




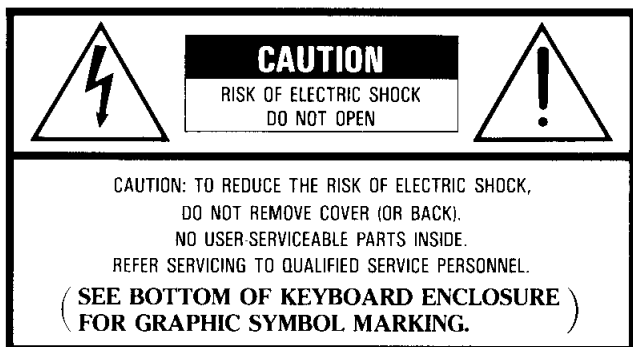
YAMAHA ELECTONE®

HC-4
HC-2

USER'S GUIDE
BEDIENUNGSANLEITUNG
MODE D' EMPLOI
MANUAL DE INSTRUCCIONES



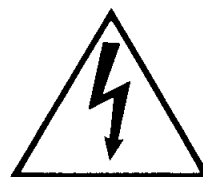
SUPPLEMENTAL MARKING INFORMATION SPECIAL MESSAGE SECTION



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



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



Yamaha electronic products will have either a label similar to the graphic shown above or a molded/stamped facsimile of the graphic on its enclosure. The explanation of these graphics appears on this page. Please observe all cautions indicated.

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

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:

- The power-supply cord or plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the product; or
- The product has been exposed to rain; or
- The product does not operate, exhibits a marked change in performance; or
- The product has been dropped, or the enclosure of the product has been damaged.

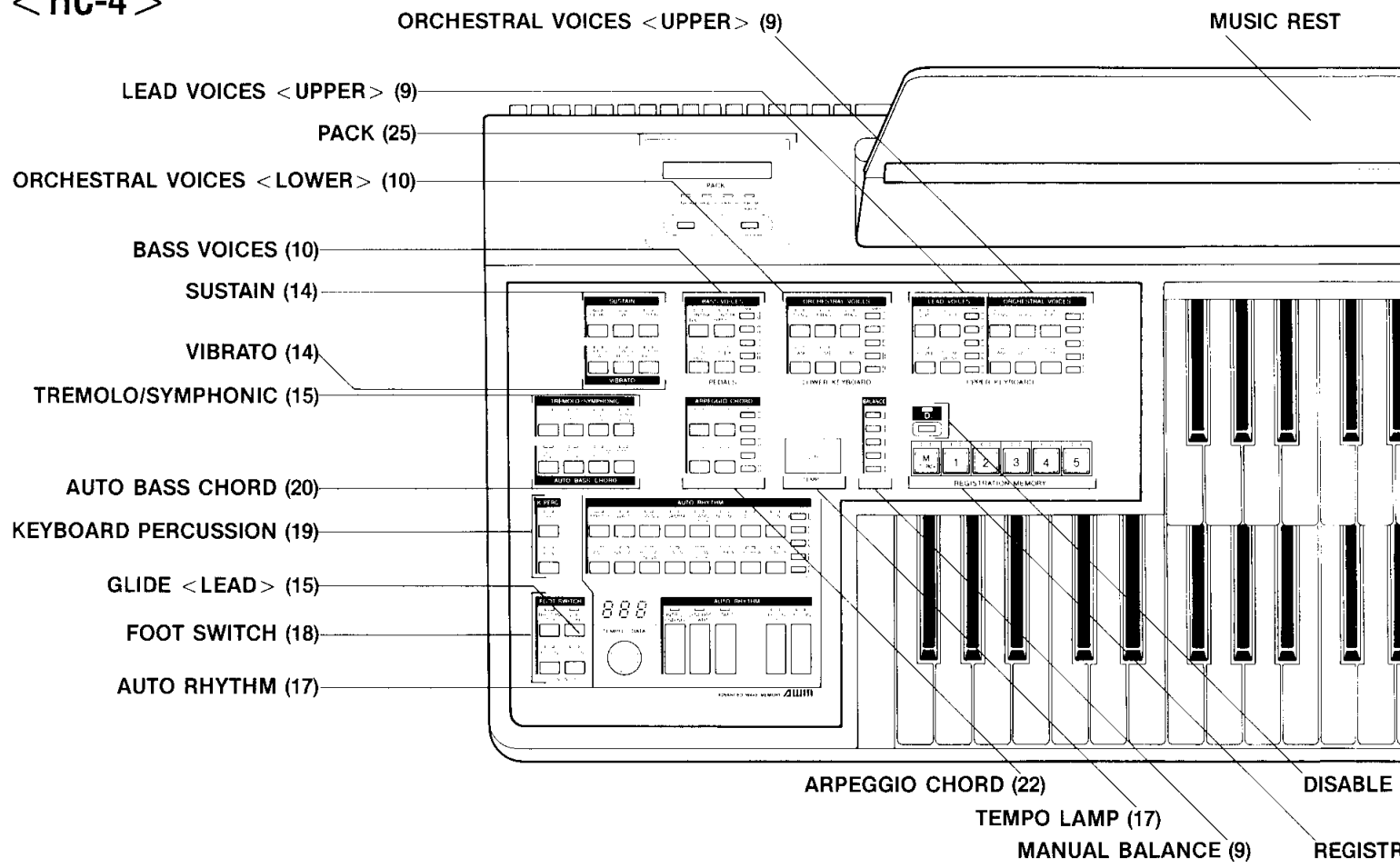
13. When not in use, always turn your Yamaha electronic product "OFF". The power-supply cord of the product should be unplugged from the outlet when it is to be left unused for a long period of time. Notes: In this case, some units may lose some user programmed data. Factory programmed memories will 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.

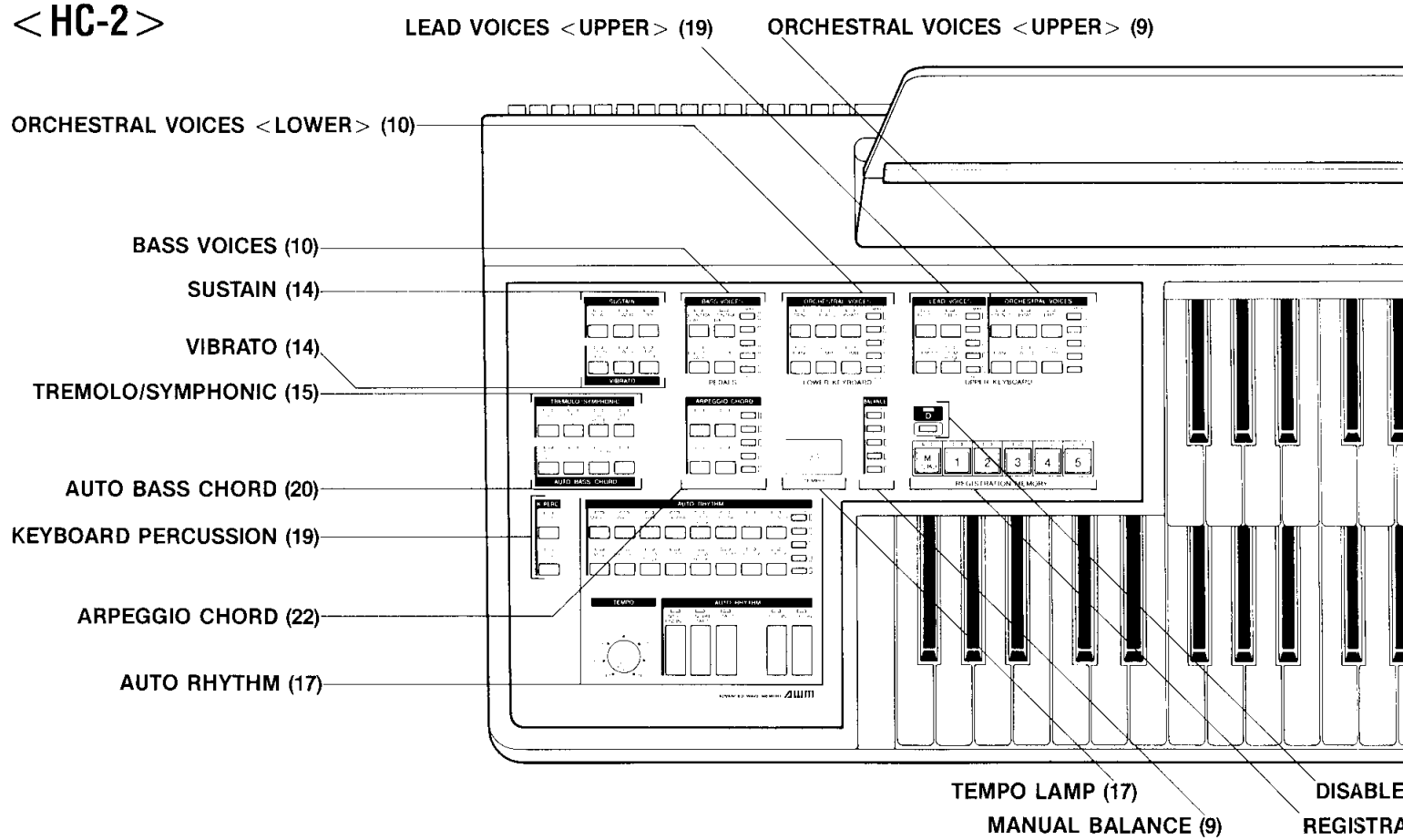
15. Electromagnetic Interference (RFI). This series of Yamaha electronic products utilizes digital (high frequency pulse) technology that may adversely affect Radio/TV reception or the operation of other devices that utilize digital technology. Please read FCC Information (Page 5) for additional information.

PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE!

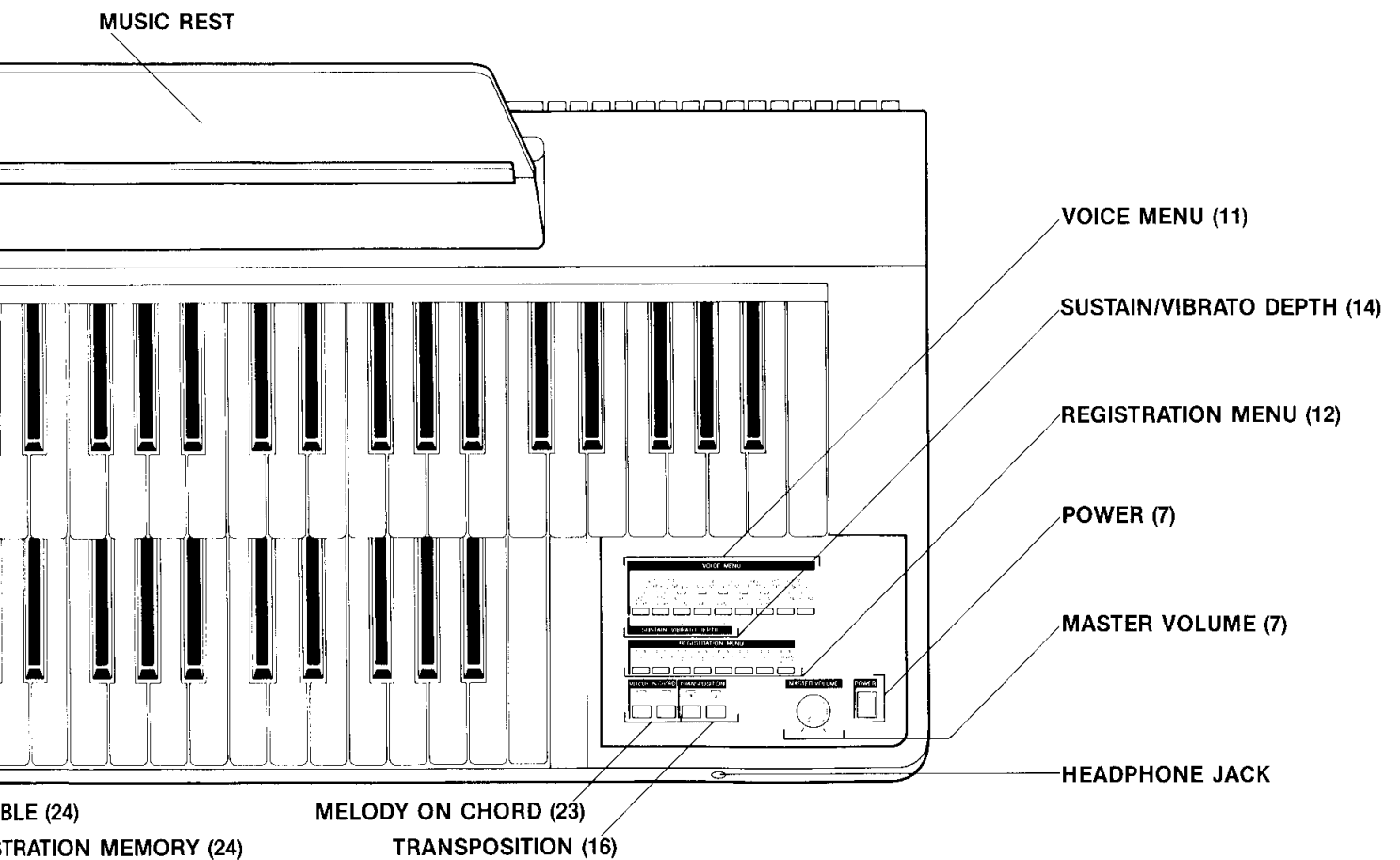
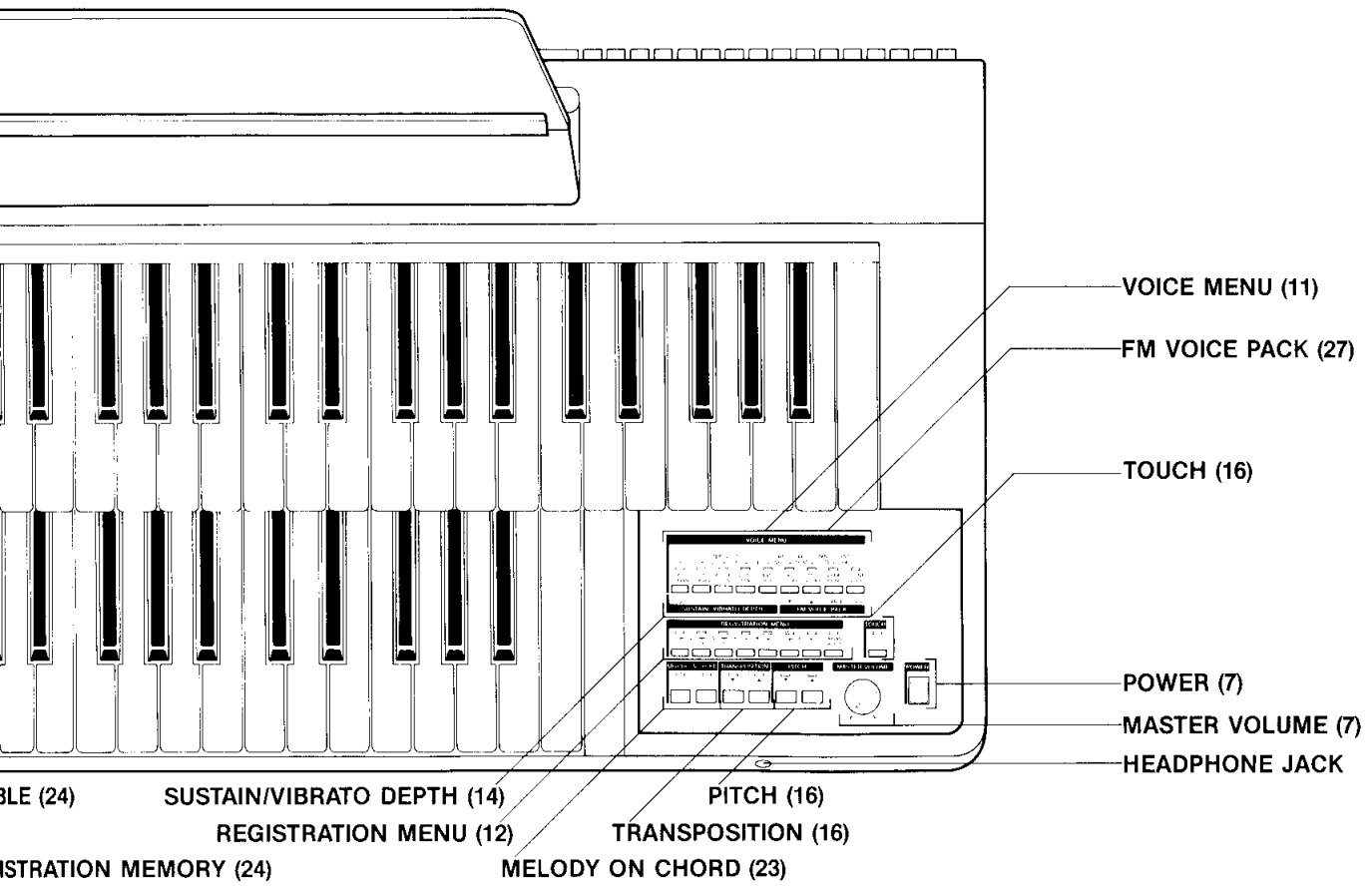
< HC-4 >



< HC-2 >



*The figures within parenthesis indicate the page numbers.
 *Die Zahlen in Klammern geben die Seitennummern an.
 *Les figures entre parenthèses indiquent les numéros de page.
 *Las cifras entre paréntesis indican los números de página.



SUPPLEMENTAL MARKING INFORMATION SPECIAL MESSAGE SECTION

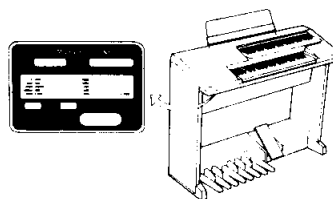
ELECTROMAGNETIC INTERFERENCE (RFI): Your Yamaha Electronic Product has been type tested and found to comply with all applicable regulations. However, if it is installed in the immediate proximity of other electronic devices, some form of interference may occur.

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

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

NOTICE: Service charges incurred due to a lack of knowledge relating to how a function or effect works (when the unit is operating as designed), are not covered by the manufacturer's warranty. Please study this manual carefully before requesting service.

NAME PLATE LOCATION: The graphic below indicates the location of the Name Plate on your Yamaha Electronic Products. The Model, Serial Number, Power requirements, etc., are indicated on this plate. You should note the model, serial number and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.



STATIC ELECTRICITY CAUTION: Some Yamaha Electronic Products have modules that plug into the unit to perform various functions. The contents of a plug-in module can be altered/damaged by static electricity discharges. Static electricity build-ups are more likely to occur during cold winter months (or in areas with very dry climates) when the natural humidity is low. To avoid possible damage to the plug-in module, touch any metal object (a metal desk lamp, a door knob, etc.) before handling the module. If static electricity is a problem in your area, you may want to have your carpet treated with a substance that reduces static electricity build-up. See your local carpet retailer for professional advice that relates to your specific situation.

Model _____

Serial No. _____

Purchase Date _____

ZUSÄTZLICHE MARKIERUNGSMITTELMER KAPITEL SONDERMELDUNGEN

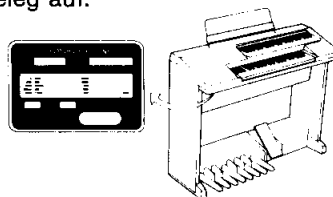
ELEKTROMAGNETISCHE INTERFERENZEN (RFI): Ihr Yamaha Electronic Produkt ist typengeprüft und wurde als allen geltenden Vorschriften entsprechend abgenommen. Wenn es aber in unmittelbarer Nähe eines anderen elektronischen Gerätes aufgestellt wird, kann Interferenz auftreten.

WICHTIGER HINWEIS: Dieses Produkt wurde von unabhängigen Sicherheitstestlabors geprüft und als betriebssicher befunden, sofern es richtig aufgestellt und sachgerecht betrieben wird. Nehmen Sie **KEINE** Modifikationen an dem Gerät vor und lassen Sie auch keine Modifikationen von anderen durchführen, es sei denn es liegt eine ausdrückliche Genehmigung von Yamaha vor. Die Produktleistung und/oder die Sicherheitswerte können sonst beeinträchtigt werden. Außerdem können Garantie- oder Kulanzleistungen verweigert werden, falls Modifikationen vorgenommen worden sind.

ÄNDERUNGEN VORBEHALTEN. Die Informationen in diesem Handbuch sind korrekt zum Zeitpunkt der Drucklegung. Yamaha behält sich aber das Recht vor, Änderungen oder Modifikationen in der technischen Auslegung des Produkts ohne vorherige Ankündigung und ohne die Verpflichtung, vorhandene Geräte nachträglich umzurüsten, vorzunehmen.

HINWEIS: Kundendienstkosten, die aufgrund von falschem Verständnis von Funktionen oder Effekten (bei korrekt arbeitendem Gerät) zustande kommen, werden nicht von der Garantie für dieses Gerät gedeckt. Bitte lesen Sie dieses Handbuch gründlich durch, bevor Sie das Gerät zu Reparatur einreichen.

LAGE DES TYPENSCHILDS: Die Zeichnung unten zeigt die Lage des Typenschildes bei Ihrem Yamaha Electronic Produkt. Modellbezeichnung, Seriennummer, Betriebsstrom etc. sind auf dem Typenschild angegeben. Tragen Sie Modellbezeichnung, Seriennummer und Kaufdatum in die unten vorhandenen Felder ein und bewahren Sie dieses Handbuch als permanenten Kaufbeleg auf.



WARNUNG VOR STATISCHER ELEKTRIZITÄT: Manche Yamaha Electronic Produkte haben Modulen für verschiedene Funktionen, die sich in das Gerät einstecken lassen. Die Inhalte eines Einsteck-Moduls können durch Entladung statischer Elektrizität geändert/beschädigt werden. Statische Elektrizität baut sich am stärksten in Wintermonaten mit niedriger Luftfeuchtigkeit (oder in Gebieten, wo die Luftfeuchtigkeit immer niedrig ist) auf. Um mögliche Schäden am Einsteck-Modul zu verhindern, sollten Sie vor der Handhabung des Moduls einen Metallgegenstand (eine metallische Bürolampe, einen Türgriff etc.) berühren. Falls statische Elektrizität in Ihrem Wohngebiet ein Problem darstellt, kann es u.U. erforderlich sein, den Teppichfußboden mit einem Antistatikmittel zu behandeln. Lassen Sie sich in diesem Fall von Ihrem Teppichhändler beraten.

Modell _____

Seriennummer _____

Kaufdatum _____

*Die Zahlen in Klammern geben die Seitenzahlen an.

SUPPLEMENT D'INFORMATION SECTION SPECIALE

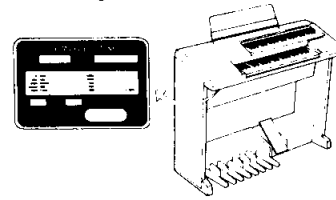
INTERFERENCE ELECTROMAGNETIQUE (RFI): Ce produit électronique Yamaha a été testé et approuvé conforme aux règlements applicables. Cependant, s'il est installé à proximité d'autres appareils électroniques, certaines formes de parasites risquent d'apparaître.

REMARQUE INPORTANTE: Ce produit a été testé et approuvé par des laboratoires d'essai indépendants, afin de garantir à l'utilisateur que, lorsque l'appareil est correctement installé et utilisé de la manière conventionnelle, tous les risques éventuels ont été éliminés. **NE PAS** modifier cet appareil soi-même ou commissionner d'autres personnes, à l'exception du personnel qualifié agréé par Yamaha, car la performance du produit et/ou ses normes de sécurité risquent de diminuer. Les réclamations rédigées sous garantie peuvent être refusées si l'appareil a été modifié. Les garanties sous-entendues seront également affectées.

LES SPECIFICATIONS SONT MODIFIABLES: Les informations contenues dans ce mode d'emploi sont considérées comme exactes au moment de l'impression. Yamaha se réserve le droit de changer ou de modifier les spécifications à tout moment et sans préavis ni obligation d'améliorer les appareils existants.

REMARQUE: Les frais d'entretien dus à un manque de connaissances sur la manière dont une fonction ou un effet s'active (lorsque l'appareil fonctionne comme prévu), ne sont pas convertis par la garantie du fabricant. Prière d'étudier soigneusement ce mode d'emploi avant de faire appel au personnel requis.

EMPLACEMENT DE LA PLAQUE SIGNALÉTIQUE: L'illustration ci-dessous montre l'emplacement de la plaque signalétique sur le produit électronique Yamaha. Le modèle, le numéro de série, l'alimentation requise et autres paramètres sont indiqués sur cette plaque. Inscrire le modèle, le numéro de série et la date de l'achat dans l'espace prévu ci-dessous et conserver le mode d'emploi à titre d'enregistrement permanent de l'achat.



PRECAUTION RELATIVE A L'ELECTRICITE STATIQUE: Certains produits électroniques Yamaha possèdent des modules qui s'enfichent dans l'appareil pour remplir diverses fonctions. Le contenu d'un module enfichable peut être altéré, voir endommagé, par des décharges d'électricité statique. La formation d'électricité statique est susceptible de se produire pendant l'hiver (ou dans les régions au climat très sec), lorsque le taux d'humidité naturelle est bas. Pour éviter d'endommager le module, toucher un objet métallique (lampe de bureau métallique, poignée de porte, etc.) avant de saisir le module. Si l'électricité statique présente un problème dans la région d'utilisation, traiter le sol avec un agent anti-statique. A cet effet, consulter un spécialiste.

Modèle _____

N° de série _____

Date de l'achat _____

* Les chiffres entre parenthèses indiquent les numéros de page.

INFORMACIÓN SUPLEMENTARIA SECCIÓN ESPECIAL DE MENSAJES

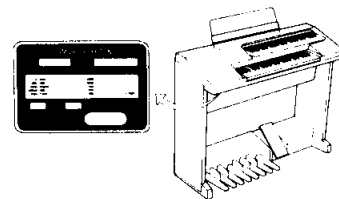
INTERFERENCIAS ELECTROMAGNÉTICAS (RFI): Su producto electrónico Yamaha fue probado y se encontró que cumple todas las regulaciones aplicables. No obstante, si se instala muy cerca de otros dispositivos electrónicos, es posible que se produzca cierta forma de interferencia.

AVISO IMPORTANTE: Este producto ha sido probado y aprobado por laboratorios de prueba de seguridad independientes a fin de asegurarse de que, si lo instala apropiadamente, y lo emplea en la forma normal y acostumbrada, se habrán eliminado todos los riesgos previsibles. **NO** modifique esta unidad ni solicite esto a otros a menos que Yamaha lo autorice específicamente. El rendimiento del producto y/o las normas de seguridad podrían verse mermados. Las reclamaciones efectuadas bajo la garantía podrán rechazarse si la unidad ha sido modificada. Las garantías implícitas también podrían verse afectadas.

ESPECIFICACIONES SUJETAS A CAMBIO: La información contenida en este manual se considera correcta en el momento de su impresión. Yamaha se reserva el derecho de cambiar o modificar las especificaciones en cualquier momento sin necesidad de aviso ni obligación de actualizar las unidades existentes.

AVISO: Los costes de reparación debidos a la falta de conocimiento de cómo trabaja una función o un efecto (cuando se utilice la unidad en la forma designada) no están cubiertos por la garantía del fabricante. Antes de solicitar la reparación, estudie cuidadosamente este manual.

UBICACIÓN DE LA PLACA DE CARACTERÍSTICAS: En la ilustración siguiente se indica la ubicación de la placa de características de este producto Yamaha. En esta placa se indican el modelo, el número de serie, la tensión de alimentación, etc. Anote el modelo, el número de serie, y la fecha de adquisición en los espacios ofrecidos a continuación, y guarde este manual como registro permanente de su adquisición.



PRECAUCIÓN CONTRA LA ELECTRICIDAD ESTÁTICA: Algunos productos electrónicos Yamaha poseen módulos que se enchufan en la unidad para realizar diversas funciones. El contenido de un módulo enchufable puede alterar/dañarse con descargas electrostáticas. Como la electricidad estática tiende a producirse con más facilidad durante los meses de invierno (o en zonas con climas muy secos) cuando la humedad natural es baja. Para evitar el posible daño que podría causar a un módulo enchufable, toque cualquier objeto metálico (lámpara metálica de escritorio, pomo de una puerta, etc.) antes de manejar el módulo. Si la electricidad estática es un problema en su zona, haga que traten su moqueta con una sustancia que reduzca la acumulación de electricidad estática. Con respecto a su situación específica, solicite consejo profesional al proveedor de la moqueta.

Modelo _____

N.º de serie _____

Fecha de adquisición _____

* Los números entre paréntesis indican las páginas.

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.

*This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

CANADA

THIS DIGITAL APPARATUS DOES NOT EXCEED THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS SET OUT IN THE RADIO INTERFERENCE REGULATION OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.

This applies only to products distributed by Yamaha Canada Music Ltd.

LE PRESENT APPAREIL NUMERIQUE N'EMET PAS DE BRUITS RADIOELECTRIQUES DEPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMERIQUES DE LA "CLASSE B" PRESCRITES DANS LE REGLEMENT SUR LE BROUILLAGE RADIOELECTRIQUE EDICTE PAR LE MINISTERE DES COMMUNICATIONS DU CANADA.

Ceci ne s'applique qu'aux produits distribués par Yamaha Canada Music Ltd.

*Wichtiger Hinweis für die Benutzung in der Bundesrepublik Deutschland.

Bescheinigung des Importeurs

Hiermit wird bescheinigt daß **der/die/das** Elektronische Orgel Typ: HC-2 HC-4 in Übereinstimmung mit den Bestimmungen der VERFÜGUNG 1046/84.

(Amtsblattverfügung) funk-entstört ist.
Der Deutschen Bundespost wurde das Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.
Das Funkschutzzeichen ist beim VDE beantragt.
Yamaha Europa GmbH: (Name des Importeurs)

*Dies bezieht sich nur auf die von der YAMAHA EUROPE GmbH. vertriebenen Produkte.

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CARACTERÍSTICAS BÁSICAS



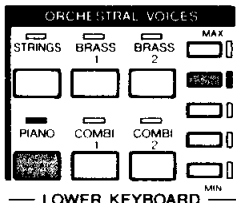
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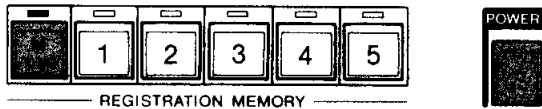

THE BASIC FEATURES

1. First, Let's Produce Some Sounds.

<p>1</p> <p>First of all, make sure that the plug is firmly inserted in the wall power outlet.</p>	<p>2</p> <p>Turn the Electone "On" by pressing the POWER switch.</p> 
<p>3</p> <p>Set the MASTER VOLUME control.</p> <ul style="list-style-type: none"> •This control lets you adjust the overall volume of your instrument. For now, place it in about a 2:00 position. 	<p>4</p> <p>Place your right foot on the EXPRESSION PEDAL, which controls the overall volume while playing, for increased musical expression.</p> <ul style="list-style-type: none"> •Push forward with your toe to make it louder, and back with your heel to make it softer.
<p>5</p> <p>Next, set the ORCHESTRAL VOICES section as shown in the illustration below.</p> 	<p>6</p> <p>Now, play any keys on the upper keyboard.</p> <ul style="list-style-type: none"> *As the next step, let's use the Basic Registrations to actually play some songs.

2. Registrations for Beginners.

*With one operation, you can call to your Electone one of five Basic Registrations (live sets of voices) which are perfect for practicing your playing.

<p>1</p> <p>First, set the POWER switch to OFF. Next, set the POWER switch back to ON while depressing the red Memory [M.] button.</p> <ul style="list-style-type: none"> •While depressing the red Memory button of the REGISTRATION MEMORY section, set the POWER switch to ON. <p>CAUTION: After setting the POWER switch to ON, keep the [M.] button continuously depressed for about one to two seconds.</p>  <p style="text-align: center;">[HC-4]</p>	<p>2</p> <p>Press one numeric button from 1 to 5.</p> <ul style="list-style-type: none"> •The lamp of the pressed button will light up, and the corresponding Basic Registration will automatically be set the Electone.  <p style="text-align: center;">[HC-4]</p>
--	---

3

Now, try playing the keyboards.

The voices of the Basic Registration will be respectively sounded from the upper, lower and pedal keyboards. Try pressing the numeric button of another Basic Registration so that other voices will be sounded.

[Voices of the Basic Registrations]

	1	2	3	4	5
Sound	String Ensemble	Brass Ensemble	Flute/Piano Ensemble	Cosmic Sound	Synthesizer Sound
Upper Keyboard	Strings	Brass	Flute	Cosmic	Synth Brass
Lower Keyboard	Strings	Brass	Piano	Cosmic	Synth Brass
Pedal Keyboard	Contra Bass	Tuba	Contra Bass	Cosmic	Synth Bass

Let's play some songs!

Hymn of Joy

*Play this on the upper keyboard.

Composed by L. V. Beethoven

M. 1 2 3 4 5



Twinkle, Twinkle, Little Star

*Play this on the lower keyboard.

French folk song

M. 1 2 3 4 5



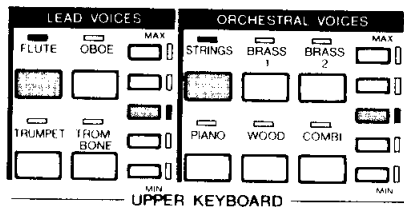
3. Setting the Voices at the Panel

There are two voice sections for the upper keyboard, one voice section for the lower keyboard, and one voice section for the pedal keyboard. Voices of the VOICE MENUS can also be called to these voice sections.

UPPER KEYBOARD VOICE SECTIONS

ORCHESTRAL VOICES, LEAD VOICES

1 Choose one voice each from ORCHESTRAL VOICES and LEAD VOICES.

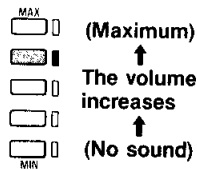


ORCHESTRAL VOICES: This voice section mainly recreates the major instrumental sounds of an orchestra, such as STRINGS and BRASS.

LEAD VOICES: This section contains solo instruments, such as FLUTE and OBOE. Even if you simultaneously press two or more keys, only the highest note will be sounded.

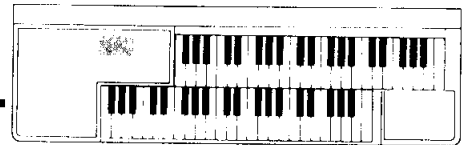
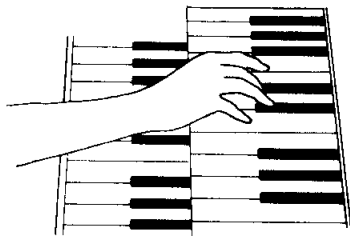
2 Set the volume.

Set the VOLUME to the desired level for each section. Five volume levels can be selected—the top one (MAX) being full volume and the bottom one (MIN) being OFF.



3 Press the Expression Pedal then try playing the upper keyboard.

The voices you have selected will be heard. Try choosing the other voices and compare the sounds.



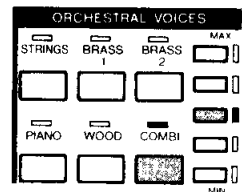
[Number of Concurrently Sounded Notes]

UPPER ORCHESTRAL VOICES: When multiple keys are pressed at the same time, up to seven notes can be played. (If AUTO BASS CHORD is in use, up to six notes can be played.)

LEAD VOICES: When multiple keys are pressed at the same time, only the highest note will be played.

[The Grey Buttons]

The ORCHESTRAL VOICES, LEAD VOICES sections are each provided with a grey button, which can be used to select a voice displayed on the panel or assigned with a voice from the VOICE MENUS. (see page 11)



[To Cancel the Sound of a Voice Section]

If you do not need the sound of a particular Voice section, set the volume level of that section to its bottom position (MIN).

[BALANCE]

This feature is convenient when you want to adjust the relative balance between the volume of the upper and lower keyboards without changing your registration.

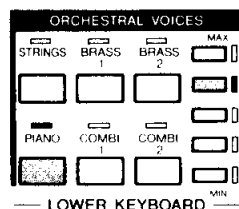
When the BALANCE button is set to UPPER, the volume of the upper keyboard becomes greater than that of the lower keyboard. When it is set to LOWER, the volume of lower keyboard becomes greater than that of the upper keyboard.



LOWER KEYBOARD VOICE SECTION

ORCHESTRAL VOICES

1 Choose one voice from ORCHESTRAL VOICES, then set its volume.



ORCHESTRAL VOICES: This voice section mainly recreates the major instrumental sounds of an orchestra, such as STRINGS and BRASS.

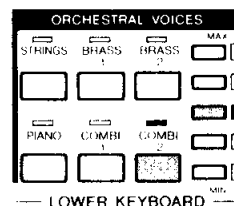
2 Press the Expression Pedal, then try playing the lower keyboard.

The voice you have selected will be heard. Try choosing the other voices and compare the sounds.



[Number of Concurrently Sounded Notes] LOWER ORCHESTRAL VOICES: When multiple keys are pressed at the same time, up to seven notes can be played.

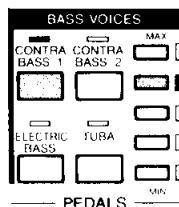
[The Grey Buttons]
The ORCHESTRAL VOICES sections is provided with a grey button, which can be used to choose a voice displayed on the panel or assigned with a voice from the VOICE MENUS. (→page 11)



PEDAL KEYBOARD VOICE SECTION

BASS VOICES

1 Choose one voice from BASS VOICES, then set its volume.



BASS VOICES: This section consists of the sounds of the electric bass and traditional organ bass. In order to hear your pedal sounds, please be sure that "Single Finger" and "Fingered Chord" (Auto Bass Chord section) are "Off".

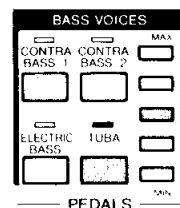
2 Play the pedal keyboard.

Your selected voice will be heard. Try choosing the other BASS voice and compare the sounds.



[Number of Concurrently Sounded Notes] BASS VOICES: When multiple keys are pressed at the same time, only the highest note will be sounded.

[The Grey Buttons]
The BASS VOICES section is provided with a grey button, which can be used to choose a voice displayed on the panel or assigned with a voice from the VOICE MENUS. (→page 11)



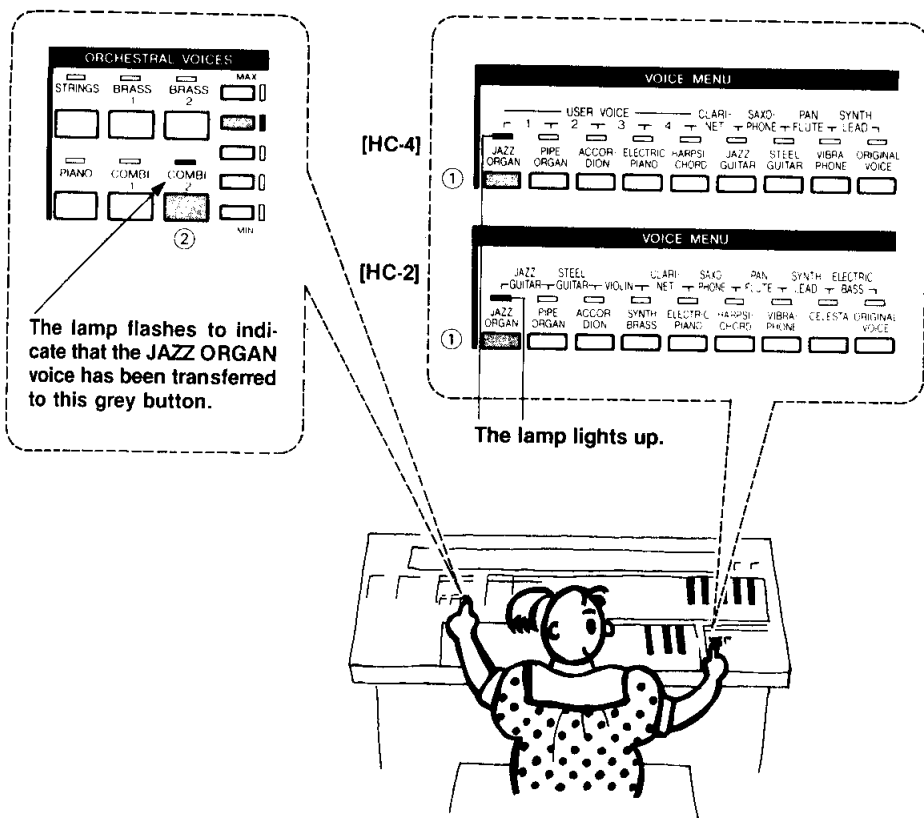
[While AUTO BASS CHORD is in Use]
While the SINGLE FINGER or FINGERED CHORD mode of AUTO BASS CHORD is ON, the AUTO BASS CHORD feature is designed so that notes of the pedal keyboard will automatically be sounded by merely playing the lower keyboard (note that any keys actually pressed on the pedal keyboard will not be sounded.) (→page 20)

VOICE MENU

The voices on the VOICE MENUS can be assigned to any grey button in any voice section.
 HC-4 VOICE MENU → 12 preset voices and four user-defined voices.
 HC-2 VOICE MENU → 16 preset voices

[The operation is so simple!]

While depressing the button of the desired voice on the VOICE MENU ①, press the grey button in the voice section where you wish to transfer the sound ②.



[ORIGINAL VOICE]

When the ORIGINAL VOICE button is pressed while depressing the grey button, you can cancel the sound transferred to that button and return to its displayed voice.

[Checking the Transferred Voices]

When you press the grey button in a voice section, the lamp of the VOICE MENU voice that was transferred to that grey button lights up, so you can check which voice was transferred. If no voice from the VOICE MENU has been transferred to that grey button, the lamp of the ORIGINAL VOICE button lights up.

[Additional Information]

- The same voice can be transferred to multiple grey buttons.
- When a VOICE MENU sound has been transferred to LEAD or BASS VOICES, it automatically becomes a "monophonic" voices, meaning that only one note at a time can be played.

[USER VOICE]

The voices below are preset as the USER VOICES:

USER VOICE No.	1	2	3	4
Voice Name	SYNTH BRASS	CELESTA	VIOLIN	ELEC. BASS

When PACK data is transferred to the Electone, however, USER VOICES 1 to 4 may be replaced by the voices transferred from the PACK. (HC-4 only)

To choose a voice at the top row of a VOICE MENU, simultaneously press the two adjacent buttons below. Both lamps will light up and the upper voice will be transferred. (To choose CLARINET, for example, press the HARPSICHORD and JAZZ GUITAR buttons at the same time.) [HC-4]

(To choose JAZZ GUITAR, for example, press the JAZZ ORGAN and PIPE ORGAN buttons at the same time.) [HC-2]

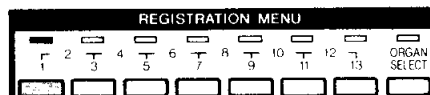
4. Call a Registration by a One-Touch Operation

The registrations of various music styles can be called to the Electone's panel by a one-touch operation.

REGISTRATION MENU



1 Press one of the buttons in REGISTRATION MENU.



The registration will now be set up on the control panel (including voices on each keyboard, volumes, rhythm selection, effects)

With the ORGAN SELECT button on, the numbered buttons are changed into various styles of the organ-sound music, too.

[Altering a Preprogrammed Registration]

When using the REGISTRATION MENU, any registration is altered to any extent by simply changing the selected controls. In fact, you can store the "altered" Registration as new registrations in the Registration Memory.

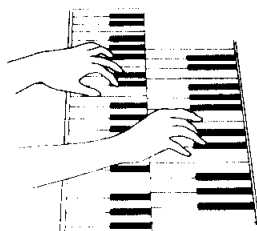
[Additional Information]

- The REGISTRATION MENU uses not only the sounds normally available on the control panel, but in some cases, the sounds from the VOICE MENUS. (→page 11)

2 ...and you're ready to play!

Start the auto rhythm, and start playing.

To choose an even-numbered registration of REGISTRATION MENU, simultaneously press the two adjacent odd-numbered buttons. Both lamps will light up and the registration will be set at the panel. (To choose 8, for example, press the 7 and 9 buttons at the same time.)



(Recommendable) song examples of each REGISTRATION MENU.

Reg. No.	Music Style & Rhythm	Song Examples
Reg. 1	March/Polka Rhythm: March Tempo = 120	She Wore A Yellow Ribbon Dixie Land
Reg. 2	Pipe Organ Rhythm: 8 Beat (Vol. 0) Tempo = 120	Joy To The World Silent Night
Reg. 3	Woodwind Ensemble Rhythm: March Tempo = 120	It's A Small World Chity-Chity Bang Bang
Reg. 4	Piano Trio Rhythm: Ballad Tempo = 170	All Of Me Autumn Leaves
Reg. 5	Jazz Combo 1 Rhythm: Swing Tempo = 120	On The Sunny Side Of The Street Day By Day Lullaby Of Birdland
Reg. 6	Jazz Combo 2 Rhythm: Bossanova Tempo = 145	The Shadow Of Smile Wave The Girl From Ipanema
Reg. 7	Big Band 1 Rhythm: Swing Tempo = 120	Red Roses For A Blue Lady Satin Doll Take The "A" Train

Reg. No.	Music Style & Rhythm	Song Example
Reg. 8	Big Band 2 Rhythm: Ballad Tempo = 86	Harbour Light I Left My Heart In San Francisco
Reg. 9	Country Rhythm: Country Tempo: 124	Cotton Fields Jambalaya Take Me Home, Country Roads
Reg. 10	String Ensemble Rhythm: Waltz Tempo = 115	Doctor Zhivago Over The Waves An Der Schönen Blauen Donau Waltz
Reg. 11	Piano Ballad Rhythm: 8 Beat Tempo = 77	Ballad For Adeline My Way Feelings
Reg. 12	Pops Ensemble 1 Rhythm: Salsa Tempo = 115	Mambo Jumbo The Peanuts Vender Mambo No. 5
Reg. 13	Pops Ensemble 2 Rhythm: Samba Tempo = 124	Samba De Orfeu Tico-Tico Brazil

Tempo is not factory-preset.

Song Examples of Organ Registration Settings and Informations on Organ Registration.

Reg. No.	Music Style & Rhythm	Combination	Effect	Song Example
Reg. 1	Jazz Organ 1 Rhythm: Swing Tempo=132	Upper: 16' + 8' + 5 1/3' + AT 2 2/3' Lower: 8' + 4' Pedal: 16' + 8'	(Trem.) (Trem.)	Take The "A" Train Satin Doll My Blue Heaven
Reg. 2	Jazz Organ 2 Rhythm: Ballad Tempo=86	Upper: 16' + 1 1/3' + 1' Lower: 8' + 4' Pedal: 8'	(Trem.) (Trem.)	Misty Here's That Rainy Day Summer Time
Reg. 3	Jazz Organ 3 Rhythm: Bossanova Tempo=144	Upper: 16' + 5 1/3' + 4' Lower: 8' + 4' Pedal: 16' + 8'	(Trem.) (Trem.)	So Nice Days Of Wine And Roses Summer Samba
Reg. 4	Pop Organ 1 Rhythm: 8 Beat Tempo=82	Upper: 16' + 4' + 1' Lower: 8' + 4' + 2' Pedal: 8'	(Sym.) (Sym.)	A Whiter Shade Of Pale Yesterday If
Reg. 5	Pop Organ 2 Rhythm: Swing Tempo=124	Upper: 16' + 1 3/5' + 1' Lower: 8' + 2' Pedal: 8'	(Trem.) (Trem.)	It's Only A Paper Moon Don't Get Around Much Anymore
Reg. 6	Pop Organ 3 Rhythm: Ballad Tempo=96	Upper: 8' + 2 2/3' + 1 3/5' + 1' Lower: 8' + 2' Pedal: 8'	(Trem.) (Trem.)	I Left My Heart In San Francisco Dream My Foolish Heart
Reg. 7	Classical Organ 1 Rhythm: March (Vol.=0) Tempo=120	Upper: 16' + 8' + 4' + 2' + 1' Lower: 16' + 8' + 4' + 2' + 1' Pedal: 16' + 8' + 4'	(Chor.) (Chor.)	Jesu, Joy Of Man's Desiring Wedding March (Wagner)
Reg. 8	Classical Organ 2 Rhythm: March (Vol.=0) Tempo=120	Upper: Gedeckt 8' Lower: Gedeckt 8' Pedal: 8'		Silent Night Ave. Verum Corpus
Reg. 9	Classical Organ 3 Rhythm: March (Vol.=0) Tempo: 120	Upper: Diapason (16') Lower: Diapason (8') Pedal: 16' + 8'		Sheep May Safety Graze (J.S. Bach) Toccata Gm
Reg. 10	Classical Organ 4 Rhythm: March (Vol.=0) Tempo=120	Upper: Full Organ (16') Lower: Full Organ (8') Pedal: Pipe bass 16' + 8'		Toccata Dm Wedding March (Mendelssohn)
Reg. 11	Theater 1 Rhythm: March Tempo=124	Upper: 16' + 8' + 4' + 2' + 1' Lower: 8' + 4' + 2 2/3' Pedal: 16' + 8'	(Trem.) (Trem.)	I Could Have Danced All Night Start Of Somethin' Big Swanee
Reg. 12	Theater 2 Rhythm: Waltz Tempo=106	Upper: 8' Lower: 8' Pedal: 8'	(Trem.) (Trem.)	Moon River Try To Remember Someday My Prince Will Come
Reg. 13	Theater 3 Rhythm: Samba Tempo=124	Upper: Full Theater 16' Lower: Full Theater 8' Pedal: 16' + 8'	(Trem.) (Trem.)	Brazil Tico-Tico Copacabana

Tempo is factory-preset on Organ Registration Menu only.

5. Using Effects for an Even Richer Sound

You can add a gradual fade-out effect or greater expansiveness to a voice by using such effects as Vibrato, Sustain, Tremolo, and Symphonic.

VIBRATO

You can control how the Vibrato effect will be applied to the LEAD and ORCHESTRAL VOICES sections.

1 Let's try changing the Vibrato effect for the Lead Voice. First, choose the Lead Voice. Next, turn on the UPPER LEAD button in the VIBRATO section. Any number of VIBRATO buttons can be turned on.

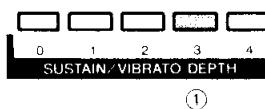
2 Set the Vibrato Depth. While depressing one button out of SUSTAIN/VIBRATO DEPTH 0 to 4 ①, press the UPPER LEAD button in the VIBRATO section ②.

The UPPER LEAD lamp ② flashes to indicate that the Vibrato Depth has been set to the value indicated at ①. Select 0 to cancel the Vibrato effect, or 4 to obtain the maximum Vibrato Depth.



3 Try playing the upper keyboard.

The Vibrato effect is applied according to the selected depth. The Vibrato effect for an Orchestral Voice of the upper and lower keyboards can also be set using the same procedure.



[The Vibrato Data You Set Will be Memorized]

You can obtain the set Vibrato effect at any time by turning on the panel VIBRATO button corresponding to the desired voice section.

[Checking the Vibrato Depth]

While a VIBRATO button is depressed, the lamp of one of the SUSTAIN/VIBRATO DEPTH buttons will light up. The lit lamp indicates the Vibrato Depth setting for the VIBRATO button being pressed.

[Regarding the Vibrato Effect]

The Vibrato effect will be applied to certain voices.

[Saving Up Your Vibrato Data]

The Vibrato data that you have set by the SUSTAIN/VIBRATO DEPTH buttons will be saved (for at least one week) even if you turn off the Electone's POWER switch or turn off the panel's VIBRATO buttons.

SUSTAIN

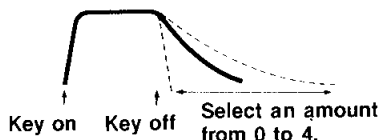
You can control how the Sustain effect will be applied to the various keyboards.

1 Let's try changing the Sustain effect for the upper keyboard. First, choose a voice from ORCHESTRAL VOICE (UPPER KEYBOARD). Next, turn on the UPPER button in the SUSTAIN section.

The Sustain effect can be simultaneously applied to any keyboards. (It cannot, however, be applied to the Lead Voice.)

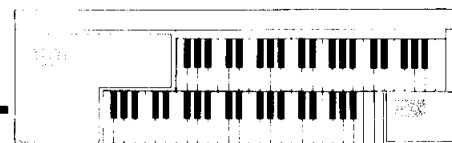
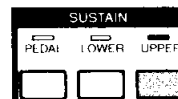
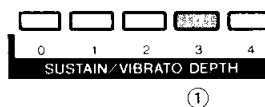
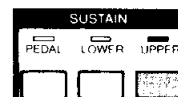
2 Set the Sustain Length. While depressing one button out of SUSTAIN/VIBRATO DEPTH 0 to 4 ①, press the UPPER button in the SUSTAIN section ②.

The UPPER lamp ② flashes to indicate that the Sustain Length has been set to the value indicated at ①.



3 Try playing the upper keyboard.

When you release the keys, a gradually fading Sustain effect of the selected length is applied to each note. The Sustain effect for the lower and pedal keyboards can also be set in the same way.



[The Sustain Length]

The higher the number of the SUSTAIN/VIBRATO DEPTH button you select, the longer the notes are sustained after you release the keys.

[Checking the Sustain Length]

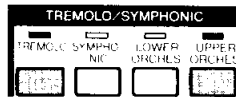
While a SUSTAIN button is depressed, the lamp of one of the SUSTAIN/VIBRATO DEPTH buttons will light up. The lit lamp indicates the Sustain Length setting for the SUSTAIN button being pressed.

TREMOLO/SYMPHONIC

The Tremolo/Symphonic effect can be applied to the ORCHESTRAL VOICES of the upper and lower keyboards.

1 Choose an ORCHESTRAL VOICE for the upper or lower keyboard.

2 Turn on the UPPER ORCHES. or LOWER ORCHES. button of the TREMOLO/SYMPHONIC section.



3 Turn on the TREMOLO or SYMPHONIC button, then try playing the corresponding keyboard.

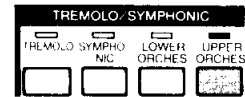
TREMOLO: The notes are provided with a trembling, expansive sound. TREMOLO is particularly effective when applied to Combination voices.

SYMPHONIC: A rich sound is created which resembles the performance of a symphony. SYMPHONIC is particularly effective when applied to a STRINGS voice.



[The CHORUS Effect]

By turning off both the TREMOLO and SYMPHONIC buttons, you can add a Chorus effect which is a slower version of the TREMOLO effect.



Both buttons are OFF.

Set either one of these buttons to ON.

[Additional Information]

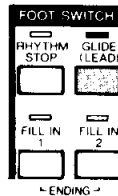
The Tremolo and Symphonic effects are electronically interlocked and cannot be used simultaneously at the same voice section.

GLIDE (LEAD) (HC-4 only)

This effect lets you temporarily lower the pitch of the Lead Voice by a half step, then gradually restore its normal pitch. (It is controlled by the Foot Switch)

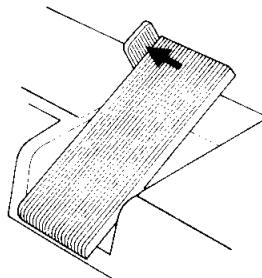
1 Choose the Lead Voice, then turn on the GLIDE (LEAD) selector at the FOOT SWITCH section.

This sets the Foot Switch so that it controls the ON/OFF status of the Glide effect.



2 While you play the upper keyboard to produce the Lead Voice sound, press the Foot Switch to the left.

When you press the Foot Switch, the pitch of the Lead Voice is lowered by a half step; when you release the Foot Switch, its normal pitch is gradually restored. (Use of the Glide effect enables you to expressively recreate the sliding techniques used for a trombone, violin (fiddle), or guitar.)



[The Glide Effect]

- While the Glide effect is being applied, the Vibrato effect which has been set for the LEAD VOICES becomes inactive.
- The Glide effect can also be applied to any VOICE MENU voice which has been transferred to a grey button in the LEAD VOICES section.

TOUCH (HC-4 only)

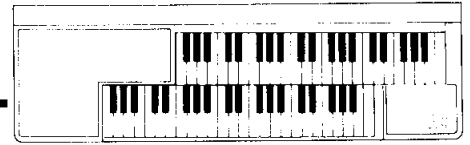
While this button is on, the volume and timbre of notes played on the upper and lower keyboards can be subtly changed according to the pressure with which you press the keys.

1 Turn on the TOUCH button.



2 Try playing the upper and lower keyboards while varying the amount of pressure you apply to the keys.

Initial Touch: The sound is controlled according to the pressure (velocity) at which the upper or lower keys are initially pressed. The harder you initially strike the keys, the louder and brighter the voice will sound.



[Using the Touch Feature]

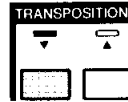
- While using the Keyboard Percussion feature, the volume of the percussion instruments can be controlled by your Initial Touch when pressing keys on the lower keyboard regardless of the ON/OFF status of the panel TOUCH button. (HC-4 only)
- The Touch feature can also be used with any VOICE MENU voice which has been transferred to a grey button in any voice section of upper and lower keyboards.
- The way in which the voices are controlled by the Touch feature will vary with the voice.



TRANSPOSITION

This feature lets you raise or lower the key of the entire Electone by a half-octave 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. (HC-4)
- 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.



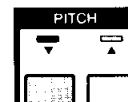
[Using the PITCH Feature]

- The current Pitch setting will not be memorized in Registration Memory and also cannot be transferred to a RAM Pack for storage.
- When the ▲ or ▼ button is pressed, the lamp of the pressed button may not always light. If the currently set pitch is below normal pitch, the lamp of the ▼ button will remain lit; if it is above normal pitch, the lamp of the ▲ button will remain lit. Even if the ▼ button is pressed, therefore, the lamp of the ▲ button may remain lit in certain cases.

PITCH (HC-4 only)

Use this feature to finely adjust the pitch of the entire Electone.

1 Press the ▲ or ▼ button to change the pitch.



▼ button: Each time this button is pressed, the pitch is slightly lowered. (When A₃ equals 440 Hz, the pitch can be lowered by four steps maximum at approximately 0.3 Hz per step.)

▲ button: Each time this button is pressed, the pitch is slightly raised. (When A₃ equals 440 Hz, the pitch can be raised by 15 steps maximum at approximately 0.3 Hz per step.)

2 To restore Normal Pitch, simultaneously press the ▲ and ▼ buttons.

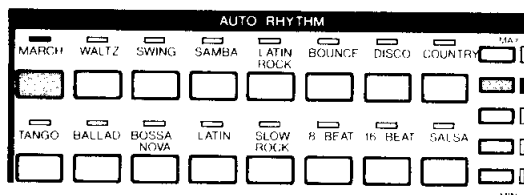
Both lamps will go off to indicate that the normal pitch has been restored. (The Normal Pitch will also be restored if the POWER switch is turned off.)

6. Adding Rhythm

The Auto Rhythm feature automatically produces various rhythm patterns.

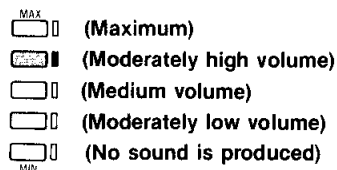
AUTO RHYTHM

1 Choose a rhythm pattern.



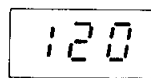
2 Set the volume level.

The volume can be set to one of five levels.



3 Set the tempo.

When the TEMPO control is turned clockwise, the displayed value increases and the tempo speeds up (maximum: 240).



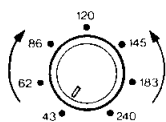
TEMPO / (DATA)



[HC-4]

When turned counter clockwise, the displayed value decreases and the tempo slows down (minimum: 40).

The selected tempo will be indicated on the display. (Note that the displayed value corresponds to the metronome value.)

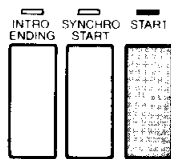


[HC-2]

Use the TEMPO Control to set the tempo of a rhythm.

The numbers indicated around the TEMPO Control represent tempo as the number of quarter notes struck in one minute. As these correspond to the metronome values, they can be used as a guide when setting the rhythm's tempo.

4 Turn the rhythm on.



SYNCHRO START

If you press this button instead of the START button, the rhythm will wait for you to press either a lower or pedal keyboard note and then will begin from the first beat. This feature is handy when you plan to play the accompaniment using the Auto Bass Chord or Arpeggio Chord feature.

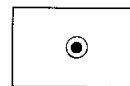
START

When this button is turned on, the rhythm starts immediately. To stop the rhythm, press this button again.



[TEMPO Lamp]

This lamp is located between the ARPEGGIO CHORD section and the BALANCE section. It flashes in time with the tempo that has been set by the TEMPO Control.



TEMPO

• Once the rhythm has been started:

The lamp will flash at the first beat (downbeat) of each measure. Check this lamp when you wish to start your performance in time with the rhythm.

• When the SYNCHRO START button is on but the rhythm has not been started yet:

The lamp will flash at every beat. Before starting your performance, use this lamp as a silent visual metronome. (The lamp also functions in a similar manner while the rhythm is stopped by the Foot Switch.)

FILL IN

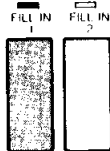
1 Start the rhythm.

2 Press the FILL IN button when you want to add this feature.

FILL IN provides a variation to the basic rhythm pattern. At the time you press the button, the Fill In pattern will play until the end of that measure, and the rhythm will automatically return to the original pattern at the start of the next measure.

FILL IN
1

A rhythmic pattern, effective when used together with ARPEGGIO patterns 1 and 2.



FILL IN
2

An arpeggio pattern, effective when used together with ARPEGGIO patterns 3 and 4.

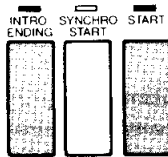
[Additional Information]

- Should you desire a longer Fill In pattern, hold down the FILL IN button.
- If you press the FILL IN button before starting the rhythm, the Fill In pattern will act as an intro.

INTRO./ENDING

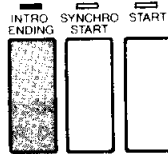
1 Press the INTRO./ENDING button and then press the START button.

A one measure rhythm introduction will precede the start of the regular pattern.



2 When you are almost finished with a song, press the INTRO./ENDING button.

At the moment this button is pressed, an ending pattern (two measures maximum) is played. As soon as the ending pattern is completed, the rhythm will stop automatically.

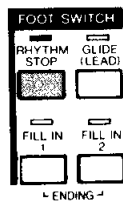


[Additional Information]

- INTRO./ENDING can be used even when Synchro Start has been used to start the rhythm.

FOOT SWITCH (HC-4 only)

1 Choose a function by pressing one of the FOOT SWITCH selectors, then start the rhythm.



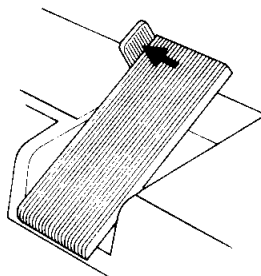
[Features Controlled by the Foot Switch]

RHYTHM STOP	Press the Foot Switch to stop the rhythm, and press it again to start the rhythm.
FILL IN 1	The FILL IN 1 pattern is sounded when the Foot Switch is pressed.
FILL IN 2	The FILL IN 2 pattern is sounded when the Foot Switch is pressed.
ENDING	When the Foot Switch is pressed, the rhythm switches to the Ending pattern after which the rhythm is stopped.

*For information on the Glide effect, see page 15.

2 Press the Foot Switch toward the left.

During your performance, use your toes to press the Foot Switch on the left side of the Expression Pedal toward the left. This allows you to control the function selected by the Foot Switch selector.



[The RHYTHM STOP feature of the Foot Switch]

When the rhythm is stopped by pressing the Foot Switch, the RHYTHM STOP lamp begins flashing and the rhythm is stopped. When the rhythm is restarted by pressing the Foot Switch once more, the lamp resumes its former lit status. In addition, if you turn on the INTRO./ENDING button after stopping the rhythm by the Foot Switch, then press the Foot Switch once more, you can produce a one-measure introduction.

7. Producing the Sounds of Percussion Instruments

34 different types of percussion instrument sounds are available, such as drums and cymbals.

KEYBOARD PERCUSSION



1 Set KEYBOARD PERCUSSION to ON.

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.



[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.

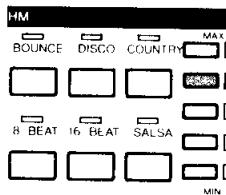
[Touch Control] (HC-4)

The volume of the percussion sounds can be finely controlled by your Initial Touch on the keys of the lower keyboard. This Initial Touch feature function operates regardless of the ON/OFF status of the panel TOUCH button.



2 Set the volume.

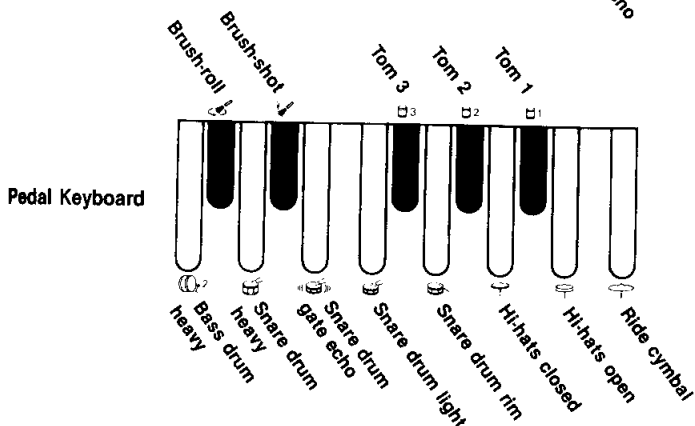
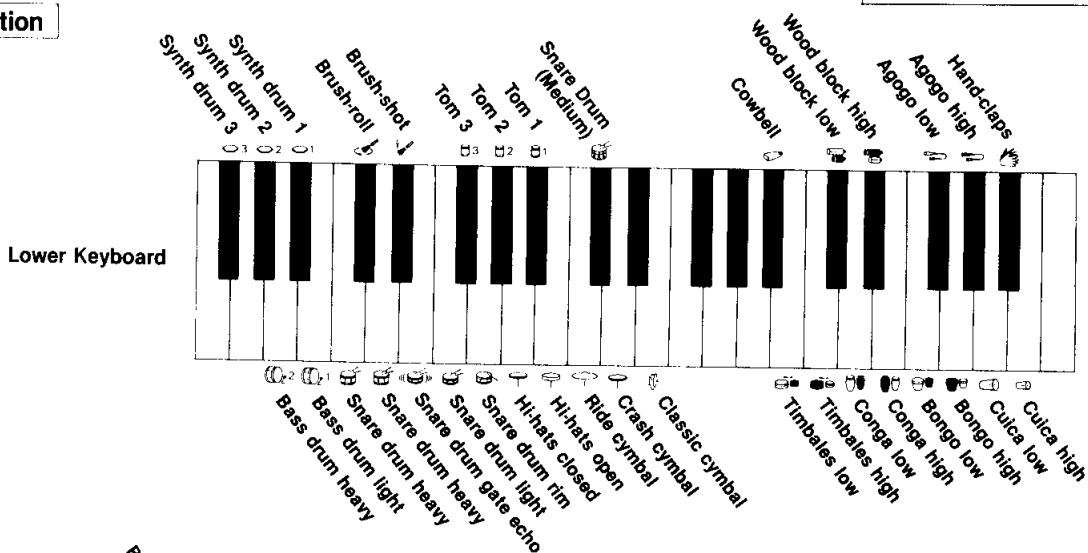
The volume of the percussion sounds can be controlled using the VOLUME of the Rhythm section. Set the volume to the desired level.



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.

Allocation



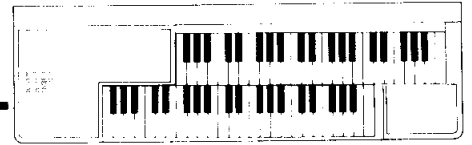
[Caution]

- Rhythms are not user-programmable.
- The percussions sounds are pre-assigned to certain keys as shown below. These key assignments can not be altered.
- Keys that simultaneously produce two notes of the same percussion sound at a time can be used to create "rolling" effects.

8. Having Fun with Automatic Accompaniment

This function automatically produces chord and bass accompaniment. There are three different ways (SINGLE FINGER, FINGERED CHORD, CUSTOM A.B.C.) that you can use this feature, and we're sure that you'll find one just right for you.

AUTO BASS CHORD

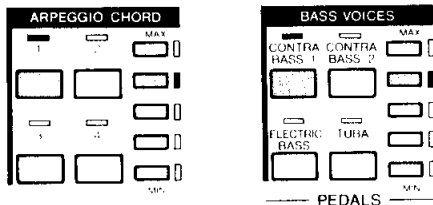


SINGLE FINGER

This mode provides the fastest and easiest means to obtain many different chords (and bass) by using just one, two, or three fingers.

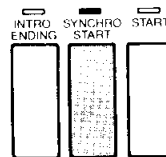
1 Press the button labeled SINGLE FINGER.

2 Choose an Arpeggio Chord pattern for the lower keyboard, choose a voice from the BASS VOICES for the pedal keyboard, then set their respective volume levels.

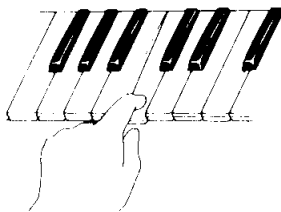


3 Select a rhythm. (→page 17)

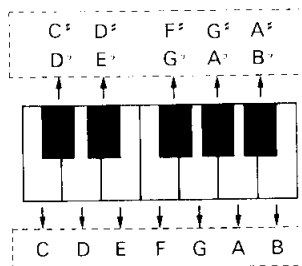
Once you've chosen a rhythm pattern, adjust the tempo to a speed comfortable for you. Then set your desired volume level and turn on SYNCHRO START.



4 Press a key on the lower keyboard.



[Relationship between the lower keyboard notes and corresponding major chords]



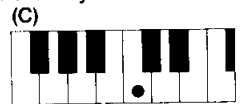
You will now hear a major chord and bass accompaniment in synchronization with the rhythm. The note you have played is called the "root". A chord derives its name from its root such as C major, F major, etc.

[Playing Chords in Single Finger Mode]

Sample Chords in the Key of C

Major chords:

Press the root (name) of the chord.



Minor chords:

Simultaneously press the root as well as any black key to the left of it.



7th chords:

Simultaneously press the root as well as any white key to the left of it.



Minor 7th chords:

Simultaneously press the root as well as any black key and any white key to the left of it.

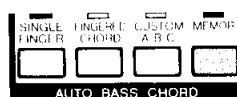


[Additional Information]

- When you change Arpeggio Chord patterns, the bass pattern will automatically be changed.
- With Single Finger, the chord produced will sound in the same octave regardless of where it is played on the lower keyboard.
- When you want to change chords, please lift your finger completely from the lower keyboard for a moment before pressing the next key.

MEMORY

By turning on the MEMORY button, you can obtain a continuous automatic performance even after you have released your fingers (or foot) from the lower (or pedal) keyboard.



FINGERED CHORD

By simply pressing chords on the lower keyboard, this feature permits you to automatically produce the bass accompaniment most suited to the pressed chords.

1 Press the button labeled FINGERED CHORD.



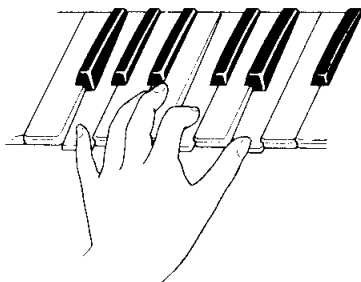
2 Choose an accompaniment pattern from ARPEGGIO CHORD for the lower keyboard, choose a voice from BASS VOICES for the pedal keyboard, then set their respective volume levels.

3 Select a rhythm. (→page 17)

Once you've chosen a rhythm pattern, adjust the tempo to a comfortable speed and set your desired volume. If you use SYNCHRO START, the automatic accompaniment and rhythm will start when you play a chord on the lower keyboard.

4 Play a chord on the lower keyboard.

You will now hear a chord and bass accompaniment in synchronization with the rhythm. The chord you play forms the basis for the automatic accompaniment. You can also add Memory, if you like.



[CUSTOM A.B.C.]

Custom A.B.C. allows you to play a chord and a pedal, and it will automatically create accompaniment patterns for you!

1) Press the button labeled CUSTOM A.B.C.



2) Choose instruments for the lower keyboard (including Arpeggio Chord if you like) and the pedal keyboard. Set all volumes to the level of your choice.

3) Select a rhythm.

4) Play a chord on the lower keyboard and press one note on the pedal keyboard.

You will now hear a chord and bass accompaniment in synchronization with the rhythm. Since the note pressed on the pedal keyboard can be any note (i.e., it does not have to be the "root" of the chord played on the lower keyboard), more sophisticated automatic accompaniments become available to you.

[Additional Information]

- When Auto Bass Chord is used without the auto rhythm, your Electone will still provide the chords and bass, but the background will be stationary (not "animated").

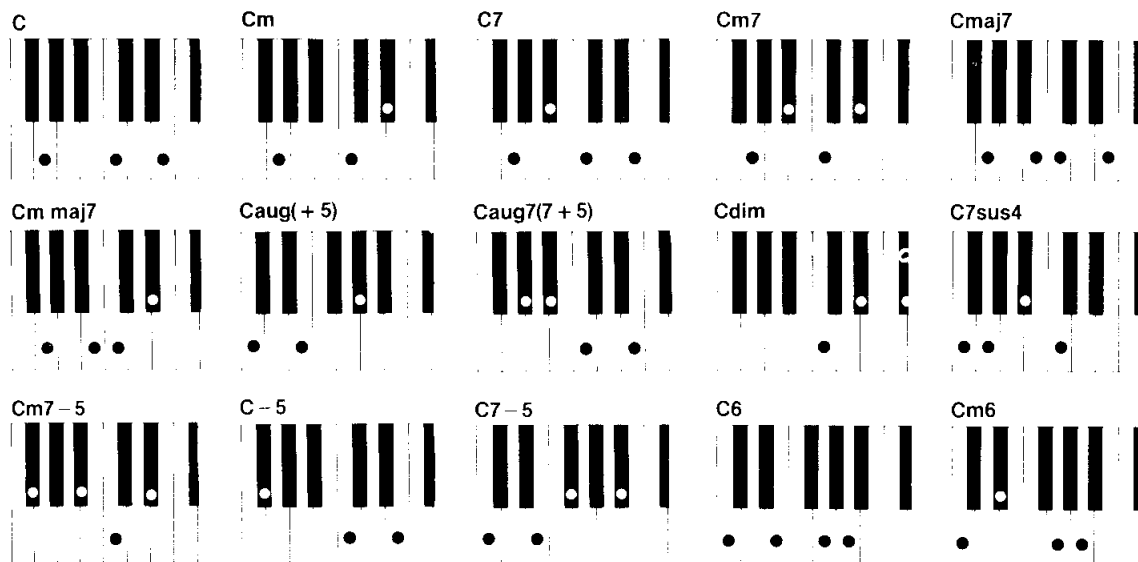
Note: Arpeggio Chords will not work without rhythm. (→page 22.)

- Some of the chords available in the Fingered Chord mode are as follows: major, minor, 7th, minor 7th, major 7th, dim, aug, aug7, dominant 7th, 7sus4, 6th, min7-5, major-5, 7-5, and min6.

- When using Custom A.B.C., the MEMORY button will be used to memorize only the bass accompaniment.

Chords that can be detected in Fingered Chord or Custom A.B.C. mode.

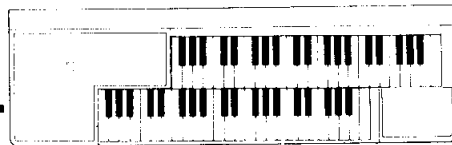
While using Fingered Chord or Custom A.B.C., the 15 chord types below can be detected to produce a bass accompaniment that is based on the detected chords. (For the illustration below, the chord types are indicated using chord names having C as the root.)



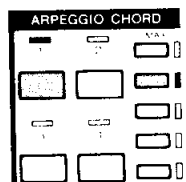
9. Choosing an Accompaniment Pattern

You can choose an accompaniment pattern by pressing an ARPEGGIO CHORD button from 1 to 4.

ARPEGGIO CHORD



1 Choose an accompaniment pattern, then set its volume level.



Patterns 1 and 2

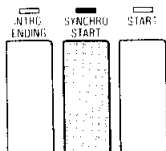
Press one of these buttons to choose a rhythmic chord accompaniment that is synchronized with the rhythm.

Patterns 3 and 4

Press one of these buttons to choose an arpeggio chord accompaniment that is synchronized with the rhythm.

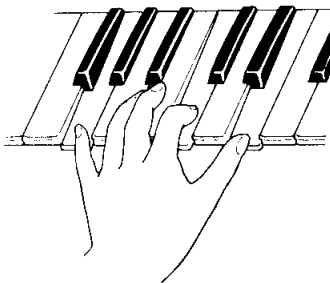
2 Turn on the SYNCHRO START button.

You can also start the rhythm by pressing the START button instead of the SYNCHRO START button.



3 Try pressing some chords on the lower keyboard.

By simply holding down chords on the lower keyboard, you can automatically obtain an accompaniment pattern that is synchronized with the rhythm.



[Arpeggio Chord Patterns and Voices]

The ARPEGGIO CHORD 1, 2, 3, and 4 patterns have been designed to provide the most suitable accompaniment patterns for each rhythm pattern. In addition, each Arpeggio Chord pattern has been preset with a voice that fits the style of its corresponding rhythm pattern.

[Relationship between ARPEGGIO CHORD and AUTO RHYTHM]

The accompaniment patterns of ARPEGGIO CHORD are designed to synchronize with the rhythm, so be sure always use this feature together with AUTO RHYTHM.

[Using ARPEGGIO CHORD Together with AUTO BASS CHORD]

The combined use of ARPEGGIO CHORD and AUTO BASS CHORD lets you create an accompaniment synchronized with the rhythm with greater ease. And if the A.B.C. MEMORY selector is turned on, the Arpeggio Chord pattern will continue sounding even after you release the keys of the lower keyboard. (→page 20.)

[Relationship between ARPEGGIO CHORD and the Bass Pattern]

When ARPEGGIO CHORD is used together with AUTO BASS CHORD, changing the Arpeggio Chord pattern will also cause the Bass pattern to change.

[Pattern Variation by a Fill In or Ending Pattern]

The Arpeggio Chord pattern also changes while a Fill In or Ending pattern of the rhythm is being sounded.

[Pattern Variation by Chord Type]

The Arpeggio Chord pattern will change according to the type of chord you press on the lower keyboard.

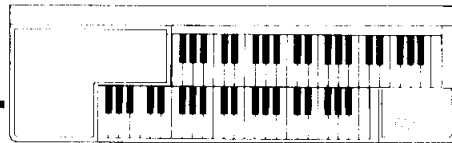
[When You Wish to Cancel the Arpeggio Chord Sound]

If you wish to play the accompaniment on the lower keyboard yourself without the Arpeggio Chord sound, set the Arpeggio Chord volume to 0 (the lowest button).

10. Harmonizing the Melody

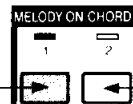
With this function, single note melodies are transformed into beautiful harmonies automatically, enhancing your playing even further.

MELODY ON CHORD



1 Press one or two of the MELODY ON CHORD buttons.

Press "1" to automatically add two notes to your melody.



Press "2" to automatically add three notes to your melody.

Press both buttons 1 and 2 simultaneously to add three notes somewhat distanced from the melody line.

2 Select an instrument to play the melody. (→page 9)

Select the sound you want to use to perform your melody from among the voices available on the upper keyboard, and set the volume level. (The UPPER ORCHESTRAL voice of the upper keyboard will be sounded as the harmony voices. Make sure to set the volume of the upper keyboard ORCHESTRAL VOICES section to a level at which each voice can be heard.)

3 Select a voice for the lower keyboard. (→page 10)

Once you've chosen one, remember to set your volume level.

4 Play a chord on the lower keyboard and the melody on the upper keyboard.

Harmonies will be automatically added to the melody, and your playing will sound more professional than ever!



[Use This Feature with Auto Bass Chord, Too!]

MELODY ON CHORD 1 and 2 can also be used with A.B.C. For example, if you use Single Finger, the chords automatically produced will be added as harmonies to the melody. If Memory and Auto Rhythm are in use, the harmonies will continue even after you have lifted your fingers from the lower keyboard.

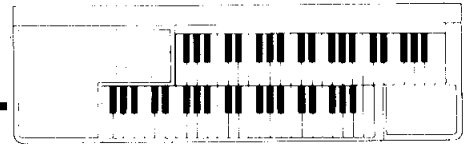
[Additional Information]

- The automatically added harmony sound is derived from chords played on the lower keyboard. Therefore, no harmony will result when you play only the upper keyboard.
- When a melody is played on the lower range of the upper keyboard, harmony sounds will sometimes not be produced.

11. Memorizing Your Favorite Registrations

This feature lets you store some of your favorite sounds in memory and have them conveniently accessible at the touch of a button.

REGISTRATION MEMORY



How to Memorize a registration

1 By using the control panel, set up your desired registration.

The following types of data can be memorized in Registration Memory:

- Voice selection, volume level, and Balance for each keyboard.
- The assignment of VOICE MENU voices to the grey buttons.
- ON/OFF status of SUSTAIN, VIBRATO, TREMOLO/SYMPHONIC.
- The Sustain Length and Vibrato Depth set by SUSTAIN/VIBRATO DEPTH.
- The pattern selection and volume level of RHYTHM.
- The tempo of the rhythm.
- The selected function of the Foot Switch. (HC-4 only)
- The pattern selection and volume level of ARPEGGIO CHORD.
- ON/OFF status of the KEYBOARD PERCUSSION buttons.
- AUTO BASS CHORD.
- MELODY ON CHORD.
- ON/OFF status of TOUCH. (HC-4 only)

2 While pressing the red M. (Memory) button, press the numbered button (1, 2, 3, 4, 5) where you wish to store this registration.

The lamp above the numbered button you pressed will flash briefly, indicating that this registration has been memorized here. Store your other favorite registrations in the same way, utilizing the remaining numbered buttons.



[HC-4]

How to Recall a Registration From Memory

1 Press one of the numbered buttons.

As soon as a numbered button is pressed, the registration that was placed in memory will instantly be set up on the control panel.



[HC-4]

2 Another registration can be recalled by pressing the appropriate numbered button.

Whenever you press a different numbered button, the control panel setting will instantly change. You can easily see what settings have been memorized.

DISABLE



If you turn on this button before calling a memorized registration to the Electone panel, the current panel settings for the rhythm and automatic accompaniment will remain valid. Even if you choose a different registration by pressing a numeric button from 1 to 5, therefore, the settings of AUTO RHYTHM, ARPEGGIO CHORD, AUTO BASS CHORD, and MELODY ON CHORD will remain unchanged. This feature is convenient when you only wish to change the voices and effects of a registration while ensuring rhythmic continuity.

[The Memorization Operation and Button Lamps]

Though the lamp of one of Registration Memory buttons 1-5 is always lit, the memorization operation for registration data can be performed regardless of the ON/OFF status of the lamps.

When memorizing a registration to a lit button: The new registration is stored at the lit button. The pertinent lamp will flash during the memorization process, then return to its lit status.

When memorizing a registration to an unlit button: A new registration is stored at that unlit button which already contains registration data, but the memory contents of the lit button remains unchanged. The lamp of the unlit button will flash only during the memorization process, then return to its unlit status.

[Changing the Registration that You Called to the Panel]

After calling a registration by pressing a numeric button 1 to 5, you can partially change the current registration by changing the panel settings. In this case, however, the actual Registration data memorized for that numeric button will not be changed.

[Storing the Data Memorized in Registration Memory] (HC-4 only)

The data memorized in Registration Memory can be stored for later use by transferring it to a RAM Pack.

[The M. (Memory) Button] (HC-4 only)

In addition to being used to memorize registrations, the red M. (Memory) button is also used when transferring the Electone's data to a RAM Pack, and so on.

[Back-Up of Registration Memory Data]

Even if the Electone is turned off, the data of Registration Memory will be stored by an internal back-up battery (for at least one week). If you leave the Electone turned off for longer than a week, however, the contents of the backed-up Registration Memory will be replaced by the data of the Basic Registrations.

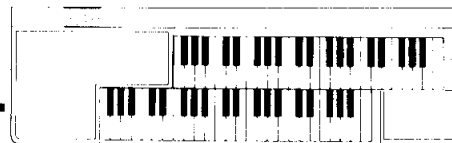
[Back-Up of the Current Panel Settings After the Power is Turned Off]

Besides the contents of Registration Memory, the panel registration that is currently set when the Electone is turned off will also be stored by the internal back-up battery. When you later turn the Electone back on, the most recent panel registration will be called back to the panel.

12. Transferring Information to a Pack

It is possible for the information of Registration Memory that has been memorized into the Electone to be transferred to a RAM Pack (optional). Also, the information transferred to a RAM Pack can be transferred back to the Electone.

PACK (HC-4 only)



How to Transfer Information to a RAM Pack (TO PACK)

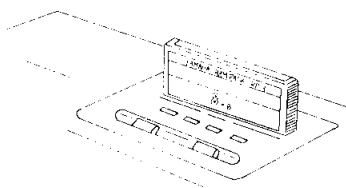
1 Memorize the desired information into Registration Memory (→page 24)

The following types of data can be transferred to a RAM Pack:

- All data of Registration Memory (→page 24)
- All data of USER VOICES (→page 11)
- Transposition data (→page 16)

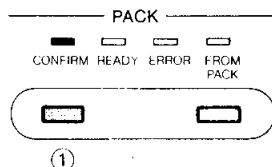
2 Insert a RAM Pack (RP-3) into the Electone.

With the label of the RAM Pack facing upward, securely insert the RAM Pack into the insertion slot. The green READY lamp will light up to indicate that the TO PACK operation can be performed.



3 While depressing the CONFIRM button ①, press the TO PACK button ② of Registration Memory.

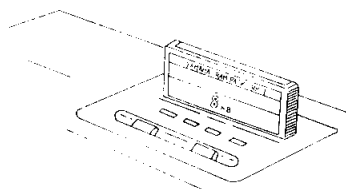
The TO PACK lamp will light up, begin flashing, and then go off, indicating that the Electone's data has been transferred to the RAM Pack. After the TO PACK lamp goes off, the RAM Pack may be removed.



How to Return Information from the RAM Pack (FROM PACK)

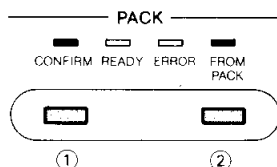
1 Insert the RAM Pack, which contains the transferred information, into the Electone.

The green READY lamp will light up to indicate that the FROM PACK operation can be performed.



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

The FROM PACK lamp will light up, begin flashing, and then go off, indicating that the RAM Pack's data has been transferred to the Electone. After the FROM PACK lamp goes off, the RAM Pack may be removed.

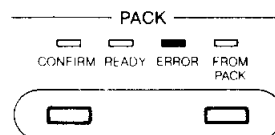


[MEMORY PROTECT]

If you wish to prevent the information that was transferred to the RAM Pack from being erased, set the MEMORY PROTECT switch of the RAM Pack to "ON". Even if you later unintentionally attempt a TO PACK operation, the information previously memorized into the RAM Pack will be protected without the new information being memorized. (The FROM PACK operation, however, can be executed.) Furthermore, if you wish to memorize new data onto the RAM Pack at a later time, just return the MEMORY PROTECT switch to "OFF".

[If the ERROR lamp flashes]

In the following cases, the red ERROR lamp will flash for about one second and the alarm will sound three times. Please check that you are using the proper operating procedures.



- When an unused RAM Pack is first inserted into the Electone. (In this case, press the CONFIRM button then perform the TO PACK operation.)
- When the Pack is not completely inserted.
- When a TO PACK operation is attempted while the MEMORY PROTECT switch of the RAM Pack is set to "ON".
- When the information memorized in the RAM Pack is for an Electone of a different model or for an Electone that is not of the HS Series.

[Precautions on RAM Pack Use]

- When a TO PACK operation is performed, the previously stored information in that RAM Pack is erased and written over with the new information. When the FROM PACK operation is performed, the previously stored information in the Electone is erased and written over with the information from the RAM Pack.
- When transferring information memorized in a RAM Pack back to an Electone, be sure that an Electone of the same model is being used (unless you are transferring the data of an HS Series Electone).

[Power-ON Reset Operation]

After replacing the User Voices and Registration Memory at HC-4 with the data from HS Electone by performing a FROM PACK operation, you can restore the preset data of HC-4 by performing the operation below:

1. Turn off the POWER switch.
2. While depressing the leftmost JAZZ ORGAN button on the HC-4 VOICE MENU, turn the POWER switch back on.

Please note that this operation will restore the preset data of the Registration Memory, User Voices. If you wish to save this data, transfer it to a RAM Pack before performing the Power-ON Reset operation.

Exchanging Data with HS Electone Using a RAM Pack

The HC-4 can exchange data with an HS Electone by using a RAM Pack. In such case, however, be sure to heed the following precautions. (The procedures below are described using the example of the HS-5 Electone. When transferring data with other models in the HS Series, however, the data of USER VOICES 1-4 can be transferred.)

HS-5 Data → HC-4

HC-4 do not have an ENSEMBLE section. Before memorizing a registration at HS-5, therefore, be sure to set its ENSEMBLE section as shown right.



Select the ON/OFF status of each voice section by setting the volume level.

HC-4 Data → HS-5

HS-5 does not have a Disable (D.) button. Before memorizing a registration to the Registration Memory of HC-4, therefore, be sure to turn off the Disable (D.) button.

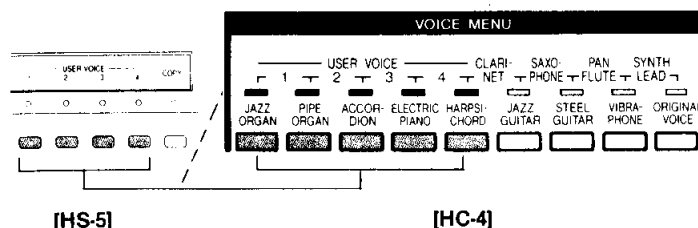


- ▶ At HS-5, the panel registration will be set as if the Disable (D.) button were off.
- ▶ When the data of HC-4 is transferred to HS-5, all Registration data except the Disable status will be set at the HS-5 panel exactly as it was memorized at HC-4. (The data transferred from HC-4 to HS-5 differs from the data transferred from HS-5 to HC-4.)

User Voices

User Voices of HS-5 can be used by HC-4.

Although USER VOICES 1 to 4 in the VOICE MENU of HC-4 contain preset voices (→ page 11), User voices which have been edited and memorized using the Voice Edit functions at HS-5 can be transferred via a RAM Pack and used by HC-4. In addition, by using the Voice Edit functions to edit voices on the HS-5 VOICE MENU and memorizing them as User voices at HS-5, such voices can also be used by HC-4.



[VOICE MENU Voices that are Assigned to Grey Buttons]

Any VOICE MENU voice which does not exist on HC-4 and has been assigned to a grey button at HS-5 will not be transferred to HC-4. (However, COMBI. 1, PIPE ORGAN 1, and ELECTRIC PIANO 1 of HS-5 will be respectively transferred to HC-4 as JAZZ ORGAN, PIPE ORGAN, and ELECTRIC PIANO.)

[The Vibrato Effect]

During a data transfer from HS-5 to HC-4, the Delay and Speed settings of User Vibrato for a Lead Voice at HS-5 will be transferred to HC-4. After the Vibrato data of HS-5 is transferred to HC-4, if you wish to restore the preset Vibrato effect at HC-4, press the UPPER LEAD button in the HC-4 VIBRATO section while you depress the ORIGINAL VOICE button on its VOICE MENU.

[The Tremolo and Symphonic Effects]

The data will be transferred from HS-5 to HC-4 as follows: (Please note the differences indicated by the asterisk.)

(HS-5)	(HC-4)
Symphonic ON	→ Symphonic ON
*Celeste ON	→ Symphonic ON
Tremolo ON	→ Tremolo ON
Chorus ON	→ Chorus ON (Tremolo and Symphonic OFF)
*Tremolo and Chorus OFF	→ Chorus ON (Tremolo and Symphonic OFF)

[Data that is Only Transferred but not Used]

- Although the following data of HS-5 cannot be used by HC-4 for performances, it will be transferred into the memory of HC-4: data of Registration Memory 6 and higher; R.P.P. data of (Registration Memory) 6 and higher; and the data of R.C.P., R.S.P., and F.M.P.
- Therefore, the data memorized at HC-4 as a result of transferring data from HS-5 to HC-4 can later be returned to HS-5 by transferring the HC-4 data back to HS-5. (Even if a certain type of data used by HS-5 is not present, the HS-5 panel setting corresponding to that data item will be set to "data not present.")

[Auto Rhythm]

Any rhythm patterns assigned to a dotted button at HS-5 will not be transferred to HC-4.

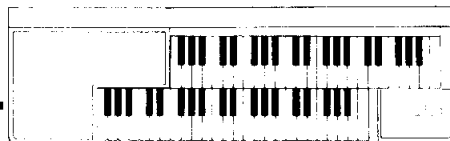
[Auto Bass Chord]

In case of transferring data from HS-5 to HC-4, the LOWER and PEDAL data of the MEMORY feature on the HS-5 MULTI-MENU will not be transferred.

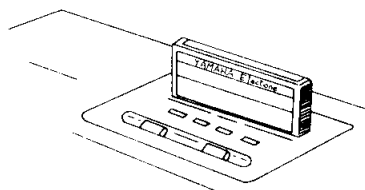
13. Using Various Voices from a Pack

By copying the data of an FM Voice Pack (optional) to the Electone, you can expand the range of voices which can be used at HC-4.

FM VOICE PACK (HC-4 only)



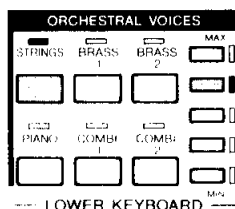
1 Insert the FM Voice Pack (optional) into the Electone.



Gently but firmly insert the optional FM Voice Pack with its label facing upward. The green READY lamp will light up and "SEL" (meaning "SELECT") will appear on the display.

2 Press one of the voice buttons at the panel.

This step determines the voice button and voice section you wish to use for checking the sound of the Pack voice to be copied. Set the volume level for the selected section. Although the FM Voice Pack contains the data of multiple voices, this step allows you to copy the data of one voice.



3 Choose the number of the Pack voice you wish to copy.



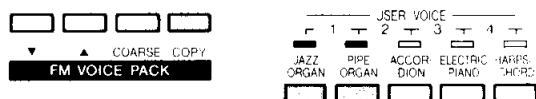
Look at the voice list provided with the FM Voice Pack and check the number of the Pack voice (Nos. 1 to 128) you wish to copy. Next, press the DATA button until the desired number appears on the right side of the TEMPO display.

▲	Each time this button is pressed, the displayed number is increased by one.
▼	Each time this button is pressed, the displayed number is decreased by one.
COARSE	If you press the ▲ or ▼ button while pressing this button, the displayed number will increase or decrease by 10.

4 Listen to the selected Pack voice and decide if you wish to actually copy that voice to the Electone.

When you press keys on the keyboard corresponding to the voice button you pressed in Step 2, the selected Pack voice will be sounded. Listen to its sound to make sure you want to copy it to the Electone.

5 While pressing the COPY button, press a numeric button in the USER VOICE section to copy the selected Pack voice.



If necessary, repeat Steps 2 through 5 to select and copy other voices in the FM Voice Pack to other USER VOICE buttons.

[How to Sound a Copied FM Voice Pack Voice]

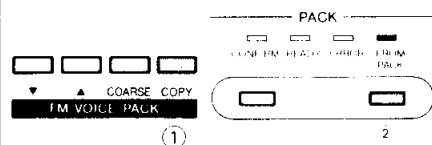
Before a copied FM Voice Pack voice can be sounded, it must be assigned to a grey button in a voice section at the Electone's panel. While pressing the USER VOICE button to which the Pack voice was copied, press a grey voice button. The grey button's lamp will light up to indicate that the Pack voice has been assigned to it. To sound the assigned Pack voice, turn on the that grey button, set its volume level, then play the corresponding keyboard.

[Transferring the FM Voice Pack Data to a RAM Pack]

After you have copied voice data of an FM Voice Pack to USER VOICE buttons at the Electone, you can perform a TO PACK operation to transfer that User voice data to a RAM Pack.

[Partial Copying of Voice Data from or to a RAM Pack]

After you have transferred Registration Memory data to a RAM Pack, you can later copy only the User voice data back to the Electone. With the RAM Pack inserted in the Electone, press the COPY button (1) while pressing the FROM PACK button (2). Only the User voice data will be copied back to the Electone.



And if you press the TO PACK button while pressing the COPY button, only the User Voice data can be copied to the RAM Pack.

[Additional Information]

When you are choosing a voice number, if 128 appears on the TEMPO display and you press either the ▲ button or the coarse and ▲ buttons, an alarm will sound and voice number will remain at 128. Similarly, if 1 is displayed and you press either ▼ button or the COARSE and ▼ buttons, the voice number will remain at 1.

Accessory Jacks

● HEADPHONE Jack

This jack is used to connect headphones (optional). When headphones are connected, there will be no sound from the Electone's speakers. This allows you to play your Electone at any time without disturbing others.



HEADPHONES

IMPORTANT: Do not use this jack for any purpose other than headphones!

● AUX. OUT Jack



AUX. OUT

This jack is used to produce a more powerful sound by connecting an external amplifier or other devices. If this jack is connected to the LINE IN jack of a tape recorder, direct recording is also possible. (Nominal Impedance: 470Ω)

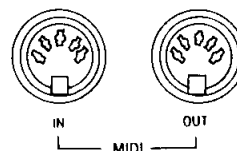
● EXP. IN Jack

This jack accepts a monaural signal from external musical instruments rather than tape recorder. The volume of the equipment connected here will be controlled by the Electone Expression Pedal.



EXP.
IN

● MIDI IN/OUT Jacks



The MIDI (Musical Instrument Digital Interface) terminals conform to the MIDI standard for digital electronic instruments. These jacks enable you to connect your Electone to a computer or other MIDI compatible electronic instruments for data communication.

WARNING: The connection or disconnection of any accessory (other than headphones) while the Electone is ON can result in extensive damage to the Electone and/or the accessory. Damage caused by the improper connection/disconnection of accessories is not covered by the manufacturer's warranty.

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 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 suggested corrective measures 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 originate 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 to 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.

Installation and Maintenance

● 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. 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.

● 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 may occur between the finish chemical and those contained in the polyvinyl products, resulting in a permanent marring of the finish.

● Optional Items

● Music Disk Recorder: MDR-3

Music Disk Recorder MDR-3 is a performance recorder for exclusive use with Electones. The compact MDR-3 is a high-performance digital recorder which can execute very high-fidelity recording and playback of your performances on an HC Electone.

● MDR-3 Bracket: BRT-3

A special bracket (BRT-3) is available for mounting MDR-3 onto an HC Electone. Because this bracket mounts MDR-3 beneath the lower keyboard, MDR-3 can be easily operated whenever necessary but does not get in the way while you are performing on the Electone.

● RAM Pack RP-3 (HC-4 only)

RAM Pack RP-3 (8k bytes) allows you to store the various data you have memorized at the Electone.

● FM Voice Pack (FVP Series) (HC-4 only)

This ROM Pack has a memory containing the voice data of 128 voices created by the FM Tone Generator system. Its memorized voice data can be called to the Electone for registration as User voices.

● Voice Expanders (Not available in some area.)

Two optional Voice Expanders are available which will greatly expand your HC Electone's range of voices. The Combination Voice Expander CVS-10 is preset with 16 organ sounds for the upper and lower keyboards plus eight organ sounds for the pedal keyboard, all of which can be edited to suit your taste. The AWM Voice Expander AVS-10 contains the data of 12 voices created by the AWM Tone Generator system. Either model can be expected to provide your Electone with enhanced total quality and versatility.

● Stereo Headphone: YHE-5

Troubleshooting

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

Phenomenon	Cause and Solution
A crackling sound is sometimes heard.	Noise may be produced when either an electrical appliance is turned ON/OFF or an electric power tool, such as a drill, is used in the proximity of the Electone. In such case, plug the Electone into an electrical outlet located as far as possible from the device that seems to be the source of the problem.
Interference from radio, TV, wireless radios, etc.	This is caused by the proximity of a high-power broadcasting station or amateur ham radio station.
Noise is produced in a radio, TV, etc.	Noise may be produced in such equipment if the Electone is located nearby. Use such equipment at a location as far as possible from the Electone.
The Electone sounds cause surrounding objects to resonate.	Because the Electone produces many sustained sounds, resonance may be caused in surrounding objects, such as cabinets or glass windows. If it becomes a problem, relocate the resonating objects or lower the Electone's volume.
The volume of the selected voice varies with the position played on the keyboard.	Because the intrinsic nature of electronic musical instruments in general is to change timbre, it is extremely difficult to eliminate changes in the volume of a voice at different keyboard positions. This Electone is designed and adjusted to eliminate any performance-related problems. Its volume and timbre also vary widely according to the installation site and system configuration of the Electone, the position of the audience, etc.
Pitch sounds high for the pedal keyboard and low for the upper and lower keyboards.	The pitch may seem particularly off when compared to the pitch of a piano. Because the harmonic structure of a piano is very complex, the tuning of high and low notes must be performed by listening to its harmonic overtones rather than to the actual sound. In contrast, an Electone is tuned according to the actual sound, so the pitch of an Electone and a piano are inherently different.
The sound of the notes is broken or seems to include noise.	This effect occurs mainly with the voices of wind instruments, and is deliberately provided to recreate the characteristic sounds of the actual instruments. It provides instrument sounds with realistic features, such as reed vibration or the breath noises for BRASS.
Only one sound is heard when two notes are simultaneously played on the pedal keyboard, or LEAD VOICES.	For practical performance reasons, this Electone has been designed so that one note can be played at a time on the pedal keyboard or LEAD VOICES. If multiple keys are pressed only the highest note will be sounded (high-note priority). (➡page 9)
Only seven notes are heard when eight notes are simultaneously played on the upper or lower keyboard.	A maximum of seven notes can be simultaneously sounded on the upper or lower keyboard.
The pedal keyboard voice isn't sounded even though the volume is properly set.	SINGLE FINGER or FINGERED CHORD mode of AUTO BASS CHORD is active. Turn off the SINGLE FINGER or FINGERED button at the panel.
The volume of the upper keyboard is too loud in comparison with the volume of the lower keyboard (or vice versa).	The BALANCE button is set too far toward the UPPER (LOWER) side. During usual performances, set Balance to the center level. (➡page 9)
A voice other than the displayed panel voice is sounded.	A VOICE MENU voice was assigned to the grey button with the lit lamp. To cancel the assignment and restore the panel voice, press the grey button while pressing the ORIGINAL VOICE button at the extreme right of the VOICE MENU. (➡page 11)

Phenomenon	Cause and Solution
When sounding a VOICE MENU User voice that was assigned to a grey button, the resulting voice is not what you expected.	USER VOICES 1 to 4 contain preset voices. If you perform a FROM PACK operation to transfer data from an HS Series Electone to your Electone, however, the preset User voices may be replaced by the User voices memorized in the Pack. If you wish to restore the preset User voices, turn off the POWER switch then turn it back on while pressing the leftmost JAZZ ORGAN button on the HC-4 VOICE MENU. (→page 26)
Basic Registrations cannot be called to REGISTRATION MEMORY.	The MEMORY button was released after turning ON the POWER switch. To properly call the Basic Registrations, turn ON the POWER switch while pressing the MEMORY button, then continue depressing the MEMORY button for 1-2 seconds.
The Sustain or Vibrato effect is turned on at the panel, but the effect is not produced at all.	The effect has been improperly set. Change the setting of the effect by using the SUSTAIN/VIBRATO DEPTH buttons on HC-4 or HC-2.
The Touch feature does not work. (HC-4)	The TOUCH button at the right side of the panel is off. Turn on the TOUCH button.
The ARPEGGIO CHORD volume is properly set, but the Arpeggio Chord pattern is not sounded.	The rhythm was not started. Be sure to use ARPEGGIO CHORD together with the rhythm. (→page 22)
When keys on the lower or pedal keyboard are pressed, the sounds of percussion instruments are also sounded.	The KEYBOARD PERCUSSION button is on. If you are not using Keyboard Percussion, turn it off. (→page 19)
The pitch in SINGLE FINGER mode does not change, even when pressing the higher or lower keys of the keyboard.	SINGLE FINGER mode will only produce the notes within a fixed one-octave interval. If notes having the same letter-name are pressed anywhere on the lower keyboard, the chords that are sounded will share the same pitch. (→page 20)
The harmony notes are not provided by MELODY ON CHORD even through the upper and lower keyboards are being played at the same.	The voice to be used for the harmony line has not been set. Choose a voice from UPPER ORCHESTRAL VOICES and set its volume. If the melody is played in the bass range of the upper keyboard, the harmony notes may not be sounded. (→page 23)
Certain functions cannot be memorized in REGISTRATION MEMORY.	REGISTRATION MEMORY is designed not to memorize AUTO RHYTHM data of the START, SYNCHRO START, FILL IN, and INTRO/ENDING buttons, as well as the data of functions, such as PITCH. (→page 24)
The Sustain or Vibrato effect is set, but the desired effect is not produced.	Check your operating procedure. When setting an effect, the panel's SUSTAIN or VIBRATO button must also be on.
When a REGISTRATION MENU button was pressed to set a registration, the VOLUME lamps at two panel voice sections lit up.	Because the volume settings of a panel registration that you set from the REGISTRATION MENU are very finely balanced among the pertinent voice sections, two lamps will light up in certain cases.
A TO PACK operation is performed, but the ERROR lamp lights. (HC-4)	Check how the Pack was inserted as well as your To Pack operating procedure, then repeat the operation. Also, if the RAM Pack's Memory Protect switch is ON, data will not be transferred even if a TO PACK operation is performed. (→page 25)
The Electone panel does not function normally or the content of the memorized data has changed.	This happens very rarely. In case an abnormal voltage is input to the Electone due to an electrical storm or other reason, the Electone may malfunction and/or the contents of its memorized data may change. If this happens, turn off the POWER switch then turn it back on while pressing the leftmost JAZZ ORGAN button on the HC-4 or HC-2 VOICE MENU.

SPECIFICATIONS

		HC-4	HC-2
KEYBOARD	UPPER KEYBOARD	44 keys F ₂ -C ₆ (3 2/3 oct.)	
	LOWER KEYBOARD	44 keys F ₁ -C ₅ (3 2/3 oct.)	
	PEDAL KEYBOARD	13 keys C ₀ -C ₁ (1 oct.)	
TOUCH RESPONSE	INITIAL TOUCH	UPPER, LOWER	—
VOICE SECTIONS	UPPER ORCHESTRAL	STRINGS, BRASS 1, BRASS 2, PIANO, WOOD, COMBI., VOLUME	
	LEAD	FLUTE, OBOE, TRUMPET, TROMBONE, VOLUME	
	LOWER ORCHESTRAL	STRINGS, BRASS 1, BRASS 2, PIANO, COMBI. 1, COMBI. 2, VOLUME	
	BASS VOICES	CONTRABASS 1, CONTRABASS 2, ELECTRIC BASS, TUBA, VOLUME	
	VOICE MENU	JAZZ ORGAN, PIPE ORGAN, ACCORDION, ELECTRIC PIANO, HARPSICHORD, JAZZ GUITAR, STEEL GUITAR, VIBRAPHONE, CLARINET, SAXOPHONE, PAN FLUTE, SYNTH LEAD, USER VOICE 1•2•3•4, ORIGINAL VOICE	JAZZ ORGAN, PIPE ORGAN, ACCORDION, SYNTH BRASS, ELECTRIC PIANO, HARPSICHORD, VIBRAPHONE, CELESTA, JAZZ GUITAR, STEEL GUITAR, VIOLIN, CLARINET, CLARINET, SAXOPHONE, PAN FLUTE, SYNTH LEAD, ELECTRIC BASS, ORIGINAL VOICE
	Registrations For Beginners	○	○
EFFECTS/ CONTROLS	VIBRATO	UPPER LEAD, LOWER ORCHES., UPPER ORCHES.	
	SUSTAIN	UPPER, LOWER, PEDAL	
	SUSTAIN/VIBRATO DEPTH	0, 1, 2, 3, 4	
	TREMOLO/SYMPHONIC	TREMOLO, SYMPHONIC, (CHORUS), UPPER ORCHES., LOWER ORCHES.	
	TOUCH	○	—
	GLIDE (LEAD)	○ (FOOT SWITCH)	—
	TRANSPOSITION	▲, ▼	▲, ▼
	PITCH	▲, ▼	—
RHYTHM	RHYTHM PATTERNS	MARCH, WALTZ, SWING, SAMBA, LATIN ROCK, BOUNCE, DISCO, COUNTRY, TANGO, BALLAD, BOSSANOVA, LATIN, SLOW ROCK, 8 BEAT, 16 BEAT, SALSA	
	RHYTHM CONTROLS	VOLUME, BALANCE, TEMPO, TEMPO DISPLAY, TEMPO LAMP, START, SYNCHRO START, INTRO. ENDING, FILL IN 1, FILL IN 2, FOOT SWITCH (RHYTHM STOP, FILL IN 1, FILL IN 2, ENDING)	VOLUME, BALANCE, TEMPO, TEMPO LAMP, START, SYNCHRO START, INTRO. ENDING, FILL IN 1, FILL IN 2
KEYBOARD PERCUSSION	LOWER, PEDAL		
AUTO BASS CHORD	SINGLE FINGER, FINGERED CHORD, CUSTOM A.B.C., MEMORY		
ARPEGGIO CHORD	1, 2, 3, 4, VOLUME		
MELODY ON CHORD	1, 2, 1+2		
REGISTRATION MEMORY	MEMORY/TO PACK, 1, 2, 3, 4, 5, DISABLE	MEMORY, 1, 2, 3, 4, 5, DISABLE	
REGISTRATION MENU	STANDARD 1-13, ORGAN SELECT 1-13		
PACK	CONFIRM, TO PACK, FROM PACK, READY, ERROR	—	
FM VOICE PACK	▲, ▼, COARSE, COPY	—	
MAIN CONTROLS	MASTER VOLUME, POWER, FOOT SWITCH, EXPRESSION PEDAL	MASTER VOLUME, POWER, EXPRESSION PEDAL	
CONNECTORS	HEADPHONES, AUX. OUT, EXP. IN, MIDI IN, MIDI OUT		
AMPLIFIERS (RMS)	30 W		
SPEAKERS	18 cm (7")×1, 5 cm (2")×1		
DIMENSIONS (W×D×H)	106 cm (41-3/4")×39 cm (15-1/2")×85 cm (33-1/4")		
WEIGHT	36.6 kg (80.7 lbs.)	35.9 kg (79.1 lbs.)	

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

How to use MIDI

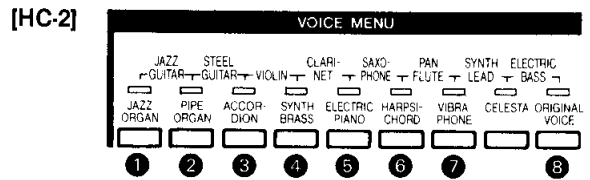
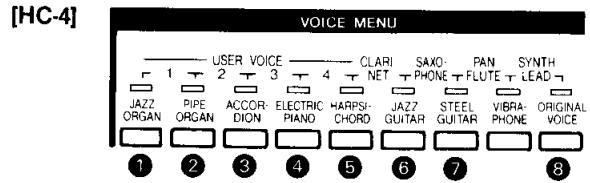
The HC Electone is provided with MIDI terminals, so you can have full access to musical enjoyment that is only possible with the most advanced electronic musical instruments. "MIDI" (Music Instrument Digital Interface) is a worldwide standard that allows electronic music instruments and devices to "communicate."

Main Data that Can be Transmitted/Received

- Transmission/reception of Performance data:
Upper keyboard: Channel 1
Lower keyboard: Channel 2
Pedal keyboard: Channel 3
- Transmission/reception of the control data for the Expression Pedal and SUSTAIN.
- Transmission/reception of only the data indicating the selection of Registration Nos. in REGISTRATION MEMORY and REGISTRATION MENU.
- Transmission/reception of the control data (Exclusive Messages) for the FILL IN, INTRO/ENDING, and FOOT SWITCH (HC-4) using the message format below:
FOH, 43H, 70H, 70H, 40H, nnH, xxH, F7H
In the above format, "nnH" and "xxH" signify the following:
nnH 45H: Foot Switch 48H: Fill In
4BH: Intro/Ending 4CH: User Fill In
xxH 7FH: ON 00H: OFF

Changing the MIDI Modes

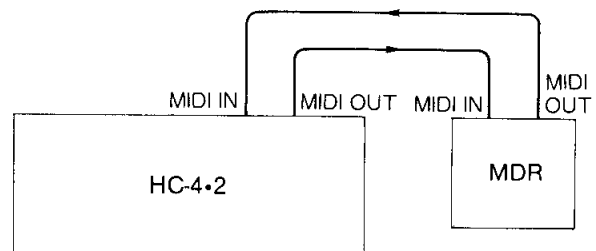
The MIDI modes can be changed by using the VOICE MENU buttons on HC-4 and HC-2.



Item	Changing the Mode		Resetting the Mode		Remarks
	HC-4	HC-2	HC-4	HC-2	
RHYTHM SYNC mode (INTERNAL SYNC → EXTERNAL SYNC)	Press JAZZ ORGAN ① while pressing ORIGINAL VOICE ⑧.		Press PIPE ORGAN ② while pressing ORIGINAL VOICE ⑧.		In EXTERNAL SYNC mode, the Electone can receive signals from a rhythm machine or an instrument with Rhythm functions.
Receive Channel No. for the Lead Voice (CH 1 → CH 4)	Press ACCORDION ③ while pressing ORIGINAL VOICE ⑧.		Press ELECTRIC-PIANO ④ while pressing, ORIGINAL VOICE ⑧.	Press SYNTH BRASS ④ while pressing ORIGINAL VOICE ⑧.	Select CH 4 when you wish to record and play back the Lead voice performance on a separate channel at MDR.
Transmit Channel Nos. of the upper and lower keyboards Upper keyboard: CH 1 → CH 4 Lower keyboard: CH 2 → CH 5	Press HARPSICHORD ⑤ while pressing ORIGINAL VOICE ⑧.	Press ELECTRIC-PIANO ⑤ while pressing ORIGINAL VOICE ⑧.	Press JAZZ GUITAR ⑥ while pressing ORIGINAL VOICE ⑧.	Press HARPSICHORD ⑥ while pressing ORIGINAL VOICE ⑧.	When recording to MDR, etc., changing the Channels Nos. lets you create a multi-part recording with specific voice sections (LEAD VOICES, ARPEGGIO CHORD, etc.) on separate channels.
Transmit Bulk data	Press STEEL GUITAR ⑦ while pressing ORIGINAL VOICE ⑧.	Press VIBRAPHONE ⑦ while pressing ORIGINAL VOICE ⑧.			Transmits Bulk data to a MIDI recorder other than MDR.

Sample MIDI Application

With this sample connection, your performances and registrations at HC-4 or HC-2 can be recorded and played back by an Yamaha MDR (Music Disk Recorder)



Glossary for the HC Electones

(The numerals within parentheses indicate the page in this User's Guide where the term is discussed.)

A

A.B.C. [AUTO BASS CHORD] (→page 20)

A feature that automatically produces a chord and bass accompaniment by merely pressing keys on the lower keyboard.

ARPEGGIO CHORD (→page 22)

This feature automatically produces a strumming chord accompaniment synchronized with the rhythm or a melodious arpeggio accompaniment, by merely pressing the keys of the lower keyboard.

AUTO RHYTHM (→page 17)

This feature automatically produces a diversity of rhythm patterns using various percussion instruments.

AUX. OUT Jack (→page 28)

This jack is used to output the Electone's audio signals to an external device, such as an amplifier/speaker system.

AWM [Advanced Wave Memory]

A method of tone generation which memorizes the waveforms of actual musical instruments in the form of digital data for use in generating tones for electronic musical instruments. The rhythm sounds and PIANO voices of the HC Electones are produced by an AWM Tone Generator.

B

BALANCE (→page 9)

A button which balances the volume levels of the upper and lower keyboards.

BALLAD

This is a swing rhythm pattern with an added afterbeat, making it suitable for slow, pop ballads.

BASS VOICES (→page 10)

This monophonic voice section provides BASS voices for use with the pedal keyboard.

BOSSANOVA (→page 17)

A rhythm born in Brazil from the fusion of Samba and Jazz.

BOUNCE

One of the typical jazz rhythms which are used in Big Band sounds, etc.

BRASS

Stands for brass instrument and is included as a voice in the ORCHESTRA VOICE section.

C

CELESTA (→page 26)

An instrument with keyboard functions which produces a timbre like that of an iron harp.

CHORUS (→page 15)

This adds a trembling effect to a voice. The trembling effect added by CHORUS is slower than that added by the TREMOLO effect.

COMBI.

For Electones, COMBIlation refers to an organ voice that consists of a combination of notes in different pitches.

CONFIRM (→page 25)

Use this button when transferring data to or from a RAM Pack. To transfer Electone data to a RAM Pack, press the TO PACK button while pressing CONFIRM. To transfer the Pack back to the Electone, press the FROM PACK button while pressing CONFIRM. (HC-4)

COUNTRY (→page 17)

Stands for Country and Western music, an American folk music.

CUSTOM A.B.C. (→page 21)

One of the buttons used to select the AUTO BASS CHORD mode. When this mode is selected, the chords pressed on the lower keyboard and the keys pressed on the pedal keyboard are separately detected to produce a combined automatic bass accompaniment.

D

D. (Disable) Button

Gives you the versatility to change the sound while ensuring rhythmic continuity.

DISCO

This rhythm pattern is good for disco music, and features a simple beat with a strong accent.

E

8 BEAT

A basic rock rhythm which is provided as two types of rhythm patterns.

ENDING (→page 18)

If the INTRO./ENDING button is pressed at the end of a song, an Ending rhythm pattern is produced then the rhythm is automatically stopped.

ERROR (→page 25)

When a data error occurs due to the improper use of a Pack or other reasons, this lamp flashes. (HC-4)

EXP. IN Jack (→page 28)

The jack used to input audio signals from an external musical instrument, such as a synthesizer or rhythm machine, so that its volume can be controlled by the Expression Pedal.

Expression Pedal

This pedal lets you control the volume while playing so you can express an enhanced intensity or softness through the notes you play.

F

FILL IN (→page 18)

A Fill In pattern provides a variation of the currently selected rhythm pattern. When pressing the FILL IN 1 or 2 button of AUTO RHYTHM, the rhythm will be temporarily switched to a preset Fill In pattern.

FINGERED CHORD (→page 21)

One of the buttons used to select the AUTO BASS CHORD mode. When this button is ON, the chords pressed on the lower keyboard will be detected to automatically produce a bass and chord accompaniment.

FM [Frequency Modulation]

Yamaha's exclusive method of tone generation which extracts the overtones from a sound then subjects the remaining sound to controlled frequency modulation by digital processing.

FM VOICE PACK (→page 27)

A ROM pack containing the data of various voices created by FM Tone Generation. Any sound in the pack can be transferred to the Electone and registered as a USER VOICE. (HC-4)

Foot Switch (→page 18)

A switch on the left side of the Expression Pedal. When pressed toward the left, this switch can control the function set by the Foot Switch selectors at the lower left of the panel. (HC-4)

FROM PACK (→page 25)

This button is used to recall data from a RAM Pack to the Electone. To recall the data, press this button while pressing the CONFIRM button. (HC-4)

G

GLIDE (LEAD) (→page 15)

This effect lets you lower the pitch of the LEAD voice a half-step then gradually restore its original pitch. It is controlled by the Foot Switch. (HC-4)

Grey button (→page 11)

Each Voice sector on the control panel is provided with one grey button. A voice on the VOICE MENUS is used by transferring and assigning it to a grey button.

H

HARPSICHORD

This is a keyboard instrument that was popular during the 16th to 18th centuries (also called a Cembalo).

HEADPHONES Jack (→page 28)

An accessory jack used to connect a headphones set.

I

Initial Touch (→page 16)

A type of touch control which controls the sound by the amount of pressure (velocity) with which the key is pressed. Initial touch can change the volume level and timbre to create a more expressive sound. (HC-4)

INTRO. (→page 18)

An introductory phrase to a song. On the Electone, it is a one-measure rhythm pattern that is automatically produced by turning on the INTRO./ENDING button and starting the rhythm.

K

KEYBOARD PERCUSSION (→page 19)

A feature that lets you press keys on the lower or pedal keyboard to produce the sounds of various percussion instruments.

L

LATIN (→page 17)

A rhythm forming the basis of Latin American music.

LEAD VOICES (→page 9)

This voice section provides a variety of monophonic voices to be played as the lead part on the upper keyboard.

Lower

Refers to the lower Keyboard of the Electone.

M

MAJOR CHORD (→page 20)

A chord in the major key, represented as C, F, and so forth. In SINGLE FINGER of AUTO BASS CHORD, a chord is produced by simply playing its root note.

MARCH (→page 17)

A light lifting 2-beat march rhythm.

MARIMBA

A Latin-American percussion instrument of African origin which consists of wooden strips with tuned resonating pipes below.

MASTER VOLUME

This knob controls the overall volume of the Electone.

MEMORY (→pages 20, 24)

(1) The [M.] button of REGISTRATION MEMORY is used to memorize the panel's current registration settings.

(2) The MEMORY button of AUTO BASS CHORD is used to repeat the accompaniment patterns together with the rhythm even after the keys of the lower or pedal keyboard have been released.

MEMORY PROTECT (→page 25)

A switch provided on RAM Packs to prevent accidental erasure of data. When it is set to ON, no new data can be written to the Pack so the currently stored data cannot be unintentionally erased. (HC-4)

MIDI (→page 33)

Musical Instrument Digital Interface is a specification defining the exact manner in which digital data is transferred between electronic instruments and devices.

MIDI IN/OUT (→page 33)

These jacks are used to connect an external MIDI-compatible device to exchange data between that device and the Electone.

MINOR CHORD (→page 20)

A chord in the minor key, expressed as Am, Dm, etc.

M.O.C. [MELODY ON CHORD] (→page 23)

This feature automatically adds a harmony line while you play the melody line on the upper keyboard.

Monophonic

Capable of producing only one note at a time, even if multiple keys are pressed.

Music Rest

A stand for holding music sheets.

O

ORCHESTRAL VOICES (→pages 9, 10)

This polyphonic voice section has the voices of the major instruments of an orchestra, can simultaneously sound up to seven notes, and is provided for both the upper and lower keyboards.

ORGAN SELECT (→pages 12, 13)

A selector button located in the REGISTRATION MENU. By setting this button to ON and pressing another button on the REGISTRATION MENU, all of the registrations will be changed to contain ORGAN-type voices.

ORIGINAL VOICE (→page 11)

By pressing this button while you press a grey button in a voice section, you can cancel the VOICE MENU voice that has been assigned to that grey button and thus restore its original preset voice.

P

PACK (→page 25)

The section of the panel at which a RAM Pack is installed and used to transfer data between the RAM Pack and the Electone. (HC-4)

PAN FLUTE (→page 11)

A simple wind instrument with a pastoral sound.

Pedal

Refers to the pedal keyboard of the Electone.

PITCH (→page 16)

A feature that permits fine adjustment of the overall pitch of the Electone. (HC-4)

Polyphonic

Capable of simultaneously producing multiple notes.

POWER

The switch which turns the power supply to the Electone on or off.

R

RAM Pack (→page 25)

A RAM (Random Access Memory) Pack has a built-in LSI chip capable of reading and writing data, which enables various types of Electone data to be stored in the RAM Pack or recalled from the Pack to the Electone whenever desired. (HC-4)

READY (→pages 25, 27)

After a RAM or ROM Pack is inserted, this green lamp lights up to indicate that a Pack operation can be performed. (HC-4)

Registration

In Electone terminology, it refers to a collection of settings for creating the total sound most suitable to the song to be played, including the voices, effects, rhythm, etc.

Registration For Beginners (→page 7)

These five basic registrations can be called to the panel by pressing the Memory button in the Registration Memory section while turning on the Electone.

REGISTRATION MEMORY (→page 24)

This feature lets you memorize the panel's current registration settings which were set using the panel or ROM Pack, and call any memorized registration or Basic Registration to the panel.

REGISTRATION MENU (→pages 12, 13)

A feature which is preset with the sounds of various music genres. A registration can be called to the Electone's panel by a one-touch operation.

REGGAE

Reggae is a musical style of Jamaican origin which has a late upbeat with a unique bounce.

ROM Pack

The ROM (Read Only Memory) Pack can only be used to transfer the ROM Pack data to the Electone but cannot be used to store the Electone's data. The FM Voice Pack is a ROM Pack. (HC-4)

Root (→page 9)

The root of a chord has the same letter-name as the chord itself. For example, the root of the C chord consisting of C, E, and G is the C note.

S**SALSA**

A newer genre of Latin-American music originating in New York, it is also the name of a rhythm pattern.

SAMBA (→page 17)

A typical Brazilian rhythm, employing numerous percussion instruments.

SINGLE FINGER (→page 20)

One of the buttons used to select the AUTO BASS CHORD mode. When SINGLE FINGER is on, chordal and bass accompaniments can be automatically produced by pressing one, two, or three notes on the lower keyboard.

16 BEAT

A rhythm pattern based on 16th notes which is used in such musical genres as rock, fusion and jazz.

START (→page 17)

A button in the RHYTHM section which you press to start the rhythm.

STRINGS

Refers to the stringed instruments used in an orchestra, and is provided as two types of voices in each ORCHESTRAL VOICES section.

SUSTAIN (→page 14)

This effect allows a gradual fade-out of the sound after the keys are released.

SWING

A standard rhythm pattern used in jazz music.

SYMPHONIC (→page 15)

This effect adds an expansive reverberation that resembles the combined playing of multiple instruments.

SYNCHRO START (→page 17)

When SYNCHRO START is ON, pressing any key of the lower or pedal keyboard will start the rhythm from the first beat at the same time as the accompaniment.

SYNTH BRASS, SYNTH LEAD

These voices are respectively simulate STRING and LEAD voices created on a synthesizer.

T**TEMPO Control**

This knob controls the speed of the rhythm.

TEMPO/(DATA) Display

Displays the bar and beat, and also displays other types of data. (HC-4)

TEMPO LAMP (→page 17)

This lamp indicates the tempo of the rhythm, flashing up on the first beat of each measure when the rhythm is started. When Synchro Start is set to ON, but the rhythm has not yet been started, the lamp will flash on every beat.

TO PACK (→page 25)

This button is used together with the MEMORY button of REGISTRATION MEMORY to transfer the Electone's data to a RAM Pack. (HC-4)

TOUCH (→page 16)

When the TOUCH button is on, the volume and timbre of a voice can be minutely changed in response to your touch on the keys. (HC-4)

TRANSPOSITION (→page 16)

The keys on the Electone can be transposed up or down in half-note increments, up to a maximum of 6 half-note steps in either direction.

TREMOLO (→page 15)

This adds a trembling effect to a voice to produce a richly expansive sound. The trembling effect added by TREMOLO is faster than that added by the CHORUS effect.

U**Upper**

Refers to the upper keyboard of the Electone.

USER VOICE (→page 11)

Contains preset voices, which can be replaced with other voices by copying User voices from a Pack. (HC-4)

V**VIBRAPHONE**

This is a percussion instrument consisting of tuned metal bars which are struck by the player using mallets.

Vibrato (→page 14)

This effect vibrates the pitch of voices for added appeal. Each of the Electone voices has been preset with the most suitable Vibrato effect, but the preset effect can be changed if you so desire.

Voice

This is the generic term for each of the instrument sounds that can be produced by the Electone.

VOICE MENU (→page 11)

This feature allows one of a variety of voices to be assigned to the grey button of each voice section.

Voice Section

This refers to any section of the Electone's panel at which voices can be selected, such as ORCHESTRAL VOICES, LEAD VOICES, and BASS VOICES.

W**WALTZ** (→page 17)

A 3-beat waltz rhythm.

WOOD

Refers to the woodwind instruments and is provided as a voice in the ORCHESTRAL VOICES section for the upper keyboard.

MIDI Specifications

Technische Betriebsdaten für MIDI

MIDI Specifications

MIDI Especificaciones

■ CHANNEL MESSAGES / KANALMELDUNGEN MESSAGES DE CANAL / MENSAJES DE CANALES

Code	Function	Transmitted	Recognized	Remarks
8nH, nnH (Note No.), 00H-7FH	Note OFF	×	CH 1 CH 2 CH 3 (CH 4)* CH 15	UK LK PK LEAD Keyboard Percussion
9nH, nnH (Note No.), 01H-7FH (ON) 00H (OFF)	Note ON/OFF	CH 1 CH 2 CH 3 (CH 4)* (CH 5)* ×	CH 1 CH 2 CH 3 (CH 4)* × CH 15	UK LK PK LEAD Arpeggio Chord Keyboard Percussion
BFH, 0BH, 00H-7FH BnH, 40H, 7FH (ON) 00H (OFF)	Expression Pedal Sustain ON/OFF	CH 16 CH 1 CH 2 CH 3	CH 16 CH 1 CH 2 CH 3	CONTROL UK LK PK
BnH, 7BH, 00H	All Note OFF	×	CH 1 CH 2 CH 3 (CH 4)* CH 16	UK LK PK LEAD CONTROL
CnH, nnH (REGIST. No.)	Program Change	CH 1 CH 2 CH 3 CH 16	CH 1 CH 2 CH 3 CH 16	UK LK PK CONTROL

*Can be replaced by MIDI CONTROL functions on the MULTI MENU.

■ SYSTEM REALTIME MESSAGES / SYSTEM-ECHTZEITMELDUNGEN MESSAGES EN TEMPS REEL DU SYSTEME / MENSAJES EN TIEMPO REAL DEL SISTEMA

Code	Function	Transmitted	Recognized	Remarks
F8H	Clock	○	○*	
FAH	Start	○	○	
FCH	Stop	○	○	
FEH	Active Sensing	○	○	
FFH	Reset	×	○	

*Only in External Synchronous mode.

■ SYSTEM EXCLUSIVE MESSAGES / SYSTEM-EXKLUSIVMELDUNGEN MESSAGE EXCLUSIFS DU SYSTEME / MENSAJES EXCLUSIVOS DEL SISTEMA

Code	Messages	Remarks
F0H, 43H, 70H, 70H (Electone), F7H	1. Electone common messages	(⇒Page 37)
F0H, 43H, 70H, 72H (HS), F7H	2. HS Series common messages	(⇒Page 38)
F0H, 43H, 70H, 74H (HE), F7H	3. HC-4•2 common messages	(⇒Page 39)
F0H, 43H, 70H, nnH, (Model)*..... F7H	4. Model-Specific messages	(⇒Page 39)
F0H, 43H, 73H, F7H	5. Electone/Single Keyboard common messages	(⇒Page 39)

1. Electone common messages / Electone-Normalmeldungen
 Messages communs de l'Electone / Mensajes comunes de Electone

■ BULK DUMP Related Messages

Code	Messages	Transmitted	Recognized
F0H, 43H, 70H, 70H, 00H,(data)....., F7H	Bulk Dump data	×	○
01H,	Request-to-Send Voice Parameter data	×	○
02H,	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	*1	○
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	○	×

*1 Can be transmitted using MIDI CONTROL function on the MULTI MENU.

■ CONTROL CHANGE

Code	Messages	Transmitted	Recognized
F0H, 43H, 70H, 70H, 40H, 45H, 7FH, F7H	FOOT SWITCH LEFT ON	*1	*1
00H	OFF	*1	*1
40H, 47H, 7FH, F7H	KNEE LEVER ON	×	×
00H	OFF	×	×
40H, 48H, 7FH, F7H	FILL IN 1 ON	○	○
00H	OFF	○	○
40H, 49H, 7FH, F7H	FILL IN 2 ON	○	○
00H	OFF	○	○
40H, 4BH, 7FH, F7H	INTRO./ENDING ON	○	○
00H	OFF	○	○
40H, 4CH, 7FH, F7H	EXT. FILL IN ON	×	×
00H	OFF	×	×
40H, 50H, TLH, THH, F7H	TEMPO	○	○

*1 Transmitted and Recognized only by HC-1.

■ MDR-3•MDR-2P STATUS

Code	Messages	Transmitted	Recognized
F0H, 43H, 70H, 70H, 70H, 01H, F7H	PLAY Start	×	○
02H	Stop	×	○
03H	RECORD Start	×	○
04H	Stop	×	○
05H	FF ►► Start	×	○
06H	Stop	×	○
09H	Rhythm Pointer Reset	×	○

■ OTHERS

Code	Messages	Transmitted	Recognized
F0H, 43H, 70H, 70H, 71H, 06H, 00H, F7H	Expression Control Internal	×	○
7FH, F7H	External	×	○
07H, 30H, F7H	LEAD VOICES Receive CH 1 CH	×	○
33H, F7H	4 CH	×	○
08H, 70H, F7H	UK/LK Send CH 1•2 CH	×	○
71H, F7H	4•5 CH	×	○
F0H, 43H, 70H, 70H, 78H, SC, NC, F7H	Bar signal	○	○

**2. HS-Series common messages / Normalmeldungen für HS-Serie
Messages communs de la série HS / Mensajes comunes de la serie HS**

Code	Messages	Transmitted	Recognized
FOH, 43H, 70H, 72H, 00H,(data)....., F7H	Bulk Dump data	○	○
01H	Request-to-Send Voice Parameter data	×	○
02H	Request-to-Receive Voice Parameter data	×	○
FOH, 43H, 70H, 72H, 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	×	○
FOH, 43H, 70H, 72H, 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	×	○
FOH, 43H, 70H, 72H, 41H,(data)....., F7H	Panel Switch Event data *1	○	○
FOH, 43H, 70H, 72H, 42H,(data)....., F7H	Current Registration data	○	○

*1 Refer to the "Table of Switch-Related MIDI Codes."

•Table of SW MIDI codes [FOH, 43H, 70H, 72H, 41H, nnH (SW code), nnH (SW data), F7H]

	Functions/Switches	SW code	SW data	Remarks
Selector	UPPER ORCHESTRAL VOICES	02H	00H-06H	SW No.
	LOWER ORCHESTRAL VOICES	03H	00H-07H	SW No.
	UPPER LEAD VOICES	06H	00H-03H	SW No.
	BASS VOICES	07H	00H-03H	SW No.
	ARPEGGIO	09H	00H-03H	SW No.
	RHYTHM	0BH	00H-0FH	SW No.
Volume	UPPER ORCHESTRAL VOICES	12H	00H-7FH	Volume data
	LOWER ORCHESTRAL VOICES	13H	00H-7FH	Volume data
	UPPER LEAD VOICES	16H	00H-7FH	Volume data
	BASS VOICES	17H	00H-7FH	Volume data
	ARPEGGIO	19H	00H-7FH	Volume data
	RHYTHM	1AB	00H-7FH	Volume data
Balance	MANUAL BALANCE	20H	02H-0AH	Balance data
Effect	SYMPHONIC	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	43H	00H-01H	00H = TREMOLO ON, 01H = CHORUS ON
Function	A.B.C. Mode	4CH	00H-03H	00H = OFF, 01H = SINGLE FINGER, 02H = FINGERED CODE, 03H = CUSTOM A.B.C.
	M.O.C. Mode	4DH	00H-03H	00H = OFF, 01H = Mode 1, 02H = Mode 2, 03H = Mode 3
	M.O.C. (Knee Control)	4DH	10H-11H	10H = OFF, 11H = ON *
	* FOOT SWITCH Function	4EH	00H-05H	00H = OFF, 01H = STOP, 02H = ENDING, 03H = FILL IN 1, 04H = FILL IN 2
			10H-11H	10H = GLIDE (LEAD) OFF, 11H = GLIDE (LEAD) ON
	* TOUCH Switch	4FH	00H-01H	00H = OFF, 01H = ON
	SUSTAIN (UPPER)	50H	00H-01H	00H = OFF, 01H = ON
	SUSTAIN (LOWER)	51H	00H-01H	00H = OFF, 01H = ON
	SUSTAIN (PEDAL)	52H	00H-01H	00H = OFF, 01H = ON
	VIBRATO (UPPER LEAD)	53H	00H-01H	00H = OFF, 01H = ON
	VIBRATO (UPPER ORCHES.)	54H	00H-01H	00H = OFF, 01H = ON
	VIBRATO (LOWER ORCHES.)	55H	00H-01H	00H = OFF, 01H = ON
	MEMORY ON	57H	00H-01H	00H = OFF, 01H = ON
	KEYBOARD PERCUSSION LOWER	5BH	00H-01H	00H = OFF, 01H = ON
	KEYBOARD PERCUSSION UPPER	5CH	00H-01H	00H = OFF, 01H = ON
	DISABLE Switch	5FH	00H-01H	00H = OFF, 01H = ON

*Applicable only to HC-4.

3. HC-4•HC-2 common messages / Normalmeldungen für HC-4•HC-2
Messages communs de du HC-4•HC-2 / Mensajes comunes del HC-4•HC-2

Code	Messages	Transmitted	Recognized
FOH, 43H, 70H, 74H, 00H,(data)....., F7H	Bulk Dump data	×	○
02H	Request-to-Send Voice Parameter data	×	○

4. Model-Specific messages / Modell/Einzelmeldungen
Messages spécifiques au modèle / Mensajes de modelo/especificos

Code	Messages	Transmitted	Recognized
FOH, 43H, 70H, nnH, 00H,(data)....., F7H	Bulk Dump data	×	○
mmH, 00H	Model ID data *1	○	×
nnH, 01H	Request-to-Send Voice Parameter data	×	○
nnH, 02H	Request-to-Receive Voice Parameter data	×	○
FOH, 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	×	○
FOH, 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	×	○

* The above value of "nnm" is either \$2E to identify HC-2 or \$30 to identify HC-4.

5. Electone/Single Keyboard common messages / Normalmeldungen für Electone/Einzelkeyboard
Messages communs Electone/clavier simple / Mensajes comunes de Electone/teclado único

Code	Messages	Transmitted	Recognized
FOH, 43H, 73H, 01H, 02H, F7H	Request for Internal Synchronous mode	×	○
03H	Request for External Synchronous mode	×	○

Electone HC-4/HC-2

**MIDI Implementation Chart / MIDI-Anwendungstabelle
Tableau d'implantation MIDI / Tabla de implementación de MIDI**

Date: 4/7, 1989

Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1 2 3	1 2 3	UK LK PK
	Changes	16 4 5	15 16 4	Keyboard Percussion CONTROL UK LK LEAD
Mode	Default Messages Altered	Mode 3 × *****	Mode 3 × ×	
Note Number		53-96 41-84 36-48 × × ×	36-96 36-96 36-96 36-96 36-96 36-96	UK LK PK LEAD Arpeggio Chord Keyboard Percussion
	True Voice	*****	36-96	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		×	× *	
Control Change		1 ×	× *	Modulation Wheel
		4 ×	× *	2nd Expression Pedal
		11 ○	○ **	Expression pedal
		64 ○	○	Sustain
Program Change		0-4, nn-mm	0-4, nn-mm	HC-2: 32-44
	True #	*****	0-4, nn-mm	HC-4: 64-76
System Exclusive		○	○	
System Common	Song Pos	×	×	
	Song Sel	×	×	
	Tune	×	×	
System Real Time	Clock	○	○ **	(FAH, FCH)
	Commands	○	○	
Aux Messages	Local ON/OFF	×	×	
	All Notes OFF	×	○	
	Active Sense	○	○	
	Reset	×	○	
Notes		* Recognize only when the Lead Voice has been separately assigned to Channel 4. ** Recognize only when External mode.		

Mode 1: OMNI ON , POLY Mode 2: OMNI ON , MONO
Mode 3: OMNI OFF, POLY Mode 4: OMNI OFF, MONO

○: YES
×: NO

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