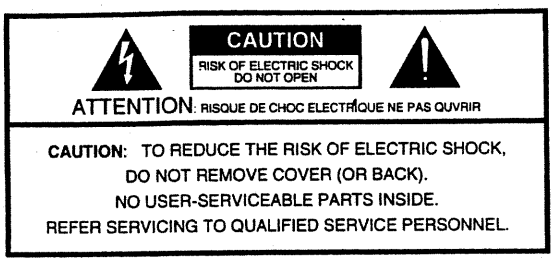
Roland

HP237e

Roland Digital Piano

Owner's Manual



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

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

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

WARNING - When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
3. This product should be used only with a cart or stand that is recommended by the manufacturer.
4. 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.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
8. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
9. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
10. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled onto the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally or exhibits a marked change in performance; or
    E. The product has been dropped, or the enclosure damaged.
11. 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.

For the USA

This product may be equipped with a polarized line plug (one blade wider than the other) . This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.

For Canada

For Polarized Line Plug

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Roland

HP 237e Roland Digital Piano

Owner's Manual

Thank you for purchasing a Roland HP-237e Digital Piano. The HP-237e is the new entry-level model of Roland's HP series Digital Pianos. As such, it comes with all the benefits: a weighted Hammer-Action keyboard, vibrant sounds and a number of useful functions.

Authentic piano performances

High-quality concert grand piano sounds, and a keyboard that's a true pleasure to play assure an even more realistic piano-playing experience. Thanks to its Hammer-Action keyboard, the HP-237e faithfully reproduces the feel of an acoustic piano with minute control over the sound.

Captures the brilliant resonance

The sound of a grand piano has a brilliant timbre than an upright piano because the sound of a grand piano contains a greater amount of high-frequency components. The HP-237e reproduces this characteristic of the grand piano.

Extended high-frequency response

One of the features of an acoustic piano is that for the strings of the highest 1 1/2 octaves, there is no damper to restrict the vibration of the strings, irrespective of whether or not the damper pedal is used. Since this also allows these strings to vibrate sympathetically with other strings, they can sometimes be heard sounding independently from the low and middle-register strings.

The HP-237e faithfully simulates these characteristics of the acoustic piano (being a digital instrument, the HP-237e contains no strings).

Eight Tones for a wide variety of musical genres

The HP-237e comes with eight sounds (called "Tones"). That way, you can also use your instrument for playing a variety of musical genres.

Three metronome sounds

The HP-237e provides a metronome that lets you use three different sounds. You can easily adjust the tempo and time signature.

Record your own performances

The HP-237e makes it easy to record your own performances.

Before using this instrument, carefully read the safety instructions. They provide important information concerning the proper operation of the HP-237e.

To get the most out of the HP-237e and to ensure many years of trouble-free service, we urge you to read through this Owner's Manual thoroughly.

To avoid confusion, let's agree to use the word "button" for all keys on the front panel, and only use "key" when referring to the HP-237e's keyboard.

Contents

Important notes

In addition to the items listed under "USING THE UNIT SAFELY" on page 2, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this instrument in the vicinity of such receivers.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

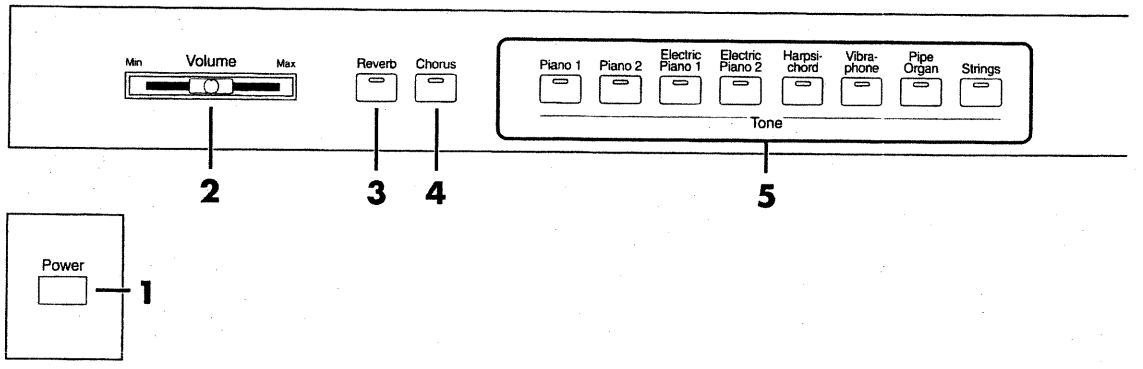
Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

- Use a reasonable amount of care when handling the instrument and when using its jacks and connectors. Rough handling can lead to malfunctions.
- When connecting / disconnecting all cables, grasp the connector itself — never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- Be sure to put the HP-237e in the original cardboard box when you need to move it. Otherwise, use equivalent packaging materials.
- If using some other make of connection cable, please note the following precautions.
- Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

1. Front panel



Note: Button, switch and knob names are enclosed in square brackets ([ ]).

① **[Power] switch**
Press this switch the power on and off (see page 7).

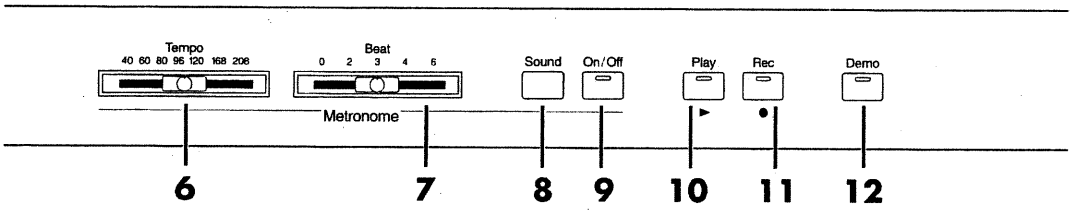
② **[Volume] slider**
This slider controls the master volume level (p. 7).

③ **[Reverb] button**
Press this button to add reverberation to the sound (p. 11).

④ **[Chorus] button**
Press this button to add the Chorus effect to the sound (p. 11).

⑤ **Tone buttons**
The following eight buttons are collectively referred to as the Tone buttons. Use these buttons to select the sound to be played on the keyboard (p. 10). The available tones are: Piano 1, Piano 2, E. Piano1,E. Piano2, Vibraphone, Harpsichord, Pipe Organ, Strings.

By holding down three of these buttons while pressing a specific key, you can make various settings on the HP-237e (see pages 22~24 as well as "Functions assigned to the keyboard" on page 26).



⑥ **[Tempo] slider**
Use this slider to adjusts the tempo of the metronome (see page 12).

⑦ **[Beat] slider**
Use this slider to select the time signature of the metronome (see page 12).

⑧ **[Sound] button**
Press this button to select another metronome sound (see page 12).

⑨ **[On/Off] button**
Press this button to switch the metronome on or off (see page 12).

⑩ **[Play] button**
Press this button to play or stop the demo songs, or a recorded performance (p. 8, p. 14). It also is used to start/stop recording (p. 13).

⑪ **[Rec] button**
Press this button to put the instrument in recording standby (p. 13).

⑫ **[Demo] button**
Press this button to access the demo songs (p. 8).

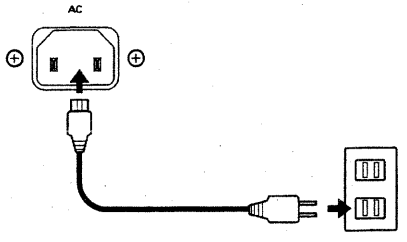
By holding down this button while you press a specific key, you can make various settings on the HP-237e (see page 15 and "Functions assigned to the keyboard" on page 26).

2. Getting started

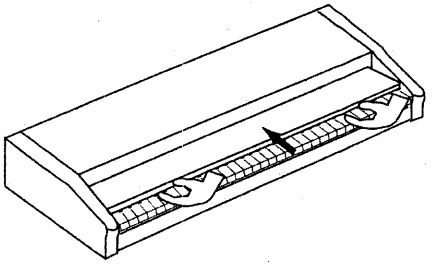
2.1 Connecting the power cord

Note: To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

1. Connect the supplied power cable to the AC Inlet on the rear panel of the HP-237e.
2. Connect the power cable to an AC outlet.



2.2 Opening and closing the lid



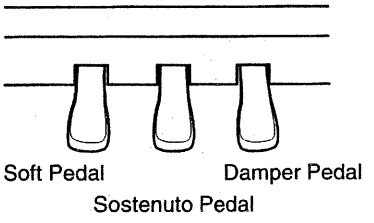
- When opening the HP-237e's lid, grasp it with both hands and gently lift it upwards, then slide it towards the back of the piano.
- When closing the lid, slowly pull the lid forward, then gently lower it into place.

Never insert your hands between the lid and the keyboard.

Note: Take care not to allow fingers to be caught or pinched when opening and closing the lid.

Note: For safety, transport the keyboard only with the lid in the closed position.

2.3 About the pedals



Soft pedal—This pedal softens the sound. Playing with the soft pedal depressed produces a sound that is not as strong as when otherwise played with the equivalent strength.

Sostenuto pedal—With the Sostenuto pedal, only the sound played at the moment the pedal is pressed is sustained.

Damper pedal—Use this pedal when you want the sound to linger. While the damper pedal is depressed, the notes you play linger on (are sustained) for an extended period, even after removing your fingers from the keys.

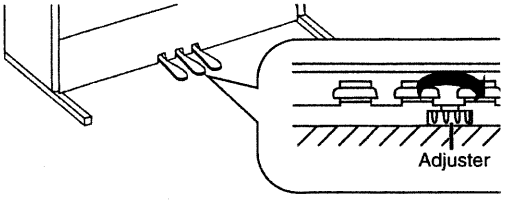
On acoustic pianos, when the damper pedal is depressed, additional strings are released to resonate with the sound of the keys that have been played, adding richness and breadth to the sound. The damper pedal on the HP-237e recreates this resonance when depressed. This is called "Sympathetic Resonance".

Note: You can change the amount of resonance applied with the damper pedal. For more information and instructions, please refer to "Changing the damper pedal's resonance" (p. 16).

About the adjuster

After you have moved this piano, or when you feel the pedal board is unstable, lower the adjuster at the bottom of the pedal board:

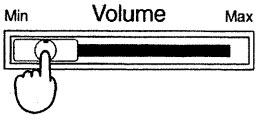
Lower the adjuster so that it is firmly in contact with the floor. If there is a gap between the adjuster and the floor, the unit may malfunction when a pedal is pressed. In particular when the instrument is placed on a carpeted floor, you must lower the adjuster so that it presses strongly against the floor.



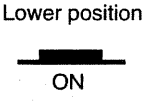
2.4 Turning the power on and off

Your HP-237e is fitted with an amplifier and speakers so that you do not need additional devices.

1. Turn the volume all the way down.



2. Press the [Power] switch, to turn on the power.

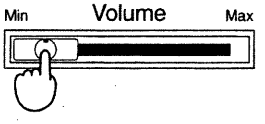


After a few seconds, the keyboard will produce sound when played. Adjust the volume to your liking.

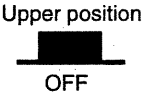
Note: Your HP-237e is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before it will operate normally.

Turning off the power

1. Turn the volume all the way down.

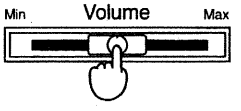


2. Press the [Power] switch to turn off the power.



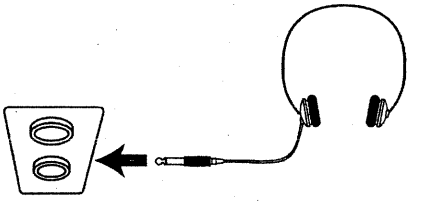
2.5 Adjusting the volume

Use the [Volume] slider to adjust the volume.



2.6 Connecting headphones (sold separately)

The HP-237e features two headphone jacks. This allows two people to listen through headphones simultaneously, making it very useful for lessons and when performing piano pieces for four hands. Additionally, this allows you to play without having to worry about bothering others around you, even at night.



1. Turn the volume all the way down.
2. Plug the headphones into the Phones jack on the lower-left panel of the HP-237e.
3. Adjust the volume.

By connecting headphones to the HP-237e, you switch off its speakers, which is ideal for playing or practising without disturbing others.

Note: Be sure to use stereo headphones.

Precautions to take when using headphones

To avoid damaging or severing the headphone cord, be sure to handle the headphones by holding the phones themselves, and grasping the plug and not the cord when pulling the headphone plug.

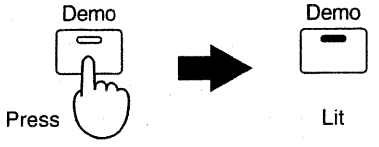
- Connecting the headphones when the volume of connected equipment is turned up may result in damage to the headphones. Connect the headphones only after turning the volume down completely.
- Listening at excessively high volume levels will not only damage the headphones, but may also cause hearing loss. Listen at appropriate levels.

3. Listening to the demo songs

The HP-237e features eight internal piano songs you may want to listen to before starting to play yourself.

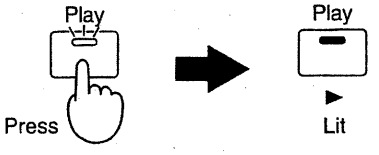
Playing/stopping the demo songs

1. Press the [Demo] button, and confirm that the indicator lights.



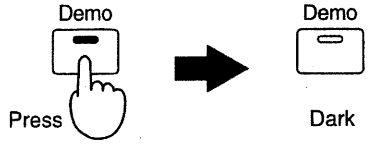
The [Play] button's indicator starts blinking.

2. Press the [Play] button, and the indicator will change from blinking to lit.



The demo songs will play back consecutively, starting with the song you selected. When the last song has been played, playback will return to the first song and resume.

3. To stop the demo song playback, press the [Demo] button to make the indicator go dark.
The demo song playback will stop.



Note: You can also stop demo song playback by pressing the [Play] or [Rec] button. In this case, the [Demo] button indicator will not go dark, though. When you press the [Play] button next, the demo song will resume playing from the beginning of the song where playback was halted.

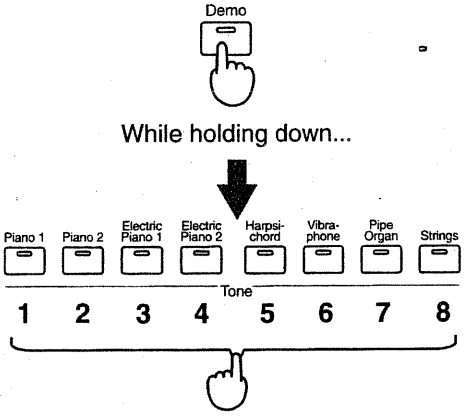
Note: It is not possible to change the tempo of a demo song.

Note: If you press the [Demo] button while the metronome is running (see page 11), the metronome will stop sounding. It is not possible to use the metronome while a demo song is playing.

Selecting a song for playback

Here's how you can select and play a desired demo song.

While holding down the [Demo] button, press the Tone button that corresponds to the demo song you wish to hear.
The indicators of the [Demo] button and the [Play] button will light.



The demo songs will play back consecutively, starting with the song you selected. When the last song has been played, playback will return to the first song and resume.

Subsequent demo songs are automatically played one after another until you stop playback.

About the demo songs

1	**Intro** J. Maul ©1991, 1999 Roland UK
2	**Bagatelle "Für Elise" WoO.59** L.v. Beethoven ©1994 Roland Corporation
3	**A Maiden's Prayer** T. Badarzewska ©1996 Roland Corporation
4	**No.14 "La Styrienne" from 25 Etudes** F. Burgmüller ©1992 Roland Corporation
5	**from Cantata BWV.147** J.S. Bach / Naoki Nishi ©1993 Roland Corporation
6	**Etude No.3 in E Major "Chanson de l'adieu"** F. Chopin ©1992 Roland Corporation
7	**Fly Free** J. Maul ©1992 Roland Corporation
8	**Mood / Ending** J. Maul ©1991, 1999 Roland UK

Note: All rights reserved. Unauthorized use of this material for purposes other than private, personal enjoyment is a violation of applicable laws.

Note: The data of the demo songs are not transmitted to the HP-237e's MIDI OUTput.

Profiles of the composers

Naoki Nishi—Born in 1958 in Hiroshima, Japan. Began working professionally at the age of 21. Has so far released 9 albums. He has also taken part in numerous other albums. His broad range of activities have included appearances at a number of jazz festivals in Japan and other parts of the world. In addition to his duties as an instructor at the Tokyo Conservatoire Shoubi, he has provided his services as a demonstrator for Roland since 1990. He is considered to be one of Japan's finest jazz pianist.

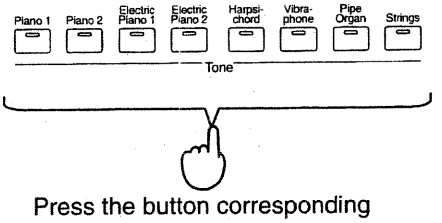
John Maul—John Maul is a musician, composer and arranger having graduated from the Royal Academy of Music in London. John's work encompasses studio recordings and live performances, including work with top UK Jazz artists. His writing credits include commercial music for BBC radio and television, as well as scoring jazz and classical works. Having been a product specialist for Roland U.K., John is now actively involved in music software composing/programming for both Roland Japan and various music publishers. Quite recently his "Musical Picture Book", a volume of original piano music encompassing all standards of musical ability, which included the piano and orchestral accompaniment data in SMF format, was published and printed.

4. Playing your own music

4.1 Selecting sounds

The HP-237e allows you to play using eight different sounds including piano.

Use the eight Tone buttons to select the desired sound. When the HP-237e is turned on, it automatically selects the "Piano 1" sound.

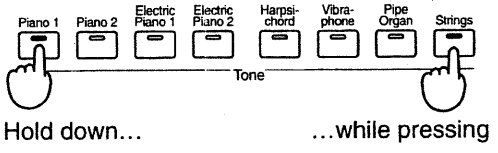


Press any Tone button.
When you play the keyboard, the selected Tone is played.

Piano 1: Full-sized concert grand piano. Rich stereo sound, providing 32 polyphonic notes.
Piano 2: Full-sized concert grand piano. 64 polyphonic notes.
Electric Piano 1: Sound of a Rhodes (electric) piano.
Electric Piano 2: A synthesizer's electric piano.
Harpsichord: Harpsichord sound
Vibraphone: Vibraphone sound
Pipe Organ: Pipe organ sound
Strings: the sound of a string instrument ensemble

4.2 Layering two instrument sounds

Playing with two different Tones on the keyboard simultaneously is called a "Layer".



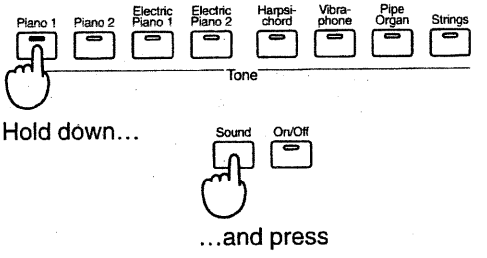
1. While holding down the [Piano 1] button, press the [Strings] button.
When you play the keyboard, both the Piano 1 and Strings Tones are layered. This is only an example, though: you can hold down any Tone button and press another Tone button to layer two sounds.

2. To cancel the Layer function, press any Tone button.
Now, only the sound of the button you pressed will be heard.

4.3 Different sounds for the right and left hands – Split

The HP-237e allows you to divide the keyboard into two sections and to play two different sounds. Dividing the keyboard is called "Split" and the key where the keyboard is split is called the "split point". The split point is at "F#3" when the power is turned on.

1. Hold down the Tone button for the sound that you wish to use for the Split, and press the Metronome [Sound] button.



The indicator of the Tone button you pressed will flash.

2. Play the keyboard. Your left and right hands now play two different sounds.
The second sound that is added to the split is preset. Here are the available combinations:

Tone button	Left Tone	Right Tone
Piano 1	Acoustic Bass	Piano 1
Piano 2	Acoustic Bass	Piano 2
Electric Piano 1	Acoustic Bass	Electric Piano 1
Electric Piano 2	Acoustic Bass	Electric Piano 2
Harpsichord	Strings	Harpsichord
Vibraphone	Acoustic Bass	Vibraphone
Pipe Organ	Pipe Organ	Harpsichord
Strings	Strings	Piano 1

Note: Chorus (see page 11) cannot be applied to the tones with Acoustic Bass.

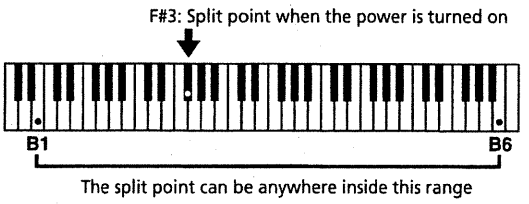
Note: The pedals do not apply to the sound played in the left part of the keyboard.

3. To cancel split, press a Tone button whose indicator is dark.

Changing the split point

You can change the location at which the keyboard is split (the split point):

Hold down the Tone button whose indicator is blinking, and press the note that you wish to use as the new split point.



Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.

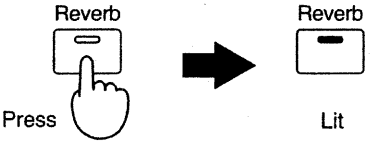
The split point can be set from B1~B6. The key that serves as the split point is the highest note of the left half. The split point you set will be retained until the piano is switched off.

4.4 Adding Reverb

The HP-237e allows you to add reverberation to what you play on the keyboard. The Reverb effect provides a pleasant reverberation that gives the impression that you are performing in a concert hall or similar space.

The HP-237e does not remember for which Tones you switch on the Reverb effect. The effect is either on or off. When the power is turned on, the Reverb effect will be cancelled.

1. Press the [Reverb] button (indicator lights).



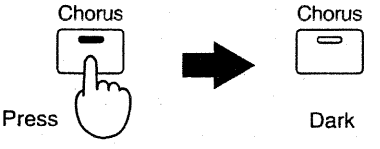
2. To cancel the Reverb effect, press the [Reverb] button once again to make the indicator go dark.
Note: The amount of Reverb can be changed. See "Changing the depth of the Reverb" (p. 16).

4.5 Adding Chorus

The HP-237e also allows you to add Chorus to what you play on the keyboard.

The Chorus effect creates a fuller sound with a distinct "stereo" impression ideal for pop music. The setting of the Chorus effect is memorized independently for each sound: when the power is turned on, the Chorus Effect will be applied to the "Electric Piano 1", "Electric Piano 2" and "Vibraphone" Tones, and off for the other sounds.

1. Press the [Chorus] button to turn on the indicator.
The Chorus Effect will be applied to the currently selected Tone.



Note: Whenever you select a sound for which the Chorus effect is switched off by default, the [Chorus] button indicator will go dark.

2. To cancel the Chorus effect, press the [Chorus] button once again to make the indicator go dark.
Note: When two Tones are layered (see page 10), or when you are using the Split function (see page 10), the [Chorus] button applies to both Tones (except for the Acoustic Bass sound). When you cancel the Layer or Split mode, you will return to the default Chorus setting of each sound.

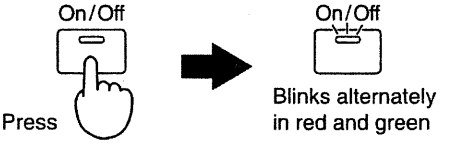
Note: The amount of Chorus can be changed. Please refer to "Changing the depth of the Chorus" (p. 16).

4.6 Using the metronome

You can start or stop the metronome with a single button.

You can adjust the tempo, time signature and volume of the metronome (see below).

1. Press the [On/Off] button, and the metronome will begin sounding.



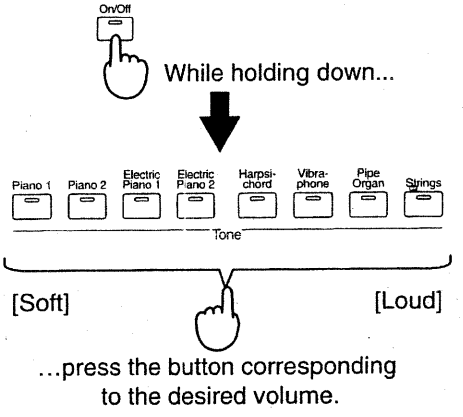
The [On/Off] indicator will blink in red and green in time with the currently selected tempo. It will blink in red on the downbeats, and in green on the upbeats. If the [Beat] slider is in the "0" position, the indicator blinks in green.

2. Press the [On/Off] button once again (indicator goes dark) to stop the metronome.

Adjusting the metronome volume

The metronome volume can be adjusted in 8 levels. The metronome volume is set to "4" when the HP-237e is turned on.

While holding down the [On/Off] button, press a Tone button.



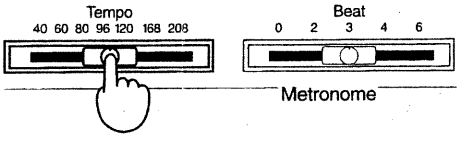
Checking the metronome volume

Press and hold the Metronome [On/Off] button.

The Tone button indicators will blink to indicate the current volume.

Changing the metronome tempo

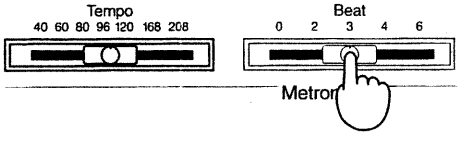
The metronome tempo can be adjusted using the [Tempo] slider. You can select a tempo in the range of 40~208 (quarter notes per minute).



Changing the metronome's time signature

Use the [Beat] slider to select the number of beats per measure (which is more or less the same as the time signature).

You can select from the following five types: 0 (only upbeat sounds), 2 (2-beat), 3 (3-beat), 4 (4-beat), 6 (6-beat).



Changing the metronome sound

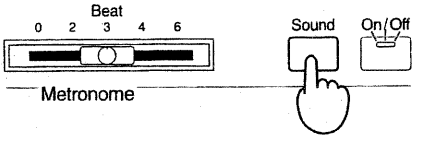
You can select from three types of metronome sound: conventional metronome sound, electronic metronome sound, and dog and cat sounds.

Immediately after switching on the HP-237e, the conventional sound will be used.

1. Press the [On/Off] button to sound the Metronome.

2. Press the [Sound] button.

Each time you press the button, the metronome sound will change to the next available choice: conventional, electronic, "dog and cat sounds".



5. Recording your performance

You can record what you play on your piano.

Note: When you record, pay attention to the setting of the [Tempo] knob. Be sure to set it to the tempo at which you wish to record.

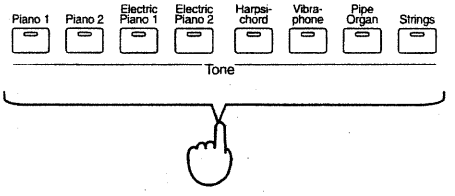
Note: Only one song can be recorded on the HP-237e. If a previously recorded performance exists, it will be erased the moment you begin recording another performance.

Note: Your song will be erased as soon as you switch off your HP-237e.

Note: After approximately 5,000 notes have been recorded, the [Play] button's and [Rec] button's indicators will go out, and recording will end automatically.

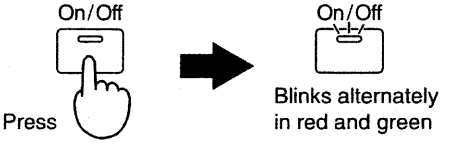
5.1 Recording

1. Use the Tone buttons to select the sound with which you wish to perform (see page 10).



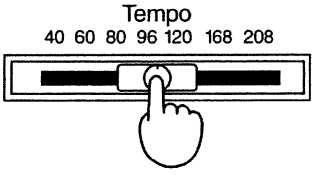
You can select other sounds while recording.

2. Press the [On/Off] button to turn on the indicator.
The metronome starts sounding.

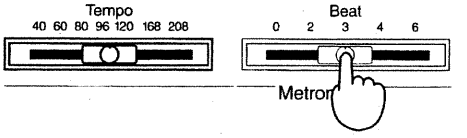


While listening to the metronome, select the tempo and beat (time signature) of the song that you wish to record.

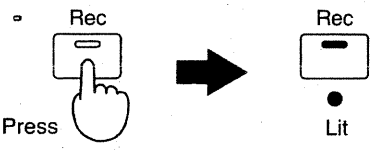
3. Use the [Tempo] slider to select the basic tempo for the song.
Note: Moving the [Tempo] slider after recording has begun will not change the tempo.



4. Use the [Beat] slider to select the time for the song.
The time signature cannot be changed during or after recording.



5. Press the [Rec] button (indicator lights).



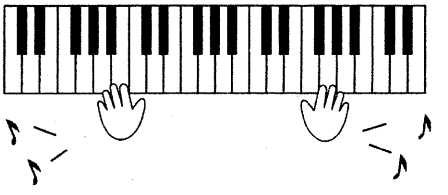
The HP-237e is put in record standby mode and the [Play] indicator flashes.

If you want to cancel the recording, then press the [Rec] button once more to make the indicator dark.

If you don't need the metronome, press the [On/Off] button to make the indicator go dark.

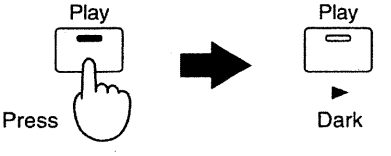
In the beginning it is probably a good idea to listen to the metronome as you record. The sound of the metronome is not recorded.

6. Recording will begin as soon as you play a note on the keyboard.
The [Play] indicator now lights steadily. Listen to the metronome, and play along with the tempo.



Instead of playing the keyboard, you can also begin recording by pressing the [Play] button to make the indicator light. In this case, you will hear a two-measure count-in before recording begins.

7. When you are finished recording, press the [Play] button to make the indicator go dark.



ENGLISH

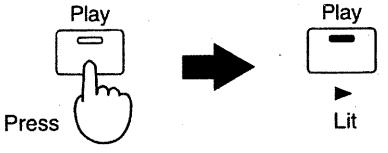
You can use the following methods to record your performances. This implies the use of external instruments, however.

- Connect an audio device to the HP-237e, and record your performance on a cassette tape or other media (see page 20).
- Connect a MIDI sequencer, and record the performance on the sequencer (see page 21).

5.2 Listening to the recorded performance

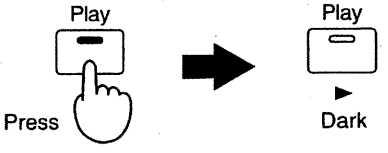
Here's how to listen to (audition) your song:

1. Press the [Play] button to make the indicator light.



The music you recorded is played back. When the song ends, the [Play] button indicator goes dark, and playback stops.

2. If you wish to stop playback before the end of your song, press the [Play] button to make the indicator go dark.

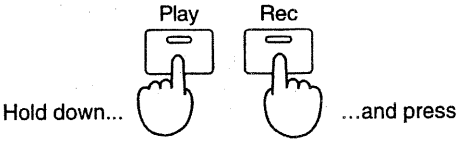


Note: If you switch on the metronome, playback will begin after a two-measure count-in.

5.3 Deleting the song

Your song will be erased as soon as you switch off your HP-237e. You can, however, delete it beforehand to record another song.

Hold down the [Play] button while pressing the [Rec] button.



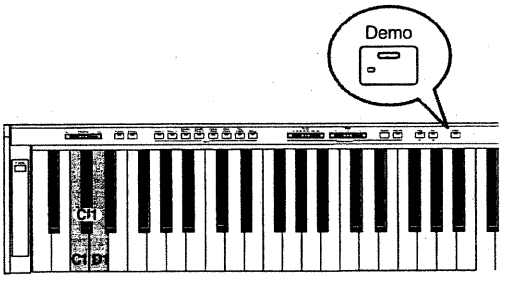
This deletes the recorded song.

6. Convenient functions

6.1 Changing the touch sensitivity

You can select from three touch sensitivity levels. When the power is turned on, the response is set to "medium".

While holding down the [Demo] button, press the corresponding note (C1~D1).



[C1] light—With this setting, fortissimo can be produced using much less force than normal, thus making the keys seem lighter. This setting makes it easy to play, even for children.

[C#1] medium—Normal setting, providing the most natural touch, closest to that of an acoustic piano.

[D1] heavy—With this setting, to play fortissimo the keys must be pressed much more strongly than normally, as if the keys had become heavier. Adds even more emotion when you play with lots of dynamics.

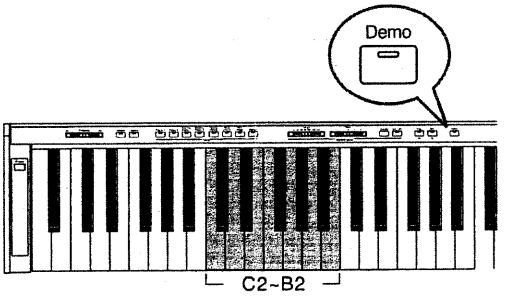
6.2 Transposing (same fingering, different notes)

You can play in a different key—without changing the keys you are playing. That way, even songs originally written in a difficult key with many ♯(sharps) or ♭(flats) (i.e. with many black keys), can be played in a more convenient way. This is especially useful when you are used to playing a given song in one key, while someone else wants you to play it in another key: just change the Transpose setting and you're there.

The transposition remains in effect until you change it or until you switch off the HP-237e.

1. While holding down the [Demo] button, press the tonic (root) of the key to which you want to transpose.

Use the C2~B2 notes to select the key.

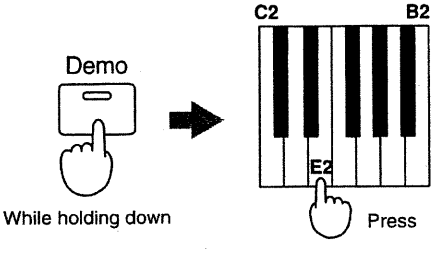


Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.

2. To return to normal pitch, hold down the [Demo] button while pressing the C2 key.

Example: playing in C but sounding in E

For example if you want the E pitch to sound when you play the C key, you would hold down the [Demo] button and press the E2 key.



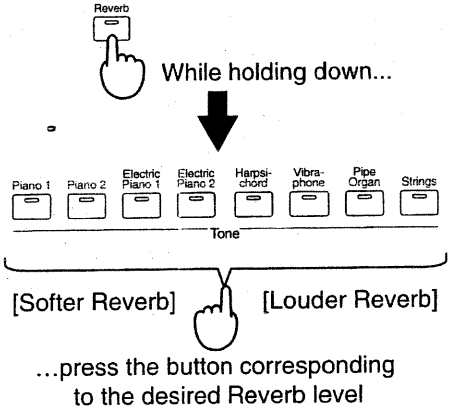
Note: The transposition only applies to the notes you play on the HP-237e's keyboard. It does not apply to note messages received via the MIDI IN connector.

6.3 Changing the depth of the Reverb

The depth of the Reverb effect (p. 11) can be adjusted. There are eight depth levels to choose from.

This is set to "4" when the power is turned on.

Holding down the [Reverb] button, press any Tone button.



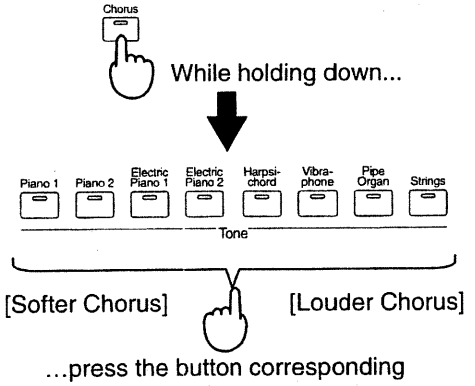
Checking the depth of the Reverb effect

Press and hold the [Reverb] button.
The Tone button indicators will blink to indicate the selected depth.

6.4 Changing the depth of the Chorus

The depth of the Chorus effect (p. 11) can be adjusted. There are eight levels to choose from. This is set to "4" when the power is turned on.

Holding down the [Chorus] button, press any Tone button.



Checking the depth of the chorus effect

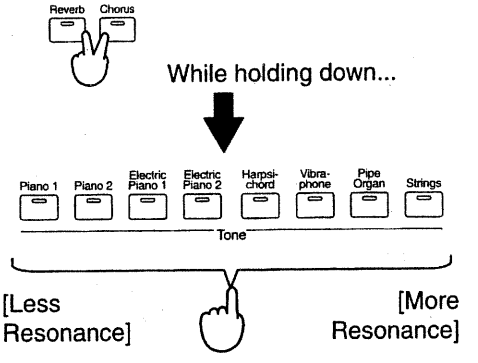
Press and hold the [Chorus] button.
The Tone button indicators will blink to indicate the selected depth.

6.5 Changing the damper pedal's resonance

On acoustic pianos, when the damper pedal is depressed, additional strings are released to resonate with the sound of the keys that have been played, adding richness and breadth to the sound. The damper pedal on the HP-237e recreates this resonance when depressed. This is called "Sympathetic Resonance".

Eight levels of resonance are available; the higher the value, the deeper the resonance. This is set to "4" when the power is turned on.

Holding down the [Reverb] and [Chorus] buttons, press any Tone button.



Checking the resonance level

Press and hold the [Reverb] and [Chorus] buttons.
The Tone button indicators will blink to indicate the selected depth.

Note: This resonance works only with the Piano 1 and Piano 2 tones.

6.6 Master Tuning

In situations such as when playing in ensemble with other instruments, you can adjust the HP-237e's reference pitch to that of another instrument.

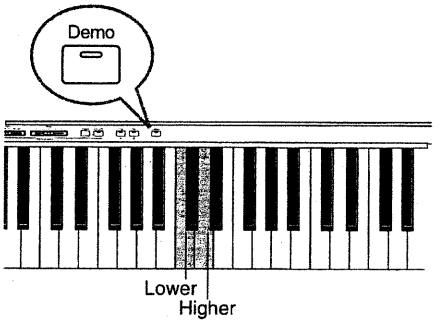
Middle A ("A4") is generally used for tuning instruments. When playing in ensemble with other instruments, tune each instrument to the same reference pitch to ensure that you will be in tune with each other.

The reference pitch can be set to any value from 415.3Hz~466.2 Hz. "440.0 Hz" is the power-on default for the reference pitch.

Lowering/ raising the reference pitch

While holding down the [Demo] button, press the "C4" note to lower the reference pitch, or the "D4" note to raise it.

Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.



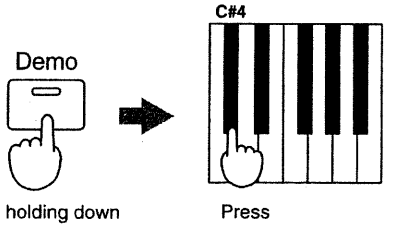
Each time you press the "C4" key, the pitch will fall by 0.1 Hz. If you continue holding the key, the pitch will continue falling.

Each time you press the "D4" key, the pitch will rise by 0.1 Hz. If you continue holding the key, the pitch will continue rising.

Setting the reference pitch to 440Hz

While holding down the [Demo] button, press the "C#4" key on the keyboard.

Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.



The reference pitch will be set to 440Hz. This is the most commonly used setting.

Setting the reference pitch to 442Hz straight away

While holding down the [Demo] button, press the "D#4" key on the keyboard.

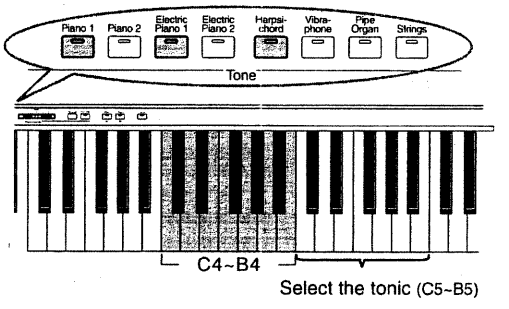
The standard pitch will be set to 442Hz. This setting is often used for concert pianos. The A4 (Middle A) key will sound at 442.0 Hz.

Note: By holding down the [Demo] and (Metronome) [Sound] buttons, and pressing the corresponding note, you can hear a reference tone (Middle A) as you adjust the pitch.

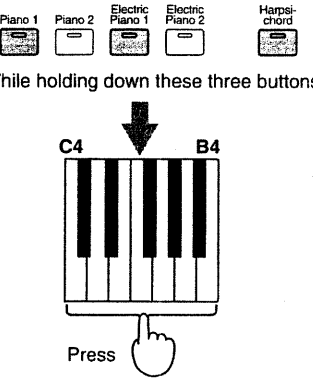
6.7 Playing songs using classical tunings

Your HP-237e also allows you to perform using the tunings that were in use at the time that classical music (such as Baroque) was composed. Most modern songs are composed based on the assumption that equal-tempered tuning (the tuning in use almost universally today) will be used when performing. However, in the age of classical music there were a variety of different tunings. Thanks to these tunings you can experience what the chords in certain pieces sounded like originally.

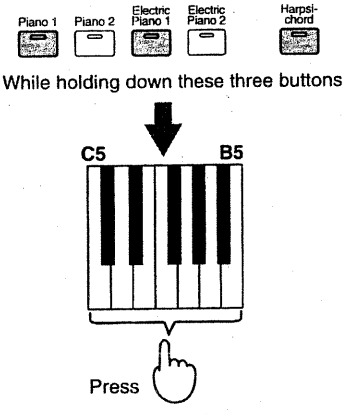
Note: Equal temperament is selected each time the HP-237e's power is turned on.



1. While holding down the [Piano 1], [Electric Piano 1], and [Harpsichord] buttons, press the corresponding key (C4~B4).



2. To select the keynote (tonic), hold down the [Piano 1], [Electric Piano 1], and [Harpsichord] buttons and press a key in the range of C5~B5.



For others tunings than equal temperament, you also need to specify the keynote (tonic for major, sixth for minor) to match the key of the song you want to play.

[C4] Equal—With this tuning, the octave is divided into twelve equal intervals. Regardless of the interval, very little ambiguity is produced.

[D4] Pythagorean—Developed by the philosopher Pythagoras as a method of tuning that resolved the ambiguity of fourths and fifths. As a result, melodies sound cleaner, while triads may appear to be flat.

[E4] Just Major—This tuning eliminates the ambiguity of fifths and thirds. This tuning is not suitable for melodies, and transposition is impractical, but rich sonorities can be produced by chords.

[F4] Just Minor—Same as Just Major, except you need to select this tuning for playing in a minor key.

[G4] Mean Tone—A partial compromise of the Just Major tuning, created to make transposition possible.

[A4] Werckmeister—A combination of the Mean Tone and Pythagorean tunings. This tuning can be used in all keys.

[B4] Kirnberger—As a result of improvements made to the Mean Tone and Just temperaments, it is relatively tolerant towards transposition, and can be used to play in all keys.

Note: When performing in ensemble with other instruments, be aware that depending on the key, there may be some shifting of the pitch. Please tune to the other instruments in the ensemble.

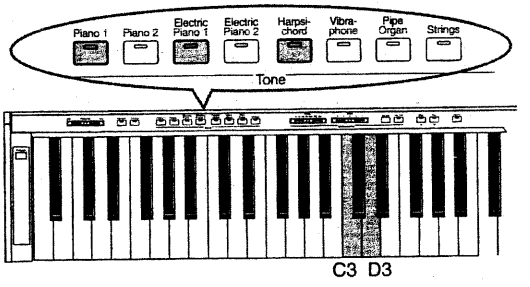
Note: When you play back your recorded song, it will use the temperament that was selected at the time of recording.

6.8 Changing the tuning curve

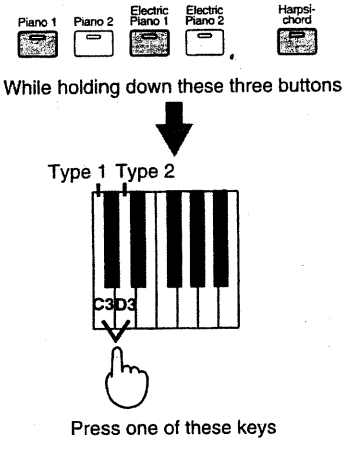
Grand pianos are commonly tuned so that notes in the lower registers are slightly flat, and notes in the higher registers are slightly sharp compared to equal temperament. This kind of tuning method for the piano is called "Stretch Tuning".

The graphic representation of the differences in pitch when comparing equal-tempered tuning with the actual tuning used is called the "tuning curve". Changing the tuning curve results in a subtle change in the sound of the chords.

"Type 2" (Stretch Tuning) is the power-on default for the tuning curve.



While holding down the [Piano 1], [Electric Piano 1], and [Harpsichord] buttons, press the "C3" note to select Type 1, or the "D3" note to select Type 2.



[C3] Type 1—Standard tuning curve. This is the right choice when layering two sounds (see page 10) or when playing in ensemble with other instruments.

[D3] Type 2—A tuning curve where the low and high registers are widened slightly—low pitches are a little lower, high pitches a little higher (Stretch Tuning). Appropriate for piano solos.

Note: This setting is only available with piano tones.

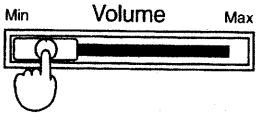
6.9 "Locking" the buttons

You can disable all buttons with the exception of certain operations. This is a convenient way for music classes etc. where you don't want your pupils to try out the other Tones or to play with the recording function.

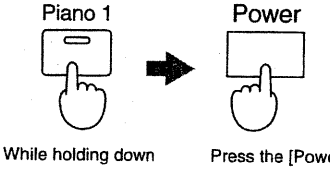
While the panel is locked, only the following operations can be performed.

- Play using the piano sound
- Changing keyboard touch sensitivity (p. 15)
- Key transpose (see page 15)
- Master Tuning (see page 17)

1. Turn the volume all the way down and switch off the HP-237e.



2. While holding down the [Piano 1] button, press the [Power] switch.



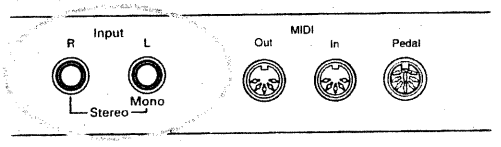
3. Adjust the volume.
Playing the keyboard now produces a Piano 1 Tone. It will not be possible to switch to another sound.

4. Switching the power off and back on again releases the panel lock and returns the HP-237e to its usual state.
Note: If you turn on the power while holding down the Metronome [On/Off] button, it will also be possible to sound the metronome. In that case, you can also adjust the metronome tempo, time, volume, and sound (while the remaining functions are locked).

7. Connecting to audio equipment

Read this chapter if you wish to connect the HP-237e to an audio device. Connecting the HP-237e to an audio device allows you to use an external amplifier or to record your performance onto cassette, MD or other recording media.

About the audio jacks



Input Jacks—You can use audio cables (sold separately) to connect another audio producing device to the HP-237e, and hear its sound through the speakers of the HP-237e.

Making the connections

Note: To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

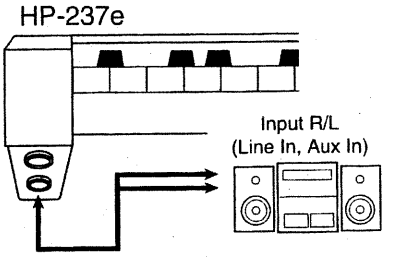
1. Turn the volume down completely on all equipment.
2. Turn off the HP-237e and any other device to be connected.
3. Use audio cables (sold separately) to connect the other device to the HP-237e.

Note: If the device you are connecting is monaural, connect it to the L (Mono) jack. In this case, connect nothing to the R jack of the HP-237e.

Use a cable from Roland to make the connection. For cable makes, please note the following: Some connection cables contain resistors. Do not use them. They can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

Once the connections have been completed, turn on power to your various devices in the order specified below. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

Using an external amplifier or recording your music with an audio device



1. Turn on the power to the HP-237e.
2. Turn on the power to the connected equipment.
3. Adjust the volume.

Recording procedure

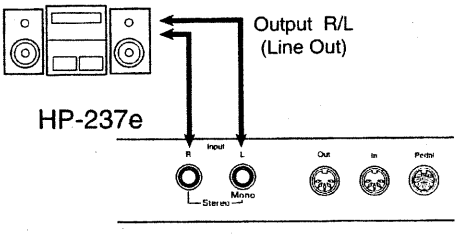
1. Connect one of the HP-237e's headphone jacks the audio device.

This requires the use of an optional breakout cable (stereo 1/4" jack→2x RCA jacks, or 2 x 1/4" mono jacks, depending on the input types of the external device).

Note: This switches off the HP-237e's speakers.

2. Start recording on the connected audio device.
3. Begin playing on the HP-237e.
4. When you finish playing, stop recording.

Listening to the sound of an audio device through the speakers of the HP-237e



1. Turn on the power to the connected equipment.
2. Turn on the power to the HP-237e.
3. Adjust the volume.

8. Connecting to MIDI devices

Read this chapter if you wish to connect the HP-237e to an external MIDI devices.

If the HP-237e is connected to a MIDI sequencer, such as one from the MT series, a performance recorded on the HP-237e can be transmitted to the MIDI sequencer. It is also possible to record the performance directly on the MIDI sequencer. The recorded performance can be saved on the MIDI sequencer.

When the HP-237e is connected to an MT series sequencer, the rich variety of sounds built into the MT can be played from the keyboard of the HP-237e.

About MIDI

MIDI, short for "Musical Instrument Digital Interface," was developed as a standard for the exchange of performance data between electronic instruments and computers.

The HP-237e is equipped with MIDI connectors to allow such exchange of performance data with external equipment and devices. Connecting the keyboard to other devices via these jacks provides you with an even greater variety of ways to use your HP-237e.

About the MIDI connectors

MIDI In connector—Use a MIDI cable (sold separately) to connect from here to the MIDI Out connector on the external MIDI device.

MIDI messages sent from connected external equipment will be received here. As a result, the HP-237e will produce sound, change tones, or perform other operations.

MIDI Out connector—Use a MIDI cable (sold separately) to connect from here to the MIDI In connector on the external MIDI device. Performance data detailing what has been played on the keyboard, and other data, such as that generated when a pedal is depressed, is sent out from here to external MIDI devices.

Making the connections

Note: To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

1. Turn the volume down completely on all equipment.

2. Turn off the HP-237e and any other device to be connected.

3. Use an optional MIDI cable to connect the external MIDI device to the MIDI connector on the HP-237e. Take a look at the connection examples.

4. ???If necessary, use audio cables to connect the other devices to the HP-237e (see page 20).

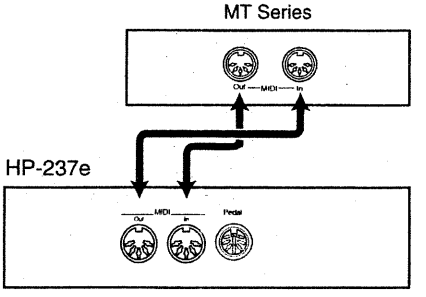
5. You should also make the settings below as needed.

For details on making MIDI-related settings for the HP-237e, refer to "Cautions when connecting an external MIDI device" on page 22 and following.

6. Turn on the power to all equipment.

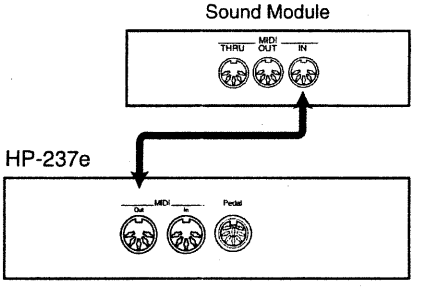
7. Adjust the volume.

Connecting to a sequencer (Roland MT series)



Note: The MT-80s has no MIDI Out connector.

Connecting to a MIDI sound module

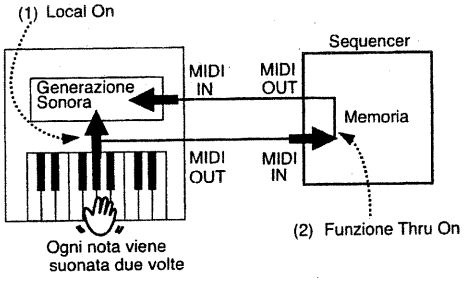


Cautions when connecting an external MIDI device

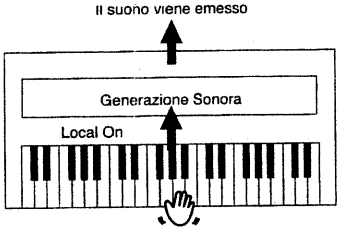
Here we will explain the "Local On/Off" and "Omni On/Off" settings that you need to be aware of when connecting the HP-237e to an external MIDI device.

Disconnecting the HP-237e's keyboard and internal sound generator—Local On/Off

When the HP-237e is connected to a MIDI sequencer or the like, set it to Local Off. As shown in the diagram, the data that is produced when you play the keyboard will reach the sound generator by two routes, (1) and (2), causing each note to be played in duplicate. To prevent this, select the Local Off setting to cut route (1).



When Local is on:

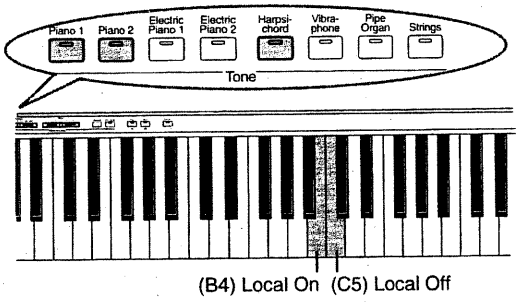


When Local is off:

Note: Be aware that if you set your instrument to Local Off when no external MIDI device is connected, there will be no sound.

Note: Local On is set when the power is switched on.

While holding down the [Piano 1] button, [Piano 2] button, and [Harpsichord] button, press the "B4" note to turn the setting On, or press the "C5" note to turn the setting Off.



Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.

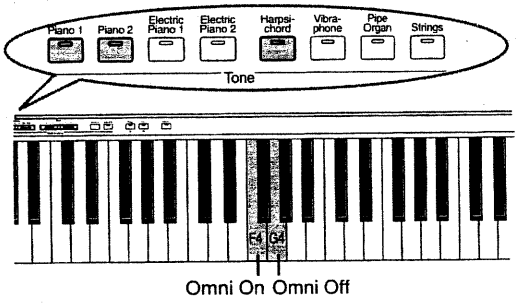
If the HP-237e is connected to a Roland MT series (except MT-80S), it is not necessary to make the Local Off setting. When the power is turned on, the MT will transmit a Local Off message. If you first switch on the HP-237e and then the MT, the HP-237e will automatically be set to Local Off.

Receiving on all MIDI channels—Omni

When set to Omni On, the HP-237e receives on all MIDI channels, so that you do not need to set a specific one. This may be practical for playing back sequences containing piano music on different channels for the left and right hands. It should not be used, however for playing back commercial Standard MIDI Files as that will cause the HP-237e to produce so many notes that you hardly recognize the piece in question.

Omni Off is automatically set when the power is switched on.

Hold down the [Piano 1], [Piano 2], and [Harpsichord] buttons, and press the "F4" note to turn the setting On, or the "G4" note to turn the setting Off.



Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.

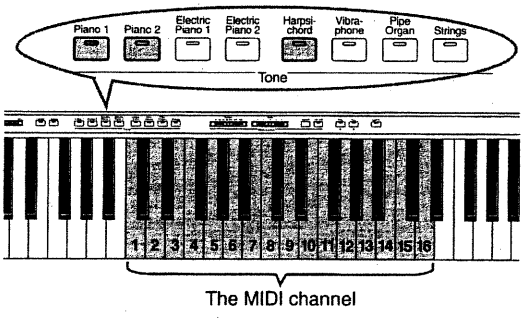
8.1 Setting the MIDI channel

MIDI features sixteen MIDI channels, numbered 1~16. The connected devices must be set to use the same MIDI channel, otherwise no sound will be produced.

- In a setup where you wish to play the HP-237e and also have another MIDI-equipped instrument or sound module play the same notes, you must set the channel used for reception on your external device to the same channel that the HP-237e uses for transmission.
- If you use another MIDI keyboard as a master instrument and want the HP-237e to play these notes, you need to set the channel used for reception on the HP-237e to the same channel that the master keyboard is transmitting on.
- If you want to use the HP-237e as tone generator for an external sequencer, select the MIDI channel assigned to the track who's data the HP-237e should play back.

Note: When the HP-237e is turned on, Channel "1" is selected.

While holding down the [Piano 1], [Piano 2], and [Harpsichord] buttons, press the appropriate key on the keyboard.



The MIDI transmit and receive channel will switch to the number that corresponds to the note you pressed.

8.2 Program Changes

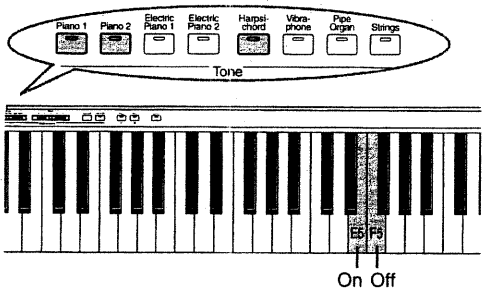
Program Changes are messages that tell an instrument to "switch to sound number x". When the other device receives this message, it will switch to whichever of its sounds corresponds to the number contained in the message.

When you press one of the HP-237e's Tone buttons to select another Tone, a Program Change message with the corresponding Program Number is sent via the MIDI Out connector. Furthermore, a Program Change message received via the MIDI In will cause the HP-237e to select the corresponding Tone.

Each time the power is turned on, the instrument will be set to "On" (it will transmit/receive Program Change messages).

If you set it to "Off," the HP-237e will no longer send out Program Change messages and ignore any Program Change messages transmitted by an external unit.

While holding down the [Piano 1], [Piano 2], and [Harpsichord] buttons, press the "E5" note to turn the setting On, or the "F5" note to turn the setting Off.



Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.

The Tones and their corresponding program cgange numbers appear below:

01	Piano 1	24	Harpsichord + Electric Piano1
02	Piano 2	25	Harpsichord + Electric Piano2
03	—	26	Harpsichord + Pipe Organ
04	Harpsichord	27	Harpsichord + Strings
05	Vibraphone	28	Vibraphone + Electric Piano1
06	Electric Piano 1	29	Vibraphone + Electric Piano2
07	Electric Piano 2	30	Vibraphone + Pipe Organ
08	Pipe Organ	31	Vibraphone + Strings
09	Strings	32	Electric Piano1 + Electric Piano2
10	Piano1 + Piano2	33	Electric Piano1 + Pipe Organ
11	Piano1 + Harpsichord	34	Electric Piano1 + Strings
12	Piano1 + Vibraphone	35	Electric Piano2 + Pipe Organ
13	Piano1 + Electric Piano1	36	Electric Piano2 + Strings
14	Piano1 + Electric Piano2	37	Pipe Organ + Strings
15	Piano1 + Pipe Organ	38	Acoustic Bass / Piano1
16	Piano1 + Strings	39	Acoustic Bass / Piano2
17	Piano2 + Harpsichord	40	Strings / Harpsichord
18	Piano2 + Vibraphone	41	Acoustic Bass / Vibraphone
19	Piano2 + Electric Piano1	42	Acoustic Bass / Electric Piano1
20	Piano2 + Electric Piano2	43	Acoustic Bass / Electric Piano2
21	Piano2 + Pipe Organ	44	Pipe Organ / Harpsichord
22	Piano2 + Strings	45	Strings / Piano1
23	Harpsichord + Vibraphone		

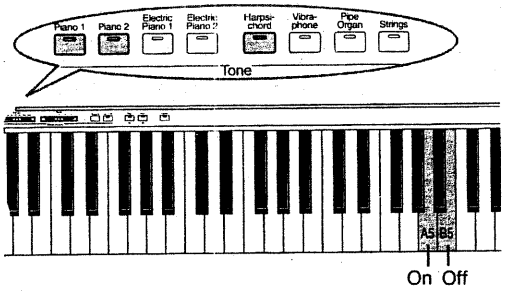
8.3 Control Changes

Messages known as "Control Changes" are used to inform another device when you press a pedal, switch on/off the Chorus or Reverb effect, etc.

Each time the power is turned on, the instrument will be set to transmit/receive all Control Change messages.

If you set it to "Off" the HP-237e will no longer send or receive Control Change messages.

While holding down the [Piano 1], [Piano 2], and [Harpsichord] buttons, press the "A5" note to turn the setting On, or the "B5" note to turn the setting Off.



Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.

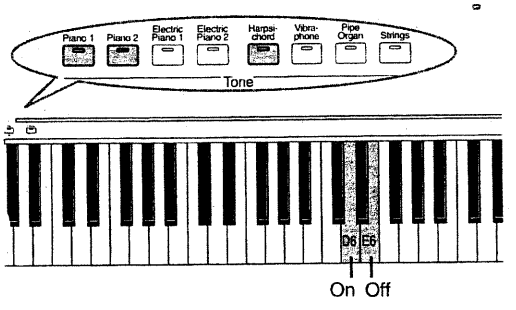
Note: If you want to know more about Control Change Number, please refer to "MIDI Implementation" on page 27.

8.4 Transmitting song data from MIDI OUT

If this setting is left "On", the music recorded with the HP-237e can be transmitted from the MIDI Out connector. Each time the power is turned on, this setting reverts to "Off."

Hold down the [Piano 1], the [Piano 2], and the [Harpsichord] buttons, and press the "D6" note to turn the setting On, or the "E6" note to turn the setting Off.

Note: See also "Functions assigned to the keyboard" on page 26 for the exact keys to press.



Note: The data that you recorded will disappear when the power of the HP-237e is turned off. If you wish to save the recording on an external device, use the following procedure.

1. Connect a MIDI sequencer such as the MT series (see page 21).

2. Record the performance on the HP-237e.

3. Set this setting to "On."

4. Start recording with the connected MIDI device.

5. Start playback of the recorded song on the HP-237e.

6. When playback ends, stop recording.

7. Use a connected MIDI sequencer to save the data on a floppy disk or other media.

9. Appendix

9.1 Troubleshooting

If you are encountering problems with the HP-237e, please read the section below before assuming that there is a malfunction.

The piano cannot be switched on

Is the power cord properly connected? (p. 6)

No sound is produced

Is the [Volume] slider set to the minimum position? (p. 7)

Are headphones connected? (p. 7)

Is Local On/Off set to "Off"? (p. 22)

Demo songs do not play

Did you lock the panel? (p. 19)

Metronome does not sound

Did you lock the panel? (p. 19)

Buttons do not function

Did you lock the panel? (p. 19)

Keyboard sound does not change

Did you lock the panel? (p. 19)

Two sounds are produced when the keyboard is played

Have you layered two Tones? (p. 10)

The pitch of the keyboard sounds incorrect

Is the Master Tuning setting correct? (p. 17)

Is the Transpose setting correct? (p. 15)

Is the temperament or the Tuning Curve setting correct? (p. 17, p. 18)

The pedals are not functioning, or function intermittently

Are the pedals connected properly? (p. 6)

Can't record

Did you lock the panel? (p. 19)

Is the [Demo] button's indicator lit? Press the [Demo] button; the indicator goes out (p. 8).

The metronome sound or count-in is never recorded.

The recorded performance has been deleted

The song data that you recorded will disappear when the power of the HP-237e is turned off (p. 13).

If you record again after recording, the first-recorded performance will be erased (p. 13).

Bass notes sound wrong/buzzing or vibration occurs

If you can't hear the problem in the *headphones*:
When playing at high volumes, resonance may occur in the piano itself or in objects near the piano. At times, other objects in the room, such as fluorescent lights or glass doors, could start vibrating. This becomes more noticeable when sounding the lower frequencies at high volume. To minimize such unwanted resonance, please observe the following:

- Locate the instrument at least 10~15 cm away from the walls.
- Reduce the volume.
- Increase the distance from the object that is resonating.

If you can hear the problem in the *headphones*, there may be another reason. Please contact your dealer.

In the upper range, the sound changes abruptly beyond a certain key

On an acoustic piano, notes in the upper one and a half octaves of the keyboard continue to sound until they decay naturally, regardless of the damper pedal. There is a difference in the timbre as well. Roland pianos faithfully simulate such characteristics of the acoustic piano. On the HP-237e, the range that is unaffected by the damper pedal will change depending on the Key Transpose setting.

When the HP-237e is connected to an external device

No sound is produced

Is the power to all equipment turned on?

Are the connections between HP-237e and the MIDI sequencer or the other external devices correct? (p. 20, p. 21)

Is the MIDI channel setting correct? (p. 23)

Is the Omni On/Off setting correct? (p. 22)

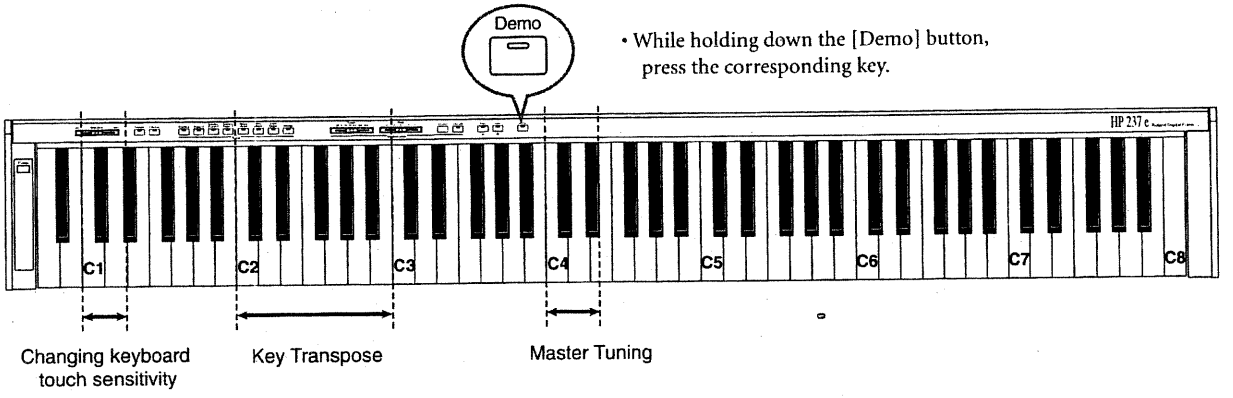
Strange sounds (or two sounds) are produced when the HP-237e is played

With the sequencer's "Thru" function on, the same notes may be sounded twice. Switch off the Local function (p. 22).

The volume level of the instrument connected to Input jacks is too low

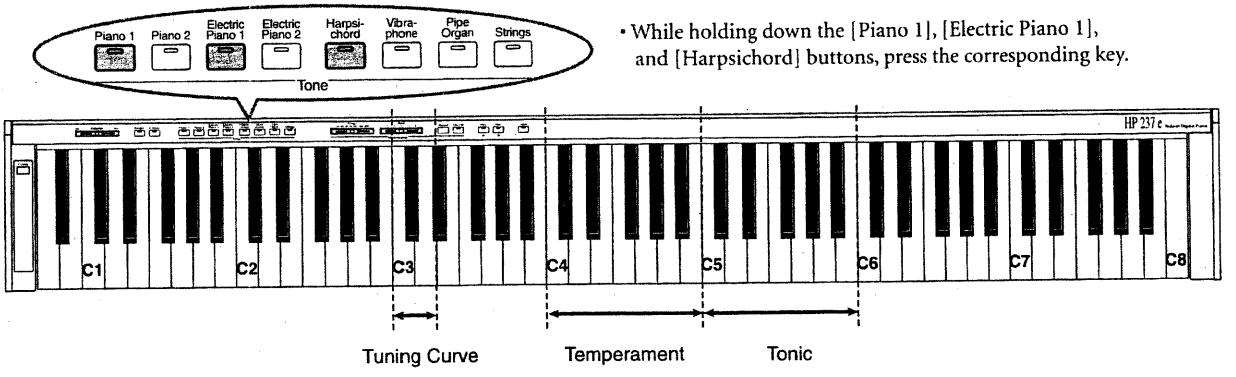
Could you be using a connection cable that contains a resistor? Use a connection cable that does not contain a resistor.

9.2. Functions assigned to the keyboard



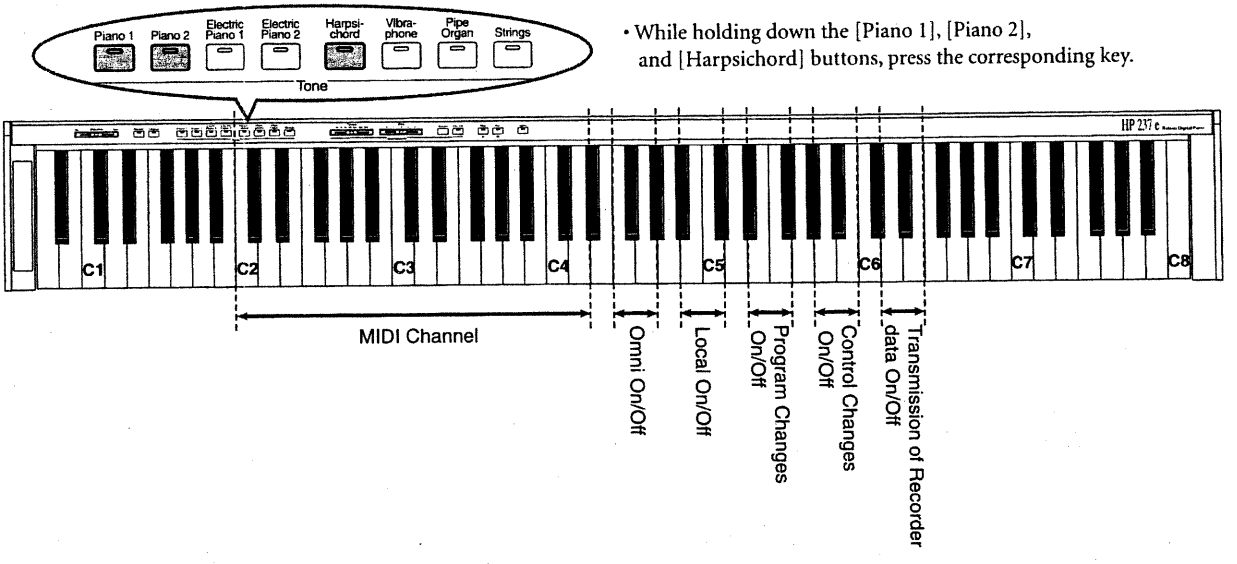
• While holding down the [Demo] button, press the corresponding key.

Functions for temperament



• While holding down the [Piano 1], [Electric Piano 1], and [Harpsichord] buttons, press the corresponding key.

Functions for MIDI



• While holding down the [Piano 1], [Piano 2], and [Harpsichord] buttons, press the corresponding key.

10. MIDI Implementation

DIGITAL PIANO
Model HP237e

MIDI Implementation Chart

Date : October 1999
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 1–16	1 1–16	
Mode	Default Messages Altered	Mode 3 x **********	Mode 3 OMNI ON/OFF	
Note Number :	True Voice	15–113 **********	0–127 15–113	
Velocity	Note ON Note OFF	O x 8n v=64	O x	
After Touch	Key's Ch's	x x	x x	
Pitch Bend		x	x	
Control Change	6, 38 7 11 64 66 67 91 93 100, 101	O *1 x x O *1 O O *1 O *1 O *1 O *1	O *1 O *1 *2 O *1 *2 O *1 *2 O *1 *2 O *1 *2 O *1 O *1 O *1	Data entry Volume Expression Hold 1 Sostenuto Soft Effect1 depth (Reverb) Effect3 depth (Chorus) RPN LSB, MSB
Prog Change	: True #	O (0–44) *1 **********	O (0–127) *1 0–44	
System Exclusive		O	O	
System Common	: Song Pos : Song Sel : Tune	x x x	x x x	
System Real Time	: Clock : Commands	x x	x x	
Aux Message	: All sound off : Reset all controllers : Local ON/OFF : All Notes OFF : Active Sense : System Reset	x x x x O x	x O O O (123–127) O x	
Notes		*1 O x is selectable. *2 These message can affect only MIDI notes.		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO O : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO X : No

11. Specifications

HP-237e: Roland Digital Piano

Keyboard

Keyboard
88 keys (Hammer Action Mechanism)

Touch sensitivity
3 levels

Keyboard mode
Whole, Layer, Split

Sound Generator

Maximum polyphony
64 voices

Tones
9 (Piano 1, Piano 2, Electric Piano 1, Electric Piano 2, Harpsichord, Vibraphone, Pipe Organ, Strings, Acoustic Bass (in Split mode))

Effects
Chorus (8 levels), Reverb (8 levels)
Sympathetic Resonance (8 levels)

Key transposition
–6 to +5 (semitone steps)

Temperament
7 types, selectable tonic

Stretch tuning
2 types

Master tuning
415.3Hz~466.2 Hz (0.1 Hz steps)

Composer

Metronome
Beat: 0, 2, 3, 4, 6
Volume: 8 levels
Sounds: 3 types

Track
1 track

Song
1 song

Note Storage
Approx. 5,000 notes

Tempo
Quarter note (♩)= 40~208

Resolution
96 ticks per quarter note

Control
Play/Stop, Rec, Tempo

Others

Pedals
Damper, Sostenuto, Soft

Speakers
16 cm x 2

Rated power output
20 W x 2

Connectors
Headphone jacks (Stereo) x 2 (they also double as output jacks)
MIDI connectors (In, Out)
Pedal Connector
Input L/Mono, R connectors

Power supply
AC 117 V, AC 230 V, AC 240 V

Power consumption
60 W (AC 117 V), 45 W (AC 230/240 V)

Cabinet Finish
Simulated Rosewood

Dimensions (including the stand)
1392 (W) x 523 (D) x 867 (H) mm

Weight (including the stand)
71kg

Accessories
Owner's Manual
Power cord

Note: In the interest of product improvement, the specifications and/or appearance of this instrument are subject to change without prior notice.

For E.C. Countries

This product complies with EC directives
- LOW VOLTAGE 73/23
- EMC 89/336"

Dieses instrument entspricht folgenden EG-Verordnungen:
- NIEDRIGE SPANNUNG 73/23
- EMC 89/336"

Cet instrument est conforme aux directives CE suivantes:
- BASSE TENSION 73/23
- EMC 89/336"

CE

Questo prodotto é conforme alle seguenti direttive CEE
- BASSA TENSIONE 73/23
- EMC 89/336"

Dit instrument beantwoordt aan de volgende EG richtlijnen:
- LAGE SPANNING 73/23
- EMC 89/336"

Este producto cumple con las siguientes directrices de la CE
- BAJO VOLTAJE 73/23
- EMC 89/336"

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

CLASS B **NOTICE**

This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASS B **AVIS**

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

Roland®

K6018365

UPC K6018365

10981

HP 237e

RES 243-99 Printed in Italy by Arbadit Grafiche srl - Ancona 99-10 - HP 237e - O.M./E-D-F-It-Ol-Sp

Roland®

602153376