhat distanced from the Melody line.

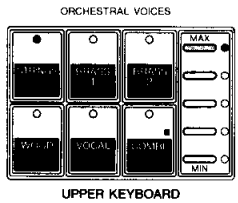
NOTE: One button from 1 to 3 is always ON.

2 Set the panel M.O.C. ON button to ON.



While M.O.C. ON is lit up: The MELODY ON CHORD Mode selected at MULTI MENU will be valid.
While M.O.C. ON is unlit: The Melody On Chord function will not operate.

3 Set the Voice section of the upper keyboard.



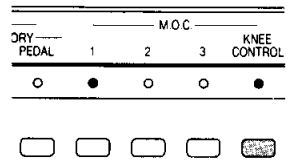
(Illustration of HS-5)

As the Harmony voice, set ORCHESTRAL VOICES, COMBINATION VOICES (HS-8/HS-7/HS-6), PERCUSSIVE VOICES (HS-7/HS-6/HS-5), and AWM PRESET (HS-8) for the upper keyboard, then set their corresponding buttons of the ENSEMBLE section to ON. The LEAD voice cannot be used to produce the Harmony notes, but it can be set as a voice for playing the Melody line. Be sure to also set the Voice section for the lower keyboard.

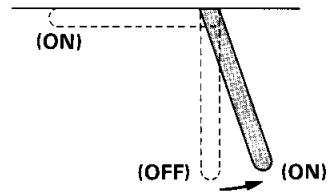
4 While depressing chords on the lower keyboard, play the Melody line on the upper keyboard.

The Harmony line will be added below the Melody line played on the upper keyboard, allowing you to enjoy a rich melody.

[KNEE CONTROL Button]



Setting the KNEE CONTROL button to ON enables you to use the Knee Lever to control the ON/OFF status of M.O.C. It is very handy when, for example, you wish to use the M.O.C. function only during certain sections of your performance.



When the KNEE CONTROL button is ON and the Knee Lever beneath the lower keyboard is set to a perfectly vertical position, the M.O.C. function will go OFF. Press the Knee Lever toward the right at the moment you wish to set M.O.C. to ON. The MELODY ON CHORD Mode will function as long as the Knee Lever is pressed to the right.

[Regarding the Use of Melody On Chord]

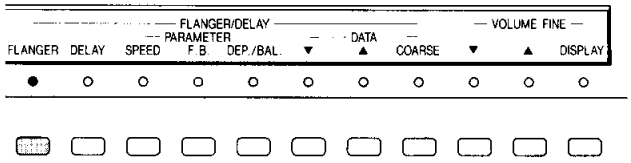
- The automatically produced Harmony line is detected from among the notes of the chords being sounded on the lower keyboard, then the Harmony line is sounded using the upper keyboard voice. When you wish to add the Harmony line, play the upper keyboard while sounding chords on the lower keyboard.
- When the MEMORY LOWER button of A.B.C. is ON and the rhythm has been started, the Melody line will be provided with a Harmony line even after your release your fingers from the lower keyboard.

12-(3) FLANGER/DELAY (HS-8/HS-7/HS-6/HS-5)

In addition to selection of the Flanger and Delay effects, you can also change the parameters of each effect.

Basic Usage (without Changing the Parameters)

1 Select an effect from MULTI MENU.



Set either the FLANGER or DELAY button to ON to select an effect. (One of these buttons is always ON.)

FLANGER	Applies an undulating sensation to the notes so that they seem to be rotating.
DELAY	Applies an echo to the notes for an expansive sound.

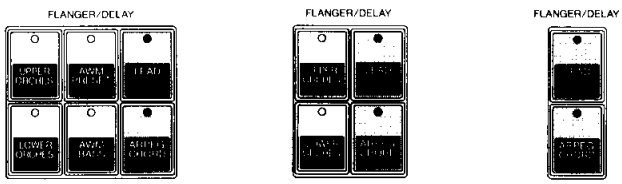
NOTES: The way in which each effect is applied can also be altered by changing its parameters. Try changing the parameters, if necessary. (➡Page 66)
The normal parameter values are preset for each effect and remain valid until changed. If you wish to apply an effect using its preset parameter values after you have already changed its parameters, perform the procedure described in "[How to Restore the Preset Status]" at the top right.

2 At the panel, set the Voice section that will be subjected to the effect.

The Voice sections which can be subjected to the Flanger or Delay effect are as follows:

HS-8	UPPER ORCHESTRAL VOICES, LEAD VOICES, AWM PRESET, LOWER ORCHESTRAL VOICES, ARPEGGIO CHORD, and AWM BASS VOICES.
HS-7/HS-6	UPPER ORCHESTRAL VOICES, LEAD VOICES, LOWER ORCHESTRAL VOICES, and ARPEGGIO CHORD.
HS-5	LEAD VOICES and ARPEGGIO CHORD.

3 At the panel FLANGER/DELAY section, set the button of the Voice section to be subjected to the effect to ON.



(HS-8) (HS-7/HS-6) (HS-5)

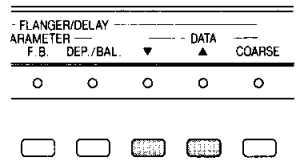
Use the buttons of the panel FLANGER/DELAY section to select the Voice sections to be subjected to the effect. If multiple buttons are set to ON, the effect can be applied to multiple Voice sections.

4 When the keys are played, the selected effect will be applied.

Since the data selected at MULTI MENU will be memorized in the Electone, the effect you have set can be produced at any time by setting the button of the panel FLANGER/DELAY section to ON.

[How to Restore the Preset Status]

The Flanger and Delay effects can be used after changing their preset parameter values. After their parameters have been changed, however, it is also possible to restore their Preset status at any time.



First, set the FLANGER or DELAY button to ON in order to extinguish all lamps of the PARAMETER section, then concurrently press the "▼" and "▲" buttons of the DATA section. All three parameter values for the selected effect will be returned to their preset values. The preset values are as follows:

FLANGER:	SPEED	[4]
	FEEDBACK	[67]
	DEPTH	[85]
DELAY	: SPEED	[0]
	FEEDBACK	[61]
	BALANCE	[50]

[Memorizing the Flanger/Delay Data]

The ON/OFF data of the FLANGER/DELAY sections of the panel and MULTI MENU as well as the parameter values for each effect can be stored in REGISTRATION MEMORY. Try memorizing the various ON/OFF status data and the parameter values to different numeric buttons of REGISTRATION MEMORY. By merely pressing a numeric button of REGISTRATION MEMORY, you can very conveniently change the ON/OFF status of the effects or the way in which they are applied. (➡Page 18)

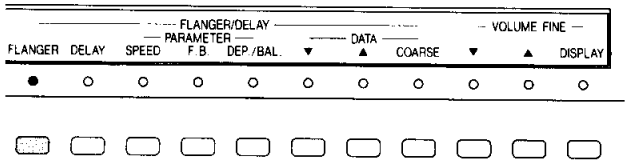
CAUTION: If you memorize a Registration with the Flanger effect in ON status to one numeric button, memorize a Registration with the Delay effect in ON status to another numeric button, then switch between the two Registrations during a performance, the timing for switching the effects may be slightly delayed in some cases.

[Regarding the Use of the Flanger and Delay Effects]

- Even if an effect is applied using the same parameter values, the application of effect may sound different according to the voice.
- The Flanger or Delay effect can also be applied to the VOICE MENU voices which have been assigned to the dotted buttons of the Voice sections.
- The Flanger and/or Delay parameter values that have been set at MULTI MENU will be backed up (for at least one week) even during Power OFF status.

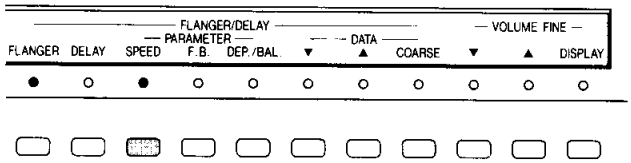
Changing the Parameters

1 Select the effect for which you wish to change the parameters.



Set either the FLANGER or DELAY button to ON. The parameters can be separately changed for FLANGER and DELAY.

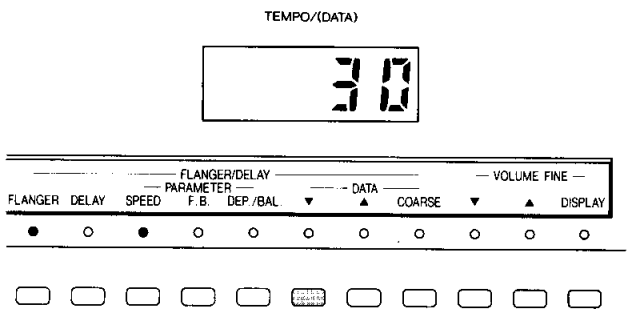
2 Select a parameter to be changed.



There are three parameters which you can change: SPEED, F.B. (Feedback), and DEP./BAL. (Depth when FLANGER has been selected or Balance when DELAY has been selected). Select the button of the parameter you wish to change.

Effect	Parameter	Description	Variable Width
FLANGER	SPEED	The modulating frequency	0-100
	FEEDBACK	The amount of feedback	0-100
	DEPTH	The depth of modulation	0-100
DELAY	SPEED	The delay time	0-100
	FEEDBACK	The amount of feedback	0-100
	BALANCE	The ratio between the Direct and Delay signals	0-100

3 Use the DATA buttons to change the parameter.



When a PARAMETER button is set to ON, the currently set value for that parameter is shown on the TEMPO/(DATA) Display. While sounding the voices to be subjected to the effect, press the ▼ and ▲ buttons of the DATA section to decrease or increase the parameter value.

▼	Decreases the displayed numeric value by one each time it is pressed.
▲	Increases the displayed numeric value by one each time it is pressed.
COARSE	The displayed numeric value is respectively decreased or increased by 10 each time the ▼ or ▲ button is pressed while the COARSE button is depressed. Use this button if you wish to change the value by a large amount.

4 If necessary, change the other parameters.

Since the parameter values you have set will be memorized, the effect can be produced at any time, according to the parameters you have set, by setting the panel FLANGER or DELAY button to ON.

[The Results of Changing Each Parameter]
Changing the parameter values of the Flanger or Delay effect will change the way each effect is applied as follows:

• FLANGER

SPEED	▲	Modulates the Flanger effect in shorter cycles.
	▼	Modulates the Flanger effect in longer cycles.
FEEDBACK	▲	Increases the sharp, metallic sensation.
	▼	Decreases the sharp, metallic sensation.
DEPTH	▲	The Vibrato-like modulation becomes more conspicuous.
	▼	The vibrato-like modulation becomes less conspicuous.

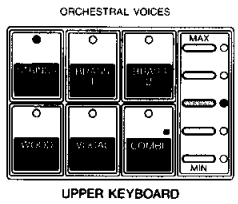
• DELAY

SPEED	▲	Increases the speed at which the Delay notes are sounded.
	▼	Decreases the speed at which the Delay notes are sounded.
FEEDBACK	▲	Lengthens the duration of the Delay notes.
	▼	Shortens the duration of the Delay notes.
BALANCE	▲	The Delay notes are sounded more loudly than they are played.
	▼	The Delay notes are sounded less loudly than they are played.

12-(4) VOLUME FINE

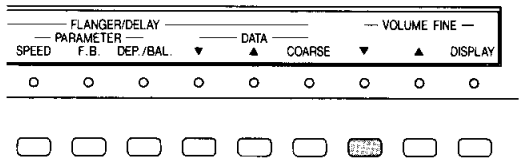
It is possible to finely set the volume level of each section.

1 Press the Volume button of the section for which you wish to set the volume.



Pressing a Volume button specifies the section to which you wish to apply the VOLUME FINE function. From among the Voice sections, ARPEGGIO CHORD section, and RHYTHM section, specify the section at which you wish to finely set the volume level.

2 Press the ▼ or ▲ button to set the volume level.



The HS-8 panel is equipped with seven Volume buttons, and the panels of the other HS Electones are equipped with five Volume buttons each. The VOLUME FINE function can set the volume to three finer levels between each Volume button and its upper (or lower) Volume button.

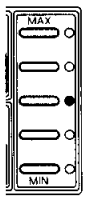
▼ button: Lowers the volume by one level each time it is pressed, or sets the volume level to that of the next lower Volume button when pressed four times.

▲ button: Raises the volume by one level each time it is pressed, or sets the volume level to that of the next higher Volume button when pressed four times.

NOTES: You cannot press the ▲ button to raise the volume level above that of the top Volume button. Also, you cannot press the ▼ button to lower the volume level below that of the bottom Volume button.

When an intermediate volume level has been set, the lamps of two panel Volume buttons will light up. (See the table below.)

According to the currently set volume level, the ▼ and ▲ lamps will light up to indicate the top, center or bottom level of the three intermediate levels. (See the table below.)



Volume Level		Button Operation	Volume Lamps	Button Lamps
Top button level		(▲×4)	One lights up	○ ○
Intermediate level	Top	▲×3	Two light up	○ ●
	Center	▲×2		● ●
	Bottom	▲×1		● ○
Current level		—	One lights up	○ ○
Intermediate level	Top	▼×1	Two light up	○ ●
	Center	▼×2		● ●
	Bottom	▼×3		● ○
Bottom button level		(▼×4)	One lights up	○ ○

3 Use the same procedure to set the volume level of the other sections.

Press a Volume button to specify the section to be set, then perform the above procedure. The procedure described in "[For Consecutively Setting the Volume Levels]" on the right can also be performed.

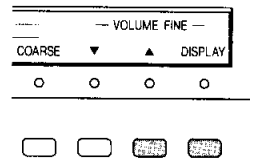
[DISPLAY Button]

The DISPLAY button has the two functions below:

- When the DISPLAY button is pressed, the Volume lamp of the currently set section (the section at which a Volume button was last pressed) will flash, indicating at which section the volume setting can be performed. While the DISPLAY button is pressed, the Volume lamp will continue flashing then return to its lit status when you release your finger from the DISPLAY button.
- In the following operation "[For Consecutively Setting the Volume Levels]," the ▼ or ▲ button is pressed while depressing the DISPLAY button.

[For Consecutively Setting the Volume Levels]

In case you wish to continue setting the volume levels of other sections after setting the level for one section, press the ▼ or ▲ button while depressing the DISPLAY button. The volume level can be consecutively set even without using the panel Volume buttons to specify the sections.



DISPLAY + ▲: Each time both buttons are pressed, the flashing status of the Volume buttons will shift to the section situated either to the left or below. The flashing will shift to the ORCHESTRAL VOICES of the upper keyboard after the RHYTHM section.

DISPLAY + ▼: Each time both buttons are pressed, the flashing status of the Volume buttons will shift to the section situated either to the right or above. The flashing will shift to the RHYTHM section after the ORCHESTRAL VOICES of the upper keyboard.

- If you use the Volume buttons at each section to set the volume level as close as possible to the desired setting in advance, consecutive setting by VOLUME FINE can be performed more smoothly.
- It is most convenient to begin with the ORCHESTRAL VOICES section of the upper keyboard and sequentially set the various volume levels using the "DISPLAY + ▲" procedure.

[Memorizing the Volume Fine Settings]

The data describing the volume levels set by VOLUME FINE for each section can be memorized in REGISTRATION MEMORY. Try memorizing the data of various volume levels to different numeric buttons of REGISTRATION MEMORY. By merely pressing a numeric button of REGISTRATION MEMORY, you can very conveniently change the finely set volume levels.

[Regarding the Use of VOLUME FINE]

- When the ▼ or ▲ button has been pressed, its lamp will not always light up because the ON/OFF status of the lamps of the ▼ and ▲ buttons will depend on the currently set volume level. Consequently, the lamp of the ▼ button may light up when the ▲ button is pressed (or vice versa).
- The data describing the volume levels set by VOLUME FINE will be backed up (for at least one week) even during Power OFF status.

ACCESSORY JACKS

❶ HEADPHONES
This jack is used to connect a headphone set. If headphones are used, the sound will not be output from the Electone's built-in speakers so that the Electone performance can be monitored without external output of the sound. (Never use this jack for connecting any device except for headphones.)

❷ MIC.
This jack connects a microphone.

❸ MIC. VOL.
This control lets you adjust the volume of the connected microphone.

❹ SPEAKER OUT
This jack is used to output the Voice signals to the Electone's built-in speakers, either for stereo output with HS-8, HS-7 and HS-6 or for monaural output with HS-5 and HS-4. Be sure to connect the plug(s) from the Speaker Unit to the SPEAKER OUT jack(s). (Refer to the separate "Assembly Instructions.") While external speakers are connected, if you wish to produce sound only from external speakers with no sound from the Electone's speakers, disconnect the plugs from the SPEAKER OUT jack(s).

❺ TO PEDAL
This jack is used to input the various signals from the Pedal Unit. Securely insert the plug from the Pedal Unit into this jack in the proper position. (Refer to the separate "Assembly Instructions.")

❻ AUX. OUT
This jack is used to output the Voice signals to such devices as external speakers, such as the Keyboard Amplifier KA Series, mixers, and so on. All models can be set up for stereo output. With HS-5 and HS-4, the output to the Electone's speakers is monaural, but the output to external devices can be assigned to two channels for stereo output. (Output impedance: 470 ohms)

❼ AUX. IN
This jack is used to input the Voice signals from external devices, either for stereo output with HS-8, HS-7 and HS-6 or for monaural output with HS-5 and HS-4. Adjust the volume of the sound input to this jack using an externally connected device.

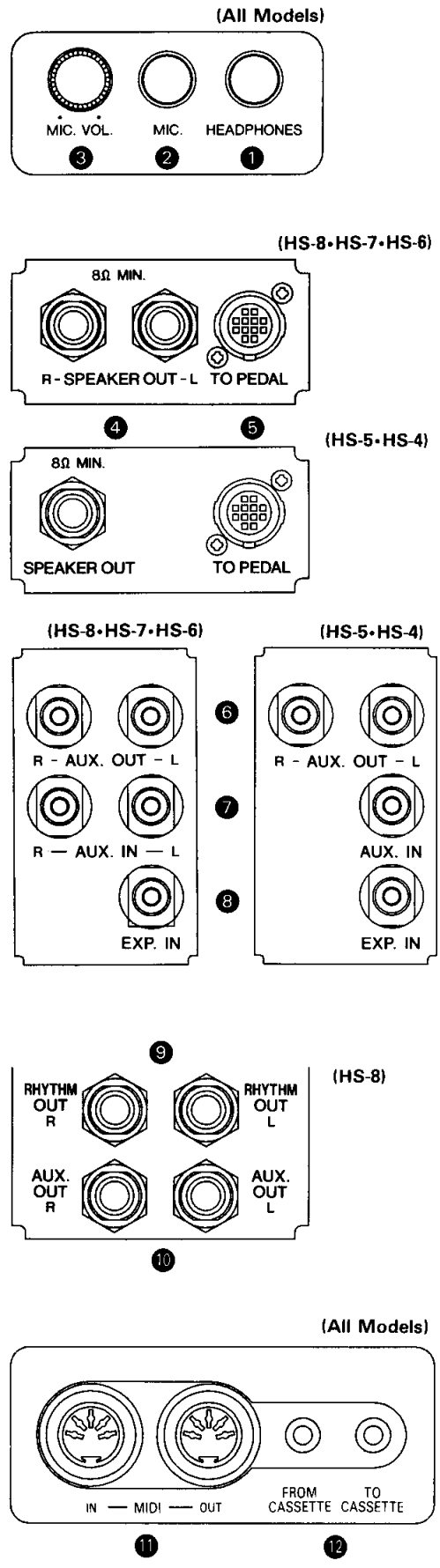
❽ EXP. IN
This jack is used to input the Voice signals (monaural) of such instruments as a synthesizer or rhythm machine. The volume of the sound input to this jack can be controlled together with the Electone's sound, by using the Electone's Expression Pedal.

❾ RHYTHM OUT (HS-8 only)
Out of the Electone's Voice signals, this jack enables only the Rhythm signals to be output in stereo to external speakers, a mixer, etc. Simultaneous use of this jack and the ⑩ AUX. OUT jack also lets you output all Voice signals except the Rhythm signals (which will be canceled). (Output impedance: 470 ohms)

❿ AUX. OUT (HS-8 only)
This jack enables the stereo output of the Voice signals of the Electone to external speakers, a mixer, etc. Simultaneous use of the ⑨ RHYTHM OUT jack and this jack also lets you output all Voice signals except the Rhythm signals (which will be canceled). (Output impedance: 470 ohms)

⓫ MIDI IN/OUT
This jack is connected for transferring various data between the Electone and an external device that conforms to the MIDI Standard. (➡Pages 69, 76, 77, & 83)

⓬ FROM CASSETTE/TO CASSETTE
This jack is used when transferring the various data of the Electone to a Cassette Tape or recalling the Cassette Tape's data to the Electone. (➡Page 21)



OPTIONAL ITEMS

•RAM Pack (RP-3)
RAM Pack RP-3 (8K bytes) allows you store the various data you have memorized at the Electone. Besides the RAM Pack provided as a standard accessory, other optional RAM Packs are also available.

•RAM Pack (RP-5)
Use of RAM Pack RP-5, with its 32K-byte memory capacity, allows you to transfer all of the data memorized at F.M.P. If you wish to use RP-5, it can be obtained from your YAMAHA dealer.

•FM Voice Pack (FVP Series)
This ROM Pack has a memory containing of Voice data based on the FM Tone Generator System. Its memorized Voice data can be called to the Electone for registration as User voices.

•AWM Voice Pack (AVP Series)
This ROM Pack has a memory containing Voice data based on the AWM Tone Generator System, and can be used only with HS-8.

•2nd Expression Pedal
This pedal provides you with realtime control of pitch bending or the tempo of the rhythm, and can be used only with HS-8.

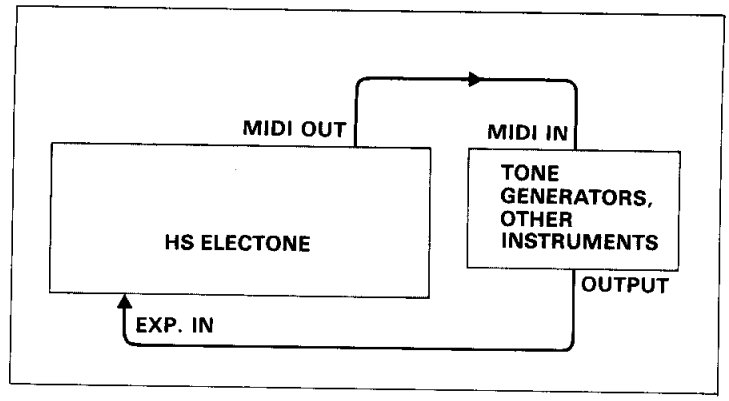
•Keyboard Amplifier (KA Series)
This is an amplifier/speaker that was developed for exclusive use with keyboards. The KA Series is available in four models, each with a different output: KA-40, KA-30, KA-20, and KA-10. Use these speakers when you require external speakers.

•Music Disk Recorder (MDR-2)
The MDR-2 is a music recording device which is capable of recording and playback of your Electone performances according to the transfer of MIDI signals. It employs floppy disks as its storage medium, and can record up to 16 songs at maximum.

CONNECTION EXAMPLES WITH MIDI-EQUIPPED DEVICES

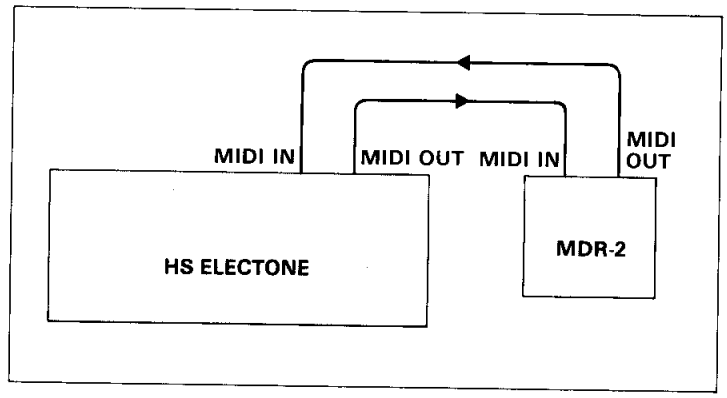
① To transmit Performance data to an external Tone Generator or instrument:
In order to transmit the Electone's Performance data to an external Tone Generator or a MIDI-equipped instrument, perform connection as shown on the right. When the Electone is played, the voice of the external instrument will also be sounded.

- Prior to transmission, depending upon the keyboard for which the data will be received, set the reception channel of the external instrument to match the Electone's transmission channel (1: Upper keyboard, 2: Lower keyboard, or 3: Pedal keyboard).



② To record and playback a performance using MDR-2:
In case of using an external recording device, such as the Music Disk Recorder (MDR-2), respectively connect the MIDI IN and MIDI OUT jacks as shown on the right.

- With MDR-2, it is also possible to record and recall not only the Performance data, but also various other types of data, such as that of REGISTRATION MEMORY.
- When performing recording or playback with MDR-2, the Electone's Rhythm Sync Modes will be automatically switched, making it unnecessary to change the modes yourself.



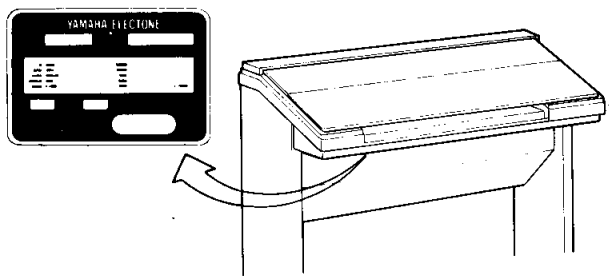
INSTALLATION AND MAINTENANCE INFORMATION

● Installation

1. **WARNING:** Do not allow your Electone or its bench to rest on or be installed over power cords of any type. An electrical shock and/or fire hazard could possibly result from this type of improper installation

2. **WARNING:** Do not place objects on your Electone power cord or place it in a position where anyone could trip over, walk on or roll anything over it. An improper installation of this type creates a personal injury/fire hazard possibility.

3. **Main Power Supply Verification:** Your Electone has been manufactured specifically for the main supply voltages used in your area. If you should move, or if any doubt exists, please consult your local authorized Electone dealer for instructions. The main supply voltage is printed on the name plate.



4. **Environment:** Your Electone should not be installed in a position that exposes the cabinet to direct sunlight or air currents having high humidity or heat levels. This type of installation can cause contact oxidation, case joint separation, and cabinet finish problems.

5. **Electromagnetic Interference (RFI):** Your Electone has been type tested and found to comply with all applicable regulations. However, if it is installed in the immediate proximity of other electronic devices, some form of interference may occur.

● Maintenance

1. **SERVICE:** Your Electone contains no user serviceable components. Refer all service to qualified service technicians only.

2. **BENCH STRUCTURAL INTEGRITY:** If any motion or an "unsteady" sensation is noted in the bench, please check its structural integrity immediately. Discontinue use until any and all discrepancies are resolved.

3. **CLEANING/CARE**
   - **A) GENERAL:** DO NOT use chemically harsh (i.e., alcohol, paint thinners, etc.) or abrasive cleaners on any portion of your Electone.
   - **B) KEYS/CONTROL PANEL:** When cleaning the keys and control panels of your Electone, please use a soft absorbent-type cloth that has been dampened with a very mild solution of liquid soap and lukewarm water.
   - **C) CABINET/BENCH:** Clean the cabinet portions of your Electone with a slightly dampened cloth containing a neutral cleaning agent. The cleaning agent selected should not contain a high wax content or any other substance that would have a tendency to form a "build-up" on the cabinet.

4. **Vinyl Products:** Do not set vinyl items, (i.e., headphones, vinyl doilies, etc.) on the finished surfaces of your Electone or use polyvinyl material to cover the unit for any extended period of time. A chemical reaction many occur between the finish chemical and those contained in the polyvinyl products, resulting in a permanent marring of the finish.

IMPORTANT NOTICE: This product has been tested and approved by independent safety testing laboratories in order that you may be sure that when it is properly installed and used in its normal and customary manner, all foreseeable risks have been eliminated. DO NOT modify this unit or commission others to do so unless specifically authorized by the manufacturer. Product performance and/or safety standards may be diminished. Claims filed under the expressed warranty terms may be denied if the unit is/has been modified. The warranty of title (patent infringement, etc.) will not be defended by the manufacturer in the area(s) that relate to the modification. Implied warranties may also be affected.

ELECTROMAGNETIC INTERFERENCE

"Interference" can be a two way street; something you are operating can interfere with others or, something someone else has may interfere with something of yours.
Naturally, it is also possible that two or more of your own electronic (electric) devices may interfere with each other. Your Electone has been designed to minimize all these possibilities and meets all applicable standards worldwide.

Electromagnetic interference with your Electone can show itself in variety of ways. You may hear speech, music, "beeps", static, or a buzzing sounds. Yamaha Electones are designed to reject RF (radio frequency) signals that are many times the levels found in any normal environment. If, however, you are in the immediate proximity of a very high power transmitter, some interference may still occur. If this should happen, please try to identify the radio (TV) station and record the time of day that the interference occurs. Station identification is essential in order that the offending frequencies can be established and the authorized (legal) operating power level of the transmitter causing the interference can be verified. If the interference continues, please follow the corrective measure suggestions provided later in this section.

If the interference is in the form of occasional buzzing or static, it is highly probable that the cause can be traced to the turning on or off of some household appliance. The offending appliance can also be outside your own residence. Usually a "time" pattern (i.e., evenings only, etc.) will be involved. Noises of this type rarely orginate in the Electone itself. If the condition continues, please contact your local authorized Yamaha Electone dealer for assistance.

Main power line disturbances and electrical storms (lightning) can also be the source of static interference. Generally speaking, problems generated by these two sources will also be present in your other audio or video equipment. Lightning can also be very destructive. The following special warning also applies to virtually all electronic products.

IMPORTANT NOTICE
Modern electronic products, (i.e., computers, video games, electronic organs, etc.), contain components that, under normal conditions, extend the service free life of the products they make up an almost unbelievable period of time. This is especially true when you consider the vast number of equivalent components incorporated within one given part. These "parts," called "integrated circuits," are however, subject to destruction by high voltage discharges, such as a close proximity lightning strike. This can occur even if the unit is turned off.

IN PERIODS OF ELECTRICAL STORM PROBABILITY, IT IS ADVISABLE THAT YOU DISCONNECT ANY ELECTRONIC DEVICE NOT ACTUALLY IN USE, FROM ITS WALL SOCKET.

FCC Information (USA)

While the following statements are provided to comply with FCC Regulations in the United States, the corrective measures listed are applicable worldwide.

The digital series of Yamaha Electones™ use frequencies that appear in the radio frequency range, and if installed in the immediate proximity of some types of audio or video devices within three meters (approximately ten feet), interference may occur.

This series of Yamaha Electones™ has been type-tested and found to comply with the specifications set for a class B computer in accordance with those specifications listed in sub-part J, part 15 of the FCC rules. These rules are designed to provide a reasonable measure of protection against such interference. However, this does not guarantee that interference will not occur.

If your Electone™ should be suspected of causing interference with other electronic devices, verification can be made by turning your Electone™ off and on. If the interference continues when your Electone™ is off, the Electone™ is not the source of the interference. If your Electone™ does appear to be the source of the interference, you should try to correct the situation by using one or more of the following measures:

- Relocate either the Electone™ or the electronic device that is being affected by the interference.
- Utilize power outlets for the Electone™ and the device being affected that are on different branch (circuit breaker or fuse) circuits, or install AC line filters.
- In the case of radio-TV interference, relocate the antenna or if the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact an authorized Yamaha Electone™ dealer for suggestions and/or corrective measures. If you can not locate an authorized Yamaha Electone™ dealer in your general area, please contact the Electone™ Service Department, YAMAHA CORPORATION OF AMERICA, U.S.A., 6600 Orangethorpe Ave., Buena Park, CA 90620.

If for any reason, you should need additional information relating to radio or TV interference, you may find a booklet prepared by the Federal Communications Commission Helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet, Stock #004-000-00345-4, is available from the US. Government Printing Office, Washington DC. 20402.

TROUBLESHOOTING

SYMPTOM	CAUSE AND REPAIR METHOD
No sound is produced from the Electone's speakers.	The plug of the cable from the Speaker Unit is disconnected. Referring to the separate "Assembly Instructions," re-connect the plug securely.
The sound is too low despite setting its volume to MAX.	①If MASTER VOLUME is set close to MIN, turn it in the clockwise direction. ②If the Expression Pedal isn't being depressed, press it with your toes.
Despite pressing a total of eight simultaneous notes at the upper and lower keyboards, only seven notes are sounded.	Either the upper or lower keyboard is set so that only a maximum of seven simultaneous notes can be sounded. (➡Pages 4, 6, 8 & 10)
Despite setting the volume, the voice of the upper or lower keyboard isn't sounded.	The corresponding button of the ENSEMBLE section is not ON. Set the button for the Voice Section you wish to sound to ON. (➡Pages 5, 7, & 9)
Despite setting the volume, the voice of the pedal keyboard isn't sounded.	Either the SINGLE FINGER or FINGERED CHORD Mode of the AUTO BASS CHORD section is set. Set the panel A.B.C. button to OFF. (➡Page 62)
The volume of the upper keyboard is too high with respect to that of the lower keyboard (or vice versa).	The MANUAL BALANCE setting is set too close to the UPPER or LOWER position. For regular performances, be sure to set it near center. (➡Pages 5, 7, 9 & 11)
Switching voices causes the volume to change, despite their volume settings being identical.	The volume of certain voices may seem lower than that of other voices. Achieve a balanced sound by adjusting the Volume buttons at the pertinent Voice sections.
For a dotted button, a voice different from the displayed (original) voice is sounded.	A VOICE MENU voice has been assigned to the dotted button which is set to ON. Cancel its assigned voice by pressing that dotted button while depressing the ORIGINAL VOICE button at the right of MULTI MENU's VOICE MENU 3. (➡Page 24)
Despite setting SUSTAIN, USER VIBRATO, FLANGER or DELAY to ON at the panel, the effect won't function or is applied excessively.	The pertinent effect has been improperly set at MULTI MENU. Display the pertinent screen of MULTI MENU and appropriately change the settings of the effect. (➡Pages 55, 56, & 66)
Touch Control won't function.	TOUCH TONE is set to OFF at MULTI MENU, so set the UPPER & LOWER button of MULTI MENU's TOUCH TONE section to ON. Models HS-7, HS-6, HS-5, and HS-4 are designed so that Touch Control cannot be used at the Electone's pedal keyboard despite setting the PEDAL button to ON. (➡Page 57)
A Rhythm pattern different from the one displayed at the panel is sounded.	①If a RHYTHM MENU pattern has been assigned to the dotted button that is set to ON, cancel its assigned pattern by pressing that dotted button while depressing the ORIGINAL PATTERN button at the right of MULTI MENU's RHYTHM MENU. (➡Page 32) ② If a USER button is ON but its User pattern will not be used, set the USER button to OFF. (➡Pages 12 & 38)
Despite setting its volume, the Arpeggio Chord pattern is not sounded.	The rhythm has not been started. Be sure to use Arpeggio Chord together with the rhythm. (➡Page 14)
The Rhythm pattern doesn't synchronize with the Arpeggio Chord pattern. The Rhythm pattern doesn't synchronize with the Fill In, Intro. and/or Ending patterns.	A USER button of the RHYTHM or ARPEGGIO CHORD section is ON. Because the User patterns and preset patterns will not be automatically synchronized, if you wish to use them concurrently, be sure to create a User pattern that will synchronize with the preset pattern. (➡Pages 38 & 41)
When the lower or pedal keyboard is pressed, the sound of a percussion instrument is also sounded.	A KEYBOARD PERCUSSION button is ON. When keyboard percussion will not be used, be sure to set its buttons to OFF. (➡Page 15)
Certain functions cannot be memorized to REGISTRATION MEMORY.	The data of C.S.P, R.S.P., F.M.P., Transposition, Pitch Control, etc., cannot be memorized. To store this data, transfer it to a RAM Pack. (➡Page 18)
Performing a To Pack operation causes the ERROR lamp to light up but no data is transferred.	Either the operating procedure is mistaken or MEMORY PROTECT of the RAM Pack is ON. Check your operating procedure and the RAM Pack. (➡Page 20)
Data can't be transferred to a Cassette Tape or from the Cassette Tape to the Electone.	The operating procedure or the connection is mistaken, or the Cassette Tape or Cassette Recorder in use is defective. Check all of the above. (➡Page 21)
The Bass pattern of AUTO BASS CHORD doesn't synchronize with the Rhythm or Arpeggio Chord pattern.	A USER button of the RHYTHM or ARPEGGIO CHORD section is ON. The A.B.C. Bass pattern will synchronize with the current lit preset Rhythm or Arpeggio Chord pattern. (➡Page 62)
The notes of the lower or pedal keyboard aren't sustained despite setting the panel A.B.C. MEMORY button to ON.	The LOWER or PEDAL button of the MULTI MENU's A.B.C. MEMORY section is set to OFF. To sustain the notes of both the lower and pedal keyboards, set both buttons to ON. (➡Page 63)
The Harmony notes of the Melody On Chord function are not sounded.	The upper keyboard has been set only to sound LEAD voices, so set it to also enable the sounding of non-LEAD voices. (➡Page 64)

SYMPTOM	CAUSE AND REPAIR METHOD
During voice editing, the specified voice isn't sounded even when the keyboard is played.	The current setting inhibits the sounding of the specified voice. Set the volume for the specified voice and set its corresponding button at the ENSEMBLE section to ON. (➡Page 26)
During voice editing, changing the Envelope Generator of a Carrier causes the timing for timbre fluctuations to deviate.	Since the Modulator's Envelope Generator hasn't been changed, the timing for periodic fluctuations will vary for volume and timbre. Select a Modulator-type Operator and change its Envelope Generator parameters. (➡Page 28)
Despite pressing the FROM FM VOICE PACK button, an FM Voice Pack voice can't be called.	The Electone isn't in VOICE EDIT Mode. To call a voice from an FM Voice Pack, specify a panel voice, then enter EDIT Mode. (➡Page 31)
While performing realtime writing by R.P.P., no pattern is input when the lower keyboard keys are struck.	The patterns of eight percussion instruments have already been input. Before adding the pattern of an additional instrument sound or inputting a pattern, delete the patterns of all unnecessary instruments. (➡Pages 36 & 37)
While performing step writing by R.P.P., no pattern is input when an ACCENT button is pressed.	The percussion instrument to be input hasn't been specified. Before inputting a pattern, specify the instrument to be input using a key of the lower keyboard. (➡Pages 36 & 37)
A pattern created by R.P.P. or R.C.P. can't be registered.	①The registration procedure is mistaken. While depressing a numeric button of REGISTRATION MEMORY, press a USER button. ②The input pattern was deleted prior to registration. Before registering a pattern, never set the R.P.P. button to OFF or switch the display of MULTI MENU. (➡Pages 44 & 48)
The RECORD or EDIT Mode of C.S.P. or R.S.P. can't be entered.	A button of the panel's C.S.P./R.S.P. section is ON. Before entering RECORD or EDIT Mode, set all buttons of the C.S.P./R.S.P. section to OFF. (➡Pages 44 & 48)
During recording by C.S.P. or R.S.P., a signal noise is sounded and input becomes impossible.	The memory capacity is full. Terminate recording, then program the remainder of that performance to another numeric button. (➡Pages 42 & 46)
The registrations that were recorded to C.S.P. can't be played back.	The data memorized to REGISTRATION MEMORY at the time of playback differs from the data used during recording. Because the contents of REGISTRATION MEMORY can't be stored at C.S.P., be sure to transfer the REGISTRATION MEMORY data to a RAM Pack after completing programming. (➡Page 42)
The User Rhythm patterns that were recorded to R.S.P. can't be played back.	The User patterns that are registered at the time of playback differ from those registered during recording. Because the contents of User patterns can't be stored at R.S.P., be sure to transfer the User pattern data to a RAM Pack after completing programming. (➡Page 46)
During R.S.P. playback, the registrations arbitrarily change.	The Registration data that was programmed to the same numeric button is being recalled. Delete the C.S.P. data. (➡Pages 42 & 46)
After starting the rhythm, the registrations arbitrarily change.	A numeric button of the panel's C.S.P./R.S.P. section is ON. For regular performances, set all of its numeric buttons to OFF. (➡Page 44)
During editing by C.S.P. or R.S.P., any attempt to insert data causes the data to be placed one position before the desired position.	The INSERT button is being pressed at the wrong data position. Press the INSERT button at the data position following the desired position for insertion. (➡Pages 45 & 49)
RECORD Mode of F.M.P. can't be entered.	A button of the panel's C.S.P./R.S.P. section is ON. Before entering the F.M.P.'s RECORD Mode, set all buttons of the C.S.P./R.S.P. section to OFF. (➡Pages 44 & 48)
The registrations recorded at F.M.P. can't be played back.	①The data memorized to REGISTRATION MEMORY at the time of playback differs from the data used during recording. Because the contents of REGISTRATION MEMORY can't be stored at F.M.P., be sure to transfer the data to a RAM Pack after completing programming. ② The registration that was set at the panel before starting recording hasn't been memorized to REGISTRATION MEMORY. Be sure to always memorize the registration used at the start of recording to REGISTRATION MEMORY. (➡Page 50)
During F.M.P. playback, such parts as the melody line or accompaniment are terminated before their completion.	The recorded performance exceeds the memory capacity. When the memory becomes full during recording, the lamps of the RECORD section will go OFF. (➡Page 50)
The F.M.P. data can't be transferred to a RAM Pack.	①The amount of the recorded F.M.P. data exceeds the memory capacity of the RAM Pack. ② RAM Pack RP-3 is designed not to receive the data recorded on the Registration track. To store all F.M.P. data, use a Cassette Tape or RAM Pack RP-5. (➡Page 54)
The various functions don't operate normally or the data memorized at the Electone is destroyed.	An abnormal voltage was input to the Electone. In extremely rare cases, an abnormal voltage input caused by lightening, etc., may cause the Electone to malfunction and destroy the data in its memory. In such cases, set its POWER switch to OFF, then set it back to ON while depressing the leftmost button of MULTI MENU.

SPECIFICATIONS

		HS-8	HS-7	HS-6	HS-5	HS-4
KEYBOARD	**UPPER KEYBOARD**	49 keys c-c4 (4 oct.)	49 keys c-c4 (4 oct.)	49 keys c-c4 (4 oct.)	49 keys c-c4 (4 oct.)	49 keys c-c4 (4 oct.)
	LOWER KEYBOARD	49 keys c-c3 (4 oct.)	49 keys c-c3 (4 oct.)	49 keys c-c3 (4 oct.)	49 keys c-c3 (4 oct.)	49 keys c-c3 (4 oct.)
	PEDAL KEYBOARD	20 keys C-g (1 1/2 oct.)	20 keys C-g (1 1/2 oct.)	20 keys C-g (1 1/2 oct.)	20 keys C-g (1 1/2 oct.)	20 keys C-g (1 1/2 oct.)
TOUCH RESPONSE	**INITIAL TOUCH**	UPPER, LOWER, PEDAL	UPPER, LOWER	UPPER, LOWER	UPPER, LOWER	UPPER, LOWER
	AFTER TOUCH	UPPER, LOWER, PEDAL	UPPER, LOWER	UPPER, LOWER	UPPER, LOWER	UPPER, LOWER
VOICE SECTIONS	**UPPER ORCHESTRAL**	STRINGS, BRASS, WOOD, VOCAL, VOLUME	STRINGS, BRASS, WOOD, VOCAL, VOLUME	STRINGS, BRASS, WOOD, VOCAL, VOLUME	STRINGS, BRASS 1, BRASS 2, WOOD, VOCAL, COMBI., VOLUME	STRINGS, BRASS 1, BRASS 2, WOOD, COMBI. 1, COMBI. 2, VOLUME
	UPPER COMBINATION	1, 2, 3, 4, VOLUME	1, 2, 3, 4, VOLUME	1, 2, 3, 4, VOLUME		
	U/L LEAD	FLUTE, OBOE, TRUMPET, TROMBONE, VOLUME	FLUTE, OBOE, TRUMPET, TROMBONE, VOLUME	FLUTE, OBOE, TRUMPET, TROMBONE, VOLUME	FLUTE, OBOE, TRUMPET, TROMBONE, VOLUME	FLUTE, OBOE, TRUMPET, TROMBONE, VOLUME
	U/L AWM PRESET	PIANO, STRINGS, PIPE ORGAN (VOICE PACK 1), BRASS (VOICE PACK 2), VOLUME	–	–	–	–
	U/L PERCUSSIVE	–	PIANO, VIBRAPHONE, JAZZ GUITAR, GUITAR, VOLUME	PIANO, VIBRAPHONE, JAZZ GUITAR, GUITAR, VOLUME	PIANO, VIBRAPHONE, JAZZ GUITAR, GUITAR, VOLUME	–
	LOWER ORCHESTRAL	STRINGS, BRASS 1, BRASS 2, VOCAL, VOLUME	STRINGS, BRASS 1, BRASS 2, VOCAL, VOLUME	STRINGS, BRASS 1, BRASS 2, VOCAL, COMBI. 1, COMBI. 2, VOLUME	STRINGS, BRASS 1, BRASS 2, VOCAL, COMBI. 1, COMBI. 2, VOLUME	STRINGS, BRASS 1, BRASS 2, PIANO, COMBI. 1, COMBI. 2, VOLUME
	LOWER COMBINATION	1, 2, 3, 4, VOLUME	1, 2, 3, 4, VOLUME			
	AWM BASS	WOOD BASS, STRING BASS (VOICE PACK), VOLUME	–	–	–	–
	BASS	CONTRABASS 1, CONTRABASS 2, ELECTRIC BASS, TUBA, VOLUME	CONTRABASS 1, CONTRABASS 2, ELECTRIC BASS, TUBA, VOLUME	CONTRABASS 1, CONTRABASS 2, ELECTRIC BASS, TUBA, VOLUME	CONTRABASS 1, CONTRABASS 2, ELECTRIC BASS, TUBA, VOLUME	CONTRABASS 1, CONTRABASS 2, ELECTRIC BASS, TUBA, VOLUME
	ARPEGGIO CHORD	1, 2, 3, 4, USER 1, USER 2, VOLUME	1, 2, 3, 4, USER 1, USER 2, VOLUME	1, 2, 3, 4, USER 1, USER 2, VOLUME	1, 2, 3, 4, USER 1, USER 2, VOLUME	1, 2, 3, 4, USER 1, USER 2, VOLUME
ENSEMBLE		UPPER: COMBI., ORCHES., AWM PRESET, LEAD LOWER: COMBI., ORCHES., AWM PRESET, LEAD	UPPER: COMBI., ORCHES., PERCUS., LEAD LOWER: COMBI., ORCHES., PERCUS., LEAD	UPPER: COMBI., ORCHES., PERCUS., LEAD LOWER; COMBI., PERCUS., LEAD	UPPER: ORCHES., PERCUS., LEAD LOWER; COMBI., PERCUS., LEAD	LEAD: UPPER, LOWER
EFFECTS/ CONTROLS	**SUSTAIN**	UPPER (KNEE), LOWER (KNEE), PEDAL	UPPER (KNEE), LOWER (KNEE), PEDAL	UPPER (KNEE), LOWER (KNEE), PEDAL	UPPER (KNEE), LOWER (KNEE), PEDAL	UPPER (KNEE), LOWER (KNEE), PEDAL
	USER VIBRATO	UPPER ORCHES., LOWER ORCHES., LEAD	UPPER ORCHES., LOWER ORCHES., LEAD	UPPER ORCHES., LOWER ORCHES., LEAD	UPPER ORCHES., LOWER ORCHES., LEAD	UPPER ORCHES., LOWER ORCHES., LEAD
	REVERB	○ (DIGITAL)	○	○	○	○
	TREMOLO	CHORUS, TREMOLO, UPPER COMBI., LOWER COMBI.	CHORUS, TREMOLO, UPPER COMBI., LOWER COMBI.	CHORUS, TREMOLO, UPPER COMBI., LOWER ORCHES.	CHORUS, TREMOLO, CELESTE, SYMPHONIC, UPPER ORCHES., LOWER ORCHES.	CHORUS, TREMOLO, CELESTE, SYMPHONIC, UPPER ORCHES., LOWER ORCHES.
	SYMPHONIC	CELESTE, SYMPHONIC, UPPER ORCHES., LOWER ORCHES.	CELESTE, SYMPHONIC, UPPER ORCHES., LOWER ORCHES.	CELESTE, SYMPHONIC, UPPER ORCHES., LOWER ORCHES.		
	FLANGER/DELAY	UPPER ORCHES., AWM PRESET, LEAD, LOWER ORCHES., AWM BASS, ARPEGGIO CHORD	UPPER ORCHES., LEAD, LOWER ORCHES., ARPEGGIO CHORD	UPPER ORCHES., LEAD, LOWER ORCHES., ARPEGGIO CHORD	LEAD, ARPEGGIO CHORD	–
	PITCH	NARROW, WHEEL	–	–	–	–
	MODULATION	ON, WHEEL	–	–	–	–
	MANUAL BALANCE	○	○	○	○	○
RHYTHM	**RHYTHM PATTERNS**	MARCH, TANGO, WALTZ, BALLAD, SWING, BOSSANOVA, SAMBA, LATIN, LATIN ROCK, SLOW ROCK,BOUNCE, 8 BEAT, DISCO, 16 BEAT, USER 1, USER 2	MARCH, TANGO, WALTZ, BALLAD, SWING, BOSSANOVA, SAMBA, LATIN, LATIN ROCK, SLOW ROCK,BOUNCE, 8 BEAT, DISCO, 16 BEAT, USER 1, USER 2	MARCH, TANGO, WALTZ, BALLAD, SWING, BOSSANOVA, SAMBA, LATIN, LATIN ROCK, SLOW ROCK,BOUNCE, 8 BEAT, DISCO, 16 BEAT, USER 1, USER 2	MARCH, TANGO, WALTZ, BALLAD, SWING, BOSSANOVA, SAMBA, LATIN, LATIN ROCK, SLOW ROCK,BOUNCE, 8 BEAT, DISCO, 16 BEAT, USER 1, USER 2	MARCH, TANGO, WALTZ, BALLAD, SWING, BOSSANOVA, SAMBA, LATIN, LATIN ROCK, SLOW ROCK,BOUNCE, 8 BEAT, DISCO, 16 BEAT, USER 1, USER 2
	RHYTHM CONTROLS	VOLUME, BALANCE, TEMPO, TEMPO DISPLAY, TEMPO LAMPS, START, SYNCHRO START, INTRO./ENDING, FILL IN 1, FILL IN 2, USER FILL IN	VOLUME, BALANCE, TEMPO, TEMPO DISPLAY, TEMPO LAMPS, START, SYNCHRO START, INTRO./ENDING, FILL IN 1, FILL IN 2, USER FILL IN	VOLUME, BALANCE, TEMPO, TEMPO DISPLAY, TEMPO LAMPS, START, SYNCHRO START, INTRO./ENDING, FILL IN 1, FILL IN 2, USER FILL IN	VOLUME, BALANCE, TEMPO, TEMPO DISPLAY, TEMPO LAMPS, START, SYNCHRO START, INTRO./ENDING, FILL IN 1, FILL IN 2, USER FILL IN	VOLUME, TEMPO, TEMPO DISPLAY, TEMPO LAMPS, START, SYNCHRO START, INTRO./ENDING, FILL IN 1, FILL IN 2, USER FILL IN

		HS-8	HS-7	HS-6	HS-5	HS-4
KEYBOARD PERCUSSION		LOWER, PEDAL	LOWER, PEDAL	LOWER, PEDAL	LOWER, PEDAL	LOWER, PEDAL
AUTO BASS CHORD		ON, MEMORY	ON, MEMORY	ON, MEMORY	ON, MEMORY	ON, MEMORY
MELODY ON CHORD		ON	ON	ON	ON	ON
REGISTRATION MEMORY		MEMORY, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	MEMORY, 1, 2, 3, 4, 5, 6, 7, 8	MEMORY, 1, 2, 3, 4, 5, 6, 7, 8	MEMORY, 1, 2, 3, 4, 5, 6, 7, 8	MEMORY, 1, 2, 3, 4, 5, 6, 7, 8
PACK		CONFIRM, TO PACK, FROM PACK, READY, ERROR	CONFIRM, TO PACK, FROM PACK, READY, ERROR	CONFIRM, TO PACK, FROM PACK, READY, ERROR	CONFIRM, TO PACK, FROM PACK, READY, ERROR	CONFIRM, TO PACK, FROM PACK, READY, ERROR
AWM VOICE PACK		3	–	–	–	–
C.S.P./R.S.P.		1, 2, 3, 4, C.S.P. PLAY, R.S.P. PLAY	1, 2, 3, 4, C.S.P. PLAY, R.S.P. PLAY	1, 2, 3, 4, C.S.P. PLAY, R.S.P. PLAY	1, 2, 3, 4, C.S.P. PLAY, R.S.P. PLAY	1, 2, 3, 4, C.S.P. PLAY, R.S.P. PLAY
F.M.P.		START	START	START	START	START
MULTI MENU	**REGISTRATION MENU**	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, VARIATION				
	VOICE MENU 1	COMBI. 1, COMBI. 2, COMBI. 3, PIPE ORGAN 1, PIPE ORGAN 2, PIPE ORGAN 3, STRINGS 1, STRINGS 2, STRINGS 3, BRASS 1, BRASS 2, WOOD, ACCORDION, SYNTH STRINGS, SYNTH BRASS, COSMIC 1, COSMIC 2, COSMIC 3, VOCAL 1 (HS-4 = COSMIC 4), VOCAL 2 (HS-4 = COSMIC 5)				
	VOICE MENU 2	PIANO, ELECTRIC PIANO 1, ELECTRIC PIANO 2, HARPSICHORD, HARP, ACOUSTIC GUITAR, ELECTRIC GUITAR, JAZZ GUITAR, STEEL GUITAR, DISTORTION GUITAR, VIBRAPHONE, MARIMBA, CELESTA, BANJO, KOTO, STEEL DRUM, TIMPANI, CLAVI, CHIME, WAVE				
	VOICE MENU 3	VIOLIN, CELLO, HORN, FLÜGEL HORN, PICCOLO, CLARINET, SAXOPHONE, BASSOON, PAN FLUTE, RECORDER, HARMONICA, WHISTLE, SYNTH LEAD, COMBI. BASS 1, COMBI. BASS 2, ELECTRIC BASS 1, ELECTRIC BASS 2, SYNTH BASS 1, SYNTH BASS 2, ORIGINAL VOICE				
	VOICE EDIT	VOICE EDIT, OPERATOR = 1•2•3•4, OUTPUT LEVEL, ENVELOPE GENERATOR = AR•DIR•DIL•D2R•RR, FROM FM VOICE PACK, DATA = ▼•▲•COARSE, USER VOICE = 1•2•3•4, COPY				
	RHYTHM MENU	MARCH, POLKA/COUNTRY, TANGO, WALTZ, SWING, BALLAD, BOSSANOVA, SAMBA, LATIN, SALSA, SLOW ROCK, 8 BEAT 1, 8 BEAT 2, REGGAE, BOUNCE, DISCO, 16 BEAT 1, 16 BEAT 2, VARIATION, ORIGINAL PATTERN				
	R.P.P./R.C.P.	R.P.P., R.C.P., METRONOME, STEP WRITE = ACCENT (0•1•2•3)•◀•▶, CLEAR, PAN = ◀•▶, BEAT = 2/4•3/4•4/4, QUANTIZE = ♪•♪•♫•♬, COPY				
	C.S.P./R.S.P.	C.S.P., R.S.P., CLEAR, CHECK, 𝄞, ◀, ▶, —, 𝅝, 𝅗𝅥, 𝅘𝅥, 𝅘𝅥𝅮, 𝄿, 𝄾, D.S., REGIST., DELETE, INSERT, RHYTHM AUTO VARIATION				
	F.M.P.	CLEAR, METRONOME, RECORD = UPPER•LOWER•PEDAL•LEAD•REGIST., PLAY = UPPER•LOWER•PEDAL•LEAD•REGIST., COPY/CONFIRM				
	VIB., SUS. TREMOLO, TOUCH	USER VIBRATO = LEAD (DELAY•DEPTH•SPEED)•U.ORC.DEPTH•L.ORC.DEPTH, SUSTAIN = UPPER•LOWER•PEDAL, TREMOLO SPEED, 0 (MIN)•1•2•3•4 (MAX), EXTERNAL/MIDI CONT., TOUCH VIBRATO = LEAD•U.ORC.•L.ORC., TOUCH TONE = UPPER & LOWER•PEDAL (MIDI)				
	FT.SW., WHEEL, TRANS., PITCH CONT.	FOOT SWITCH = RHYTHM STOP•ENDING•FILL IN 1•FILL IN 2•USER FILL IN•GLIDE (LEAD•U.ORC.•L.ORC.), LEAD SLIDE, PITCH WHEEL (HS-8) = PITCH (LEAD.•U.ORC.)•TEMPO, MODULATION WHEEL (HS-8) = VIBRATO (LEAD•U.ORC.)•BRILLIANCE (LEAD•U.ORC.), TRANSPOSITION = ▼•▲, PITCH CONTROL = ▼•▲				
	A.B.C., M.O.C. FLNGR./DLY., VOL. FINE	A.B.C. = SINGLE FINGER•FINGERED CHORD•CUSTOM A.B.C.•MEMORY (LOWER•PEDAL), M.O.C. = 1•2•3•KNEE CONTROL, FLANGER/DELAY (HS-8•HS-7•HS-6•HS-5) = FLANGER•DELAY•PARAMETER (SPEED•F.B.•DEP./BAL)•DATA (▼•▲•COARSE), VOLUME FINE = ▼•▲•DISPLAY				
MAIN CONTROLS		MASTER VOLUME, POWER, GUIDE DISPLAY, KNEE LEVER, FOOT SW (L), FOOT SW (R), EXPRESSION PEDAL, 2ND EXPRESSION PEDAL (OPTIONAL), MIC. VOL.	MASTER VOLUME, POWER, KNEE LEVER, FOOT SW (L), EXPRESSION PEDAL, MIC. VOL.	MASTER VOLUME, POWER, KNEE LEVER, FOOT SW (L), EXPRESSION PEDAL, MIC. VOL.	MASTER VOLUME, POWER, KNEE LEVER, FOOT SW (L), EXPRESSION PEDAL, MIC. VOL.	MASTER VOLUME, POWER, KNEE LEVER, FOOT SW (L), EXPRESSION PEDAL, MIC. VOL.
CONNECTORS		HEADPHONES, MIC., SPEAKER OUT L•R, TO PEDAL, RHYTHM OUT L•R (PHONE), AUX. OUT L•R (PHONE), AUX. OUT L•R, AUX. IN L•R, EXP. IN, MIDI IN•OUT, FROM CASSETTE, TO CASSETTE, AC INLET	HEADPHONES, MIC., SPEAKER OUT L•R, TO PEDAL, AUX. OUT L•R, AUX. IN L•R, EXP. IN, MIDI IN•OUT, FROM CASSETTE, TO CASSETTE, AC INLET	HEADPHONES, MIC., SPEAKER OUT L•R, TO PEDAL, AUX. OUT L•R, AUX. IN L•R, EXP. IN, MIDI IN•OUT, FROM CASSETTE, TO CASSETTE, AC INLET	HEADPHONES, MIC., SPEAKER OUT L R, TO PEDAL, AUX. OUT L•R, AUX. IN L R, EXP. IN, MIDI IN•OUT, FROM CASSETTE, TO CASSETTE, AC INLET	HEADPHONES, MIC., SPEAKER OUT L R, TO PEDAL, AUX. OUT L•R, AUX. IN L R, EXP. IN, MIDI IN•OUT, FROM CASSETTE, TO CASSETTE, AC INLET
AMPLIFIERS		30W + 30W	30W + 30W	30W + 30W	30W	30W
SPEAKERS		20cm × 2, 5cm × 2	20cm × 2, 5cm × 2	20cm × 2, 5cm × 2	20cm × 1, 5cm × 1	20cm × 1, 5cm × 1
DIMENSIONS	**W**	1092 mm (43″)	1092 mm (43″)	1092 mm (43″)	1092 mm (43″)	1092 mm (43″)
	D	522.5 mm (20-1/2″)	522.5 mm (20-1/2″)	522.5 mm (20-1/2″)	522.5 mm (20-1/2″)	522.5 mm (20-1/2″)
	H	989.5 mm (39″)	989.5 mm (39″)	989.5 mm (39″)	989.5 mm (39″)	989.5 mm (39″)
NET WEIGHT		79.5 kg (175.3 lbs.)	74.5 kg (164.2 lbs.)	74.5 kg (164.2 lbs.)	72.5 kg (159.8 lbs.)	72.5 kg (159.8 lbs.)

EXTERNAL/MIDI CONTROL

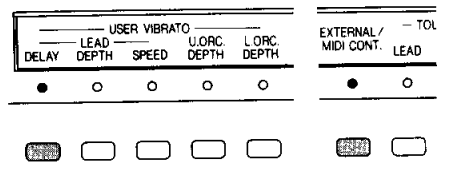
Use of the EXTERNAL/MIDI CONTROL functions located on the 10th screen of MULTI MENU will enable you to perform the various MIDI-related control operations.

① Transmitting signals for remote control of an external device:

The procedure described on the right enables the transmission of signals for remote control of the connected external instrument (a type of Exclusive Message common to all YAMAHA Electone's). The codes of the transmitted signals are as follows: (➡Page 78)

DELAY (ON) : F0H, 43H, 70H, 70H, 72H, 00H, 7FH, F7H
(OFF): F0H, 43H, 70H, 70H, 72H, 00H, 00H, F7H
DEPTH (ON) : F0H, 43H, 70H, 70H, 72H, 01H, 7FH, F7H
(OFF): F0H, 43H, 70H, 70H, 72H, 01H, 00H, F7H
SPEED (ON) : F0H, 43H, 70H, 70H, 72H, 02H, 7FH, F7H
(OFF): F0H, 43H, 70H, 70H, 72H, 02H, 00H, F7H

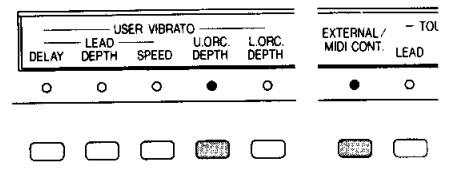
While depressing the EXTERNAL/MIDI CONT. button, press any button of the USER VIBRATO LEAD section.



② Switching to a status that excludes F.M.P. data from transmission

When the operation on the left is performed prior to recording a performance to MDR-2 or another external device, the transmission status will be switched so that the F.M.P. data is excluded from transmission. Because a large volume of data is memorized within F.M.P., about 40 seconds or more will be needed at the start of a recording operation in order to memorize the F.M.P. data to an external device. If you wish to start recording immediately by excluding the F.M.P. data, just perform the operation on the right. Note that the status which includes F.M.P. data within the transmission will be restored by performing the operation on the right once more or by setting the POWER switch to OFF.

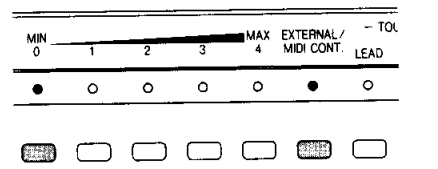
While depressing the EXTERNAL/MIDI CONT. button, press the U. ORC. DEPTH button of the USER VIBRATO section.



③ Switching the Rhythm Sync Mode:

The procedure described on the right switches the Electone's Rhythm Sync Mode from INTERNAL SYNCHRONOUS Mode into EXTERNAL SYNCHRONOUS Mode. When the procedure is performed once more, the INTERNAL SYNCHRONOUS Mode will be restored. Switch to EXTERNAL SYNCHRONOUS Mode when you want the Electone to receive the signals of a rhythm machine or an instrument provided with rhythm functions. (During the transfer of other MIDI data, this operation is not required.)
Note that switching OFF the Electone's power will cause the Electone to automatically enter INTERNAL SYNCHRONOUS Mode.

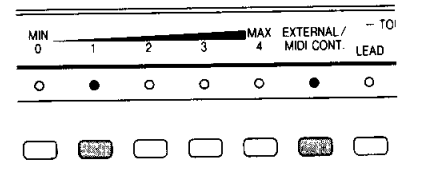
While depressing the EXTERNAL/MIDI CONT. button, press Button "0" (MIN).



④ Separating the LEAD voice reception channels:

While receiving MIDI signals from an external device, the LEAD voice will be sounded according to the Performance data received at the upper keyboard (Channel 1) or lower keyboard (Channel 2). The procedure on the right, however, enables the LEAD voice to be sounded according to the Performance data received at Channel 4. Perform this procedure to play back a performance consisting only of a LEAD voice that has been recorded at Channel 4 using an MDR-2, etc., or for transmitting the performance data of only the LEAD voice from a remote keyboard or similar instrument.
Note that this separation of the reception channels is canceled by performing the above procedure once more or switching OFF the Electone's power.

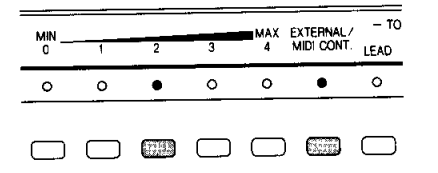
While depressing the EXTERNAL/MIDI CONT. button, press Button "1".



⑤ Separating the Arpeggio Chord reception channels:

While receiving MIDI signals from an external device, the Arpeggio Chord pattern will be sounded according to the Performance data received at the lower keyboard (Channel 2). The procedure on the right, however, enables Arpeggio Chord to be sounded according to the Performance data received at Channel 5. Perform this procedure to play back a performance consisting only of Arpeggio Chord patterns that has been recorded at Channel 4 using an MDR-2, etc., or for transmitting the performance data of only Arpeggio Chord patterns from a remote keyboard or similar instrument.
Note that this separation of the reception channels is canceled by performing the above procedure once more or switching OFF the Electone's power.

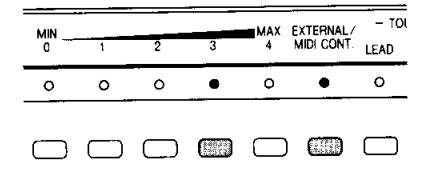
While depressing the EXTERNAL/MIDI CONT. button, press Button "2".



⑥ Switching the Receive Enable/Disable status for Expression Pedal data:

If the procedure on the right is performed while receiving MIDI signals from an external device, the Receive Enable status for Expression Pedal data will be entered so that the data can be received. When the procedure performed once more or the Electone's power is switched OFF, the Receive Disable status will be entered so that no Expression Pedal data can be received.
Because the Receive Enable status will be automatically entered while performing playback using MDR-2 or a similar device, however, if you wish to control the playback volume using the Electone's Expression Pedal, perform the procedure on the right only once.

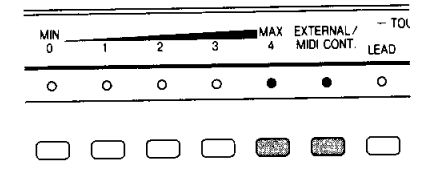
While depressing the EXTERNAL/MIDI CONT. button, press Button "3".



⑦ Changing the transmission channels for the upper and lower keyboards:

Normally, the Performance data of the upper keyboard is received at Channel 1 and that of the lower keyboard is received at Channel 2. The procedure on the right, however, enables the upper keyboard's data to be transmitted from Channel 4, and that of the lower keyboard to be transmitted from Channel 5. Perform this procedure in case of recording with MDR-2 or similar device, when you wish to perform multiplex recording of the performance of a specific Voice section (LEAD, ARPEGGIO CHORD, etc.) onto a different channel.
Note that this change of the transmission channels is canceled by performing the above procedure once more or switching OFF the Electone's power.

While depressing the EXTERNAL/MIDI CONT. button, press Button "4" (MAX).



MIDI SPECIFICATIONS

■CHANNEL MESSAGES

Code	Function	Transmitted	Recognized	Remarks
8nH, nnH (Note No.), 00H-7FH	Note OFF	×	CH 1 CH 2 CH 3 (CH 4)* (CH 5)* CH 15	UK LK PK LEAD Arpeggio Chord Keyboard Percussion
9nH, nnH (Note No.), 01H-7FH (ON) 00H (OFF)	Note ON/OFF	CH 1 (CH 4)* CH 2 (CH 5)* CH 3	CH 1 CH 2 CH 3 (CH 4)* (CH 5)* CH 15	UK LK PK LEAD Arpeggio Chord Keyboard Percussion
BnH, 01H, 00H-7FH	Modulation Wheel	(CH 4)* CH 16	CH 1 CH 16 (CH 4)*	UK CONTROL LEAD
BnH, 04H, 00H-7FH	2nd Expression Pedal	(CH 4)* CH 16	CH 1 CH 16 (CH 4)*	UK CONTROL LEAD
BnH, 0BH, 00H-7FH	Expression Pedal	CH 16	CH 16	CONTROL
BnH, 40H, 7FH (ON) 00H (OFF)	Sustain ON/OFF	CH 1 CH 2 CH 3	CH 1 CH 2 CH 3	UK LK PK
BnH, 7BH, 00H	All Note OFF	×	CH 1 CH 2 CH 3 (CH 4)* (CH 5)* CH 16	UK LK PK LEAD Arpeggio Chord CONTROL
CnH, nnH (Program No.)	Program Change (Registration Memory)	CH 1 CH 2 CH 3 CH 16	CH 1 CH 2 CH 3 CH 16	UK LK PK CONTROL
DnH, 00H-7FH	After Touch	CH 1 (CH 4)* CH 2 (CH 5)* CH 3	CH 1 CH 2 CH 3 (CH 4)* (CH 5)*	UK LK PK LEAD Arpeggio Chord
EnH, (00H-7FH), 00H-7FH	Pitch Bender	(CH 4)* CH 16	CH 1 CH 16 (CH 4)*	UK CONTROL LEAD

*Can be replaced by MIDI CONTROL functions on the MULTI MENU. (➡Page 76)

■SYSTEM REALTIME MESSAGES

Code	Function	Transmitted	Recognized	Remarks
F8H	Clock	○	○	Recognize=Ext. mode
FAH	Start	○	○	
FCH	Stop	○	○	
FEH	Active Sensing	○	○	
FFH	Reset	×	○	

■SYSTEM EXCLUSIVE MESSAGES

Code	Messages	Remarks
F0H, 43H, 70H, 70H (Electone), ..., F7H	1. Electone common messages	(➡Page 78)
F0H, 43H, 70H, 72H (HS), ..., F7H	2. HS Series common messages	(➡Page 79)
F0H, 43H, 70H, nnH (Model)*, ..., F7H	3. Model-Specific messages	(➡Page 80)
F0H, 43H, 73H, ..., F7H	4. Electone/Single Keyboard common messages	(➡Page 80)

*HS-4=15H, HS-5=16H, HS-6=17H, HS-7=18H, HS-8=19H

1. Electone common messages

■ BULK DUMP Related Messages

Code	Messages	Transmitted	Recognized
F0H, 43H, 70H, 70H, 00H, ...(data)....., F7H	Bulk Dump data	×	○
01H, ...(data).....,	Request-to-Send Voice Parameter data	×	○
02H, ...(data).....,	Request-to-Receive Voice Parameter data	×	○
F0H, 43H, 70H, 70H, 10H, F7H	Request-to-Send all RAM data	×	○
11H	Request-to-Send Registration data	×	○
12H	Request-to-Send C.S.P./R.S.P. data	×	○
13H	Request-to-Send F.M.P. data	×	○
14H	Request-to-Send USER Pattern data	×	○
15H	Request-to-Send USER Pattern data	×	○
16H	Request-to-Send USER Voice data	×	○
F0H, 43H, 70H, 70H, 20H, F7H	Request-to-Receive all RAM data	×	○
21H	Request-to-Receive Registration data	×	○
22H	Request-to-Receive C.S.P./R.S.P. data	×	○
23H	Request-to-Receive F.M.P. data	×	○
24H	Request-to-Receive USER Pattern data	×	○
25H	Request-to-Receive USER Pattern data	×	○
26H	Request-to-Receive USER Voice data	×	○
F0H, 43H, 70H, 70H, 30H, F7H	Request-to-Send Model ID data	×	○
F0H, 43H, 70H, 70H, 38H, 7FH, F7H	Bulk Dump Acknowledge	○	×
00H	Unacknowledge		

■ CONTROL CHANGE

Code	Messages		Transmitted	Recognized
F0H, 43H, 70H, 70H, 40H, 45H, 7FH, F7H	FOOT SWITCH LEFT	ON	○	○
00H		OFF		
40H, 47H, 7FH	KNEE LEVER	ON	○	○
00H		OFF		
40H, 48H, 7FH	FILL IN 1	ON	○	○
00H		OFF		
40H, 49H, 7FH	FILL IN 2	ON	○	○
00H		OFF		
40H, 4BH, 7FH	INTRO./ENDING	ON	○	○
00H		OFF		
40H, 4CH, 7FH	USER FILL IN	ON	○	○
00H		OFF		
40H, 4FH, 00H-7FH	MASTER VOLUME		○	×
40H, 50H, Tl, Th	TEMPO		○	○

■ MDR-2 STATUS

Code	Messages		Transmitted	Recognized
F0H, 43H, 70H, 70H, 70H, 01H, 7FH	PLAY	Start	×	○
70H, 02H		Stop		
70H, 03H	RECORD	Start	×	○
70H, 04H		Stop		
70H, 05H	FF ▶▶	Start	×	○
70H, 06H		Stop		
70H, 07H	REW ◀◀*	Start	×	×
70H, 08H		Stop		
70H, 09H	Rhythm Pointer Reset		×	○

*When the rewind button on the MDR-2 is depressed, the rhythm pointer reset and fast forward signals are sent.

■ OTHERS

Code	Messages		Transmitted	Recognized
F0H, 43H, 70H, 70H, 72H, 00H, 7FH, F7H	EXTERNAL CONTROL DELAY	OFF	○	○
00H		OFF		
72H, 01H, 7FH	DEPTH	ON		
00H		OFF		
72H, 02H, 7FH	SPEED	ON		
00H		OFF		
F0H, 43H, 70H, 70H, 78H, SC, NC, F7H	Bar signal		○	○

2. HS-Series common messages

Code	Messages	Transmitted	Recognized
F0H, 43H, 70H, 72H, 00H, ...(data)....., F7H	Bulk Dump data	○*	○
01H, ...(data).....,	Request-to-Send Voice Parameter data	×	○
02H, ...(data).....,	Request-to-Receive Voice Parameter data	×	○
F0H, 43H, 70H, 72H, 41H, ...(data)....., F7H	Panel Switch Event data**	○	○
F0H, 43H, 70H, 72H, 42H, ...(data)....., F7H	Current Registration data	○	○

*Voice Parameter data **Refer to the below table.

●Table of SW MIDI codes [F0H, 43H, 70H, 72H, 41H, nnH (SW code), nnH (SW data), F7H]

Functions/Switches		SW code	SW data	Remarks
Selector	UPPER COMBINATION VOICES	00H	00H-03H	SW No.
	LOWER COMBINATION VOICES	01H	00H-03H	SW No.
	UPPER ORCHESTRAL VOICES	02H	00H-05H	SW No. (HS-8/7/6: 00H-03H)
	LOWER ORCHESTRAL VOICES	03H	00H-05H	SW No. (HS-8/7: 00H-03H)
	U/L PERCUSSIVE VOICES	04H	00H-03H	SW No.
	U/L AWM PRESET VOICES	05H	00H-03H	SW No.
	U/L LEAD VOICES	06H	00H-03H	SW No.
	BASS VOICES	07H	00H-03H	SW No.
	AWM BASS VOICES	08H	00H-01H	SW No.
	ARPEGGIO CHORD (Preset)	09H	00H-03H	SW No.
	ARPEGGIO CHORD (USER)	0AH	00H-02H	00H=OFF, 01H, 02H=SW No.
	RHYTHM (Preset)	0BH	00H-0DH	SW No.
	RHYTHM (USER)	0CH	00H-02H	00H=OFF, 01H, 02H=SW No.
Volume	UPPER COMBINATION VOICES	10H	00H-7FH	Volume data
	LOWER COMBINATION VOICES	11H	00H-7FH	Volume data
	UPPER ORCHESTRAL VOICES	12H	00H-7FH	Volume data
	LOWER ORCHESTRAL VOICES	13H	00H-7FH	Volume data
	U/L PERCUSSIVE VOICES	14H	00H-7FH	Volume data
	U/L AWM PRESET VOICES	15H	00H-7FH	Volume data
	U/L LEAD VOICES	16H	00H-7FH	Volume data
	BASS VOICES	17H	00H-7FH	Volume data
	AWM BASS VOICES	18H	00H-7FH	Volume data
	ARPEGGIO CHORD	19H	00H-7FH	Volume data
	RHYTHM	1AH	00H-7FH	Volume data
	REVERB	1BH	00H-7FH	Volume data
Balance	MANUAL BALANCE	20H	00H-0CH	Balance data
	RHYTHM BALANCE	21H	00H-0CH	Balance data
Ensemble	UPPER COMBI.	30H	00H-01H	00H=OFF, 01H=ON
	LOWER COMBI.	31H	00H-01H	00H=OFF, 01H=ON
	UPPER ORCHES.	32H	00H-01H	00H=OFF, 01H=ON
	LOWER ORCHES.	33H	00H-01H	00H=OFF, 01H=ON
	U/L PERCUS.	34H	00H-02H	00H=OFF, 01H=UPPER ON, 02H=LOWER ON
	U/L AWM PRESET	35H	00H-03H	00H=OFF, 01H=UPPER ON, 02H=LOWER ON, 03H=UPPER and LOWER ON
	U/L LEAD	36H	00H-02H	00H=OFF, 01H=UPPER ON, 02H=LOWER ON
Tremolo/ Symphonic	SYMPHONIC/CELESTE	40H	00H-01H	00H=SYMPHONIC ON, 01H=CELESTE ON
	UPPER ORCHES.	41H	00H-01H	00H=OFF, 01H=ON
	LOWER ORCHES.	42H	00H-01H	00H=OFF, 01H=ON
	TREMOLO/CHORUS	43H	00H-02H	00H=OFF, 01H=TREMOLO ON, 02H=CHORUS ON
	UPPER COMBI.	44H	00H-01H	00H=OFF, 01H=ON
	LOWER COMBI.	45H	00H-01H	00H=OFF, 01H=ON
Flanger/ Delay	UPPER ORCHES.	46H	00H-01H	00H=OFF, 01H=ON
	LOWER ORCHES.	47H	00H-01H	00H=OFF, 01H=ON
	LEAD	48H	00H-01H	00H=OFF, 01H=ON
	AWM PRESET	49H	00H-01H	00H=OFF, 01H=ON
	AWM BASS	4AH	00H-01H	00H=OFF, 01H=ON
	ARPEGGIO CHORD	4BH	00H-01H	00H=OFF, 01H=ON
Sustain	UPPER	50H	00H-01H	00H=OFF, 01H=ON
	LOWER	51H	00H-01H	00H=OFF, 01H=ON
	PEDAL	52H	00H-01H	00H=OFF, 01H=ON
User Vibrato	LEAD	53H	00H-01H	00H=OFF, 01H=ON
	UPPER ORCHES.	54H	00H-01H	00H=OFF, 01H=ON
	LOWER ORCHES.	55H	00H-01H	00H=OFF, 01H=ON
Functions	A.B.C. ON	56H	00H-01H	00H=OFF, 01H=ON
	MEMORY	57H	00H-01H	00H=OFF, 01H=ON
	M.O.C. ON	58H	00H-01H	00H=OFF, 01H=ON
	PITCH NARROW	59H	00H-01H	00H=OFF, 01H=ON
	MODULATION ON	5AH	00H-01H	00H=OFF, 01H=ON
	KEYBOARD PERCUSSION LOWER	5BH	00H-01H	00H=OFF, 01H=ON
	KEYBOARD PERCUSSION PEDAL	5CH	00H-01H	00H=OFF, 01H=ON
Sequencer	F.M.P. START	60H	00H-01H	00H=OFF, 01H=ON
	C.S.P./R.S.P. 1	61H	00H-01H	00H=OFF, 01H=ON
	2	62H	00H-01H	00H=OFF, 01H=ON
	3	63H	00H-01H	00H=OFF, 01H=ON
	4	64H	00H-01H	00H=OFF, 01H=ON
	C.S.P. PLAY	65H	00H-01H	00H=OFF, 01H=ON
	R.S.P. PLAY	66H	00H-01H	00H=OFF, 01H=ON

3. Model-Specific messages

Code	Messages	Transmitted	Recognized
F0H, 43H, 70H, nnH*, 00H, ...(data)....., F7H	Bulk Dump data	○**	○
00H	Model ID data	○	×
01H, ...(data).....,	Request-to-Send Voice Parameter data	×	○
02H, ...(data).....,	Request-to-Receive Voice Parameter data	×	○
F0H, 43H, 70H, nnH*, 10H, F7H	Request-to-Send all RAM data	×	○
11H	Request-to-Send Registration data	×	○
12H	Request-to-Send C.S.P./R.S.P. data	×	○
13H	Request-to-Send F.M.P. data	×	○
14H	Request-to-Send USER Pattern data	×	○
15H	Request-to-Send USER Pattern data	×	○
16H	Request-to-Send USER Voice data	×	○
F0H, 43H, 70H, nnH*, 20H, F7H	Request-to-Receive all RAM data	×	○
21H	Request-to-Receive Registration data	×	○
22H	Request-to-Receive C.S.P./R.S.P. data	×	○
23H	Request-to-Receive F.M.P. data	×	○
24H	Request-to-Receive USER Pattern data	×	○
25H	Request-to-Receive USER Pattern data	×	○
26H	Request-to-Receive USER Voice data	×	○

*HS-4=15H, HS-5=16H, HS-6=17H, HS-7=18H, HS-8=19H **Excl. Voice Parameter data

4. Electone/Single Keyboard common messages

Code	Messages	Transmitted	Recognized
F0H, 43H, 73H, 01H, 02H, F7H	Request for Internal Synchronous mode	×	○
03H	Request for External Synchronous mode	×	○

Electone HS Series
MIDI Implementation Chart

Date: 2/1, 1987
Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1 2 3 16	1 2 3 15 16	UK LK PK Keyboard Percussion CONTROL
	Changes	4 5	 4 5	UK LK LEAD Arpeggio Chord
Mode	Default Messages Altered	Mode 3 × **********	Mode 3 × ×	
Note Number	 True Voice	48-96 36-84 36-55 × × × **********	36-96 36-96 36-96 36-96 36-96 36-96 36-96	UK LK PK LEAD Arpeggio Chord Keyboard Percussion UK, LK, PK
Velocity	Note ON Note OFF	○ 9nH, v=1-127 ○ 9nH, v=0	○ 9nH, v=1-127 ○ 9nH, v=0, 8nH	
After Touch	Key's Ch's	× ○	× ○	
Pitch Bender		○	○ 0-12 semi	7 bit resolution
Control Change	1	○	○	Modulation wheel (HS-8)
	4	○	○	2nd Expression pedal (HS-8)
	11	○	○ ***	Expression pedal
	64	○	○	Sustain
Program Change	 True #	0-15 (0-7)*, 32-50, 64-82 **********	0-15 (0-7)*, 32-50, 64-82 0-15 (0-7)*, 32-50, 64-82	Registration Memory Registration Menu
System Exclusive		○ **	○ **	
System Common	Song Pos Song Sel Tune	× × ×	× × ×	
System Real Time	Clock Commands	○ ○	○ *** ○	 (FAH, FCH)
Aux Messages	Local ON/OFF All Notes OFF Active Sense Reset	× × ○ ×	× ○ ○ ○	
Notes		* 0-15=HS-8, 0-7=HS-7/6/5/4 ** Refer to Exclusive message list *** Recognize only when External mode		

Mode 1: MONI ON , POLY Mode 2: OMNI ON , MONO ○: YES
Mode 3: OMNI OFF, POLY Mode 4: OMNI OFF, MONO ×: NO

GLOSSARY FOR THE HS SERIES ELECTONES

A

A.B.C. (Auto Bass Chord): A function that provides automatic accompaniment by the lower and pedal keyboards. The A.B.C. mode is selected at the MULTI MENU, and its ON/OFF status is controlled at the panel. (➡Page 62)

ACCENT buttons: Used for Step-Write input to the Rhythm Pattern Programmer or Rhythmic Chord Programmer. Pressing "0" inputs a rest, and pressing "1", "2" or "3" inputs a note of the corresponding volume. (➡Pages 36,40)

After touch: Controls the volume and timbre according to the intensity of your subsequent pressing of the keys after the initial touch. The harder the keys are pressed, the higher the volume and the brighter the timbre. (➡Page 57)

AR (Attack Rate) parameter: A Voice parameter specifying the time required for the envelope to reach maximum level from its starting position. It can be changed by voice editing, so select AR to change either the fluctuations in volume or timbre for the attack rate. (➡ Page 28)

ARPEGGIO CHORD function: Provides an automatic accompaniment pattern in time with the rhythm by merely holding down chords on the lower keyboard. (➡Page 14)

AUX. IN jack: Inputs Voice signals from an external device or instrument. (➡Page 68)

AUX. OUT jack: Outputs the Electone's Voice signals to an external device or instrument. (➡Page 68)

AWM (Advanced Wave Memory): YAMAHA's exclusive technology which digitally records the sounds of acoustic instruments and memorizes that data into a tone generator for electronic instruments. This Tone Generator System is adopted in the rhythm notes of all models as well as in AWM PRESET and AWM BASS VOICES of HS-8.

AWM BASS VOICES section: A Voice section for the HS-8 pedal keyboard. Adopting the AWM Tone Generator System, it provides extremely realistic voices. (➡Page 4)

AWM PRESET section: A Voice section for the upper and lower keyboards of HS-8. Adopting the AWM Tone Generator System, it provides extremely realistic voices. (➡Page 4)

AWM Voice Pack: A ROM (Read-Only Memory) Pack containing Voice data of the AWM Tone Generator. With HS-8, three of these packs can be concurrently installed. (➡Page 5)

B

BALANCE: ① A button for controlling the volume balance of the instrument sounds forming a Rhythm pattern. (➡Page 12)
② A parameter of the Delay effect which determines the output balance between the Direct signals and Delay signals. (➡Page 66)

BAR/BEAT Display: Displayed in place of the TEMPO/(DATA) Display when the rhythm is started. (➡Page 12)

BASS VOICES section: A Voice section, for the pedal keyboard, which is provided for all models. (➡Pages 4,6,8,10)

BEAT button: Specifies the beat of a Rhythm pattern for input to the Rhythm Pattern Programmer. (➡Page 35)

BRILLIANCE: An effect that can be controlled by the HS-8 Modulation Wheel. The more the wheel is turned toward MAX, the more brilliant the voice will sound. (➡Page 60)

C

Carrier: A type of Operator used for voice synthesis based on the FM Tone Generator, it is a unit for outputting the actual voice (Voice signals). (➡Page 26)

CELESTE: An effect which provides a voice with expansiveness. Its effect seems to be applied more slowly than that of Symphonic. (➡Page 16)

CHECK button: Used for checking each data position of a Rhythm pattern that has been input to the Rhythm Sequence Programmer or Chord Sequence Programmer. If CHECK is ON and the rhythm is started, the Rhythm pattern that was input at the current data position will be sounded. (➡Page 49)

CHORUS: An effect which provides a Voice with an undulating sensation. The sounds seems to undulate more slowly than that of Tremolo. (➡Page 16)

CLEAR button: (1) With R.P.P. or R.C.P., pressing a key of the lower keyboard while depressing CLEAR will enable you to delete the patterns you have input by individual instrument sounds. (➡Pages 36,37,41)
(2) With C.S.P. or R.S.P., press CLEAR before the programming of new Sequence data. (➡Pages 42,46)
(3) With F.M.P., before starting to newly record a performance, press CLEAR while depressing the COPY/CONFIRM button. (➡Page 50)

COARSE button: Pressing the ▼ button or ▲ button, or while depressing COARSE implements a coarse increase or decrease in the numeric value of the data displayed at the right edge of the TEMPO/(DATA) Display. (➡Pages 28,31,66)

COMBI. (COMBINATION) voices: The preset voices of various organ sounds which are provided on the VOICE MENU as well as at the panel. (➡Pages 4,6,8,10,23)

COMBINATION VOICES section: A Voice section that is preset only with Combination voices for both the upper and lower keyboard, and is provided for HS-8, HS-7, and HS-6. (➡Pages 4,6)

CONFIRM button: To perform a To Pack (or To Cassette) operation, press the TO PACK button at the REGISTRATION MEMORY section while depressing CONFIRM. To perform a From Pack (or From Cassette) operation, press the FROM PACK button while depressing CONFIRM. (➡Pages 18,20)

COPY button: (1) This button is used either to register edited voice data during voice editing or to exclusively copy to the Electone the Voice data out of all the data stored in a RAM (Random-Access Memory) Pack. (➡Page 30)
(2) With R.P.P. or R.C.P., it is used to exclusively copy to the Electone the User Pattern data out of all the data stored in a RAM Pack. (➡Page 38)

COPY/CONFIRM button: Used when newly recording a performance at F.M.P. or when transferring the data recorded at F.M.P. to a RAM Pack. (➡Pages 50,54)

COSMIC: Preset voices consisting of a variety of image sounds which are provided on the VOICE MENU. (➡Page 23)

C.S.P. (Chord Sequence Programmer): A function capable of programming and playback of the Sequence data for chords and registrations. (➡Page 42)

C.S.P. PLAY button: Set this button to ON for playback of the chord sequences programmed at C.S.P. (➡Page 44)

CUSTOM A.B.C. Mode: One of the Auto Bass Chord Modes, which detects the chords pressed on the lower keyboard and the notes pressed on the pedal keyboard to provide an automatic bass accompaniment. (➡Page 62)

D

ATA buttons: Used to increase/decrease the numeric values of the data displayed at the right of the TEMPO/(DATA) Display. (➡Pages 28,31,66)

DECAY parameters (D1R, D1L, D2R): Decay 1 Rate, Decay 1 Level, and Decay 2 Rate are Voice parameters that can be changed by voice editing, and are selected to change the way the volume or timbre fluctuates over time. (➡Page 28)

DELAY: (1) A parameter set at the USER VIBRATO section for application to LEAD voices. The larger the value set, the deeper the Vibrato effect that will be applied. (➡Page 55)
(2) An effect which adds an echo to notes and provides an expansive sensation. To produce the Delay effect, set the DELAY button of MULTI MENU to ON, then set the panel button of the Voice section that is to be subjected to the Delay effect to ON. (➡Page 65)

DELETE button: With C.S.P. or R.S.P., this button is pressed to delete unnecessary data from among the programmed data. (➡Pages 45,49)

DEPTH parameter: (1) A parameter that can be set at the USER VIBRATO section. The larger the value set, the deeper the Vibrato effect that will be applied. (➡Page 55)
(2) A parameter for changing the Flanger effect. The higher the numeric value, the deeper the modulation. (➡Page 66)

DISPLAY button: Used either when confirming the currently specified section for VOLUME FINE setting, or for the consecutive performance of VOLUME FINE setting. (➡Page 67)

Dotted buttons: The panel buttons provided with a small square. VOICE MENU voices or User voices can be assigned to the dotted buttons at each Voice section and the ARPEGGIO CHORD section. RHYTHM MENU patterns can be assigned to dotted buttons of the RHYTHM section. (➡Pages 23,30,32)

E

ENDING switch: Pressing this switch after the rhythm has started will sound a two-bar Ending pattern,then automatically stop the rhythm. (➡Page 13)

ENSEMBLE section: Collectively controls the ON/OFF status of all Voice sections. (➡Pages 5,7,9)

ENVELOPE GENERATOR parameters: Among the parameters that can be changed by voice editing, this is a general term for the parameters controlling the fluctuations of volume or timbre over time. (➡Page 28)

ERROR lamp: During use of a RAM Pack or FM Voice Pack, this lamp will flash when data has not been transferred properly due to a mistaken operation, etc. (➡Page 20)

EXTERNAL/MIDI CONTROL button: Used for various controls during the transfer of MIDI signals. (➡Pages 57, 76)

EXP. IN jack: Is connected to permit input of Voice signals from an external device and the control of their volume by the Electone's Expression Pedal. (➡Page 68)

Expression Pedal: Enables control of the overall volume of the Electone.

F

FEEDBACK parameter: A parameter for changing the Flanger or Delay effect. (➡Page 66)

FILL IN 1/2 switches: Pressing one of these switches after the rhythm has started will produce a preset Fill In pattern for rhythm. (➡Page 13)

FINGERED CHORD Mode: One of Auto Bass Chord modes, which detects the chords pressed on the lower keyboard to provide an automatic bass accompaniment. (➡Page 62)

FLANGER button: An effect which provides a voice with an undulating sensation. To produce the Flanger effect, set the FLANGER button of MULTI MENU to ON, then set the panel button of the Voice section that is to be subjected to the Flanger effect to ON. (➡Page 65)

FM (Frequency Modulation): YAMAHA's exclusive tone generation technique, which retrieves the diverse components of each voice and subjects them to detailed digital processing to create a wide variety of musical sounds.

F.M.P. (Full Music Programmer): A function capable of the realtime recording and playback of the Electone's performance. (➡Page 50)

FM Voice Pack: A ROM Pack containing of Voice data based on the FM Tone Generator System. (➡Page 31)

Foot Switch: Provided at the left of the Expression Pedal, its function is selected at the FOOT SWITCH section of MULTI MENU. (➡Page 58)

Foot Switch (Right): Provided at the right of the HS-8's Expression Pedal and capable of controlling REGISTRATION MEMORY. (➡Page 58)

FROM CASSETTE jack: An accessory jack that is connected for recalling to the Electone the data that was transferred to a Cassette Tape. (➡Page 21)

FROM FM VOICE PACK button: Press this button to call the voices of an FM Voice Pack to the Electone. (➡Page 31)

FROM PACK button: Press this button to recall to the Electone the data that was transferred to a RAM Pack. (➡Pages 20,30,38,54)

G

GLIDE: An effect that temporarily lowers the pitch a half-step then gradually restores the original pitch. It is controlled by the Foot Switch. (➡Page 58)

GUIDE Display: A liquid-crystal display provided on HS-8 for displaying various messages.

H

HEADPHONES jack: For connecting a headphone set. (➡Page 68)

I

Initial Touch: Controls the volume and timbre according to the intensity of your initial pressing of the keys. The harder the keys are pressed, the higher the volume and the brighter the timbre. (➡Page 57)

INSERT button: Used with C.S.P. or R.S.P. to insert new data into previously programmed Sequence data. (➡Pages 45,49)

INTRO. switch: By setting the INTRO./ENDING switch to ON and then pressing the START switch, a one-bar Intro pattern will be provided before the rhythm is started. (➡Page 13)

K

KEYBOARD PERCUSSION function: A function for sounding the percussion notes by pressing keys on the lower or pedal keyboard. (➡Page 15)

KNEE CONTROL button: Setting this button to ON lets you control the ON/OFF status of MELODY ON CHORD by the Knee Lever. (➡Page 64)

Knee Lever: A knee-operated lever that can control the ON/OFF status of SUSTAIN and MELODY ON CHORD. (➡Pages 56,64)
KOTO: A traditional stringed instrument of Japan which is provided on the VOICE MENU. (➡Page 23)

L

LEAD SLIDE button: When set to ON, the Portamento effect is applied to the LEAD voice. (➡Page 58)
LEAD VOICES section: A voice section for the upper or lower keyboards, consisting of a monophonic voice group capable of sounding only one note at a time. (➡Pages 4,6,8,10)

M

MANUAL BALANCE function: A function for setting the volume balance of the upper and lower keyboards. (➡Pages 5,7,9,11)
MASTER VOLUME: A control for adjusting the overall volume of the Electone.
MEMORY: (1) A button which is pressed to memorize the panel settings to REGISTRATION MEMORY. (➡Page 18)
(2) A function that continues the accompaniment of the lower and pedal keyboards even after their keys are released. (➡Page 63)
MEMORY PROTECT switch: Provided on the RAM Pack to prevent accidental deletion of its data. (➡Page 20)
METRONOME button: (1) When set to ON for Realtime-Write input to R.P.P., a metronome will be sounded according to the current tempo setting. (➡Page 36)
(2) When set to ON for recording to F.M.P., a metronome will be sounded according to the current tempo setting until the rhythm is started. (➡Page 50)
MIC. jack: For connecting a microphone. The volume of the connected microphone can be controlled by the MIC. VOL. control. (➡Page 68)
MIDI Standard: Musical Instrument Digital Interface. An international standard to enable communication between digital devices.
MIDI IN/OUT jacks: Used for exchanging data between the Electone and external MIDI-equipped devices. (➡Pages 68,69)
M.O.C. (Melody On Chord): A function that automatically provides a Harmony line to the Melody line played on the upper keyboard. (➡Page 64)
MODULATION function: Enables realtime control of the manner in which the Vibrato and Brilliance effects are applied, using the Modulation Wheel provided on HS-8. (➡Page 60)
Modulator: A type of Operator used for voice synthesis based on the FM Tone Generator, it is a unit for outputting the Modulation signals to other Operators. (➡Page 26)
MULTI MENU: A rotating panel with various built-in functions on 12 different screens.

N

NARROW button: Selects the variable width of the Pitch Wheel that is provided on HS-8. OFF sets a wide variable width, and ON narrows the variable width. (➡Page 59)

O

Operator: A unit which generates various signals for voice synthesis based on the FM Tone Generator. Each voice of the HS Electones is formed from a combination of four Operators. (➡Page 26)
ORCHESTRAL VOICES section: A voice section provided for both the upper and lower keyboard, consisting of a polyphonic voice group which can sound up to seven simultaneous notes. (➡Pages 4,6,8,10)
ORIGINAL PATTERN button: Pressing a dotted button of the RHYTHM section while depressing this button will cancel the assignment of the RHYTHM MENU pattern and restore the dotted button's original pattern. (➡Page 32)
ORIGINAL VOICE button: Pressing a dotted button of a Voice section or the ARPEGGIO CHORD section while depressing this button will cancel the assignment of the VOICE MENU voice and restore the dotted button's original voice. (➡Page 24)
OUTPUT LEVEL parameter: A parameter that can be changed by voice editing, it changes the overall volume or timbre. (➡Page 28)

P

PACK: The slot for inserting a RAM Pack or FM Voice Pack. (➡Pages 20,31)
PAN: A function that changes the panning of each rhythm instrument during input to R.P.P. (➡Page 35)
PERCUSSIVE VOICES section: A Voice section for the upper or lower keyboards, consisting of a polyphonic voice group which can sound up to seven simultaneous notes. (➡Pages 6,8)
PITCH function: A function that performs realtime control of pitch bending or the tempo, using the Pitch Wheel provided on HS-8. (➡Page 59)
PITCH CONTROL: A function capable of fine tuning of the overall pitch of the Electone. (➡Page 61)
PLAY section: Selects the track for performing F.M.P. playback. By setting all buttons of the RECORD section to OFF and then pressing the F.M.P. START switch, all buttons of the PLAY section will go ON. (➡Page 54)
POWER switch: Controls the ON/OFF status of the Electone's power supply.

Q

QUANTIZE section: Sets the resolution of the notes for input to R.P.P. or R.C.P. During Realtime Writing, the position of the input notes will be automatically corrected according to the set resolution. (➡Page 35)

R

RAM Pack: A memory pack capable of reading or writing data. (➡Page 20)
R.C.P. (Rhythmic Chord Programmer): A function enabling you to create your own Rhythmic patterns for ARPEGGIO CHORD and then register them as User patterns. (➡Page 39)
READY lamp: Lights up upon insertion of a RAM Pack or FM Voice Pack to indicate that it is possible to transfer the data. (➡Page 20)
REALTIME Writing: A method for inputting patterns to R.P.P. or R.C.P., by setting the Rhythm START switch to ON, then performing input by striking the keys of the lower keyboard in realtime. (➡Pages 36,40)
RECORD section: Selects the track for recording to F.M.P. By pressing the CLEAR button while depressing the COPY/CONFIRM button, all buttons of the RECORD section will go ON. (➡Page 50)
Registration: For an Electone, a registration refers to the collective settings of voices, effects, rhythm, and so on, for the creation of various sounds.
REGISTRATION MEMORY: A function which memorizes the registrations set at the panel and recalls them at a later time. (➡Page 18)
Repetition buttons (𝄋 , 𝄌 , D.S.): Pressing these buttons during input to C.S.P. or R.S.P. enables the programming of the respective repeat symbols. (➡Page 43)
REVERB: An effect which provides a voice with a reverberation. (➡Page 17)
RHYTHM: The general term for rhythm-related functions. (➡Page 12)
RHYTHM MENU: A function for assigning various Rhythm patterns to the dotted buttons of the panel's RHYTHM section. (➡Page 32)
RHYTHM STOP button: One of the buttons for selecting the function of the Foot Switch. When this button is ON, the STOP and subsequent START of the rhythm can be controlled by the Foot Switch. (➡Page 58)
RHYTHM OUT jack: An accessory jack provided on HS-8, which enables only the Rhythm signals to be output to an external device. (➡Page 68)
R.P.P. (Rhythm Pattern Programmer): A function which lets you newly create or edit a Rhythm or Fill In pattern, then register it as a User pattern. (➡Page 33)
RR (Release Rate) parameter: A Voice parameter that can be changed by voice editing. Select RR to change the speed of the fluctuations in volume or timbre from time the key is released until it returns to its initial position. (➡Page 28)
R.S.P. (Rhythm Sequence Programmer): A function for the programming and playback of Rhythm Sequence data. (➡Page 46)
R.S.P. PLAY button: Set this button to ON to playback the Rhythm sequence programmed to R.S.P. (➡Page 48)

S

2nd Expression Pedal: An optional pedal available for HS-8 which permits realtime control of pitch bending or the tempo. (➡Page 59)
SINGLE FINGER Mode: One of Auto Bass Chord modes, which provides an automatic chord and bass accompaniment according to the root notes you play on the lower keyboard. (➡Page 62)
SPEAKER OUT jack: Outputs the Voice signals to the Electone's built-in speakers. (➡Page 68)
SPEED parameter: (1) A parameter which sets the speed of the User Vibrato effect applied to the LEAD voice. (➡Page 55)
(2) A parameter for changing the Flanger or Delay effect. (➡Page 66)
START switch: (1) Press this switch to start the rhythm. It is also used for Realtime-Write input to R.P.P. or R.C.P. and for starting playback of C.S.P. or R.S.P. (➡Pages 12,36,40,44,48)
(2) Press this switch to start recording or playback with F.M.P. (➡Pages 50,54)
STEP Writing: A method used for inputting patterns to R.P.P. or R.C.P., by inputting the pattern one step at time. (➡Pages 36,40)
SUSTAIN: An effect which adds an aftersound to a note after its key is released. The duration of the aftersound is set at the MULTI MENU, and its ON/OFF status is switched using a panel button. (➡Page 56)
SYMPHONIC: An effect which provides a voice with an expansive sensation of a performance by multiple instruments. (➡Page 16)
SYNCHRO START switch: When this switch is set to ON, the rhythm will be started as soon as the lower or pedal keyboard is pressed. (➡Page 12)

T

TEMPO control: Sets the tempo of the rhythm. (➡Page 12)
TEMPO/(DATA) Display: Besides displaying tempo, bars, and beats of the rhythm, it also displays various data of the MULTI MENU functions. (➡Pages 12,26,31,66)
TO CASSETTE jack: Used for transferring data to a Cassette Tape. (➡Page 21)
TO PACK button: To transfer the Electone's data to a RAM Pack, press this button while depressing the CONFIRM or COPY button. (➡Pages 20,21,30,38,54)
TO PEDAL jack: Used for inputting the various signals from the Pedal Unit. (➡Page 68)
TOUCH TONE section: When its button is set to ON, the volume and timbre can be minutely controlled according to the intensity with which you press the keys. (➡Page 57)
TOUCH VIBRATO section: When its button is set to ON, the manner in which Vibrato is applied can be minutely controlled according to the intensity with which you press the keys. (➡Page 57)
TRANSPOSITION: A function that raises or lowers the overall key of the Electone in half-step units up to a half octave in either direction. (➡Page 61)
TREMOLO: One of the effects that provide a voice with a rotating, undulating effect. Its rotation seems to be faster than that of Chorus. (➡Page 16)
TREMOLO SPEED: A function that sets the rotating speed of the Tremolo effect. (➡Page 56)

U

USER buttons: (1) The USER 1 and 2 buttons of the RHYTHM section provide the User Rhythm patterns registered at R.P.P. (➡Page 38)
(2) The USER 1 and 2 buttons of the ARPEGGIO CHORD section provide the User Rhythmic Chord patterns registered at R.C.P. (➡Page 41)
USER FILL IN switch: When set to ON, this switch provides the User Fill In pattern registered at R.P.P. (➡Page 38)
USER VIBRATO: A function that sets the manner in which Vibrato will be applied to the LEAD and ORCHESTRAL voices. (➡Page 55)
USER VOICE section: Used for registering the edited Voice data. The registered voices can be assigned for use at the panel's dotted buttons. (➡Page 30)

V

VARIATION button: (1) Setting this button to ON at the REGISTRATION MENU will provide the respective Variations of each registration. (➡Page 22)
(2) Setting this button to ON at the RHYTHM MENU enables assignment of the respective Variation patterns. (➡Page 32)
VOICE EDIT functions: Enable the editing and subsequent registering of preset voices. (➡Page 25)
VOICE MENU: A function that lets you assign various voices to the dotted buttons of the Voice sections. (➡Page 23)
VOLUME FINE: A function which finely sets the volume level at each Voice section. (➡Page 67)

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