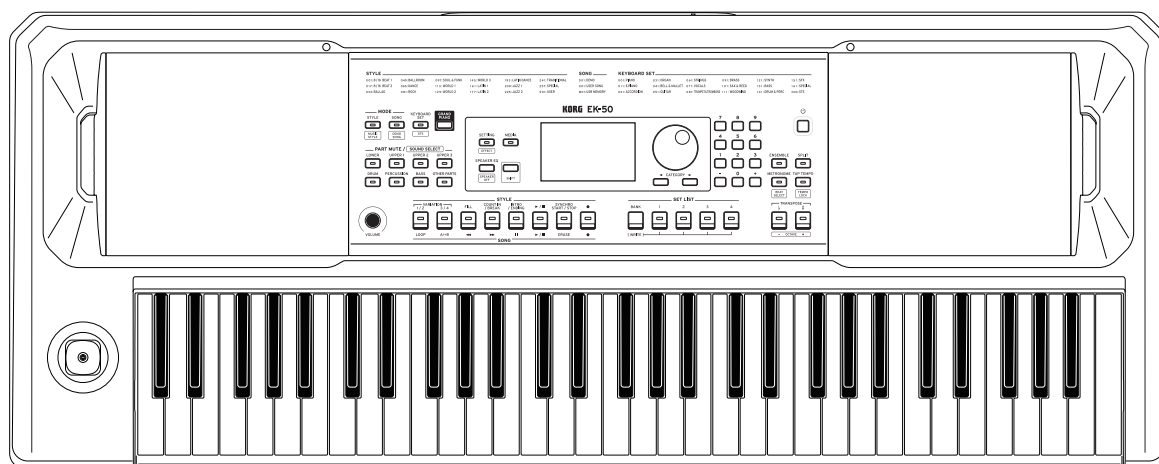


EK-50

ENTERTAINER KEYBOARD

Owner's Manual



KORG

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Thank you for purchasing the Korg EK-50 Entertainer keyboard. To help you get the most out of your new instrument, please read this manual carefully.

About this manual

The EK-50 comes with the following manuals.

- Quick Start Guide (printed)
- Owner's Manual (this document, PDF)
- Voice Name List (PDF)

Quick Start Guide (booklet)

Read this manual first. This guide explains the basic operations and other features of the EK-50.

Owner's Manual (this document, PDF)

This explains how to use the detailed functions of the EK-50.

Voice Name List (PDF)

This is a list of the styles, keyboard sets, demo songs and other data used on the EK-50.

Download the PDF from the following Korg website.
www.korg.com

■ Conventions in this manual

Symbols  *Note, Tip*

These symbols respectively indicate a caution, a supplementary note, or a tip.

■ Example screen displays

The parameter values shown in the example screens of this manual are only for explanatory purposes, and may not necessary match the values that appear in the screen of your instrument.

■ Lists shown at the top of the panel

The styles, songs, and keyboard set categories are listed at the top of the panel.

Main Features

Playing with different sounds

The EK-50 lets you play many different kinds of instrument sounds in addition to piano, violin, sax, drums and so on. page 10



Playing along with a style (auto-accompaniment)

You can select from different genres of "styles," which are like a backing band or rhythm accompaniment. Try playing a melody in your right hand while playing a chord with your left hand. page 14



Playing back a sound source from a USB flash drive

The EK-50 lets you play back MP3, WAV and SMF files contained on a USB flash drive. Select the sound you want and enjoy playing along. page 18



Connecting to an external device and playing back audio

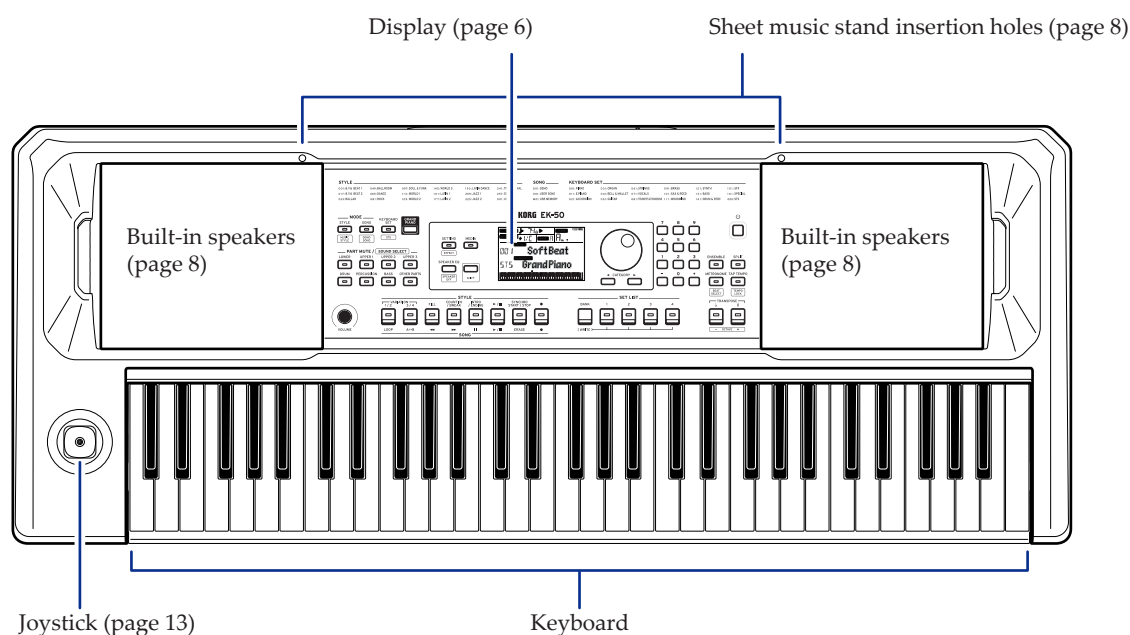
You can play the audio from external devices, such as MP3 players, smartphones and other mobile devices, computers and so on, and hear it through the built-in speakers of the EK-50. page 26

Adding effects to sounds

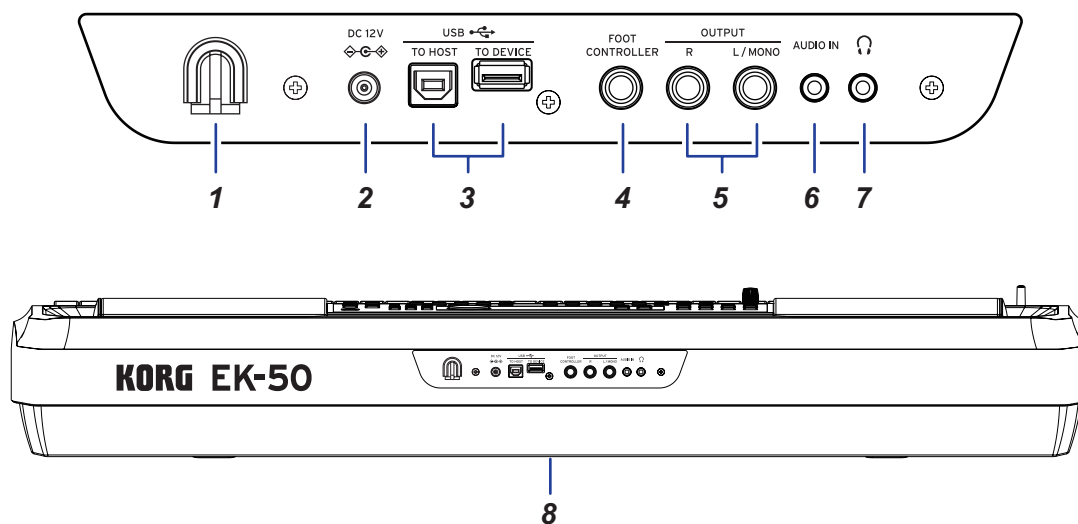
You can add distortion or reverb to sounds, giving the sound a different character. page 13

Part Names

Front panel

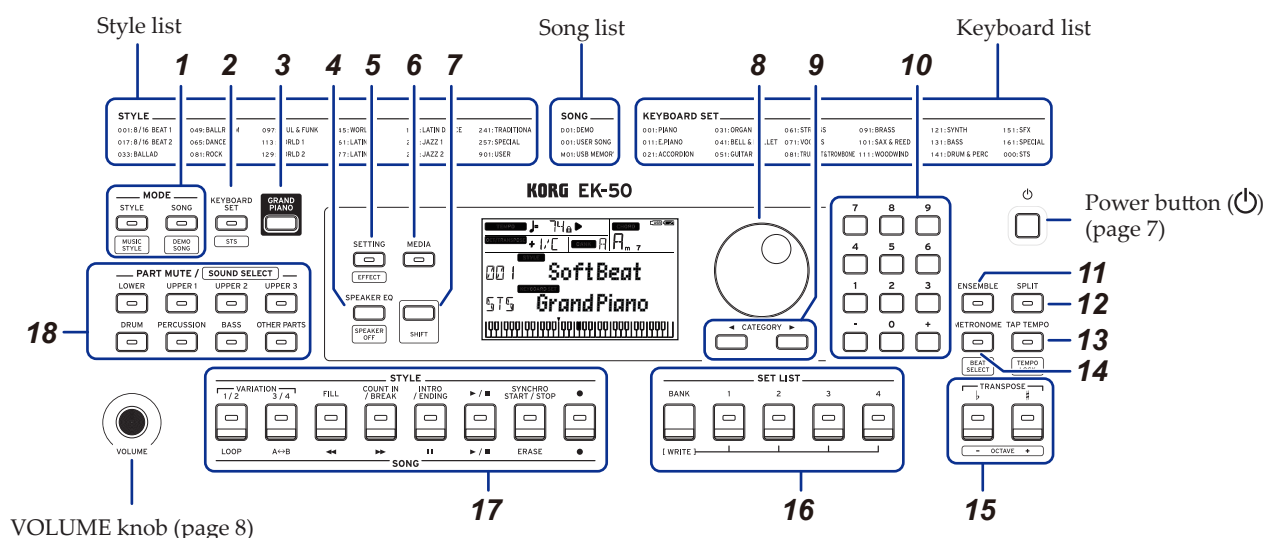


Rear panel



- | | |
|--|-------------------------------------|
| 1. Cable hook..... page 7 | 6. AUDIO IN jack page 26 |
| 2. DC 12V jack (⚡) page 7 | 7. Headphones jack (🎧)..... page 8 |
| 3. USB TO DEVICE port, USB TO HOST port (🔌)
..... page 24, 27 | 8. Battery compartment page 7 |
| 4. FOOT CONTROLLER jack page 8, 29 | |
| 5. OUTPUT L/MONO and R jacks page 26 | |

Control panel



1. **MODE section**..... page 9
 - STYLE/[MUSIC STYLE] button..... page 10, 16
 - SONG/[DEMO SONG] button..... page 18
2. **KEYBOARD SET/[STS] button**..... page 10, 15
3. **GRAND PIANO button**..... page 10
4. **SPEAKER EQ/[SPEAKER OFF] button**..... page 13, 26
5. **SETTING/[EFFECT] button**..... page 13, 21
6. **MEDIA button**..... page 24
7. **[SHIFT] button**

When setting a function enclosed in white lines for a button, hold the [SHIFT] button down and press that button.



You may sometimes need to **hold down the [SHIFT] button** and then press another button or turn the dial.
This icon is used in these cases.

8. **Dial** page 9
9. **CATEGORY button** ◀, ▶ page 9
10. **Numerical buttons, + button, - button** page 9
11. **ENSEMBLE button**..... page 13
12. **SPLIT button** page 11
13. **TAP TEMPO/[TEMPO LOCK] button**..... page 11, 12
14. **METRONOME/[BEAT SELECT] button**..... page 11
15. **TRANPOSE \flat , \sharp /[OCTAVE -, +] button**..... page 12

16. **SET LIST section** page 10, 17

- BANK/WRITE button
- Buttons 1–4

17. **STYLE/SONG section**

STYLE section page 15

- VARIATION 1/2, 3/4 buttons
- FILL button
- COUNT IN/BREAK button
- INTRO/ENDING button
- Start/stop button (▶ / ■)
- SYNCHRO START/STOP button
- Record button (●)

SONG section page 18

- LOOP button
- A ↔ B button (A ↔ B)
- Rewind button (◀◀)
- Fast-forward button (▶▶)
- Pause button (||)
- Start/stop button (▶ / ■)
- ERASE button
- Record button (●)

18. **PART MUTE/[SOUND SELECT] section** page 12, 16

Keyboard part page 10

- LOWER button
- UPPER 1 button
- UPPER 2 button
- UPPER 3 button

Accompaniment part page 14

- DRUM button
- PERCUSSION button
- BASS button
- OTHER PARTS button

Display

TEMPO : Displays the tempo of the style or song.

: Lights up to display the beat of the style or song.

Tempo lock icon (page 12)
Displays when the tempo is locked.

Chord

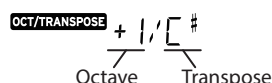
Displays the name of the chord played within the chord recognition range.

USB icon

Displays when a USB flash drive is plugged into the USB TO DEVICE port.

OCT/TRANPOSE: Displays when the style or song have stopped.

The octave and transpose state are displayed to the right.



MEASURE: Displays when a style or song is being played back.

The current measure position or remaining number of measures are displayed to the right.



Battery indicator

Displays the remaining amount of battery power when running on batteries.

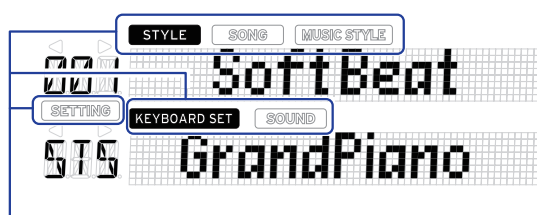
Bank

Displays the bank of the currently selected set list.

Keyboard display

Displays the keys currently played on the keyboard, and the split point.

Split point (page 11)



These show the current mode and function. When the display is **blinking**, the blinking items indicate what operations are in effect.

STYLE: Displays when using style mode. The style name and number appear below on the display.

SONG: Displays when using song mode. The song name and number appear below on the display.

MUSIC STYLE: Displays when a music style is selected. The music style name and number appear below on the display.

KEYBOARD SET: Displays when style mode or song mode are in use. The keyboard set name and number used by the style or song appear below on the display.

SOUND: Displays when the sound for each part used in the keyboard set is selected. The sound name and number appear below on the display.

SETTING: Displays when accessing the SETTING functions. The parameter name, number, value and so on that are being set appear in the display.

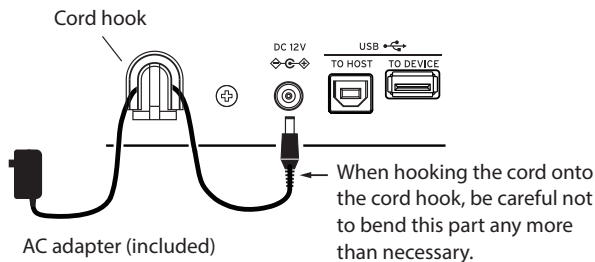
Preparing to Play

Using the AC adapter

1. Make sure that the power on this instrument is turned off.
2. Connect the DC plug of the included AC adapter to the DC 12V jack located on the rear panel of the EK-50.

⚠ Be sure to use only the included AC adapter. Using any other AC adapter may cause malfunctions.

Hook the AC adapter cord onto the cord hook. Do not use excessive force when pulling the cord off the hook.



3. Connect the plug of the AC adapter to an AC outlet.
- ⚠ Be sure to use an AC outlet of the correct voltage for your adapter.

Using this instrument with batteries

You can use eight AA alkaline or nickel-metal hydride batteries to power this instrument.

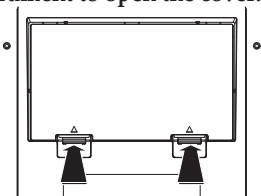
⚠ Zinc-carbon batteries cannot be used.

Note: Batteries are not included, so please obtain them separately.

Installing batteries

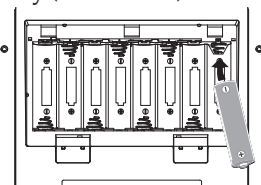
1. Make sure that the power on this instrument is turned off.
2. Push the two tabs on the battery compartment cover that is located on the bottom of this instrument to open the cover.

Note: When turning the instrument upside down, place it on a blanket or similar material to prevent damage to the display, joystick and so on.



3. When inserting the batteries, be sure to observe the correct polarity ("+" and "-").

⚠ Do not mix new and old batteries, or batteries of different types. Failing to observe this guideline might cause the batteries to leak or burst.



4. Close the battery cover.

Note: To make sure the correct battery level is displayed, make the setting on this instrument for the type of battery you are using (see page 21 "Setting the battery type").

Replacing the batteries

The battery indicator is displayed at the top right-hand part of the display.

Note: This indicator will not be displayed while the AC adapter is plugged in.

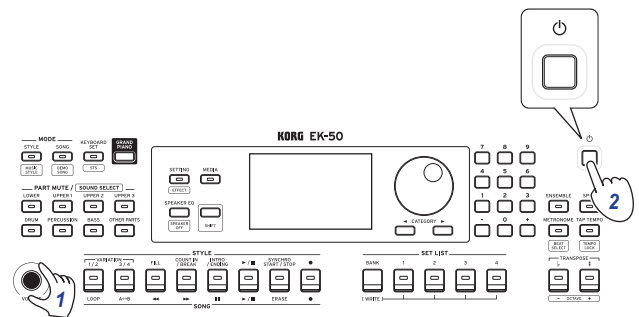


When the indicator is blinking, this means that the batteries are nearly depleted, so replace the batteries as soon as possible or connect an AC adapter to power this instrument.

⚠ Remove depleted batteries immediately. Leaving depleted batteries in could result in malfunctions caused by battery electrolyte leakage or similar problems. Also, remove the batteries if you will not be using the EK-50 for a long time.

Turning the power on/off

1. Turn the VOLUME knob all the way to the left, so that the volume is down.



2. Press the power button to turn the instrument on.

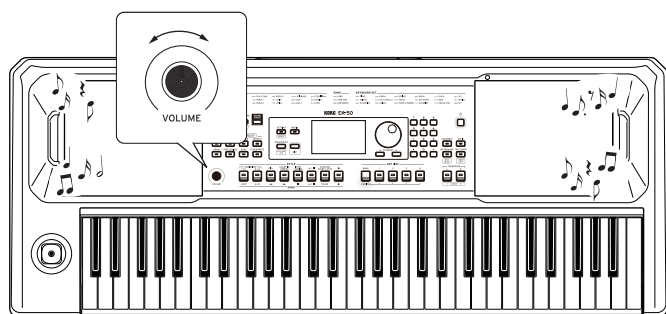
When turning off the power, hold the power button down until the backlight on the display goes dark.

Note: The EK-50 will automatically turn off if it has not been played or operated for a certain amount of time (via the **auto power-off function**).

The time interval is set to 30 minutes at factory default. This interval can be changed (see page 21 "Changing the auto power-off function").

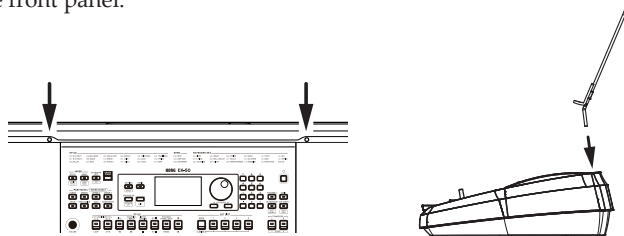
Adjusting the volume

- Turn the **VOLUME** knob on the front panel to adjust the sound to the optimum level.
The VOLUME knob sets the volume of sound coming from the built-in speakers, the headphones jack and the OUTPUT jacks.



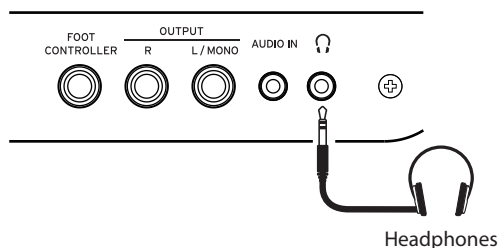
Using the sheet music stand

Insert the sheet music stand into the two holes for the same on the front panel.




Using headphones

- Connect the stereo mini-plug of a pair of commercially available headphones to the headphones jack on the rear panel.



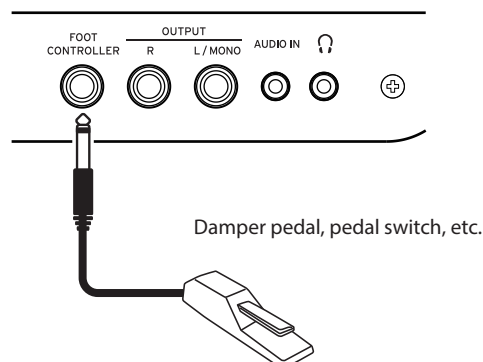
Note: The built-in speakers will not make a sound if a pair of headphones has been connected to the headphones jack (but sound will still be outputted from the OUTPUT jacks).

 Using headphones at high volume for an extended time may cause hearing damage. Avoid excessively high volume levels.

Using a pedal

You can plug an optional pedal (sold separately) into the FOOT CONTROLLER jack on the rear panel to use as a damper pedal, or to control the volume.

Use the SETTING function to make the pedal settings, according to which kind of pedal you will connect (see page 21 "Changing the pedal polarity" and page 21 "Changing the pedal function").



- When using a Korg PS-1 or PS-3 pedal switch, this will function as a damper switch to change how much the damper takes effect, according to how far down you press the pedal. As with the damper pedal on a piano, you can use a pedal with this instrument to sustain the notes you play, even after taking your fingers off the keyboard. You can also make settings for quarter tone playing.

Note: Note that the damper effect does not work on the lower part.

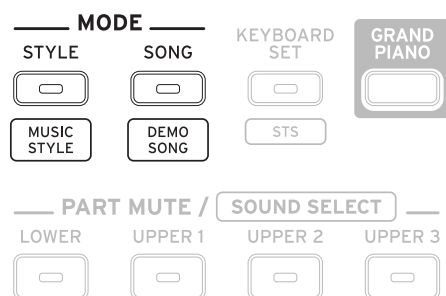
- Connect a Korg DS-1H damper pedal to use as a half-damper switch. This will give you fine damper control when playing sounds like piano and electric piano on this instrument.
- Connect a Korg EXP-2 foot controller to control the volume of the keyboard part (see page 10 "Selecting the keyboard set").

Basic operations

About modes

The EK-50 features two different modes, a style mode and a song mode.

Press the appropriate MODE section button on the front panel to enter one of the modes.



When turning on the EK-50, the instrument will automatically enter style mode.

Style mode

Style mode lets you select a sound in this instrument and play it together with another sound you like on the keyboard, as well as play along with auto-accompaniment (style). You can also record your playing when using the auto-accompaniment function.

Song mode

In song mode, you can play back demo songs and user songs as well as music data files (MP3, WAV and SMF), and play along with them. You can also edit the user songs easily.

Other functions

SETTING functions

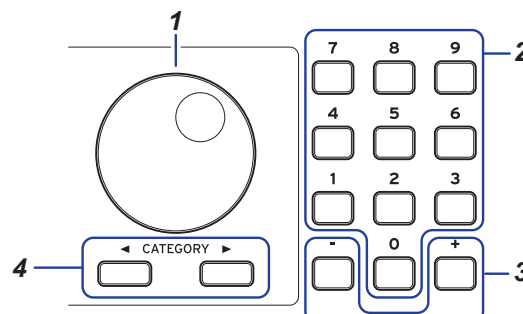
These functions include global settings for the instrument like keyboard touch, master tune, scale, pitch bend variable range and so on. There are also settings for pedals that you connect, as well as MIDI-related settings.

MEDIA functions

These functions are for saving or loading set lists to/from USB flash drives, as well as for saving user songs. This also includes functions for formatting USB flash drives and for system updates.

Selecting sounds and changing values

Use the dial, the numerical buttons, the + and – buttons and the CATEGORY button when selecting sounds or changing the values of the settings.



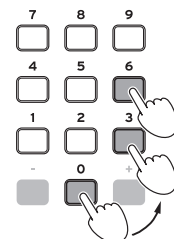
1. Dial

This is used to change numbers and values. Turn the dial **clockwise** to increase the value, and turn the dial **counter-clockwise** to decrease the value.

2. Numerical buttons

Use these buttons to **directly input numbers and values** on the EK-50.

To input a two-digit number using the three-digit display (for example, “36”), press “0”, “3” and “6”.



3. + and – buttons

- Press either the + or – button **once** to increment or decrement a number.
- **Hold down** the + or – button to continually change the number.

4. CATEGORY buttons ◀, ▶

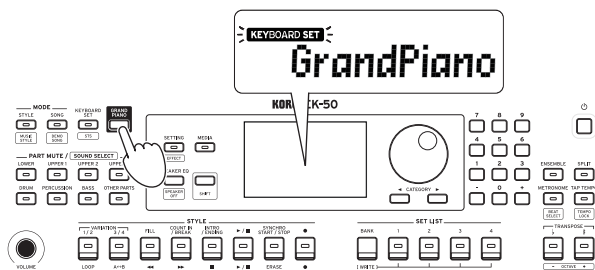
When you press the CATEGORY button to select a style, keyboard set, sound and so on in style mode or song mode, the first digit of the number group corresponding to the category or genre will be selected.

When using the SETTING or MEDIA functions, press the CATEGORY button to select a page.

Playing the EK-50 (style mode)

Selecting a grand piano

- Press the **GRAND PIANO** button.
This will quickly select the grand piano sound.

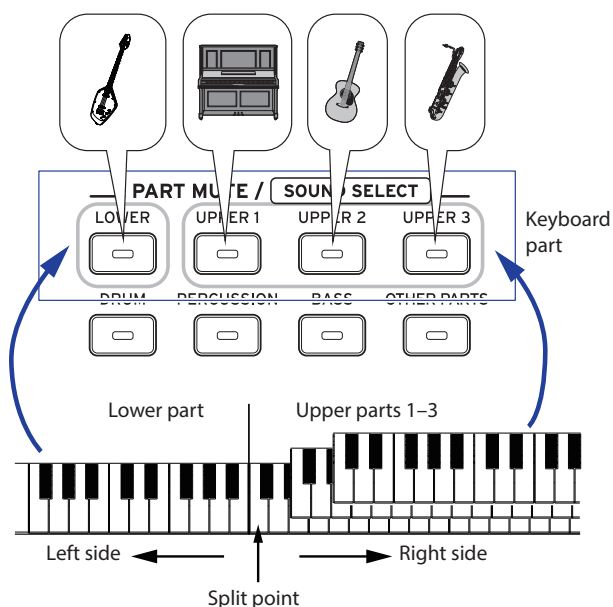


Selecting the keyboard set

The **keyboard set** is a group of **sounds** used in keyboard performance.

There are over 170 keyboard sets, divided into 17 groups.

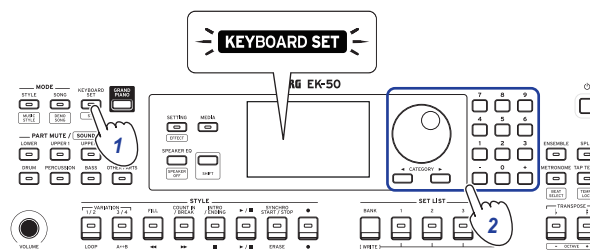
Four parts are allocated to the keyboard set (the lower part and upper parts 1–3), which include sounds like piano, strings, synthesizer, drums and so on. These four parts together are called a **keyboard part**.



Tip: See the “Voice Name List” (PDF) for a list of the keyboard sets and sounds.

- Press the **KEYBOARD SET/[STS]** button.

KEYBOARD SET will blink on the display, and the keyboard set name will be displayed.



- Select the keyboard set by using the dial.

Use the **CATEGORY** buttons to switch to different keyboard sets within each category.

- To revert to the original keyboard set, press the **KEYBOARD SET/[STS]** button while holding down the **[SHIFT]** button.
“STS” (Single Touch Settings) will be shown in front of the keyboard set name.

Selecting a set list

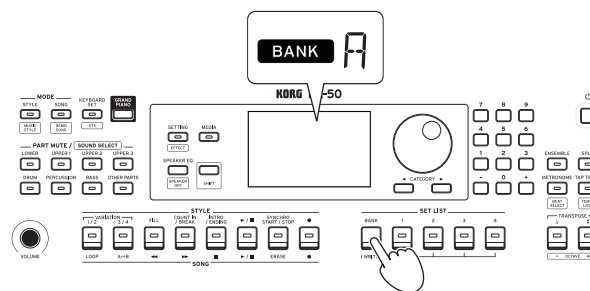
Set lists are used to save and quickly recall your favorite settings (style, keyboard set, tempo, effects and so on; see page 17 “Saving the set list (WRITE)”).

The recommended set lists are stored in locations 1–4 of bank A. Bank A-1 will be selected right after the power is turned on.

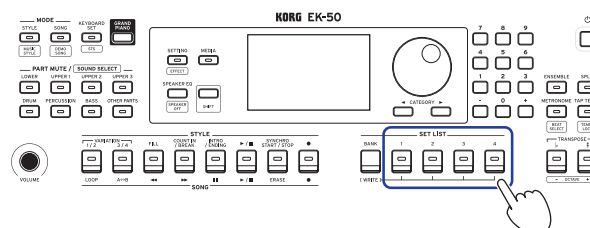
- Press the **BANK/WRITE** button several times to select the bank.

The bank will change in sequential order (A→B→C...J→A...) with each press of the **BANK/WRITE** button.

Tip: Pressing this button while holding down the **[SHIFT]** button will select banks in reverse order.

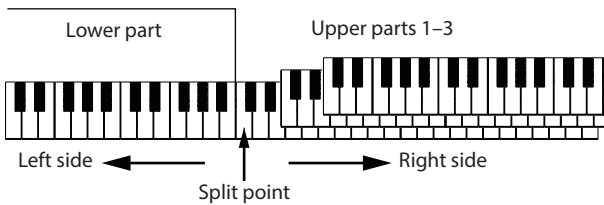


- Use buttons 1–4 to select the set list.

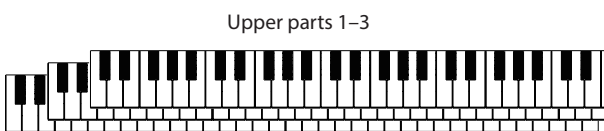


Changing the sounds on the left and right (split)

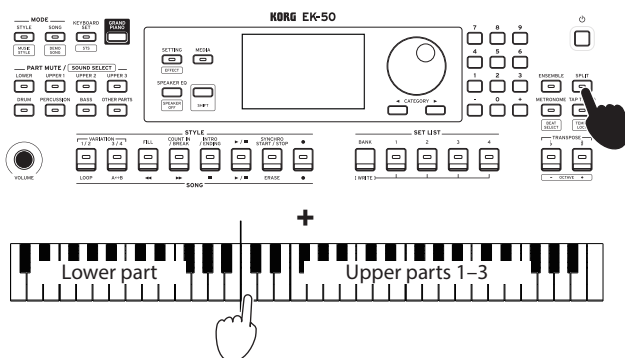
You can divide the keyboard into a high note range (for upper 1–3 parts) and a low note range (for lower part). This is called a **split function**, and the key where the sound changes (the next note directly below the upper part) is called the **split point**. Turn the split function on when you want to play different sounds with your left and right hands. You can also change the sounds for each part (see page 12 “Changing sounds”).



- **To turn the split on:** Press the SPLIT button to turn the split function on (the button will light). The keyboard will be divided into two ranges.
- **To turn the split off:** Press the SPLIT button once more to turn the split off (the button will go dark). The entire keyboard range will play upper parts 1–3.



- **To change the split point:** Press a key on the keyboard while holding down the SPLIT button.



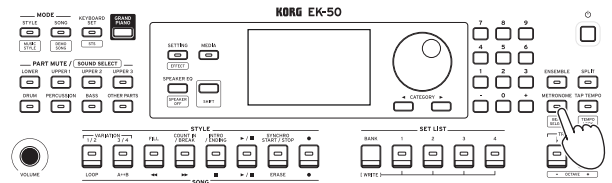
Tip: You can check the split point on the keyboard display, which is shown in the display.

Playing in time with the metronome

You can practice along with the tempo and beat of the metronome.

Setting the metronome

Turning on the metronome: Press the METRONOME/[BEAT SELECT] button to turn the metronome on (the button will light), and press the button again to make it stop.



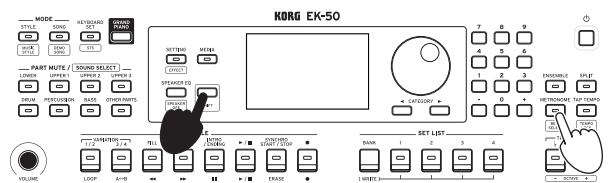
- **Setting the beat:** Press the METRONOME/[BEAT SELECT] button a number of times while holding down the [SHIFT] button.

2/2...16/16 → Click HI → Click LOW → 2/2...

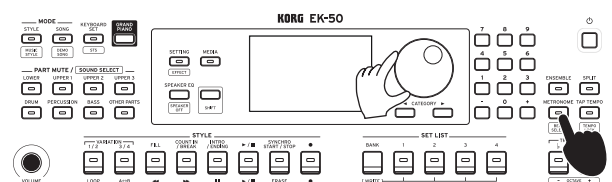
2/2, 2/4, 3/4, 4/4, 5/4, 7/4, 6/8, 8/8, 16/16: Beat

Click HI: Accent sound

Click LOW: No accent sound

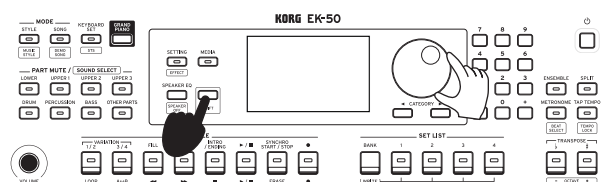


- **Adjusting the volume:** Turn the dial while holding down the METRONOME/[BEAT SELECT] button.



Adjusting the tempo


- Turn the dial while holding down the [SHIFT] button.

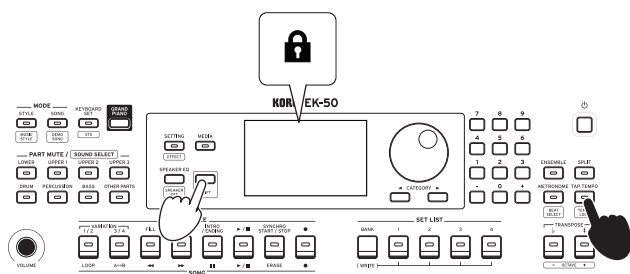


- Press the TAP TEMPO/[TEMPO LOCK] button to match the number of beats of the style at the tempo timing you wish to set. (For instance, if you want to set a 4/4 beat, press the button four times; and for a 3/4 beat, press the button three times.)

Note: Pressing the TAP TEMPO/[TEMPO LOCK] button any more times will start the accompaniment (tap start function). You can turn the tap start function disable (see page 23 “Tap Auto Start”).

Locking the tempo (tempo lock)

- Press the TAP TEMPO/[TEMPO LOCK] button while holding down the [SHIFT] button (the tempo lock icon  will light on the display).

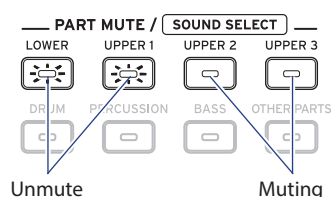


Muting parts and changing sounds

On the keyboard part (upper 1–3 and lower) and on the accompaniment part (drums, percussion, bass and other parts), you can mute (turn off) individual parts, or change the part's sound.

Muting parts

- Pressing the part buttons will mute the respective part(s) (the button will go dark). Pressing the buttons again will cancel muting (the button will light).

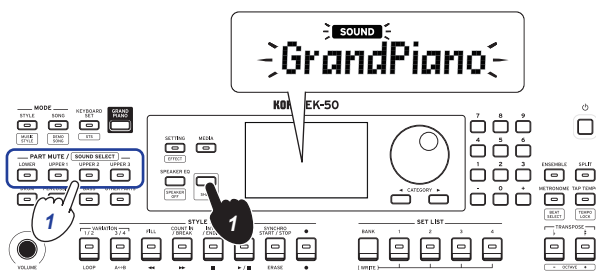


Changing sounds

- Press the part button for the part you want to change while holding down the [SHIFT] button (the part button will blink).

SOUND and the sound name will blink on the display.

Note: The sounds for “other parts” cannot be changed.



- Use the dial to select a sound.
- Press the [SHIFT] button to return to the previous mode.

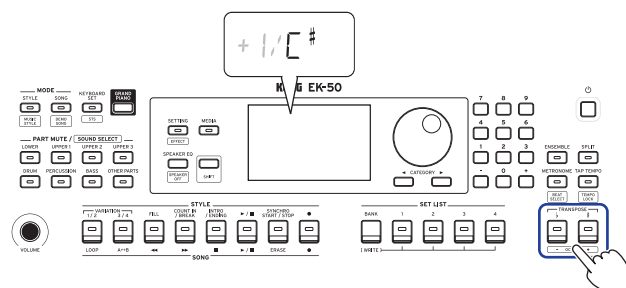
Setting the key and octave

Transposing (changing the key)

You can change the key of this instrument in semitones, over a range of ± 1 octave.

The key that is currently set is shown in the display.

- To lower the key:** Press the TRANSPOSE \flat /[OCTAVE $-$] button.
- To raise the key:** Press the TRANSPOSE \sharp /[OCTAVE $+$] button.
- To reset the key:** Press both the TRANSPOSE \flat /[OCTAVE $-$] and TRANSPOSE \sharp /[OCTAVE $+$] buttons together.

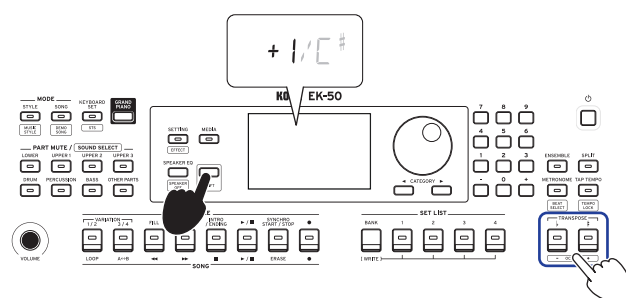


Changing the octave

You can change the pitch of the note that actually sounds when you play a note on the keyboard, up or down in one-octave units. You can set the octave within a range of ± 2 octaves.

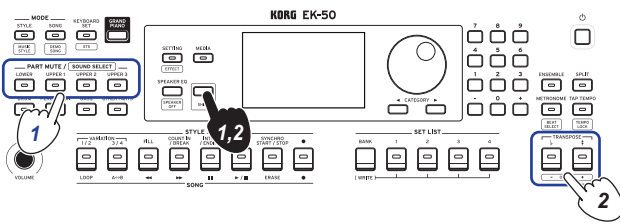
■ Changing the octave for the entire keyboard part

- To lower the octave:** Press the TRANSPOSE \flat /[OCTAVE $-$] button while holding the [SHIFT] button.
- To raise the octave:** Press the TRANSPOSE \sharp /[OCTAVE $+$] button while holding down the [SHIFT] button.



Changing the octave for each part

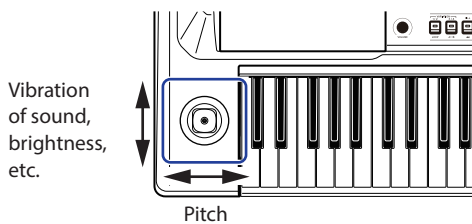
1. Press the part button for the part you want to change while holding down the [SHIFT] button (the part button will blink).
SOUND and the sound name will blink on the display.



2. Press the TRANSPOSE ♭/[OCTAVE -] or TRANSPOSE #/[OCTAVE +] buttons while holding down the [SHIFT] button.

Adding effects and embellishments to your playing

Using the joystick

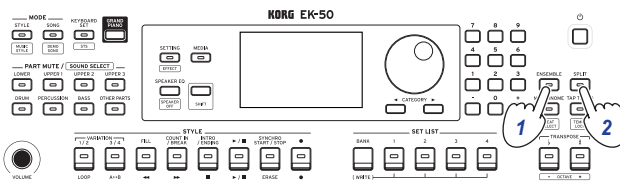


- Move the joystick to the left and right to change the pitch of the keyboard part.
Tip: You can also set how much the pitch changes (see page 22 "PchBndRange").
- Move the joystick up and down to change the sound of the keyboard part.
Tip: The change in sound when you do this will depend on the keyboard set.

Adding a harmony to the melody

This adds a harmony to the melody you are playing, to match the chord. The harmony will vary depending on the style you have selected.

1. Press the ENSEMBLE button.

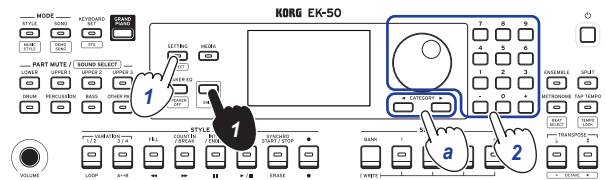


2. Press the SPLIT button to activate the keyboard split feature (the button will light).
3. Play a chord within the chord recognition range, and play a melody with your right hand.

Selecting effects

Each keyboard set contains two effects (effect 1 and effect 2), which change the sound and its impression depending on the effects you select.

1. Press the SETTING/[EFFECT] button while holding down the [SHIFT] button to display the settings screen for effect 1.
a. Press the CATEGORY button ► to display the settings screen for effect 2.
Press the CATEGORY buttons to switch between the effect 1 and effect 2 settings screens.



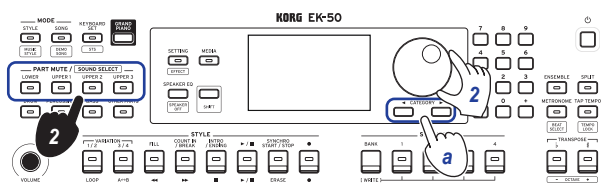
2. Select the effects using the dial.
"Default" indicates the optimum effect that is set for the keyboard set by default.
3. Press the [SHIFT] button to return to the previous mode.

Setting the effect send level

Here you can adjust the send level for effects 1 and 2 that are applied to the lower and upper 1-3 parts respectively. This will change how the effect sounds.

Note: Depending on the type of effect, the change in sound may not be too noticeable.

1. Follow steps 1 and 2 in "Selecting effects" to configure effect 1 or 2.
2. Turn the dial while holding down the PART button to set the effect send level.
a. To switch between effect 1 and 2, press the CATEGORY button.



3. Press the [SHIFT] button to return to the previous mode.

Selecting an equalizer (EQ)

You can add an equalizer effect to make the sound outputted from the built-in speakers easier to listen to, or to adjust the tonal character of the sound to match the musical genre you are playing.

- Press the SPEAKER EQ/[SPEAKER OFF] button several times to select the equalizer.

There are eight types of speaker EQ:

Standard → Bass Boost → Bass Cut → Treble Boost → Treble Cut → Mid Boost → Mid Cut → Loudness → Standard ...

Auto-accompaniment (style mode)

Playing along with auto-accompaniment

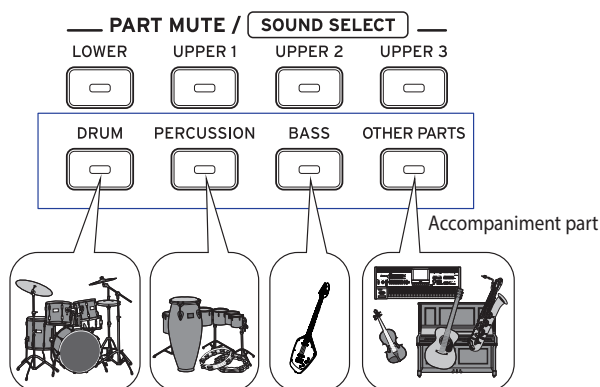
Auto-accompaniment is a function that automatically plays accompaniment to match the chord that you specify. The EK-50 features accompaniment patterns in various styles, such as dance, rock, jazz, Latin and so on. These patterns are called **styles**.

There are over 280 styles, divided into 17 groups.

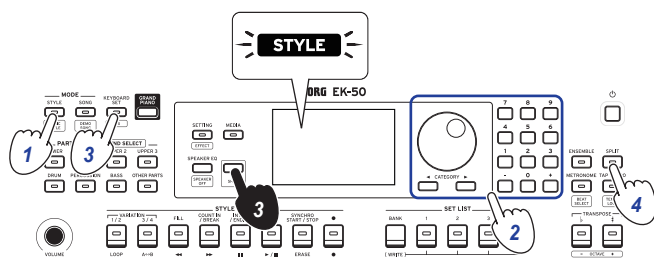
Playing with a style you choose

The sounds used in a style (auto-accompaniment) are assigned to four parts (drums, percussion, bass and other parts).

Together, these four parts are called an **accompaniment part**.



1. Press the **STYLE/[MUSIC STYLE]** button to enter style mode.
STYLE will blink on the display, and the style name will be shown.

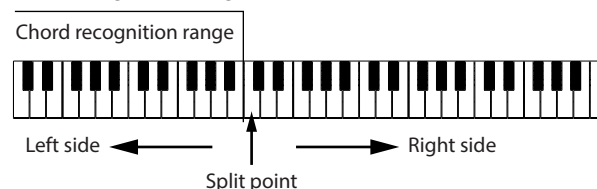


2. Select the style using the dial.
 Use the CATEGORY buttons to switch the style between different musical genres.
3. Press the **KEYBOARD SET/[STS]** button while holding down the **[SHIFT]** button.
 A keyboard set that matches the style will be recalled, and "ST" (Single Touch Settings) will be displayed before the keyboard set name.

4. Press the **SPLIT** button to activate the keyboard split feature (the button will light).

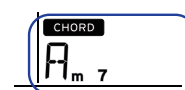
When you turn the split on, all keys to the left of the split point (the lower part) will become the "chord recognition range."

Turn the split off to make the entire keyboard become the chord recognition range.



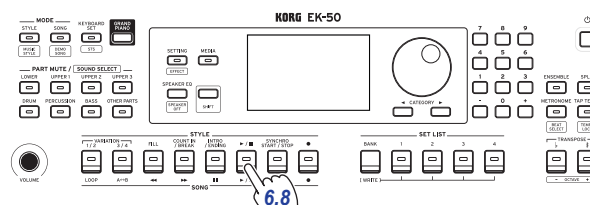
Tip: To change the split point, press a key while holding down the **SPLIT** button. See page 11 "Changing the sounds on the left and right (split)" for details on the split feature.

5. Play a chord within the chord recognition range.
 The chord name that you played is recognized and shown on the display.



Tip: You can change how this instrument recognizes the chords you play, by changing the Chord Detect setting in the **SETTING** functions (see page 22 "Chord Detect").

6. Press the **start/stop** button.
 The auto-accompaniment will begin, and the start/stop button will light up green.

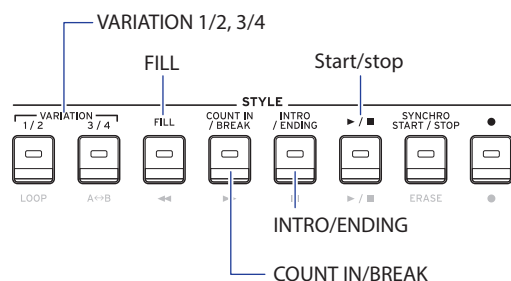


7. Play a melody on the right side of the split point on the keyboard, while playing a chord in the chord recognition range.
 When you change the chord, the accompaniment will automatically follow along.
Tip: See "List of chords recognized" (page 30) for a list of the chords that this instrument can recognize.
Tip: To change or lock the tempo, see "Adjusting the tempo" (page 11). When you lock the tempo, the tempo will not change when you select a different style.
8. To stop the auto-accompaniment, press the **start/stop** button.

Making changes to the auto-accompaniment

Adding an intro or setting a variation

Use the buttons in the STYLE section to make changes to the auto-accompaniment, such as adding an intro, fill-ins and breaks, and an ending.



1. Follow steps 1–4 in “Playing with a style you choose” (page 14).
2. Press **VARIATION** buttons 1/2 or 3/4 to select a variation. Each press of the buttons will switch between VARIATION 1 and 2, or VARIATION 3 and 4.

VARIATION	VARIATION button	Button state	Variation complexity
1	1/2	Lights green	Simple
2	1/2	Lights red	Slightly complex
3	3/4	Lights green	Complex
4	3/4	Lights red	Advanced, complex

The arrangement will become progressively more complex as you go up from variation 1 to 4.

3. Press the **INTRO/ENDING** button to select the intro. Each press of the button will switch between intro 1 and 2.

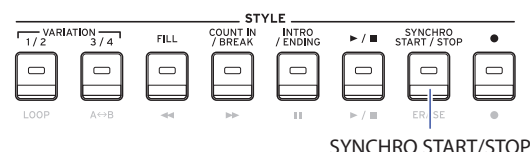
INTRO/ENDING	Button state	Intro/ending content
1	Lights green	Includes chord changes
2	Lights red	Chord stays the same

Tip: When you press the **INTRO/ENDING** button before you start to play, this will select the intro; and when you press the button while you are playing, this will select the ending.

4. Play a chord within the chord recognition range. The chord name that you played is recognized and shown on the display.
5. Press the **start/stop** button. The intro will begin, and then the variation accompaniment will play back.
6. Play the chords with your left hand and the melody with your right hand.
7. Press **VARIATION** buttons 1/2 and 3/4, as well as the **FILL** button and **COUNT IN/BREAK** button to change the playback of the song while you play.
8. To end the song, press the **INTRO/ENDING** button and select the ending. The ending will switch between ending 1 (lights up green) and ending 2 (lights up red) with each press of the button. The accompaniment will finish after the ending.

Using the SYNCHRO START and SYNCHRO START/STOP functions

This function allows you to start the accompaniment when you play the keyboard (**SYNCHRO START**), or accompany you only when you are playing the keyboard (**SYNCHRO START/STOP**).



■ SYNCHRO START

1. Press the **SYNCHRO START/STOP** button. The button will blink green. This turns on the **SYNCHRO START** function.
2. Play a chord in the chord recognition range to start the accompaniment. The button will change to being continually lit in green.
3. Press the **start/stop** button to stop the accompaniment.

■ SYNCHRO START/STOP

1. Press the **SYNCHRO START/STOP** button several times, to make the button start blinking red. This turns on the **SYNCHRO START/STOP** function on.
2. When you play a chord in the chord recognition range, the accompaniment will start; and when you take your fingers off the keyboard the accompaniment will stop. Playing again will restart the accompaniment. The button will blink green while the accompaniment is playing.
3. To cancel **SYNCHRO START/STOP**, press the **SYNCHRO START/STOP** button several times to make the button go dark.

Changing the style and keyboard set combination

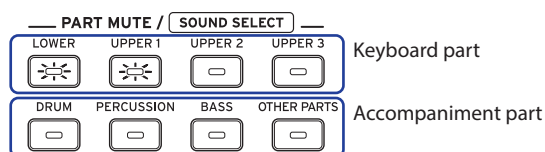
Each style contains the keyboard set that is optimal for that style. For keyboard sets on which “**ST5**” is shown before the name on the display, a keyboard set will automatically be selected whenever you change the style.

Change the keyboard set to create your own combinations of styles and keyboard sets.

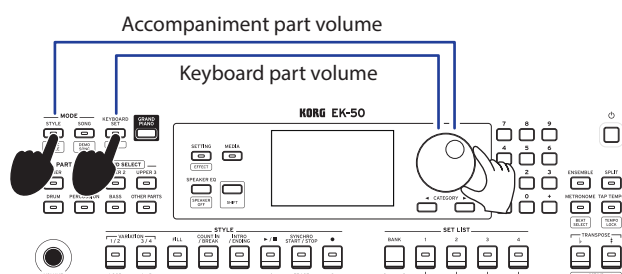
1. Follow steps 1–4 in “Playing with a style you choose” (page 14).
2. Press the **KEYBOARD SET** button and then use the dial or other means to select the keyboard set. **KEYBOARD SET** will blink in the display, and the keyboard set name will be shown below it. **Note:** When you use a keyboard set aside from **STS**, the keyboard set will not change, even when you change the style.
3. To change the keyboard set back to **STS**, hold down the **[SHIFT]** button and press the **KEYBOARD SET/[STS]** button.

Adjusting the volume of the keyboard and accompaniment parts

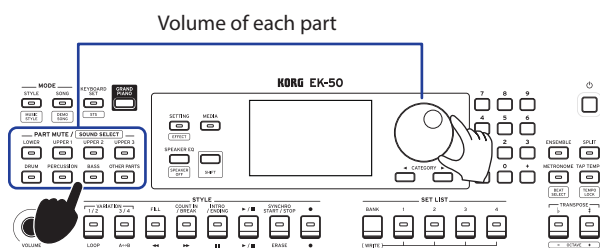
You can adjust the volume balance between the keyboard and accompaniment parts. This is useful for making a solo that you play on the keyboard stand out over the accompaniment, or for simply performing with good sound balance.



- **Adjusting the overall volume of the keyboard part (upper 1–3 and lower):** Turn the dial while holding down the KEYBOARD SET/[STS] button.
- **Adjusting the overall volume of the accompaniment part (drums, percussion, bass and other parts):** Turn the dial while holding down the STYLE/[MUSIC STYLE] button.



- **Adjusting the volume of individual parts:** Turn the dial while holding down the respective buttons in the PART MUTE/[SOUND SELECT] section.



Choosing a music style and playing

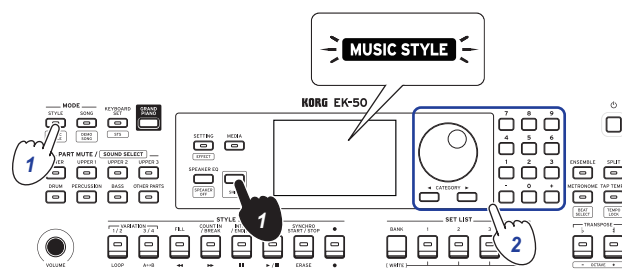
Instead of choosing a style, you can select a music style and then play or record.

A **music style** is based on a style, but is optimized to include a keyboard set that easily matches the mood of existing songs, and contains other settings like tempo.

You can use music styles when playing music from your favorite genre.

Note: The keyboard sets of music styles cannot be changed or saved to a set list.

1. Press the STYLE/[MUSIC STYLE] button while holding down the [SHIFT] button.
The instrument will enter music style mode, and **MUSIC STYLE** will blink on the display.

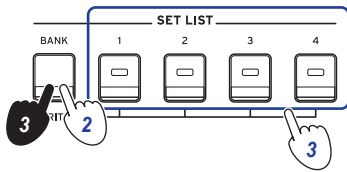


2. Use the dial or other means to select a music style.
Tip: See the “Voice Name List” (PDF) for a list of music styles available.
3. Follow steps 3 and on in “Playing with a style you choose” (page 14), or steps 2 and on in “Adding an intro or setting a variation” (page 15).
Tip: You can also mute the sound or adjust the volume of the part, as shown in “Making changes to the auto-accompaniment” (page 15).

Saving the set list (WRITE)

A **set list** contains saved settings such as style, tempo, keyboard set and effect settings. Once you have customized the settings for a style, we recommend that you save your settings as a set list.

1. In style mode, customize the style such as changing the sound of the keyboard part, changing the octave and so on.
2. Press the **BANK/WRITE** button to select the bank to save to.
The bank will change in sequential order (A→B→C...J→A...) with each press of the **BANK/WRITE** button.
 - Bank A: preloaded
 - Banks B–J: initialized



Tip: Press the **BANK/WRITE** button while holding the [SHIFT] button to reverse the order.

3. Press one of buttons 1–4 while holding down the **BANK/WRITE** button.
Your settings will be saved to the set list, and the button you pressed will light.
- Tip:** Bank A-1 will be selected right after the power is turned on.

The settings shown below are saved in the set list.

- **Styles**
Style number, volume
- **Keyboard sets**
Keyboard set number, volume, octave settings
- **Part**
Sounds assigned to each part, volume, mute, octave settings
- **Other settings**
Effect selected for effect 1 and 2, send level for effect 1 and 2, tempo, transpose, split on/off, split point, ensemble on/off, metronome volume

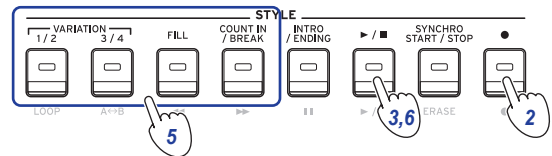
Recording your performance

You can record as you play along with the auto-accompaniment.

1. Follow steps 1–5 in “Playing with a style you choose” (page 14), or steps 1–4 in “Adding an intro or setting a variation” (page 15).

Tip: You can also mute the sound or adjust the volume of the part, as shown in “Making changes to the auto-accompaniment” (page 15).

2. Press the **record** button to put the instrument in record standby mode (the button will light red).



Note: Parts that are muted will not be recorded. To record a part, make sure that muting is canceled (see page 12 “Muting parts and changing sounds”).

3. Press the **start/stop** button to begin recording.
4. Play the chords with your left hand and the melody with your right hand.
5. Press **VARIATION** buttons 1/2 and 3/4, as well as the **FILL** button and **COUNT IN/BREAK** button to change the playback of the song while you play.
6. To finish recording, press the **start/stop** button or the **INTRO/ENDING** button.

The data that you recorded will automatically be saved as a user song.

Tip: The name of the user song will be “UserSong,” with a sequential number added to the end. Up to 999 songs can be recorded.

Tip: See “Playing along with a song” (page 18) when you want to listen to a user song.

Tip: You can make simple edits to user songs (see page 19 “Editing a song”).

Recording

		Rec Start					Rec Stop	
Part	Upper 1							MIDI ch 1
	Upper 2							MIDI ch 2
	Upper 3							MIDI ch 3
	Lower							MIDI ch 4
	Bass							MIDI ch 9
	Drum							MIDI ch 10
	Percussion							MIDI ch 11
	Other Parts							MIDI ch 12-16

		Rec Start					Rec Stop	
Part	Upper 1							MIDI ch 1
	Upper 2	Mute						MIDI ch 2
	Upper 3	Mute						MIDI ch 3
	Lower							MIDI ch 4
	Bass							MIDI ch 9
	Drum							MIDI ch 10
	Percussion							MIDI ch 11
	Other Parts							MIDI ch 12-16

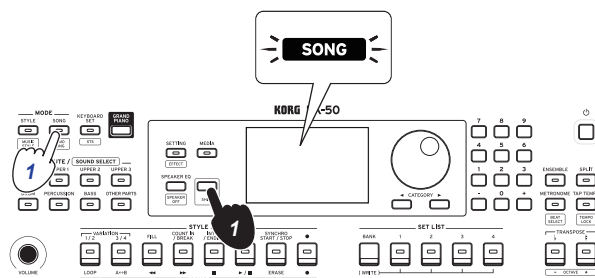
Song mode

Listening to the demo songs

The EK-50 has 18 built-in demo songs. This shows you how to listen to the songs.

Tip: See “Playing along with a song” (page 18) for how to play along with a demo song.

1. Press the **SONG/[DEMO SONG]** button while holding down the **[SHIFT]** button.
SONG will blink in the display, and the demo songs will start playing back in order from song D01.



When you want to play back a specific demo song, use the dial or other means to select the demo song. The demo songs will play back starting with the song you selected.

2. Press the **[SHIFT]** button to stop.

Playing along with a song

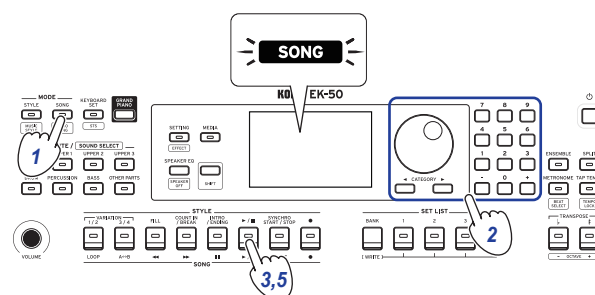
You can play the EK-50 while playing back a song.

- To play back an MP3, WAV or standard MIDI file on a USB flash drive, connect the USB flash drive with your data to the **USB TO DEVICE** port of the real panel on this instrument.

The USB icon (USB) will be shown in the top right of the display.

Tip: See “MEDIA functions” (page 24) for more information on the devices and playback formats supported by the EK-50.

1. Press the **SONG/[DEMO SONG]** button to enter song mode.
SONG will blink on the display, and the song name will be displayed.



2. Select the song type using the **CATEGORY** buttons, and use the dial to select the song.
 The song types and **SONG/[DEMO SONG]** button states are as follows:

D01–D18: Demo song (blinks green)

001–999: User song (blinks red)

M01–M99: Music data (blinks green)

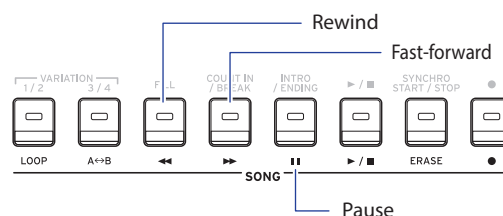
Note: User songs are recordings of songs that you have played on the EK-50 (see page 17 “Recording your performance”).

3. Press the **start/stop** button (the button will light up green).
4. Play the keyboard along with the song.
Tip: To change the keyboard set, see “Selecting the keyboard set” (page 10).
Tip: To change the tempo, see “Adjusting the tempo” (page 11).
5. To stop playback of a song, press the **start/stop** button.

Tip: The user songs can be edited and then saved to USB flash drive (see page 19 “Editing a song” and page 24 “Song Convert”).

Playing back using different methods

Rewinding, fast-forwarding or pausing a song



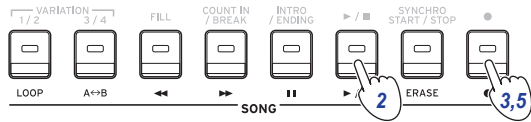
- **Rewind button:** Press this once to go back one measure. (For MP3 and WAV files, this will go back two seconds.) Hold down the button to continue rewinding.
- **Fast-forward button:** Press this once to move forward one measure. (For MP3 and WAV files, this will move forward two seconds.) Hold down the button to continue fast-forwarding.
- **Pause button:** Press this during playback to pause. Press the button again to resume playback from where you stopped.

		Erase On				Erase Off				
Part	Upper 1									MIDI ch 1
	Upper 2									MIDI ch 2
	Upper 3									MIDI ch 3
	Lower									MIDI ch 4
	Bass									MIDI ch 9
	Drum									MIDI ch 10
	Percussion									MIDI ch 11
	Other Parts									MIDI ch 12-16

Overlaying parts when recording (overdubbing function)

You can overlay parts that you play using the keyboard part when recording a user song. You can also record changes in the sounds used for the keyboard and accompaniment parts.

- 1. Select a user song.
- 2. Press the start/stop button to play back the song.



- 3. Press the record button (the button will light up red).
 - 4. Play the keyboard and make changes to the sounds.
 - To change the sounds of a part, press the PART button while holding down the [SHIFT] button, and use the dial or other means to select a sound.When you change the sound, that information is recorded in the part.

Note: During overdubbing, you can mute or unmute the keyboard part, but this will not be recorded.

Note: To record changes to the sound, make the changes while the part is unmuted. Changes to a sound can be made to any part besides the other parts. The changes you make to a sound, as well as your keyboard playing will be recorded while the part is unmuted.
 - 5. Press the record button when you are finished overdubbing (the button will go dark).
- Note:** To overdub again, press the start/stop button to stop playback, and follow the steps from step 2 on.
- To check the song that you have overdubbed your playing on, press the start/stop button and then unmute the part you overdubbed.

Overdubbing

		Rec Start				Rec Stop				
Part	Upper 1	Overdubbing								MIDI ch 1
	Upper 2	Overdubbing								MIDI ch 2
	Upper 3	Overdubbing								MIDI ch 3
	Lower	Overdubbing								MIDI ch 4
	Bass									MIDI ch 9
	Drum									MIDI ch 10
	Percussion									MIDI ch 11
	Other Parts									MIDI ch 12-16

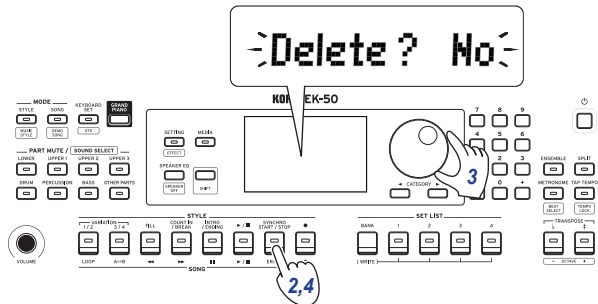
		Song Play				Rec Start				Rec Stop				
Part	Upper 1					Overdubbing								MIDI ch 1
	Upper 2					Overdubbing								MIDI ch 2
	Upper 3					Overdubbing								MIDI ch 3
	Lower					Overdubbing								MIDI ch 4
	Bass													MIDI ch 9
	Drum													MIDI ch 10
	Percussion													MIDI ch 11
	Other Parts													MIDI ch 12-16

Deleting a user song

This will delete a user song that you have selected.

- 1. Select a user song.
- 2. Press the ERASE button.

“Delete? No” will appear on the display.



- 3. Turn the dial to select “Yes”.
- 4. Press the ERASE button.

The user song will be deleted, and the display will show “Completed”.

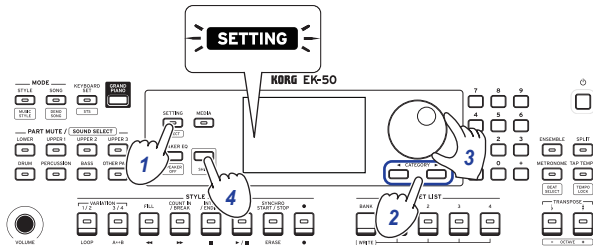
SETTING functions

Basic methods of use

The basic methods of using the SETTING functions are shown below.

1. Press the SETTING/[EFFECT] button.

This will enter the SETTING functions, and **SETTING** will blink on the display.



2. Press the CATEGORY button and select the parameter to set.

3. Turn the dial to select a value.

4. After you are finished, press the [SHIFT] button to return to the previous mode.

Main SETTING functions

Changing the auto power-off function

This instrument has an auto power-off function that automatically turns off the power when the unit has not been played or operated for a certain length of time. The time interval is set to 30 minutes at factory default, but this can be changed.

1. In the SETTING functions, press the CATEGORY button ► several times to select "Auto PowerOff".
2. Turn the dial to select "Disable" or a specific time after which the power will turn off.
3. Press the [SHIFT] button to return to the previous mode.

Changing the pedal polarity

If the pedal connected to the FOOT CONTROLLER jack does not sustain the sound even when pressed, and if the sound sustains when you take your foot off the pedal, you will need to change the pedal polarity on this instrument.

1. Connect either a Korg DS-1H damper pedal, or a PS-1/PS-3 pedal switch to the FOOT CONTROLLER jack.
2. In the SETTING functions, press the CATEGORY button ► several times to select "Pedal Polarity".
3. Turn the dial to change the polarity.
 - (KORG): This is the factory default setting. Use this setting when using a DS-1H, PS-1 or PS-3 pedal.
 - + (Reverse): Use this setting when the effect of the pedal appears to be reversed.
4. Press the [SHIFT] button to return to the previous mode.

Changing the pedal function

Change the pedal function on this instrument to match the type of pedal connected, whether a pedal switch, expression pedal or volume pedal.

1. Connect the pedal to the FOOT CONTROLLER jack.
2. In the SETTING functions, press the CATEGORY button ► several times to select "Pedal Function".
3. Turn the dial to select the pedal function.
 - No Assign:** Use this when you are not using a pedal.
 - Damper:** This is the factory default setting. Select this when using a damper pedal or a pedal switch like the Korg DS-1H, PS-1 or PS-3.
 - Expression:** Select this when using an expression pedal like the Korg EXP-2.
 - Quarter Tone:** Select this when playing quarter tones (see page 21 "Setting the quarter tone function").
4. Press the [SHIFT] button to return to the previous mode.

Setting the quarter tone function

This shifts the pitch of the notes you play on the keyboard down 1/4 tone.

1. Connect either a Korg DS-1H damper pedal, or a PS-1/PS-3 pedal switch to the FOOT CONTROLLER jack.
2. Select "Quarter Tone" in "Pedal Function," SETTING functions.

Tip: See steps 2 through 4 in "Changing the pedal function" (page 21).
3. Press the [SHIFT] button to return to the previous mode.
4. While pressing the pedal, press the key on the keyboard that will be set to a quarter tone.

On the right-side one-octave of the keyboard display, the key set for quarter tones will change to black. Press the key once more while holding the pedal down to cancel the quarter tone setting.

Tip: To cancel all quarter tones that have been set, press the pedal down, and then release the pedal (without playing any keys).

Note: All quarter tone settings will be erased when this instrument is turned off.

Setting the battery type

To make sure the correct battery level is displayed, set which type of battery you are using.

1. In the SETTING functions, press the CATEGORY button several times to select "Battery Type".
2. Turn the dial to select the type of battery you have inserted.
 - Alkaline:** alkaline batteries
 - Ni-MH:** nickel-metal hydride batteries
3. Press the [SHIFT] button to return to the previous mode.

List of SETTING functions

(*: Factory default setting value)


Page	Parameter	Settings	Contents of settings
P.01	KeyResponse	Soft Touch Medium Touch* Hard Touch Fixed_001...127	Sets the ratio of volume change when playing the keyboard at different velocities (the strength at which your fingers strike the keyboard).
P.02	PtchBndRange (Pitch Bend Range)	Style Setting* Off 01 ... 12	Sets the range of pitch change (how high or low the sound is) that can be made to the keyboard part using the joystick. Style Setting: The pitch bend range set for each style. 01...12: The pitch range can be set in semitones (12 semitones=±1 octave).
P.03	Pedal Function	No Assign Damper* Expression Quarter Tone	See page 21 “Changing the pedal function”.
P.04	Pedal Polarity	-(KORG)* +(Reverse)	See page 21 “Changing the pedal polarity”.
P.05	MasterTuning	427.5 ... 440.0* ... 452.9 Hz	Sets the overall tuning for the instrument (drums excepted).
P.06	Chord Detect	Fingered1* Fingered2 Fingered3 Fingered3/Bass One Finger	Sets the method of chord recognition. This setting is enabled when the split function is on. When split is off, “Fingered3” is enabled. Fingered1: You can play a single note or multiple notes. When you play a single note, this is recognized as a major chord. Fingered2: You need to play at least three notes for the chord to be recognized. Playing only one note will play back in unison. The root and the 5th will be recognized as a major chord when you play them. Fingered3: You always need to play at least three notes for the chord to be recognized. Fingered3/Bass: The Fingered3 setting is enabled, with the addition of bass inversions. The lowest note of an inverted chord (the lowest note that you play of a chord) is always considered to be the root of the chord. You can use this to make specify composite chords like Am7/G, F/C and so on. One Finger: Chord recognition works as follows. - Single notes played are recognized as major chords. - Play the root of the chord and then the white note to the left of it together for a seventh chord (for example, if you play C3 and B2 together, you will get a C7 chord). - Play the root of the chord and then the black note to the left of it together for a minor chord (for example, if you play C3 and B \flat 2 together, you will get a C minor chord). - Play the root of the chord and then the black and white notes to the left of it together for a minor seventh chord (for example, if you play C3, B2 and B \flat 2 together, you will get a Cm7 chord).
P.07	Scale Root Key	C*...B	Sets the note to be used as the root of the scale.
P.08	UpperScaleTyp (Upper Scale Type)	KeyboardSet* Equal PureMajor PureMinor Arabic Pythagorean Werckmeister Kirmberger Slendro Pelog Stretch User	“P.08 UpperScaleTyp” sets the scale for the upper part. Note that this cannot be set if “P.03 Pedal Function” is set to “Quarter Tone”. “P.09 StyleScaleTyp” sets the scale used for the style accompaniment part and the lower part. KeyboardSet: This is the scale set for each style. Equal (equal temperament tuning): This is a widely-used scale in general use, where the difference in pitch between each semitone is uniform. PureMajor (just temperament major scale): This is a scale in which the major chord for the primary overtones selected harmonizes perfectly. PureMinor (just temperament minor scale): This is a scale in which the minor chord for the primary overtones selected harmonizes perfectly. Arabic: This is a scale that includes quarter tones used in Arabian music. Pythagorean: This is the scale used in ancient Greece, and is effective for playing melodies. Werckmeister: This is an equal temperament tuning used in later-era baroque music. Kirmberger: This was a scale created in the 18th century, mainly used for harpsichord tuning. Slendro: This is a scale used on gamelans in Indonesia, with five notes per octave. Pelog: This is another scale used on gamelans in Indonesia, with seven notes per octave. When the key is set to “C”, use only white notes when playing (the black note pitches use equal temperament tuning). Stretch: This is a scale used for acoustic pianos. User: This is a user-defined scale.
P.09	StyleScaleTyp (Style ScaleType)	Equal* PureMajor PureMinor Arabic Pythagorean Werckmeister Kirmberger Slendro Pelog Stretch User	

Page	Parameter	Settings	Contents of settings
	User C Tune – User B Tune	-99... +00* ... 99 Cent	This is displayed when “User” is selected for “P.08 UpperScaleTyp” or “P.09 StyleScaleTyp”. This indicates the amount of detuning compared to standard equal temperament tuning. These settings affect the entire tonal range. ±50 : Moves the tuning up or down 1/4 (quarter) tone. ±99 : Moves the tuning up or down nearly one semitone.
P.10	Tap Auto Start	Disable Enable*	Pressing TAP TEMPO/[TEMPO LOCK] button continuously will set whether performance begins automatically or not.
P.11	MIDI Clock	Internal* External	Sets whether the MIDI clock of this instrument is controlled by the internal clock (Internal) or by an external clock (External).
P.12	Local Control	Off On*	Sets whether the sound generator of this instrument will play or not (“On” to play, “Off” to not play) when the keyboard is played. On : Notes that you play on the keyboard and MIDI data will be sent to the internal sound generator and to the USB TO HOST port. Off : Notes that you play on the keyboard and MIDI data will be sent to the USB TO HOST port, but the internal sound generator will not sound. Turn this setting to “Off” when this instrument is connected to a computer that is set to echo back and when you want to use this instrument as a sound generator, in order to prevent notes from sounding in duplicate.
P.13	Audio In Level	0 ... 100* ... 127	Sets the input level from audio devices connected to the AUDIO IN jack.
P.14	Auto PowerOff	Disable, 5, 10, 30*, 60, 120 Minutes	See page 21 “Changing the auto power-off function”.
P.15	Battery Type	Alkaline* Ni-MH	See page 21 “Setting the battery type”.


MEDIA functions

Connecting and removing USB flash drives

1. Turn off the power.
2. Connect a USB flash drive (commercially available) to the USB TO DEVICE port.

 Make sure that the USB flash drive is facing the right direction when you insert it. If you try to push the drive in the wrong way too hard, the port on the instrument or the drive itself may break, or you may lose your data.

3. Turn the power back on.

The USB icon () will be shown in the top right of the display.


Note: If  does not display, turn off the power and reconnect the USB flash drive.


Note: Be sure to format the USB flash drive before using it for the first time on this instrument.

 When removing the USB flash drive, be sure to turn off the power first.

Basic method of use


The basic method of making settings using the MEDIA functions is as shown below.

 The MEDIA functions will not work unless you plug a USB flash drive into this instrument.

1. Connect a USB flash drive.
See "Connecting and removing USB flash drives" (page 24).
2. Press the MEDIA button.
This will enter the MEDIA functions.
3. Select the menu to set using the CATEGORY button, and press the MEDIA button.
"Enter [MEDIA]" will be displayed.
4. Press the MEDIA button.
5. Turn the dial to select the next function, and follow the directions shown in the display.
For instance, to select "Yes [MEDIA]", press the MEDIA button to go to the next step. To select "Cancel [<]", press the CATEGORY button  to stop the operation and return to step 2.
6. When the operation is finished, the message "Completed!" will be displayed. Press the [SHIFT] button to return to the previous mode.

Formatting a USB flash drive

In order to use a USB flash drive on this instrument, you will need to format (initialize) it first.

1. In the MEDIA functions, press the CATEGORY button  and select "Media Format".
The message "Enter MEDIA Key" will be displayed.
2. Press the MEDIA button.
"Cancel [<]" will be displayed.
3. Turn the dial to select "Yes [MEDIA]", and press the MEDIA button.
"Are You Sure?" will be displayed.
4. Turn the dial to select "Yes [MEDIA]", and press the MEDIA button.
5. When the operation is finished, the message "Completed!" will be displayed. Press the [SHIFT] button to return to the previous mode.

List of MEDIA functions

Page	Menu	Contents of settings
P.01	SetListBackUp	Saves all set lists to the USB flash drive.
P.02	SetListRestore	Loads all set lists from the USB flash drive.
P.03	Song Convert	Saves the user songs to the USB flash drive in SMF (Standard MIDI File) format. Current: This saves the user song currently selected in song mode. ALL: This saves all user songs.
P.04	Media Format	See page 24 "Formatting a USB flash drive".
P.05	SystemUpdate	This updates the system on this instrument.

Storage media that can be used

The EK-50 supports the use of USB storage devices such as FAT16 or FAT32-formatted flash drives or disks.

Supported capacities

FAT32: Up to 2 TB (2,000 GB)

FAT16: Up to 4 GB

File and folder structure

This instrument can save and load set lists, as well as save user songs.

When saving data to USB flash drives from this instrument, or when formatting USB flash drive, a folder directory named “EK-50” will automatically be created on the media.

When using the MEDIA functions “SetListBackUp” and “Song Convert”, the files shown below will be saved to the directory.

SetList: The “SetList” directory will be created, and a file named “SetListData_##.json” will be saved to the directory. The “##” characters above are a placeholder for the file number, which can be from 01 to 40.

UserSong_###.mid: This represents a user song file on this instrument that has been converted to a MIDI file (SMF format 0). The “###” characters above are a placeholder for the file number.

The WAV, MP3, SMF and MID files in the “EK-50” directory can be loaded into this instrument as user songs.

When you insert a USB flash drive into the EK-50, the instrument searches for the relevant files in the “EK-50” directory, and displays these files as a list from M01 to M99 in song mode.

The supported formats for each file type are as shown below.

WAV: Supported sample rate = 44.1 kHz

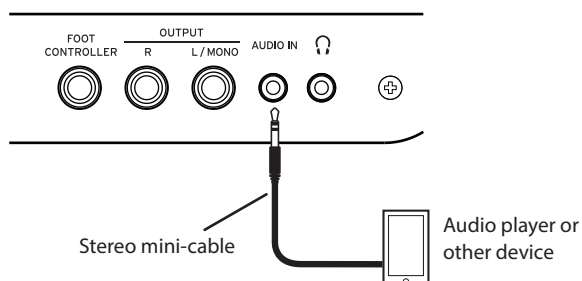
MP3: Supported sample rate = 44.1 kHz, VBR compatible

SMF, MIDI: SMF formats 0, 1

Connecting to an external device

Connecting an audio player

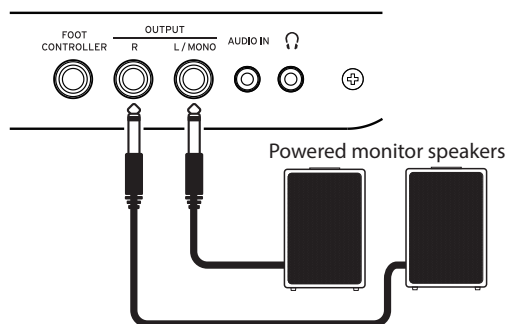
You can connect an audio device such as an audio player to the AUDIO IN jack (stereo mini-phone jack) on the rear panel of this instrument, and hear the sound of the audio device playing back through the built-in speakers of the EK-50. This is useful for playing along.




1. Turn the volume on this instrument and on your audio device all the way down, and then turn the power off on both units.
2. Connect your audio device to the AUDIO IN jack on the rear panel of this instrument using a stereo mini-cable.
3. Turn the power of the audio device on, and then turn on the power of the EK-50.
4. Play back sound on the audio device, slowly turning up the volume. As you raise the volume on the EK-50, you should be able to hear the sound coming through the speakers.
5. To adjust the volume balance, raise the volume on your audio device while playing the keyboard of the EK-50 along with the sound.
To adjust the overall volume level, use the VOLUME knob.
Tip: You can adjust the input level of the audio device using the "Audio In Level" (page 23) parameter in the SETTING functions.
6. When turning off the power, stop playback on the audio device, turn off the EK-50, and then turn off your audio device, in that order.

Connecting powered monitor speakers

You can connect audio equipment such as powered monitor speakers or a home stereo to the OUTPUT jacks on the rear panel of the EK-50, which lets you hear what you play on this instrument through your audio equipment.



 The audio output on this instrument uses a higher signal level than ordinary home audio equipment like CD players. For this reason, playing at an excessive volume may damage the

external audio equipment. Use particular care when setting the volume.

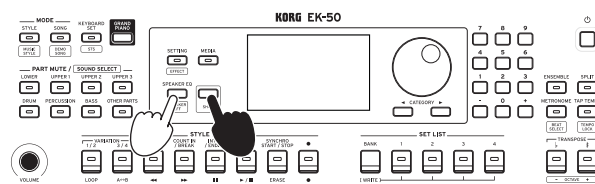
1. Turn the volume down all the way on this instrument and on the external audio equipment, and turn off the power on both devices.
2. Connect the OUTPUT jacks of this instrument to the audio input jack(s) of your external audio equipment or other device.
Tip: When using monaural sound, connect to the L/MONO jack.
3. Turn on the power on the EK-50, and then on the external audio equipment.
4. Turn up the volume of this instrument gradually and play the keyboard. Adjust the volume balance by turning up the volume of both this instrument and the external audio equipment.
5. When turning off the power, first turn the power of the external audio equipment off, and then turn off the power of this instrument.

When you will not be using the built-in speakers

You may want to turn off the built-in speakers and output the sound from the OUTPUT jacks only, such as when you are playing onstage.

1. Refer to "Connecting powered monitor speakers" (page 26) when connecting external audio equipment.
2. Press the SPEAKER EQ/[SPEAKER OFF] button while holding down the [SHIFT] button.
The built-in speakers will turn off and will not make a sound.

Tip: Also, if you connect a pair of headphones to the headphones jack, the built-in speakers will shut off.



3. To turn the built-in speakers on again, press the SPEAKER EQ/[SPEAKER OFF] button once more while holding down the [SHIFT] button.

Connecting to a computer

The EK-50 is equipped with USB TO HOST port, which can be used to connect to a computer, allowing this instrument to be controlled using DAW software as a MIDI sound generator, or to be used as a controller.

To connect the EK-50 to a computer via USB, install the KORG USB-MIDI driver on your computer. Download the driver from the Korg website, and install the driver by following the accompanying documentation.

■ What is MIDI?

MIDI (Musical Instrument Digital Interface) is a worldwide standard for communicating various information between electronic musical instruments and computers.

■ Connecting to a computer

Connect the USB A port of your Windows PC or Mac to the USB TO HOST port of this instrument with a USB cable, and try sending and receiving MIDI messages.

Tip: For the MIDI-related settings to make after connecting, see “MIDI Clock” (page 23) and “Local Control” (page 23).

■ About MIDI channels

The MIDI channels that are used in style mode and song mode when you select a user song are as follows.

- Ch01: Upper 1 part
- Ch02: Upper 2 part
- Ch03: Upper 3 part
- Ch04: Lower part
- Ch09: Bass part
- Ch10: Drum part
- Ch11: Percussion part
- Ch12–16: Other parts


Note: Note that the MIDI channels used when playing back an SMF will depend on the settings in that file.

Appendix

Restoring the EK-50 to factory default settings

This restores the settings of this instrument to the factory defaults.

Note that this will initialize (reset) all of your song lists, user songs and the settings you have made in the SETTING functions. For this reason, any user songs you have recorded or any new set lists you may have made will be overwritten and lost. If you want to keep your user songs and set lists, save the data to a USB flash drive using the MEDIA function (see page 24 “SetListBackUp”, page 24 “Song Convert”).

 Do not turn off the power on this instrument while it is initializing. If the initialization fails, you may be unable to use the instrument.

1. **Turn off the power.**
2. **While holding down the [SHIFT] button and the BANK/WRITE button in the SET LIST section, press the power button.**
“FactoryPreload” will be displayed, and the start/stop button in the STYLE/SONG section will blink.
3. **Turn the dial to select “Yes”, and press the start/stop button in the STYLE/SONG section.**
The initialization will begin.
Once the instrument has been restored to the factory default settings, “Completed” will appear in the display.
4. **Turn off the power, and then turn it on again.**

Calibrating an expression pedal

Calibrate the expression pedal (such as a EXP-2) that you have connected to the FOOT CONTROLLER jack, and set the pedal’s variable range.

1. **Connect the expression pedal while the EK-50’s power is turned off.**
2. **Press the power button while holding down button 1 in the SET LIST section.**
“Pedal Calib.” will be displayed, and the start/stop button in the STYLE/SONG section will blink.
3. **Press the start/stop button in the STYLE/SONG section.**
“Measuring Min” will appear on the display.
4. **Bring the pedal all the way down (towards you), and take your foot off.**
The value will appear on the display.
5. **Press the start/stop button.**
“Measuring Max” will appear on the display.
6. **Press the expression pedal upward all the way (away from you), and take your foot off.**
The value will appear on the display.
7. **Press the start/stop button.**
“Completed” will appear on the display, which completes the calibration.
8. **Turn off the power, and then turn it on again.**
Try operating the pedal to make sure that it is working as intended. If the pedal does not work correctly, repeat this process from step 1.

Troubleshooting

If this instrument is not operating as expected, check the following points.

The instrument will not turn on.

- ☐ Is the AC adapter plug connected to the AC outlet?
- ☐ Have you pressed the power button?

The power will not go off.

- ☐ Did you hold down the power button for a while?

The power turns off by itself.

- ☐ The auto power-off function may be enabled.

No sound is heard from the speakers of this instrument when the keys are played.

- ☐ Is the instrument’s volume turned up?
- ☐ Is a pair of headphones connected to this instrument?
The speakers will not produce sound when headphones are connected to this instrument.
- ☐ The part buttons might all be muted.
- ☐ Is the volume down on the pedal connected to the FOOT CONTROLLER jack?
- ☐ If sound is not heard when pressing some keys, you may have exceeded the instrument’s maximum polyphony.
- ☐ The local control in the SETTING functions should be set to “On”.
- ☐ Are the speakers set to off?
Press the SPEAKER EQ/[SPEAKER OFF] button while holding down the [SHIFT] button.
- ☐ The keyboard parts might all be muted.

The sound will not stop.

- ☐ The functions or polarity for the pedal might not be set correctly.

The sound seems to be doubled.

- ☐ If you are using a DAW, make sure that the local control setting in the SETTING functions is set to “Off”.

The sound coming from external audio equipment is distorted.

- ☐ The inputs of the powered monitor speakers and other equipment might be overloaded.
Adjust the volume on this instrument using the VOLUME knob.

The pitch is off.

- ☐ Is the transpose function set correctly?
- ☐ Has “MasterTuning” in the SETTING functions been set correctly, as well as the program’s octave and tune edit parameters?
- ☐ Is the scale set correctly?
See “UpperScaleTyp” (page 22) and “StyleScaleTyp” (page 22) for these settings in the SETTING functions.
- ☐ The quarter tone settings may be enabled.
Check the “Pedal Function” (page 22) in the SETTING functions.

I hear unwanted noise.

- ☐ When the volume for a part is raised, the digital signal processing may overload the signal, which could cause distortion or other noises. This is not a malfunction.
Try lowering the volume on each part button.
- ☐ You may hear distorted or noisy sounds due to input overload with certain effects. This is not a malfunction.
- ☐ In certain electrical environments, you may hear noise due to a ground loop or other factors.

The pedal switch or expression pedal connected to the FOOT CONTROLLER jack doesn't work like it should.

- ☐ The functions or polarity for the pedal might not be set correctly.
See "Pedal Function" (page 22) and "Pedal Polarity" (page 22) for these settings in the SETTING functions.
- ☐ Is the variable range of the expression pedal set correctly?
Calibrate as shown on "Calibrating an expression pedal" (page 28).


I cannot record a user song.

- ☐ The maximum number of user songs is 999.
You may need to delete one (see page 20 "Deleting a user song".)

MIDI signals sent to/from this instrument and a computer are not being correctly received.





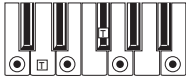




























- ☐ Is the USB cable connected correctly to the USB TO HOST port?

The instrument does not let me access the MEDIA functions.

- ☐ Is your USB flash drive correctly plugged in?
If the USB flash drive is correctly plugged in, you should see  in the display.

List of chords recognized

These are the main chords that will be recognized when the chord recognition on this instrument is set to "Fingered3".


Major 3-note 	2-note 	Major 6th 4-note 	2-note 
Major 7th 4-note 	3-note 	2-note 	
Sus 3-note 	2-note 	Sus 2 3-note 	
Dominant 7th 4-note 	3-note 	2-note 	
Dominant 7th Sus 4 4-note 	3-note 	Flat 5th 3-note 	
Dominant 7th b5 4-note 	Major 7th b5 4-note 	Major 7th Sus 4 4-note 	
Minor 3-note 	2-note 	Minor 6th 4-note 	
Minor 7th 4-note 	3-note 	Minor-Major 7th 4-note 	3-note 
Diminished 3-note 	Diminished 7th 4-note 	Diminished Major 7th 4-note 	
Minor 7th b5 4-note 			
Augmented 3-note 	Augmented 7th 4-note 	Augmented Major 7th 4-note 	

● = constituent notes of the chord

□ = can be used as tension

Specifications

Function	EK-50	
Keyboard	61 keys (velocity sensitive) Normally C2–C7 (adjustable in the range [C1...C6]–[C3...C8])	
	Touch control	Soft (light), medium (standard), hard (heavier), fixed
Sound generator	Stereo PCM sound generator	
Maximum polyphony	64 voices	
Sounds	Over 702 sounds, 41 drum kits (including GM-compatible sound sets)	
Keyboard sets	More than 170	
Effects	Accompaniment part: 2 stereo digital multi-effects Keyboard part: 2 stereo digital multi-effects	
	148 variations	
Styles	More than 280 presets	
	2 intros, 4 variations, 2 fills, 1 break, 2 endings, synchro start/stop, tap tempo	
Music styles	More than 64	
Demo songs	18	
Audio player	MP3 (44.1 kHz) WAV (44.1 kHz)	
Sequencer	Record	Real-time recording (style mode), maximum of 999 songs (approx. 100,000 notes), 12 tracks (4 keyboard parts + 8 auto-accompaniment parts), original format (can convert to SMF0)
	Playback	Supports song play (playing on the keyboard during song playback), SMF (Standard MIDI File) format 0 or 1
Scales	11 types (including user scale)	
Controls	Power button, VOLUME knob, joystick, STYLE/[MUSIC STYLE] button, SONG/[DEMO SONG] button, KEYBOARD SET/[STS] button, GRAND PIANO button, each button in the PART MUTE/[SOUND SELECT] section, SETTING/[EFFECT] button, MEDIA button, SPEAKER EQ/[SPEAKER OFF] button, [SHIFT] button, ENSEMBLE button, SPLIT button, METRONOME/[BEAT SELECT] button, TAP TEMPO/[TEMPO LOCK] button, TRANSPOSE \flat and \sharp /[OCTAVE –/+] buttons, dial, CATEGORY button, numerical buttons, + button, – button, each button in the STYLE/SONG section, each button in the SET LIST section	
Set lists	10 banks × 4	
Metronome	Tempo, beat, volume	
Tempo	30–240	
Transpose	C (–12) to C (0) to C (+12)	
Tuning	427.5–452.9 Hz	

Function	EK-50	
Input/output jacks	FOOT CONTROLLER jack	6.3 mm phone jack
	AUDIO IN jack	3.5 mm stereo mini-phone jack
	OUTPUT L/ MONO, R jacks	6.3 mm phone jack (unbalanced)
	Headphones jack	3.5 mm stereo mini-phone jack
	USB A port	TO DEVICE port: For connecting USB flash drive and controllers
	USB B port	TO HOST port: For connecting personal computers
Speaker system	Amp: 10 W × 2	
	Speakers: 120 mm double-cone speakers × 2 (bass reflex box-type)	
	Speaker EQ: 8 types	
MIDI	USB MIDI	
Display	Custom LCD with backlighting	
Power supply	AC adapter (DC12V, )	
	AA batteries (alkaline dry cells or nickel-metal-hydride batteries) × 8	
Battery life:	When using alkaline dry cells: approx. 7 hours	
Power consumption	8 W (0.1 W on standby)	
Dimensions (width × depth × height)	994 × 392 × 132 mm/39.13" × 15.43" × 5.20" (not including sheet music stand) Height with sheet music stand attached: 329 mm/12.95"	
Weight	7.5 kg/16.53 lbs. (not including sheet music stand or batteries)	
Included items	Quick Start Guide, AC adapter, sheet music stand	
Accessories (sold separately)	DS-1H damper pedal (supports half-pedaling) PS-1 pedal switch PS-3 pedal switch EXP-2 foot controller	

* Specifications and appearance are subject to change without notice for improvement.

MIDI Implementation Chart

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Change	0-16 X	0-16 X	
Mode	Default Messages Altered	X X *****	3 X X	
Note Number	True Voice	0-127 *****	0-127 0-127	*4
Velocity	Note On Note Off	O 9n, V=1-127 O 8n, V=0-127	O 9n, V=1-127 X	
After Touch	Key's Channel	X X	O O	
Pitch Bend		O	O	
Control Change	0, 32 1, 2 64 6 7, 11 10, 91, 93 71, 72, 73 74, 75 76, 77, 78 98, 99 100, 101 120, 121	O O O O O O O O O O O O	O O O O O O O O O O O O	Bank Select (MSB, LSB) Modulation Damper Data Entry (MSB) *1 Volume, Expression Pan pot, Effect 1/2 send *1 Harmony contents, EG time (Release, Attack) *1 Brightness, Decay time *1 Vibrato rate, Depth, Delay *1 NRPN (LSB, MSB) *1 RPN (LSB, MSB) *1 All sound off, Reset all Controllers *1
Program Change	True Number	O 0-127 *****	O 0-127 0-127	
System Exclusive		X	O	*2
System Common	Song Position Song Select Tune Request	X X X	X X X	
System Real Time	Clock Commands	X X	O X	*3
Aux Meassages	Local On/Off All Notes Off Active Sense System Reset	X X X X	X O (123-127) X X	*1 *1
Notes *1: EK-50 will transmits Sequencer data. *2: Includes setting of inquiry and master volume. *3: When the MIDI Clock setting of the Setting function is External, the EK-50 will recieve this message. *4: Depending on the selected program, there may be cases in which it is not possible to sound the whole range.				

Mode 1: Omni On, Poly
Mode 3: Omni Off, Poly

Mode 2: Omni On, Mono
Mode 4: Omni Off, Mono

O: Yes
X: No

Consult your local Korg distributor for more information on MIDI implementation.

KORG INC.

4015-2 Yanokuchi, Inagi-City, Tokyo 206-0812 JAPAN

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www.korg.com
Published 10/2018