KAWAI

DIGITAL PIANO

CA91
CA71
CA51

Owner's Manual

THANK YOU FOR PURCHASING A KAWAI Concert Artist DIGITAL PIANO!

Your KAWAI digital piano is a revolutionary new keyboard instrument that combines the latest in technology with traditional piano craftsmanship inherited from KAWAI's many years of experience in building fine acoustic pianos. Its 88 key wooden keyboard provides the touch response and full dynamic range required for a superb performance on the piano, harpsichord, organ, and other instruments. The CA's piano sound has been created through stereo-sampling of concert grand pianos, and is reproduced by KAWAI's Harmonic Imaging sound technology. The CA91 is also equipped with a revolutionary sound board speaker system, providing an even more realistic piano experience.

Your CA piano is equipped with a Lesson function which, in addition to basic finger exercises, includes etudes from Czerny, Burgmuller, and others or songs from Alfred's Basic and Premier Piano lesson books (USA, Canada, UK, AU only). The CA piano is also equipped with reverb and a digital effect processor for an even fuller sound. Industry-Standard MIDI (Musical Instrument Digital Interface) jacks and a USB interface are included which allow you to play other electronic instruments at the same time or connect your CA piano to a personal computer—opening a whole new world of musical possibilities.

There are many other features and functions inside your new piano. This Owner's Manual contains valuable information that will help you make full use of this instrument's many capabilities. Please read all sections carefully and keep this manual handy for further reference.

■ Please read this Owner's Manual before using CA91 / CA71 / CA51.

Table of Contents

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 lighting 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 leterature 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.

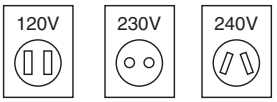
13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or object have 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

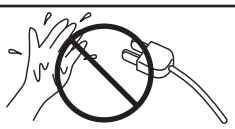
Indicates a potential hazard that could result in death or serious injury if the product is handled incorrectly.

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.



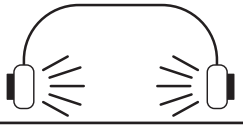
Doing so may cause electric shock.

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.**

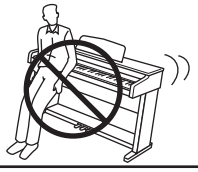
Doing so may cause the chair to fall over or your fingers to be trapped, resulting in injury.

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



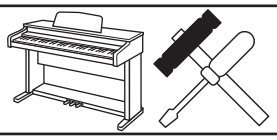
Doing so may result in hearing problems.

Do not lean against the keyboard.



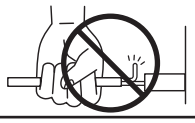
Doing so may cause the product to fall over, resulting in injury.

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.

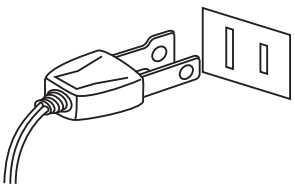


- Pulling the AC power cord itself may damage the cord, causing a fire, electric shock or short-circuit.

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.



It is a good practice to have the instrument 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.

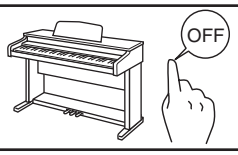
- **Areas, such as those near windows, where the product is exposed to direct sunlight**
- **Extremely hot areas, such as near a heater**
- **Extremely cold areas, such as outside**
- **Extremely humid areas**
- **Areas where a large amount of sand or dust is present**
- **Areas where the product is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

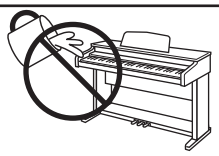
Closing it roughly may trap your fingers, resulting in injury.

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



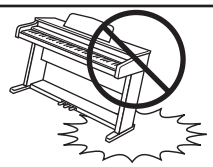
Failure to do so may cause breakdown of this product and other devices.

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



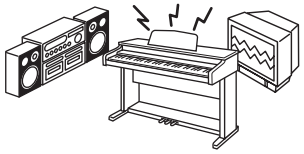
Entry of water, needles or hair pins may result in breakdown or short-circuit.
The product shall not be exposed to dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the product.

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



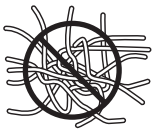
Please lift up the product when moving it.
Please note that the product is heavy and must be carried by more than two persons.
Dropping the product may result in breakdown.

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.

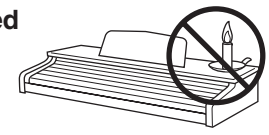
Do not wipe the product with benzene or thinner.

- 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.

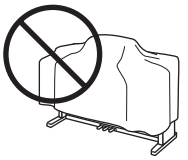
- Doing so may cause the product to become deformed or fall over, resulting in breakdown or injury.

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.

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

FCC Information
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.
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 different electrical circuit from the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

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.

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)

1. Part Names and Functions

This section explains the locations and functions of the various panel sliders and buttons.

◇ Panel

■ CA91/CA71

● CONCERT MAGIC
Press the CONCERT MAGIC button to enjoy listening or performing a collection of preprogrammed piano songs. Concert Magic will provide the correct melody and accompaniment notes, regardless of which keys you press. Anybody, young or old, can enjoy Concert Magic from the moment they sit down at the CA piano regardless of their previous musical experience (page 45).

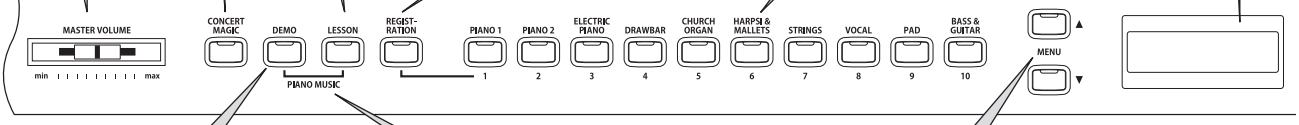
● LCD display
The LCD display provides useful information such as the currently selected sound type. It also shows values or status when other functions are active.
* A protective plastic film is provided on the display. Remove it before use.

● MASTER VOLUME
The MASTER VOLUME slider controls the master volume level of the built-in speakers and headphones. Move this slider to the right to increase the volume and move to the left to decrease the volume.

● LESSON
Press the LESSON button to access the etudes, Alfred lesson books (USA, Canada, UK, AU only), and the finger exercises. Listen or practice along with the various etudes, songs, and exercises (page 35).

● REGISTRATION
A registration is a setup that memorizes most of the panel settings such as sound selections or effects settings so that you can recall them at the touch of a button. 10 different registrations can be saved and accessed using this button (page 25). * CA91 / CA71 only

● Sound buttons
Use these buttons to select the different preset sounds. Press the SOUND SELECT button under the name of the instrument you would like to listen to. When the button is pressed, the LED indicator will be turned on to indicate that this sound category is selected. Multiple sound types are assigned to each button. Repeatedly pressing a SOUND SELECT button selects the different sounds assigned to that button. The name of the selected sound will be displayed in the LCD display (page 13).

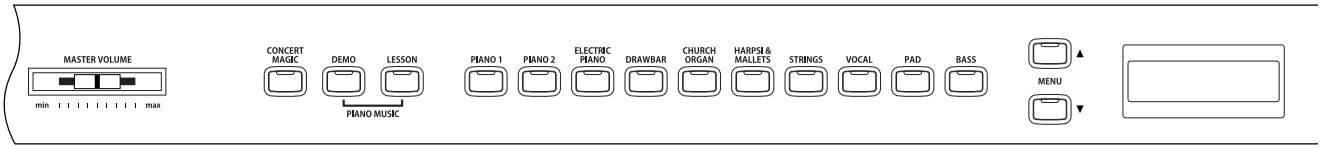


● DEMO
Press the DEMO button to listen to the various different demo songs (page 11).

● PIANO MUSIC
Pressing the DEMO and LESSON buttons together lets you enter the piano music mode. The CA piano provides some hours of pre-recorded classical piano music for your listening pleasure (page 12).

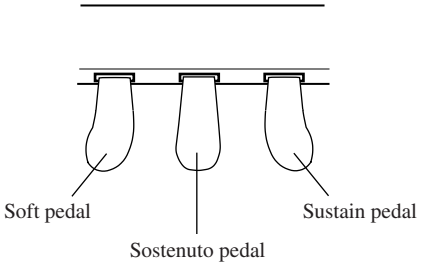
● MENU
These buttons are used to access the various virtual technician and menu functions that control the CA piano's tuning, system and MIDI functions.

■ CA51



◇ Using the pedals

The CA piano has three pedals—just like a grand piano. They are Sustain, Soft and Sostenuto.



◆ Sustain pedal
Sustains the sound after lifting your hands from the keyboard. The sustain pedal is capable of responding to half pedaling.

◆ Sostenuto pedal
Depressing this pedal after playing the keyboard and before releasing the keys sustains the sound of only the keys just played.

◆ Soft pedal
Depressing this pedal softens the sound and reduces its volume. When the rotary effect is active the soft pedal is used to change the speed of the rotor between slow and fast.

● VALUE
These two buttons are used to change the value settings for the various functions.

● EFFECTS
Press the EFFECTS button to turn the effects ON/OFF for the selected sound. The EFFECTS button is used to select the different effect types and adjust their settings (page 20).

● REVERB
Press the REVERB button to turn the reverb ON/OFF for the selected sound. The REVERB button is used to select the different reverb types (page 19).

● TONE CONTROL
Press the TONE CONTROL button to access the CA piano's built in EQ section. This button is used to turn on/off the tone control and select/edit the various different EQ types. Use the tone control function to adjust the sound character of the CA piano to your taste (page 22).
* CA91 / CA71 only

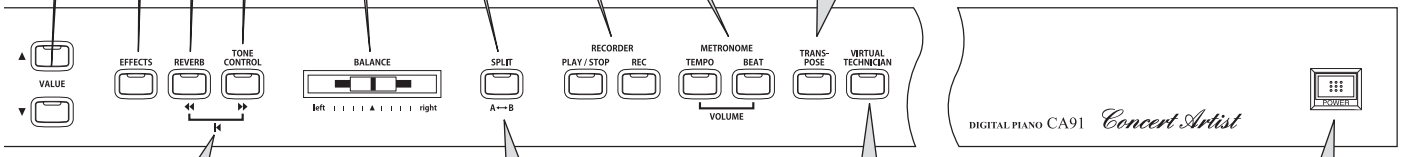
● BALANCE
Use the BALANCE slider to adjust the volume balance between two sounds in dual or Split mode. The BALANCE slider is also used to adjust the balance of the two parts in the Concert Magic and lesson modes (pages 15, 17, 38, and 47).

● SPLIT
The split function divides the keyboard into two sections—upper and lower—and lets you play each part with a different sound (page 16).

● RECORDER
The REC button is used for recording your own songs and when using the lesson function, to record your playing and compare with the built in songs, etudes, and exercises.
The PLAY/STOP button is used to select a song and part to play, and to start and stop play back of the recorded songs. It is also used to start / stop playback when using the lesson function (page 30).

● METRONOME
Use these buttons to turn on / off the metronome, and to set the tempo, beat, and volume (page 27).

● TRANSPOSE
The transpose function lets you raise or lower the piano's key in half steps. This is especially useful when you have learned a song in one key and have to play it in another key. The transpose feature allows you to play the song in the original key, but hear it in another key (page 24).

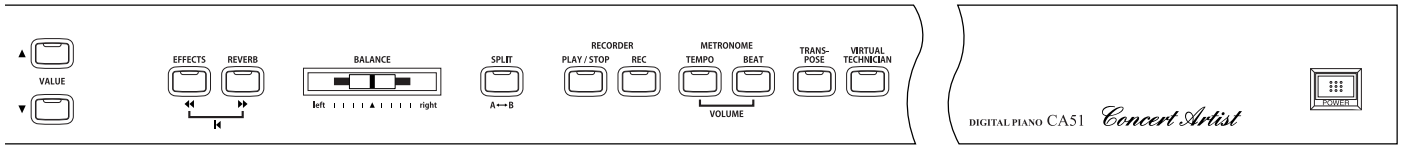


● ◀◀ rewind ▶▶ forward |◀ reset
Use these buttons to play a song from a specific bar or to find the beginning of a song in the lesson function (pages 36 and 37).

● A↔B (AB repeat)
Press this button to play back a specific section of a song repeatedly in the lesson function (page 39).

● VIRTUAL TECHNICIAN
The virtual technician provides a set of special functions that make it possible for you to customize the CA piano to your personal taste. CA91 / CA71 / CA51 (page 51).

● POWER
Press the POWER to turn the power on / off. Turn the power off after use (page 10).

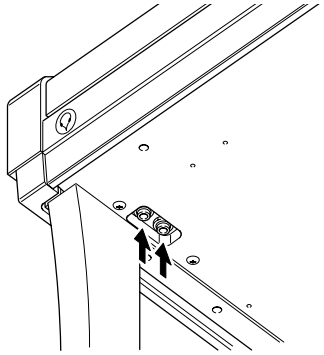


◇ Headphone

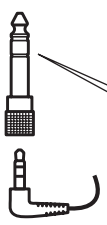
◆ Headphone jack (x 2)

Use this Jack to connect a pair of headphones.

Up to two pairs of headphones can be connected.



◇ Caution



Some headphones are designed with a removable adapter that is used to connect to different sized jacks. Sound may not be heard from the built-in speakers if this adapter remains in the CA headphone jack when the plug is removed.

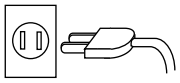
2. Listening to the Piano

1) Basic Operation

This section provides the basic procedures for turning the power on and playing the CA piano.

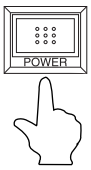
☐ Step 1

Connect the CA pianos' power cable to an AC outlet.

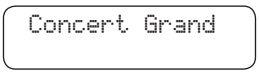


☐ Step 2

You will find the POWER SWITCH at the right end of the front panel. Press this button to turn on the power. Pressing it again will turn off the power.



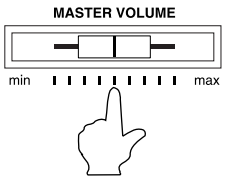
When the power is first turned ON you will hear the CA's main piano sound. The name of the sound, "Concert Grand" is shown in the LCD Display.



The REVERB button will also be turned on.

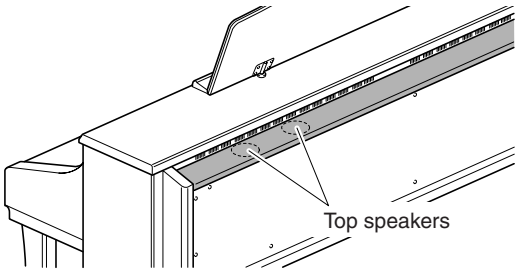
☐ Step 3

Use the MASTER VOLUME slider to set the volume to a comfortable listening level. The MASTER VOLUME slider controls the volume level of the speakers and the headphones. Setting the volume slider to the middle is a good starting point.



⚠ Caution

- The CA91 is equipped with top speakers on the left and right sides of the unit, behind the top board. To avoid damage to these speakers or other parts of the CA piano do not place liquids such as water or coffee on or near these speakers.



2) Demo Songs

The CA has a variety of built-in sound demo songs. 33 for the CA91, 32 for the CA71, and 27 for the CA51. Each of the demo songs presents a musical piece to introduce the different sounds.
Press the DEMO button and then use the SOUND SELECT buttons to select and play the different demo songs.

■ PIANO 1
- Concert Grand : Valse Romantique / Debussy
- Studio Grand : KAWAI
- Mellow Grand : La Fille aux Cheveux de Lin / Debussy
- Modern Piano (PIANO 2 for CA51) : KAWAI
- Rock Piano : KAWAI (CA91 only)

■ PIANO 2
- Concert Grand 2 : KAWAI (CA91/CA71 only)
- New Age Piano 2 : KAWAI

■ ELECTRIC PIANO
- Classic E.Piano : KAWAI
- Modern E.P. : KAWAI
- Modern E.P. 2 : KAWAI

■ DRAWBAR
- Jazz Organ : KAWAI
- Drawbar Organ : KAWAI
- Drawbar Organ 2 : KAWAI

■ CHURCH ORGAN
- Church Organ : Toccata / Eugene Gigout
- Diapason : Wohl mir, daß ich Jesum habe / Bach
- Full Ensemble : KAWAI

■ HARPSI & MALLETS
- Harpsichord : French Suite No.6 / Bach
- Vibraphone : KAWAI
- Clavi : KAWAI
- Harpsichord Oct. : Prelude in A♭ / Bach (CA91 only)

■ STRINGS
- Slow Strings : KAWAI
- String Pad : KAWAI
- String Ensemble : Le quattro stagioni La primavera / Vivaldi

■ VOCALS
- Choir : KAWAI
- Choir 2 : KAWAI
- Jazz Ensemble : KAWAI (CA91/CA71 only)

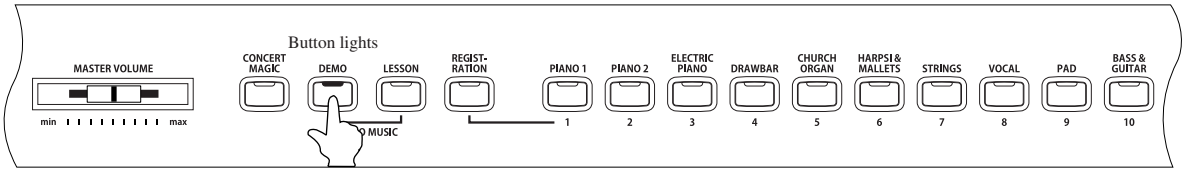
■ PADS
- New Age Pad : KAWAI
- Atmosphere : KAWAI

■ BASS & GUITAR
- Wood Bass : KAWAI
- Fretless Bass : KAWAI
- W. Bass & Ride : KAWAI
- Ballad Guitar : KAWAI (CA91/CA71 only)
- Pick Nylon Gt. : KAWAI (CA91/CA71 only)

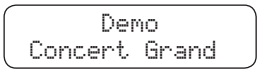
KAWAI regret that sheet music for KAWAI original demo songs is not available.

☐ Step 1

Press the DEMO button and the LED indicator for the DEMO button will be turned on.



The LED indicators for the SOUND SELECT buttons will flash and the demo song for the Piano 1 category will start. After the Piano 1 demo songs are finished playing, the demo songs for another sound category will be selected at random.
The LCD display shows the sound name for the demo that is currently being played.



☐ Step 2

If you would like to listen to the demos for a particular category, just press the desired SOUND SELECT button while the demo is playing. When you press the button, the demo songs for the newly selected category will be played. Then the demo songs for another category will be selected at random.

Some SOUND SELECT buttons have more than one demo assigned to them. Press the same SOUND SELECT button repeatedly to select the other demos assigned to that button.

☐ Step 3

Press the DEMO button again to exit the demo mode.

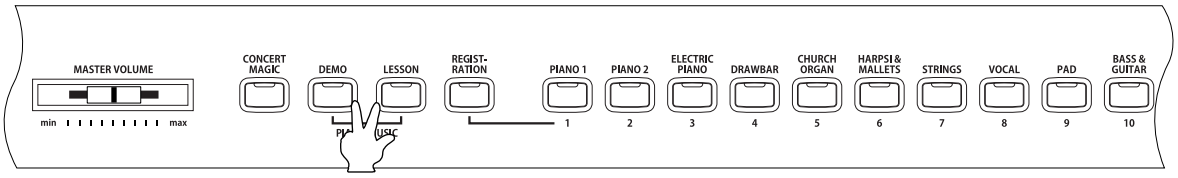
■ You can also exit demo mode by pressing the PLAY / STOP button of the recorder.

3) Piano Music

Pressing the DEMO button and the LESSON button simultaneously lets you enter the piano music mode. The CA piano provides over two hours of pre-recorded classical piano music for your listening pleasure.
All of the song titles are listed in a separate reference booklet entitled "Internal Song Lists."

☐ Step 1

Press the DEMO and LESSON buttons simultaneously.

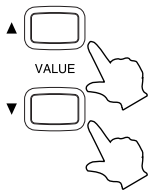


Press them at the same time.

The LED indicators for these buttons will be turned on, and the piano music selection screen will be displayed.

☐ Step 2

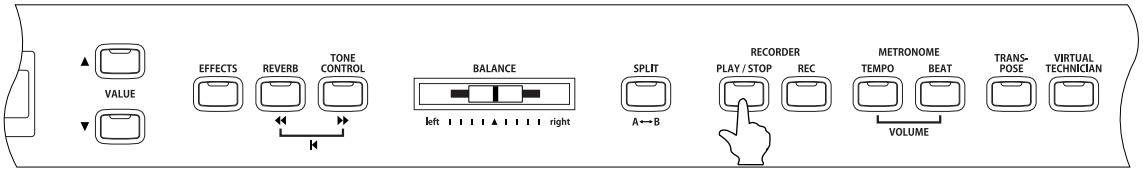
Use the VALUE buttons▲ or ▼ to select your desired song.



Songs can be changed while the selected song is being played.

☐ Step 3

Start the song by pressing the PLAY / STOP button.



To stop the song, press the same button again.

☐ Step 4

Press the DEMO and LESSON buttons simultaneously again to exit the piano music mode.

3. Playing the Piano

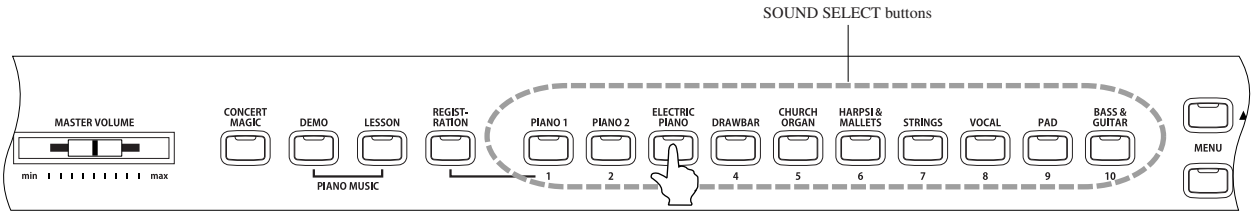
1) Selecting a Sound

The panel has 10 SOUND SELECT buttons.
The CA91 has 8 sounds assigned to each SOUND SELECT button for a total of 80 different sounds.
The CA71 has 6 sounds assigned to each SOUND SELECT button for a total of 60 different sounds.
The CA51 has 4 sounds assigned to each SOUND SELECT button for a total of 40 different sounds.

Sound Button	CA91	CA71	CA51
Piano 1	Concert Grand	Concert Grand	Concert Grand
	Studio Grand	Studio Grand	Studio Grand
	Mellow Grand	Mellow Grand	Mellow Grand
	Jazz Grand	Jazz Grand	Jazz Grand
	Modern Piano	Modern Piano	
	Honky Tonk	Honky Tonk	
	Rock Piano		
	New Age Piano		
Piano 2	Concert Grand 2	Concert Grand 2	Modern Piano
	Studio Grand 2	Studio Grand 2	Honky Tonk
	Mellow Grand 2	Mellow Grand 2	New Age Piano 2
	Jazz Grand 2	Jazz Grand 2	New Age Piano 3
	New Age Piano 2	New Age Piano 2	
	New Age Piano 3	New Age Piano 3	
	New Age Piano 4		
	New Age Piano 5		
Electric Piano	Classic E.Piano	Classic E.Piano	Classic E.Piano
	Modern E.P.	Modern E.P.	Modern E.P.
	60's E.P.	60's E.P.	60's E.P.
	Modern E.P. 2	Modern E.P. 2	Modern E.P. 2
	New Age E.P.	New Age E.P.	
	Crystal E.P.	Crystal E.P.	
	Modern E.P. 3		
	New Age E.P. 2		
Drawbar	Jazz Organ	Jazz Organ	Jazz Organ
	Drawbar Organ	Drawbar Organ	Drawbar Organ
	Drawbar Organ 2	Drawbar Organ 2	Drawbar Organ 2
	Be 3	Be 3	Be 3
	Jazzer	Jazzer	
	Odd Man	Odd Man	
	Hi Lo		
	4' Drawbar		
Church Organ	Church Organ	Church Organ	Church Organ
	Diapason	Diapason	Diapason
	Full Ensemble	Full Ensemble	Full Ensemble
	Diapason Oct.	Diapason Oct.	Diapason Oct.
	Chiffy Tibia	Chiffy Tibia	
	Stopped Pipe	Stopped Pipe	
	Principal Choir		
	Baroque		
Harpsi & Mallets	Harpsichord	Harpsichord	Harpsichord
	Harpsichord 2	Harpsichord 2	Harpsichord 2
	Vibraphone	Vibraphone	Vibraphone
	Clavi	Clavi	Clavi
	Marimba	Marimba	
	Celesta	Celesta	
	Harpsichord Oct		
	Bell Sprit		
Strings	Slow Strings	Slow Strings	Slow Strings
	String Pad	String Pad	String Pad
	Warm Strings	Warm Strings	Warm Strings
	String Ensemble	String Ensemble	String Ensemble
	Soft Orchestra	Soft Orchestra	
	Chamber Strings	Harp	
	Harp		
	Pizzicato Str.		
Vocals	Choir	Choir	Choir
	Pop Ooh	Pop Ooh	Pop Ooh
	Pop Aah	Pop Aah	Pop Aah
	Choir 2	Choir 2	Choir 2
	Jazz Ensemble	Jazz Ensemble	
	Pop Ensemble	Pop Ensemble	
	Slow Choir		
	Breathy Choir		
Pads	New Age Pad	New Age Pad	New Age Pad
	Atmosphere	Atmosphere	Atmosphere
	Itopia	Itopia	Itopia
	Brightness	Brightness	Brightness
	New Age Pad 2	New Age Pad 2	
	Brass Pad	Brass Pad	
	Halo Pad		
	Bright Warm Pad		
Bass & Guitar	Wood Bass	Wood Bass	Wood Bass
	Finger Bass	Finger Bass	Finger Bass
	Fretless Bass	Fretless Bass	Fretless Bass
	W. Bass & Ride	W. Bass & Ride	W. Bass & Ride
	E. Bass & Ride	Ballad Guitar	
	Ballad Guitar	Pick Nylon Gt.	
	Pick Nylon Gt.		
	Finger Nylon Gt.		

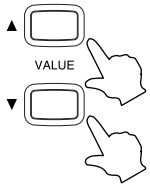
☐ Step 1

Selecting a sound.



Press the SOUND SELECT button under the name of the instrument you would like to listen to. When the button is pressed, the LED indicator will be turned on to indicate that this sound is selected.
Multiple sounds are assigned to each button. Press the selected button repeatedly to select the different sounds assigned to that button.
The sound selections you make can be saved by using the registration function (page 25).

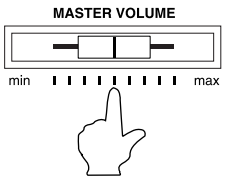
■ The VALUE buttons can also be used to select sounds.

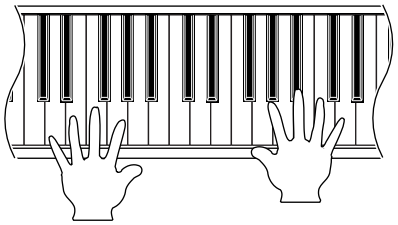


☐ Step 2

Try playing the keyboard.

You will hear your selected sound as you play.
Use the MASTER VOLUME slider to adjust the volume.





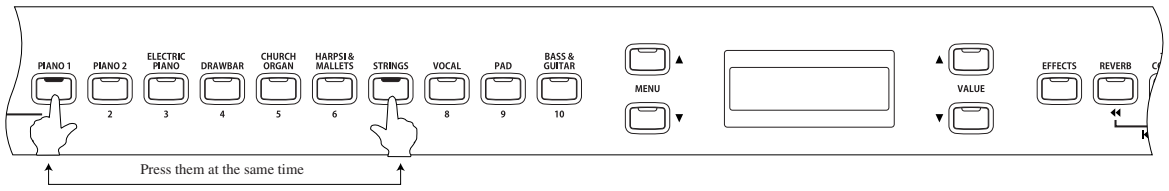
■ The CA piano is capable of playing up to 192 notes simultaneously (192-note polyphony). When playing in dual mode, or when playing the stereo piano sound, the polyphony will be reduced by half since the piano has to produce two sounds for each note.

2) Dual Mode

Another feature of the CA piano is the ability to layer two preset sounds together to create a more complex sound. For example, piano layered with strings, electric piano with choir sound, and so on.
Settings made in the dual mode can be saved by using the registration function (page 25).

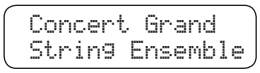
☐ Step 1

To layer two sounds, press the SOUND SELECT buttons for both sounds simultaneously.



The LED indicators for each button will be turned on to indicate the two sounds you have chosen. You will find the selected sound names are also shown in the LCD display. (the sound assigned to the button that is pressed first will be displayed in the top line).

For example, To layer a piano sound and a string sound, press the PIANO 1 and STRINGS buttons simultaneously as shown in the diagram.



Pressing either of the SOUND buttons again will select the other sounds assigned to that button. For example if you want to change the String Ensemble sound to Slow Strings, while holding down the PIANO 1 button press the STRINGS button again until Slow Strings is displayed in the LCD.

If you want to layer two sounds assigned to the same SOUND SELECT button, while pressing the desired SOUND SELECT button use the VALUE buttons to select your desired layered sound.
For example, if you wish to layer Concert Grand and Mellow Grand, first press the PIANO 1 button to select Concert Grand, and then use the VALUE buttons to select Mellow Grand while still holding down the PIANO 1 button.

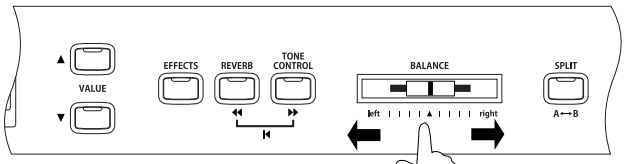
☐ Step 2

Try playing the keyboard.

Two different sounds are played at the same time.

☐ Step 3

Use the BALANCE slider to adjust the volume balance between the two sounds.



Increases the volume of the sound assigned to the leftmost selected SOUND button.

Increases the volume of the sound assigned to the rightmost selected SOUND button.

☐ Step 4

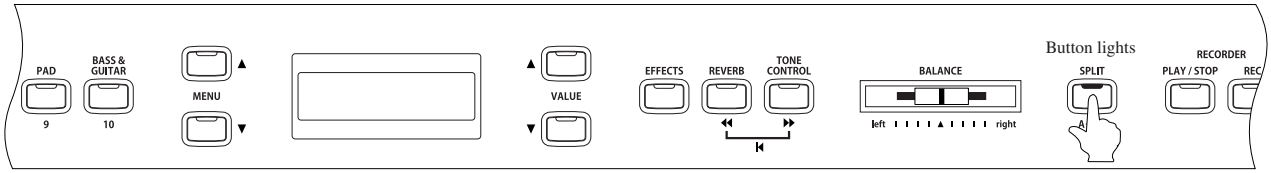
To exit dual mode, simply press any individual SOUND SELECT button and dual mode will be cancelled.

3) Split Mode

The split function divides the keyboard into two sections—upper and lower—and lets you play each section with a different sound.
Settings made in split mode can be saved by using the registration function (page 25).

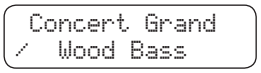
☐ Step 1

First press the desired SOUND SELECT button to select the upper sound, then press the SPLIT button.



The LED indicator on the SPLIT button will be turned on.
The LED Indicator for the upper sound will be turned on and the LED for the lower sound will start flashing.

To change the lower sound, while holding down the SPLIT button, press the desired SOUND SELECT button to select the lower sound.
The LCD display shows the selected sound for the upper and lower sections.

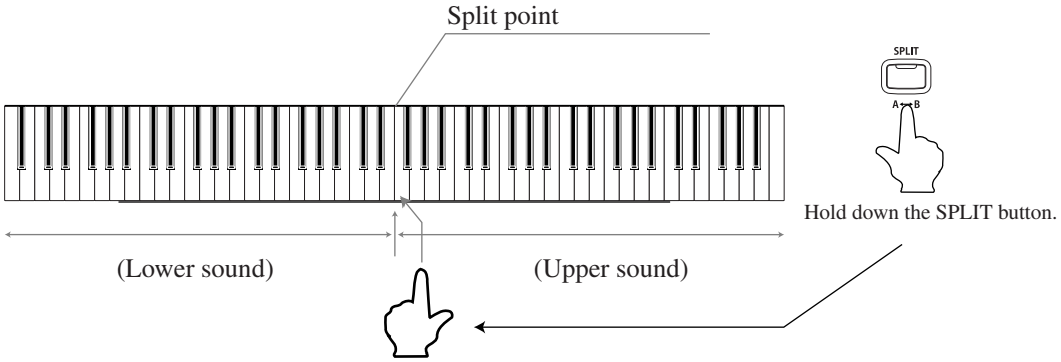


The "/" symbol will be displayed at the bottom left corner of the LCD display to show that split mode has been activated.
The default split point is set between B2 and C3. The split point can be moved to anywhere on the keyboard.

☐ Step 2

Press a key while holding down the SPLIT button to change the split point.

The key you pressed becomes the lowest note of the upper section.



☐ Step 3

Try playing the keyboard.

Different sounds are produced in the upper and lower sections.

☐ Step 4

To change the upper sound while in split mode, press the desired SOUND SELECT button to select the desired sound.

The LED indicator turns on for the selected SOUND SELECT button.
Press the same button repeatedly to select a different sound type assigned to that button.

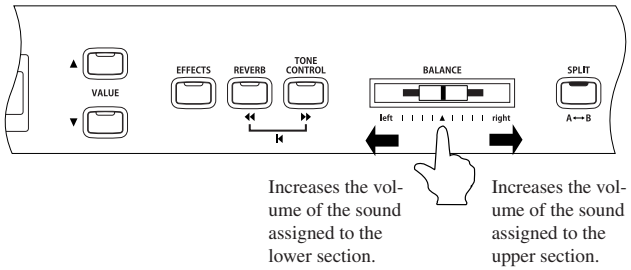
☐ Step 5

To change the Lower sound, Press the desired SOUND SELECT button while holding down the SPLIT button to select the desired sound.

The LED indicator flashes for the selected SOUND SELECT button.
Press the same button repeatedly to select a different sound type assigned to that button.

☐ Step 6

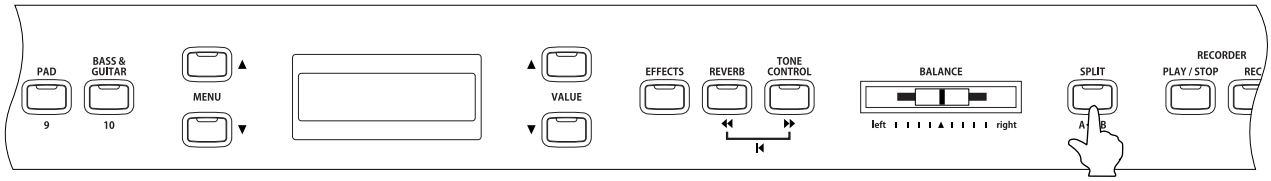
Use the BALANCE slider to adjust the volume balance between the upper and lower sections.



☐ Step 7

Press the SPLIT button to exit the split mode.

The LED indicator on the SPLIT button will be turned off.



■ "Lower Octave shift" can be used to adjust the octave range for the lower section. (page 63).

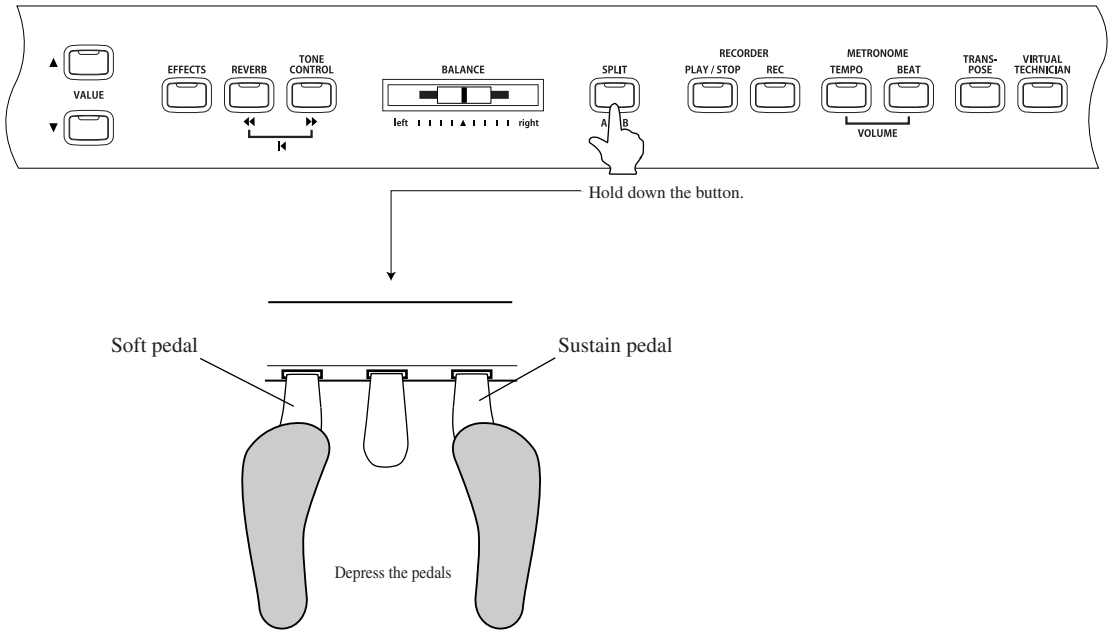
■ The Sustain pedal can be turned ON / OFF for the lower section. (page 63).

4) Four Hands Mode

It is possible to divide the keyboard into left and right sections at the default split point, and to play both sections in the same key range using the four hands mode.
When four hands mode is active, the sustain pedal (right pedal) acts as the sustain pedal for the right section, and the soft pedal (left pedal) acts as the sustain pedal for the left section. When four hands mode is active the CA functions as two pianos, so you can enjoy duet performances or use one CA piano for two students.

☐ Step 1

To enter the four hands mode, depress the Sustain pedal (right pedal) and the Soft pedal (left pedal) while holding down the SPLIT button.



The LED indicator on the SPLIT button will flash to indicate four hands mode is active.

On the LCD display, the top line indicates the sound for the right section, and the lower line indicates the sound for the left section.

```
 Concert Grand
/Concert Grand
```

■ Concert Grand is the default sound for both sections.

As with SPLIT mode, left and right sounds, split point, and the volume balance can be set (pages 16 and 17).

■ Compared to the normal operation of the CA piano, the key range is lowered by two octaves for the right section, and raised by two octaves for the left section. "Lower octave shift" can be used to adjust the octave range of the lower section (page 63).
■ The settings made for four hands mode are independent of those made in split mode; therefore, making these settings will not change the split mode settings.

☐ Step 2

Press the SPLIT button to exit four hands mode.

The LED indicator for the SPLIT button will be turned off.

5) Reverb / Effects / Tone Control

You might have noticed that when you select some of the preset sounds, the LED indicator for the EFFECTS or the REVERB button is turned on. The reason for this is some of the sounds are set up with reverb or an effect on as their initial setting. Adding an effect to the sound enhances tonal quality and improves acoustical realism. The CA piano is equipped with two separate groups of effects. There are five different reverbs, seven different effects and a tone control section that contains four preset and one user EQ.
Settings made in the reverb, effects, and tone control sections can be saved by using the registration function (page 25).

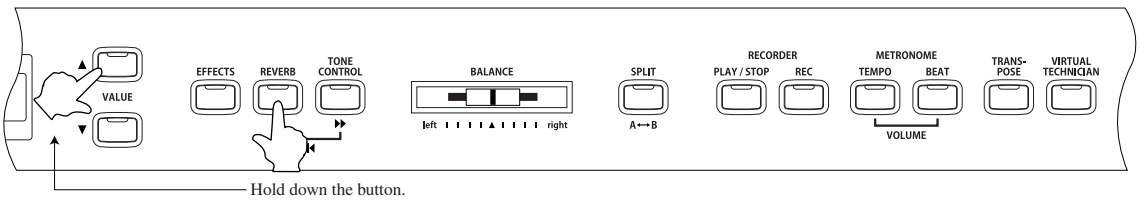
◇ Using REVERB

Reverb adds reverberation to the sound, simulating the acoustic environment of a recital room, stage, or concert hall.
Five types of reverb are available as follows:

■ROOM1, ROOM2	:	Simulates the ambiance of a living room or small rehearsal room. Room2 simulates a larger room than Room1.
■STAGE	:	Simulates the ambiance of a small hall or live stage.
■HALL1, HALL2	:	Simulates the ambiance of a concert hall or theater. Hall2 simulates a larger hall or theater than Hall1.

□ Step 1

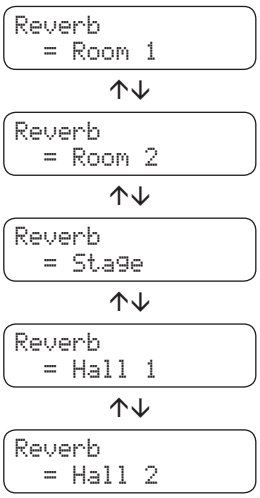
Press the REVERB button to turn the reverb on / off. The LED indicator will be turned on to indicate that reverb is in use.
Press and hold the REVERB button and the currently selected reverb type will be shown in the LCD display.
To change the reverb type, while holding the REVERB button use the VALUE buttons to change the reverb type.
Release the REVERB button once the desired reverb type is displayed.



The currently selected reverb type is displayed while the REVERB button is held down.

Reverb will be turned off when the REVERB button is pressed and its LED indicator turns off.

To turn the selected reverb on, press the REVERB button once again to turn its LED indicator on.



◇ Using EFFECTS

Seven different effect types are available as follows:

- ■Chorus : Chorus is an effect that simulates the rich character of a vocal choir or string ensemble, by layering a slightly detuned version of the sound over the original to enrich it.
- ■Delay : Adds echoes to the sound. There are three types of delay available (delay 1 - 3), each of which has a different length of delay between the echoes.
- ■Tremolo : Adds vibrato to the sound.
- ■Rotary : This effect simulates the sound of the Rotary Speaker cabinet commonly used with electronic organs. Rotary 1 is a normal rotary effect and Rotary 2 adds distortion to the rotary effect.
  The soft pedal is used to change the speed of the rotor between SLOW and FAST (page 8).

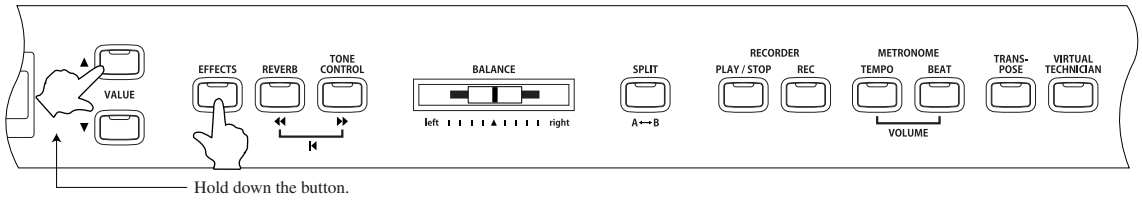
□ Step 1

Press the EFFECTS button to turn the effects on / off. The LED indicator will be turned on to indicate that the effects are in use.

Press and hold the EFFECTS button and the currently selected effect type will be shown in the LCD display.

To change the effect type, while holding the EFFECT button use the VALUE buttons to change the effect type.

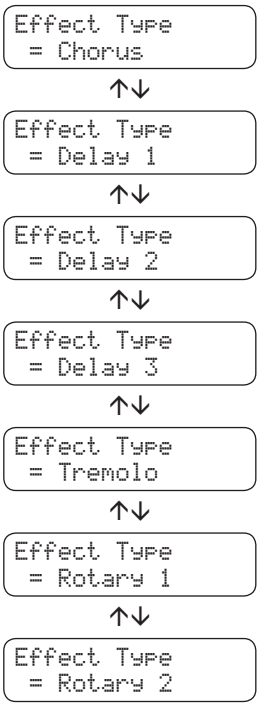
Release the EFFECTS button once the desired effect type is displayed.



The currently selected effect type is displayed while the EFFECTS button is held down.

Effects will be turned off when the EFFECTS button is pressed and its LED indicator turns off.

To turn the selected effect on, press the EFFECTS button once again to turn its LED indicator on.



◇ Editing the settings for the Chorus / Delay / Tremolo / Rotary effect

The following parameters can be edited for each effect type:

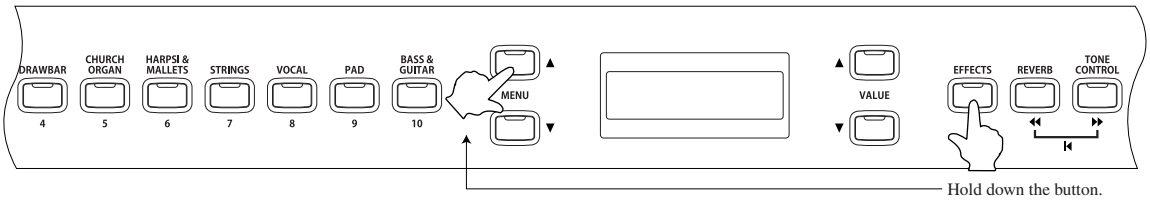
■Chorus : Modulation speed – Higher values produce a faster modulation, Depth- higher values produce a deeper chorus.
■Delay : Delay Time – Higher values add longer delays, Delay Depth – Higher values create louder echoes.
■Tremolo : Rate – Higher values produce faster tremolo, Depth - Higher values produce a deeper tremolo.
■Rotary : Acceleration speed – higher values produce a faster change from slow to fast, Rotary Speed- higher values produce a faster rotor speed.

☐ Step 1

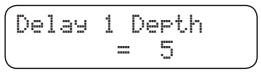
While Holding the EFFECTS button and use the VALUE buttons to select the effect type you wish to edit.

☐ Step 2

With the EFFECTS button still held down, use the MENU buttons to select the parameter to be edited.

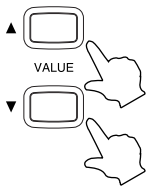


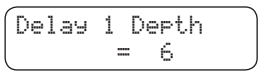
Effect type	Item
Chorus	Depth, Speed
Delay 1, 2, 3	Depth, Time
Tremolo	Depth, Rate
Rotary 1, 2	Acceleration speed (time required to change the rotor speed from "SLOW" to "FAST" or from "FAST" to "SLOW"), Rotary Speed (this setting only affects the "FAST" speed)



☐ Step 3

With the EFFECTS button still held down, use the VALUE buttons to adjust the value for the selected parameter.





As the value is set higher:
Depth : The effect becomes deeper or louder.
Rate : The speed becomes faster.
Time : The time length becomes longer.
Speed : The speed becomes faster.

☐ Step 4

Release the EFFECTS button when you are finished editing.

◇ Using TONE CONTROL *CA91/CA71 only

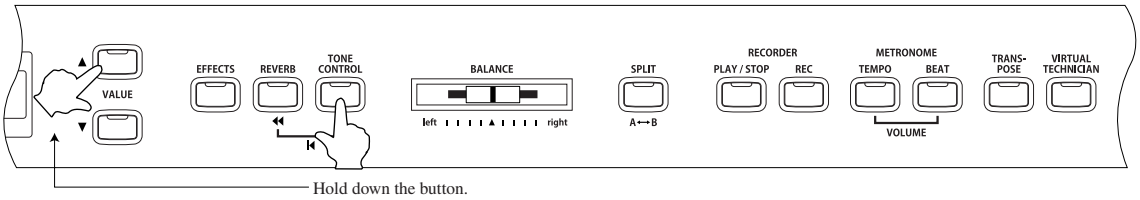
Tone control allows you to adjust the sound character of the CA piano to your taste. It can also be used to optimize the sound of the CA piano for the best sound quality within the area that it is located.

The following preset EQ settings and one user setting are provided:

- ■Loudness : Use this EQ to help retain the normal sound character of the CA piano when listening at lower volumes.
- ■Bass boost : Low frequencies are emphasized.
- ■Treble boost : High frequencies are emphasized.
- ■Mid cut : Mid frequencies are reduced creating a clearer sound.
- ■User : The three available frequency bands can be separately adjusted to your taste.

□ Step 1

To change the EQ setting, while holding the TONE CONTROL button use the VALUE buttons to select an EQ type.
Release the TONE CONTROL button once the desired EQ type is displayed.

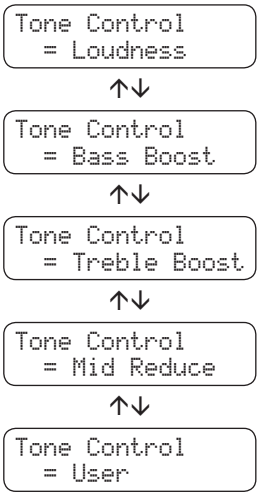


The currently selected setting is displayed while the TONE CONTROL button is held down.

The tone control EQ will be turned off when the TONE CONTROL button is pressed and its LED indicator turns off.

To turn the selected tone control EQ on, press the TONE CONTROL button once again to turn its LED indicator on.

If you wish to adjust the each frequency band separately refer to "◇User tone control settings" (page 23).



◇ User tone control settings *CA91/CA71 only

This screen appears only when "User" is selected in tone control.

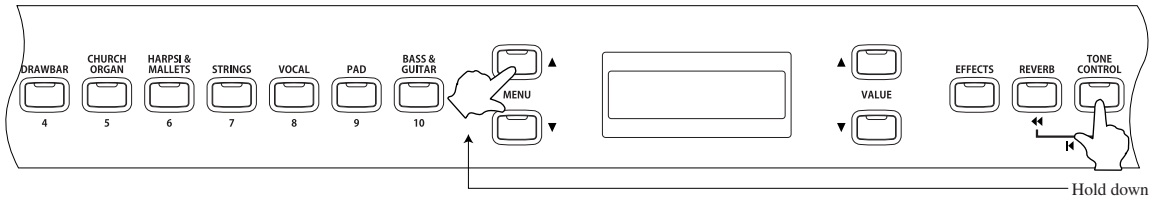
☐ Step 1

While holding down the TONE CONTROL button, use the VALUE buttons to select "User."

☐ Step 2

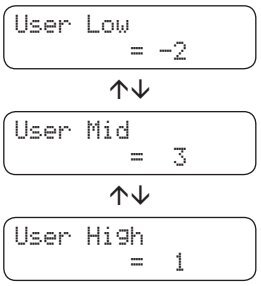
While holding down the TONE CONTROL button, use the MENU buttons to select the user setting function.

Repeatedly pressing the MENU button ▲ or ▼ selects each of the user frequency bands and displays current value.



☐ Step 3

Without releasing the TONE CONTROL button, use the VALUE buttons ▲ or ▼ to adjust the level of the selected frequency band within a range of -6 and +6.



☐ Step 4

Release the TONE CONTROL button when you have completed editing the user EQ settings.

■ Sound board speakers (CA91)

As with an upright piano, sounds are produced from the backside of the sound board.

If you wish to lower the sound volume of the sound board, set the Low value to -6.

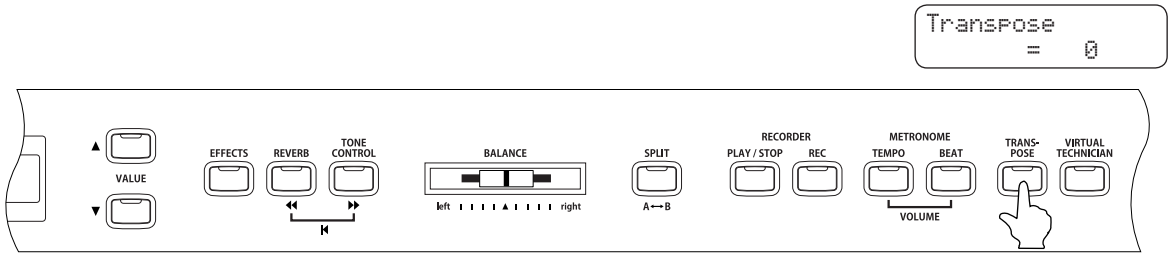
6) Transpose

The transpose function lets you raise or lower the piano's key in half steps. This is especially useful when you have learned a song in one key and have to play it in another key. The transpose feature allows you to play the song in the original key, but hear it in another key.

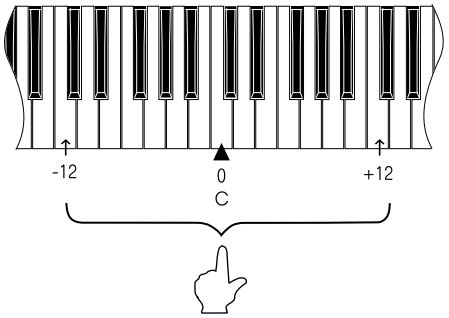
☐ Step 1

While holding down the TRANSPOSE button, use the keys to specify a transpose value (between -12 and +12 (two octaves)).

Notes will be transposed according to the set transpose value when the LED indicator for the TRANSPOSE button is on. The current transpose value is displayed in the display while the TRANSPOSE button is held down. The default setting is C major.



Hold down the button.



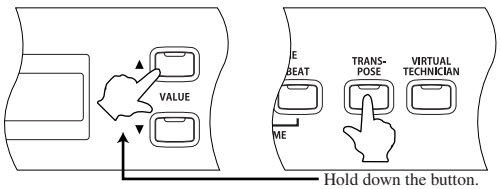
The "C" key at the middle of the keyboard corresponds to the value 0.
The value is displayed in the second line on the display.

☐ Step 2

Transpose can be turned on or off by pressing the TRANSPOSE button.

Transpose is active when the LED indicator is on, and the notes are transposed according to the set transpose value.
The LED indicator will not turn on when the set value is 0.

■ Notes can also be transposed by pressing the VALUE buttons while holding down the TRANSPOSE button.



Hold down the button.

7) Using the Registration Function *CA91/CA71 Only

A registration is a special set up that memorizes most of the panel settings such as sounds and effect settings so that you can recall them at the touch of a button.
10 Registrations can be memorized and saved. The settings and functions below can be memorized to a registration.

- Sound type (including settings made in dual or split mode)
- Dual / split balance, split point
- Effect, reverb, tone control settings

Virtual technician functions (page 51)

- Voicing
- Damper Resonance
- String resonance
- Key-off effect
- Touch curve
- Temperament
- Stretch tuning

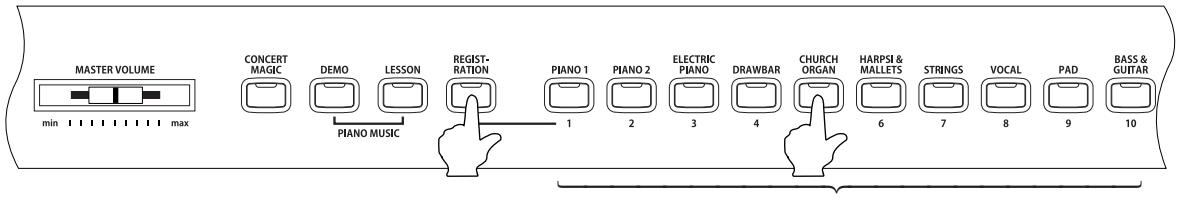
Menu functions (page 61)

- Wall EQ (CA91 only)
- Brilliance (CA51 only)
- Lower octave shift
- Lower pedal
- Layer octave shift
- Layer dynamics
- Damper hold
- Tuning

◇ Selecting a registration

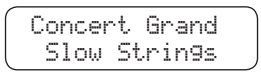
☐ Step 1

Press the REGISTRATION button.



Press one of them.

The REGISTRATION button LED indicator will be turned on, and the display will show the sound or sounds for the currently active registration.



☐ Step 2

To select a different registration, press any one of the REGISTRATION SELECT buttons (= SOUND SELECT buttons) numbered from 1 to 10.

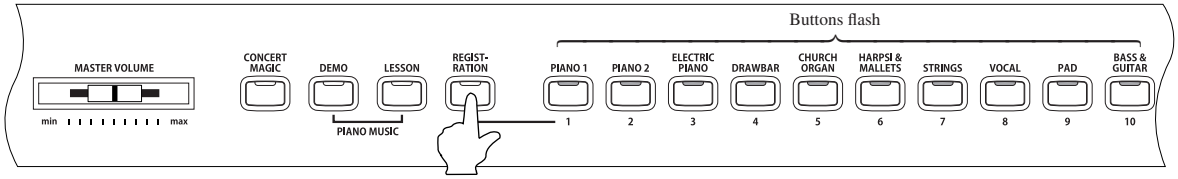
☐ Step 3

Press the REGISTRATION button again to return to normal operation. The LED indicator for the REGISTRATION button will be turned off.

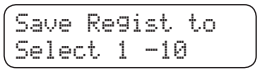
◇ Memorizing a registration

☐ Step 1

To memorize the current panel settings, press and hold the REGISTRATION button for a few seconds until the REGISTRATION/SOUND SELECT buttons start flashing.



Hold it down for a few seconds.



☐ Step 2

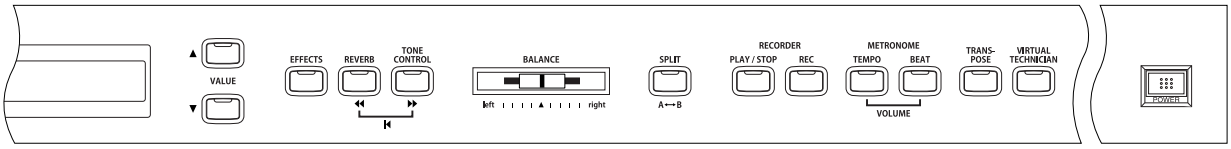
Press any one of the REGISTRATION/SOUND SELECT buttons marked 1-10 to select a location for your new registration.

A beep sound confirms that your registration has been memorized to your selected location.

◇ Resetting the registration settings

☐ Step 1

Turn on the power while holding down the TRANSPOSE and VIRTUAL TECHNICIAN buttons.



Hold them down at the same time.

The registrations will be reset to the factory default settings.

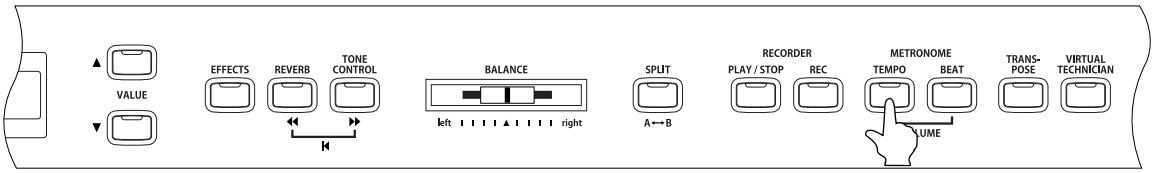
8) Using Metronome / Rhythm

Rhythm is one of the most important elements when learning music. It is important to practice playing the piano at the correct tempo and with a steady rhythm. The CA piano's metronome is a tool that helps you to achieve this by providing a steady beat for you play along with. In addition to regular metronome beats, the CA piano contains a wide variety of drum beats such as pop, rock, ballad, and jazz.

◇ Starting the metronome and setting the tempo

☐ Step 1

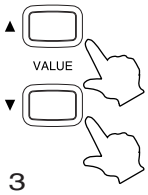
Press the TEMPO button.



You will see the LED indicator for the TEMPO button turn on and hear the metronome begin counting with a steady beat.
The current tempo is displayed on the LCD display in beats per minute.

☐ Step 2

Use the VALUE buttons to set the tempo.



The tempo can be set within a range of ♩ = 10 to 400.
(♪ = 20 to 800 for 3/8, 6/8, 7/8, 9/8, and 12/8 times)

☐ Step 3

To stop the metronome, press the TEMPO button again. The LED indicator for the TEMPO button will be turned off.

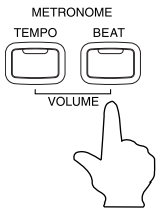
■ The metronome function cannot be used when Concert Magic is active.

◇ Changing the metronome time signature and rhythm

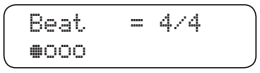
You probably noticed that there are two types of clicks and the louder one comes every fourth beat. The metronome is capable of giving you a down beat to indicate the beginning of the measure. You are now hearing a 4-beat or 4/4 time signature. You can select a different time signature, if you want to. There are ten different time signatures available on the CA piano—1/4, 2/4, 3/4, 4/4, 5/4, 3/8, 6/8, 7/8, 9/8 and 12/8. You can also select one of the 100 built-in rhythm styles instead of a simple metronome click.

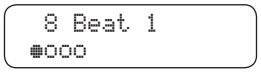
☐ Step 1

Press the BEAT button.



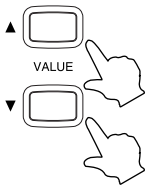
You will see the LED indicator turn on and hear the metronome begin counting. The LCD display shows the time signature and a visual indicator of beats per measure.
The LED indicator for the BEAT button turns on, the set beat is displayed on the LCD display, and then the metronome starts. When a rhythm is selected, the currently selected rhythm is shown on the LCD display, and the rhythm starts.





☐ Step 2

Use the VALUE buttons to change the beat / rhythm.



The beat can be selected from 1/4, 2/4, 3/4, 4/4, 5/4, 3/8, 6/8, 7/8, 9/8, 12/8.
The rhythm can be selected from 100 patterns (see page 29 for the rhythm list).

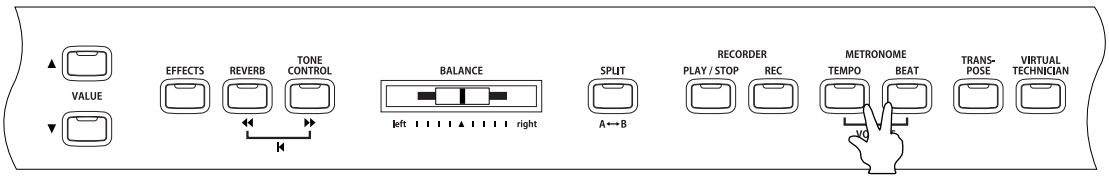
☐ Step 3

To stop the metronome or rhythm, press the BEAT button again. The LED indicator for the BEAT button will be turned off.

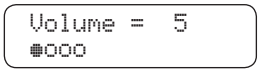
◇ Setting the sound volume for the metronome / rhythm

☐ Step 1

Press the TEMPO and BEAT buttons at the simultaneously.

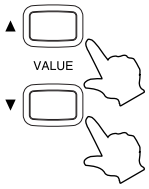


You will see the LED indicators for these buttons turn on and hear the metronome begin counting.
The Metronome volume is displayed on the LCD display.



☐ Step 2

Use the VALUE buttons to set the volume.



The volume can be set within a range of 1 to 10.

☐ Step 3

To stop the metronome or rhythm, press the TEMPO and BEAT buttons simultaneously again. The LED indicators for the TEMPO and BEAT button will be turned off.

◇ Rhythm list

No.	Rhythm
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
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

4. Using the Recorder

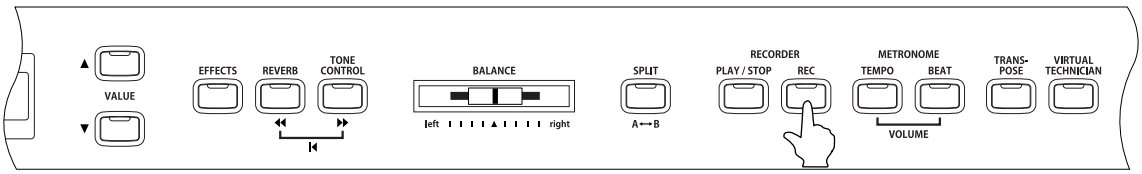
1) Recording a Song (REC Button)

The CA piano's recorder is a 10 song (5 songs in the CA51), two track recorder. It records your playing much like a tape recorder, and it is just as easy to use. The CA piano records a song as digital data instead of audio data and stores the song inside the piano. Because the song is stored as digital information you can modify the song when you play it back. You can, for example, record each of the two tracks separately, adjust the tempo without changing the pitch or use a different effect setting from one you have recorded. Once you understand the recorder, you will find it to be a useful tool for both practicing and playing the piano.

◇ Selecting a song and part to be recorded

☐ Step 1

Press the REC button.



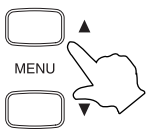
The display shows the song and part numbers.
The LED indicator on the REC button flashes.

```
Record
Song 1 Part=1
```

If you just want to record a song without making any changes you can proceed to step 4 at this time.

☐ Step 2

Use the MENU buttons to select a song to be recorded.




```
Record
Song 1 Part=1
```

↑↓ MENU buttons

```
Record
Song 2 Part=1
```

↑↓

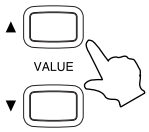
⋮

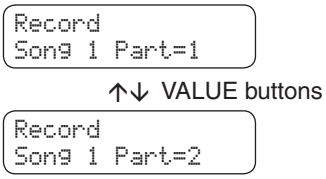
↑↓

```
Record
Song 5 Part=1
```

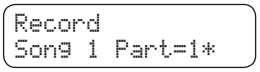
☐ Step 3

Use the VALUE buttons to select a part to be recorded.





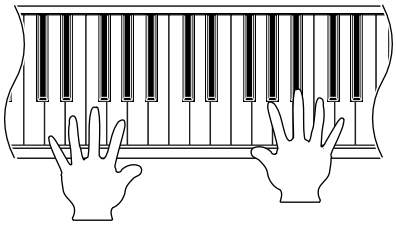
The ✳ symbol appears on the second line on the display if the selected part has already been recorded.



If you select a part with previously recorded data to record, the previously recorded data will be overwritten by the new performance data.

☐ Step 4

Play the keys to start recording.



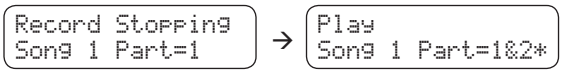
Recording starts automatically when you play the keys.
At the same time, the LED indicators of the REC and PLAY / STOP buttons will be turned on.

Recording can also be started by pressing the PLAY / STOP button.
Any changes made to the sound while you are recording will also be recorded.

☐ Step 5

When you finish playing a song, press the PLAY / STOP buttons to stop recording.

The LED indicators of the PLAY / STOP and REC buttons turn off, and recording stops.
After showing that the recording has been stopped, the display shows that the CA piano is ready to play the recorded performance.



■ The maximum recording capacity is approximately 90,000 notes (15,000 notes in CA51). When the storage capacity becomes full during recording, the LED indicators of the PLAY / STOP and REC buttons turn off, and recording stops. Performance up to that point that will be recorded.

■ Performance data stored in the CA piano will be saved even after turning off the power.
You can record a second part in the second track (part) of the same song. After recording the first part, use the VALUE buttons to select the other track and record your second part. You will hear the first part playing as you record the second part. If you want to record a second part without hearing the first part please read step 3 of the next section: "2) Playing Back a Song (PLAY/STOP Button)" for more information on selecting the different parts for playback.

■ Panel operations during recording:

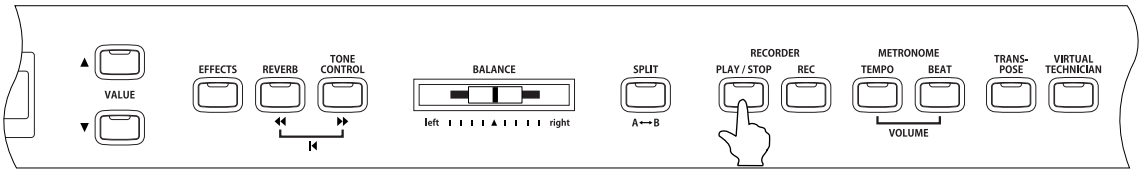
- Any changes made to the sound type will be stored in memory.
- Shifts between dual and split modes will be stored in memory.
- Changes made to the effect settings will not be stored in memory; the selected effect will be applied to the selected sound type.
- Changes made to tempo will not be stored in memory.
- Changes made using the BALANCE slider in dual and split modes will not be stored in memory. The volume balance set immediately before recording will be stored in memory.
- Turning the touch curve or transpose functions ON or OFF will not be stored in memory. Regardless of the transpose settings, the performance will be replayed at the pitch that had been used for recording.

2) Playing Back a Song (PLAY/STOP Button)

The PLAY/STOP button is used to select a song and part to play, and to start and stop play back of the recorded songs.
To play back a recorded performance immediately after recording, proceed to Step 2.

☐ Step 1

Press the PLAY / STOP button.

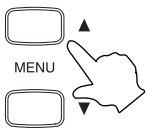


The currently selected song and parts are displayed, and the CA piano is ready to play back the song.

```
Select Song/Part
Song 1 Part=1&2*
```


☐ Step 2

Use the MENU buttons to select a song.




```
Select Song/Part
Song 1 Part=1&2*
```

↑↓ MENU buttons

```
Select Song/Part
Song 2 Part=1&2
```

↑↓

⋮

↑↓

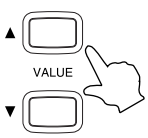
```
Select Song/Part
Song 5 Part=1&2
```

The ∗ symbol appears on the second line on the display if the selected part has already been recorded.

```
Select Song/Part
Song 1 Part=1&2*
```

☐ Step 3

Use the VALUE buttons to select a part.




```
Select Song/Part
Song 1 Part=1&2*
```

↑↓ VALUE buttons

```
Select Song/Part
Song 1 Part=1*
```

↑↓

```
Select Song/Part
Song 1 Part=2*
```

Part 1 & 2 : Both parts will be played back.
Part 1 : Only the first part will be played back.
Part 2 : Only the second part will be played back.

☐ Step 4

After you have made any desired settings, press the PLAY / STOP button to play back the song.

☐ Step 5

To stop, press the PLAY / STOP button again.

The CA piano enters standby mode.
While the recorder is in standby mode, you may select a song and part to be played back next.

☐ Step 6

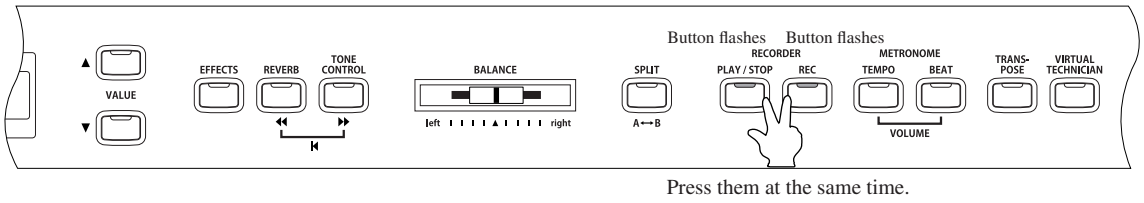
To exit the recorder and return to the normal operation, press any SOUND SELECT button.

3) Deleting a Song or Part

You can delete songs or parts within a song that were not recorded as you wished or that you do not want to keep any more.

☐ Step 1

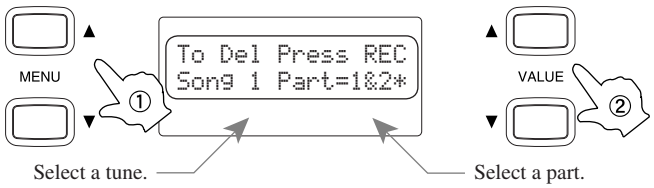
Press the PLAY / STOP and REC buttons at the simultaneously.



The LED indicators of the PLAY / STOP and REC buttons flash.

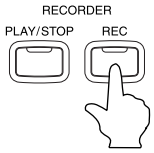
☐ Step 2

Select a song by using the MENU buttons, and then select a part using the VALUE buttons.



☐ Step 3

Press the REC button to delete. The LCD display will ask you if you're sure.



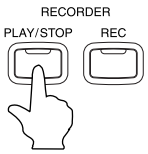

```
Sure? Press REC
Song 1 Part=1&2*
```

☐ Step 4

Press the REC button again to delete the selected song and part data.

```
Delete Completed
Song 1 Part=1&2*
```

* To cancel the delete operation in Step 3, press the PLAY / STOP button.

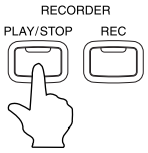



```
Delete Canceled
Song 1 Part=1&2*
```

→

```
To Del Press REC
Song 1 Part=1&2*
```

The display returns to the play back standby screen when the PLAY / STOP button is pressed again.




```
Select Song/Part
Song 1 Part=1&2*
```

■ Repeat the same procedures to delete multiple songs / parts.

■ If you wish to delete all the recorded songs, turn on the power while pressing the PLAY / STOP and REC buttons at the same time.

5. Using the Lesson Function

The CA piano's Lesson function helps you practice the piano with either a collection of etudes from Czerny, Burgmuller, and others or songs from Alfred's Basic and Premier Piano lesson books (USA, Canada, UK, AU only). In addition to the etudes or songs, basic finger exercises and a companion music book are also provided. You can listen to any etude, song, or the finger exercises and practice along with them. You may practice each hand separately at various tempos, and even record your practice. The lesson function can also evaluate your recorded performances for note accuracy, timing, and evenness of playing to help you further improve your skills.

(Alfred's Basic Piano Library lesson books are sold separately. Please check with your dealer or contact Alfred's Customer service at 818-892-2452 <USA, Canada> or 0 -95240033 <Australia> or, +44 (0)1279828960 <Alfred UK >, or by E-mail at customerservice@alfred.com).

1) Using the Etudes or Alfred Lesson Books (USA, Canada, UK, AU only)

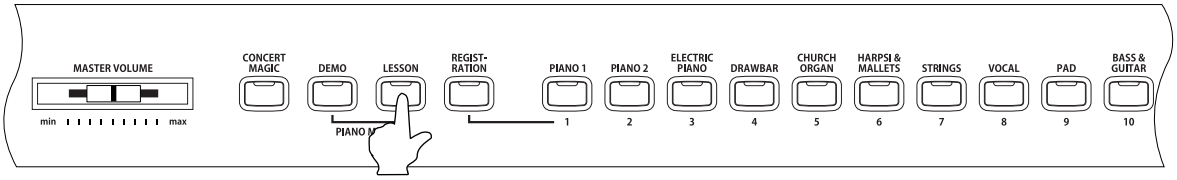
You can choose one of the etudes or songs and:

1. Listen to study the overall performance.
2. Practice the right-hand part while listening to the left-hand part of the etude/song.
3. Practice the left-hand part while listening to the right-hand part of the etude/song.
4. Practice with different tempos.
5. Practice a specific section of the etude/song.
6. Play, record, and listen to the right-hand performance while playing the left-hand part of the example etude/song.
7. Play, record, and listen to the left-hand performance while playing the right-hand part of the example etude/song.

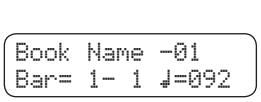
◇ Selecting a Etude category or Alfred book and an etude or song

☐ Step 1

Press the LESSON button.

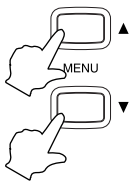


The Lesson selection screen appears. The first line shows the Category (etudes) or Book (Alfred) and the etude/song number. The second line shows the current bar, beat, and tempo.



☐ Step 2

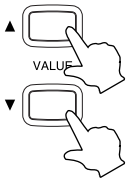
Use the MENU buttons to select the book you wish to practice.

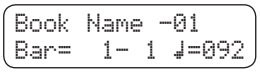


You may change the category or book while an etude or song is being played. Note, however, that you cannot change the category or book while you are recording your performance.

☐ Step 3

Use the VALUE buttons to select an etude or song number.



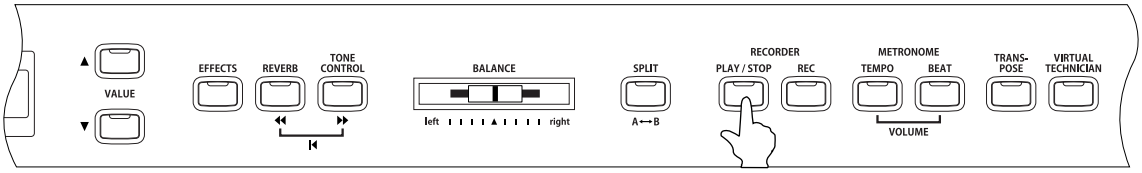


You may change etude/songs while an etude/song is being played. Note, however, you cannot change the etude/songs while you are recording your performance.

◇ Listening to an etude or song

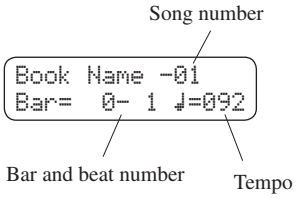
☐ Step 1

Press the PLAY / STOP button of the RECORDER.



There will be a one bar count-in before the etude/song begins playing.

- ■ The bar and beat number is displayed during the count-in before the first bar of the etude/song.
- ■ The first bar number of the etude/song is zero if there are pick up notes before the first bar.



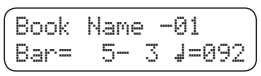
The metronome will not continue after the count-in bar, but you may turn it on by pressing the TEMPO or BEAT button of the metronome.

To change the tempo, use the VALUE buttons while holding down the TEMPO button.
Press the ▼ button to decrease the tempo, and press the ▲ button to increase the tempo.
To reset the tempo, press the VALUE ▲ and ▼ buttons at the same time.

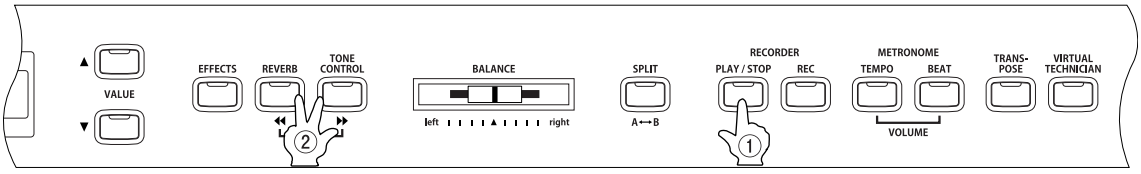
☐ Step 2

Press the PLAY / STOP button of the RECORDER once again.

The etude/song play back stops.



If the PLAY / STOP button is pressed again, there will be a one bar count-in, and the etude/song play back resumes.
If you wish to listen to the etude/song from the beginning, first stop the etude/song by pressing the PLAY / STOP button, and then press the ◀◀ and ▶▶ buttons at the same time.

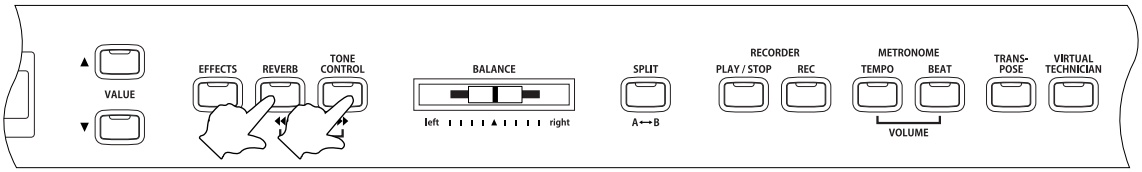


Press this button first.

◇ Playing an etude or song from a specific bar

☐ Step 1

Press the ⏩ or ⏪ button to locate the bar in which you want to begin play back.

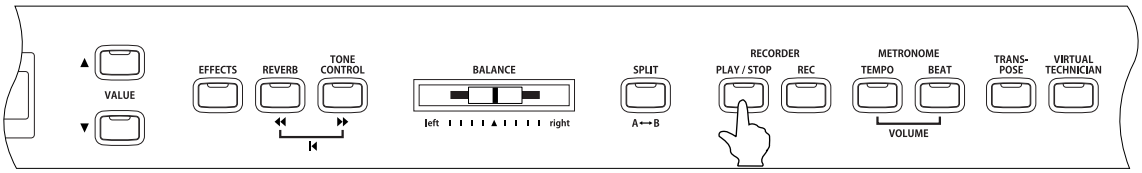


Press the ⏩ button to advance the etude/song one bar at a time. Press the ⏪ button to rewind the etude/song one bar at a time. To fast-forward or fast-rewind the etude/song, hold down the corresponding button.

You may use this function while an etude/song is being played.

☐ Step 2

Press the PLAY / STOP button.



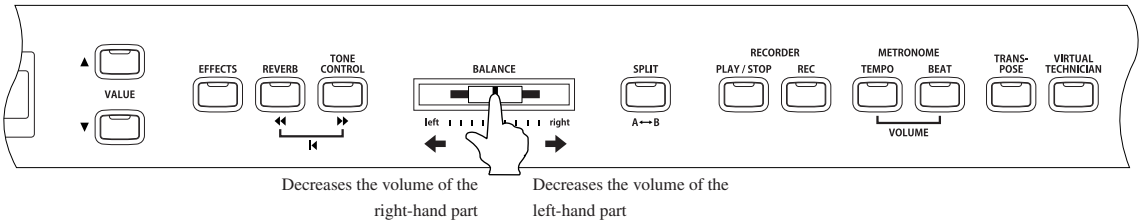
After the one bar count-in, the music starts from the specified bar number.

◇ Practicing the right / left-hand part while listening to the other part

Playing the only right / left-hand part of an example etude/song is called "minus-one play," and practicing the right / left-hand part while listening to the other part is called "minus-one practice."

☐ Step 1

After selecting an etude or song, move the BALANCE slider to the right or to the left.

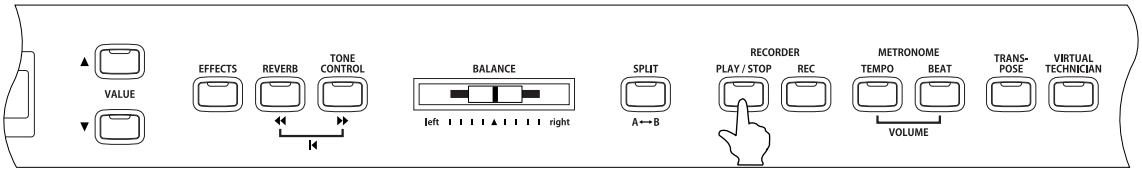


■ To practice the right-hand part while listening to the left-hand part of an etude/song.
Move the slider to the left. The volume of the right-hand part of the etude/song is decreased, so that you can still hear the right hand part playing softly as guide for you to play along with. When the slider is moved all the way to the left end, the right-hand part is completely muted and you can try playing without a guide.

■ To practice the left-hand part while listening to the right-hand part of an etude/song.
Move the slider to the right. The volume of the left-hand part of the etude/song is decreased, so that you can still hear the left hand part playing softly as guide for you to play along with. When the slider is moved all the way to the left end, the left-hand part is completely muted and you can try playing without a guide.

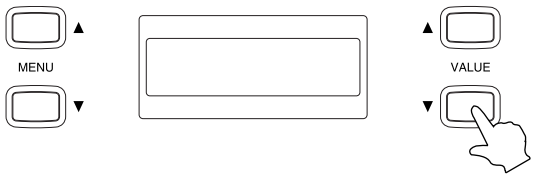
☐ Step 2

Press the PLAY / STOP button of the RECORDER.



After the one bar count-in, the etude/song starts with the slider setting applied. You may practice the right / left-hand parts along with the etude/song.

To change the tempo, use the VALUE ▲ and ▼ buttons while holding down the TEMPO button.
If you wish to practice with a lower tempo, press the VALUE ▼ button. To practice with a faster tempo, press the VALUE ▲ button.
To reset the tempo, press the VALUE ▲ and ▼ buttons at the same time.

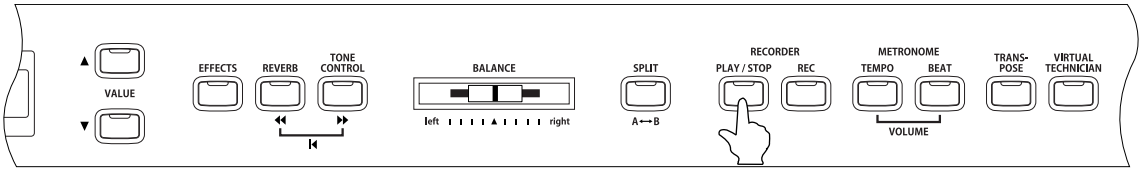


◇ Repeating and practicing specific sections of an etude or song

You can play back (loop) a specific section of an etude/song repeatedly between a defined A and B point.

☐ Step 1

Press the PLAY / STOP button of the RECORDER.

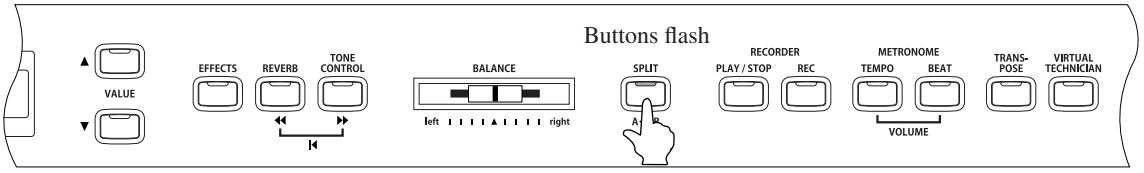


After the count-in, the etude/song starts.

```
Book Name -01
Bar=  0- 1 ♩=092
```

☐ Step 2

Press the A ↔ B button when the etude/song reaches to the point where you wish to specify the start point of the loop.



The first bar for the loop is set, and the LED indicator for the A ↔ B button flashes.

```
Book Name -01
Bar=  5- 1 ♩=092
```

☐ Step 3

Press the A ↔ B button again when the etude/song reaches to the point where you wish to specify the end point of the loop.

The last bar for the loop is set, and the LED indicator for the A ↔ B button turns on.
The section to be repeated (looped) is now defined. The section of the etude/song defined by the start (A) and end (B) points will be repeated (looped).

```
Book Name -01
Bar= 10- 2 ♩=092
```

☐ Step 4

Press the A ↔ B button once again to cancel the loop play and return to the regular play mode.

The LED indicator for the A ↔ B button turns off.

■ The loop section (the first and the last bars) specified here will be stored in the CA piano unless loop play is cancelled, a different etude/song is selected, or you exit the lesson mode.

```
Book Name -01
Bar= 21- 2 ♩=092
```

The loop section can also be specified by selecting bars with the ◀◀ and ▶▶ buttons while the etude is paused.

■ The last bar cannot precede the first bar.

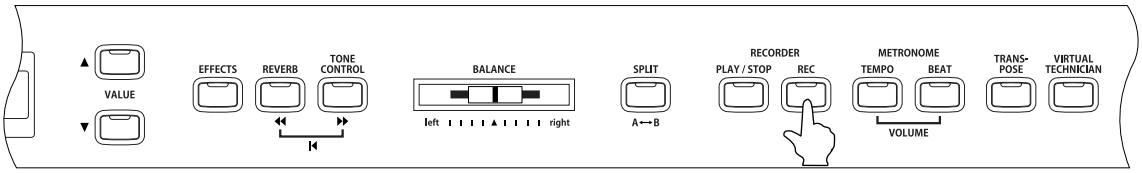
◇ Playing along with an etude or song and recording your own performance

Using the minus-one play function, you can play the right / left-parts of an etude/song, record your performance, and listen to your performance afterwards.

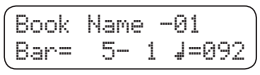
■ Loop cannot be used when you are recording your performance.

□ Step 1

Press the REC button.



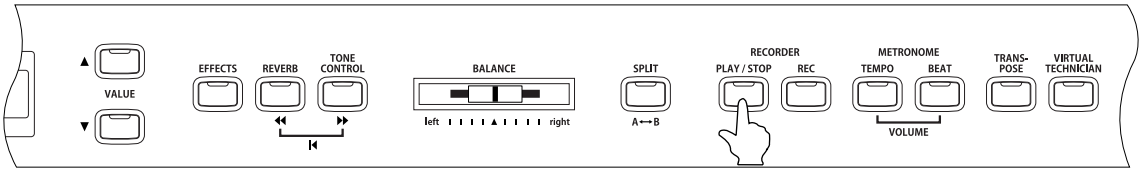
The LED indicators for the REC and PLAY / STOP buttons turn on. After the one bar count-in, the etude/song plays and the CA piano begins recording.



To change the start bar for your recording, use the ▶▶ or ◀◀ button to select the desired bar before starting to record.
The volume of the left / right-hand part of the etude/song can be adjusted with the BALANCE slider.

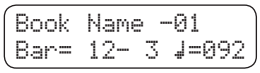
□ Step 2

To stop recording, press the PLAY / STOP button.



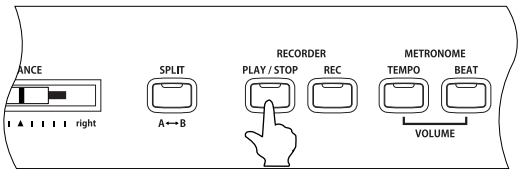
Etude/song play back and recording stops, and the LED indicators for the REC and PLAY / STOP buttons turn off. The recorded performance can be deleted by pressing the REC and PLAY / STOP buttons at the same time.

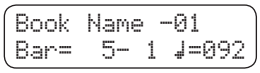
■ The recorded performance will also be erased when a different etude/song is selected.



□ Step 3

Press the PLAY / STOP button again.





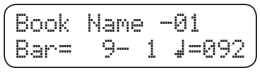
After the one bar count-in, the etude/song plays and the recorded performance begins.

To change the start point for playback, use the ▶▶ or ◀◀ buttons.
The volume of the left / right-hand part of the song can be changed with the BALANCE slider.

□ Step 4

Press the PLAY / STOP button.

Song playback and the recorded performance stops.



◇ Exiting the lesson function

□ Step 1

Press the LESSON button.

2) Using the Finger Exercises

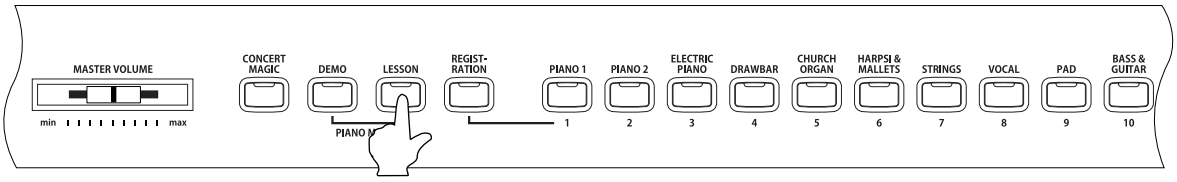
Select one of the exercises and practice it.
When you play and record the selected exercise, your performance can be evaluated by the CA piano:
Mistakes (wrong notes)
Uneven timing
Uneven note volume
The evaluation result will be shown on the LCD display to allow you to objectively review your own performance.

Use the included music book "FINGER EXERCISES" for practice.

◇ Selecting an exercise

□ Step 1

Press the LESSON button.

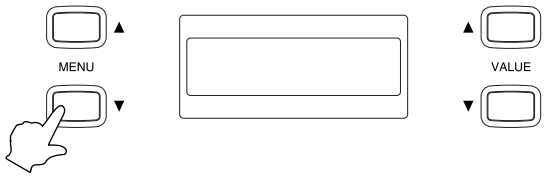


The Lesson selection screen appears. The first line shows the exercise category name and exercise number. The second line shows the current bar, beat, and tempo.

```
Book Name -01
Bar=  1- 1 ♩=092
```

□ Step 2

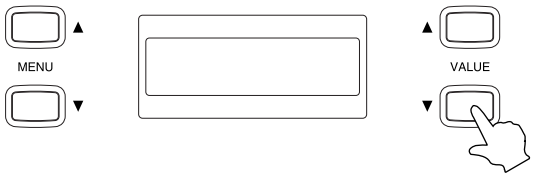
Press the MENU ▼ button to select Hanon.




```
Hanon -01
Bar=  1- 1 ♩=060
```

□ Step 3

Use the VALUE buttons to select an exercise.

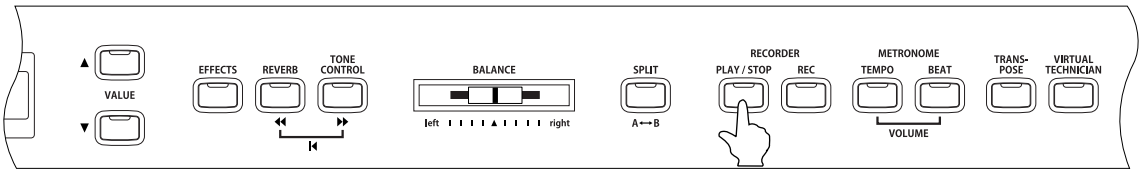



```
Hanon -12
Bar=  1- 1 ♩=060
```

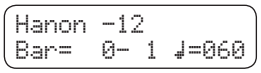
◇ Listening to an exercise

☐ Step 1

Press the PLAY / STOP button of the RECORDER.



There will be a one bar count-in before the exercise begins playing.



■ The bar and beat number is displayed during the count-in before the first bar of the exercise.
■ The first bar number of the exercise is zero if there are pick up notes before the first bar.

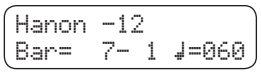
The metronome will not continue after the count-in bar, but you may turn it on by pressing the TEMPO or BEAT button of the metronome.

To change the tempo, use the VALUE buttons while holding down the TEMPO button.
Press the ▼ button to decrease the tempo, and press the ▲ button to increase the tempo.
To reset the tempo, press the VALUE ▲ and ▼ buttons at the same time.

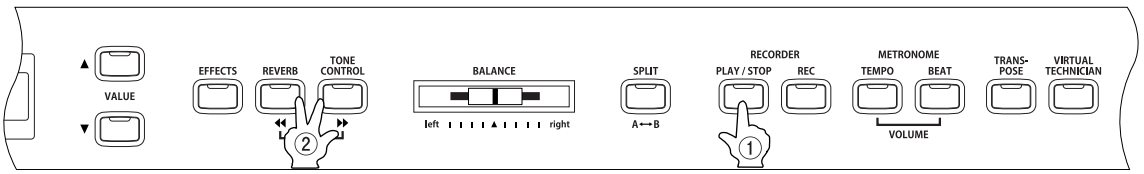
☐ Step 2

Press the PLAY / STOP button of the RECORDER once again.

The exercise play back stops.



If the PLAY / STOP button is pressed again, there will be a one bar count-in, and the exercise play back resumes.
If you wish to listen to the exercise from the beginning, first stop the exercise by pressing the PLAY / STOP button, and then press the ◀◀ and ▶▶ buttons at the same time.



Press this button first.

As with the etudes or Alfred songs, you may play an exercise from a specific bar or use the loop function. Refer to page 37 (◇ Playing an etude or song from a specific bar) and page 39 (◇ Repeating and practicing specific sections of an etude or song) for details.

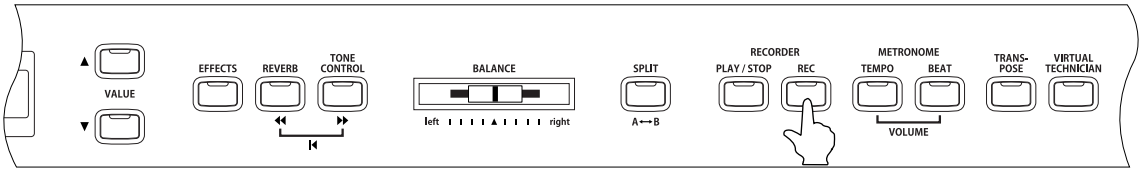
◇ Playing along with an exercise, recording your own performance, and checking the evaluation result

After playing along with an exercise while recording, when you are finished your performance will be evaluated and the result will be displayed.

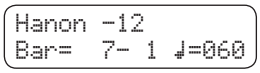
■ Loop cannot be used when you are recording your performance.

☐ Step 1

Press the REC button.



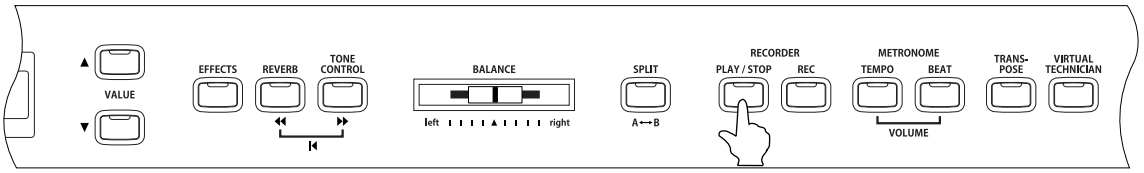
The LED indicators for the REC and PLAY / STOP buttons turn on. After the one bar count-in, the exercise plays and the CA piano begins recording.



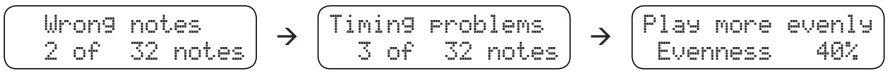
To change the start bar for your recording, use the ▶▶ or ◀◀ button to select the desired bar before starting to record.
The volume of the left / right-hand part of the exercise can be adjusted with the BALANCE slider.

☐ Step 2

To stop recording, press the PLAY / STOP button.



Exercise play back and recording stops, and the LED indicators for the REC and PLAY / STOP buttons turn off. Three different evaluation points as shown below will be displayed alternately.



The recorded performance can be deleted by pressing the REC and PLAY / STOP buttons at the same time.

■ The recorded performance will also be deleted when a different exercise is selected.

☐ Step 3

Press the PLAY / STOP button again.

After the one bar count-in, the exercise and recorded performance play back begins.
You can listen to the recorded performance and review it while the evaluation results are displayed.

You can adjust the volume of the exercise by using the BALANCE slider.

☐ Step 4

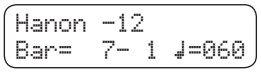
Press the PLAY / STOP button.

Exercise playback and the recorded performance stops.

□ Step 5

Press one of the MENU buttons.

The display changes from the evaluation result display screen to the exercise selection screen.



■ The recorded performance can be played even after canceling the evaluation result screen.

◇ Exiting the lesson function

□ Step 1

Press the LESSON button.

6. Playing with Concert Magic

The great German composer Johann Sebastian Bach once said, "Playing the keyboard is simple. Just strike the right keys at the right time."
Many people wish it were that simple. The reality is very different of course. However, there is a way to make playing the keyboard very simple. You don't even have to strike the right keys thanks to Concert Magic.

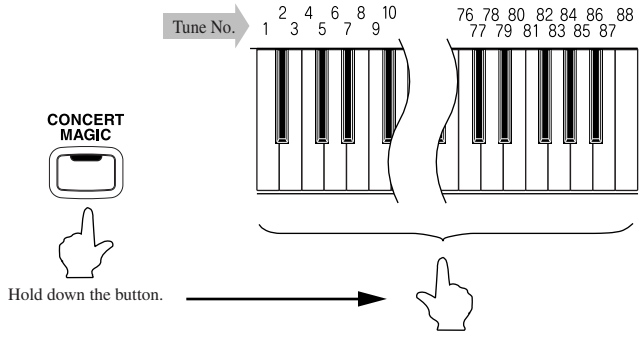
With CONCERT MAGIC, absolutely anyone can sit at the CA piano and make real music... even if you've never taken a piano lesson in your life.
To enjoy performing by yourself, you have only to select your favorite piece from 176 preprogrammed songs and tap any of the 88 piano keys with a steady rhythm and tempo. CONCERT MAGIC will provide the correct melody and accompaniment notes, regardless of which keys you press. Anybody, young or old, can enjoy CONCERT MAGIC from the moment they sit down at the CA piano.
Now let's see how CONCERT MAGIC works.

1) Selecting a Song

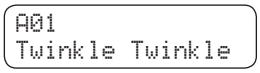
The 176 Concert Magic songs are assigned to each of the 88 piano keys, two songs for each key. There are two banks of songs, Bank A and Bank B. Each bank contains 88 songs. (CA51 has only Bank A.)
The songs are also classified in eight groups by song category such as Children's Songs, American Classics, and Christmas Songs.
All of the song titles are listed in separate volume "Internal Song Lists." To make it easier to find which song is assigned to which key, there is a key strip that can be placed between the end of black keys and the front panel. The key strip indicates song categories, and note names.

☐ Step 1

To select a song, press the key to which your desired song is assigned while holding down the CONCERT MAGIC button.



The LCD display shows you the song number and abbreviated song title.



You have selected a song in Bank A.

☐ Step 2

To select a song in Bank B, press the same key again.

The LCD display shows you another song title with "B" at the beginning.

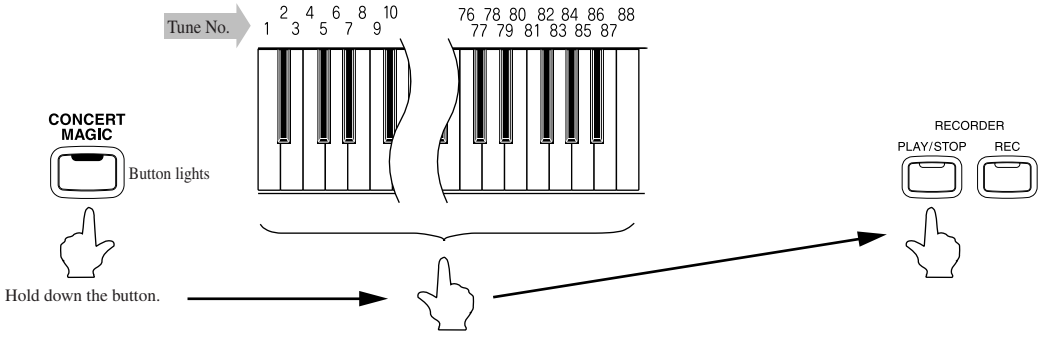
■ Repeatedly pressing the key switches between the two banks.

2) Listening to the Song

If you have selected a song you are familiar with, you may want to play by yourself right away. However you may want to listen to the song first before playing it.

☐ Step 1

After selecting a Concert Magic song to play back, press the PLAY/STOP button.



The CA piano will start playing back the selected song.

■ You can adjust the speed or tempo of the song by using the VALUE buttons while holding down the TEMPO button.
■ While you are listening you can select a different Concert Magic song by using the VALUE buttons.

You probably noticed that the circles in the LCD display turn into smaller plus signs as the song is played back. This is called the Note Navigator. These circles and plus signs provide a visual guide that shows you when to press the next key. The space between the circles and position of the circles in the LCD shows you the approximate timing between each key press.

The circles turn into small plus signs as the song is playing.

The key to performing using Concert Magic is to know the rhythm of the song. The Note Navigator provides a rough outline of the songs rhythm, that will help you to learn the song's rhythm and then perform it by yourself.

■ If you want to listen to a different song, press the key to which your desired song is assigned while holding down the CONCERT MAGIC button. To listen, press the PLAY/STOP button.

☐ Step 2

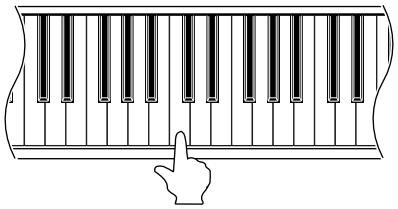
When you are finished listening to the song, press the PLAY/STOP button again to stop.

3) Performing a Song

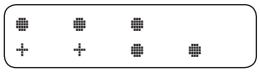
Now you're ready to play yourself.

☐ Step 1

Tap out the rhythm of the selected song on any one of the 88 black or white keys on the piano's keyboard.



Use the Note Navigator (the circles and plus signs) to learn the rhythm of the Concert Magic song.



As you tap harder, the notes will get louder; as you tap softer, the notes will get quieter. As you tap faster, the notes speed up; as you tap slower, they will slow down correspondingly, just like regular piano playing.
Isn't it fun? You can sound like you've been playing for years just by pressing one key with one finger.

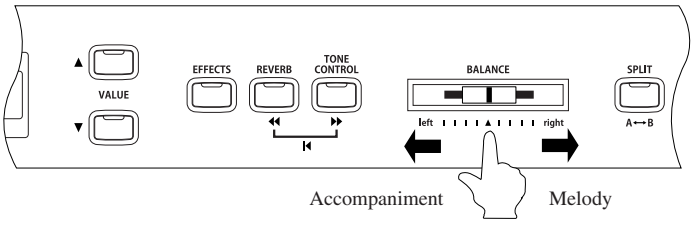
Concert Magic is a perfect method for small children to learn music, especially to develop a sense of rhythm. For older people who may think it is too late to learn the keyboard, Concert Magic is a good first step for them to begin with. With Concert Magic, your CA piano can be enjoyed by anyone in the family, even those who have never touched a musical instrument in their life.

4) Part Volume Balance for Concert Magic

When used with Concert Magic, the balance slider adjusts the volume balance of the melody part and the accompaniment.

☐ Step 1

Move the balance slider to the right or left to adjust the volume balance.



As the slider is moved to the right, the sound of the melody becomes louder and the accompaniment becomes softer. The balance changes in the opposite way when the slider is moved to the left.

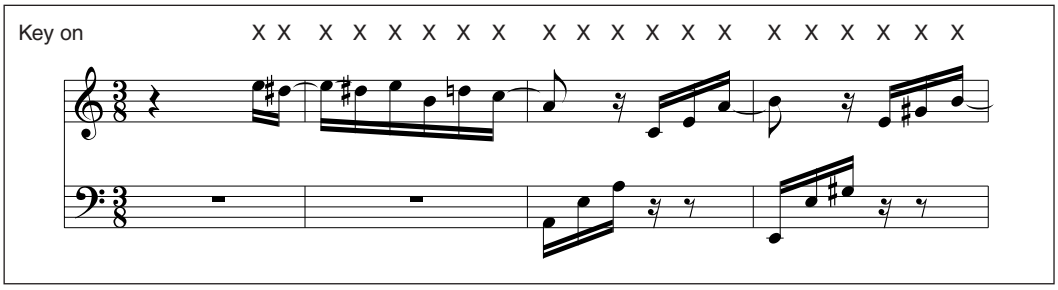
5) Concert Magic Song Arrangement Types

After playing for a while with Concert Magic you may think that it's too easy and there is very little to learn.
While it is true that some of the songs are very easy to play, even for beginners, there are also some which will challenge you and require practice to play beautifully. Each of the 176 Concert Magic songs falls into one of three different arrangement types depending on the skill level required to perform them.

■ Easy Beat

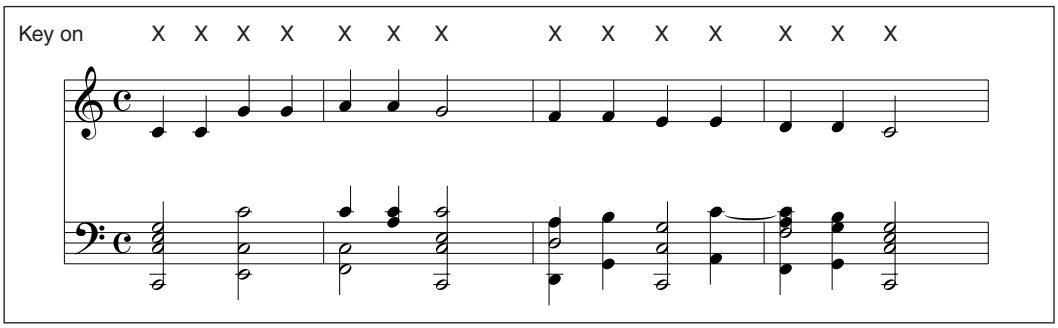
These are the easiest songs to play. To perform them, simply tap out a constant steady beat on any key on the keyboard.
Look at the following example, "Für Elise". The Note Navigator indicates that you should keep a constant steady rhythm all the way through the song. This is the distinguishing character of an Easy Beat song.

Press any key with a steady rhythm.



■ Melody Play

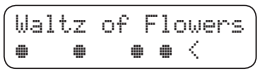
These songs are also quite easy to play, especially if they are familiar to you. To perform them, tap out the rhythm of the melody on any key on the keyboard. Singing along as you tap the rhythm can be helpful.
Play "Twinkle, Twinkle, Little Star" for example. Follow the melody's rhythm as shown.

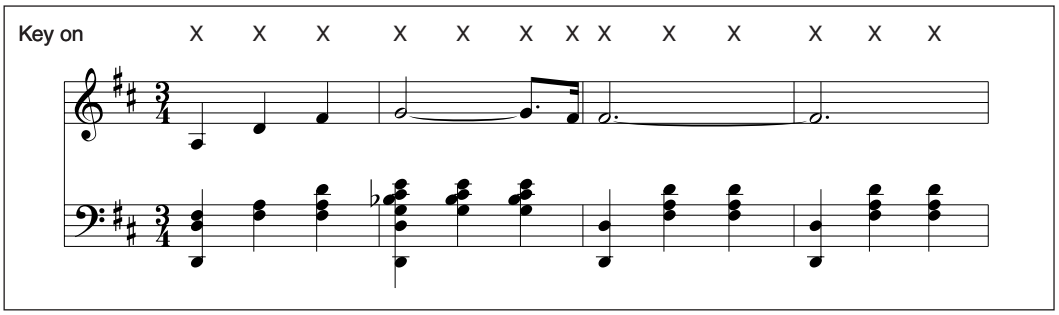


When performing fast songs with Concert Magic, it is sometimes easier to tap two different keys with two fingers alternating. This allows you to play twice as fast as you can using only one finger on one key.

■ Skillful

These songs range in difficulty from moderately difficult to difficult. To perform them, tap out the rhythm of both the melody and the accompaniment notes on any key on the keyboard, like "Waltz of the Flowers" shown below. The Note Navigator will be very helpful with the Skillful songs.





It may take some practice to get them just right. A good way to learn these songs is to listen to them first, and then try to tap out the rhythms that you hear.

6) Steady Beat

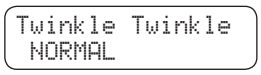
Regardless of which arrangement type a Concert Magic song is, with Steady Beat you can play any Concert Magic song by simply tapping any key with a constant steady beat.

☐ Step 1

Press and hold the CONCERT MAGIC button.

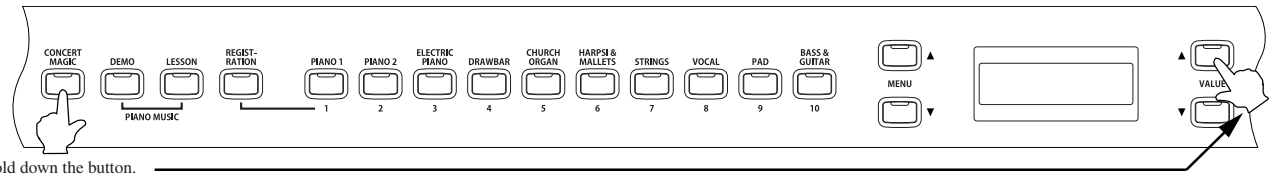
The LCD display will change to show the current Concert Magic mode in the second line.

The current mode is NORMAL.



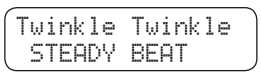
☐ Step 2

While still holding the CONCERT MAGIC button, use the VALUE button to change the Concert Magic mode to STEADY BEAT.



Hold down the button.

The mode is changed to STEADY BEAT.



☐ Step 3

Start by tapping any key with a constant steady beat.

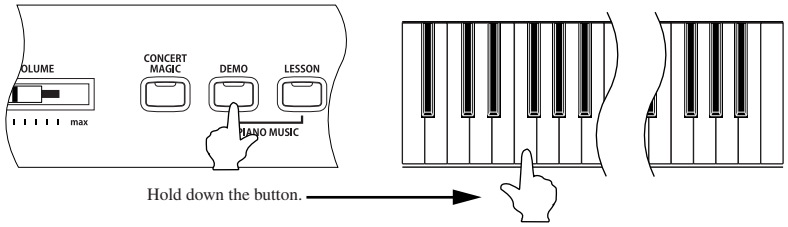
Your tapping will set the tempo for the song. Both the accompaniment and melody parts will be played automatically in time with the tempo you tap.

7) Concert Magic Song Demo

There are two ways to listen to the Concert Magic songs in the DEMO mode.

■ Category Play

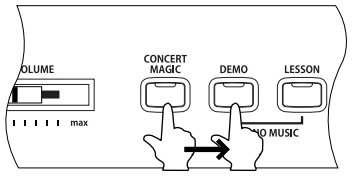
Press the piano key to which the desired song is assigned while holding down the DEMO button.



The CA piano will play back the selected song and, then play the rest of the songs in the same song category one after another.

■ Random Play

Press the CONCERT MAGIC button and then press the DEMO button.



The CA piano will play back all of the Concert Magic songs in random order.

■ To stop the demo, press the DEMO button again.
■ To select the songs in different categories, select a song from the desired category.

8) Adjusting the Playback Speed for the Concert Magic Songs

The TEMPO button is also used to adjust the playback speed for the Concert Magic songs.

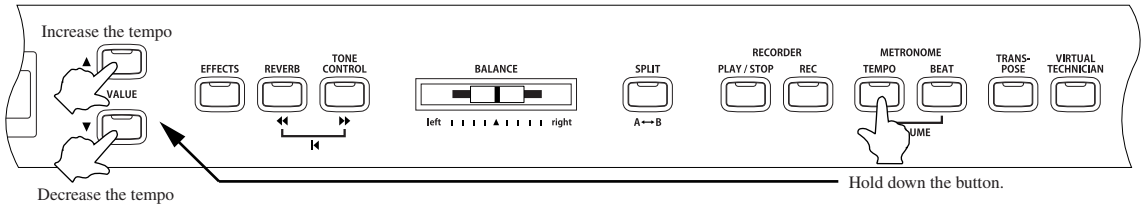
□ Step 1

After selecting a Concert Magic song to play back, hold down the TEMPO button.

The LED display will show the tempo value.

□ Step 2

While holding down the TEMPO button, use the VALUE buttons to change the tempo.



You can adjust the tempo, either before playing back a song or while the song is playing back.

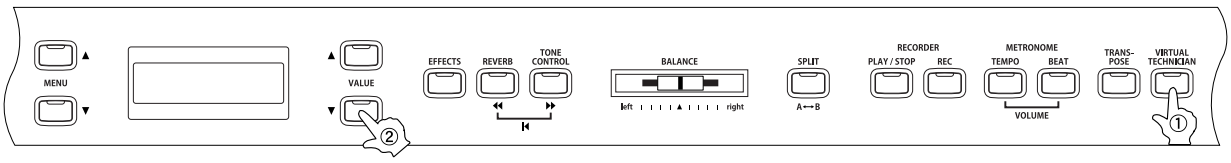
7. Using the Virtual Technician Functions

A Piano technician is essential for an acoustic piano. He not only tunes the piano but also performs regulation and voicing adjustments to make the piano sound and play better. Virtual technician simulates the work of a piano technician electronically and allows you to customize the CA piano to your personal taste.
Settings made here to the virtual technician functions can be saved by using the registration function (page 25).
These are the functions of virtual technician.

1) Voicing
2) Damper resonance
3) String resonance
4) Key-off effect
5) Touch curve
6) Temperament
7) Key of Temperament
8) Stretch tuning (when equal temperament (piano) or equal temperament is selected)

1) Voicing

Voicing is a technique used by piano technicians to mold the character of a piano's sound. The voicing function lets you adjust the CA piano's tone quality by choosing one of six types of voicings.



☐ Step 1

Press the VIRTUAL TECHNICIAN button.
Voicing is the first function in the virtual technician menu.

```
1 Voicing
      = Normal
```

☐ Step 2

Use the VALUE buttons to select the desired voicing type from Normal, Mellow 1, Mellow 2, Dynamic, Bright 1, and Bright 2.

The second line on the display shows the selected voicing type.

■Normal : Produces the normal tone character of an acoustic piano throughout the entire dynamic range. This is the default voicing.
■Mellow 1, 2 : Produces a softer mellow tone character throughout the entire dynamic range. Mellow 2 is softer than Mellow 1.
■Dynamic : The tone character will change dramatically from mellow to bright depending on how soft or loud you play.
■Bright 1, 2 : Produces a brighter tone character throughout the entire dynamic range. Bright 2 is brighter than bright 1.

☐ Step 3

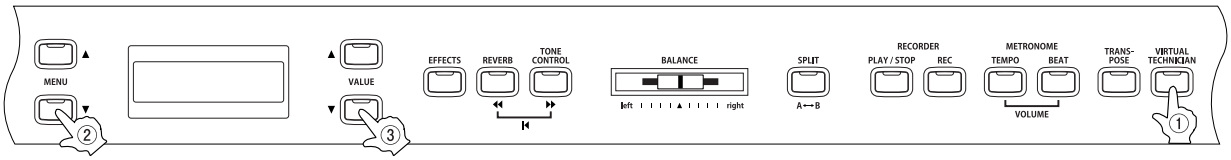
After selecting the desired voicing, you can exit the virtual technician function by pressing the VIRTUAL TECHNICIAN button.

You can also select other virtual technician functions at this point by using the MENU buttons.

■ The voicing setting defaults to "Normal" each time the power is turned off. You can use the user memory function (page 76), to save your selected voicing. This way your current voicing selection will remain even after the power is turned off.

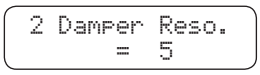
2) Damper Resonance

When the sustain pedal (page 8) is depressed on an acoustic piano, all the dampers are lifted up allowing the strings to vibrate freely. When you play note or chord on the piano with the sustain pedal depressed, not only will the strings for the notes you played vibrate but other strings will vibrate in sympathetic resonance. The damper resonance function simulates the phenomenon.



☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the damper resonance function. You can adjust the volume of the damper resonance.



☐ Step 2

Use the VALUE buttons to set the volume within a range of "Off, 1 to 10. 5 is the default setting.

Damper resonance will not be active when "Off" is selected.

☐ Step 3

After setting the desired damper resonance volume, you can exit the virtual technician function by pressing the VIRTUAL TECHNICIAN button.

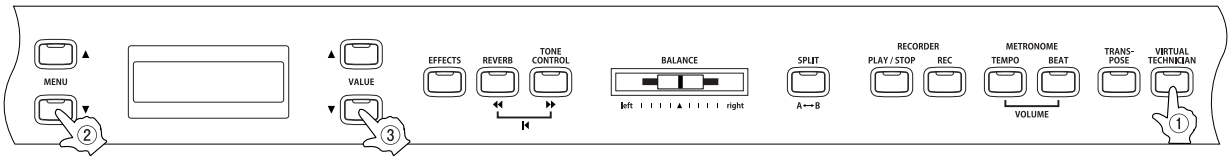
■ The damper resonance volume defaults to "5" each time the power is turned off. You can use the user memory function (page 76), to save your desired volume. This way your current damper resonance volume will remain even after the power is turned off.

■ The damper resonance function is effective only for the following piano sounds:

SOUND SELECT button	CA91	CA71	CA51
PIANO 1	Concert Grand	Concert Grand	Concert Grand
	Studio Grand	Studio Grand	Studio Grand
	Mellow Grand	Mellow Grand	Mellow Grand
	Jazz Grand	Jazz Grand	Jazz Grand
PIANO 2	Concert Grand 2	Concert Grand 2	
	Studio Grand 2	Studio Grand 2	
	Mellow Grand 2	Mellow Grand 2	
	Jazz Grand 2	Jazz Grand 2	

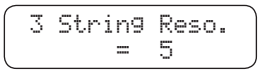
3) String Resonance

The string resonance function simulates the phenomenon of string resonance on an acoustic piano.



☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the string resonance function. You can adjust the volume of the string resonance.



☐ Step 2

Use the VALUE buttons to set the volume within a range of "Off, 1 to 10. 5 is the default setting.

String resonance will not be active when "Off" is selected.

☐ Step 3

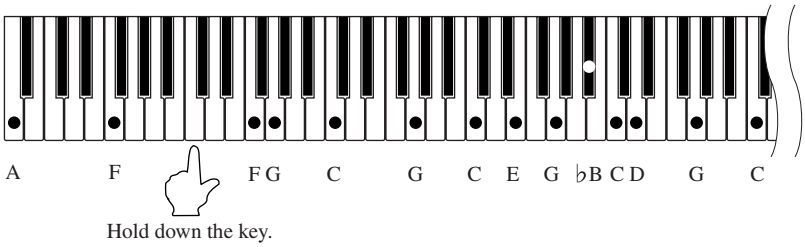
After setting the desired string resonance volume, you can exit the virtual technician function by pressing the VIRTUAL TECHNICIAN button.

■ About string resonance

Even when the sustain pedal is not depressed on an acoustic piano, the strings for any notes you are holding will be un-damped and will resonate freely in sympathy with the strings of other notes that you play if they are part of the same harmonic series. In addition, adjacent notes will also be resonated. The string resonance function simulates this phenomenon. This is called "string resonance."

For example, when you play the keys shown below while holding down the C key, the string of the C key resonates and produces a sound.

(Quietly press and hold down the C key, and then quickly tap each of the keys shown below. You can hear the string resonate.)



■ When you play a key while holding down an adjacent key, an acoustic piano produces a sound as a result of string resonance. The CA91 / CA71 / CA51 simulates this phenomenon.

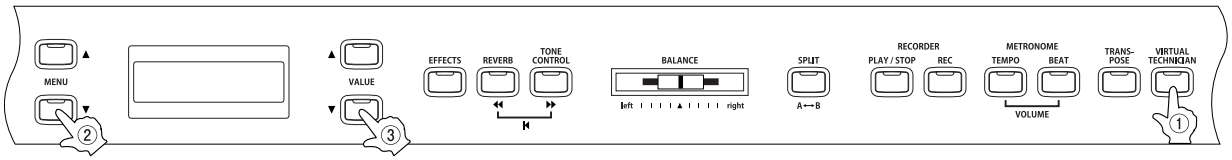
■ The string resonance volume defaults to "5" each time the power is turned off. You can use the user memory function (page 76), to save your desired volume. This way your current string resonance volume will remain even after the power is turned off.

■ String resonance is not active when the sustain pedal is depressed.

■ The string resonance function is effective only for the acoustic piano sounds.

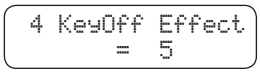
4) Key-off Effect

Especially for low-pitched tones, when a key is played and released quickly and strongly, there will be the sound of the damper touching the strings immediately before the sound stops. The key-off effect simulates this phenomenon, and you can adjust the key-off volume to your taste.



☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the key-off effect function. You can adjust the volume of the key-off effect.



☐ Step 2

Use the VALUE buttons to set the volume within a range of "Off", 1 to 10. 5 is the default setting.

The key-off effect will not be active when "Off" is selected.

☐ Step 3

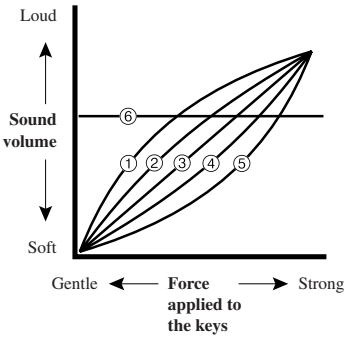
After setting the desired key-off volume, you can exit the virtual technician function by pressing the VIRTUAL TECHNICIAN button.

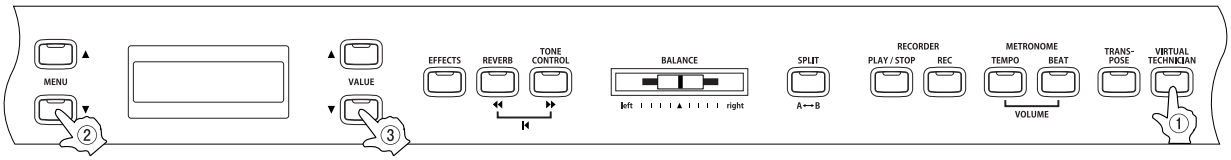
- The key-off volume defaults to "5" each time the power is turned off. You can use the user memory function (page 76), to save your desired volume. This way your current key-off volume will remain even after the power is turned off.
- The key-off effect is effective only for the acoustic piano sounds.

5) Touch Curve

The CA piano responds just like a real acoustic piano when you play it. It produces a louder sound when you play hard and a softer sound when you play soft. The volume level and sound character changes in relation to how strongly and quickly the keys are pressed. This system is called “touch sensitivity” on a digital piano. The CA piano’s Touch Curve function lets you select a different touch sensitivity for the keyboard from the standard touch of an acoustic piano. You can change the touch sensitivity to one of six different preset touch curves and two user touch curves.

①Light +	:	For players with a delicate touch. Requires less striking force to achieve a forte note.
②Light	:	For those still developing finger strength. A louder volume is produced even when playing with a soft touch. This curve is recommended for children and organ players.
③Normal	:	Reproduces the standard touch sensitivity of an acoustic piano.
④Heavy	:	Perfect for those with strong fingers. Requires a heavier touch to produce a loud volume.
⑤Heavy +	:	Requires more striking force to achieve a loud volume.
⑥Off	:	A constant volume is produced regardless of how hard the keys are struck. This setting is suitable for sounds that have a fixed dynamic range such as Organ and Harpsichord.
·User 1 ·User 2	:	You can create your own custom touch curve to fit your playing style. Two user touch curves can be saved.





☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the touch curve function.

```
 5 Touch
= Normal
```

☐ Step 2

Use the VALUE buttons to select a touch curve from Heavy+, Heavy, Normal, Light, Light+, Off, User 1, and User 2.

The selected touch curve is shown on the second line on the display.

■ See the next page for information on creating a user touch curve.

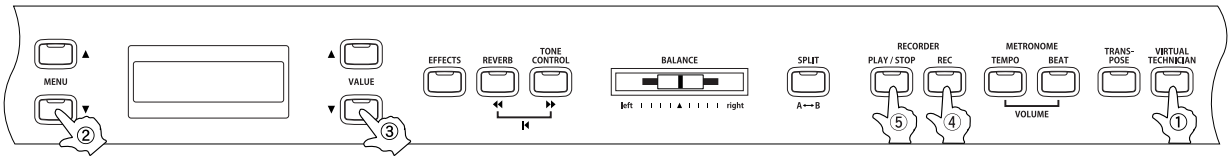
☐ Step 3

After selecting the desired touch curve, you can exit the virtual technician function by pressing the VIRTUAL TECHNICIAN button.

■ The touch curve setting defaults to "Normal" each time the power is turned off. You can use the user memory function (page 76), to save your desired touch curve. This way your current touch curve will remain even after the power is turned off.

◇ Using the user touch curve function

The user touch curve function analyzes your playing and creates a custom touch curve for you based upon your playing style.



☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the touch curve function. Then, use the VALUE buttons to select User 1 or User 2.

```
 5 Touch
=User1→Press REC
```

☐ Step 2

Press the REC button.

```
Start Playing
Soft → Loud
```

☐ Step 3

Play the keys.

Begin playing the piano dynamically from soft to loud in order to let the CA piano analyze you playing style.
The screen shown below will be displayed a few seconds after the REC button is pressed. While you are playing, a musical note will blink in the right corner of the display.

```
Press STOP
when finished  ♩
```

Proceed to Step 4 when you are finished playing.

☐ Step 4

Press the PLAY / STOP button.

```
   Analyze
  Completed
```

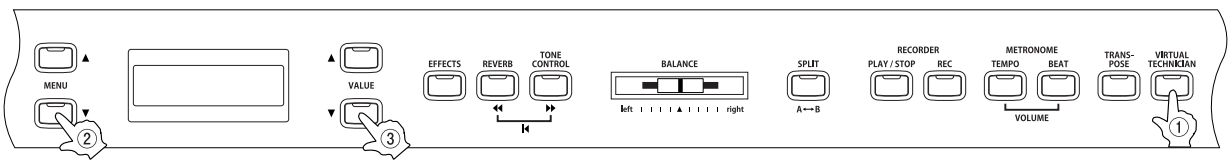
Once the CA piano has analyzed your playing the message shown above will be displayed and your new user touch curve is ready to be used.
Both user touch curves will be saved even after the power is turned off.

6) Temperament Setting

The CA piano offers not only equal temperament (the modern standard) but also immediate access to temperaments popular during the Renaissance and Baroque periods. It should be interesting and educational to try some of the different temperaments, although the equal temperament is dominant today.

The following temperaments are available:

◆Equal temperament (piano) (Equal P. only)	This is the default temperament. If a piano sound is selected the tuning is stretched like an acoustic piano (EQUAL TEMPERAMENT). If any other type of sound is selected the tuning will be EQUAL (FLAT). An explanation of EQUAL TEMPERAMENT and EQUAL TEMPERAMENT (FLAT) is provided later in this section. If a piano sound is used in a layer with any other sound then both sounds will use the EQUAL TEMPERAMENT (Stretched) tuning.
◆Pure temperament <major> (Pure major)	In this temperament, dissonance for thirds and fifths is eliminated. Performance using this temperament can be frequently observed in choral music.
◆Pure temperament <minor> (Pure minor)	Pure temperament <major> and pure temperament <minor> are different. The same result can be obtained for minor keys.
◆Pythagorean temperament (Pythagorean)	In this temperament, dissonance for fifths is eliminated. This temperament is characterized by the fact that it produces more beautiful melody sounds than chords.
◆Meantone temperament (Meantone)	In this temperament, dissonance of thirds is eliminated, and the extreme discordance of the fifth in pure temperaments has been corrected. This temperament produces more beautiful chords than pure temperaments.
◆Werckmeister III temperament (Werckmeister) ◆Kirnberger III temperament (Kirnberger)	For music with few accidentals, this temperament produces beautiful chords that are similar to those of the meantone temperament, and as accidentals increase, the temperament produces beautiful melody sounds that are similar to those of the Pythagorean temperament. This temperament can realize the "nature of tonality" intended by composers of classical music.
◆Equal temperament (flat) (Equal Flat)	This is an “unstretched” equal temperament that divides the scale into twelve equal semitones. This 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.
◆User temperament (USER)	You can create your own temperament by raising or lowering the pitch for each half step.



☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the temperament function.

```
6 Temperament
= Equal(P.only)
```

The second line shows the temperament type.

☐ Step 2

Use the VALUE buttons to select a temperament type.

■Equal temperament

```
6 Temperament
= Equal(P.only)
```

↑↓ VALUE buttons

■Pure temperament <major>

```
6 Temperament
= Pure(Major)
```

→ ←

■Pure temperament <minor>

```
6 Temperament
= Pure(minor)
```

→ ←

■Pythagorean temperament

```
6 Temperament
= Pythagorean
```

→ ←

■Meantone temperament

```
6 Temperament
= Meantone
```

↑↓

■Equal temperament (stretch)

```
6 Temperament
= Equal
```

→ ←

■Equal temperament (flat)

```
6 Temperament
= Equal(Flat)
```

→ ←

■Kirnberger III temperament

```
6 Temperament
= Kirnberger
```

→ ←

■Werckmeister III temperament

```
6 Temperament
= Werckmeister
```

↑↓

■User temperament

```
6 Temperament
= User
```

■ To create a user temperament, please read the section "◇ Creating a user temperament" below.

■ After selecting a desired temperament type read the section "7) Key of Temperament" (page 59) on selecting a key signature for the temperament before continuing.

☐ Step 3

After selecting the desired temperament type, you can exit the virtual technician function by pressing the VIRTUAL TECHNICIAN button.

■ The temperament type defaults to "equal temperament (piano)" each time the power is turned off. You can use the user memory function (page 76), to save your desired temperament type. This way your current temperament type will remain even after the power is turned off.

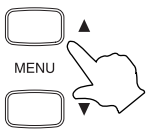
◇ Creating a user temperament

This screen appears only when user temperament is selected.
Each half step can be set within a range of -50 to +50 (100 cents = half step).

☐ Step 1

After selecting the user temperament type, use the MENU buttons to select the cent value setting screen.

A different half step tone is displayed each time the MENU ▲ button is pressed.



↑↓

```
6 Temperament
 C    =     0
```

↑↓ MENU buttons

```
6 Temperament
 C#   =     0
```

↑↓

⋮

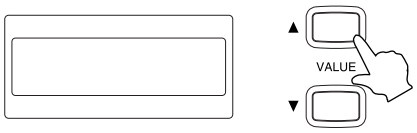
↑↓

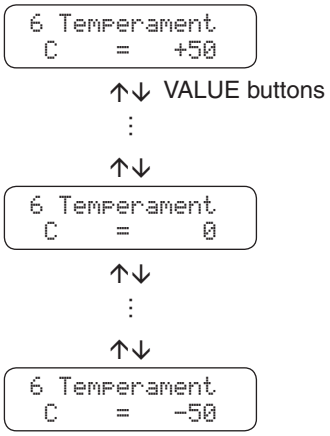
```
6 Temperament
 B    =     0
```

↑↓

☐ Step 2

Use the VALUE buttons to set the cent value (-50 to +50).





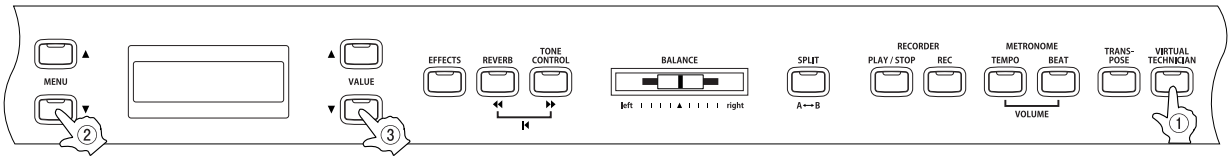
☐ Step 3

After you have finished creating a user temperament, you can exit the virtual technician function by pressing the VIRTUAL TECHNICIAN button.

The user temperament data is saved automatically even after the power is turned off. However, you must re select the user temperament each time you turn the power on unless you save it as your default temperament by using the user memory function (page 76).

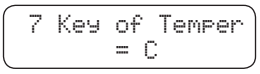
7) Key of Temperament

Limitless modulation of the key became available only after the invention of Equal temperament. When we use a temperament other than equal temperament, we must carefully choose the key signature to play in. For example, if the song you are going to play is written in D major, choose “D” as the temperament key.



☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the key of temperament function.



☐ Step 2

Use the VALUE buttons to select the desired key within the range of C to B.

The second line on the display shows the selected key.
Please note that changing the key of the temperament will only change the “balance” of the tuning, the pitch of the keyboard remains unchanged.

The key of temperament function will not have any effect when equal temperament has been selected.

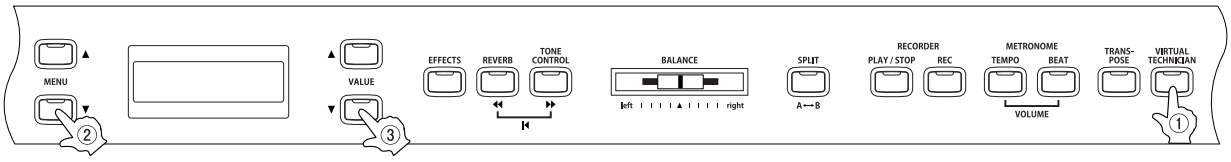
☐ Step 3

After you have selected the desired key, you can exit the key of temperament function by pressing the VIRTUAL TECHNICIAN button.

■ The key of temperament type defaults to "C" each time the power is turned off. You can use the user memory function (page 76), to save your desired key of temperament. This way your current key of temperament will remain even after the power is turned off.

8) Stretch Tuning

Stretch tuning is a piano-specific tuning method in which the tuning for the lower notes is slightly lower and the tuning for the higher notes is slightly higher than the settings made in the equal temperament. The stretch tuning function determines the level of stretch tuning. The CA piano has two kinds of stretch tuning available, Normal and Wide. The stretch tuning screen appears only when equal temperament (piano) or equal temperament is selected (page 57).



☐ Step 1

After pressing the VIRTUAL TECHNICIAN button, use the MENU buttons to select the stretch tuning function.

```
8 StretchTuning
      = Normal
```

The second line on the display shows either Normal or Wide.

☐ Step 2

Use the VALUE buttons to select either Normal or Wide.

The tuning adjustment for the lower and higher notes is more pronounced when "Wide" is selected.

☐ Step 3

After you have set the stretch tuning level, you can exit the stretch tuning function by pressing the VIRTUAL TECHNICIAN button.

■ The stretch tuning setting defaults to "Normal" each time the power is turned off. You can use the user memory function (page 76), to save your desired stretch tuning setting. This way your current stretch tuning setting will remain even after the power is turned off.

8. Menu Functions

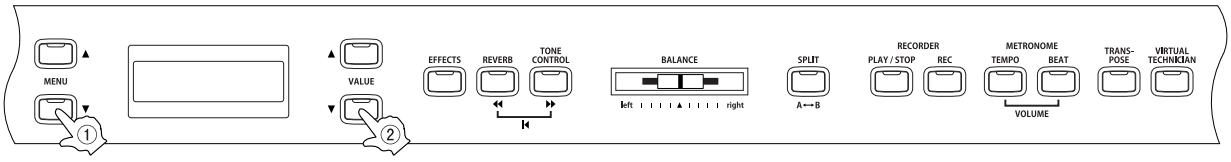
The menu functions allow you to adjust the various functions that control the CA piano's tuning, system and MIDI functions. You can adjust the settings for the following functions. Also, functions 1) to 7) can be memorized as part of a registration (page 25).

1) Wall EQ (CA91), Brilliance (CA51)
2) Lower octave shift
3) Lower pedal on / off
4) Layer octave shift
5) Layer dynamics
6) Damper hold
7) Tuning
8) MIDI transmit / receive channel
9) Program (sound type) number transmission
10) Local control
11) Program (sound type) number transmission on / off
12) Multi timbre mode
13) Channel mute (only in multi timbre mode)
14) Memory backup
15) Factory reset
(only when memory backup is executed)

When the MENU ▲ button is pressed, the first menu item is displayed. When the MENU ▼ is pressed, the 15th (14th for CA71) menu item is displayed. You can scroll through the various menu items in ascending / descending order by repeatedly pressing the MENU buttons.

1) Wall EQ (CA91 Only)

The Wall EQ function is used to optimize the CA91's sound depending on whether it is located against a wall or in a location away from a wall.



☐ Step 1

Press the MENU button to select the wall EQ function.

```
1 Wall EQ
      = Off
```

The second line on the display shows the current setting.

☐ Step 2

Use the VALUE buttons to turn the wall EQ function on or off.

When set to on, the sound character is optimized for placement with the back of the piano against a wall.
When set to off, sound character is optimized for placement with the back of the piano away from a wall.

■ The wall EQ function does not affect the sound when using headphones.

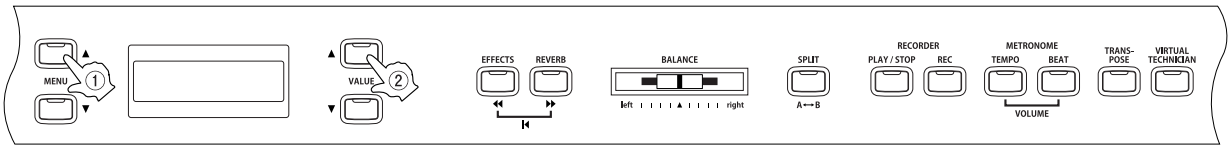
☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The Wall EQ setting defaults to "Off" each time the power is turned off. You can use the user memory function (page 76), to save your desired Wall EQ setting. This way your current Wall EQ setting will remain even after the power is turned off.

1) Brilliance (CA51 Only)

Brilliance lets you adjust brightness of the sounds.



☐ Step 1

Use the MENU buttons to select the brilliance function.

```
1 Brilliance
      =   0
```

The second line on the display shows the value.

☐ Step 2

Use the VALUE buttons to select the value within the range of -10 to +10.

Plus settings produce a brighter tone, minus settings produce a mellower tone.

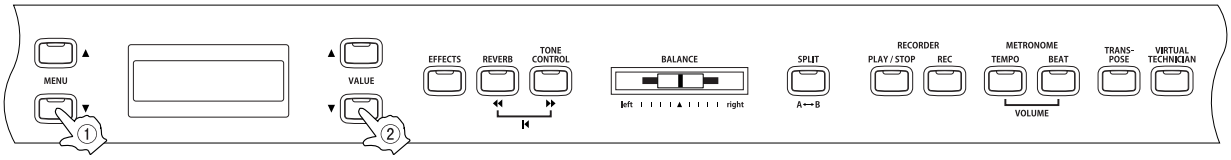
☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The Brilliance setting defaults to "0" each time the power is turned off. You can use the user memory function (page 76), to save your desired brilliance setting. This way your current brilliance setting will remain even after the power is turned off.

2) Lower Octave Shift

This allows the octave of the lower section to be shifted up one, two, or three octaves higher when you use the split function.



☐ Step 1

Use the MENU buttons to select the lower octave shift function.

The second line on the display shows the value.

☐ Step 2

Use the VALUE buttons to set the value.

Set the octave range within a range of 0 to + 3.

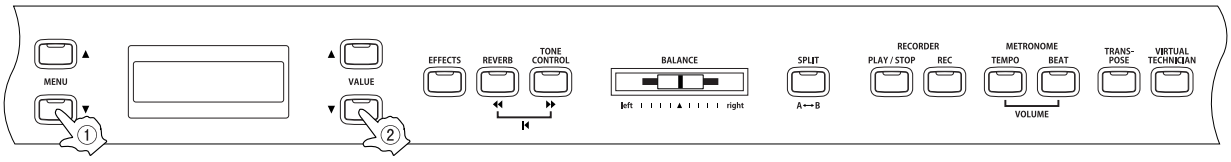
☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The lower octave shift function setting defaults to "0" each time the power is turned off. You can use the user memory function (page 76), to save your desired lower octave shift setting. This way your current lower octave shift setting will remain even after the power is turned off.

3) Lower Pedal On / Off

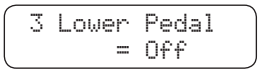
This determines if the sustain pedal will be active for the lower sound when in SPLIT mode. The default setting is Off which means the sustain pedal is not active for the lower sound.



☐ Step 1

Use the MENU buttons to select the lower pedal on/off function.

The second line on the display shows ON or Off.



☐ Step 2

Use the VALUE buttons to turn the lower pedal function on or off.

When set to on, the sustain pedal is active for the lower sound when the pedal is depressed.
When set to off, the sustain pedal will not be active for the lower sound when the pedal is depressed. The sustain pedal will still be active for the upper sound.

■ Note that damper resonance (page 52) can be used regardless of on or off setting for the lower pedal.

☐ Step 3

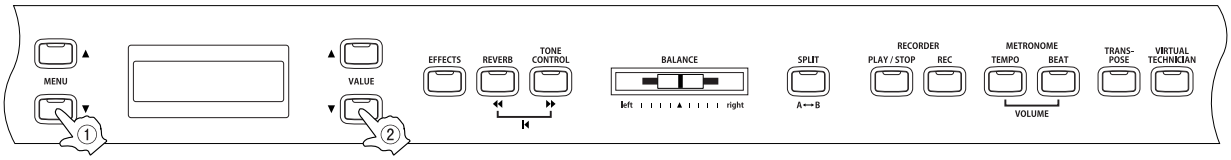
When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The lower pedal on/off function setting defaults to "Off" each time the power is turned off. You can use the user memory function (page 76), to save your desired lower pedal on/off setting. This way your current lower pedal on/off setting will remain even after the power is turned off.

4) Layer Octave Shift

This allows the octave of a layered sound (the sound displayed in the second line on the display) to be shifted up or down when you use the dual function (page 15).

For example, when you play in dual mode using Concert Grand Piano and String Ensemble, you can adjust the octave range for the String Ensemble sound up or down.



☐ Step 1

Use the MENU buttons to select the layer octave shift function.

The second line on the display shows the value.

☐ Step 2

Use the VALUE buttons to set the value.

Set the octave value within a range of -2 to + 2.
Minus values select an octave range one or two octaves lower. Positive values select an octave range one or two octaves higher.
The octave for the sound displayed in the second line on the display in dual mode will be changed.

■ For some sounds it may not be possible to select a higher octave range.

☐ Step 3

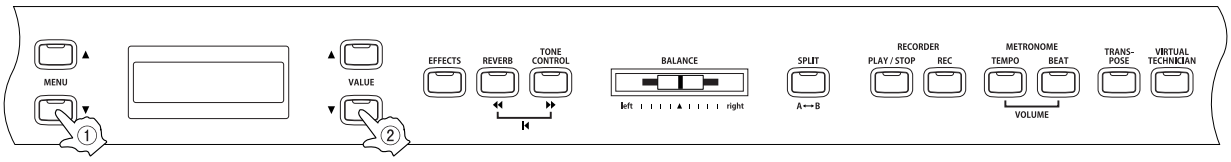
When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The layer octave shift function setting defaults to "Off" each time the power is turned off. You can use the user memory function (page 76), to save your desired layer octave shift setting. This way your current layer octave shift setting will remain even after the power is turned off.

5) Layer Dynamics

In Dual mode sometimes simply adjusting the volume balance between the two layered sounds is not enough to create the desired sound character if both sounds are very dynamic. Two equally dynamic sounds can be difficult to control and play comfortably. The layer dynamics function allows you to limit the overall dynamic sensitivity of the layered sound to create a perfect blend between both sounds in a layer. In addition to reducing the volume of the layered sound, limiting the dynamic sensitivity of the layered sound also makes the layered sound easier to control in relation to the main sound as you play. With this function, you can comfortably play as dynamically as you like with the main sound while maintaining control of the layered sound.

For example, when you play in dual mode using Concert Grand Piano and String Ensemble, you can use the layer dynamics function to adjust the String Ensemble dynamics to your taste.



☐ Step 1

Use the MENU buttons to select the layer dynamics function.

The second line on the display shows the value.

☐ Step 2

Use the VALUE buttons to set the value.

You can select the level of dynamics from 1 to 10. A value of 1 produces the greatest reduction in dynamics and a value of 10 produces no change in the dynamics. The default value is 10.

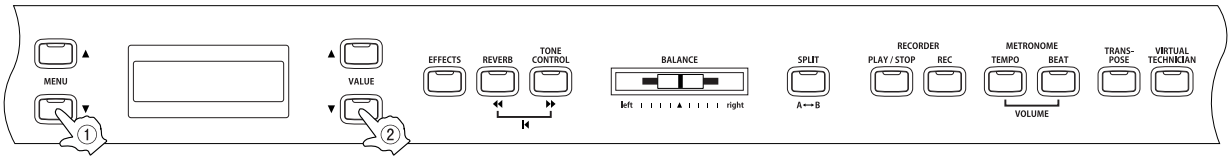
☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The layer dynamics function setting defaults to "10" each time the power is turned off. You can use the user memory function (page 76), to save your desired layer dynamics setting. This way your current layer dynamics setting will remain even after the power is turned off.

6) Damper Hold On / Off

This determines if the sound such as organ or strings should be held (on) or gradually decayed (off) when the damper pedal is depressed.



☐ Step 1

Use the MENU buttons to select the damper hold function.

```
6 Damper Hold
      =  Off
```

The second line on the display shows On or Off.

☐ Step 2

Use the VALUE buttons to select on or off.

When set to on and the sustain pedal is depressed, sustained sounds will be sustained even after the keys are released.

When set to off and the sustain pedal is depressed, sustained sounds will begin to decay (fade out) after the keys are released.

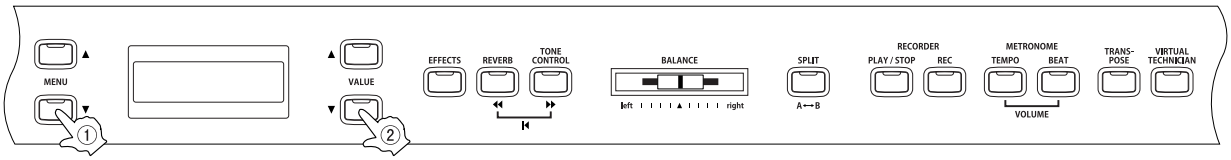
☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The damper hold function setting defaults to "Off" each time the power is turned off. You can use the user memory function (page 76), to save your desired damper hold setting. This way your current damper hold setting will remain even after the power is turned off.

7) Tuning

Tuning allows you to adjust the piano's pitch. You may need to adjust the tuning when you play with other instruments.



☐ Step 1

Use the MENU buttons to select the tuning function.

```
7 Tuning
      = 440.0
```

The second line on the display shows the value.

☐ Step 2

Use the VALUE buttons to set the pitch within a range of 427.0 to 453.0 (Hz).

The pitch can be changed by 0.5 Hz each time one of the VALUE buttons is pressed.

☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The tuning function setting defaults to "440.0 Hz" each time the power is turned off. You can use the user memory function (page 76), to save your desired tuning setting. This way your current tuning setting will remain even after the power is turned off.

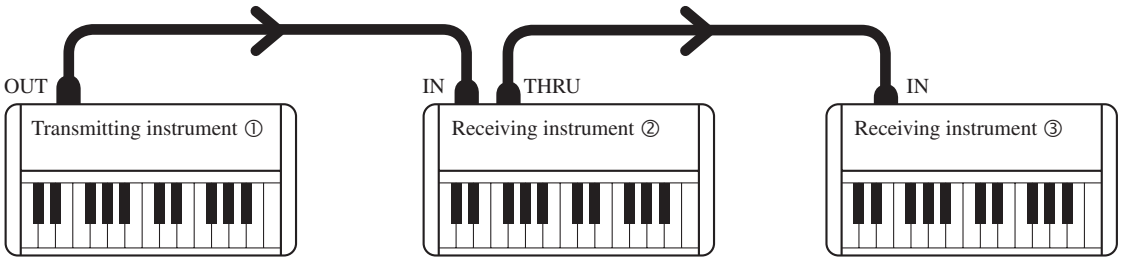
◇ About MIDI

This section briefly explains MIDI.
The term MIDI is an acronym for Musical Instrument Digital Interface, an international standard for connecting keyboards, sequencers, and other MIDI devices so that they can exchange performance data. The CA piano is equipped with three MIDI jacks for exchanging data:
MIDI IN, MIDI OUT and MIDI THRU. Each uses a special cable with a DIN connector.

MIDI IN : For receiving note, program change and other data.
MIDI OUT : For sending note, program change and other data.
MIDI THRU : For passing along MIDI data received to another MIDI device without processing.

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. There are 16 MIDI channels available to choose from on the CA piano. In addition to channel-to-channel connection, it is possible to receive on multiple channels.

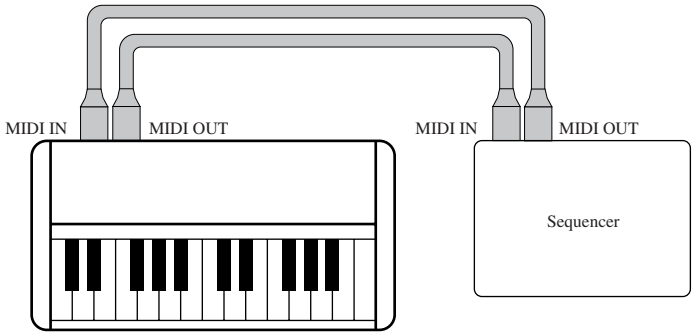
The receive channels are used to receive data from another MIDI device and the transmit channels are used to transmit data to another MIDI device.
For example, if you were to connect three musical instruments together to play music:
Transmitting instrument ① sends transmit channel and keyboard information to receiving instruments ② and ③.



The information arrives at the receiving instruments ② and ③. Receiving instruments ② and ③ will respond to MIDI data that is sent if their receive channel is the same the transmit channel of transmitting instrument ①. If the channels do not match, then the receiving instruments ② and ③ will not respond to any data that is sent.
For both receiving and transmitting, channel 1 through channel 16 can be used.

◆ Example of MIDI use

◆ Recording / playing with a sequencer



By connecting CA piano to a sequencer as shown in the diagram, the sequencer can record and playback your performance to help your practice. When you record / playback your performance using the multi -timbral function on (page 75), you can receive multiple parts on multiple channels each played with a different sound simultaneously. For example, the CA piano might receive the melody on channel 1, the chords on 2, the bass on 3, and assign a different sound to each channel. Piano for channel 1, strings for 2, electric bass for 3.

◆ MIDI functions of CA91 / CA71 / CA51

The MIDI functions of CA91 / CA71 / CA51 are as follows:

◆ Transmit / receive keyboard note information
By transmitting MIDI data from the CA piano (MIDI OUT) you can play a MIDI-connected keyboard from the CA piano or by receiving MIDI data (MIDI IN) , you can play the CA piano from another MIDI-connected keyboard.

◆ Transmit / receive channel setting
You can specify the channels within the range of 1 to 16.

◆ Transmit / receive Program change (sound type) number
You can transmit to or receive program change data from a MIDI-connected musical instrument or device.

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

◆ Receive volume data
The CA piano will respond to MIDI volume data sent from a MIDI-connected musical instrument or device.

◆ Multi-timbral setting
When Multi-timbral mode is ON, the CA piano can receive MIDI data from a MIDI-connected musical instrument or device on multiple channels.

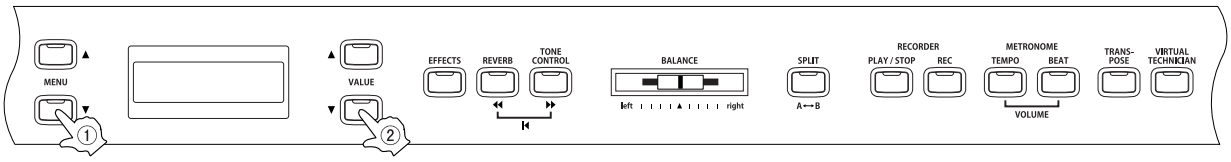
◆ Transmit / receive exclusive data
You can transmit / receive front panel or menu function settings as exclusive data.

◆ Transmit recorder playback data
Songs recorded using the recorder can be played back from a MIDI-connected musical instrument or can be recorded by an external sequencer via the MIDI OUT jack.

Refer to the "MIDI implementation chart (page 88)" for details about the CA91 / CA71 / CA51 MIDI functions.

8) MIDI Transmit / Receive Channel

This determines on which MIDI channel the CA piano will exchange MIDI data with an external MIDI device or a personal computer. The selected channel will function both as the transmit and receive channel.



☐ Step 1

Use the MENU buttons to select the MIDI channel function.

```
 8 MIDI Channel
=  1  (TRS/RCV)
```

The second line on the display shows the current channel.

☐ Step 2

Use the VALUE buttons to select a MIDI channel 1 to 16.

☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

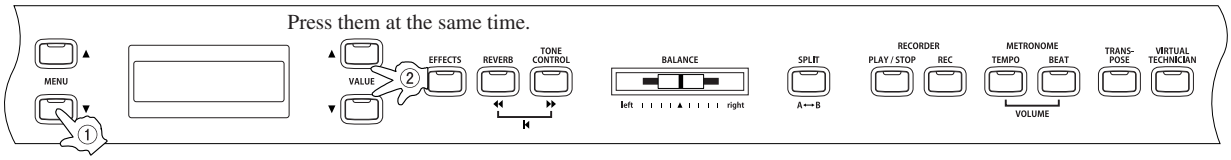
■ At power-on, CA piano will receive MIDI channel information of all channels from 1 to 16. This is called "omni mode on". The mode shifts to "omni mode off" once a specific channel is selected using the MIDI channel function. Then data will be received only on the specified channel. When you want to specify channel 1 in the "omni mode off" state, first set it to 2 and then put it back to 1.

■ When multi-timbral mode is on (page 75):
When playing in split mode with Multi-timbral mode ON
: Notes played in the lower section of the keyboard will be transmitted on the channel that is one channel higher than the selected channel. For example, with the MIDI channel is set to 3 notes played in the lower section of the keyboard will be transmitted on channel 4.

When playing in dual mode : The notes you play will be transmitted on two channels, the selected channel and the channel that is one channel higher. When channel the selected MIDI channel is 16, channel 1 will be used to transmit notes for the layered part.

9) Sending Program (Sound Type) Change Numbers

This function allows the CA piano to transmit program change numbers.
You can send any number from 1 to 128.



☐ Step 1

Use the MENU buttons to select the send PGM # function.

```
 9 Send PGM #
=   1 (UP+DOWN)
```

The second line on the display shows the program number.

☐ Step 2

Use the VALUE buttons to specify the program change number to be transmitted within the range of 1 to 128.

☐ Step 3

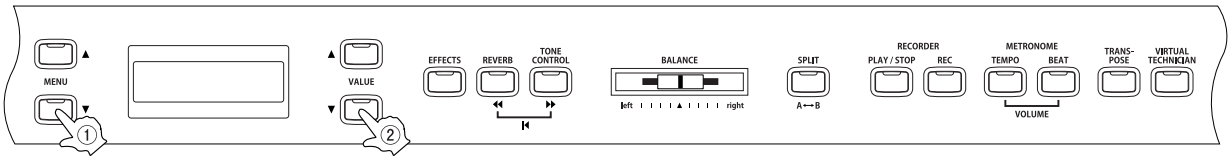
To send the program change number, press both VALUE buttons (▲▼) simultaneously.

☐ Step 4

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

10) Local Control

This determines whether the CA piano's sound will be played from the piano's keyboard ("ON") or only from an external MIDI device ("OFF"). Even with local control "off" the CA piano's keyboard will still transmit on the selected MIDI channel to an external MIDI device or personal computer.



☐ Step 1

Use the MENU buttons to select the local control on/off function.

```
10 Local Control
      = On
```

The second line on the display shows On or Off.

☐ Step 2

Use the VALUE buttons to select On or Off.

☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

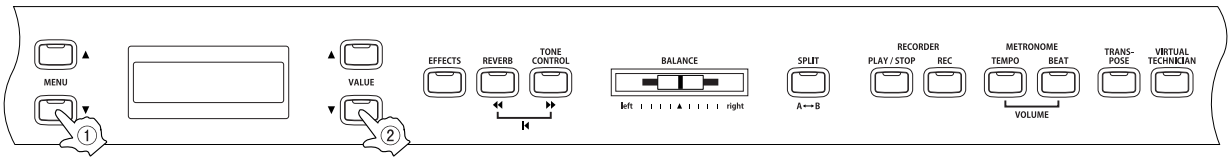
■ The local control setting defaults to "On" each time the power is turned off. You can use the user memory function (page 76), to save your desired local control setting. This way your current local control setting will remain even after the power is turned off.

11) Transmit Program Change (Sound Type) Numbers On / Off

◇ Transmitting a program change number using the SOUND SELECT buttons

This determines whether or not the CA piano will transmit program change information via MIDI when pressing the SOUND SELECT buttons. When set to on and with Multi-Timbral Mode set to off or on 1, pressing the SOUND SELECT buttons will send the program change numbers listed in the left half of the chart on the next page.
When multi-timbral mode is set to on 2, program numbers listed in the right half of the chart on the next page will be transmitted via MIDI.

In addition to SOUND SELECT buttons, other button operations such as touch curve, dual, digital effect, and reverb settings can be transmitted as MIDI exclusive data when the corresponding buttons are pushed.
When set to off no program change or other panel information will be transmitted via MIDI.



■ Refer to page 75 for multi-timbral mode.

☐ Step 1

Use the MENU buttons to select the sending program change on/off function.

```
11 Transmit PGM
      = On
```

The second line on the display shows On or Off.

☐ Step 2

Use the VALUE buttons to select On or Off.

☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

■ The sending program change on/off setting defaults to "On" each time the power is turned off. You can use the user memory function (page 76), to save your desired sending program change on/off setting. This way your current sending program change on/off setting will remain even after the power is turned off.
■ When using dual / split mode, on / off information and sound type settings for each mode are transmitted as exclusive data, but program numbers will not be transmitted.
Program numbers will also be transmitted when multi-timbral mode is on.

■ Sound types and their corresponding transmit / receive program numbers

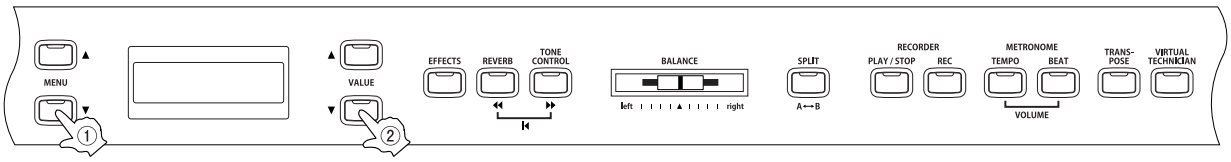
Sound type	When multi timbre mode is set to off or on 1			When multi timbre mode is set to on 2		
	Program number			Program number	Bank	
	CA91	CA71	CA51		MSB	LSB
● Piano 1						
Concert Grand	1	1	1	1	121	0
Studio Grand	2	2	2	1	121	1
Mellow Grand	3	3	3	1	121	2
Jazz Grand	4	4	4	1	95	8
Modern Piano	5	5	5 (Piano 2)	2	121	0
Honky Tonk	6	6	6 (Piano 2)	4	121	0
Rock Piano	7			2	121	1
New Age Piano	8			2	95	5
● Piano 2						
Concert Grand 2	9	7		1	95	16
Studio Grand 2	10	8		1	95	17
Mellow Grand 2	11	9		1	95	18
Jazz Grand 2	12	10		1	95	19
New Age Piano 2	13	11	7	1	95	9
New Age Piano 3	14	12	8	1	95	10
New Age Piano 4	15			1	95	11
New Age Piano 5	16			1	95	15
● Electric Piano						
Classic E.Piano	17	13	9	5	121	0
Modern E.P.	18	14	10	6	121	0
60's E.P.	19	15	11	5	121	3
Modern E.P. 2	20	16	12	6	121	1
New Age E.P.	21	17		6	95	2
Crystal E.P.	22	18		6	95	1
Modern E.P. 3	23			6	121	2
New Age E.P. 2	24			6	95	3
● Drawbar						
Jazz Organ	25	19	13	18	121	0
Drawbar Organ	26	20	14	17	121	0
Drawbar Organ 2	27	21	15	17	121	1
Be 3	28	22	16	17	95	2
Jazzer	29	23		18	95	1
Odd Man	30	24		17	95	6
Hi Lo	31			17	95	3
4' Drawbar	32			19	95	4
● Church Organ						
Church Organ	33	25	17	20	121	0
Diapason	34	26	18	20	95	7
Full Ensemble	35	27	19	21	95	1
Diapason Oct.	36	28	20	20	95	6
Chiffy Tibia	37	29		20	95	17
Stopped Pipe	38	30		20	95	21
Principal Choir	39			20	95	23
Baroque	40			20	95	19
● Harpsi & Mallets						
Harpsichord	41	31	21	7	121	0
Harpsichord 2	42	32	22	7	121	3
Vibraphone	43	33	23	12	121	0
Clavi	44	34	24	8	121	0
Marimba	45	35		13	121	0
Celesta	46	36		9	95	1
Harpsichord Oct	47			7	121	1
Bell Sprit	48			15	95	5
● Strings						
Slow Strings	49	37	25	45	95	1
String Pad	50	38	26	49	95	8
Warm Strings	51	39	27	49	95	1
String Ensemble	52	40	28	49	121	0
Soft Orchestra	53	41		50	95	1
Chamber Strings	54			49	95	14
Harp	55	42		47	121	0
Pizzicato Str.	56			46	121	0
● Vocals						
Choir	57	43	29	53	121	0
Pop Ooh	58	44	30	54	95	39
Pop Aah	59	45	31	54	95	40
Choir 2	60	46	32	54	95	53
Jazz Ensemble	61	47		54	95	2
Pop Ensemble	62	48		54	95	7
Slow Choir	63			53	95	2
Breathy Choir	64			53	95	1
● Pads						
New Age Pad	65	49	33	89	121	0
Atmosphere	66	50	34	100	121	0
Itopia	67	51	35	92	121	1
Brightness	68	52	36	101	95	1
New Age Pad 2	69	53		89	95	2
Brass Pad	70	54		62	95	2
Halo Pad	71			95	121	0
Bright Warm Pad	72			90	95	1
● Bass & Guitar						
Wood Bass	73	55	37	33	121	0
Finger Bass	74	56	38	34	121	0
Fretless Bass	75	57	39	36	121	0
W. Bass & Ride	76	58	40	33	95	1
E. Bass & Ride	77			34	95	2
Ballad Guitar	78	59		26	95	6
Pick Nylon Gt.	79	60		25	95	3
Finger Nylon Gt.	80			25	95	4

12) Multi-timbral Mode

Multi-timbral mode allows the CA piano to receive data on more than one MIDI channel simultaneously. In this mode, the CA piano can play different musical parts with different sounds for each part.

Multi-timbral On (On1 and On2)
This is a flexible 16 part multi-timbral setup. You can turn individual MIDI channels on and off, and assign any program number to any channel in the way you like. The CA piano's normal program change numbers are assigned in On1 (corresponding to the program numbers listed in the left half of the chart on the previous page).
General MIDI program change numbers are assigned in On2 (corresponding to the program number and bank numbers listed in the right half of the chart on the previous page.
See page 76 for channel mute information.

Multi-timbral Off
This turns off the multi-timbral capability. Only one MIDI channel will be active and only the preset sound currently selected will be heard when a MIDI signal is received.
With this function, you can use an external sequencer to enjoy an ensemble performance using multiple sound types (multi timbral) on a single CA piano.



☐ Step 1

Use the MENU buttons to select the multi-timbral mode function.

```
12 Multi Timbre
       = Off
```

The second line on the display shows Off, On 1, or On 2.

☐ Step 2

Use the VALUE buttons to select Off, On1, or On2.

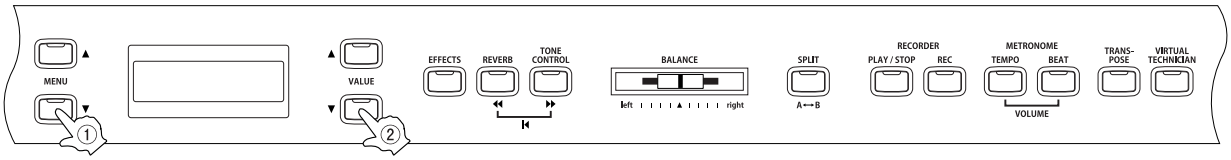
☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

- The multi-timbral mode setting defaults to "Off" each time the power is turned off. You can use the user memory function (page 76), to save your desired multi-timbral mode setting. This way your current multi-timbral mode setting will remain even after the power is turned off.
- When multi-timbral mode is set to on, sounds received via MIDI on the receive channels will all be played even when split mode is active.

13) Channel Mute

This screen will be displayed only when multi-timbral mode is on.
Play / mute settings can be made individually for each MIDI channel.



☐ Step 1

Use the MENU buttons to select the channel mute function.

A different channel number and its play/mute status will be shown on the display each time one of the MENU buttons is pressed.

↑↓
13 Channel Mute
Channel 1= Play
↑↓ MENU button
13 Channel Mute
Channel 2= Play
↑↓
⋮
↑↓
13 Channel Mute
Channel16= Play
↑↓

☐ Step 2

Use the VALUE buttons to select play or mute.

13 Channel Mute
Channel 1= Play
↑↓ VALUE button
13 Channel Mute
Channel 1= Mute

☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

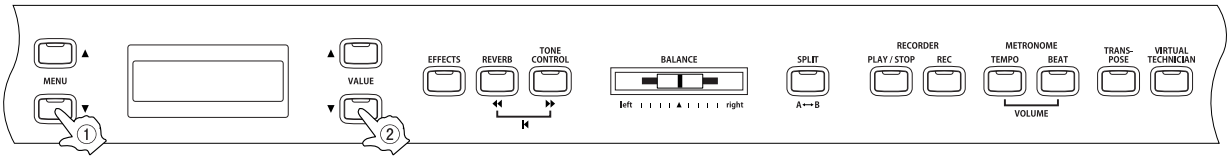
■ The channel mute settings default to "On" each time the power is turned off. You can use the user memory function (read the section below), to save your desired channel mute setting. This way your current channel mute setting will remain even after the power is turned off.

14) User Memory

This function allows the CA piano to save the user-definable settings when the power is turned off. Once written to the memory, the saved settings will be recalled every time you turn the power on.

The following settings can be saved.

- ◆ Sound type including starting sound and primary sound for each category.
- ◆ Effects/Reverb/Tone Control settings
- ◆ Menu function settings
- ◆ Virtual technician settings
- ◆ Transpose
- ◆ Tempo, beat, and sound volume of the metronome



☐ Step 1

Use the MENU buttons to select the user memory function.

```
14 User Memory
 Save →Press REC
```

☐ Step 2

Press the REC button to execute the save operation.

```
14 User Memory
 Save Completed
```

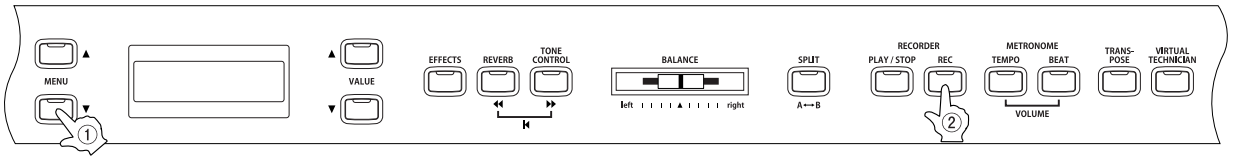
The save operation is completed when the display shows "Save complete."

☐ Step 3

When you are finished, press any one of the SOUND SELECT buttons to exit the menu.

15) Factory Reset

This screen will be displayed only when the user memory function has been used.
This function resets the CA piano to the factory settings. All parameters you saved in “User Memory” will be reset to the factory preset values.



☐ Step 1

Use the MENU buttons to select the factory reset function.

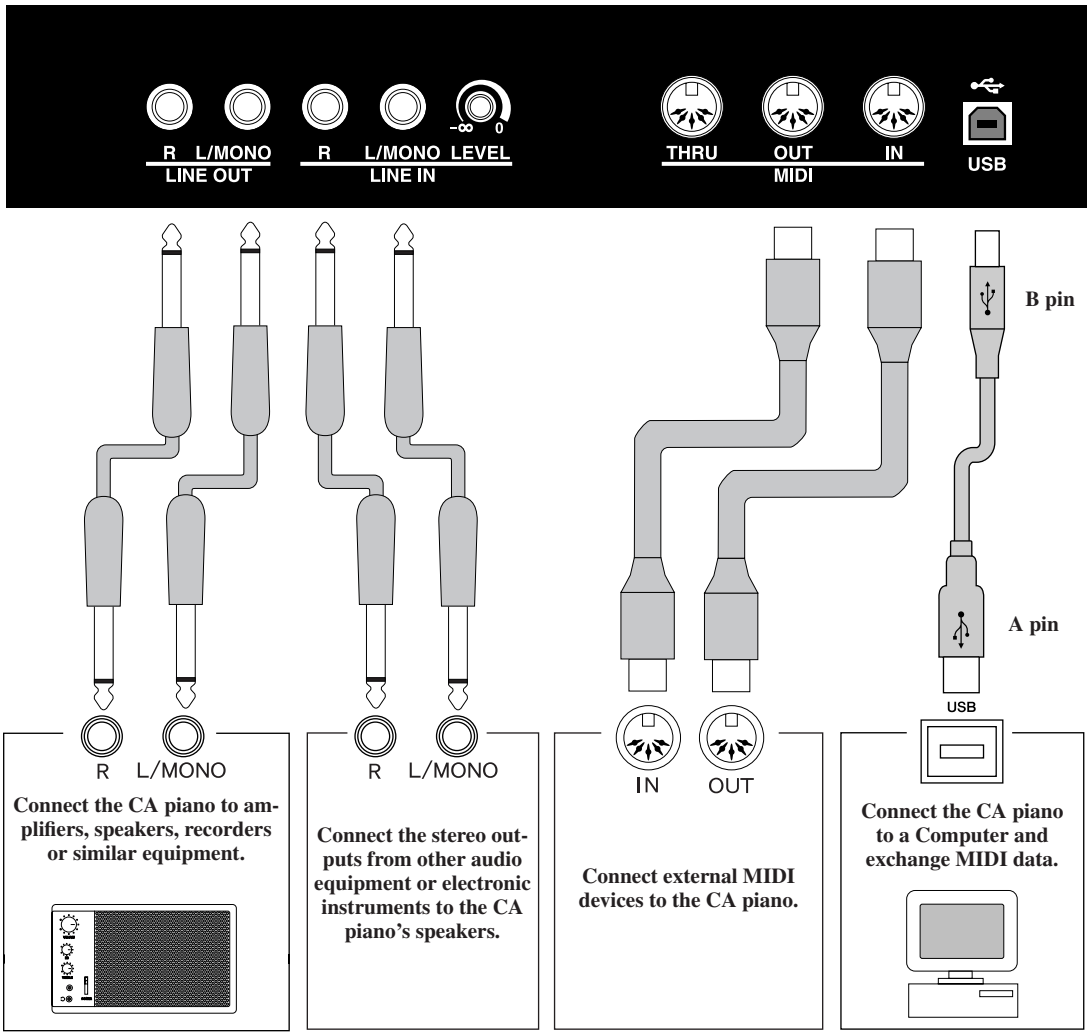
```
15 Factory Reset
 Reset→Press REC
```

☐ Step 2

Press the REC button to restore factory settings, and exit the menu.

9. Appendix

◇ Connecting to other devices



⚠ Caution

- Before connecting the CA91 / CA71 / CA51 to other devices, **make sure that the power to the CA piano and any other devices is turned OFF**. If connections are established while the power is on, extraneous noise that can damage the CA piano may occur and activate the protection circuit for the CA's digital amplifier, preventing the CA piano from producing sounds. If this occurs, turn off the power and then turn it on again.
- Do not directly connect the LINE IN and LINE OUT jacks of the CA91 / CA71 / CA51 together with a cable. An audio loop (oscillation sound) will occur, resulting damage to the unit.

1. LINE OUT JACK <phone jack>
These jacks provide stereo output of the piano's sound to amplifiers, recorder devices or similar equipment. The audio signal coming through the LINE IN jacks is also routed to these jacks. The piano's sound is mixed with the LINE IN signals. The CA piano's VOLUME slider can control the output level of its own sound while it does not control the LINE IN signal. Mono signals will be output only if a cable is inserted into the L/MONO jack.

2. LINE IN JACKS <phone jack>
These jacks are used to connect a pair of stereo outputs from other audio equipment or electronic instruments to the CA piano's speakers. The audio signal coming through these jacks bypasses the piano's volume control. To adjust the volume level, use the level knob on the right hand side of the LINE IN jacks or use the output control of the external device. To connect a device in mono, insert the connecting cable into the L/MONO jack only.

3. MIDI
Use these jacks to connect external MIDI devices to the CA piano.
There are three terminals: MIDI IN, MIDI OUT, and MIDI THRU.

4. USB port
- When the CA piano is connected to a computer via a commercially available USB cable, the CA piano will be recognized as a MIDI device. As with a regular MIDI interface, the CA piano will be able to transmit and receive MIDI messages.
- There are A USB port and B USB port. Connect a computer to the A port and digital piano to the B port.

About a USB driver

For data exchange between a computer and digital piano via USB connection, software (USB-MIDI driver) must be installed on the computer for proper digital piano operations.
Please read the following instructions carefully as a different USB-MIDI driver may be necessary depending on the computer OS.

◇Windows XP / Me users:
The standard USB-MIDI driver installed on Windows will be used. This USB-MIDI driver will be automatically installed when the unit is connected to the computer.
To establish MIDI communications with the unit by using an application, select "USB audio device" to define the unit as a MIDI device.

◇Windows 2000 / 98SE users:
You need to install the specified, special USB-MIDI driver. Download the special USB driver from the KAWAI site as shown below, and install it on the computer.
http://www.kawai.co.jp/download_demo/driver/

■ Read the instruction manual thoroughly before connecting the unit to the computer, and make sure to install the driver.
If you connect the unit to the computer without installing the driver, the USB-MIDI driver may not operate properly. If this occurs, use the driver update function of the OS to install the appropriate USB-MIDI driver, or delete the driver by using the driver delete function and then install the driver again.

To establish MIDI communications with the unit by using an application, select "KAWAI USB MIDI IN" and "KAWAI USB MIDI OUT" to define the unit as a MIDI device.

◇Macintosh OS X users:
When the unit is used with Macintosh OS X, the unit will be recognized as a MIDI device automatically; therefore, no special driver is needed.

To establish MIDI communications with the unit by using an application, select "USB-MIDI" to define the unit as a MIDI device.

◇Users of Macintosh OS9 or earlier:
The unit does not support Macintosh OS9 or earlier. Please establish a MIDI connection by using a commercially available MIDI interface.

Notes on USB

- When MIDI and USB are connected simultaneously, USB will be prioritized.
- When connecting a digital piano to a computer by using a USB cable, first connect the cable and then turn on the power of the digital piano.
- When a digital piano is connected to a computer by using a USB cable, it may take some time before communications start.
- When a digital piano and a computer are connected via a hub, and the operation is not stable, connect the digital piano directly to the USB port of the computer.
- Operations of a computer or a digital piano may become unstable if the power of the piano is turned on or off, or if the USB cable is pulled out or inserted during:
  * Driver installation
  * Computer power-up
  * MIDI application operations
  * Communication with the computer
  * Standby in power-saving mode

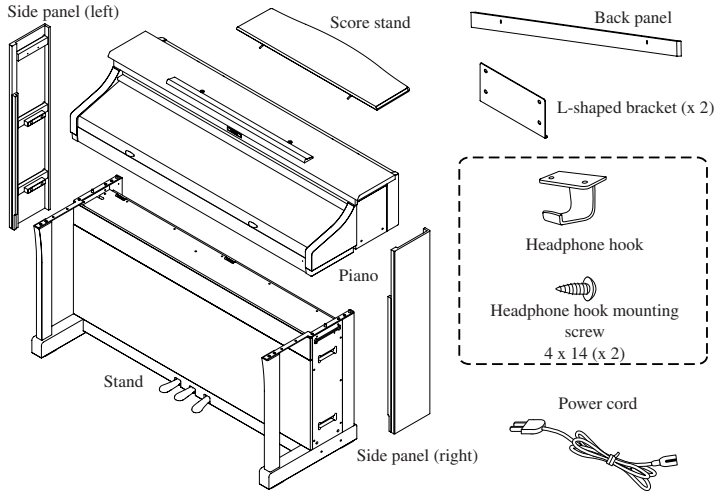
✳ USB may not operate properly depending on the settings of your computer. Read the computer instruction manual thoroughly before use and ensure that appropriate settings are made.

◇ CA91 stand assembly instructions

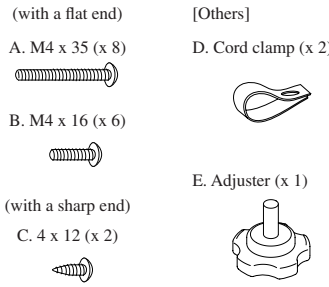
Thank you for purchasing a KAWAI Concert Artist digital piano.
First, read this instruction manual and make sure that all the parts are included, and assemble the unit while being careful not to scratch or damage the stand. (Follow the procedures in reverse order when disassembling the unit.)

■Parts (included items)

✱Use a Phillips-head screwdriver (+) to assemble the unit.



■Assembling screws

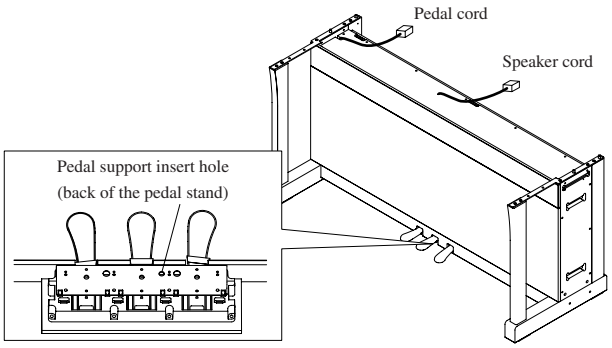


⚠ Caution
- Make sure that more than two people work on unit assembly.

■Assembly sequence

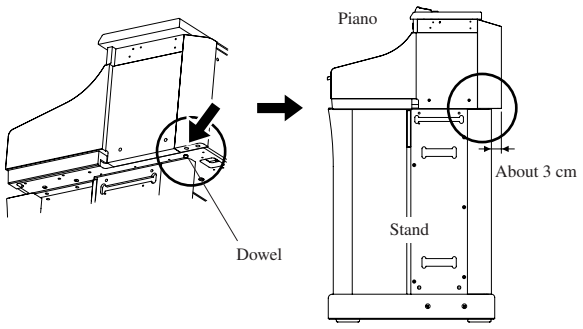
1. Remove the stand from the box.

(1) Insert the pedal support (E) about 1 cm into the bottom of the stand.
(2) Pull out the pedal cord and speaker cord, hang over the back of the stand.



2. Remove the piano from the box, and temporarily place it onto the stand.

Place the piano onto the stand temporarily.

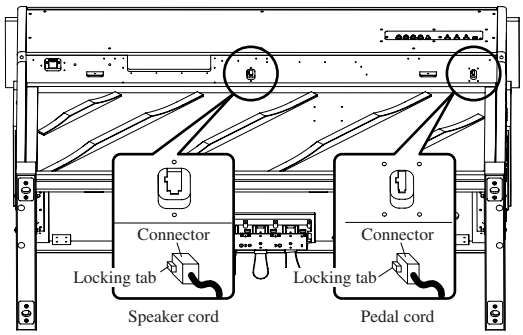


Important points:
- Place the piano in the manner that the dowels fit in the holes provided on the bottom surface of the piano.
- Place the piano on the stand in the manner that the piano part and the stand will not be perfectly aligned; the piano part must be off by approximately 3 cm towards the back.

⚠ Caution
- Make sure that more than two people work on unit assembly.
- Make sure that your hands are not caught between the piano and the stand when you place the piano on top of the stand.

3. Connecting the cables.

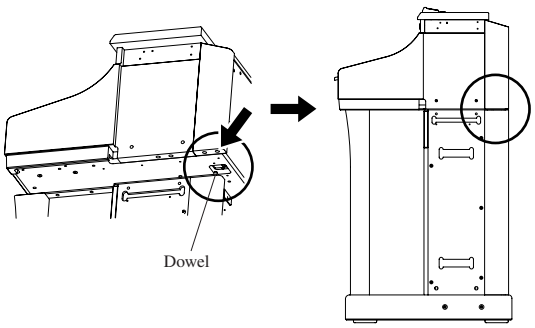
While the piano is temporarily placed on the stand, connect the pedal cord and speaker cord to the piano.



Important points:
- Make sure that the locking tabs are facing the correct direction.
- Insert the connector straight.
  Do not apply too much force; it may cause unit failure.
  * To pull out the cord, remove the connector while pressing the locking tab.

4. Correcting the piano position.

Using the rear most holes for the dowels, correct the piano position by moving the piano forward on the stand 3 cm.



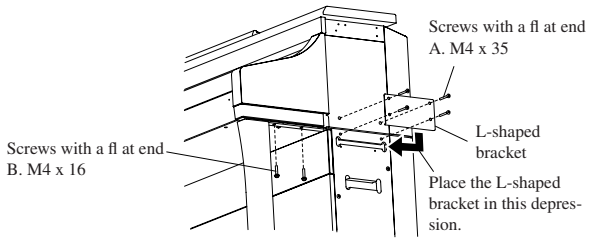
Important points:
- When placing the piano on the stand, make sure the dowels fit in the holes provided on the bottom surface of the piano.
- When placing the piano on the stand, the piano and the stand will not be perfectly aligned; the piano should be offset by approximately 3 cm towards the back.

⚠ Caution
- When correcting the piano position, do not pull the pedal cord and speaker cord.

5. Securing the piano to the stand.

(1) Place the L-shaped bracket as shown in the diagram, and use screws A (M4 x 35) to fasten the bracket to the piano and the stand.

(2) Use screws B (M4 x 16) to fasten the bracket to the piano.



Important point:

· Place the L-shaped bracket in the depression on the side of the stand, and align the holes.

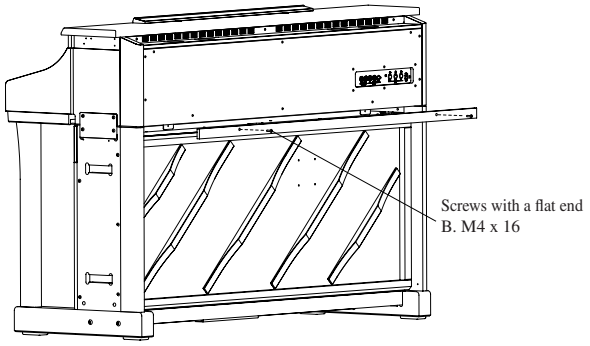
⚠ Caution

- Use the screws provided in order to securely fasten the piano to the stand. Failure to do so may result in the piano falling off from the stand, causing great danger.
- Do not force the screws in. Insert them straight into the hole without excessive force and tighten them there.
- Lightly tighten the screws by hand first to make sure that they are threaded correctly.

6. Attaching the back panel

(1) Place the pedal cord and speaker cord in the gap between the piano and the stand.

(2) Fasten the back panel with two screws B (M4 x 16).



⚠ Caution

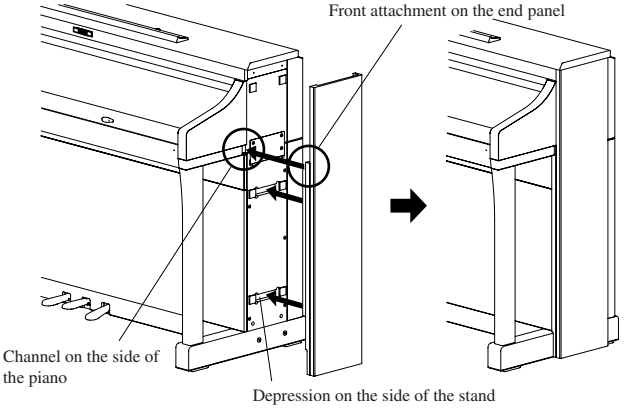
- Make sure that all the screws have been properly tightened.

7. Attaching the end panels.

(1) Fit the rung of the end panel into the depression on the side of the stand.

(2) Insert the front attachment on the end panel into the channel on the side of the piano.

(3) Fasten the end panel, and then press hard where hook and loop fasteners are used.

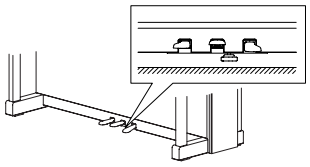


Important point:

· Make sure that the front attachment of the end panel overlaps the front surface of the stand.

8. Adjusting the pedal support

Turn the pedal support (E) at the bottom of the stand until it reaches the floor.



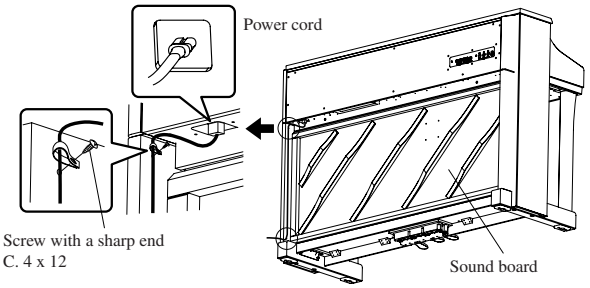
⚠ Caution

- The pedal stand may be damaged if the pedals are used when the pedal support is not touching the floor. Make sure that the pedal support is touching the floor.
- Once the pedal support touches the floor, stop turning it. Failure to do so may result in damage to the stand.
- When you move the unit, remove the pedal support before moving. Readjust the pedal support after moving is complete.

9. Connecting the power cord

(1) Connect the power cord to the piano.

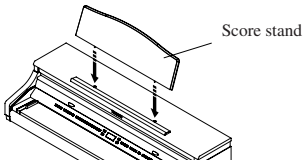
(2) Use the cord clamp to secure the power cord screw C (M4 x 12).



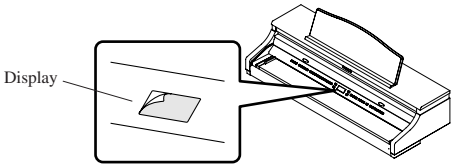
⚠ Caution

- Use the cord clamp to secure the power cord so that the cord will not touch the sound board. Noises may be generated if the power cord touches the sound board.

10. Attaching the score stand.



11. Remove the protective plastic film on the display.

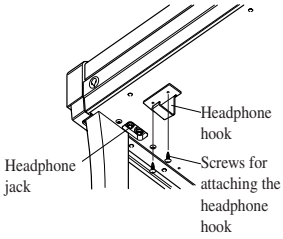


Assembly is now complete

■Attaching the headphone hook

Using two screws with a sharp end (M4 x 14) that come with the headphone hook, you can attach the headphone hook beside the headphone jack.

* This step is optional. If you do not need the hook, keep it with the instruction manual.



⚠ Caution

<When moving the unit>

- When you move the unit, make sure to remove the end panels and the pedal support before moving.
- Do not drag the unit.
- When you remove the piano from the stand, first disconnect the pedal cord, speaker cord, and power cord.

<Sound board at the back of the stand>

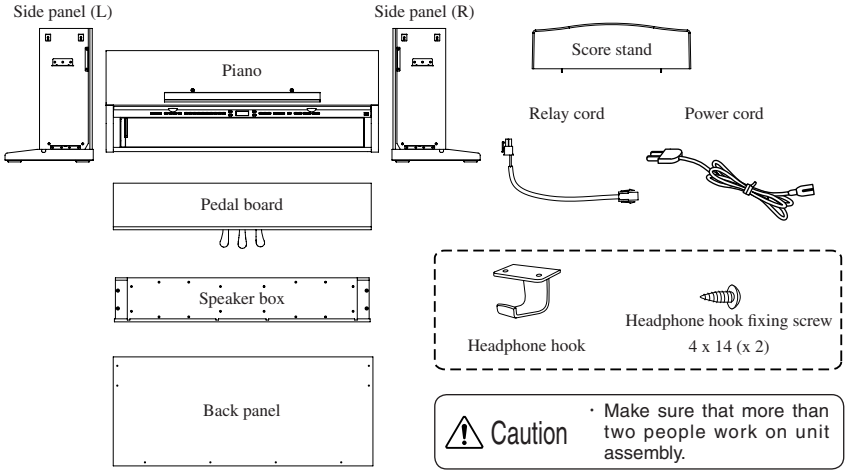
- Natural wood is used on the surface of the sound board, and its color may be therefore different from the artificial panel color.

◇ CA71 stand assembly instructions

Thank you for purchasing a KAWAI Concert Artist digital piano.
First, read this instruction manual and make sure that all the parts are included, and assemble the unit while being careful not to scratch or damage the floor, piano or stand. (Follow the procedures in reverse order when disassembling the unit.)

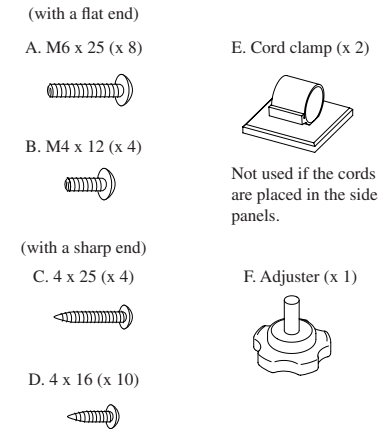
■Parts (included items)

✳Use a Phillips-head screwdriver (+) to assemble the unit.



⚠ Caution
- Make sure that more than two people work on unit assembly.

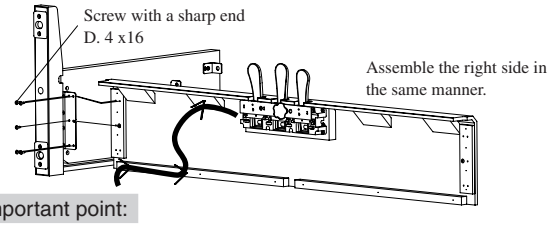
■Assembling screws



■Assembly sequence

1. Attaching the pedal board.

(1) From the bottom of the pedal board, insert the pedal support (F) about 1 cm.
(2) Untie and pull out the connection cord from the bottom of the pedal board.
(3) Insert the screws loosely into the pedal board through the bottom of the steel bracket. Line up the pedal board front to fit into the groove of the side panel. Press the side panel against the pedal board, and tighten the screws.
(4) Tighten screws D (4 x 16) in the remaining threaded holes.
(5) When the left and right side panels are both fastened, slowly raise the assembly while keeping the side panels parallel.



Important point:

Attach the side panels firmly to the pedal board.

2. Temporarily attach the back panel (select method A or B).

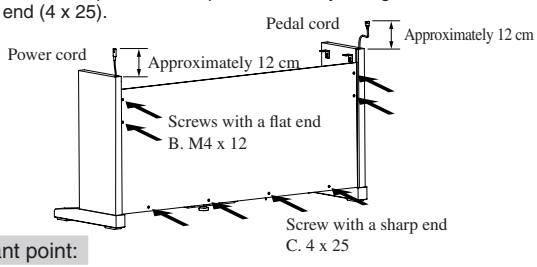
A. When placing the cords in the side panels:

(1) Place the pedal cord in the groove provided on the side panel (L), and place the power cord in the groove provided on the side panel (R) (make sure to pull the cords through to a length of about 12 cm outside the side panels).
(2) Place the back panel in the groove of the side panels.
(3) Align the holes of the bracket at the top of the side panels with the holes provided on the back panel, and temporarily fasten them by using screws B with a flat end (M4 x 12).
(4) Fasten the back panel to the pedal board by using screws C with a sharp end (4 x 25).

✳The attached cord clamps will not be used.

B. When the cords will not be placed in the side panels:

(1) Place the back panel in the groove of the side panels.
(2) Align the holes of the bracket at the top of the side panels with the holes provided on the back panel, and temporarily fasten them by using screws B with a flat end (M4 x 12).
(3) Fasten the back panel to the pedal board by using screws C with a sharp end (4 x 25).

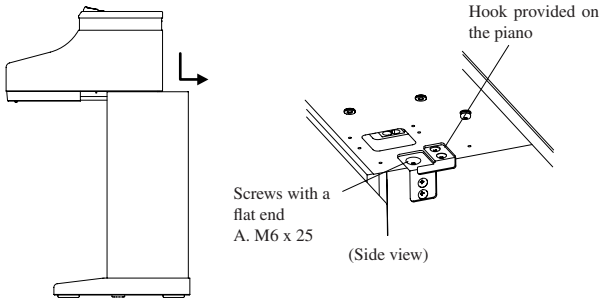


Important point:

When using screws B with a flat end (M4 x 12), loosely tighten them so that the side panels are loosely fastened.

3. Attaching the piano

(1) Place the piano on the front half of the stand (so that the metal bracket holes are seen when viewed from the top) (the piano hooks will be placed between the two side panel brackets).
(2) While supporting the piano, slide the piano towards the back to engage the hooks on the piano with the metal brackets on the side panels.
(3) Press both the side panels against the piano, and tighten the temporarily-tightened screws B (M4 x 12) on the back panel.
(4) Fasten the piano part with screws A with a flat end (M6 x 25).



Important point:

- Loosely attach the side panels so that the piano can be placed between them.
- When attaching the piano to the side panels, press the side panels inward for a tight fit against the piano.

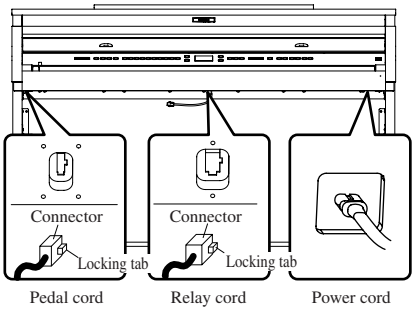
⚠ Caution
- Make sure that more than two people work on unit assembly.
- Make sure that your hands are not caught between the piano and the stand.
- Use the screws provided in order to securely fasten the piano to the stand. Failure to do so may result in the piano falling off from the stand, causing great danger.
- When the cords are placed in the side panel, make sure that the cords are not pinched between parts.
- Do not force the screws in. Insert them straight into the hole without excessive force and tighten them securely.
- Lightly tighten the screws by hand first to make sure that they are threaded correctly.

4. Connecting the cords (select method A or B).

A. When the cords are placed in the side panels:

(1) Connect the pedal cord and the power cord to the piano.

(2) Connect the relay cord to the piano. Place the other end of the relay cord at the backside of the back panel.



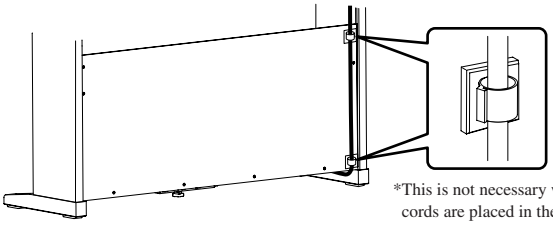
B. When the cords are not placed in the side panels:

(1) Connect the power cord and place its other end at the backside of the back panel.

(2) Connect the pedal cord from the backside of the back panel.

(3) Fasten the pedal cord with the cord clamp.

(4) Connect the relay cord to the piano.
Place the other end of the relay cord at the backside of the back panel.
*This is not necessary when the cords are placed in the side panels.



*This is not necessary when the cords are placed in the side panels.

Important point:

- Make sure that the locking tab of the connectors is facing the correct direction.
- Insert the connector straight. Do not apply too much force; it may cause unit failure.
  * To pull out the cord, remove the connector while pressing the locking tab.

5. Attaching the speaker box.

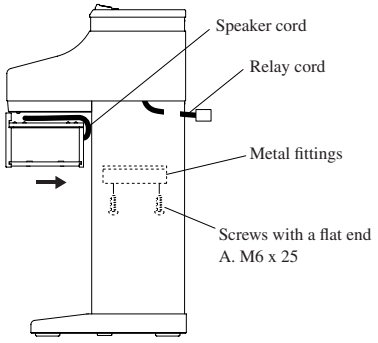
(1) Place the speaker cord over the top of the speaker box.

(2) Place the speaker box on top of the metal brackets on the side panels, and align the threaded holes.

(3) By using screws A with a fl at end (M6 x 25), attach the side panel.

(4) Pull the speaker cord towards the backside of the back panel, and connect it with the relay cord.

(5) Place both the speaker cord and the relay cord between the speaker box and the back panel.

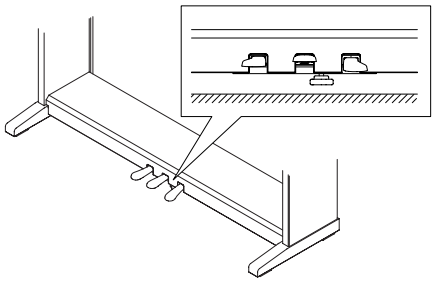


⚠ Caution

- Make sure that more than two people work on unit assembly.
- Make sure that your hands are not caught between the speaker box and the stand when placing the speaker box.
- Use the screws provided in order to securely fasten the speaker box to the stand. Failure to do so may result in the speaker box falling off from the stand, causing great danger.
- Do not force the screws in. Insert them straight into the hole without excessive force and tighten them there.
- Lightly tighten the screws by hand first to make sure that they are threaded correctly.

6. Adjust the pedal support.

Turn the pedal support (E) at the bottom of the stand until it reaches the floor.



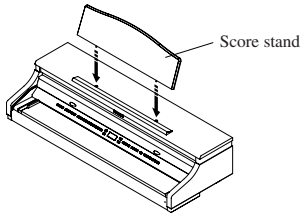
⚠ Caution

- The pedal stand may be damaged if the pedals are used when the pedal support is not touching the floor. make sure that the pedal support is touching the floor.
- Once the pedal support touches the floor, stop turning it. Failure to do so may result in damage to the stand.
- When you move the unit, remove the pedal support before moving. Readjust the pedal support after moving is complete.

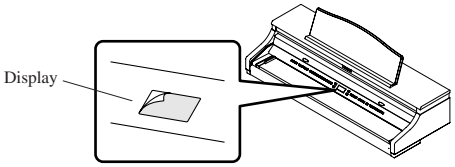
7. Check the screws.

Confirm that all the screws are properly tightened.

8. Attach the score stand.



9. Remove the protective plastic film on the display.

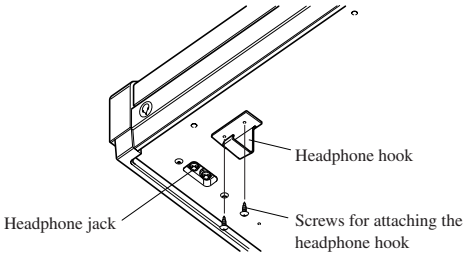


Assembly is now complete

■Attaching the headphone hook

Using two screws with a sharp end (ϕ4 x 14) that come with the Headphone hook, you can attach the headphone hook beside the headphone jack.

✳ This step is optional. If you do not need the hook, keep it with the instruction manual.



⚠ Caution

<When moving the unit>

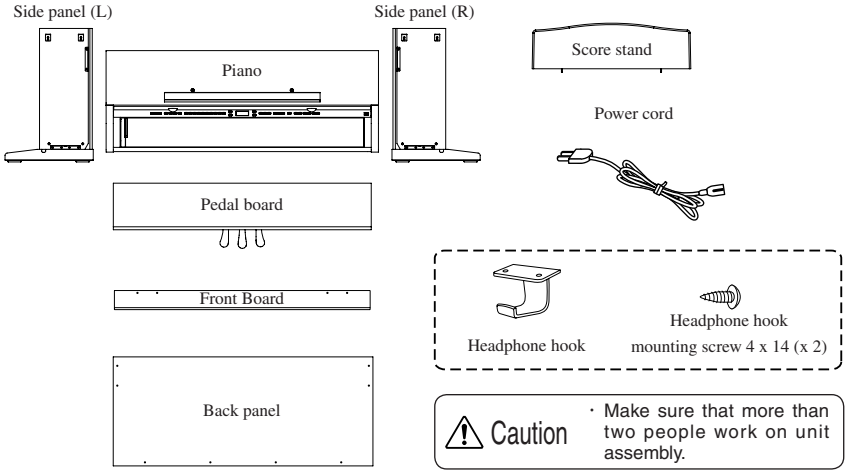
- When you move the unit, make sure to remove the end panels and the pedal support before moving.
- Do not drag the unit.
- When you remove the piano part from the stand, first disconnect the pedal cord, speaker cord, and power cord.

◇ CA51 stand assembly instructions

Thank you for purchasing a KAWAI Concert Artist digital piano.
First, read this instruction manual and make sure that all the parts are included, and assemble the unit while being careful not to scratch or damage the floor, piano or stand. (Follow the procedures in reverse order when disassembling the unit.)

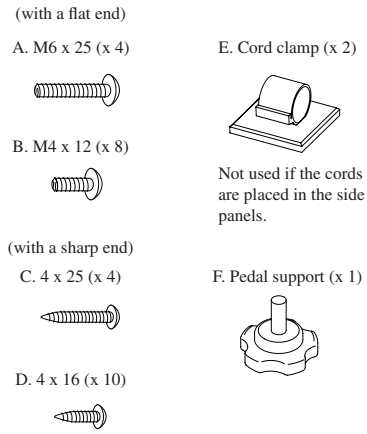
■Parts (included items)

✳Use a Phillips-head screwdriver (+) to assemble the unit.



⚠ Caution
- Make sure that more than two people work on unit assembly.

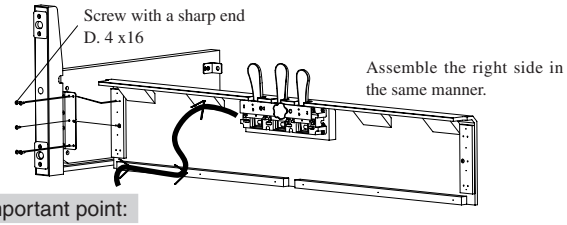
■Assembling screw



■Assembly sequence

1. Attaching the pedal board.

(1) From the bottom of the pedal board, insert the pedal support (F) about 1 cm.
(2) Untie and pull out the connection cord from the bottom of the pedal board.
(3) Insert the screws loosely into the pedal board through the bottom of the steel bracket. Line up the pedal board front to fit into the groove of the side panel. Press the side panel against the pedal board, and tighten the screws.
(4) Tighten screws D (4 x 16) in the remaining threaded holes.
(5) When the left and right side panels are both fastened, slowly raise the assembly while keeping the side panels parallel.



Important point:

Attach the side panels firmly to the pedal board.

2. Temporarily attach the back panel (select method A or B).

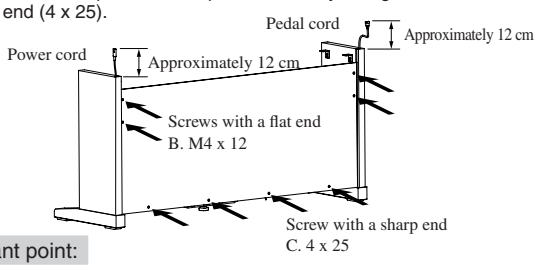
A. When placing the cords in the side panels:

(1) Place the pedal cord in the groove provided on the side panel (L), and place the power cord in the groove provided on the side panel (R) (make sure to pull the cords through to a length of about 12 cm outside the side panels).
(2) Place the back panel in the groove of the side panels.
(3) Align the holes of the bracket at the top of the side panels with the holes provided on the back panel, and temporarily fasten them by using screws B with a fl at end (M4 x 12).
(4) Fasten the back panel to the pedal board by using screws c with a sharp end (4 x 25).

✳The attached cord clamps will not be used.

B. When the cords will not be placed in the side panels

(1) Place the back panel in the groove of the side panels.
(2) Align the holes of the bracket at the top of the side panels with the holes provided on the back panel, and temporarily fasten them by using screws B with a fl at end (M4 x 12).
(3) Fasten the back panel to the pedal board by using screws C with a sharp end (4 x 25).

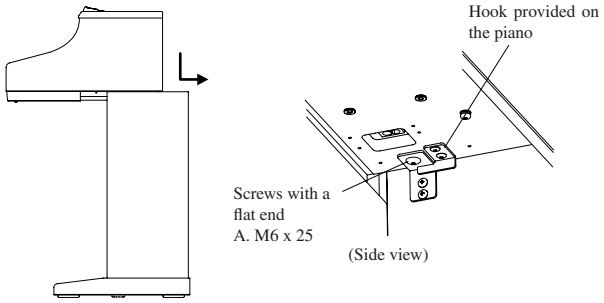


Important point:

When using screws B with a flat end (M4 x 12), loosely tighten them so that the side panels are loosely fastened.

3. Attaching the piano

(1) Place the piano on the front half of the stand (so that the metal bracket holes are seen when viewed from the top) (the piano hooks will be placed between the two side panel brackets).
(2) While supporting the piano, slide the piano towards the back to engage the hooks on the piano with the metal brackets on the side panels.
(3) Press both the side panels against the piano, and tighten the temporarily-tightened screws B (M4 x 12) on the back panel.
(4) Fasten the piano with screws A with a fl at end (M6 x 25).



Important point:

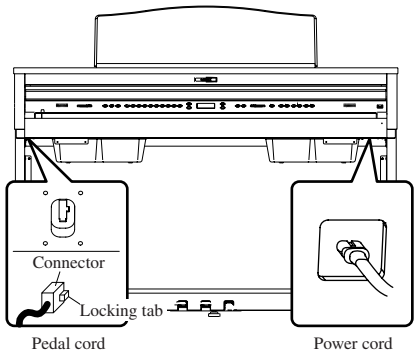
- Loosely attach the side panels so that the piano can be placed between them.
- When attaching the piano to the side panels, press the side panels inward for a tight fit against the piano.

⚠ Caution
- Make sure that more than two people work on unit assembly.
- Make sure that your hands are not caught between the piano and the stand.
- Use the screws provided in order to securely fasten the piano to the stand. Failure to do so may result in the piano falling off from the stand, causing great danger.
- When the cords are placed in the side panel, make sure that the cords are not pinched between parts.
- Do not force the screws in. Insert them straight into the hole without excessive force and tighten them securely.
- Lightly tighten the screws by hand first to make sure that they are threaded correctly.

4. Connecting the cords (select method A or B).

A. When the cords are placed in the side panels:

(1) Connect the pedal cord and the power cord to the piano.



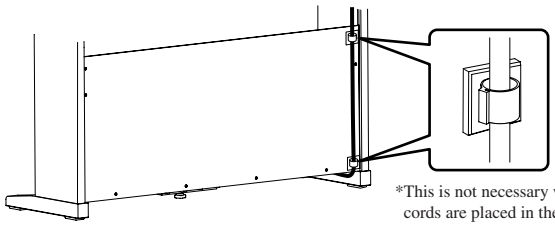
B. When the cords are not placed in the side panels:

(1) Connect the power cord and place its other end over the rear of the of the back panel.

(2) Connect the pedal cord from the backside of the back panel.

(3) Attach the pedal cord with the cord clamp.

*This is not necessary when the cords are placed in the side panels.



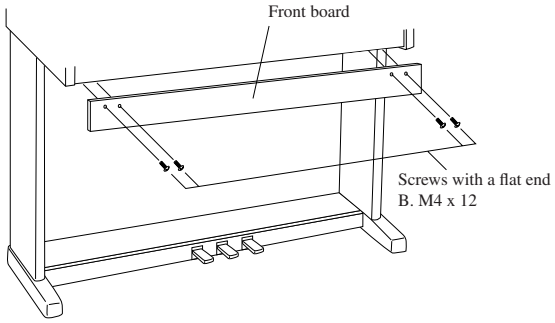
*This is not necessary when the cords are placed in the side panels.

Important point:

- Make sure that the locking tab of the connectors is facing the correct direction.
- Insert the connector straight. Do not apply too much force; it may cause unit failure.
  * To pull out the cord, remove the connector while pressing the locking tab.

5. Fasten the front board.

(1) Place the front board in front of the speaker boxes by using screws B with a fl at end (M4 x 12).

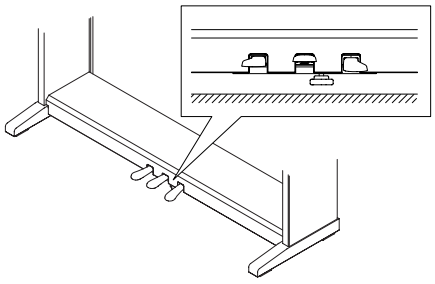


⚠ Caution

- Make sure that more than two people work on unit assembly.
- Do not force the screws in. Insert them straight into the hole without excessive force and tighten them there.
- Lightly tighten the screws by hand first to make sure that they are threaded correctly.

6. Adjust the pedal support

Turn the pedal support (E) at the bottom of the stand until it reaches the floor.



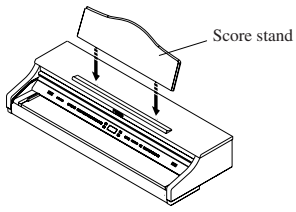
⚠ Caution

- The pedal stand may be damaged if the pedals are used when the pedal support is not touching the floor. Make sure that the pedal support is touching the floor.
- Once the pedal support touches the floor, stop turning it. Failure to do so may result in damage to the stand.
- When you move the unit, remove the pedal support before moving. Readjust the pedal support after moving is complete.

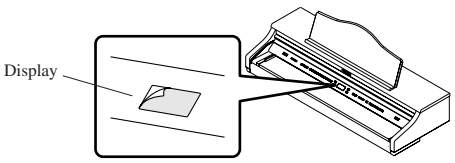
7. Check the screws.

Confirm that all the screws are properly tightened.

8. Attach the score stand.



9. Remove the protective plastic film on the display.

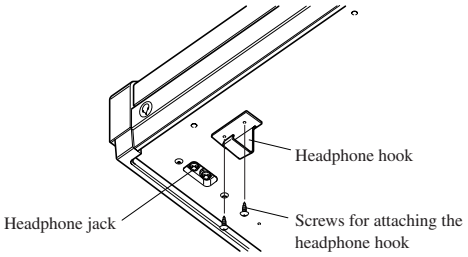


Assembly is now complete

■Attaching the headphone hook

Using two screws with a sharp end (4 x 14) that come with the Headphone hook, you can attach the headphone hook beside the headphone jack.

✳ This step is optional. If you do not need the hook, keep it with the instruction manual.



⚠ Caution

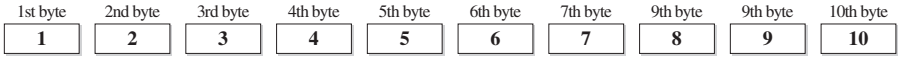
<When moving the unit>

- When you move the unit, make sure to remove the end panels and the pedal support before moving.
- Do not drag the unit.
- When you remove the piano from the stand, first disconnect the pedal cord, and power cord.

◇ Specifications

	CA91	CA71	CA51
■ Keyboard	88 key wooden action		
■ Max Polyphony	192		96
■ Number of Sounds	80 (page 13)	60 (page 13)	40 (page 13)
■ Display	16 letters x 2 lines, LCD		
■ Effects	Reverb (Room 1, Room 2, Stage, Hall 1, Hall 2), Chorus, Delay 1, Delay 2, Delay 3, Tremolo, Rotary 1, Rotary 2, Tone control (CA91 / CA71 only)		
■ Lesson	Please see the separate reference booklet entitled "Internal Song Lists" for information regarding the Lesson etudes, songs, and exercises.		
■ Metronome	Beat: 1/4, 2/4, 3/4, 4/4, 5/4, 3/8, 6/8, 7/8, 9/8, 12/8 Rhythm: 100 types		
■ Recorder	CA91/71 = 2 parts x 10 songs total memory capacity: approximately 90,000 notes		CA51 = 2 parts x 5 songs total memory capacity: approximately 15,000 notes
■ Demo Songs	33 tunes	31 tunes	27 tunes
■ Piano Music	Please see the separate reference booklet entitled "Internal Song Lists" for more information.		
■ Concert Magic	176 tunes		88 tunes
■ Virtual Technician	Voicing (6 types), Damper resonance, String resonance, Key-off effect, Touch curve (6 preset types, 2 user-defined curves), Temperament (9 types, and user-defined temperament), Stretch tuning (2 types)		
■ Transpose	From -12 to +12 halftones		
■ Other Functions	Dual, Split, Duet performance, Balance slider, Wall EQ (CA91 only), Brilliance (CA51 only), Lower octave shift, Lower pedal, Layer octave shift, Layer dynamics, Damper hold, Tuning, MIDI function settings, User memory, Factory reset		
■ Pedal	Sustain (8 levels), soft, sostenuto		
■ Key Cover	Slide type		
■ External Jacks	Headphone (2) MIDI (IN, OUT, THRU), LINE OUT (L/MONO, R), LINE IN (L/MONO, R), LINE IN, volume (CA91 / CA71 only), USB		
■ Output Power	40 W x 2 + 30 W x 1	40 W x 2	
■ Speaker	7 cm x 4 (top speakers) 1.9 cm x 2 (dome tweeters) Sound board speaker	13 cm x 4 (with wooden enclosure) 1.9 cm x 2 (dome tweeters)	13 cm x 2 (with enclosure) 5 cm x 2 (tweeters)
■ Power Consumption	115 W	85 W	80 W
■ Finish	Rosewood, Mahogany, European Cherry		
■ Dimensions (WxDxH) (Not including Music Rack)	142 x 52 x 95 (cm) 57” x 21” x 38”	139 x 52 x 95 (cm) 56” x 21” x 38”	138 x 52 x 91 (cm) 56” x 21” x 38”
■ Weight (without bench)	87.0 Kg, 192 LB’s	83.0 Kg 183 LB’s	71.5 Kg 158 LB’s

◇ MIDI exclusive data format



1 F0 .....Start code
2 40.....KAWAI's ID number
3 00 - 0F .....MIDI channel
4 10, 30.....Function code (30 when setting MULTI TIMBRE ON/OFF)
5 04.....Indicates that the instrument is Electronic Piano
6 02.....Indicates that the piano is one of "CA" series
7 data 1
8 data 2.....(See the table below.)
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 1, 03: Delay 2, 04: Delay 3, 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, 01: Normal, 02: Heavy, 03: Off, 04: Light +, 05: Heavy +, 06: User 1, 07: User 2
19	00-03	——	Lower Octave Shift
20	00-4F(3C/27)	00-4F(3C/27)	Dual, data 2: Right sound, data 3: Left sound, ( ) for CA71/51
21	00-4F(3C/27)	00-4F(3C/27)	Split, data 2: Upper sound, data 3: Lower sound, ( ) for CA71/51
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

Date : Aug '06
Version : 1. 0

◇ KAWAI [Model CA91 / CA71 / CA51] MIDI implementation chart

Function			Transmit	Receive	Remarks
Basic channel	At power-up Settable		1 1 - 16	1 1 - 16	
Mode	At power-up Message Alternative		Mode 3 × *********	Mode 1 Mode 1, 3** ×	** Omni mode is on at power-up. Omni mode can be turned off through MIDI channel setting operations.
Note number	Range		21 - 108* *********	0 - 127 0 - 127	* 9-120, including transpose
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 10 11 64 66 67	○ × × × ○ (Right pedal) ○ (Middle pedal) ○ (Left pedal)	○ ○ ○ ○ ○ ○ ○	Bank select Volume Panpot Expression pedal Damper pedal Sostenute pedal Soft pedal
Program change settable range			○ (0 - 127) *********	○ (0 - 127)	
Exclusive			○	○	Transmission can be selected
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
Mode 3: omni mode Off, Poly, Mode 4: omni mode Off, Mono

○: Yes
×: No

KAWAI

CA91/CA71/CA51 Owner's Manual
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英/E