

# CTK-3400SK

EN/ES

English

Español

## USER'S GUIDE

Please keep all information for future reference.

### Safety Precautions

Before trying to use the Digital Keyboard, be sure to read the separate "Safety Precautions".

## GUÍA DEL USUARIO

Guarde toda información para tener como referencia futura.

### Precauciones de seguridad

Antes de intentar usar el teclado digital, asegúrese de leer las "Precauciones de seguridad" separadas.

## NOTICE

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

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

## FCC WARNING

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

## Declaration of Conformity

Model Number: CTK-3400SK

Trade Name: CASIO COMPUTER CO., LTD.

Responsible party: CASIO AMERICA, INC.

Address: 570 MT. PLEASANT AVENUE, DOVER, NEW JERSEY 07801

Telephone number: 973-361-5400

This device complies with Part 15 of the FCC Rules, Operation is subject to the following two conditions:

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

## Important!

Please note the following important information before using this product.

- Before using the optional AD-E95100L Adaptor to power the unit, be sure to check the AC Adaptor for any damage first. Carefully check the power cord for breakage, cuts, exposed wire and other serious damage. Never let children use an AC adaptor that is seriously damaged.
- Never attempt to recharge batteries.
- Do not use rechargeable batteries.
- Never mix old batteries with new ones.
- Use recommended batteries or equivalent types.
- Always make sure that positive (+) and negative (-) poles are facing correctly as indicated near the battery compartment.
- Replace batteries as soon as possible after any sign they are getting weak.
- Do not short-circuit the battery terminals.
- The product is not intended for children under 3 years.
- Use only CASIO AD-E95100L adaptor.
- The AC adaptor is not a toy.
- Be sure to disconnect the AC adaptor before cleaning the product.



This mark applies in EU countries only.



Manufacturer:

CASIO COMPUTER CO., LTD.

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543, Japan

Responsible within the European Union:

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Casio-Platz 1, 22848 Norderstedt, Germany

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- The contents of this manual are subject to change without notice.
- The actual appearance of the product may be different from that shown in the illustrations in this User's Guide.
- Company and product names used in this manual may be registered trademarks of others.

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## **MIDI Implementation Chart**

### **Included Accessories**

- **Music Stand**
- **Leaflets**
  - Safety Precautions
  - Appendix
  - Other (Warranty, etc.)

Items included as accessories are subject to change without notice.

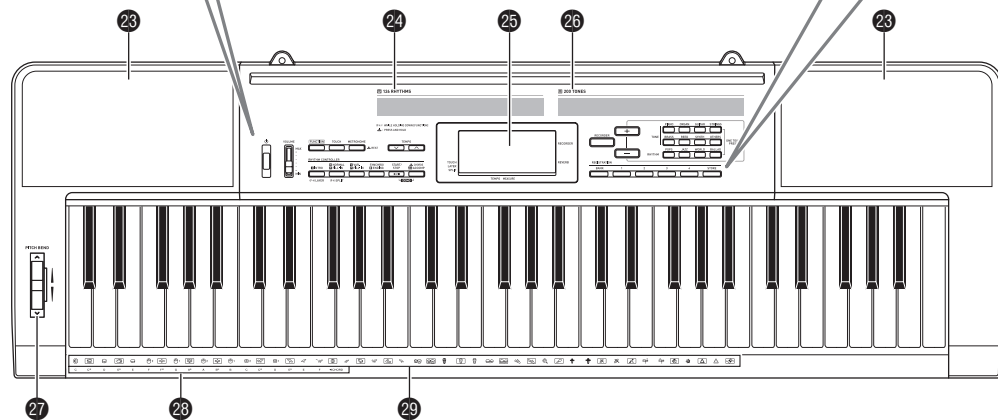
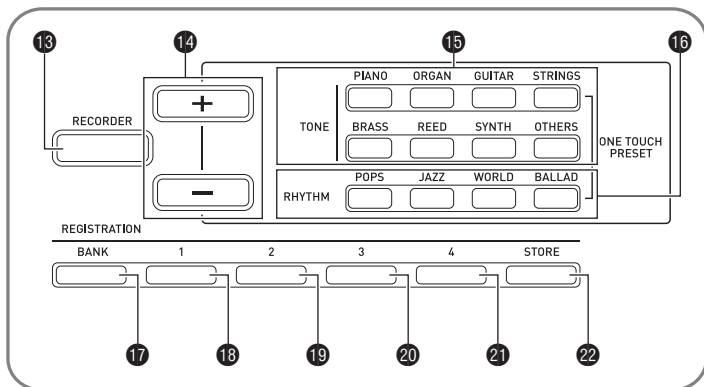
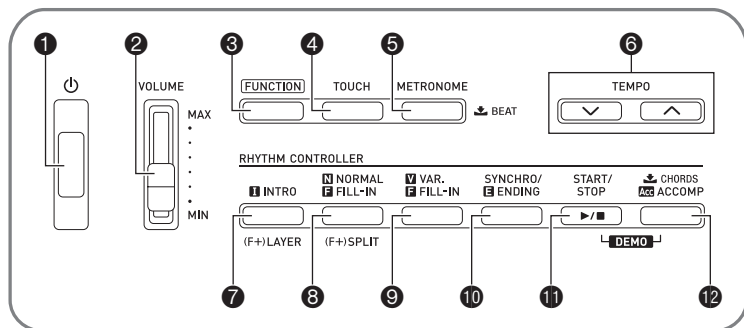
### **Separately Available Accessories**


- You can get information about accessories that are separately for this product from the CASIO catalog available from your retailer, and from the CASIO website at the following URL.

<http://world.casio.com/>


# General Guide


























- In this manual, the term “Digital Keyboard” refers to the CTK-3400SK.
- **In this manual, buttons and other controllers are identified using the numbers shown below.**



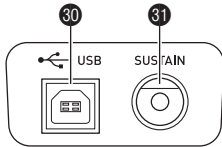
The following explains the meanings of the (F+) and  symbols that appear on the product console and with the key names below.

(F+) : Indicates a function that is enabled by holding down the **3** (FUNCTION) button when pressing a button.

 : Indicates a function that is enabled by holding down the button for some time.

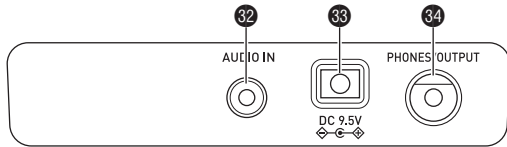
- 1  button  EN-6, 7
- 2 **VOLUME** slider  EN-7
- 3 **FUNCTION** button  EN-4, 10, 11, 12, 13, 19, 25, 26
- 4 **TOUCH** button  EN-8
- 5 **METRONOME**,  **BEAT** button  EN-9
- 6 **TEMPO** buttons  EN-9, 19
- 7 **INTRO**, **LAYER** button  EN-18
- 8 **NORMAL/FILL-IN**, **SPLIT** button  EN-11, 15, 18
- 9 **VAR./FILL-IN** button  EN-18
- 10 **SYNCHRO/ENDING** button  EN-18, 19
- 11 **START/STOP** button  EN-14, 15
- 12 **ACCOMP**,  **CHORDS** button  EN-14, 16
- 13 **RECORDER** button  EN-22
- 14 **[-]/[+]** buttons  
 EN-4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 19, 25, 26
- 15 **TONE** buttons  EN-10, 19
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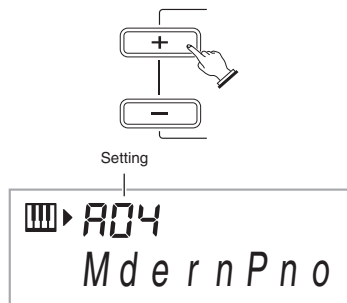
32 **AUDIO IN** jack  EN-26

33 **DC 9.5V** terminal  EN-5

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## Using the [-] and [+] Buttons (14)

You can use the [+] (increase) and [-] (decrease) buttons (14) to change the displayed number or value.

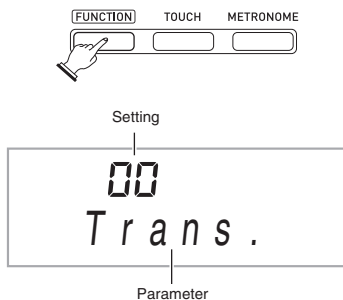


- Holding down either button scrolls the displayed setting.
- Pressing both buttons at the same time will revert to the initial default setting or the recommended setting.
- Holding down 3 (FUNCTION) while pressing 14 (-/+) [-] will decrease the displayed number of value by 10. Holding down 3 (FUNCTION) while pressing 14 (-/+) [+] will increase it by 10.

## Using the FUNCTION Button (3)

Use the **FUNCTION** button (3) to access settings that let you select the reverb type, pedal effect, etc.

### 1. Press 3 (FUNCTION).



### 2. Next press 3 until the parameter whose setting you want to change is displayed.

Each press of 3 cycles through the available parameters.

#### NOTE

- When selecting a parameter, you can scroll backwards by holding down 3 as you press 4 (TOUCH).

	Parameter	Display	See Page
1	Transpose	Trans.	EN-13
2	Accompaniment Volume	AcompVol	EN-19
3	Tuning	Tune	EN-13
4	Reverb	Reverb	EN-12
5	Keyboard Channel	Keybd Ch	EN-25
6	Navigate Channels	Navi. Ch	EN-25
7	Local Control	Local	EN-26
8	Accomp Out	AcompOut	EN-26
9	Pedal Effect	Jack	EN-12
10	Pitch Bend Range	Bend Rng	EN-13

### 3. When the parameter you want is displayed, use 14 (-/+) to change its setting.

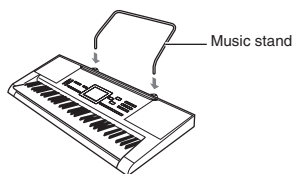
- The parameter setting will disappear from the upper left area of the screen if you do not perform any operation for some time.

#### IMPORTANT!

- The tone and other parameters revert to their initial defaults whenever you turn on power (page EN-7).

# Getting Ready to Play

## Preparing the Music Stand



## Power Supply

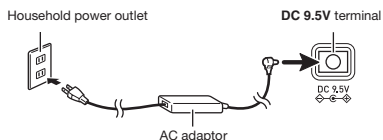
Either an AC adaptor or batteries can be used to power this Digital Keyboard. Normally, use of AC adaptor power is recommended.

- The AC adaptor does not come with this Digital Keyboard. Purchase it separately from your retailer. See page EN-1 for information about options.

## Using the AC Adaptor

Make sure that you use only the AC adaptor specified for this Digital Keyboard. Use of a different type of AC adaptor can cause malfunction.

**Specified AC Adaptor: AD-E95100L**  
(JEITA Standard plug)



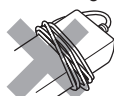
## IMPORTANT!

- Be sure to turn off Digital Keyboard power before connecting or disconnecting the AC adaptor.
- The AC adaptor will become warm to the touch after very long use. This is normal and does not indicate malfunction.
- To prevent breaking of the wire, take care to avoid putting any type of load on the power cord.

No bending!



No winding!



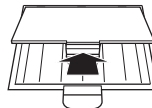
- Never insert metal, pencils, or any other objects into the product's 9.5V DC terminal. Doing so creates the risk of accident.

## Using Batteries

### IMPORTANT!

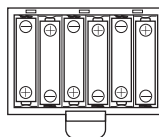
- Be sure to turn off power before loading batteries.
- It is up to you to prepare six commercially available AA-size batteries. Do not use oxyride batteries or any other nickel based batteries.

1. Open the battery cover on the bottom of the Digital Keyboard.

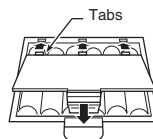


2. Load six AA-size batteries into the battery compartment.

Make sure the positive (+) and negative (-) ends of the batteries are facing as shown in the illustration.

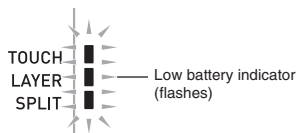


3. Insert the tabs of the battery cover into the holes on the side of the battery compartment, and close the cover.



### Low Battery Indication

The indicator shown below starts to flash to let you know when battery power is low. Replace the batteries with new ones.








## ■ Saving Settings

Your Digital Keyboard is equipped with a recorder and other features that you can use to store data you create. This stored data is retained even when the Digital Keyboard is turned off.\* However, the tone, rhythm, and other settings you configure on the Digital Keyboard's console normally are returned to their initial power on defaults whenever you turn off power.

- \* The data and settings below are always retained even when power is turned off.
- Registration data (page EN-20)
  - Song recording data (page EN-22)

## Returning the Digital Keyboard to Its Factory Default Settings

Perform the following procedure when you want to return the Digital Keyboard's stored data and settings to their initial factory defaults.

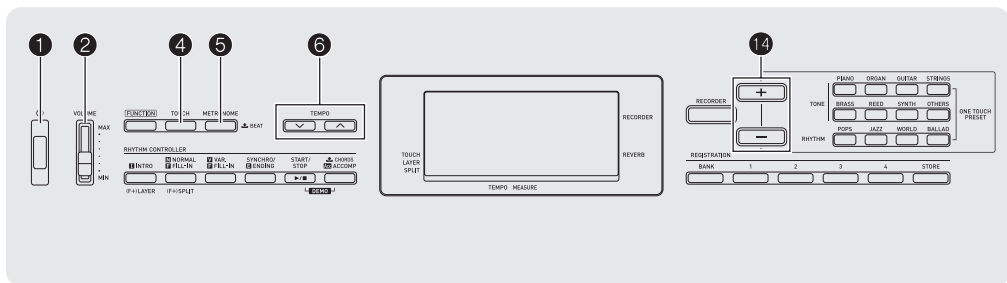
- 1. Turn off the Digital Keyboard.**
- 2. While holding down  (-/+) [-] and the  (RHYTHM) [POPS] button at the same time, press  (P).**
  - Keep  and the  (RHYTHM) [POPS] button depressed until the next step is complete.
- 3. When the message “Pls wait” appears on the screen, release both of the above buttons.**
  - You will be able to use the Digital Keyboard in a short while after its system is initialized.

### **NOTE**

- See “Turning on Power and Playing” (page EN-7) for information about turning digital power on and off.



# Playing the Digital Keyboard



## Turning on Power and Playing

1. Press **1** (⏻).  
This turns on power.
  - To turn off the Digital Keyboard, press **1** again.
2. Try playing something on the keyboard. Use **2** (VOLUME) to adjust volume.



### IMPORTANT!

- Pressing **1** (⏻) to turn off power actually puts the Digital Keyboard into a standby state. Minute amounts of current continue to flow within the Digital Keyboard in the standby state. If you do not plan to use the Digital Keyboard for a long time or if there is a lightning storm in your area, be sure to unplug the AC adaptor from the power outlet.
- The message "Pls wait" will remain on the display while a data save operation is in progress. Do not perform any other operation while it is displayed. Turning off the Digital Keyboard can cause Digital Keyboard data to be deleted or become corrupted.

## Auto Power Off

If you do not perform any operation on the Digital Keyboard for one of the trigger times noted below, Auto Power Off will turn off power.

- During battery operation : 6 minutes
- During AC adaptor operation : 30 minutes

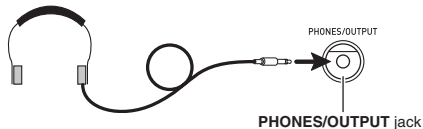
■ **Disabling Auto Power Off**  
You can disable Auto Power Off to ensure that power is not turned off automatically during a concert, etc.

1. While holding down **14** (-/+) [+], turn on power.  
Auto Power Off will be disabled.

## Using Headphones

Using headphones cuts off output from the built-in speakers, which means you can practice playing even late at night without disturbing others.

- Be sure to turn down the volume level before connecting headphones.



### NOTE

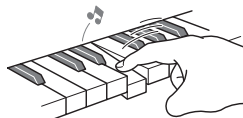
- Headphones do not come with the Digital Keyboard.
- Use commercially available headphones. See page EN-1 for information about options.

### IMPORTANT!

- Do not listen to very high volume output over headphones for long period. Doing so creates the risk of hearing damage.
- If you are using headphones that require an adaptor plug, make sure you do not leave the adaptor plugged in when removing the headphones.

## Changing Keyboard Response to Touch Pressure (Touch Response)

Touch Response alters tone volume in accordance with keyboard pressure (speed). This provides you some of the same expressivity you get on an acoustic piano.



1. Press **4** (TOUCH) to toggle touch response on and off.

TOUCH  
LAYER  
SPLIT

Indicator disappears when Touch Response is turned off.

Off	Touch Response is turned off. Sound volume is fixed, regardless of key press speed.
On	Touch Response is turned on.

## Using the Metronome

The metronome lets you play and practice along with a steady beat to help keep you on tempo.

### Start/Stop

#### 1. Press **5** (METRONOME).

This starts the metronome.

This pattern changes with each beat.



TEMPO MEASURE

#### 2. Press **5** again to stop the metronome.

### Changing the Beats per Measure

You can configure the metronome to use a bell sound for the first beat of each measure of the song you are playing.

- You can specify 0, or a value from 2 to 6 as the number of beats per measure.
- When playing a built-in song, the beats per measure setting (which determines when the bell sounds) is configured automatically for the currently selected song.

#### 1. Hold down **5** until the beats per measure setting screen appears on the display.



- If you do not perform any operation for after the beats per measure setting screen appears, the display will return to the screen displayed before you pressed **5**.

#### 2. Use **14** (-/+) to enter the number of beats per measure.

- The bell will not sound if you specify 0 for this setting. In this case, all beats are indicated by a click sound. This setting lets you practice with a steady beat, without worrying how many beats there are in each measure.

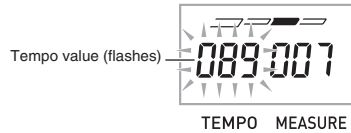
## Changing the Metronome Tempo

Use the following procedure to change the tempo of the metronome.

#### 1. Press **6** (TEMPO).

Use **∇** (slower) and **∧** (faster) to change the tempo setting. Holding down either button changes the setting at high speed.

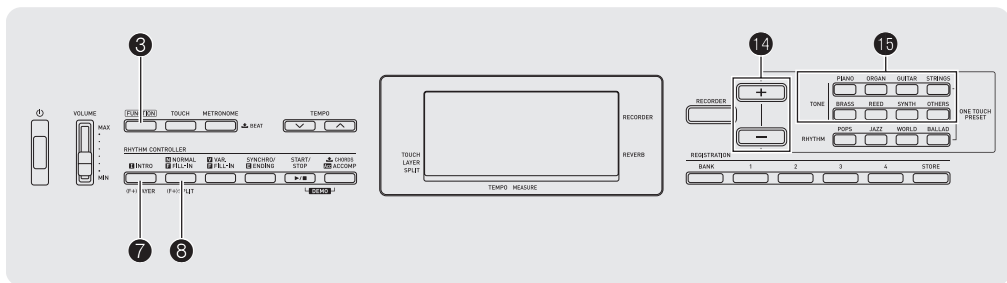
- Pressing **∇** and **∧** at the same time will initialize the tempo setting in accordance with the currently selected song or rhythm.
- Pressing **6** causes the tempo value to flash on the display. While the tempo value is flashing, you can use **14** to change it.
- The tempo value will stop flashing if you do not perform any operation for a short while.



Tempo value (flashes)

TEMPO MEASURE

# Controlling the Keyboard Sounds

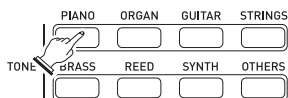


## Select from a variety of musical instrument sounds

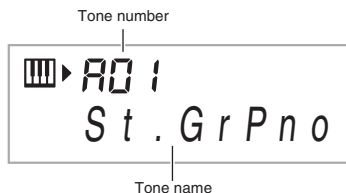
Your Digital Keyboard lets you select tones for a wide variety of musical instrument sounds, including violin, flute, orchestra, and more. Even the same song sound takes on a different feel by changing the instrument type.

### To select an instrument for playing

1. Press one of the eight **15** (TONE) buttons to select the tone group you want.



2. Use **14** (-/+) to select the tone number you want.



The corresponding tone number and tone name will appear on the screen.

### NOTE

- See the separate “Appendix” for a complete list of available tones.
- When one of the drum sets is selected (tone numbers H20 through H25), each keyboard key is assigned a different percussion sound.

3. Try playing something on the keyboard.

The tone of the instrument you selected will sound.



## Layering Two Tones

You can use the following procedure to layer two different tones (such as piano and strings) so they sound simultaneously when you press a keyboard key.

1. Select the first tone you want to use.

Press **15** (TONE) and then use **14** (-/+) to select the tone you want.

Example: A15 ELEC.PIANO



2. While holding down **3** (FUNCTION), press **7** (LAYER).



**3. Select the second tone you want to use.**

Press **15** (TONE) and then use **14** (-/+) to select the tone you want.

Example: D08 STRINGS

**4. Play something on the keyboard.**

Both tones sound at the same time.

**5. Holding down **3** (FUNCTION) and pressing **7** (LAYER) again will unlayer the tones for output of a single tone.**

- Each press of **7** (LAYER) while **3** (FUNCTION) is held down will toggle between layered (two tones) and unlayered (one tone).

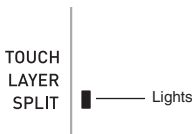
## Splitting the Keyboard between Two Different Tones

You can use the procedure below to assign different tones to the right range and left range of the keyboard, so it sounds like you are playing an ensemble between two instruments.

**To select the two tones for a split keyboard****1. Select the tone for the right side range (page EN-10).**

Press **15** (TONE) and then use **14** (-/+) to select the tone you want.

Example: F11 FLUTE

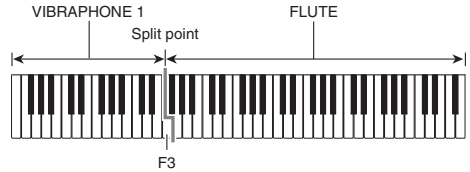
**2. While holding down **3** (FUNCTION), press **8** (SPLIT).****3. Select the tone for the left side range.**


Press **15** (TONE) and then use **14** (-/+) to select the tone you want.

Example: B20 VIBRAPHONE 1

**4. Play something on the keyboard.**

This will sound the tones assigned to the left and right side ranges of the keyboard.

**NOTE**

- The  mark above the graphic keyboard on the screen indicates the initial default split point setting.

**5. Holding down **3** (FUNCTION) and pressing **8** (SPLIT) again will unsplit the tones for output of a single tone.**

- Each press of **8** (SPLIT) while **3** (FUNCTION) is held down will toggle between split (two tones) and unsplit (one tone).

**NOTE**

- If you turn on both layer and split, layering will be applied to the right side range of the keyboard only.

**To change the split point****1. While holding down **3** (FUNCTION), press **8** (SPLIT).**

- Keep **3** depressed until the next step is complete.

**2. While holding down **3** (FUNCTION), press the keyboard key where you want the split point to be.**

The key you press will become the lowest note of the right side range of the split keyboard.

Example: Setting middle C (C4) as the split point.



## Using Reverb

Reverb adds reverberation to notes. You can change the duration of the reverb.


1. Press **3** (FUNCTION) a number of times until “Reverb” appears on the display (page EN-4).



2. Use the **14** (-/+) to select the reverb setting you want.

Off (OFF)	Turns off reverb.
1 to 10	The larger the number selected, the longer the reverb duration.



Indicator disappears when reverb is turned off.  REVERB

## Using a Pedal

A pedal can be used to change notes in various ways while playing.

- A pedal unit does not come with the Digital Keyboard. Purchase one separately from your retailer. See page EN-1 for information about options.

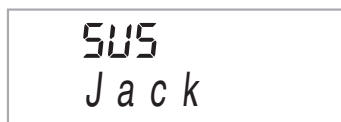
### Connecting a Pedal Unit

Connect an optional pedal unit.



### Selecting the Pedal Effect

1. Press **3** (FUNCTION) a number of times until “Jack” appears on the display (page EN-4).



2. Use the **14** (-/+) to select the pedal effect you want.

- The following shows the available pedal effects.

<b>Sustain (SUS)</b>	Sustains notes played while the pedal is depressed. Organ and other similar tone notes are sustained even if the pedal is not pressed.
<b>Sostenuto (SoS)</b>	Sustains notes that are playing when the pedal is depressed before the keyboard keys are released.
<b>Soft (SFt)</b>	Slightly softens notes played while the pedal is depressed.
<b>Rhythm (rHy)</b>	Pressing the pedal starts and stops Auto Accompaniment or song playback.

## Changing the Pitch (Transpose, Tuning)

### Changing the Pitch in Semitone Steps (Transpose)

The transpose feature lets you change the pitch, in semitone steps. A simple operation lets you instantly change the pitch to match that of a singer.

- The transpose setting range is -12 to +12 semitones.

#### 1. Press **3** (FUNCTION).



#### 2. Use the **14** (-/+) to select the transpose setting you want.

### Fine Tuning (Tuning)

Use the tuning feature when you need to adjust the pitch slightly to play along with another musical instrument. Also, some artists perform their music with slightly altered tuning. You can use the tuning feature to adjust tuning so it exactly matches a performance on a CD.

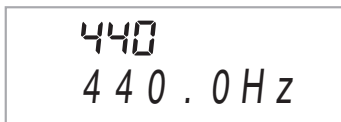
- The tuning feature specifies the frequency of the A4 note. You can set a frequency within the range of 415.5 to 465.9 Hz. The initial default setting is 440.0 Hz.

#### 1. Press **3** (FUNCTION) a number of times until "Tune" appears on the display (page EN-4).



#### 2. Use the **14** (-/+) to adjust the tuning.

- Performing this step causes the display to change from "Tune" to a value that indicates the current frequency setting as shown below. You can change the frequency in 0.1Hz steps.



- Even if you do not perform a **14** operation to adjust the tuning, the current frequency setting will appear automatically after a few seconds.

## Using the Pitch Bend Wheel to Shift the Pitch of Notes

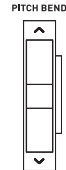
You can use the pitch bend wheel to slide the pitch of notes smoothly upwards and downwards. This technique makes it possible to produce effects that are similar to sounds produced when bending notes on a saxophone or electric guitar.

### To play with the pitch bend wheel

#### 1. While playing a note on the keyboard, rotate the pitch bend wheel on the left of the keyboard upwards or downwards.

The amount the note bends depends on how much you rotate the pitch bend wheel.

- Do not have the pitch bend wheel rotated as you turn on the Digital Keyboard.



### Specifying the Pitch Bend Range

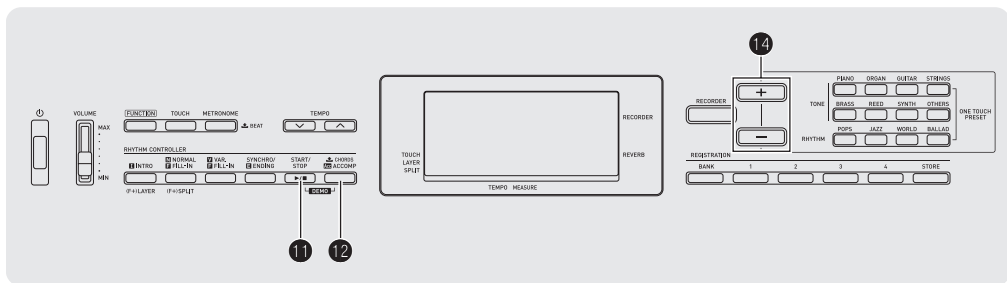
Use the following procedure to specify how much the pitch of the note changes whenever the pitch bend wheel is rotated upwards or downwards. You can specify a range from 0 to 12 semitones (one octave).

#### 1. Press **3** (FUNCTION) a number of times until "Bend Rng" appears on the display (page EN-4).



#### 2. Use the **14** (-/+) to change the range.

# Playing the Demo Songs



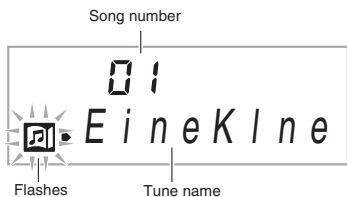
Use the following procedure to play back built-in songs (01 to 10).

No.	Title
01	SERENADE FROM "EINE KLEINE NACHTMUSIK"
02	MARCH FROM "THE NUTCRACKER"
03	FÜR ELISE
04	THE ENTERTAINER
05	ODE TO JOY
06	TWINKLE TWINKLE LITTLE STAR
07	DANNY BOY
08	GREENSLEEVES
09	LE CYGNE FROM "LE CARNAVAL DES ANIMAUX"
10	SPRING FROM "THE FOUR SEASONS"

## 1. Press **11** (START/STOP) and **12** (ACCOMP) at the same time.

This will start playback of the demo songs. Demo playback continues until you stop it.

- Demo playback always starts from song number 01.



## 2. To change to another song while demo playback is in progress, use **14** (-/+) to enter the song number you want (page EN-4).

This will cause demo playback to jump to the song whose number you entered.

## 3. To stop demo playback, press **11**.

Demo playback continues until you stop it by pressing **11**.

## NOTE

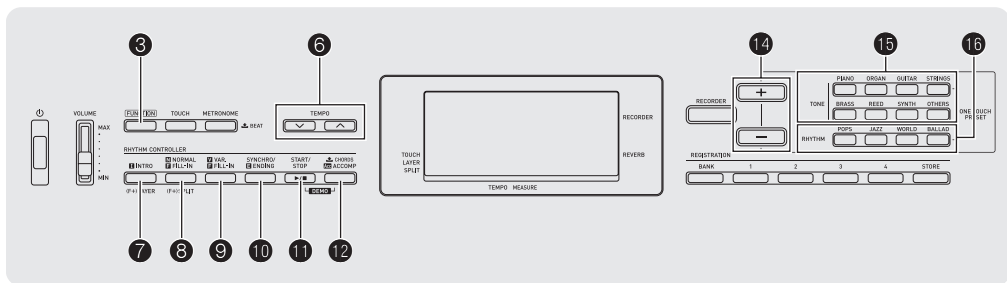
- When the keyboard is playing one of its built-in songs, the display shows fingerings about the song.



- If Auto Power Off (page EN-7) is enabled, the Digital Keyboard will turn off if 30 minutes (six minutes under battery power) elapse without any keyboard operation being performed. Use the procedure under "Disabling Auto Power Off" (page EN-7) for information about how to disable Auto Power Off.



# Using Auto Accompaniment



With Auto Accompaniment, simply select an accompaniment pattern. Each time you play a chord with your left hand the appropriate accompaniment will play automatically. It's like having a personal backup group along with you wherever you go.

## NOTE

- Auto Accompaniments are made up of the following three parts.
  - Rhythm
  - Bass
  - Harmony

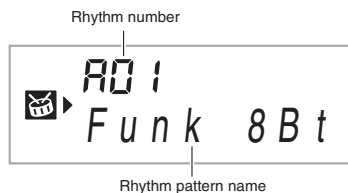
You can have only the rhythm part play, or you can have all three parts play at the same time.

## Playing the Rhythm Part only

The rhythm part is the foundation each Auto Accompaniment. Your Digital Keyboard comes with a variety of built-in rhythms, including 8-beat and waltz. Use the following procedure to play the basic rhythm part.

## Starting and Stopping the Rhythm Part only

- Press one of the four **16** (RHYTHM) buttons to select the rhythm group you want.



- Use **14** (+/-) to select the rhythm number you want.
  - See the separate "Appendix" for information about individual rhythms.

## NOTE

- With rhythms D19 to D28, nothing will sound until you play a chord on the keyboard.

- Press **11** (START/STOP) or **8** (NORMAL/FILL-IN).

This starts the rhythm.

This pattern changes with each beat.



- Play along with the rhythm.
- To stop the rhythm, press **11** again.

## NOTE

- Holding down any one of the rhythm buttons while the tone screen is displayed will cause the currently selected rhythm name to appear without changing the rhythm setting.
- Holding down any one of the tone buttons while the rhythm screen is displayed will the currently selected tone name to appear without changing the tone setting.

## Playing All Parts

### Auto Accompaniment with Chords

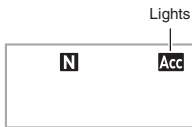
Playing a chord with your left hand automatically adds bass and harmony accompaniment parts to the currently selected rhythm. It is just like having your own personal back up group on call.

#### 1. Start play of the Auto Accompaniment rhythm part.

#### 2. Press **12** (ACCOMP).

This enables chord input on the accompaniment keyboard.

Accompaniment keyboard

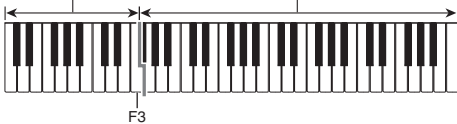


#### 3. Use the accompaniment keyboard to play chords.

This will cause bass and harmony Auto Accompaniment parts to be added to the rhythm part.

Chords  
(no melody played)

Melody



Example: Pressing D-F<sup>#</sup>-A-C on the accompaniment keyboard

↓  
Accompaniment for the D-F<sup>#</sup>-A-C chord (D7) sounds.



#### 4. Play other chords with left hand as you play the melody with your right hand.

#### 5. Pressing **12** again returns to rhythm only accompaniment.

#### NOTE

- For information about starting Auto Accompaniment as soon as a chord is played, see "Using Synchro Start" on page EN-19.
- You can use the split point to change the size of the accompaniment keyboard range (page EN-11).

### Selecting a Chord Input Mode

You can select from among the following five chord input modes.

- FINGERED 1
- FINGERED 2
- FINGERED 3
- CASIO CHORD
- FULL RANGE CHORD

#### 1. Hold down **12** until the chord input mode selection screen appears on the display.

Chord input mode



#### 2. Use the **14** (-/+ ) to select the chord input mode you want.

- If you do not perform any operation after the chord input mode selection screen appears, the display will return automatically to the screen that was displayed before you held down **12**.

### ■ FINGERED 1, 2, and 3

With these three input modes, you play chords on the accompaniment keyboard using their normal chord fingerings. Some chord forms are abbreviated, and can be fingered with one or two keys.

See page EN-31 for information about chords that are supported and how they are fingered on the keyboard.

Accompaniment keyboard



#### ● FINGERED 1

Play the component notes of the chord on the keyboard.

F1

#### ● FINGERED 2

Unlike FINGERED 1, 6th input is not possible. m7 or m7<sup>♯5</sup> is input.

F2

#### ● FINGERED 3

Unlike FINGERED 1, allows input of fraction chords with the lowest keyboard note as the bass note.

F3

### ■ CASIO CHORD

With CASIO CHORD, you can use simplified fingerings to play the four types of chords described below.

Accompaniment keyboard



CC

### CASIO CHORD Fingering

Chord Type	Example
<b>Major Chords</b> Letters above the accompaniment keyboard indicate the chord assigned to each key. Pressing a single accompaniment area key in the CASIO CHORD mode will play the major chord whose name is marked above the key. All of the accompaniment area keys that are marked with the same chord name play exactly the same chord.	C (C Major) 
<b>Minor Chords</b> To play a minor chord, press the accompaniment area key that corresponds to the major chord, while also pressing one other accompaniment area key to the right.	Cm (C Minor) 
<b>Seventh Chords</b> To play a seventh chord, press the accompaniment area key that corresponds to the major chord, while also pressing two other accompaniment area keys to the right.	C7 (C Seventh) 
<b>Minor Seventh Chords</b> To play a minor seventh chord, press the accompaniment area key that corresponds to the major chord, while also pressing three other accompaniment area keys to the right.	Cm7 (C Minor Seventh) 

#### NOTE

- When playing a minor, seventh, or minor seventh chord, it makes no difference whether the additional keys you press are black or white.

### ■ FULL RANGE CHORD

With this mode, you can use the full range of the keyboard to play chords and the melody.

See page EN-31 for information about chords that are supported.

Frc

Accompaniment keyboard / Melody keyboard



## Using Auto Accompaniment Effectively

### Auto Accompaniment Pattern Variations

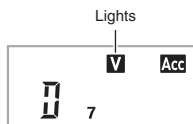
Use the following procedures to play intro and ending patterns, to play fill-in patterns, and to play variations of basic Auto Accompaniment patterns.

#### ■ Auto Accompaniment Variation

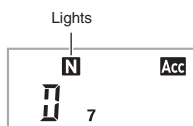
Each Auto Accompaniment pattern has a basic “normal pattern” as well as a “variation pattern”.

##### 1. Press 9 (VAR./FILL-IN).

This starts the variation pattern.



##### 2. Pressing 8 (NORMAL/FILL-IN) returns to normal pattern.



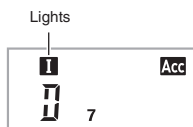
#### ■ Auto Accompaniment Intro

Use the following procedure to play an intro of a few measures.

##### 1. Press 7 (INTRO).

This starts the intro pattern. Normal pattern play will start when the intro pattern is finished.

- If you press 9 while an intro pattern is being played, the variation pattern will start when the intro pattern is finished.



#### ■ Auto Accompaniment Fill-in

Use the procedure below to play a fill-in pattern during a performance.

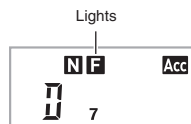
- A “fill-in” is a short phrase played where you want to change the mood of a piece. A fill-in pattern can be used to create a link between two melodies or an accent.
- Normal and variation patterns have their own unique fill-in patterns.

##### ● Normal Pattern Fill-in

##### 1. While a normal pattern is playing, press 3.

This plays the fill-in for the normal pattern.

- Normal pattern play will resume after the fill in pattern is complete.

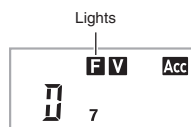


##### ● Variation Pattern Fill-in

##### 1. While a variation pattern is playing, press 9.

This plays the fill-in for the variation pattern.

- Variation pattern play will resume after the fill in pattern is complete.

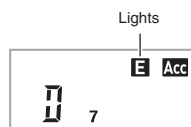


#### ■ Auto Accompaniment Ending

Use the following procedure to play an ending of a few measures.

##### 1. While an Auto Accompaniment is playing, press 10 (SYNCHRO/ENDING).

This will play the ending pattern and then stop Auto Accompaniment play automatically.

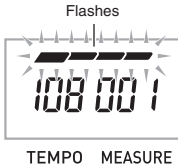


## ■ Using Synchro Start

Use the following procedure to configure the Digital Keyboard to start Auto Accompaniment play as soon as you press a keyboard key.

### 1. Press **10** (SYNCHRO/ENDING).

This enters accompaniment start standby.



### 2. Play a chord on the keyboard.

This will start full part accompaniment (normal).

Any of the following operations can be performed while in synchro standby to start a non-normal pattern.

- To start with intro pattern, press **7**.
- To start with variation pattern play, press **9**.

## Changing Auto Accompaniment Speed (Tempo)

Use the following procedure to change Auto Accompaniment speed to a level that suits you.

### 1. Press **6** (TEMPO).

Use **∇** (slower) and **∧** (faster) to change the tempo setting. Holding down either button changes the setting at high speed.

- Pressing **∇** and **∧** at the same time will initialize the rhythm setting in accordance with the currently selected rhythm.
- While the tempo value is flashing, you also can use **14** to change it.
- If you do not perform any operation for after the tempo setting screen appears, the display will return to the screen displayed before you pressed **6**.



## Adjusting the Accompaniment Volume

Use the following procedure to adjust the balance between what you are playing on the keyboard and the volume of the Auto Accompaniment.

### 1. Press **3** (FUNCTION) a number of times until "AcompVol" appears on the display (page EN-4).

AcompVol

### 2. Use the **14** (-/+) to adjust the accompaniment volume.

## Using One-Touch Preset

With One-Touch Preset, the Digital Keyboard automatically configures optimal tone, tempo, and other settings in accordance with the rhythm pattern you select.

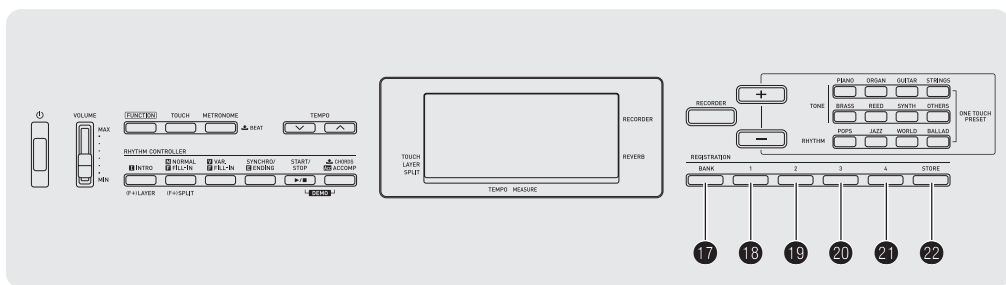
### 1. Press the **15** (TONE) [STRINGS] button and the **16** (RHYTHM) [BALLAD] button at the same time.

This will automatically apply the One-Touch Preset settings in accordance with the rhythm pattern that is currently selected.

### 2. Play a chord on the keyboard.

This will start accompaniment automatically.

# Saving Keyboard Setups to Registration Memory



Registration memory lets you store Digital Keyboard setups (tone, rhythm, etc.) for instant recall whenever you need them. Registration memory simplifies performance of complex pieces that require successive tone and rhythm changes.

You can have up to 32 setups in Registration memory at one time. 17 and 18 to 21 are used for recording.

## Registration Save Example

This example saves the data shown in the table below to the following setups in Bank 1.

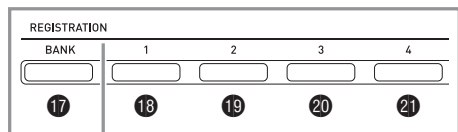
- Initial melody setup saved to Setup 1-1.
- Second melody setup saved to Setup 1-2.
- Third melody setup saved to Setup 1-3.

	Setup 1-1	Setup 1-2	Setup 1-3
Tone Number	A01	B14	A01
Rhythm Number	A04	B16	B13
Tempo	080	140	089

## Registration Memory Data

The following is the complete list of data that is saved to a registration memory setup.

- Tone numbers (main, layer, split)
- Rhythm number
- Tempo
- Transpose
- Split point
- Touch Response
- Chord fingerings
- Accompaniment volume
- Synchro start
- Reverb (on, off, type)
- Accomp (on, off)
- Layer (on, off)
- Split (on, off)
- Pedal effect



	Area 1	Area 2	Area 3	Area 4
Bank 1	Setup 1-1	Setup 1-2	Setup 1-3	Setup 1-4
Bank 2	Setup 2-1	Setup 2-2	Setup 2-3	Setup 2-4
...	...	...	...	...
Bank 8	Setup 8-1	Setup 8-2	Setup 8-3	Setup 8-4

- Each press of bank select button 17 cycles through the bank numbers, from 1 to 8.
- Pressing a button from 18 to 21 selects the corresponding area in the currently selected bank.

## To save a setup to registration memory

1. Configure the tone, rhythm, and other settings you can to include in the setup.
2. Press **17** (BANK) to select the bank you want.  
Each press of **17** cycles through the bank numbers.

4-  
B a n k

3. While holding down **22** (STORE), press a button from **18** (Area 1) to **21** (Area 4) to select an area.

This will save the settings you configured in step 1 into the applicable setup.

- If there is anything already stored in the setup, it will be replaced (deleted) by the new setup.

4-1  
S t o r e

Stored in Setup 4-1

## To recall a setup from registration memory

1. Press **17** (BANK) to select the bank that contains the setup you want to recall.

6-  
B a n k

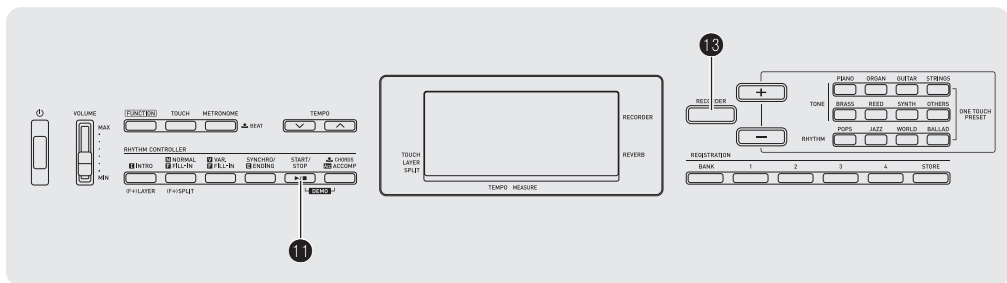
2. Use buttons **18** (Area 1) to **21** (Area 4) to select the area whose setup you want to recall.

This will recall the registration memory setup and automatically configure the Digital Keyboard settings accordingly.

6-1  
R e c a l l

Setup 6-1 recalled

# Recording Your Keyboard Play



The recorder feature lets you record your keyboard play.

## Recording and Playing Back Keyboard Play

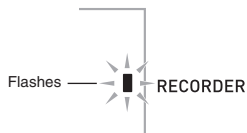
Use the following procedure to record everything you play on the keyboard.

### 1. Press **13** (RECORDER).



### 2. Press **13** again.

This will enter record standby.



### 3. Configure the tone, rhythm, and other settings you want to use.

### 4. Start playing.

Recording starts as soon as you play something on the keyboard.

#### **NOTE**

- You can use Auto Accompaniment while playing. If you do, Auto Accompaniment also will be recorded.

### 5. To stop recording, press **11** (START/STOP).



### 6. To play back what you have recorded, press **11** again.

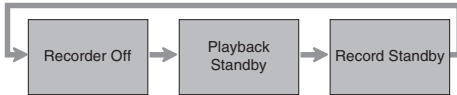
Each press of **11** starts and stops playback.



## 7. Press **13** (RECORDER) twice to exit the recorder mode.



- The flashing on the screen shown in step 2 becomes faster when remaining recorder memory capacity becomes less than 100 notes.
- Total recorder memory capacity is approximately 2,000 notes. Recording will stop automatically when there is no more unused recorder memory remaining.
- Each press of **13** cycles through the settings shown below. You can listen to the recorded data as many times as you like by pressing **11** while in playback standby.



### ■ To delete recorded data

After step 1 of the above procedure, do hold down **13** (without pressing any keyboard key) until the message “SongDel?” appears on the display. Press **[+]** (YES) to delete the data, or **[-]** (NO) to cancel the delete operation.

### ! IMPORTANT!

- **Turning off the Digital Keyboard while recording is in progress will cause any data in recorder memory to be deleted.**
- **A new recording replaces (deletes) previously recorded contents.**

## Song Recording Data

In addition to what you play on the keyboard, the following information also is recorded.

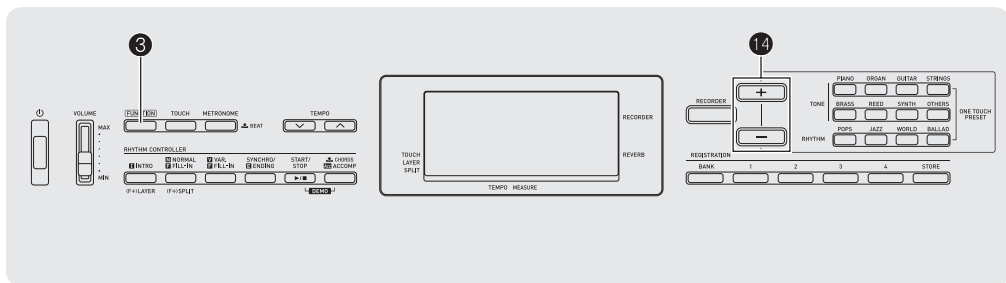
### Settings:

Tone number, rhythm number, tempo, reverb, chords, layer/split settings, Pitch Bend Range setting

### Operations:

Pedal, INTRO button, SYNCHRO/ENDING button, NORMAL/FILL-IN button, VAR./FILL-IN button, TOUCH button, PITCH BEND wheel

# Connecting External Devices



## Connecting a Computer

You can connect the Digital Keyboard to a computer and exchange MIDI data between them. You can send play data from the Digital Keyboard to music software running on your computer, or you can send MIDI data from your computer to the Digital Keyboard for playback.

### Minimum Computer System Requirements

The following shows the minimum computer system requirements for sending and receiving MIDI data. Check to make sure that your computer complies with these requirements before connecting the Digital Keyboard to it.

#### Operating System

- Windows® XP (SP2 or later) \*1
- Windows Vista® \*2
- Windows® 7 \*3
- Windows® 8 \*4
- Mac OS® X (10.3.9, 10.4.11, 10.5.X, 10.6.X, 10.7.X, 10.8.X)

\*1: Windows XP Home Edition  
Windows XP Professional (32-bit)

\*2: Windows Vista (32-bit)

\*3: Windows 7 (32-bit, 64-bit)

\*4: Windows 8 (32-bit, 64-bit)

#### USB port

### IMPORTANT!

- Never connect to a computer that does not conform to the above requirements. Doing so can cause problems with your computer.

## Connecting the Digital Keyboard to Your Computer

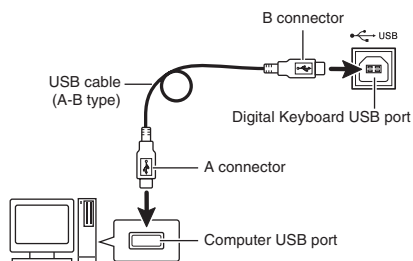
### IMPORTANT!

- Make sure you follow the steps of the procedure below exactly. Connecting incorrectly can make data send and receive impossible.

#### 1. Turn off the Digital Keyboard and then start up your computer.

- Do not start up the music software on your computer yet!

#### 2. After starting up your computer, use a commercially available USB cable to connect it to the Digital Keyboard.



#### 3. Turn on the Digital Keyboard.

- If this is the first time you are connecting the Digital Keyboard to your computer, the driver software required to send and receive data will be installed on your computer automatically.

#### 4. Start up commercially available music software on your computer.

## 5. Configure the music software settings to select one of the following as the MIDI device.

CASIO USB-MIDI: For Windows Vista, Windows 7,  
Windows 8, Mac OS X

USB Audio Device: For Windows XP

- For information about how to select the MIDI device, see the user documentation that comes with the music software you are using.

### IMPORTANT!

- Be sure to turn on the Digital Keyboard first before starting up your computer's music software.

### NOTE

- Once you are able to connect successfully, there is no problem with leaving the USB cable connected when you turn off your computer and/or Digital Keyboard.
- For detailed specifications and connections that apply to MIDI data send and receive by this Digital Keyboard, see the latest support information provided by the website at the following URL.

<http://world.casio.com/>

## MIDI Settings

### Keyboard Channel

A keyboard channel is the channel used for sending Digital Keyboard data to a computer. You can select the channel you want for sending Digital Keyboard data to a computer.

- The keyboard channel setting range is 01 to 16.

1. Press **3** (FUNCTION) a number of times until "Keybd Ch" appears on the display (page EN-4).



2. Use the **14** (-/+) to change the keyboard channel.

### Navigate Channels

The navigate channels can be used to display only the notes of a particular channel (part) as on-screen guide information from among the note information of a tune sent from the computer.

#### ■ Specifying the Navigate Channels

From among the 16 available channels (numbered 1 to 16), you can specify any two neighboring channels (such as 05 and 06) as navigate channels. The smaller numbered channel is the navigate (L) channel, while the larger numbered channel is the navigate (R) channel. Specifying the navigate (R) channel will automatically configure the navigate (L) channel as well.

1. Press **3** (FUNCTION) a number of times until "Navi. Ch" appears on the display (page EN-4).



2. Use the **14** to specify the navigate (R) channel.

This also will automatically configure the next lower channel number as the navigate (L) channel.

## Local Control

There are times when exchanging data with a computer when you may not want the Digital Keyboard to sound notes you play on its keyboard. The local control setting lets you do just that.

1. Press **F** (FUNCTION) a number of times until "Local" appears on the display (page EN-4).



2. Use the **14** (-/+) to specify the local control setting.

## Accomp Out

Enabling the Accomp Out setting causes Auto Accompaniment data to be sent to the computer.

1. Press **F** (FUNCTION) a number of times until "AccompOut" appears on the display (page EN-4).



2. Use the **14** (-/+) to turn Accomp Out on or off.

## Connecting to Audio Equipment

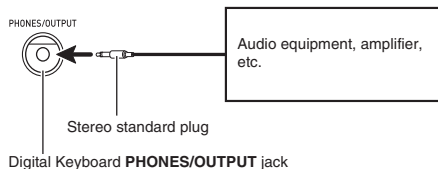
This Digital Keyboard can be connected to commercially available stereo, amplifier, or recording equipment, to a portable audio player or other equipment.

### Outputting Digital Keyboard Notes to Audio Equipment

Connection requires commercially available connecting cords, supplied by you. The connecting cords should have a stereo standard plug on one end and a plug that matches the configuration of the external device on the other end.

#### IMPORTANT!

- Turn off the external device when making connections. After connecting, turn down the Digital Keyboard and external device volume levels whenever turning power on or off.
- After connecting, turn on the Digital Keyboard and then the external device.
- If Digital Keyboard notes sound distorted when they are sounded from external audio equipment, lower the Digital Keyboard's volume setting.

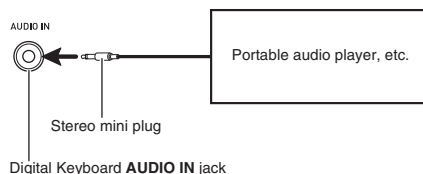


### Playing an External Device from the Digital Keyboard

Connection requires commercially available connecting cords, supplied by you. The connecting cords should have a stereo mini plug on one end and a plug that matches the configuration of the external device on the other end.

#### IMPORTANT!

- Turn off the Digital Keyboard when making connections. After connecting, turn down the Digital Keyboard and external device volume levels whenever turning power on or off.
- After connecting, turn on the external device and then the Digital Keyboard.
- If notes are distorted when they are sounded on the external device, lower the volume setting of the external device.



## Troubleshooting

Symptom	Action
<b>Included Accessories</b>	
I can't find something that should be here.	Carefully check inside all of the packing materials.
<b>Power Requirements</b>	
Power will not turned on.	<ul style="list-style-type: none"> <li>• Check the AC adaptor or make sure that the batteries are facing correctly (page EN-5).</li> <li>• Replace the batteries with new ones or switch over to AC adaptor power (page EN-5).</li> <li>• You may have tried to perform some operation while the "Pls wait" message was displayed, which caused an internal problem. If other measures do not correct this problem, perform the operation below to turn on power.</li> </ul> <p><b>Warning!</b> The following operation will delete all Digital Keyboard data and return all settings to their initial factory defaults.</p> <p>While holding down <b>14</b> (-/+ [-]) and the <b>16</b> (RHYTHM) [POPS] button at the same time, press <b>1</b> (⏻) to turn on power.</p>
The Digital Keyboard outputs a loud sound and then suddenly powers down.	Replace the batteries with new ones or switch over to AC adaptor power (page EN-5).
The display lights up momentarily but power does not turn on when I press the <b>1</b> (⏻) button.	Press the <b>1</b> (⏻) button firmly and completely to turn on power.
The Digital Keyboard suddenly powers down after a few minutes.	This happens when Auto Power Off (page EN-7) is triggered.
<b>Display</b>	
The display keeps going out or are flashing.	Replace the batteries with new ones or switch over to AC adaptor power (page EN-5).
Screen contents are visible only from straight ahead.	This is dues to production limitations. It does not indicate malfunction.
<b>Sound</b>	
Nothing happens when I press any keyboard key.	<ul style="list-style-type: none"> <li>• Adjust the main volume setting (page EN-7).</li> <li>• Check if something is plugged into the <b>PHONES/OUTPUT</b> jack (<b>34</b>) on the back of the Digital Keyboard.</li> <li>• Turn power off and then back on to initialize all Digital Keyboard settings (page EN-6).</li> </ul>
Nothing happens or notes do not play normally when I play notes on the left side of the keyboard.	Press <b>12</b> to disable chord input in the accompaniment keyboard area (page EN-16).
Nothing happens when I start an Auto Accompaniment.	<ul style="list-style-type: none"> <li>• With rhythms D19 to D28, nothing will sound until you play a chord on the keyboard. Try playing a chord (page EN-16).</li> <li>• Check and adjust the accompaniment volume setting (page EN-19).</li> <li>• Turn power off and then back on to initialize all Digital Keyboard settings (page EN-6).</li> </ul>
Notes keep sounding, without stopping.	<ul style="list-style-type: none"> <li>• Turn power off and then back on to initialize all Digital Keyboard settings (page EN-6).</li> <li>• Replace the batteries with new ones or switch over to AC adaptor power (page EN-5).</li> </ul>
Some notes are cut off while they are playing.	Notes are cut off whenever the number of notes being sounded exceeds the maximum polyphony value of 48 (24 for some tones). This does not indicate malfunction.

Symptom	Action
The volume or tone setting I made has changed.	<ul style="list-style-type: none"> <li>• Adjust the main volume setting (page EN-7).</li> <li>• Turn power off and then back on to initialize all Digital Keyboard settings (page EN-6).</li> <li>• Replace the batteries with new ones or switch over to AC adaptor power (page EN-5).</li> </ul>
Output volume does not change even though is change my keyboard touch.	<ul style="list-style-type: none"> <li>• Change the Touch Response setting (page EN-8).</li> <li>• Turn power off and then back on to initialize all Digital Keyboard settings (page EN-6).</li> </ul>
In certain keyboard ranges, the volume and tone quality sound are slightly different from those in other keyboard ranges.	This is due to system limitations. It does not indicate malfunction.
With some tones, octaves do not change at the far ends of the keyboard.	This is due to system limitations. It does not indicate malfunction.
The pitch of the notes does not match other accompanying instruments or sounds strange when played long with other instruments.	<ul style="list-style-type: none"> <li>• Check and adjust the transpose (page EN-13) and tuning settings (page EN-13).</li> <li>• Turn power off and then back on to initialize all Digital Keyboard settings (page EN-6).</li> </ul>
The reverb of notes seems to change suddenly.	<ul style="list-style-type: none"> <li>• Check and adjust the reverb setting (page EN-12).</li> <li>• Turn power off and then back on to initialize all Digital Keyboard settings (page EN-6).</li> </ul>
<b>Computer Connection</b>	
I can't exchange data between the Digital Keyboard and a computer.	<ul style="list-style-type: none"> <li>• Check to make sure that the USB cable is connected to the Digital Keyboard and computer, and that the device is selected correctly with your computer's music software settings (page EN-24).</li> <li>• Turn off the Digital Keyboard and then exit the music software on your computer. Next, turn the Digital Keyboard back on and then restart the music software on your computer.</li> </ul>

## Specifications

<b>Model</b>	CTK-3400SK
<b>Keyboard</b>	61 standard-size keys
Touch Response	On, Off
<b>Maximum Polyphony</b>	48 notes (24 for certain tones)
<b>Tones</b>	
Built-in Tones	200
Functions	Layer, Split
<b>Reverb</b>	1 to 10, Off
<b>Metronome</b>	
Beats per Measure	0, 2 to 6
Tempo Range	30 to 255
<b>Demo Song</b>	10
<b>Auto Accompaniment</b>	
Rhythm Patterns	126
One Touch Presets	126
<b>Other Functions</b>	
Transpose	±1 octaves (-12 to +12 semitones)
Tuning	A4 = 415.5 to 465.9 Hz (Initial Default: 440.0 Hz)
<b>Registration</b>	32 (4 setups × 8 banks)
<b>Recorder</b>	Real-time recording, playback
Keyboard Play	1 song, 1 track
Memory Capacity	Approximately 2,000 notes
<b>MIDI</b>	16 multi-timbre received
<b>Musical Information Function</b>	Tone, Rhythm, Demo song numbers and names, staff notation, fingering, pedal operation, tempo, measure and beat number, chord name, etc.
<b>Pitch Bend Wheel</b>	
Pitch Bend Range	0 to 12 semitones
<b>Inputs/Outputs</b>	
USB port	TYPE B
Sustain jack	Standard jack (sustain, sostenuto, soft, rhythm)
Phones/Output jack	Stereo standard jack
	Output Impedance: 200Ω, Output Voltage: 4.5V (RMS) MAX
Audio In jack	Stereo mini jack
	Input Impedance: 9kΩ, Input Sensitivity: 200mV
<b>Power Jack</b>	9.5V DC
<b>Power Supply</b>	2-way
Batteries	6 AA-size zinc-carbon batteries or alkaline batteries
Battery Life	Approximately 3 hours continuous operation on alkaline batteries
AC Adaptor	AD-E95100L
Auto Power Off	Approximately 6 minutes (during battery operation) or 30 minutes (during AC adaptor operation) without any operation
<b>Speakers</b>	
Output	10cm × 2 2W + 2W
<b>Power Consumption</b>	9.5V --- 7.7W
<b>Dimensions</b>	94.6 × 30.7 × 9.2 cm (37 1/4 × 12 1/16 × 3 5/8 inch)
<b>Weight</b>	Approximately 3.5kg (7.7 lbs) (without batteries)

- Design and specifications are subject to change without notice.

## Operating Precautions

Be sure to read and observe the following operating precautions.

### ■ Location

Avoid the following locations for this product.

- Areas exposed to direct sunlight and high humidity
- Areas subjected to temperature extremes
- Near a radio, TV, video deck, or tuner

The above devices will not cause malfunction of the product, but interference from the product can cause audio or video interference of a nearby device.

### ■ User Maintenance

- Never use benzine, alcohol, thinner, or other chemical agents to clean the product.
- To clean the product or its keyboard, wipe with a soft cloth moistened in a weak solution of water and a mild neutral detergent. Wring all excess moisture from the cloth before wiping.

### ■ Included and Optional Accessories

Use only accessories that are specified for use with this product. Use of unauthorized accessories creates the risk of fire, electric shock, and personal injury.

### ■ Weld Lines

Lines may be visible on the exterior of the product. These are “weld lines” that result from the plastic molding process. They are not cracks or scratches.

### ■ Musical Instrument Etiquette

Always be aware of others around you whenever using this product. Be especially careful when playing late at night to keep the volume at levels that do not disturb others. Other steps you can take when playing late at night are closing the window and using headphones.



## Fingering Guide

### Fingered 1, Fingered 2 Chords

<b>C</b>	
<b>Cm</b>	
<b>Cdim</b>	
<b>Caug</b> *3	
<b>Csus4</b> *3	
<b>Csus2</b> *3	
<b>C7</b>	
<b>Cm7</b> *3	
<b>CM7</b>	
<b>Cm7b5</b> *3	
<b>C7b5</b> *3	
<b>C7sus4</b>	
<b>Cadd9</b>	
<b>Cmadd9</b>	
<b>CmM7</b>	
<b>Cdim7</b> *3	
<b>C69</b> *3	
<b>C6</b> *1 *3	
<b>Cm6</b> *2 *3	

\*1 With Fingered 2, interpreted as Am7.

\*2 With Fingered 2, interpreted as Am7<sup>b5</sup>.

\*3 Inverted form not supported in some cases.

### Fingered 3, Full Range Chords

In addition to the chords that can be fingered with Fingered 1 and Fingered 2, the following chords also are recognized.

$\frac{C\#}{C}$	$\frac{D}{C}$	$\frac{E}{C}$	$\frac{F}{C}$	$\frac{G}{C}$	$\frac{A^b}{C}$	$\frac{B^b}{C}$	$\frac{B}{C}$	$\frac{C\#m}{C}$	$\frac{Dm}{C}$	$\frac{Fm}{C}$
$\frac{Gm}{C}$	$\frac{Am}{C}$	$\frac{B^bm}{C}$	$\frac{Ddim}{C}$	$\frac{A^b7}{C}$	$\frac{F7}{C}$	$\frac{Fm7}{C}$	$\frac{Gm7}{C}$	$\frac{A^badd9}{C}$		

#### NOTE

- With Fingered 3, the lowest note fingered is interpreted as the base note. Inverted forms are not supported.
- With Full Range Chord, when the lowest note fingered is a certain distance from the neighboring note, the chord is interpreted as a fraction chord.
- Unlike Fingered 1, 2, and 3, Full Range Chord requires pressing of at least three keys to form a chord.

Chord Example List

Root Chord Type	C	C <sup>♯</sup> /D <sup>♯</sup>	D	(D <sup>♯</sup> )/E <sup>♯</sup>	E	F	F <sup>♯</sup> /G <sup>♯</sup>	G	(G <sup>♯</sup> )/A <sup>♯</sup>	A	(A <sup>♯</sup> )/B <sup>♯</sup>	B
M												
m												
dim												
aug												
sus4												
sus2												
7												
m7												
M7												
m7 <sup>♯5</sup>												
7 <sup>♯5</sup>												
7sus4												
add9												
madd9												
mM7												
dim7												
69												
6												
m6												

• Since the chord input range is limited, this model may not support some of the chords shown above.

## MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
<b>Basic Channel</b> Default Changed	1 1 - 16	1 - 16 1 - 16	
<b>Mode</b> Default Messages Altered	Mode 3 X * * * * *	Mode 3 X * * * * *	
<b>Note Number</b> True voice	36 - 96 * * * * *	0 - 127 0 - 127 *1	
<b>Velocity</b> Note ON Note OFF	0 9nH v = 1 - 127 X 9nH v = 0	0 9nH v = 1 - 127 X 9nH v = 0, 8nH v = **	** : no relation ** : sin relación
<b>After Touch</b> Key's Ch's	X X	X O	
<b>Pitch Bender</b>	O	O	
<b>Control Change</b> 0, 32 1 6, 38 7 10 11	O X O *2 O O X	O (MSB only) O O *2 O O O	Bank select Modulation Data entry Volume Pan Expression

64 66 67 91 100, 101		O*3 O*3 O*3 X O*2	O O O O O*2	Hold 1 Sostenuto Soft pedal Reverb send RPN LSB, MSB
<b>Program Change</b> : True #		O 0 - 127 * * * * *	O 0 - 127	
<b>System Exclusive</b>		O*2	O*2	
<b>System Common</b> : Song Pos : Song Sel : Tune		X X X	X X X	
<b>System Real Time</b> : Clock : Commands		O O	X X	
<b>Aux Messages</b> : All sound off : Reset all controller : Local ON/OFF : All notes OFF : Active Sense : Reset		X O X O X X	O O X O O X	
<b>Remarks</b>		*1: Depends on tone. *2: For details about NRPN, RPN, and system exclusive messages, see MIDI Implementation at <a href="http://world.casio.com/">http://world.casio.com/</a> . *3: In accordance with pedal effect setting.	*1: Depende del tono. *2: Para obtener información acerca de NRPN, RPN y los mensajes exclusivos del sistema, consulte implementación MIDI en <a href="http://world.casio.com/">http://world.casio.com/</a> . *3: De acuerdo con el ajuste de efecto de pedal.	

Mode 1 : OMNI ON, POLY  
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO  
Mode 4 : OMNI OFF, MONO

O : Yes  
X : No



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CTK3400SK-ES-1A

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