

KAWAI

CE220 Owner's Manual

Preparation Before Use

Basic Operations

Recorder

USB Operations

Function Buttons

Appendix

Thank you for purchasing this Kawai CE220 digital piano.

This owner's manual contains important information regarding the usage and operation of the CE220 digital piano.

Please read all sections carefully, keeping this manual handy for future reference.

Preface

■ About this Owner's Manual

Before attempting to play the CE220 digital piano, please read the **Preparation Before Use** section from page 10 of this owner's manual. This section explains the name and function of each part, how to connect the power cable, and how to turn on the power.

The **Basic Operations** section (page 14) provides an overview of the instrument's most commonly used functions, such as selecting and combining sounds, and splitting the keyboard into separate sections. This chapter also explains how to apply reverb and effects to sounds, and how the voicing controls can be used to adjust the character of the piano sounds.

The **Recorder** section (page 26) provides instructions on how to record and play back pieces stored in the instrument's internal memory, while the **USB Functions** section (page 30) explains how recorded performances can be loaded from and saved to USB flash memory devices.

The **Function Buttons** chapter (page 36) details the CE220 digital piano's various keyboard, sound, and pedal settings, in addition to explaining the instrument's useful MIDI capabilities.

Finally, the **Appendix** section (page 60) includes lists for all internal sounds, songs, and drum rhythms, assembly instructions, troubleshooting recommendations, MIDI reference information, and full specification details.

■ CE220 Feature Highlights

AWA Grand Pro II wooden-key keyboard action

The CE220 digital piano utilises the critically acclaimed AWA Grand Pro II keyboard action, employing longer, real wooden keys for an unsurpassed acoustic piano feel. Authentic key balance points, action movement and contact placements combine with proper hammer grading and bass key counter-weights to replicate the exceptional touch of the world-renowned Kawai EX Concert Grand Piano. Such meticulous attention to detail provides incredible stability during fortissimo passages, while preserving delicate pianissimo control, to satisfy the demands of even the most discerning pianist.

Harmonic Imaging™ (HI) sound technology, 88-key piano sampling

The CE220 digital piano captures the beautiful sound of Kawai's highly acclaimed hand-built concert grand piano, with all 88 keys of this exceptional instrument meticulously recorded, analysed and faithfully reproduced using proprietary *Harmonic Imaging™* technology. This unique process accurately recreates the broad dynamic range of the original grand piano, affording pianists an extraordinary level of expressiveness ranging from the softest pianissimo to the strongest, boldest fortissimo.

Additional reverberation effects that simulate the acoustic environment of a recital room, stage, or concert hall are also applied, resulting in a rich, vibrant piano tone that delivers breathtaking realism and authenticity, while the unique *Voicing* function allows players to adjust the tonal character of the piano beneath their fingertips.

Excellent selection of additional instrument sounds

Supplementing the realistic acoustic piano voices, the CE220 digital piano also features an excellent selection of additional instrument sounds, ranging from electric pianos and drawbar and church organs, to strings, brass, and woodwind instruments, inviting musicians to add greater variety to their performances.

Furthermore, the *Dual* playing mode also allows two different sounds, such as grand piano and strings, to be layered together, while the *Split* and *Four Hands* modes divide the keyboard into two independent sections. The volume balances for each playing mode can also be adjusted quickly and easily using the real-time balance slider.

Wide range of connectivity options

The CE220 digital piano features a variety of standard connectivity options, with LINE-level audio jacks that allow the instrument to be enjoyed in larger settings such as churches and schools. Standard MIDI and *USB to Host* connectors provide flexibility when using computers and other audio devices, while the *USB to Device* port allows musicians to save recorded performances to USB flash memory devices. It is even possible to playback Standard MIDI File (SMF) songs stored on USB memory directly, without the need for additional equipment.

Important Safety Instructions

SAVE THESE INSTRUCTIONS

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



WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

AVIS : RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR.

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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.

Examples of Picture Symbols



denotes that care should be taken.
The example instructs the user to take care not to allow fingers to be trapped.



denotes a prohibited operation.
The example instructs that disassembly of the product is prohibited.



denotes an operation that should be carried out.
The example instructs the user to remove the power cord plug from the AC outlet.

Read all the instructions before using the product.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prongs are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or object have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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



WARNING

Indicates a potential hazard that could result in death or serious injury if the product is handled incorrectly.

The product should be connected to an AC outlet of the specified voltage.



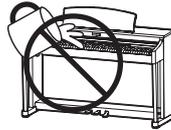
- If you are going to use an AC power cord, make sure that its has the correct plug shape and conforms to the specified power voltage.
- Failure to do so may result in fire.

Do not insert or disconnect the power cord plug with wet hands.



Doing so may cause electric shock.

Take care not to allow any foreign matter to enter the product.



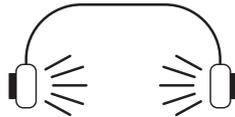
Entry of water, needles or hair pins may result in breakdown or short-circuit. The product shall not be exposed to dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the product.

The chair must be used properly (it must be used only when playing the product).

- Do not play with it or stand on it.
- Only one person is allowed to sit on it.
- Do not sit on it when opening the lid.
- Re-tighten the bolts occasionally.

Doing so may cause the chair to fall over or your fingers to be trapped, resulting in injury.

When using the headphones, do not listen for long periods of time at high volume levels.



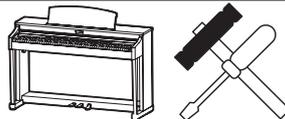
Doing so may result in hearing problems.

Do not lean against the keyboard.



Doing so may cause the product to fall over, resulting in injury.

Do not disassemble, repair or modify the product.



Doing so may result in product breakdown, electric shock or short-circuit.

When disconnecting the AC power cord's plug, always hold the plug and pull it to remove it.



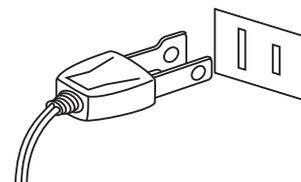
- Pulling the AC power cord itself may damage the cord, causing a fire, electric shock or short-circuit.

The product is not completely disconnected from the power supply even when the power switch is turned off. If the product will not be used for a long time, unplug the AC power cord from the AC outlet.



- Failure to do so may cause fire in case of lightning.
- Failure to do so may over-heat the product, resulting in fire.

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.



This product shall be near the AC outlet and the power cord plug in a position so that it can readily be disconnected in an emergency because electricity is always charging while the plug is in the AC outlet even in a power switch off condition.



CAUTION

Indicates a potential hazard that could result in injury or damage to the product or other property if the product is handled incorrectly.

Do not use the product in the following areas.

- Areas, such as those near windows, where the product is exposed to direct sunlight
- Extremely hot areas, such as near a heater
- Extremely cold areas, such as outside
- Extremely humid areas
- Areas where a large amount of sand or dust is present
- Areas where the product is exposed to excessive vibrations

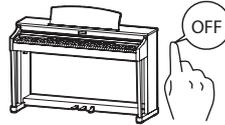
Using the product in such areas may result in product breakdown. Use the product only in moderate climates (not in tropical climates).

When you close the keyboard cover, close it gently.



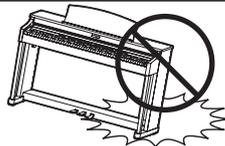
Closing it roughly may trap your fingers, resulting in injury.

Before connecting cords, make sure that the power to this product and other devices is turned OFF.



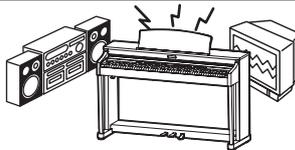
Failure to do so may cause breakdown of this product and other devices.

Do not drag the product on the floor. Take care not to drop the product.



Please lift up the product when moving it. Please note that the product is heavy and must be carried by more than two persons. Dropping the product may result in breakdown.

Do not place the product near electrical appliances such as TVs and radios.



- Doing so may cause the product to generate noise.
- If the product generates noise, move the product sufficiently away from the electrical appliance or connect it to another AC outlet.

When connecting the AC power cord and other cords, take care not to get them tangled.



Failure to do so may damage them, resulting in fire, electric shock or short-circuit.

Do not wipe the product with benzene or thinner.



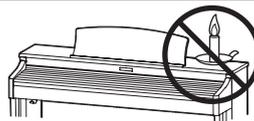
- Doing so may result in discoloration or deformation of the product.
- When cleaning the product, put a soft cloth in lukewarm water, squeeze it well, then wipe the product.

Do not stand on the product or exert excessive force.



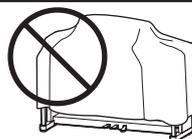
- Doing so may cause the product to become deformed or fall over, resulting in breakdown or injury.

Do not place naked flame, such as lighted candles on the product.



Doing so may cause the illumination to fall over, resulting in fire.

Ensure that the ventilation is not impeded by covering the ventilation openings with items, such as newspaper, table-cloths, curtains, etc.



Failure to do so may over-heat the product, resulting in fire.

The product should be located so that its location or position does not interfere with its proper ventilation. Ensure a minimum distance of 5cm around the product for sufficient ventilation.

The product should be serviced by qualified service personnel when:

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

Notes on Repair

Should an abnormality occur in the product, immediately turn the power OFF, disconnect the power cord plug, and then contact the shop from which the product was purchased.

CAUTION:

To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION:

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.



An information on Disposal for users

If your product is marked with this recycling symbol it means that, at the end of its life, you must dispose of it separately by taking it to an appropriate collection point. You should not mix it with general household waste. Disposing of this product correctly will prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling. For further details, please contact your local authority. (European Union only)

Instruction for AC power cord (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. Do not plug either terminal of the power cord to the the ground od AC outlet on the wall.

Canadian Radio Interference Regulations

This instrument complies with the limits for a class B digital apparatus, pursuant to the Radio Interference Regulations, C.R.C., c. 1374.

FCC Information (U.S.A)

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

Declaration of Conformity

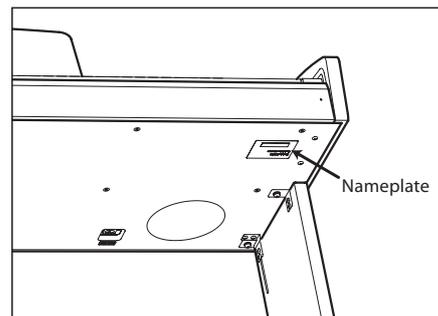
Products :	Electronic Piano
Model Number :	CE220
Responsible Party Name :	Kawai America Corporation
Address :	2055 East University Drive Rancho Dominguez, CA 90220
Telephone :	310-631-1771

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

The nameplate label is located on the underside of the instrument, as indicated below.



This applies only to products distributed by Kawai America Corporation.

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USB MIDI (USB to Host Connector)

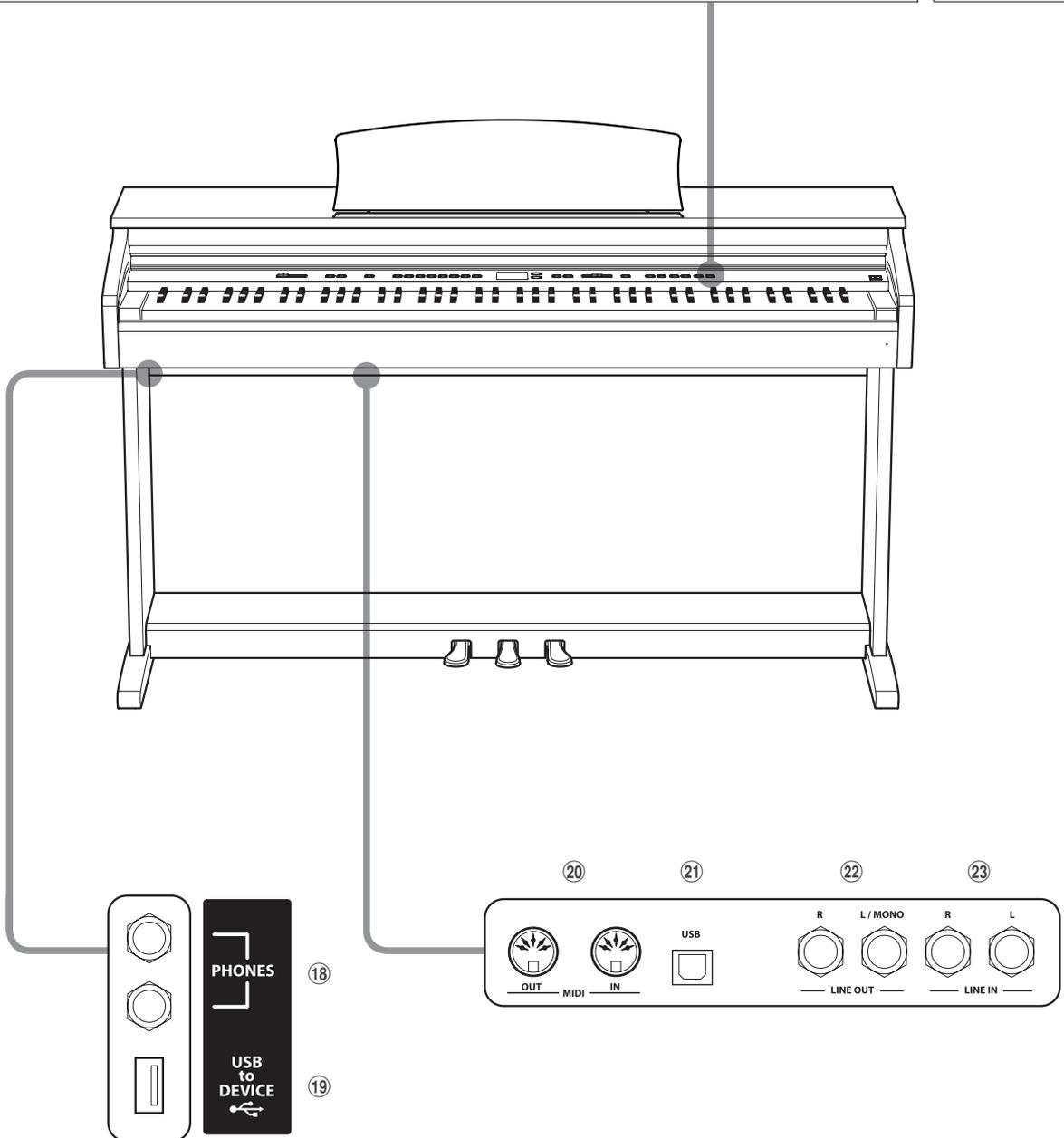
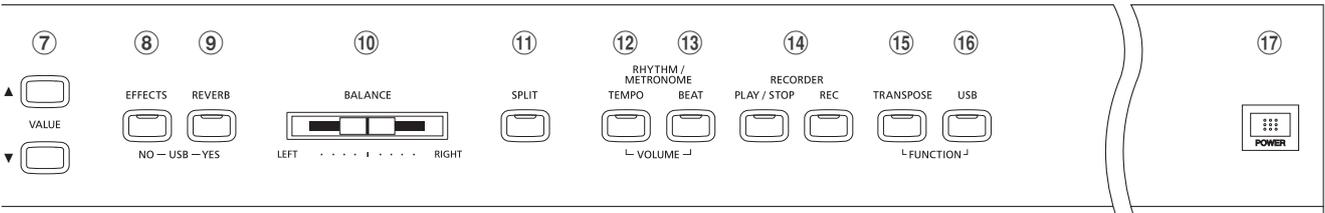
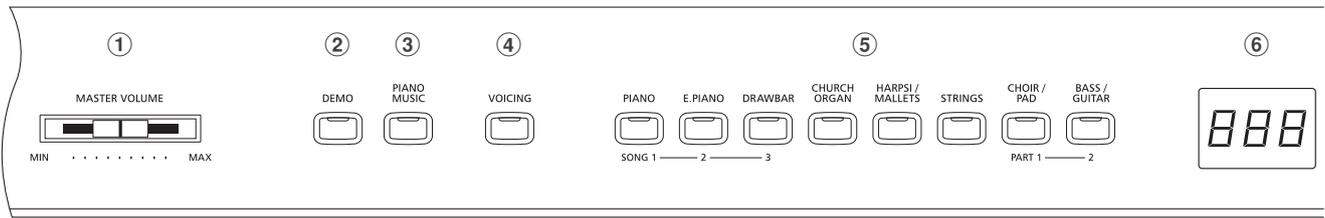
User Memory

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Part Names and Functions

Preparation Before Use



① MASTER VOLUME slider

This slider controls the master volume level of the instrument's built-in speakers or headphones, if connected.

② DEMO button

This button is used to start/stop playback of the instrument's built-in Demonstration songs.

③ PIANO MUSIC button

This button is used to start/stop playback of the instrument's built-in Piano Music songs.

④ VOICING button

This button is used to select the tonal character of the acoustic piano sounds.

⑤ SOUND SELECTION buttons

These buttons are used to select the sound(s) that will be heard when playing the instrument's keyboard. Multiple sounds are assigned to each category button, and can be selected by pressing the same button repeatedly.

These buttons are also used to select the song and part of the internal recorder.

⑥ LED display

The LED display provides important information relating to the currently selected function and various other values.

** A protective plastic film is attached to the display during production. Please remove this film before attempting to play the instrument.*

⑦ VALUE buttons

These buttons are used to adjust the metronome/style tempo, and other values shown in the LCD display.

⑧ EFFECTS button

This button is used to turn effects for the selected sound on/off, and to select the different effect types.

This button is also used to cancel certain USB operations.

⑨ REVERB button

This button is used to turn reverb for the selected sound on/off, and to select the different reverb types.

This button is also used to confirm certain USB operations.

⑩ BALANCE slider

This slider adjusts the volume balance of the two layered sound when Dual mode is selected, or the the upper and lower sections when Split/Four Hands mode is selected.

⑪ SPLIT button

This button is used to enable the Split/Four Hands mode functions, allowing the keyboard to be divided into upper and lower sections.

⑫ TEMPO button

This button is used to adjust the tempo of the metronome time signature/drum rhythm.

⑬ BEAT button

This button is used to change the metronome time signature/drum rhythm.

When pressed simultaneously, the TEMPO/BEAT buttons are also used to adjust the volume of the metronome/drum rhythm.

⑭ RECORDER buttons

These buttons are used to record and playback performances stored in the instrument's internal memory.

⑮ TRANSPOSE button

This button is used to adjust the pitch of the keyboard in semi-tone steps.

⑯ USB button

This button is used to control the instrument's USB functions.

When pressed simultaneously, the TRANSPOSE/USB buttons are also used to access the Function Buttons.

⑰ POWER switch

This switch is used to turn the instrument on/off.

⑱ PHONES jacks

These jacks are used to connect stereo headphones to the instrument. Two pairs of headphones can be connected and used simultaneously.

⑲ USB to DEVICE port

This port is used to connect a FAT or FAT32 formatted USB memory device to the instrument in order to load and save recorded song data.

⑳ MIDI jacks

These jacks are used to connect the instrument to electronic devices (such as a computer or another musical instrument) in order to send and receive MIDI data.

㉑ USB to Host port

This port is used to connect the instrument to a computer using a USB 'B to A' type cable in order to send and receive MIDI data.

㉒ LINE OUT jacks

These jacks are used to connect the stereo output (Left/Right 1/4" phone plug) of the instrument to external amplifiers, mixers, recording devices, and similar equipment.

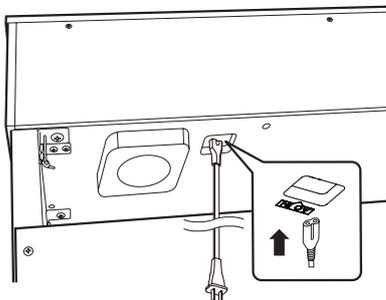
㉓ LINE IN jacks

These jacks are used to connect the stereo output (Left/Right 1/4" phone plug) from audio equipment, computers, or other electronic devices to the instrument's amplifier and speakers.

Setting Up the Piano

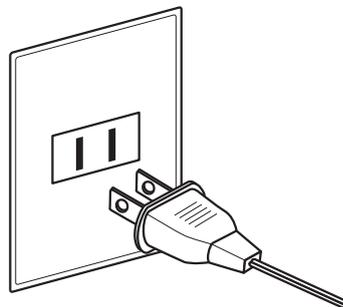
1. Connecting the power cable to the instrument

Connect the included power cable to the 'AC IN' inlet located on the underside of instrument.



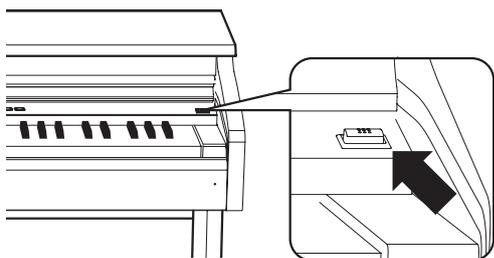
2. Connecting the power cable to an outlet

Connect the instrument's power cable to an AC outlet.



3. Turning on the power

Press the POWER SWITCH located on the right hand side of the front panel.

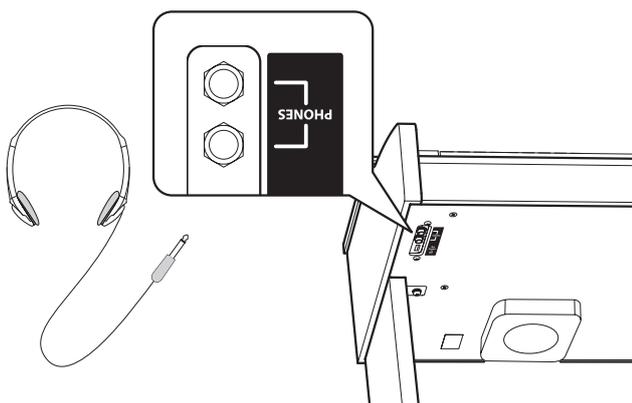


The instrument will turn on. The LED indicator for the PIANO button will also turn on, indicating that the Concert Grand sound is selected, and the CE220 digital piano is ready to be played.

■ Using headphones

Use the jacks located beneath the keyboard on the left hand side, to connect stereo headphones to the CE220 digital piano.

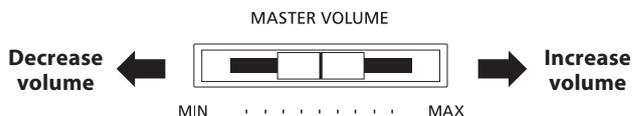
Two pairs of headphones can be connected and used simultaneously. When a pair of headphones is connected, sound will not be produced by the speakers.



4. Adjusting the volume

The MASTER VOLUME slider controls the volume level of the instrument's speakers, or headphones if connected.

Move the slider to the right to increase the volume, and to the left to decrease the volume.

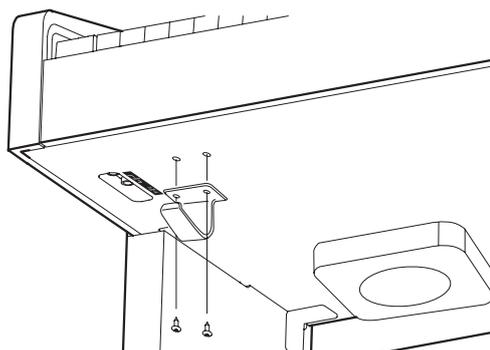


Use this slider to set the volume to a comfortable listening level - the middle is often a good starting point.

■ Attaching the headphone hook (optional)

A headphone hook is included with the CE220 digital piano and can be used to hang headphones when not in use.

If desired, attach the headphone hook to the underside of the keyboard as shown in the illustration below.



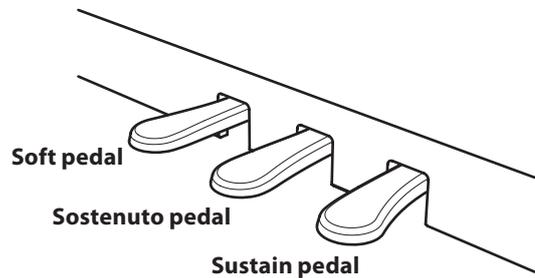
Using the Pedals

As with a grand piano, the CE220 digital piano features three pedals: sustain, sostenuto, and soft.

■ Sustain pedal (right pedal)

Depressing this pedal sustains the sound after one's hands have been lifted from the keyboard - greatly enriching the piano sound, while also assisting smooth 'legato' passages.

The sustain pedal is capable of responding to half pedaling.



■ Soft pedal (left pedal)

Depressing this pedal softens the sound, reducing its volume.

When the rotary speaker effect is selected, the soft pedal is also used to alternate the speed of the rotary simulation between 'Slow' and 'Fast' effect modes.

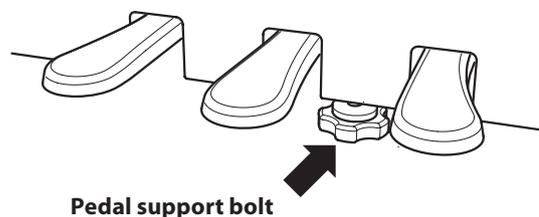
■ Sostenuto pedal (centre pedal)

Depressing this pedal after playing the keyboard and before releasing the keys, sustains the sound of only those notes that have been played. Any keys that are subsequently played after the sostenuto pedal is depressed will not be sustained.

■ Pedal support bolt

A pedal support bolt is attached at the base of the pedal board to aid stability when the pedals are pushed.

Turn the bolt anti-clockwise until it makes contact with the floor and supports the pedals firmly. If the pedal support bolt does not make contact with the floor, the pedal board may become damaged.



When moving the instrument, always adjust or remove the pedal support bolt, then readjust when the instrument is in its new position.

■ Caring for the pedals

If the surface of the pedals becomes dirty, clean the pedals using a dry dish-washing sponge. Do not attempt to clean the pedals using rust-removing solvents, abrasives or files.

Selecting Sounds

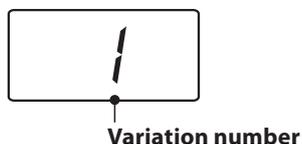
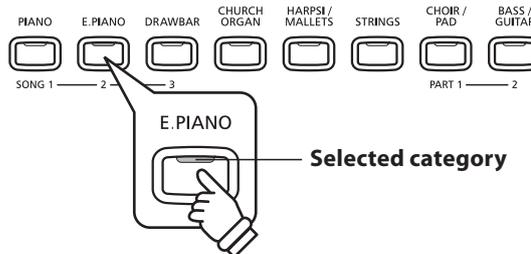
The CE220 digital piano features a wide selection of realistic instrument sounds suitable for various musical styles. Sounds are arranged into eight categories, with several sounds assigned to each category button. For a complete listing of sounds available on the CE220 digital piano, please refer to page 68 of this owner's manual.

By default, the 'Concert Grand' sound will be selected automatically when the instrument is turned on.

■ Selecting a sound category

Press the desired SOUND SELECTION button.

The LED indicator for the button will turn on to indicate that this category has been selected. The variation number of the selected sound will briefly be shown in the LED display.

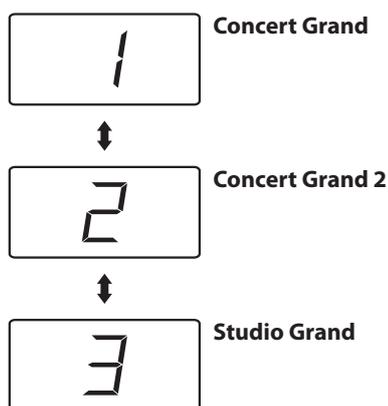


■ Changing the selected sound variation

Several sound variations are assigned to each category button.

Press the selected category button repeatedly to cycle through the different sound variations.

The ▲ and ▼ VALUE buttons can also be used to select sounds.



Method 1:



Method 2:



* To change the default sound, and specify a preferred sound to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

Demo Songs

The Demo function provides an excellent introduction to the varied capabilities of CE220 digital piano. There are 18 different demonstration songs available, highlighting the instrument's rich selection of high quality sounds and powerful speaker system.

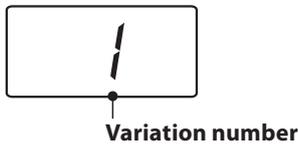
For a complete listing of available demonstration songs, please refer to page 64 of this owner's manual.

* Kawai regrets that sheet music for Kawai original demo songs is not available.

1. Entering demo mode

Press the DEMO button.

The LED indicator for the DEMO button will turn on, and the Concert Grand demo will start to play. The variation number of the selected sound/demo will also be shown in the LED display.



When the Concert Grand demo has finished, another song selected at random will start to play automatically.

2. Selecting a demo song

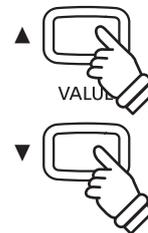
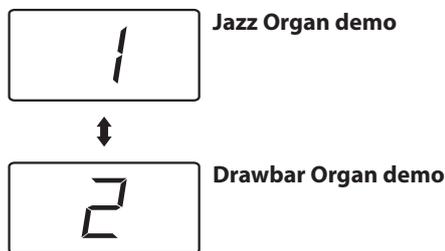
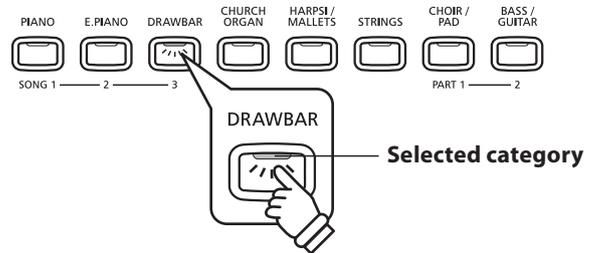
While Demo mode is selected and the demo songs are playing:

Press the desired SOUND SELECTION button.

The LED indicator for the button will start to flash, and the first demo in the selected category will start to play.

Press the selected category button repeatedly to cycle through the different demo songs.

The ▲ and ▼ VALUE buttons can also be used to select sounds.



3. Stopping the demo song and exiting demo mode

Press the DEMO button while the demo song is playing.

The LED indicator for the DEMO button will turn off, the demo song will stop, and the instrument will return to normal operation.



Piano Music Pieces

In addition to the sound demonstration songs, the CE220 digital piano also features a selection of popular classical piano works from the Baroque and Romantic periods.

For a complete listing of available piano music pieces, please refer to page 65 of this owner's manual.

1. Entering Piano Music mode

Press the PIANO MUSIC button.

The LED indicator for the PIANO MUSIC button will turn on to indicate that Piano Music mode is in use.



2. Selecting a Piano Music piece

Press the ▲ and ▼ VALUE buttons to select the desired Piano Music piece.

The number of the selected Piano Music piece will be shown in the LED display.



Piano Music piece



3. Starting and stopping the Piano Music piece

Press the PLAY/STOP button.

The LED indicator for the PLAY/STOP button will turn on and the selected Piano Music piece will start to play.

* The selected Piano Music piece can be changed during playback by pressing the ▲ and ▼ VALUE buttons.

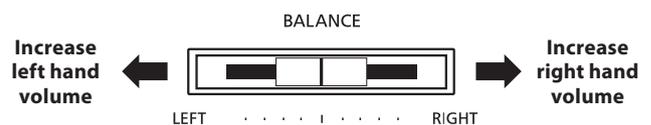
To stop playback, press the PLAY/STOP button again.

PLAY / STOP



■ Adjusting the left hand/right volume balance

Move the BALANCE slider left and right to adjust the volume balance between the left and right hand parts of the piece.



4. Exiting Piano Music mode

Press the PIANO MUSIC button again.

The LED indicator for the PIANO MUSIC button will turn off, and playing Piano Music pieces will stop, and the instrument will return to normal operation.



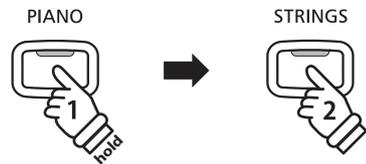
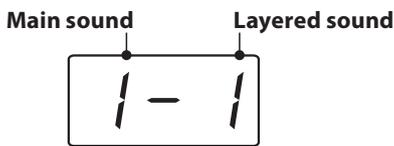
Dual Mode

The Dual Mode function allows two sounds to be layered together, creating a more complex sound. For example, a piano sound layered with strings, or a church organ combined with a choir, etc.

■ Entering Dual mode

Press and hold a SOUND SELECTION button to select the main sound, then press another SOUND SELECTION button to select the layered sound.

The LED indicators for both SOUND SELECT buttons will turn on to indicate that Dual mode is in use, and the respective sound variation numbers will be shown in the LED display.

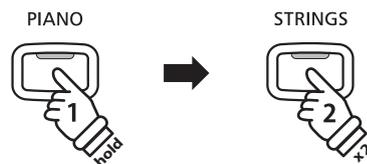
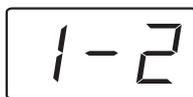


Example: To layer the 'String Ensemble' sound with the 'Concert Grand' sound, press and hold the PIANO button, then press the STRINGS button.

■ Changing layered sounds

To select a different variation for the layered sound:

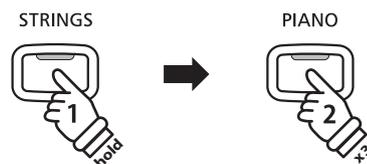
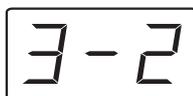
Press and hold the main SOUND SELECTION button, then press the layered SOUND SELECTION button repeatedly to cycle through the different sound variations.



Example: To change the layered 'String Ensemble' sound to the 'Slow Strings' sound, press and hold the PIANO button, then press the STRINGS button twice.

To select a different variation for the main sound:

Press and hold the layered SOUND SELECTION button, then press the main SOUND SELECTION button repeatedly to cycle through the different sound variations.

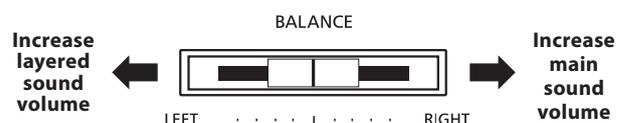


Example: To change the first 'Concert Grand' sound to the 'Studio Grand' sound, press and hold the STRINGS button, then press the PIANO button three times.

* To layer two variations assigned to the same button, press and hold a SOUND SELECTION button, then press the ▲ and ▼ VALUE buttons.

■ Adjusting the main/layered sound volume balance

Move the BALANCE slider left and right to adjust the volume balance between the main and layered sounds.



■ Exiting Dual mode

Press a single SOUND SELECTION button to exit Dual mode.

The instrument will return to normal operation.

Split Mode

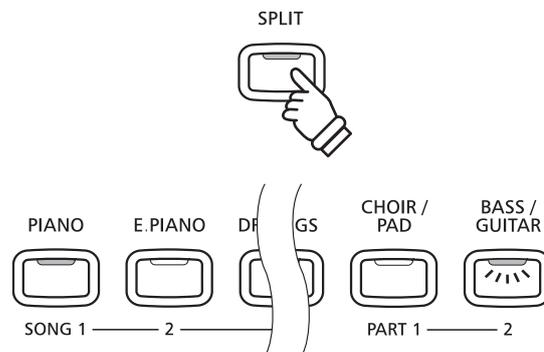
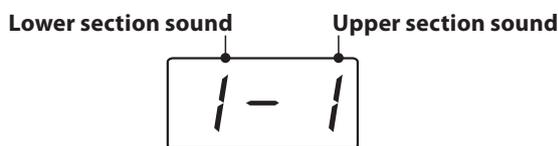
The Split Mode function divides the keyboard into two sections, allowing each section to be played with a different sound. For example, a bass sound in the lower section, and a piano sound in the upper section. By default the split point for the lower and upper sections is set between B2 and C3.

■ Entering Split mode

Press the SPLIT button.

The LED indicator for the SPLIT button will turn on to indicate that Split mode is in use.

The LED indicator for the upper section sound button will turn on, and the LED indicator for the lower section sound button will start to flash. The respective sound variation numbers will also be shown in the LED display.



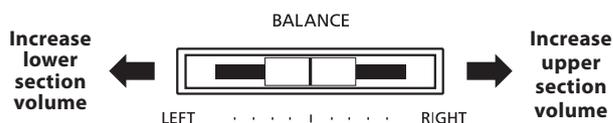
■ Changing the upper/lower section sound

Press a SOUND SELECTION button to select the desired sound for the upper section.

Press and hold the SPLIT button, then press a SOUND SELECTION button to select the desired sound for the lower section.

■ Adjusting the upper/lower section volume balance

Move the BALANCE slider left and right to adjust the volume balance between the main and layered sounds.

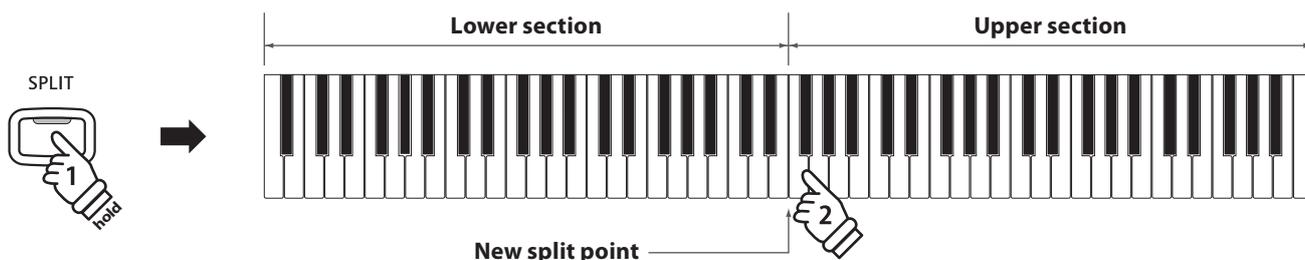


■ Changing the split point

Press and hold the SPLIT button, then press a key on the keyboard.

The name of the pressed key will be shown in the LED display, and will become the new split point.

* The default split point is set between keys B2 and C3.



■ Exiting Split mode

Press the SPLIT button to exit Split mode.

The LED indicator for the SPLIT button will turn off, and the instrument will return to normal operation.

Four Hands Mode

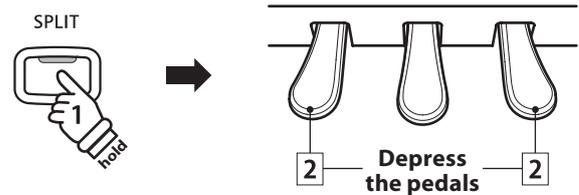
The Four Hands Mode function divides the keyboard into two sections in a similar way to that of the Split Mode function. However, with Four Hands Mode enabled, the octave/pitch of each section is automatically adjusted to create two separate 44-key instruments with the same playing range. Furthermore, the sustain (right) pedal and soft (left) pedal act as separate sustain pedals for the respective upper and lower sections, allowing two people to perform piano duets using a single instrument.

■ Entering Four Hands mode

Press and hold the SPLIT button, then press the sustain (right) and soft (left) pedals simultaneously.

The LED indicator for the SPLIT button will turn on to indicate that Four Hands mode is in use.

* The 'Concert Grand' sound will be selected for both sections, with the upper section lowered by two octaves and the lower section raised by two octaves.



■ Changing the upper/lower section sound

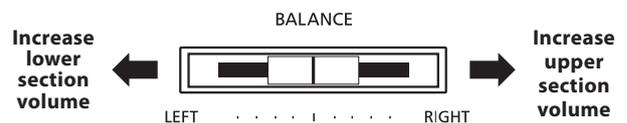
Press a SOUND SELECTION button to select the desired sound for the upper section.

Press and hold the SPLIT button, then press a SOUND SELECTION button to select the desired sound for the lower section.

* The Lower Octave Shift setting can be used to adjust the octave range for the Lower section. For further information, please refer to the instructions on page 44.

■ Adjusting the upper/lower section volume balance

Move the BALANCE slider left and right to adjust the volume balance between the main and layered sounds.

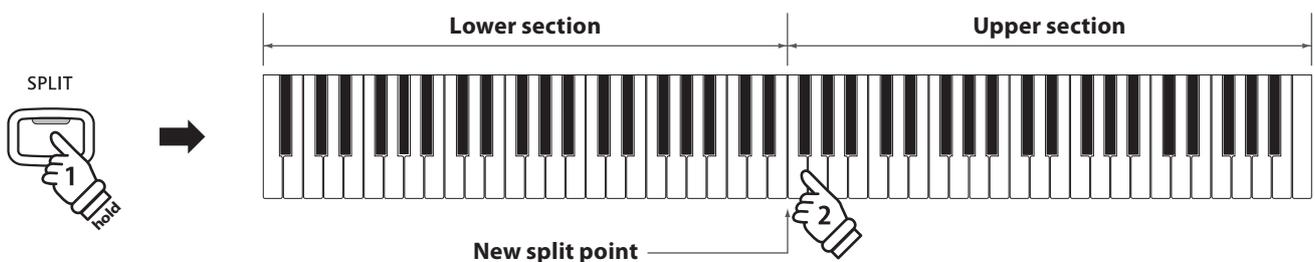


■ Changing the split point

Press and hold the SPLIT button, then press a key on the keyboard.

The name of the pressed key will be shown in the LED display, and will become the new split point.

* The default split point is set between keys B2 and C3.



■ Exiting Four Hands mode

Press the SPLIT button to exit Four Hands mode.

The LED indicator for the SPLIT button will turn off, and the instrument will return to normal operation.

Reverb

Reverb adds reverberation to the sound, simulating the acoustic environment of a recital room, stage, or concert hall. Some sound types, such as acoustic piano, enable reverb automatically in order to improve acoustic realism. The CE220 digital piano features five different reverb types.

■ Reverb types

Reverb type	Description
Room 1	Simulates the ambiance of a living room or small rehearsal room.
Room 2	Simulates a larger room than Room 1.
Stage	Simulates the ambiance of a small hall or live stage.
Hall 1	Simulates the ambiance of a concert hall or theater.
Hall 2	Simulates a larger hall or theater than Hall 1.

■ Turning Reverb on/off

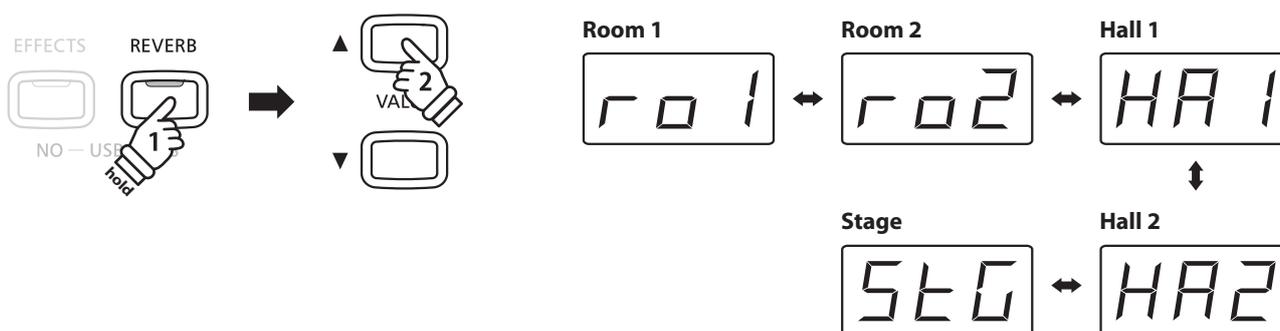
Press the REVERB button to turn reverb on/off.

The LED indicator for the REVERB button will turn on to indicate that reverb is in use.



■ Changing the Reverb type

Press and hold the REVERB button, then press the ▲ or ▼ VALUE buttons to cycle through the different reverb types. The name of the reverb type will be shown in the LED display.



Release the REVERB button to select the desired reverb type.

After a few seconds, the LCD display will return to showing the variation number of the selected sound.

* Reverb settings are independent for each sound variation.

* Any changes made to the reverb type or on/off status will remain until the power is turned off.

* The reverb type will return to the default setting when the power is turned off.

* To change this default setting, and specify a preferred reverb type to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

Effects

In addition to reverb, various other effects can be applied to the selected sound, altering the tonal character and feeling of the instrument. As with reverb, some sound types enable certain effects automatically in order to enhance tonal quality. The CE220 digital piano features five different effect types.

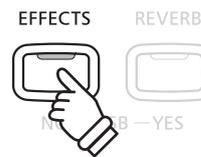
Effect types

Effect type	Description
Chorus	Simulates the rich character of a vocal choir or string ensemble, by layering a slightly detuned version of the selected sound over the original, thus enriching the tonal character.
Delay	Adds an echo to the selected sound. There are three types of delay available, each with a different length of delay between the echoes.
Tremolo	Continuously varies the volume at a constant speed, adding a vibrato type effect to the sound.
Rotary 1	Simulates the sound of a rotary speaker cabinet commonly used with electronic organs.
Rotary 2	Similar to Rotary 1, but with an additional overdrive effect also applied. * The soft pedal can be used to alternate the speed of the rotary simulation between 'Slow' and 'Fast' effect modes.

Turning Effects on/off

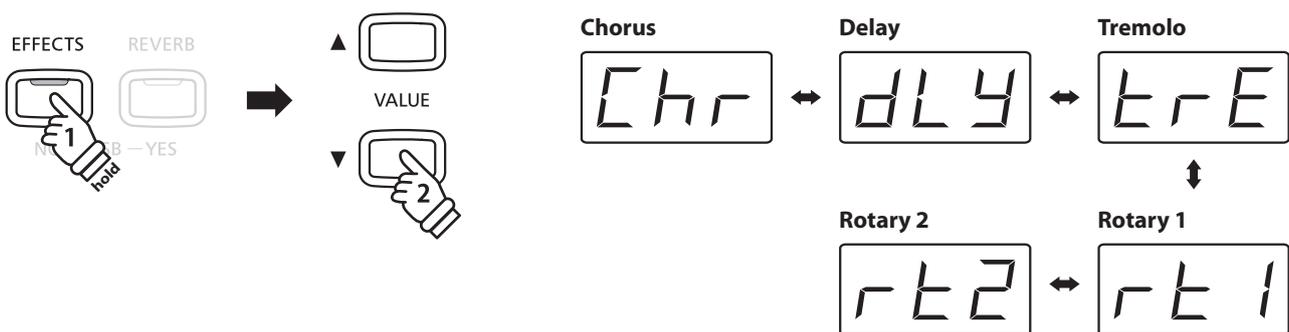
Press the EFFECTS button to turn effects on/off.

The LED indicator for the EFFECTS button will turn on to indicate that effects are in use.



Changing the Effects type

Press and hold the EFFECTS button, then press the ▲ or ▼ VALUE buttons to cycle through the different effect types. The name of the effect type will be shown in the LED display.



Release the EFFECTS button to select the desired effects type.

After a few seconds, the LCD display will return to showing the variation number of the selected sound.

- * Effect settings are independent for each sound variation.
- * Any changes made to the effect type or on/off status will remain until the power is turned off.
- * The effect type will return to the default setting when the power is turned off.
- * To change this default setting, and specify a preferred effect type to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

Voicing

The Voicing function simulates the techniques used by skilled technicians to adjust the tonal character of a piano's sound. The CE220 digital piano features three different voicing types, in addition to the default 'Normal' type.

* The Voicing function affects the PIANO category sounds only.

Voicing types

Voicing type	Description
Normal (default)	The normal tonal character of an acoustic piano throughout the entire dynamic range. * This is the default voicing type, used when the VOICING button is turned off.
Mellow	A softer, more mellow tonal character throughout the entire dynamic range.
Dynamic	A tonal character that changes dramatically from mellow to bright, depending on the strength of key strike.
Bright	A bright tonal character throughout the entire dynamic range.

Turning Voicing on/off

To select a voicing other than the 'Normal' type:

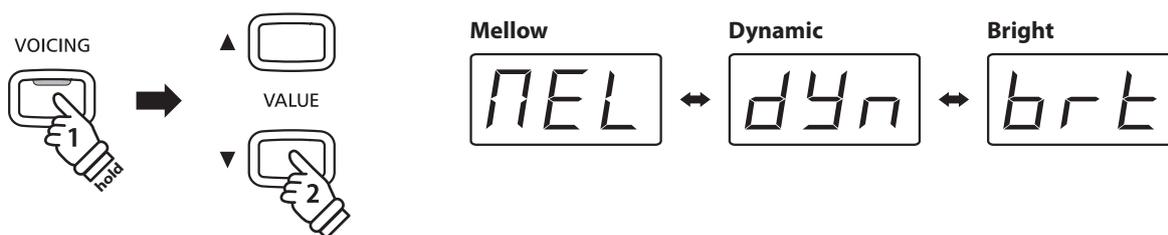
Press the VOICING button.



The LED indicator for the VOICING button will turn on to indicate that a voicing type other than 'Normal' is in use.

Changing the Voicing type

Press and hold the VOICING button, then press the ▲ or ▼ VALUE buttons to cycle through the different voicing types. The name of the voicing type will be shown in the LED display.



Release the VOICING button to select the desired voicing type.

After a few seconds, the LCD display will return to showing the variation number of the selected sound.

* Any changes made to the voicing type or on/off status will remain until the power is turned off.

* The voicing type will return to the default setting when the power is turned off.

* To change this default setting, and specify a preferred voicing type to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

Transpose

The Transpose function allows the pitch of the CE220 digital piano's keyboard to be raised or lowered in semi-tone intervals. This is particularly useful when accompanying instruments tuned for different keys, or when a song learned in one key must be played in another key.

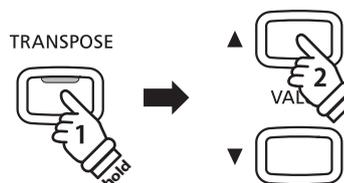
■ Adjusting the Transpose value: Method 1

Press and hold the TRANSPOSE button, then press the ▲ or ▼ VALUE buttons to increase or decrease the transpose value.

The LED indicator for the TRANSPOSE button will turn on to indicate that the transpose function is in use, and the transpose value will be shown in the LED display.



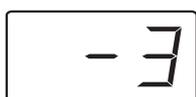
- * The keyboard pitch can be raised or lowered by up to 12 semi-tones.
- * To reset the Transpose value to 0, press and hold the TRANSPOSE button, then press the ▲ and ▼ VALUE buttons simultaneously.



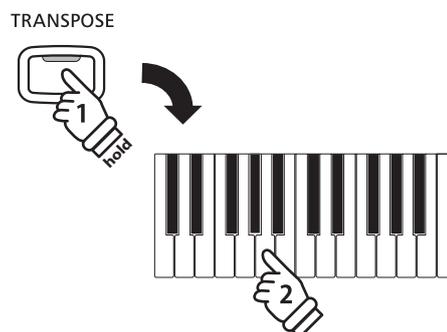
■ Adjusting the Transpose value: Method 2

Press and hold the TRANSPOSE button, then press a key within the range of C2 to C4.

The LED indicator for the TRANSPOSE button will turn on to indicate that the transpose function is in use, and the transpose value will be shown in the LED display.



- * The keyboard pitch can be adjusted within the range of C2 to C4.



■ Turning Transpose on/off

Press the TRANSPOSE button to turn the transpose function on/off.

- * The specified transpose value will be retained even after the transpose function is turned off.
- * The transpose setting will return to the default value of 0 after the power is turned off.
- * To change this default setting, and specify a preferred Transpose value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.



Metronome / Drum Rhythms

The Metronome function provides a steady beat to aid practicing the piano at a consistent tempo. In addition to regular metronome beats, the CE220 digital piano also features a variety of drum rhythms to accompany most playing styles and musical genres.

For a complete listing of available drum rhythms, please refer to page 66 of this owner's manual.

■ Turning the metronome on/off

Press the TEMPO button.

The LED indicator for the TEMPO button will turn on to indicate that the metronome is in use, and a 1/4 beat will start to count.

The current metronome tempo in beats per minute (bpm) will also be shown in the LED display.



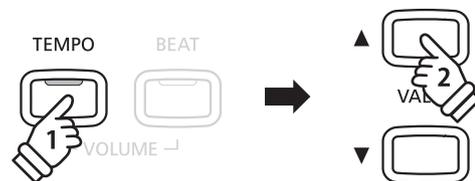
Press the TEMPO button again to stop the metronome. The LED indicator for the TEMPO button will turn off.

* The metronome can also be started by pressing the BEAT button.



■ Adjusting the metronome tempo

Press the TEMPO button, then press the ▲ or ▼ VALUE buttons to increase or decrease the metronome tempo.

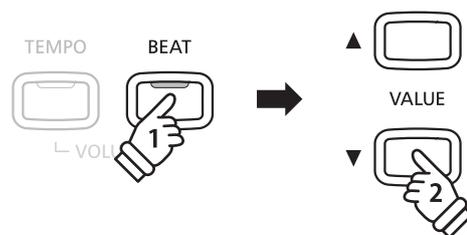
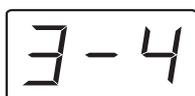


* The metronome tempo can be adjusted within the range of 10-400 bpm (20-800 bpm for eighth note rhythms).

■ Changing the metronome time signature

Press the BEAT button, then press the ▲ or ▼ VALUE buttons to select the desired metronome time signature.

The current metronome time signature will be shown in the LED display.



* There are seven different types of time signature available:

1/4, 2/4, 3/4, 4/4, 5/4, 3/8, and 6/8.

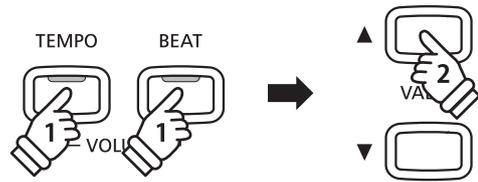
■ Adjusting the metronome volume

Press the TEMPO and BEAT buttons simultaneously, then press the ▲ or ▼ VALUE buttons to increase or decrease the metronome volume.

The metronome volume will be shown in the LCD display.



* The metronome volume can be adjusted within the range 1-10.



■ Drum rhythms

As an alternative to the simple metronome count, it is also possible to select a drum pattern from one of 100 different rhythm styles.

Press the BEAT button, then press the ▲ or ▼ VALUE buttons to cycle through the available metronome time signatures.

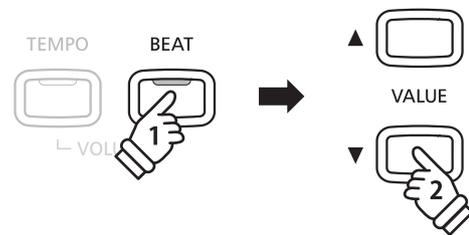
Continue to press the VALUE buttons until the rhythm numbers are shown in the LED display.



* For a complete listing of available drum rhythms, please refer to page 66 of this owner's manual.

* The metronome tempo, time signature/drum rhythm, and tempo will return to the default settings of 120 bpm, 1/4 beat, and volume 5 after the power is turned off.

* To change these default settings, and specify a preferred metronome tempo, time signature/drum rhythm, and volume to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.



Song Recorder

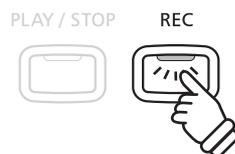
The CE220 digital piano allows up to 3 different songs to be recorded, stored in internal memory, and played back at the touch of a button. Each song consists of two separate tracks – referred to as ‘parts’ – that can be recorded and played back independently. This allows the left-hand part of a song to be recorded first on one track, and the right-hand part to be recorded later on the other track.

1 Recording a song

1. Entering song recorder mode

Press the REC button.

The LED indicator for the REC button will start to flash to indicate that the recorder is in standby mode.



To record to part 1 of song 1 (default), continue to step 3.

To select a different part or song, please refer to the instructions in step 2 below.

2. Selecting the song/part to be recorded

Press and hold the REC button, then press one of the PIANO, E.PIANO, or DRAWBAR buttons to select the desired song.

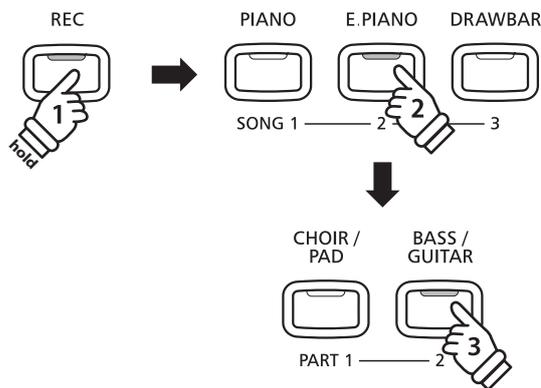
While holding the REC button:

Press the CHOIR/PAD or BASS/GUITAR buttons to select the desired part.

Release the REC button.

The LED indicators for the selected song and part will turn on to indicate that they are selected for recording, and the LED indicator for the REC button will start to flash.

* Re-recording a part will automatically erase all previously recorded performance information for that part.



Example: To record part 2 of song 2, press and hold the REC button, then press the E.PIANO button, and then the BASS/GUITAR button.

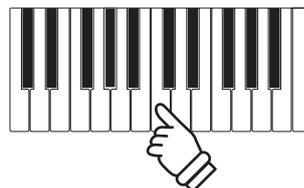


When recording part 1 and part 2 separately, select the song and part number carefully in order to prevent accidentally overwriting a previously recorded part.

3. Starting the song recorder

Press a key on the keyboard.

The LED indicators for the REC and PLAY/STOP buttons will turn on, and recording will start.



* Recording can also be started by pressing the PLAY/STOP button, allowing a rest period or empty bar to be inserted at the beginning of the song.

4. Stopping the song recorder

Press the PLAY/STOP button.

The LED indicators for the PLAY/STOP and REC buttons will turn off, the recorder will stop, and the part/song will be stored in internal memory.

The LED indicators for the selected song memory and part will turn on to indicate that they have been recorded to.

To play back the recorded song, please refer to the 'Playing back a song' instructions on page 28.



* The maximum recording capacity is approximately 7,000 notes, with button and pedal presses also counted as one note.

* If the maximum recording capacity is reached during recording, the recorder will stop automatically.

■ Recording a second part

To record a second part, repeat the instructions in step 2, but select the part that has not been recorded.

■ Changing panel settings while recording

It may be desirable to make changes to the selected sound or style while recording a song. The tables below list the various functions which will and will not be remembered during recording.

Panel operations remembered during recording

Changes made to the sound type (SOUND SELECTION buttons)

Switching between normal/dual/split playing modes

Panel operations NOT remembered during recording*

Changes made to the reverb settings

Changes made to the effects settings

Changes made to the voicing settings

Changes made to the metronome tempo, beat, volume etc.

Changes made to the volume balance in dual/split mode

Changes made to transpose, tuning, touch, etc

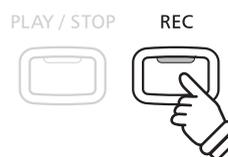
* Prepare the desired effect, reverb, voicing, volume balance, tempo settings, etc. before recording a new performance.

5. Exiting song recorder mode

Press the REC button at any time to exit the song recorder.

The LED indicator for the REC button will stop flashing and the instrument will return to normal operation.

* Recorder songs will remain in memory after the power is turned off.



2 Playing back a song

This function is used to playback recorder songs stored in internal memory.

1. Playing the selected recorded song

To play the selected song:

Press the PLAY/STOP button.

The LED indicator for the PLAY/STOP button will turn on and the recorded song will start to play.



2. Playing a different song/selecting different part(s)

Press and hold the PLAY/STOP button, then press one of the PIANO, E.PIANO, or DRAWBAR buttons to select the desired song.

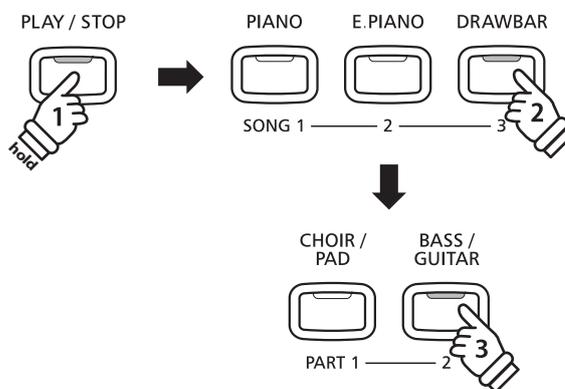
While holding the PLAY/STOP button:

Press the CHOIR/PAD or BASS/GUITAR buttons to select/deselect the desired part(s).

* Selecting a song with two parts recorded will playback both parts automatically. To playback the parts separately select/deselect the desired part(s).

Release the PLAY/STOP button.

The LED indicators for the PLAY/STOP button will turn on, and the selected song/part(s) will start to play.



Example: To playback part 2 of song 3, press and hold the PLAY/STOP button, then press the DRAWBAR button, and then the BASS/GUITAR button.

3. Stopping song playback

Press the PLAY/STOP button again.

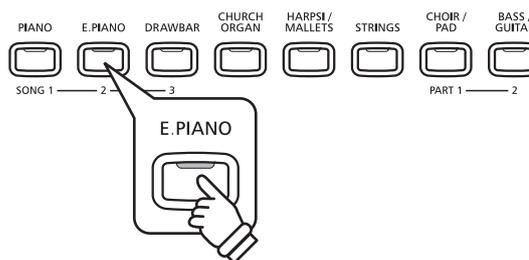
The LED indicators for the PLAY/STOP button will turn off, and the song will stop playing.



4. Exiting song play mode

Press a SOUND SELECTION button to exit song play mode.

The instrument will return to normal operation.



3 Erasing a part/song

This function is used to erase recorder parts that have been recorded incorrectly or songs that are no longer listened to. Once a part/song has been erased from memory it cannot be recovered.

■ Selecting a song, erasing a part

Press and hold the PLAY/STOP and REC buttons simultaneously.

The LED indicators for the PLAY/STOP and REC buttons will start to flash, and the LED indicators for the PIANO, E.PIANO, and DRAWBAR buttons will turn to indicate which songs have been recorded to.

While holding the PLAY/STOP and REC buttons:

Press one of the PIANO, E.PIANO, or DRAWBAR buttons to select the desired song.

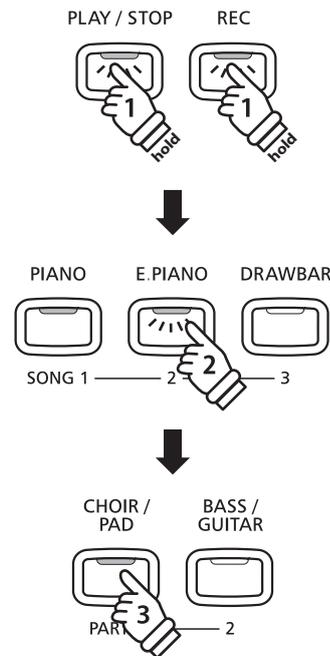
The LED indicator for the selected button will start to flash.

While holding the PLAY/STOP and REC buttons:

Press the CHOIR/PAD or BASS/GUITAR buttons to delete part 1 or part 2.

The LED indicator for the selected part will turn off to indicate that it has been erased.

- * Repeat the above steps to erase both parts.
- * When both parts of a song have been erased, the song is empty.

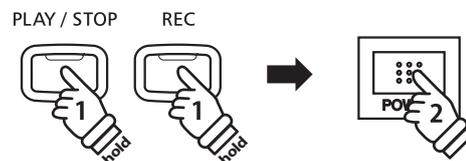


Example: To erase part 1 of song 2, press and hold the PLAY/STOP and REC buttons, then press the E.PIANO button, and then the CHOIR/PAD button.

■ Erasing all recorder songs from memory

Press and hold the PLAY/STOP and REC buttons simultaneously, then turn the instrument's power off/on.

All recorder songs stored in memory will be erased.



USB Operations

The CE220 digital piano allows recorder songs to be loaded from and saved to a USB memory device. It is also possible to play Standard MIDI File (SMF) songs, delete files, and format the USB memory device.

* The USB device should be formatted to use the 'FAT' or 'FAT32' filesystem.

1 USB Play

The USB Play function is used to play songs directly from a USB memory device, instead of loading the song data into one of the instrument's internal recorder memories. This function also supports Standard MIDI File (SMF) format songs.

1. Selecting the USB Play function

After connecting a USB memory device:

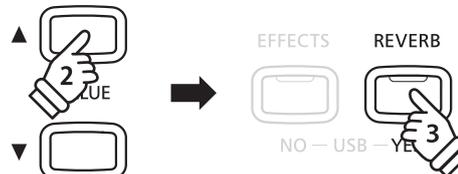
Press the USB button.

The LED indicator for the USB button will turn on, and the name of the current USB function will be shown in the LED display.



Press the ▲ or ▼ VALUE buttons to select the USB Play function, then press the YES (REVERB) button.

A number representing a song stored on the USB memory device will be shown in the LED display.



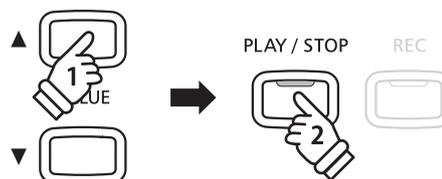
* CE220 format songs will be shown in the LCD display as U01, U02, etc.

* SMF format songs will be shown in the LCD display as 001, 002, etc.

2. Selecting and playing a song

Press the ▲ or ▼ VALUE buttons to select the desired song number, then press the PLAY/STOP button.

The LED indicator for the PLAY/STOP button will turn on, and the selected song will start to play.

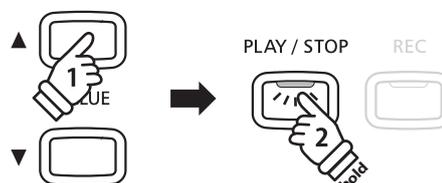


■ Chain Play mode

The Chain Play playback mode allows all songs stored on a USB memory device to be played automatically, in numerical order.

To activate Chain Play mode, press and hold the PLAY/STOP button when selecting a song, or during song playback.

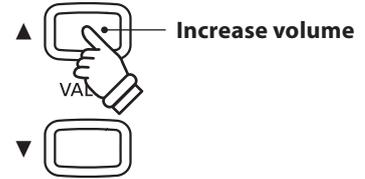
The LED indicator for the PLAY/STOP button will start to flash, to indicate that Chain Play mode is activated.



■ Adjusting the song playback volume

While a song is playing:

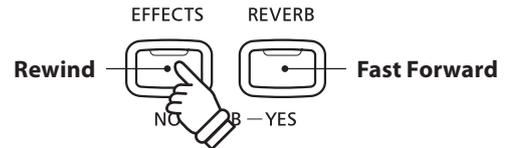
Press the ▲ or ▼ VALUE buttons to increase or decrease the song playback volume.



■ Rewind/Fast Forward a playing song

While a song is playing:

Press the NO (EFFECTS) or YES (REVERB) buttons to rewind or fast forward the playing position of the song.



3. Stopping song playback

While a song is playing:

Press the PLAY/STOP button.

The LED indicator for the PLAY/STOP button will turn off, the selected song will stop playing, and the song number selection screen will be shown in the LED display.



4. Exiting the USB Play function

Press the USB button.

The LED indicator for the USB button will turn off, and the instrument will return to normal operation.



2 USB Load

The USB Load function is used to load recorder songs stored on a USB memory device into one of the instrument's three song memories.

1. Selecting the USB Load function

After connecting a USB memory device:

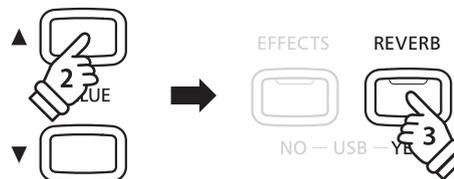
Press the USB button.

The LED indicator for the USB button will turn on, and the name of the current USB function will be shown in the LED display.



Press the ▲ or ▼ VALUE buttons to select the USB Load function, then press the YES (REVERB) button.

A number representing a song stored on the USB memory device will be shown in the LED display.



2. Selecting a song and song memory

Press the ▲ or ▼ VALUE buttons to select the desired song file stored on the USB memory device.

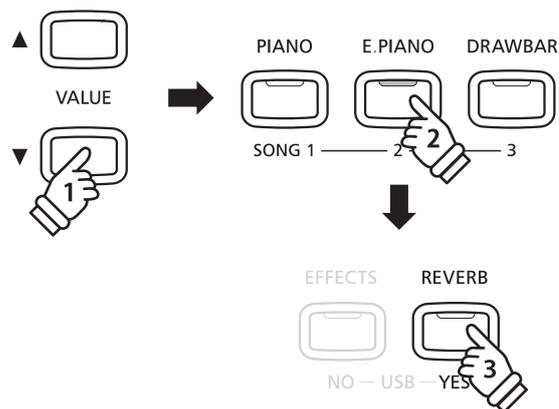


Next, press one of the PIANO, E.PIANO, or DRAWBAR buttons to select the desired song memory (1-3) to load the song into.

Finally, press the YES (REVERB) button to load the song.

- * Up to 3 different songs can be loaded and stored in internal memory.
- * Any existing recorder song data will be replaced by the loaded song.

After loading the song, please refer to the 'Playing back a song' instructions on page 28.



Example: To load song 'U03' from USB memory into song memory 2, press the E.PIANO button, then press the YES (REVERB) button.

3. Exiting the USB Load function

Press the USB button.

The LED indicator for the USB button will turn off, and the instrument will return to normal operation.



3 USB Save

The USB Save function is used to save recorder songs stored in one of the instrument's three song memories to a USB memory device.

1. Selecting the USB Save function

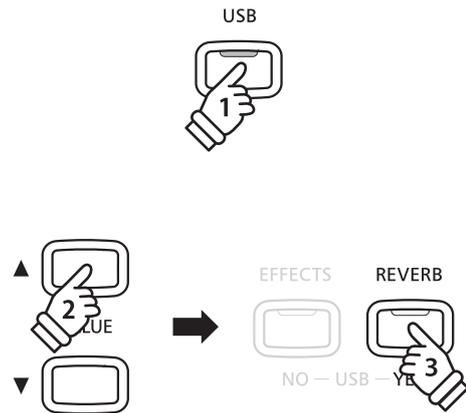
After connecting a USB memory device:

Press the USB button.

The LED indicator for the USB button will turn on, and the name of the current USB function will be shown in the LED display.



Press the ▲ or ▼ VALUE buttons to select the USB Save function, then press the YES (REVERB) button.



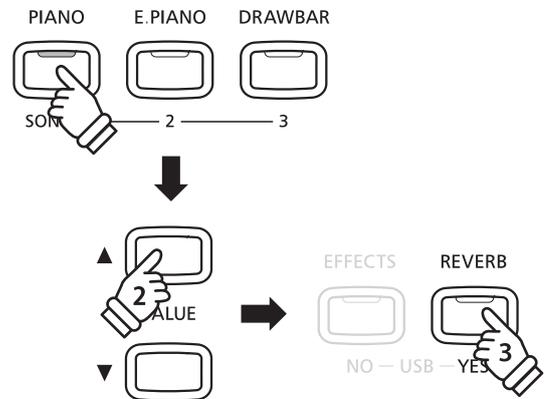
2. Selecting the song memory to save

Press one of the PIANO, E.PIANO, or DRAWBAR buttons to select the desired song memory (1-3) to save.

Next, press the ▲ or ▼ VALUE buttons to select the desired file number to which the song will be saved.



Finally, press the YES (REVERB) button to save the song.



- * The saved song file will be stored in the root folder of the USB memory device. It is not possible to store the song file in a different folder.
- * Up to 99 different songs can be saved to the USB memory device.
- * Renaming or re-saving the song file using a computer may prevent the song from being reloaded into the instrument's internal memory.

Example: To save song memory 1 to file 'U02' on the USB memory device, press the PIANO button, then press the VALUE buttons, and finally the YES (REVERB) button.

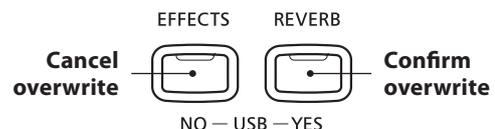
Overwriting a song file

If the specified song file already exists on the USB memory device:

A confirmation message will be shown in the LED display.



Press the YES (REVERB) button to confirm, or NO (EFFECTS) button to cancel the overwrite operation.



4 USB Delete

The USB Delete function is used to delete recorder songs stored on a USB memory device.

1. Selecting the USB Delete function

After connecting a USB memory device:

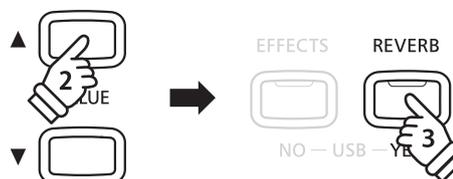
Press the USB button.

The LED indicator for the USB button will turn on, and the name of the current USB function will be shown in the LED display.



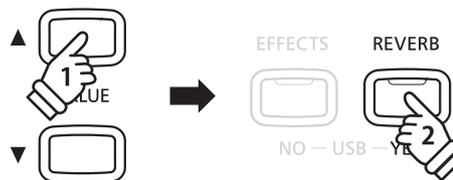
Press the ▲ or ▼ VALUE buttons to select the USB Delete function, then press the YES (REVERB) button.

A number representing a song stored on the USB memory device will be shown in the LED display.



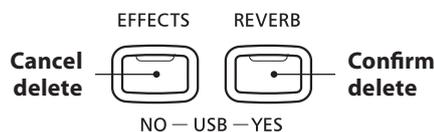
2. Selecting the song to be deleted

Press the ▲ or ▼ VALUE buttons to select the song file to be deleted, then press the YES (REVERB) button.



3. Confirming the song delete operation

A confirmation message will be shown in the LED display.



Press the YES (REVERB) button to confirm, or NO (EFFECTS) button to cancel the song delete operation.

4. Exiting the USB Delete function

Press the USB button.

The LED indicator for the USB button will turn off, and the instrument will return to normal operation.



5 USB Format

The USB Delete function is used to format the connected USB memory device, erasing all stored data.



The USB Format function will erase all data stored on the connected USB memory device. Exercise caution when using this function in order to prevent accidental data loss.

1. Selecting the USB Format function

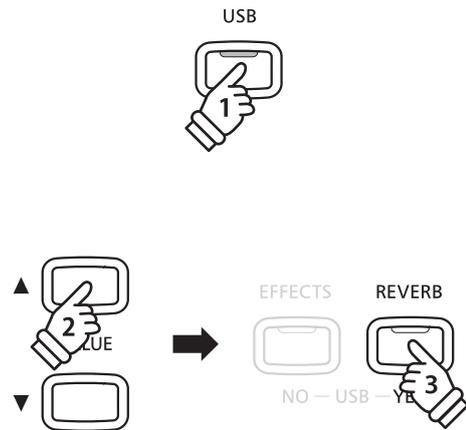
After connecting a USB memory device:

Press the USB button.

The LED indicator for the USB button will turn on, and the name of the current USB function will be shown in the LED display.



Press the ▲ or ▼ VALUE buttons to select the USB Format function, then press the YES (REVERB) button.

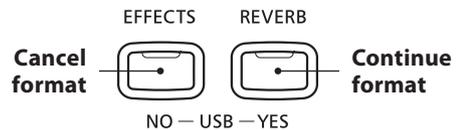


2. Confirming the format operation (initial confirmation)

An initial confirmation message will be shown in the LED display.



Press the YES (REVERB) button to continue, or NO (EFFECTS) button to cancel the format operation.

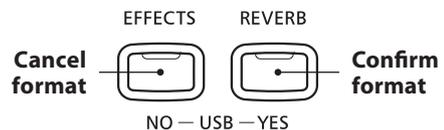


3. Confirming the format operation (final confirmation)

A final confirmation message will be shown in the LED display.



Press the YES (REVERB) button to confirm, or NO (EFFECTS) button to cancel the format operation.



4. Exiting the USB Format function

Press the USB button.

The LED indicator for the USB button will turn off, and the instrument will return to normal operation.



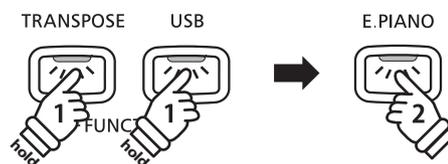
Function Buttons Overview

The Function buttons are used to select additional options and settings that control the CE220 digital piano. These buttons are also used to select MIDI functions, and to store/reset the instrument's user memory.

■ Selecting a function

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the desired function button.

The LED indicators for the three buttons will start to flash, and the name of the selected function will be shown in the LED display.



Example: To select the String Resonance function, press and hold the TRANSPOSE and USB buttons, then press the E.PIANO button.

■ Exiting a function

Press the TRANSPOSE, USB, or any one of the SOUND SELECTION buttons.

The LED indicators for the pressed buttons will turn off, and the instrument will return to normal operation.

■ Keyboard and Sound Settings

Function	Button	Description	Default
Touch	DEMO	Change the touch sensitivity of the keyboard.	Normal
Brilliance	PIANO MUSIC	Adjust the tonal brightness of the instrument's sound.	0
Tuning	VOICING	Adjust the pitch of the instrument in 0.5 Hz steps.	440 Hz
Damper Resonance	PIANO	Adjust the resonance that is heard when depressing the damper pedal.	5
String Resonance	E.PIANO	Adjust the resonance that is heard when notes are held.	5
Temperament	DRAWBAR	Adjust the tuning system to suit Renaissance and Baroque periods etc.	Equal
Lower Octave Shift	CHURCH ORGAN	Raise the pitch of the lower section in octave steps when using Split mode.	0
Lower Pedal	HARPSI/MALLETS	Specify whether the damper pedal sustains lower section notes in Split mode.	Off
Layer Octave Shift	STRINGS	Raise the pitch of the layered sound in octave steps when using Dual mode.	0
Layer Dynamics	CHOIR/PAD	Adjust the dynamic sensitivity of the layered sound when using Dual mode.	10
Damper Hold	BASS/GUITAR	Change the effect of the sustain pedal on organ, string, etc. sounds.	Off
User Memory	REC	Store/reset current panel settings as the default (power on) configuration.	-

■ MIDI Functions and Settings

Function	Button	Description	Default
MIDI Channel	EFFECTS	Specify the channel that is used to transmit/receive MIDI information.	1ch
Send PGM No.	REVERB	Send a MIDI program change number within the range of 1-128.	-
Local Control	SPLIT	Specify whether internal sounds will be heard when the keyboard is pressed.	On
Transmit PGM Chg.	TEMPO	Specify whether program information is sent when sounds are changed.	On
Multi-timbral	BEAT	Specify whether MIDI information can be received on more than one channel.	Off
Channel Mute	PLAY/STOP	Specify which channels (1-16) are activated to receive MIDI information.	Play all

* For a visual overview of the function button assignments, please refer to page 71.

Keyboard and Sound Settings

1 Touch

As with an acoustic piano, the CE220 digital piano produces a louder sound when the keys are struck with force, and a softer sound when the keys are played gently. The volume and tonal character change in relation to the strength and speed of playing – on a digital piano this system is referred to as ‘touch sensitivity’.

The Touch setting allows the touch sensitivity of the keyboard to be conveniently adjusted. There are six different preset touch types available, with the ‘User’ setting allowing performers to create their own unique touch type.

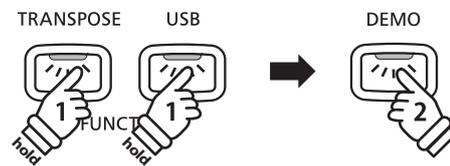
■ Touch type

Touch type	Description
Normal (default)	Reproduces the standard touch sensitivity of an acoustic piano.
Light 1	Requires less striking force to achieve a forte note. For players with a very delicate touch.
Light 2	A louder volume is produced even when playing with a soft touch. For those still developing finger strength. This curve is recommended for children and organ players.
Heavy 1	Requires a heavier touch to produce a loud volume. Ideally suited to those with stronger fingers.
Heavy 2	Requires considerably more striking force to achieve a loud volume.
Off	A constant volume is produced regardless of how hard the keys are struck. Ideally suited for sounds that have a fixed dynamic range such as organ and harpsichord.
User	A custom touch curve, created to suit an individual’s personal playing style.

1. Selecting the Touch setting

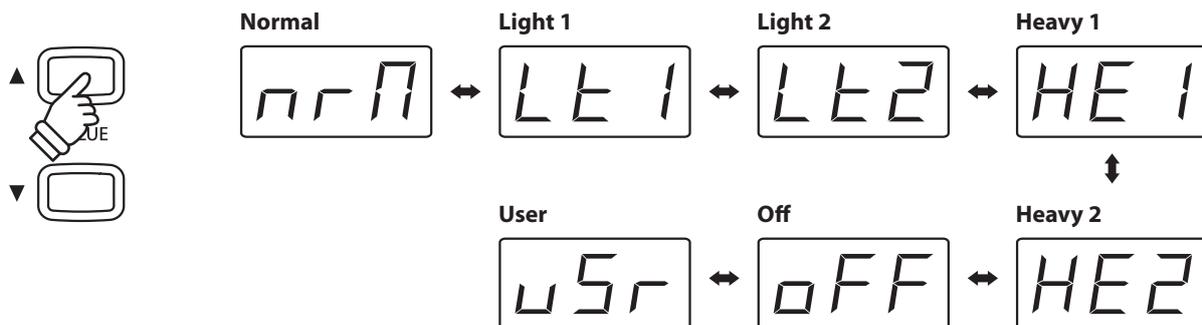
Press and hold the TRANSPOSE and USB buttons simultaneously, then press the DEMO button.

The LED indicator for the DEMO button will start to flash, and the current Touch setting will be shown in the LED display.



2. Changing the Touch type

Press the ▲ or ▼ VALUE buttons to cycle through the different touch types. The name of the touch type will be shown in the LED display.



* The Touch setting does not alter the physical weight of the keys.

* The Touch setting is global for all of the sounds. It is not possible to specify individual touch settings for each sound.

* The Touch setting will return to the default type of ‘Normal’ after the power is turned off. To change this default setting, and specify a preferred Touch type to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

1 Touch (cont.)

The 'User' touch type allows performers to personalise the responsiveness of the CE220 digital piano's keyboard to suit their unique, individual playing style.

1. Selecting the User touch setting

After selecting the Touch function:

Press the ▲ or ▼ VALUE buttons to select the User touch type.



2. Creating a User touch curve

Press the REC button.

A 'Play' prompt will be shown in the LED display.



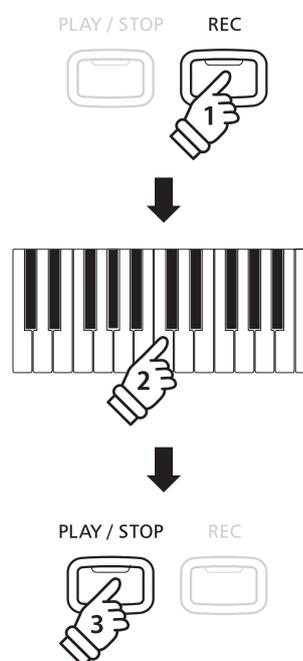
Play the piano dynamically from very soft to very loud, allowing the instrument to examine the personal playing technique.

* It may take several attempts to create an accurate User touch type. Reducing the master volume to the lowest position may help to create a more accurate User touch type.

Press the PLAY/STOP button.

After a brief pause, the new User touch type will be created and selected automatically.

* The User touch curve will remain stored in memory even after the power is turned off.



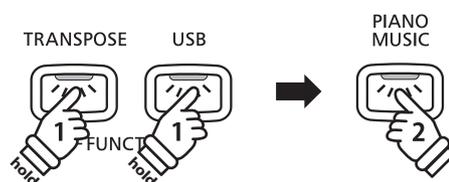
2 Brilliance

The Brilliance setting allows the tonal brightness of the CE220 digital piano's sound to be adjusted.

1. Selecting the Brilliance setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the PIANO MUSIC button.

The LED indicator for the PIANO MUSIC button will start to flash, and the current Brilliance setting will be shown in the LED display.



2. Adjusting the Brilliance value

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the Brightness setting.



* The Brightness value can be adjusted within the range -10 - +10.

Positive values will produce a brighter sound, while negative values will result in a more mellow tone.

* The Brilliance setting will return to the default value of 0 after the power is turned off.

* To change this default setting, and specify a preferred Brilliance value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

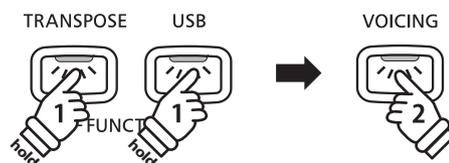
3 Tuning

The Tuning setting allows the overall pitch of the CE220 digital piano to be raised and lowered in 0.5 Hz steps, and may therefore prove useful when performing music with other instruments.

1. Selecting the Tuning setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the VOICING button.

The LED indicator for the VOICING button will start to flash, and the current Tuning setting will be shown in the LED display.



2. Adjusting the Tuning value

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the Tuning setting in 0.5 Hz steps.



* The Tuning value can be adjusted within the range of 427.0 - 453.0 Hz (shown as 27.0 - 53.0 in the LED display respectively).

* The Tuning setting will return to the default value of 440.0 (shown as 40.0 in the LED display) after the power is turned off.

* To change this default setting, and specify a preferred Tuning value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

4 Damper Resonance

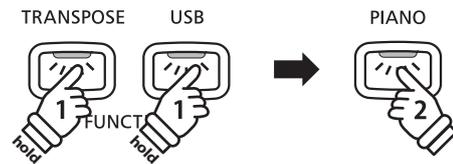
Depressing the sustain pedal of an acoustic piano raises all dampers, allowing the strings to vibrate freely. When a note or chord is played on the piano with the sustain pedal depressed, not only will the strings of the notes played vibrate, but also the strings of other notes, vibrating in sympathetic resonance.

The CE220 digital piano recreates this phenomenon, with the Damper Resonance setting allowing the volume of this resonance to be changed.

1. Selecting the Damper Resonance setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the PIANO button.

The LED indicator for the PIANO button will start to flash, and the current Damper Resonance setting will be shown in the LED display.



2. Adjusting the Damper Resonance value

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the Damper Resonance setting.



- * The Damper Resonance value can be adjusted within the range of 1 - 10, or disabled entirely (Off).
- * The Damper Resonance setting will return to the default value of 5 after the power is turned off.
- * To change this default setting, and specify a preferred Damper Resonance value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

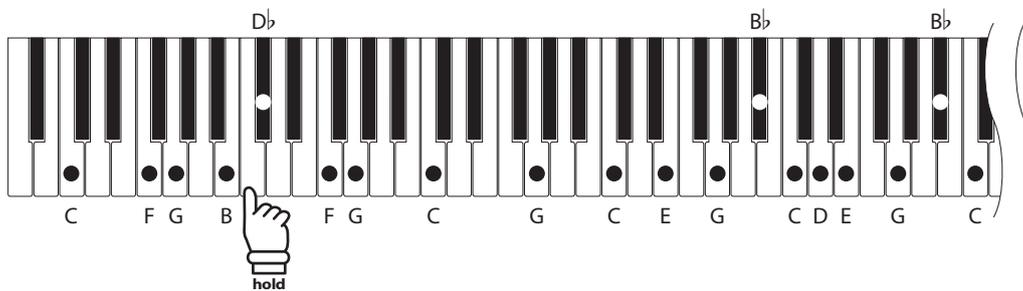
5 String Resonance

String Resonance refers to a phenomenon that exists in acoustic pianos whereby the strings of held notes resonate 'sympathetically' with other notes of the same harmonic series.

The CE220 digital piano recreates this phenomenon, with the String Resonance setting allowing the volume of this resonance to be adjusted.

■ Demonstrating String Resonance

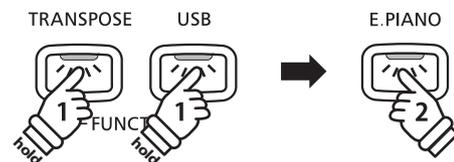
To experience the string resonance phenomenon, gently hold down the 'C' key as shown in the illustration below, then press any of the keys marked with a ● symbol. In addition to the sound of each note played, it should also be possible to hear the strings of the first 'C' key resonating 'sympathetically', thus demonstrating String Resonance.



1. Selecting the String Resonance setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the E.PIANO button.

The LED indicator for the E.PIANO button will start to flash, and the current String Resonance setting will be shown in the LED display.



2. Adjusting the String Resonance value

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the String Resonance setting.



- * The String Resonance value can be adjusted within the range of 1 - 10, or disabled entirely (Off).
- * The String Resonance setting will return to the default value of 5 after the power is turned off.
- * To change this default setting, and specify a preferred String Resonance value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

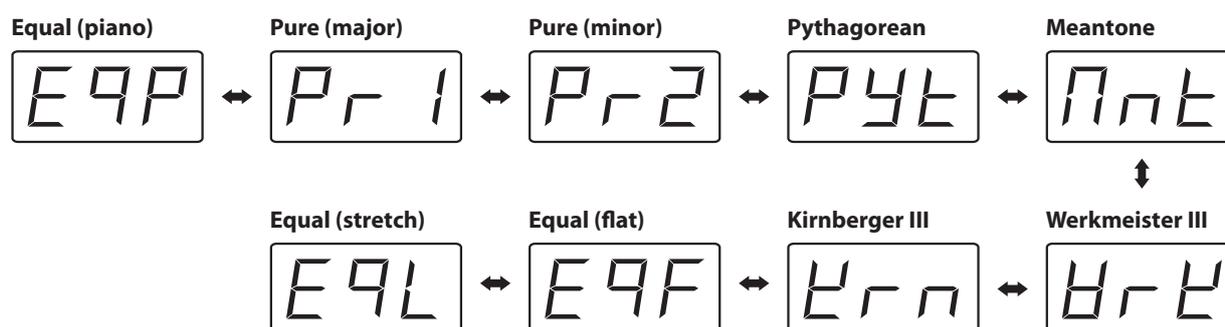
6 Temperament

The Temperament setting allows the tuning system used by the CE220 digital piano to be changed from the modern 'Equal Temperament' standard to one of the various musical temperaments popularised during the Renaissance and Baroque periods.

Available Temperament types

Temperament type	Description
Equal Temperament (piano) (Equal P.only)	This is the default temperament. When a piano sound is selected, the tuning will be stretched like an acoustic piano (equal temperament). * If any other type of sound is selected, the tuning will be set to equal temperament (flat).
Pure Temperament (major) (Pure Major) Pure Temperament (minor) (Pure Minor)	This temperament, which eliminates dissonances for thirds and fifths, is still popular in choral music because of its perfect harmony. Any key modulation will result in dissonances. * The key of the temperament, and major/minor setting must be correctly matched.
Pythagorean Temperament (Pythagorean)	This temperament, which uses mathematical ratios to eliminate dissonance for fifths, is very limited for use with chords, but produces very characteristic melodic lines.
Meantone Temperament (Meantone)	This temperament, which uses a mean between a major and minor whole tone to eliminate dissonance for thirds, was devised to eliminate the lack of consonances experienced with certain fifths for the Mersenne pure temperament. It produces chords that are more beautiful than those played with equal temperament.
Werckmeister III Temperament (Werkmeister) Kirnberger III Temperament (Kirnberger)	These two temperaments are placed in between Meantone and Pythagorean. For music with few accidentals, this temperament produces the beautiful chords of the mean tone, but as accidentals increase, the temperament produces the characteristic melodies of the Pythagorean temperament. It is used primarily for classical music written in the Baroque era to revive the original characteristics.
Equal Temperament (flat) (Equal Flat)	This is an 'unstretched' equal temperament that divides the scale into twelve equal semi-tones. It produces the same chordal intervals in all twelve keys, and has the advantage of limitless modulation of the key. However the tonality of each key becomes less characteristic and no chord is in pure consonance.
Equal Temperament (Equal Stretch)	This is the most popular piano temperament. The hearing ability of a human is uneven and is not as accurate with high frequency and low frequency as it is with the middle range. This temperament's tuning is stretched to compensate for this so the sound will be heard naturally to the ears. This 'stretched' equal temperament is a practical variation of the 'unstretched' equal temperament which was invented on a mathematical basis.

Available Temperament types

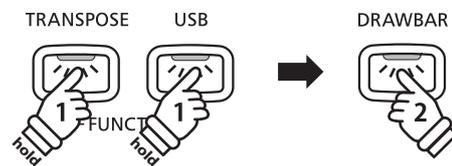


6 Temperament (cont.)

1. Selecting the Temperament setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the DRAWBAR button.

The LED indicator for the DRAWBAR button will start to flash, and the current Temperament setting will be shown in the LED display.



2. Changing the Temperament type

Press the ▲ or ▼ VALUE buttons to cycle through the different Temperament types.



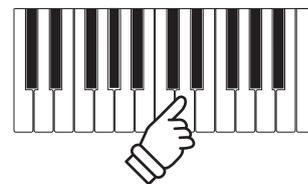
3. Changing the Key of Temperament

When using a temperament other than Equal temperament, the key signature of the piece must also be specified.

* This setting will only affect the 'balance' of the tuning system, the pitch of the keyboard will remain unchanged.

Press a key on the keyboard to specify the key of temperament.

The specified key of temperament will be shown in the LED display.



* The Temperament and Key of Temperament settings will return to the default type of Equal Piano, C after the power is turned off.

* To change these default settings, and specify a preferred Temperament type and Key of Temperament to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

Example: To specify 'D' as the key of temperament, press a 'D' key.

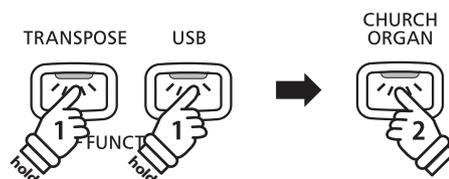
7 Lower Octave Shift

The Lower Octave Shift setting allows the pitch of the lower section when using Split mode to be raised in octave steps.

1. Selecting the Lower Octave Shift setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the CHURCH ORGAN button.

The LED indicator for the CHURCH ORGAN button will start to flash, and the current Lower Octave Shift setting will be shown in the LED display.



2. Adjusting the Lower Octave Shift value

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the Lower Octave Shift setting.



- * The Lower Octave Shift value can be adjusted within the range 0 - 3.
- * The Lower Octave Shift setting will return to the default value of 0 after the power is turned off.
- * To change this default setting, and specify a preferred Lower Octave Shift value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

8 Lower Pedal On/Off

The Lower Pedal setting determines whether the sustain pedal will affect (i.e. sustain) the lower section sound when using Split mode.

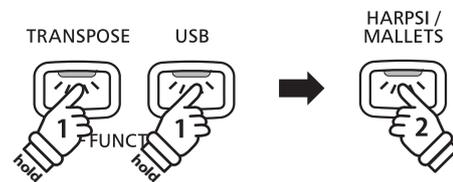
■ Lower Pedal setting

Lower Pedal	Explanation
On	In Split mode, lower section sounds will be sustained when the sustain pedal is pressed.
Off (default)	In Split mode, lower section sounds will not be sustained when the sustain pedal is pressed.

1. Selecting the Lower Pedal setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the HARPSI/MALLETS button.

The LED indicator for the HARPSI/MALLETS button will start to flash, and the current Lower Pedal setting will be shown in the LED display.



2. Changing the Lower Pedal setting

Press the ▲ or ▼ VALUE buttons to change the Lower Pedal setting.



* The Lower Pedal setting will return to the default value of Off after the power is turned off.

* To change this default setting, and specify the preferred Lower Pedal setting to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

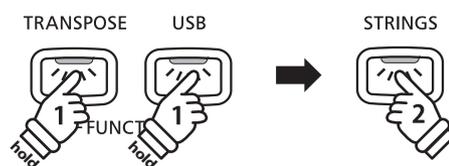
9 Layer Octave Shift

The Layer Octave Shift setting allows the pitch of the layered sound when using Dual mode to be raised or lowered in octave steps.

1. Selecting the Layer Octave Shift setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the STRINGS button.

The LED indicator for the STRINGS button will start to flash, and the current Layer Octave Shift setting will be shown in the LED display.



2. Adjusting the Layer Octave Shift setting

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the Layer Octave Shift setting.



- * The Layer Octave Shift value can be adjusted within the range -2 - 2.
- * The Layer Octave Shift setting will return to the default value of 0 after the power is turned off.
- * To change this default setting, and specify a preferred Layer Octave Shift value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

10 Layer Dynamics

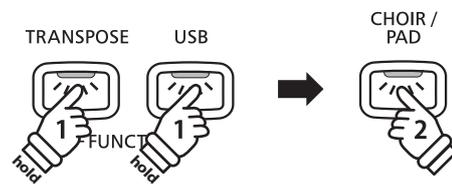
When using Dual mode, sometimes simply adjusting the volume balance between the two layered sounds is not enough to create the desired sound character, especially if both sounds are very dynamic. Layering two equally dynamic sounds can prove difficult to control and play comfortably.

The Layer Dynamics Function allows the dynamic sensitivity of the layered sound to be reduced, in order to improve the blend between the two combined sounds. In addition to reducing the volume of the layered sound, limiting its dynamic sensitivity also allows the layered sound to be controlled more easily in relation to the main sound.

1. Selecting the Layer Dynamics setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the CHOIR/PAD button.

The LED indicator for the CHOIR/PAD button will start to flash, and the current Layer Dynamics setting will be shown in the LED display.



2. Adjusting the Layer Dynamics setting

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the Layer Octave Shift setting.



- * The Layer Dynamics value can be adjusted within the range 1 - 10.
- * The Layer Dynamics setting will return to the default value of 10 after the power is turned off.
- * To change this default setting, and specify a preferred Layer Dynamics value to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

11 Damper Hold On/Off

The Damper Hold setting determines whether sounds such as organ or strings should be sustained indefinitely when the sustain (damper) pedal is depressed, or whether these sounds should gradually decay.

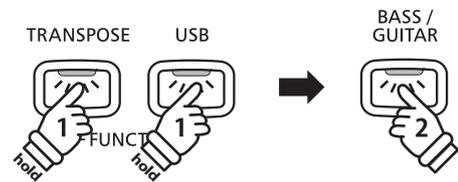
■ Damper Hold setting

Damper Hold	Explanation
On	Sounds such as organ, strings, etc. will be sustained indefinitely when the sustain pedal is pressed.
Off (default)	Sounds such as organ, strings, etc. will be sustained with a gradual decay when the sustain pedal is pressed.

1. Selecting the Damper Hold setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the BASS/GUITAR button.

The LED indicator for the BASS/GUITAR button will start to flash, and the current Damper Hold setting will be shown in the LED display.



2. Changing the Damper Hold setting

Press the ▲ or ▼ VALUE buttons to change the Damper Hold setting.



* The Damper Hold setting will return to the default value of Off after the power is turned off.

* To change this default setting, and specify the preferred Damper Hold setting to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

MIDI Functions and Settings

MIDI Overview

The term MIDI is an acronym for Musical Instrument Digital Interface, an international standard for connecting musical instruments, computers, and other devices to allow the exchange of performance data.

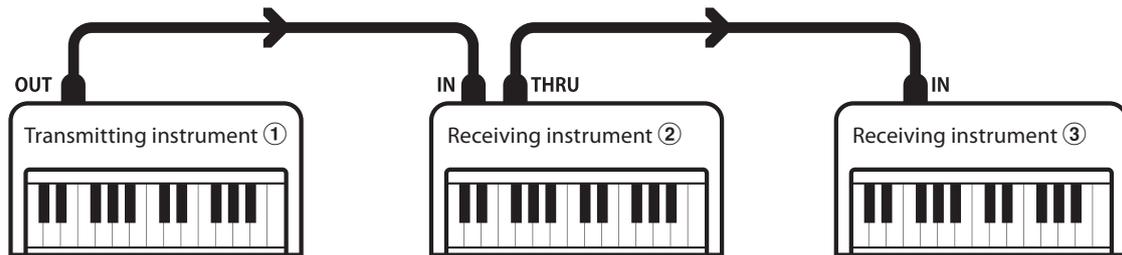
■ MIDI terminals

MIDI terminal	Function
MIDI IN	Receiving note, program change, and other data.
MIDI OUT	Sending note, program change, and other data.

■ MIDI channels

MIDI uses channels to exchange data back and forth between MIDI devices. There are receive (MIDI IN) and transmit (MIDI OUT) channels. Most musical instruments or devices with MIDI functions are equipped with both MIDI IN and OUT jacks and are capable of transmitting and receiving data via MIDI. The receive channels are used to receive data from another MIDI device and the transmit channels are used to transmit data to another MIDI device.

The illustration below shows three musical instruments, connected together using MIDI.



Transmitting instrument ① sends transmit channel and keyboard information to receiving instruments ②/③.

The information arrives at the receiving instruments ②/③.

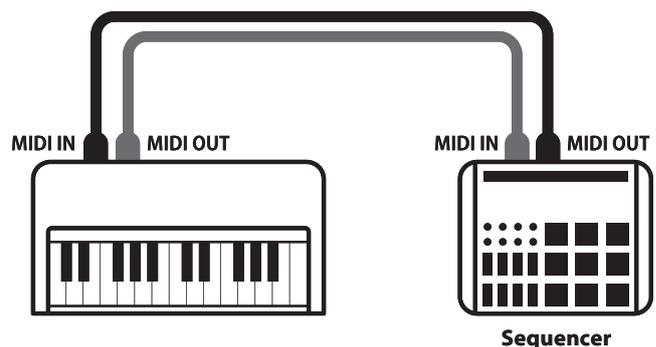
Receiving instruments ②/③ will respond to MIDI data that is sent if their receive channel is the same as the transmit channel of the transmitting instrument ①.

If the channels do not match, then the receiving instruments ②/③ will not respond to any data that is sent.

For both receiving and transmitting, channels 1-16 can be used.

■ Recording/playing with a sequencer

When connected to a sequencer, the CE220 digital piano can be used to record and playback multi-track songs, with separate sounds playing simultaneously on each channel.



■ MIDI functions

The CE220 digital piano supports the following MIDI functions:

Transmit/receive note information

Transmit/receive note information to/from a MIDI-connected musical instrument or device.

Transmit/receive channel settings

Specify transmit/receive channels within the range of 1 to 16.

Transmit/receive exclusive data

Transmit/receive front panel or menu function settings as exclusive data.

Multi-timbral mode setting

Receive multiple channel MIDI data from a MIDI-connected musical instrument or device.

Transmit/receive Program Change number

Transmit/receive program change data to/from a MIDI-connected musical instrument or device.

Transmit/receive pedal data

Transmit/receive sustain, sostenuto, and soft pedal data to/from a MIDI-connected musical instrument or device.

Receive volume data

Receive MIDI volume data sent from a MIDI-connected musical instrument or device.

* Please refer to the 'MIDI Implementation Chart' on page 70 for further information regarding the MIDI capabilities of the CE220 digital piano.

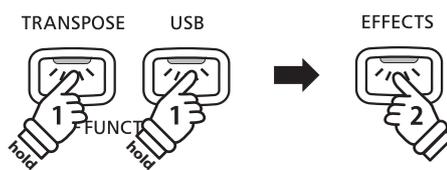
1 MIDI Channel (transmit/receive)

The MIDI Channel setting allows the transmit/receive channel to be specified. The selected channel will function as both the transmit and receive channel (separate transmit/receive channels cannot be specified).

1. Selecting the MIDI Channel setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the EFFECTS button.

The LED indicator for the EFFECTS button will start to flash, and the current MIDI Channel setting will be shown in the LED display.



2. Adjusting the MIDI Channel setting

Press the ▲ or ▼ VALUE buttons to increase or decrease the value of the MIDI Channel setting.



* The MIDI Channel value can be adjusted within the range 1 - 16.

* The MIDI Channel will return to the default setting of 1 after the power is turned off.

* To change this default setting, and specify a preferred MIDI Channel to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

2 Send Program Change Number

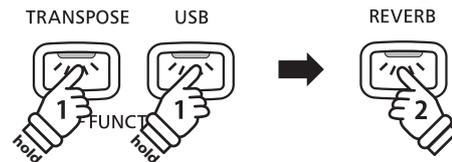
The Send Program Change Number function is used to send a Program Change Number (1-128) to the connected MIDI device.

* Please refer to the 'Program Change Number List' on page 68.

1. Selecting the Send Program Change Number function

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the REVERB button.

The LED indicator for the REVERB button will start to flash, and the Send Program Change Number function will be shown in the LED display.



2. Selecting the Program Change Number to send

Press the ▲ or ▼ VALUE buttons to select the Program Change Number to be sent.



* The Program Change Number can be set within the range of 1-128.

3. Sending the Program Change Number

Press the ▲ and ▼ VALUE simultaneously to send the selected Program Change Number.

A confirmation message will be shown in the LCD display to indicate that the Program Change Number has been sent.



3 Local Control On/Off

The Local Control setting determines whether the instrument will play an internal sound when the keys are pressed. This setting is useful when using the CE220 digital piano to control an external MIDI device.

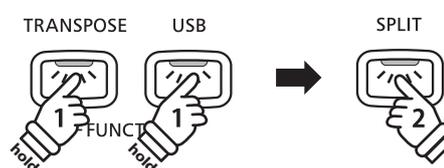
Local Control setting

Local Control	Explanation
On (default)	The instrument will play an internal sound and transmit information to an external MIDI device.
Off	The instrument will transmit information to an external MIDI device only.

1. Selecting the Local Control setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the SPLIT button.

The LED indicator for the SPLIT button will start to flash, and the current Local Control setting will be shown in the LED display.



2. Changing the Local Control setting

Press the ▲ or ▼ VALUE buttons to change the Local Control setting.



* The Local Control setting will return to the default setting of On after the power is turned off.

* To change this default setting, and specify the preferred Local Control setting to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

4 Transmit MIDI Program Change On/Off

The Transmit Program Change Number setting determines whether the CE220 digital piano will transmit program change information when the SOUND SELECTION buttons are pressed.

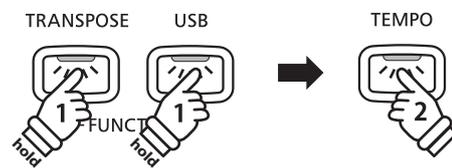
■ Transmit MIDI Program Change setting

Transmit PGM#	Explanation
On (default)	The instrument will transmit program change numbers when changing sounds.
Off	The instrument will NOT transmit program change numbers when changing sounds.

1. Selecting the Transmit MIDI Program Change setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the TEMPO button.

The LED indicator for the TEMPO button will start to flash, and the current Transmit MIDI Program Change setting will be shown in the LED display.



2. Changing the Transmit MIDI Program Change setting

Press the ▲ or ▼ VALUE buttons to change the Local Control setting.



* The Transmit MIDI Program Change setting will return to the default setting of On after the power is turned off.

* To change this default setting, and specify the preferred Transmit MIDI Program Change setting to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

5 Multi-timbral Mode On/Off

The Multi-timbral Mode setting determines whether the CE220 digital piano is able to receive MIDI information on more than one MIDI channel simultaneously. This allows the instrument to play back multi-track, multi-timbral performance data sent from an external MIDI device.

Multi-timbral Mode setting

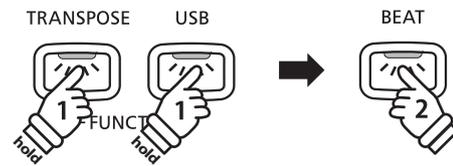
Multi-timbral	Explanation
On	Multi-timbral mode enabled.*
Off (default)	Multi-timbral mode disabled.

* Please refer to the 'Program Change Number List' on page 68.

1. Selecting the Multi-timbral Mode setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the BEAT button.

The LED indicator for the BEAT button will start to flash, and the current Multi-timbral Mode setting will be shown in the LED display.



2. Changing the Multi-timbral Mode setting

Press the ▲ or ▼ VALUE buttons to change the Multi-timbral Mode setting.



* The Multi-timbral Mode setting will return to the default setting of Off after the power is turned off.

* To change this default setting, and specify the preferred Multi-timbral Mode to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

6 Channel Mute On/Off

The Channel Mute setting determines which MIDI channels (1-16) are activated to receive MIDI information when Multi-timbral mode is set to On. Each channel can be set to mute or play individually.

* This setting is available only when Multi-timbral mode is set to On.

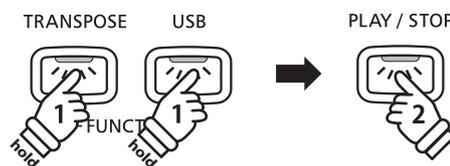
■ Channel Mute setting

Channel Mute	Explanation
On	Instrument will not respond to MIDI events received on specified channel (mute).
Off (default)	Instrument will respond to MIDI events received on specified channel (play).

1. Selecting the Channel Mute setting

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the PLAY/STOP button.

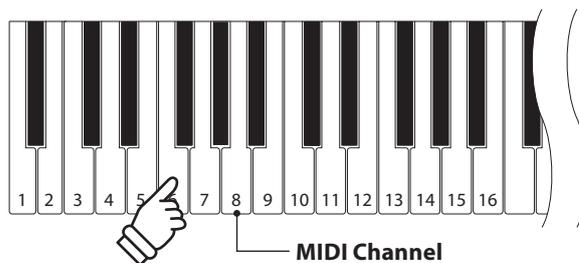
The LED indicator for the PLAY/STOP button will start to flash, and the current Channel Mute setting for channel 1 will be shown in the LED display.



2. Selecting the MIDI channel to mute/play

Press one of the 16 lower-most white keys to select the desired MIDI channel to mute/play.

The selected channel and mute/play setting will be shown in the LED display.



3. Changing the Channel Mute setting

Press the ▲ or ▼ VALUE buttons to change the Channel Mute setting.



* The Channel Mute setting will return to the default setting of On after the power is turned off.

* To change this default setting, and specify the preferred Channel Mute setting to be selected automatically when the instrument is turned on, please use the User Memory function explained on page 58.

USB MIDI (USB to Host connector)

The CE220 digital piano features a 'USB to Host' type connector, allowing the instrument to be connected to a computer and utilised as a MIDI device. Depending on the type of computer and operating system installed, additional driver software may be required for USB MIDI communication to function correctly.

■ USB MIDI driver

Operating System	USB MIDI Driver Support
Windows ME Windows XP (no SP, SP1, SP2, SP3) Windows XP 64-bit Windows Vista (SP1, SP2) Windows Vista 64-bit (SP1, SP2) Windows 7 (SP1) Windows 7 64-bit	<p>Additional USB MIDI driver software NOT required.</p> <p>The standard (built-in) Windows USB MIDI driver will be installed automatically when the instrument is connected to the computer.</p> <p>* After driver installation, ensure that the 'USB Audio Device' (Windows ME/Windows XP) or 'USB-MIDI' (Windows Vista/Windows 7) device is correctly selected in the application software.</p>
Windows 98 SE Windows 2000 Windows Vista (no SP)	<p>Additional USB MIDI driver software required.</p> <p>Please download the USB MIDI driver from the KAWAI website: → http://www.kawai.co.jp/english</p> <p>* After driver installation, ensure that the 'KAWAI USB MIDI' device is correctly selected in the application software.</p>
Windows Vista 64-bit (no SP)	<p>USB MIDI is not supported.</p> <p>Please upgrade to service pack 1 or service pack 2.</p>
Mac OS X	<p>No additional USB MIDI driver software required.</p> <p>The standard (built-in) Mac OS X USB MIDI driver will be installed automatically when the instrument is connected to the computer.</p>
Mac OS 9	<p>USB MIDI is not supported.</p> <p>Please use the standard MIDI IN/OUT connectors.</p>

■ USB MIDI information

- If the instrument's MIDI IN/OUT jacks and USB MIDI port are both connected simultaneously, the USB MIDI port will be given priority.
- Ensure that the instrument is turned OFF before attempting to connect the USB MIDI cable.
- When connecting the instrument to a computer using the USB MIDI port, there may be a short delay before communications begin.
- If the instrument is connected to a computer via a USB hub and USB MIDI communication becomes unreliable/unstable, please connect the USB MIDI cable directly to the one of the computer's USB ports.
- Disconnecting the USB MIDI cable suddenly, or turning the instrument on/off while using USB MIDI may cause computer instability in the following situations:
 - while installing the USB MIDI driver
 - while starting up the computer
 - while MIDI applications are performing tasks
 - while the computer is in energy saver mode
- If there are any further problems experienced with USB MIDI communication while the instrument is connected, please double-check all connections and relevant MIDI settings in the computer's operating system.

* 'MIDI' is a registered trademark of the Association of Manufacturers of Electronic Instruments (AMEI).

* 'Windows' is registered trademark of Microsoft Corporation.

* 'Macintosh' is registered trademark of Apple Computer, Inc.

* Other company names and product names mentioned referenced herein may be registered trademarks or trademarks of respective owners.

User Memory

The User Memory function allows preferred panel settings to be stored in the CE220 digital piano's memory, and automatically recalled as the default settings when the instrument is turned on.

■ User Memory

Settings stored in User Memory

Selected sound type

Effects, Reverb, and Voicing setting

Transpose setting

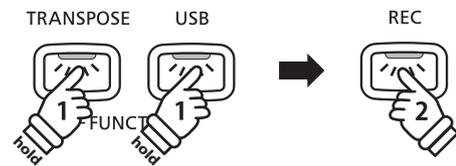
Tempo, beat, and volume of the Metronome

Function Button settings

1. Selecting the User Memory function

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the REC button.

The LED indicator for the REC button will start to flash, and the User Memory function will be shown in the LED display.



2. Storing the current panel settings to User Memory

Press the REC button to store the current panel settings to User Memory.

A confirmation message will be shown in the LED display.



■ Resetting the User Memory

After storing preferred settings to User Memory:

Press and hold the TRANSPOSE and USB buttons simultaneously, then press the REC button.

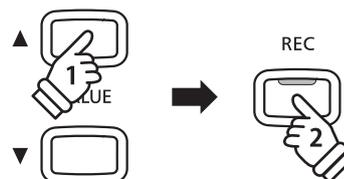
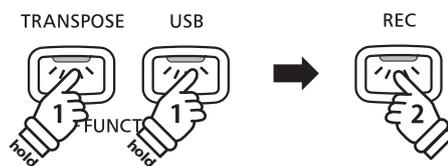
The LED indicator for the REC button will start to flash, and the User Memory function will be shown in the LED display.

Press the ▲ or ▼ VALUE buttons to select the 'Reset' function, then press the REC button.



All settings stored in User Memory will be reset to the factory default values.

* This function will not clear recorder songs stored in internal memory.



Assembly Instructions



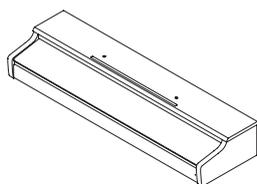
Please read these assembly instructions thoroughly before attempting to assemble the CE220 digital piano.

Please ensure that two or more people work on assembling the CE220 digital piano, especially when lifting the main body of the instrument onto the stand in step 3.

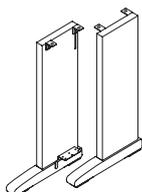
■ Included parts

Before attempting to assemble the CE220 digital piano, ensure that all parts below are included.

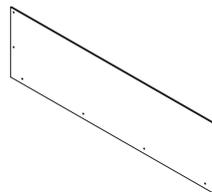
A Phillips-head screwdriver (not included) will also be required in order to assemble the instrument.



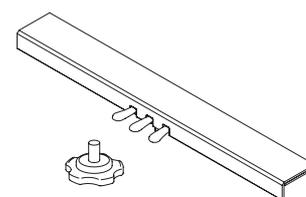
① Main body x 1



② Side panel x 2
(left, right)



③ Back board x 1



④ Pedal board x 1
Pedal support bolt x 1



⑤ Screw (with flat washer and spring washer) x 4



⑥ Tapping screw (long, black) x 4



⑦ Tapping screw (mid, black) x 4



⑧ Tapping screw (short, silver) x 4



⑨ Power cable x 1

1. Assembling the side panels ②, pedal board, and pedal support bolt ④

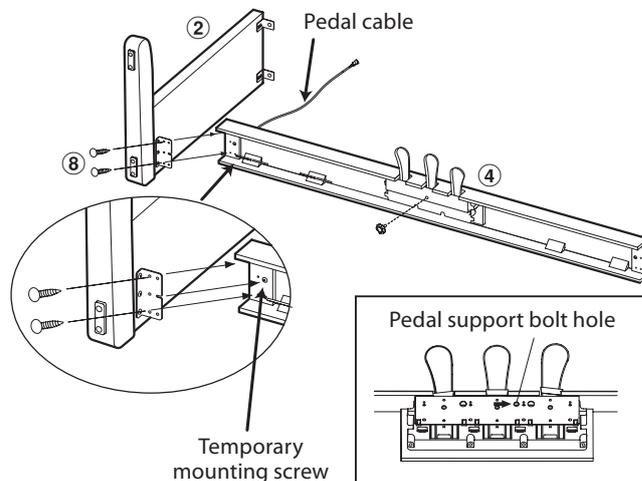
Unfasten and extend the pedal connection cable attached to the bottom of the pedal board ④.

Insert the pedal support bolt approximately 1 cm into the pedal board, using the hole shown in the diagram.

Attach the pedal board ④ to the left and right side panels ② using the temporary mounting screws located on either end of the pedal board. Ensure that the correct side panel is used for the left and right side.

Ensure that the pedal board and side panels make close contact, and that there are no large gaps between the assembled parts.

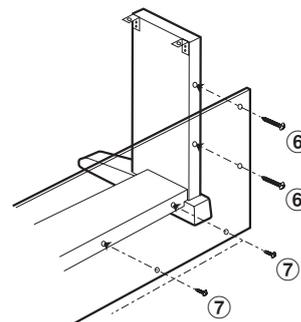
Insert the four short silver tapping screws ⑧ into the holes as shown, and securely fasten the pedal board to the left and right side panels.



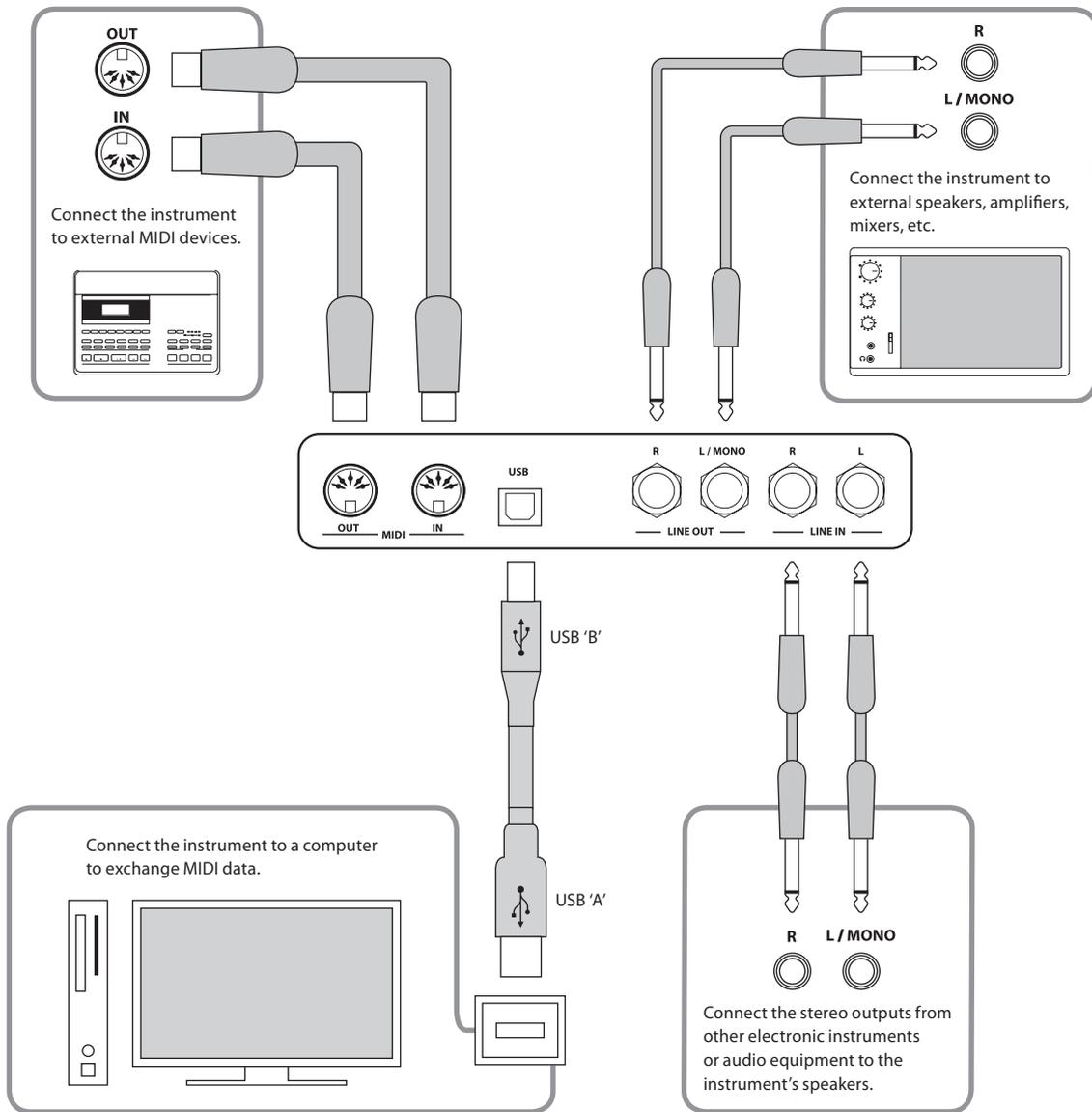
2. Attaching the back board ③

Allow the assembled pedal board and side panels to stand upright (vertically) on the floor.

Fasten the back board ③ to the left and right side panels using the four long black tapping screws ⑥, leaving a tightening allowance of approximately 1-2 mm. Then attach the bottom of the back board to the pedal board using the four mid-length black tapping screws ⑦.



Connecting to Other Devices



- Before connecting the CE220 digital piano to other devices, ensure that the power to both the instrument and the other device is turned off. If connections are established while the power is turned on, extraneous noise that can damage the CE220 digital piano may activate the instrument's amplifier protection circuit, preventing any sound from being produced. If this occurs, turn the power off and then on again to reset the amplifier protection circuit.
- Do not connect the LINE IN and LINE OUT jacks of the CE220 digital piano together with a cable. An audio loop (oscillation sound) will occur, resulting in damage to the unit.

■ MIDI IN/OUT jacks

These jacks are used to connect the CE220 digital piano to external MIDI devices, and also to a computer with a MIDI interface or USB MIDI cable.

■ USB to Host port ('B' type)

This USB port is used to connect the CE220 digital piano to a computer using an inexpensive USB cable. When connected, the instrument can be used as a standard MIDI device, allowing it to send a receive MIDI data. Connect a 'B' type USB connector to the instrument, and an 'A' type USB connector to the computer.

■ USB device information

- The 'USB to Device' functionality of the CE220 digital piano conforms to USB2.0 Hi-Speed standards. Older USB devices can still be used, however data transfer speed will be limited to the maximum transfer speed of the device.
- The 'USB to Device' port is intended for connecting USB memory devices, however USB floppy drive devices can also be used to save recorder songs stored in internal memory, or play SMF song files.
- It may be necessary to format the USB memory device before it can be used with the CE220 digital piano. If so, please refer to the USB Format function instructions on page 81. Formatting the device will erase all data.
- Avoid removing the USB memory device while data is being loaded or saved, files are being renamed or deleted, or the device is being formatted.
- Other USB devices, such as computer mice, keyboards, or battery chargers etc. cannot be used with this instrument.

■ LINE OUT jacks (1/4" phone jack)

These jacks provide stereo output of the instrument's sound to external speakers, amplifiers, mixers, recording devices, and similar equipment. Mono signals will be output only if a cable is connected to the L/MONO jack.

■ LINE IN jacks (1/4" phone jack)

These jacks are used to connect a pair of stereo outputs from other electronic instruments or audio equipment to the instrument's speakers. The audio signal from these jacks bypasses the MASTER VOLUME control.

■ Troubleshooting

	Problem	Possible Cause and Solution	Page no.
Power	The instrument does not turn on.	Check that the AC power cable is firmly attached to the instrument, and connected to an AC outlet.	p. 12
Sound	The instrument is turned on, however no sound is produced when the keys are played.	Check that the VOLUME slider is not set to the lowest position.	p. 12
		Check that a pair of headphones (or headphone adaptor plug) are not connected to the PHONES jacks.	p. 12
		Check that the 'Local Control' MIDI setting is set to 'On'.	p. 53
	The sound distorts when playing at very loud volume levels.	Check that the VOLUME slider is set to an appropriate level, reducing the volume if excessive distortion is heard.	p. 12
Pedals	The pedals are unreliable or do not function at all.	Check that the pedal cable is firmly connected to the instrument.	p. 60
	When depressing a pedal, the pedal board flexes and is not firm.	Check that the pedal support bolt is fully extended.	p. 13
USB	The USB Save function does not appear to operate correctly.	Check that the USB memory device is correctly formatted to use the FAT/FAT32 filesystem. Format the USB memory device using the USB Format function.	p. 35

Demo and Piano Music Song Lists

■ Demo song list

No.	Sound Name	Song Title	Composer
PIANO			
1	Concert Grand	Original	Kawai
2	Concert Grand 2	Petit chien	F. F. Chopin
3	Studio Grand	Original	Kawai
E.PIANO			
4	Classic E.Piano	Original	Kawai
5	Modern E.P.	Original	Kawai
DRAWBAR			
6	Jazz Organ	Original	Kawai
7	Drawbar Organ	Original	Kawai
CHURCH ORGAN			
8	Church Organ	Chorale Prelude "Wachet auf, ruft uns die Stimme"	J. S. Bach
9	Diapason	Wohl mir, daß ich Jesum habe	J. S. Bach
HARPSI & MALLETS			
10	Harpsichord	French Suite No.6	J. S. Bach
11	Harpsichord Oct.	Prelude in Ab	J. S. Bach
12	Vibraphone	Original	Kawai
STRINGS			
13	String Ensemble	Original	Kawai
14	Slow Strings	Original	Kawai
CHOIR & PAD			
15	Choir	Londonderry Air	Irish folk song
16	New Age Pad	Original	Kawai
17	Atmosphere	Original	Kawai
BASS & GUITAR			
18	Wood Bass	Original	Kawai

■ Piano Music song list

No.	Song Title	Composer
1	Tambourin	J. P. Rameau
2	The Harmonious Blacksmith	G. F. Handel
3	Menuett BWV.Anh.114	J. S. Bach
4	Menuett BWV.Anh.115	J. S. Bach
5	Menuett BWV.Anh.116	J. S. Bach
6	Le Coucou	L. C. Daquin
7	Gavotte	F. J. Gossec
8	Menuett	L. Boccherini
9	Thema und Variationen	W. A. Mozart
10	Türkischer Marsch	W. A. Mozart
11	Menuett	W. A. Mozart
12	Sonate für Klavier No.14 "Mondschein"	L. v. Beethoven
13	Sonate für Klavier No.8 "Pathétique"	L. v. Beethoven
14	Für Elise	L. v. Beethoven
15	Rondo favori	J. N. Hummel
16	Impromptu op.90-4	F. P. Schubert
17	Moments musicaux op.94-3	F. P. Schubert
18	Entr'acte	F. P. Schubert
19	Impromptu op.142-3	F. P. Schubert
20	Auf Flügeln des Gesanges	F. Mendelssohn
21	Frühlingslied	F. Mendelssohn
22	Rondo Capriccioso	F. Mendelssohn
23	Chanson de l'adieu	F. F. Chopin
24	Raindrop	F. F. Chopin
25	Petit chien	F. F. Chopin
26	Nocturne No.2	F. F. Chopin
27	Fantaisie-Impromptu	F. F. Chopin
28	Polonaise No.3 "Militaire"	F. F. Chopin
29	Polonaise No.6 "Héroïque"	F. F. Chopin

Drum Rhythm List

No.	Rhythm Name
1	8 Beat 1
2	8 Beat 2
3	8 Beat 3
4	16 Beat 1
5	16 Beat 2
6	16 Beat 3
7	16 Beat 4
8	16 Beat 5
9	16 Beat 6
10	Rock Beat 1
11	Rock Beat 2
12	Rock Beat 3
13	Hard Rock
14	Heavy Beat
15	Surf Rock
16	2nd Line
17	50 Ways
18	Ballad 1
19	Ballad 2
20	Ballad 3
21	Ballad 4
22	Ballad 5
23	Light Ride 1
24	Light Ride 2
25	Smooth Beat
26	Rim Beat
27	Slow Jam
28	Pop 1
29	Pop 2
30	Electro Pop 1
31	Electro Pop 2
32	Ride Beat 1
33	Ride Beat 2
34	Ride Beat 3
35	Ride Beat 4
36	Slip Beat
37	Jazz Rock
38	Funky Beat 1
39	Funky Beat 2
40	Funky Beat 3
41	Funk 1
42	Funk 2
43	Funk 3
44	Funk Shuffle 1
45	Funk Shuffle 2
46	Buzz Beat
47	Disco 1
48	Disco 2
49	Hip Hop 1
50	Hip Hop 2

No.	Rhythm Name
51	Hip Hop 3
52	Hip Hop 4
53	Techno 1
54	Techno 2
55	Techno 3
56	Heavy Techno
57	8 Shuffle 1
58	8 Shuffle 2
59	8 Shuffle 3
60	Boogie
61	16 Shuffle 1
62	16 Shuffle 2
63	16 Shuffle 3
64	T Shuffle
65	Triplet 1
66	Triplet 2
67	Triplet 3
68	Triplet 4
69	Triplet Ballad 1
70	Triplet Ballad 2
71	Triplet Ballad 3
72	Motown 1
73	Motown 2
74	Ride Swing
75	H.H. Swing
76	Jazz Waltz 1
77	Jazz Waltz 2
78	5/4 Swing
79	Tom Swing
80	Fast 4 Beat
81	H.H. Bossa Nova
82	Ride Bossa Nova
83	Beguine
84	Mambo
85	Cha Cha
86	Samba
87	Light Samba
88	Surdo Samba
89	Latin Groove
90	Afro Cuban
91	Songo
92	Bembe
93	African Bembe
94	Merenge
95	Reggae
96	Tango
97	Habanera
98	Waltz
99	Ragtime
100	Country & Western

Specifications

■ Kawai CE220 digital piano

Keyboard	88 wooden keys AWA Grand Pro II
Sound Source	Progressive Harmonic Imaging™ (PHI), 88-key piano sampling
Internal Sounds	22 voices Concert Grand, Concert Grand 2, Studio Grand, Classic E.Piano, Modern E.P., Jazz Organ, Drawbar Organ, Church Organ, Diapason, Diapason Oct., Harpsichord, Harpsichord Oct., Vibraphone, String Ensemble, Slow Strings, Warm Strings, Choir, New Age Pad, Atmosphere, Wood Bass, Electric Bass, Finger Nylon Gt.
Polyphony	max. 192 notes
Display	3 digit LED
Reverb	Room 1, Room 2, Stage, Hall 1, Hall 2
Effects	Chorus, Delay, Tremolo, Rotary 1, Rotary 2
Voicing	Normal, Mellow, Dynamic, Bright
Touch	Light 1, Light 2, Normal, Heavy 1, Heavy 2, Off, User
Internal Recorder	3 song, 2 track recorder – approximately 15,000 note memory capacity
USB Functions	USB Play (incl. SMF support), USB Load, USB Save, USB Delete, USB Format
Metronome	Beat: 1/4, 2/4, 3/4, 4/4, 5/4, 3/8, 6/8 Tempo: 10-400 bpm (20-800 bpm for eighth note rhythms)
Demo Songs	18 songs
Piano Music	29 pieces
Keyboard Modes	Dual Mode (with adjustable volume balance) Split Mode (with adjustable split point and volume balance) Four Hands Mode (with adjustable split point and volume balance)
Keyboard and Sound Settings	Touch, Transpose, Tuning, Brilliance, Damper Resonance, String Resonance, Temperament, Lower Octave Shift, Lower Pedal, Layer Octave Shift, Layer Dynamics, Damper Hold, User Memory
MIDI Settings	MIDI Channel, Send PGM No., Local Control, Transmit PGM Change, Multi-timbral mode, Channel Mute
Pedals	Sustain (with half-pedal support), Soft, Sostenuto
Jacks	MIDI (IN/OUT), USB to Host, USB to Device, LINE IN (L, R), LINE OUT (L/MONO, R), Headphones x 2
Speakers	12 cm x 2 (full range speakers)
Output Power	20 W x 2
Power Consumption	55 W
Cabinet Finish	Premium Satin Black
Key Cover	Sliding type
Dimensions (Not including music rack)	1386 (W) x 505 (D) x 873 (H) mm / 55" (W) x 20" (D) x 34" (H)
Weight	62 kg / 137 lbs.

Program Change Number List

Sound Name	Multi-timbral mode = off/on1		Multi-timbral mode = on2	
	Program Number	Program Number	Bank MSB	Bank LSB
PIANO				
Concert Grand	1	1	121	0
Concert Grand 2	2	1	95	16
Studio Grand	3	1	121	1
E.PIANO				
Classic E.Piano	4	5	121	0
Modern E.P.	5	6	121	0
DRAWBAR				
Jazz Organ	6	18	121	0
Drawbar Organ	7	17	121	0
CHURCH ORGAN				
Church Organ	8	20	121	0
Diapason	9	20	95	7
Diapason Oct.	10	20	95	6
HARPSI & MALLETS				
Harpsichord	11	7	121	0
Harpsichord Oct.	12	7	121	1
Vibraphone	13	12	121	0
STRINGS				
String Ensemble	14	49	121	0
Slow Strings	15	45	95	1
Warm Strings	16	49	95	1
CHOIR & PAD				
Choir	17	53	121	0
New Age Pad	18	89	121	0
Atmosphere	19	100	121	0
BASS & GUITAR				
Wood Bass	20	33	121	0
Electric Bass	21	34	121	0
Finger Nylon Gt.	22	25	95	4

MIDI Exclusive Data Format

1st byte	2nd byte	3rd byte	4th byte	5th byte	6th byte	7th byte	8th byte	9th byte	10th byte
1	2	3	4	5	6	7	8	9	10

Byte	ID	Description
1	F0	Start code
2	40	Kawai ID number
3	00 - 0F	MIDI channel
4	11, 30	Function code (30 when setting Multi-timbre On/Off)
5	04	Indicates that the instrument is an electric piano
6	02	Indicates that the piano is a CE220 model
7	data 1	See table below
8	data 2	
9	data 3	
10	F7	End code

data 1	data 2	data 3	Function
00	00	-	Multi-timbre Off
00	01	-	Multi-timbre On 1
00	02	-	Multi-timbre On 2
0D	00 - 07	-	00: Effect Off, 01: Chorus, 02: Delay, 05: Tremolo, 06: Rotary 1, 07: Rotary 2
0E	00 - 03, 06, 07	-	00: Reverb Off, 01: Room 2, 02: Stage, 03: Hall 1, 06: Room 1, 07: Hall 2
14	00 - 7F	-	Dual/Split balance
16	1F - 60	-	Tune, 40: 440 Hz
17	00, 7F	-	00: Program Change Off, 7F: Program Change On
18	00 - 07	-	00: Light 1, 01: Normal, 02: Heavy 1, 03: Off, 04: Light, 05: Heavy 2, 06: User
19	00 - 03	-	Lower Octave Shift
20	00 - 15	00 - 15	Dual, data 2: Right sound, data 3: Left sound
21	00 - 15	00 - 15	Split, data 2: Upper sound, data 3: Lower sound
25	00 - 08	00 - 0B	data 2: Temperament, data 3: Key
26	00, 7F	00 - 0F	Multi-timbre, data 2: 00 (On), 7F (Off), data 3: Channel

MIDI Implementation Chart

■ Kawai CE220 digital piano

Date : August 2011 - Version : 1.0

Function	Transmit	Receive	Remarks
Basic channel	At power-up Settable	1 1 - 16	
Mode	At power-up Message Alternative	Mode 3 × *****	Mode 1 Mode 1, 3 × * The default for the OMNI mode is ON. Specifying MIDI channels automatically turns it OFF.
Note number	Range	9 - 12** *****	0 - 127 0 - 127 ** The value depends on the Transpose setting.
Velocity	Note on Note off	○ 9nH v=1-127 × 9nH v=0	○ ×
After touch	Key specific Channel specific	× ×	× ×
Pitch bend		×	×
Control change	0, 32 7 11 64 66 67	○ × × ○ (Right pedal) ○ (Middle pedal) ○ (Left pedal)	○ ○ ○ ○ ○ ○ Bank Select Volume Expression Pedal Sustain Pedal Sostenuto Pedal Soft Pedal
Program change	True	○ 0-127 *****	○*** *** Refer to the Program Change Number List on page 68.
Exclusive		○	○ On/Off Selectable
Common	Song position Song selection Tune	× × ×	× × ×
Real time	Clock Commands	× ×	× ×
Other functions	Local On / Off All notes Off Active sensing Reset	× × ○ ×	○ ○ (123 - 127) ○ ×
Remarks			

Mode 1: omni mode On, Poly

Mode 2: omni mode On, Mono

○ : Yes

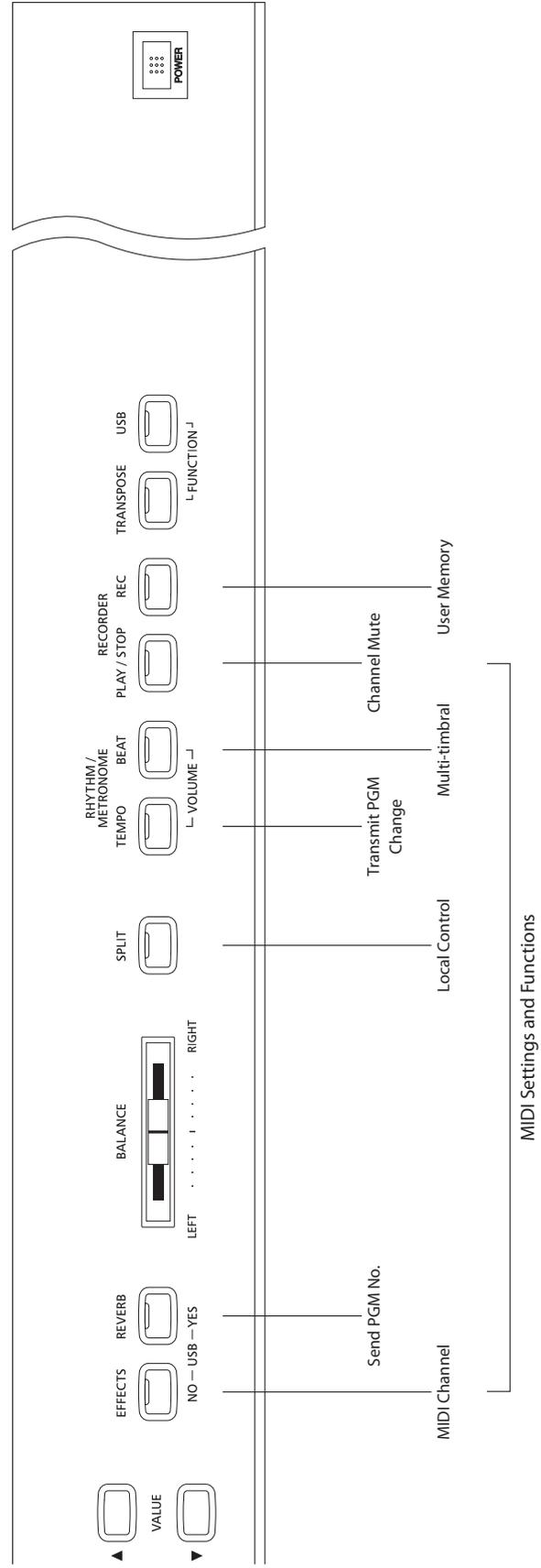
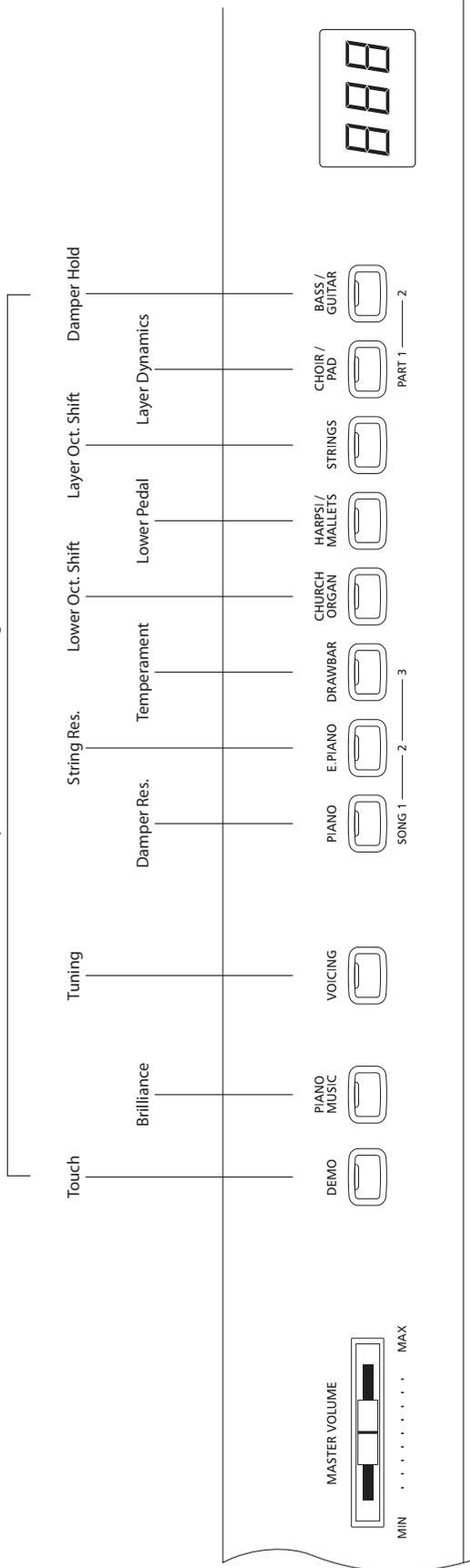
Mode 3: omni mode Off, Poly

Mode 4: omni mode Off, Mono

× : No

Function Button Assignments

Keyboard and Sound Settings



KAWAI

THE FUTURE OF THE PIANO

CE220 Owner's Manual

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OW1058E-J1108

Version 1

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