

Electone®

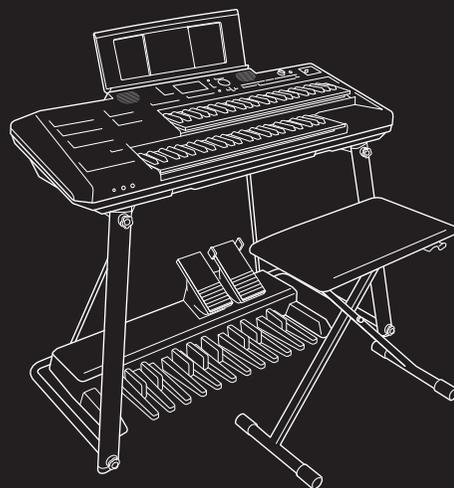
ELA-1

Owner's Manual

Thank you for purchasing this Yamaha Electone.
This instrument has a wide selection of Voices and versatile functions which gives you the potential of highly entertaining performance. We recommend that you read this manual carefully so that you can fully take advantage of the advanced and convenient functions of the instrument. We also recommend that you keep this manual in a safe and handy place for future reference.

Before using the instrument, be sure to read "PRECAUTIONS" on pages 2 – 3.

For information on assembling the instrument, refer to the instructions on pages 106 – 110.



PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

Please keep this manual in a safe and handy place for future reference.

For the AC adaptor



WARNING

- This AC adaptor is designed for use with only Yamaha electronic instruments. Do not use for any other purpose.
- Indoor use only. Do not use in any wet environments.



CAUTION

- When setting up, make sure that the AC outlet is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch of the instrument and disconnect the AC adaptor from the outlet. When the AC adaptor is connected to the AC outlet, keep in mind that electricity is flowing at the minimum level, even if the power switch is turned off. When you are not using the instrument for a long time, make sure to unplug the power cord from the wall AC outlet.

For the instrument



WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/AC adaptor

- Do not place the power cord near heat sources such as heaters or radiators. Also, do not excessively bend or otherwise damage the cord, or place heavy objects on it.
- Only use the voltage specified as correct for the instrument. The required voltage is printed on the name plate of the instrument.
- Use the specified adaptor (page 113) only. Using the wrong adaptor can result in damage to the instrument or overheating.
- Use only the supplied power cord/plug.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.

Do not open

- This instrument contains no user-serviceable parts. Do not open the instrument or attempt to disassemble or modify the internal components in any way. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

Water warning

- Do not expose the instrument to rain, use it near water or in damp or wet conditions, or place on it any containers (such as vases, bottles or glasses) containing liquids which might spill into any openings. If any liquid such as water seeps into the instrument, turn off the power immediately and unplug the power cord from the AC outlet. Then have the instrument inspected by qualified Yamaha service personnel.
- Never insert or remove an electric plug with wet hands.

Fire warning

- Do not put burning items, such as candles, on the unit. A burning item may fall over and cause a fire.

Using the bench

- Do not place the bench in an unstable position where it might accidentally fall over.
- Do not play carelessly with or stand on the bench. Using it as a tool or stepladder or for any other purpose might result in accident or injury.
- Only one person should sit on the bench at a time, in order to prevent the possibility of accident or injury.
- Keep special watch over any small children so that they don't fall off the rear of the bench. Since the bench does not have a backrest, unsupervised use may result in accident or injury.



CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the instrument or other property. These precautions include, but are not limited to, the following:

Power supply/AC adaptor

- Do not connect the instrument to an electrical outlet using a multiple-connector. Doing so can result in lower sound quality, or possibly cause overheating in the outlet.
- When removing the electric plug from the instrument or an outlet, always hold the plug itself and not the cord. Pulling by the cord can damage it.
- Remove the electric plug from the outlet when the instrument is not to be used for extended periods of time, or during electrical storms.

Assembly

- Assemble the stand and bench in the proper sequence by following the assembly instructions in this manual (page 106). Also, make sure to tighten the bolts regularly. Failure to do so might result in damage to the instrument or even injury.

Location

- Do not place the instrument in an unstable position where it might accidentally fall over.
- When transporting or moving the instrument, always use two or more people. Attempting to lift the instrument by yourself may damage your back, result in other injury, or cause damage to the instrument itself.
- Before moving the instrument, remove all connected cables, to prevent damage to the cables or injury to anyone who might trip over them.
- Do not move the stand when the Main unit is placed on it. Doing so could cause the Main unit to drop off from the stand, resulting in damage to the instrument or other property, and possibly causing injury to you or others.
- When setting up the product, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the

If you notice any abnormality

- When one of the following problems occur, immediately turn off the power switch and disconnect the electric plug from the outlet. Then have the device inspected by Yamaha service personnel.
 - The power cord or plug becomes frayed or damaged.
 - It emits unusual smells or smoke.
 - Some object has been dropped into the instrument.
 - There is a sudden loss of sound during use of the instrument.
 - If any cracks or breakages exist on the instrument.

outlet. Even when the power switch is turned off, electricity is still flowing to the product at the minimum level. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC outlet.

- Use only the provided stand. Failure to do so could cause damage to the internal components or result in the instrument falling over.

Connections

- Before connecting the instrument to other electronic components, turn off the power for all components. Before turning the power on or off for all components, set all volume levels to minimum.
- Be sure to set the volumes of all components at their minimum levels and gradually raise the volume controls while playing the instrument to set the desired listening level.

Handling

- Do not insert a finger or hand in any gaps on the instrument.
- Never insert or drop paper, metallic, or other objects into the gaps on the panel or keyboard. This could cause physical injury to you or others, damage to the instrument or other property, or operational failure.
- Do not rest your weight on, or place heavy objects on the instrument, and do not use excessive force on the buttons, switches or connectors.
- Do not use the instrument/device or headphones for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.

Using the bench

- Do not place your hand between moving parts. Otherwise, your hand could be pinched between the parts, possibly resulting in injury.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the instrument, or data that is lost or destroyed.

Always turn the power off when the instrument is not in use.

Even when the [] (Standby/On) switch is in standby status (display is off), electricity is still flowing to the instrument at the minimum level.

When you are not using the instrument for a long time, make sure you unplug the power cord from the wall AC outlet.

NOTICE

To avoid the possibility of malfunction/ damage to the product, damage to data, or damage to other property, follow the notices below.

■ Handling

- Do not use the instrument in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Otherwise, the instrument, TV, or radio may generate noise.
- When you use the instrument along with an app on your smart device such as a smartphone or tablet, we recommend that you enable "Airplane Mode" on that device in order to avoid noise caused by communication.
- Do not expose the instrument to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration, damage to the internal components or unstable operation. (Verified operating temperature range: 5° – 40°C, or 41° – 104°F.)
- Do not place vinyl, plastic or rubber objects on the instrument, since this might discolor the panel or keyboard.

■ Maintenance

- When cleaning the instrument, use a soft cloth. Do not use paint thinners, solvents, alcohol, cleaning fluids, or chemical-impregnated wiping cloths.
- When cleaning the bench, use a soft and dry cloth (or, if necessary, one that is slightly damp). Do not use paint thinners, solvents, alcohol, cleaning fluids, or chemical-impregnated wiping cloths.

■ Saving data

- Edited Song/Style/Multi Pad/Voice/MIDI setup data, etc. are lost when you turn off the power to the instrument. This also occurs when the power is turned off by the Auto Power Off function (page 14). Save the data to the instrument, or to USB flash drive (page 26).
- You can back up the data and settings of this instrument to the USB flash drive as a backup file (page 32), as well as restore a backup file to the instrument. To protect against data loss due to some failure, an operation mistake, etc., save your important data to a USB flash drive.
- To protect against data loss through USB flash drive damage, we recommend that you save your important data onto spare USB flash drive or an external device such as a computer as backup data.

Information

■ About copyrights

- Copying of the commercially available musical data including but not limited to MIDI data and/or audio data is strictly prohibited except for your personal use.
- This product incorporates and bundles contents in which Yamaha owns copyrights or with respect to which Yamaha has license to use others' copyrights. Due to copyright laws and other relevant laws, you are NOT allowed to distribute media in which these contents are saved or recorded and remain virtually the same or very similar to those in the product.
 - * The contents described above include a computer program, Accompaniment Style data, MIDI data, WAVE data, voice recording data, a score, score data, etc.
 - * You are allowed to distribute medium in which your performance or music production using these contents is recorded, and the permission of Yamaha Corporation is not required in such cases.

■ About functions/data bundled with the instrument

- Some of the preset songs have been edited for length or arrangement, and may not be exactly the same as the original.
- This device is capable of using various types/formats of music data by optimizing them to the proper format music data for use with the device in advance. As a result, this device may not play them back precisely as their producers or composers originally intended.
- The bitmap fonts used in this instrument have been provided by and are the property of Ricoh Co., Ltd.

■ About this manual

- The illustrations and LCD screens as shown in this manual are for instructional purposes only, and may appear somewhat different from those on your instrument.
- Windows is a registered trademark of Microsoft® Corporation in the United States and other countries.
- Electone is a trademark of Yamaha Corporation.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

The model number, serial number, power requirements, etc., may be found on or near the name plate, which is at the bottom of the unit. You should note this serial number in the space provided below and retain this manual as a permanent record of your purchase to aid identification in the event of theft.

Model No.

Serial No.



About the Manuals

This instrument has the following documents and instructional materials.

Included Documents



Owner's Manual (this book)

Explains the basic operations and functions of this instrument. Please read this manual first.

Online Materials (Downloadable from the web)



Reference Manual

Explains advanced features of the instrument, not explained in the Owner's Manual. For example, you can learn how to create original Styles, Songs or Multi Pads, or find detailed explanations of specific parameters.

Each chapter in the Reference Manual corresponds to the relevant chapters in the Owner's Manual.



Data List

Contains various important preset content lists such as Voices, Styles, Effects, as well as MIDI-related information.



Smart Device Connection Manual

Explains how to connect the instrument to a smart device such as smartphone or tablet, etc.



Computer-related Operations

Includes instructions on connecting this instrument to a computer, and operations related to transferring files and MIDI data.

To obtain these manuals, access the Yamaha Downloads, enter the model name for searching the desired files.

Yamaha Downloads

<https://download.yamaha.com/>

Components and Accessories

- Main unit
- Stand (page 106)
- Bench (page 110)
- Accessories
 - Owner's Manual (this book)
 - Online Member Product Registration
 - Music rest (page 109)
- Pedal unit (page 108) with corresponding Owner's Manual (Separately packaged.)

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Welcome to the world of the Electone!

Extraordinarily expressive and realistic Voices

page 34

This instrument features various realistic instrumental Voices from all over the world, including piano, organ, guitar, strings, brass, wind instruments and more. You can play each of the Upper Keyboard, Lower Keyboard, and Pedalboard in different Voices to layer them.

Super Articulation Voices (page 37)

Super Articulation Voices realistically recreate characteristic instrument sounds, such as the sound of finger slides on guitar and the breath noises of saxophone, simply by how you play or by pressing a Footswitch.

Organ Flutes (page 38)

You can create your original organ sounds by adjusting the footage lever, just like on traditional organs.



Play with a backing band accompaniment

page 44

This instrument provides you with a wide variety of rhythm patterns or accompaniment Styles that matches the various music genres. Simply playing chords automatically triggers and controls the auto accompaniment backing, and puts an entire backing band behind you! You can change arrangements on the fly, instantly selecting different rhythm variations and breaks in real time—including Intro, Ending, and Fill-in—during your performance.

Unison & Accent (page 50)

With the Unison function, you can play a melody, and have it reproduced in unison (i.e., the same melody is played by multiple instruments) or tutti (i.e., all parts are played at the same time)—expressively enhancing your performance. With the Accent function, accents such as crash cymbals are automatically generated in the Style playback according to your playing strength.



Sing along with Song playback or your own performance

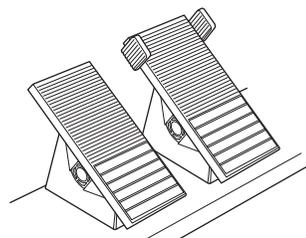
page 81

By connecting a microphone, you can hear your vocals through the built-in speakers, and can also record them with high sound quality. Moreover, since the lyrics (page 66) or music scores (page 65) of the Song are shown on the display, you can easily enjoy singing along with your keyboard performance or Song playback.



Versatile real-time controllers — Live Expression Control page 57

Various functions can be assigned to each of the Expression Pedal, Second Expression Pedal and two Footswitches, and this feature lets you control your performance in real-time by using your foot without interruption. For example, you can change the volume balance among the parts, pitch, EQ, etc., and can also add short phrases by using the Multi Pad function—allowing you to easily add variations to your performance to match the atmosphere or the mood.



Audio playing and recording page 76

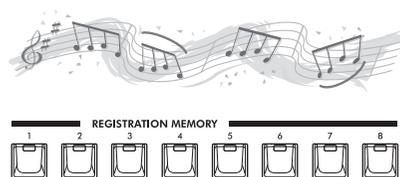
Audio files (WAV format) saved to a USB flash drive can be played back on the instrument. You can also record your performance as audio files (WAV format) to a USB flash drive—making it easy to edit your recordings on a computer, and burn your own CDs. Moreover, the compatible smart device app (page 97) allows you to record audio and video of your performances and share them over the Internet.



Saving and recalling your favorite settings page 83

The Registration Memory function allows you to save the panel settings such as Voices for each keyboard part, Styles, effects, etc. all together, and call them up instantly during your performance. The panel settings can be called up by simply pressing the panel button or by using the Footswitch (if the Registration Sequence is pre-programmed).

Each of the REGISTRATION MEMORY [1] – [8] buttons contains the basic settings by default. Moreover, the preset Playlist provides the links to call up Registration Memory settings in various music genres. Try it out!



These are just a few of the many functions that enhance your musical enjoyment and expand your creative and performance possibilities. Try them out and enjoy your ELA-1!

**Want to learn more about the ELA-1's features?
Press the [7] or [8] button to start the demonstration.**

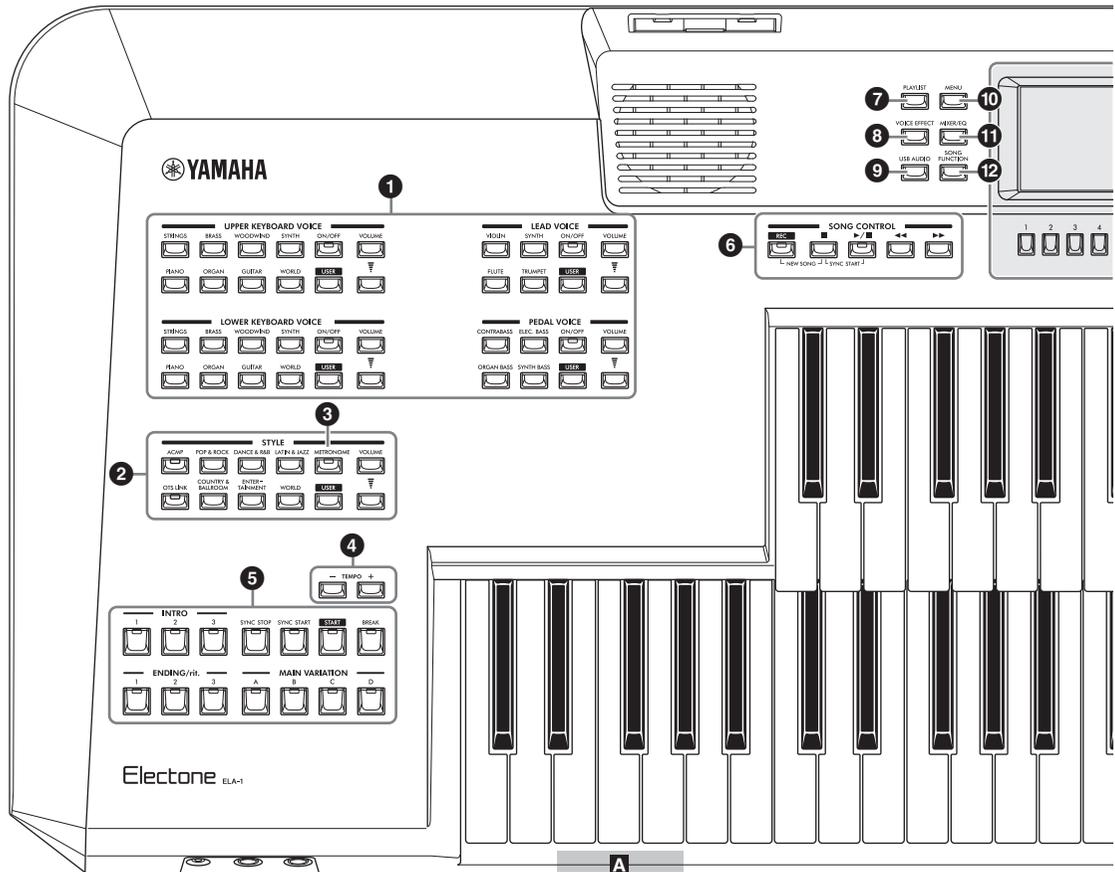
To stop the demonstration, press the [EXIT] button.

*The functions of the bottom area of the Main display can be changed as desired (page 17).

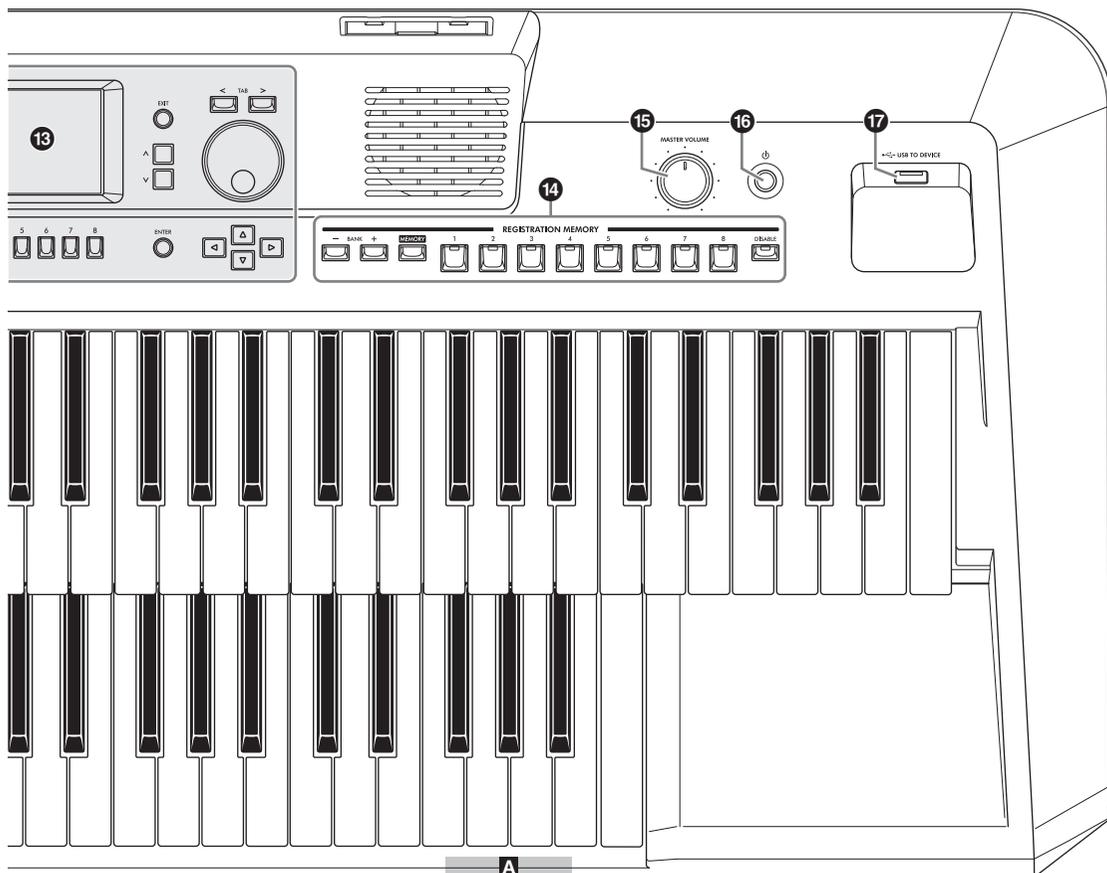


Panel Controls

Top Panel



- ❶ VOICE buttons page 34**
For playing with various sounds on each keyboard part (Upper Keyboard Voice, Lower Keyboard Voice, Lead Voice and Pedal Voice).
- ❷ STYLE buttons page 44**
For playing back a rhythm pattern or adding auto accompaniment to your keyboard performance.
- ❸ [METRONOME] button page 31**
Turns the metronome on or off.
- ❹ TEMPO [+]/[-] buttons page 31**
Controls the tempo for Style, Song and Metronome playback.
- ❺ Style control buttons page 46**
For controlling Style playback.
- ❻ SONG CONTROL buttons page 64**
For controlling Song playback.
- ❼ [PLAYLIST] button page 86**
Calls up the display for managing your repertoire.
- ❽ [VOICE EFFECT] button page 42**
Calls up the display which indicates the current effect settings for each Voice part.
- ❾ [USB AUDIO] button page 76**
Calls up the display for playing back audio files and recording your performance in audio format.
- ❿ [MENU] button page 100**
Calls up the display for making advanced settings and creating your original Styles, Multi Pads and Songs.
- ⓫ [MIXER/EQ] button page 91**
Calls up the display for adjusting the volume and tonal balance.
- ⓬ [SONG FUNCTION] button page 62**
Calls up the operation window for selecting Songs etc.



13 LCD and related controls page 19

Indicates the current panel settings and allows you to select or change the settings.

14 REGISTRATION MEMORY buttons page 84

For registering and recalling panel setups.

15 [MASTER VOLUME] dial page 14

Adjusts the overall volume.

16 [⏻](Standby/On) switch page 13

Turns on the instrument's power or sets to standby.

17 [USB TO DEVICE] terminal page 94

For connecting a USB flash drive or USB wireless LAN adaptor. Before using this terminal, be sure to read the precautions on page 94.

Panel Setup (Panel Settings)

By using the controls on the panel, you can make various settings as described here. These settings of the instrument are together referred to as "panel setup" or "panel settings" in this manual.

A Bass reflex ports

The ports (holes) on the front side of this instrument are for bass reflex sounds. Do not insert any objects (such as a coin, pen, card, handkerchief, etc.) into them.

⚠ CAUTION

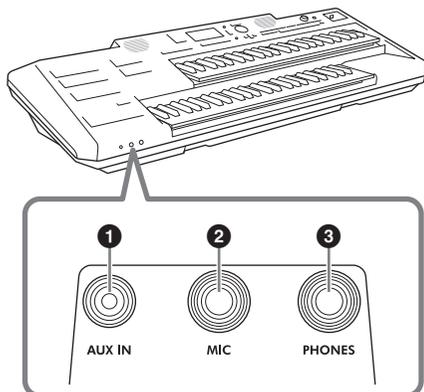
Do not insert your fingers or hands into the ports when carrying this instrument to prevent injury.

Overview



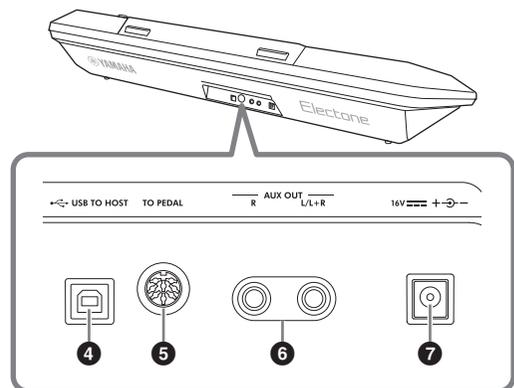
Jacks and Terminals

Front panel



- ❶ [AUX IN] jack.....page 98
- ❷ [MIC] jackpage 81
- ❸ [PHONES] jackpage 15

Rear panel

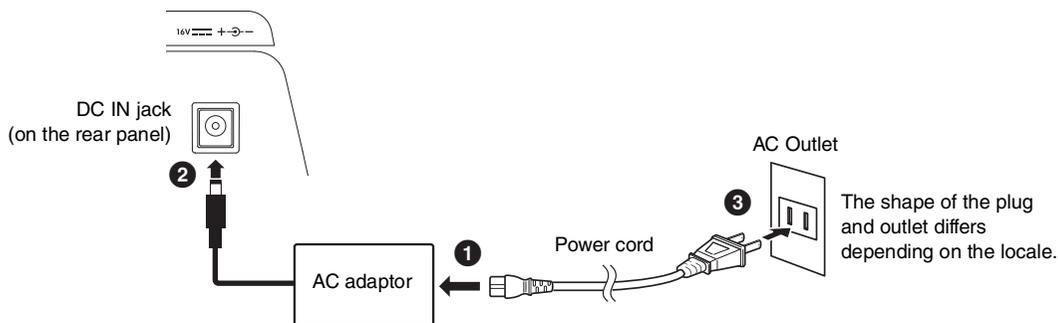


- ❹ [USB TO HOST] terminalpages 96, 97
- ❺ [TO PEDAL] jackpage 109
- ❻ AUX OUT [R]/[L/L+R] jacks.....page 99
- ❼ DC IN jackpage 13

Starting Up

Power Supply

Connect the plugs of the AC adaptor in the order shown in the illustration.



⚠ WARNING

Use the specified AC adaptor (page 113) only. Using the wrong AC adaptor can result in damage to the instrument or overheating.

⚠ CAUTION

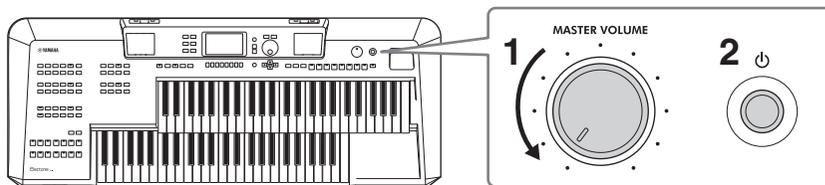
When setting up the product, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn the power off and disconnect the plug from the outlet.

NOTE

When disconnecting the power cord, first turn off the power, and then follow this procedure in reverse order.

Turning the Power On/Off

- 1 Turn down the [MASTER VOLUME] dial to the minimum position.



- 2 Press the [⏻] (Standby/On) switch to turn the power on.

After a while, the Main display appears.

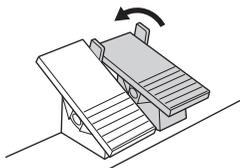
NOTICE

Until the Main display appears, never attempt any other operations, such as pressing the keys, buttons or pedals. Doing so may cause the instrument to malfunction.

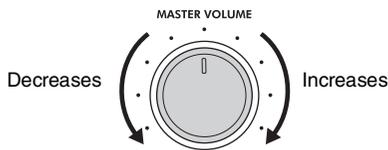
3 Adjust the volume of the entire sound.

3-1 Press the Expression Pedal all the way to the back with your foot (as shown).

By default, the function of the Expression Pedal is set to volume controller, and this is the maximum position.



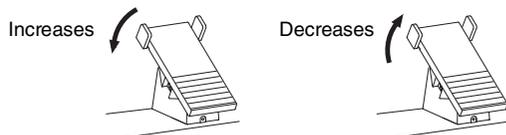
3-2 Adjust the maximum volume as desired by using the [MASTER VOLUME] dial while playing the keyboards and the Pedalboard.



NOTE

In case the Pedalboard does not sound, check the Troubleshooting section on page 104.

3-3 Adjust the volume by letting up or pressing down the Expression Pedal with your foot as you play. The Expression Pedal lets you adjust the volume in a range from the minimum (mute) to the volume you've set by the [MASTER VOLUME] dial.



CAUTION

Do not use the instrument for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss.

4 After you finish using the instrument, turn off the power by pressing the [⏻] (Standby/On) switch for about a second.

CAUTION

Even when the [⏻] (Standby/On) switch is in standby status, electricity is still flowing to the instrument at the minimum level. Remove the electric plug from the outlet when the instrument is not to be used for extended periods of time, or during electrical storms.

NOTICE

While recording or editing, or while a message is displayed, the power cannot be turned off even if you press the [⏻] (Standby/On) switch. If you want to turn off the power, press the [⏻] (Standby/On) switch after recording, editing, or after the message has disappeared. If you need to force-quit the instrument, hold down the [⏻] (Standby/On) switch for longer than three seconds. Note that the force-quit operation might cause data loss and damage to the instrument.

Auto Power Off function

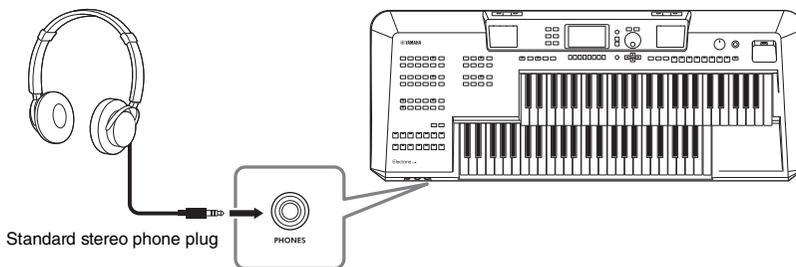
To prevent unnecessary power consumption, this instrument features an Auto Power Off function that automatically turns the power off if the instrument is not operated for a specified period of time. This function is disabled by default. For instructions on how to enable this function, refer to page 15.

Intelligent Acoustic Control (IAC)

IAC is an auto-tone control function that performs adjustments depending on the overall volume of the instrument. Even when the volume is low, it permits both low sounds and high sounds to be clearly heard. IAC affects only the sound output of the instrument speakers. You can turn the IAC function on or off, although the default setting for this function is on. This can be set on the “**Configuration**” tab in the “**Utility**” display called up via the [MENU] button (page 100).

Using the Headphones

Connect a pair of headphones to the [PHONES] jack on the front side of the instrument.



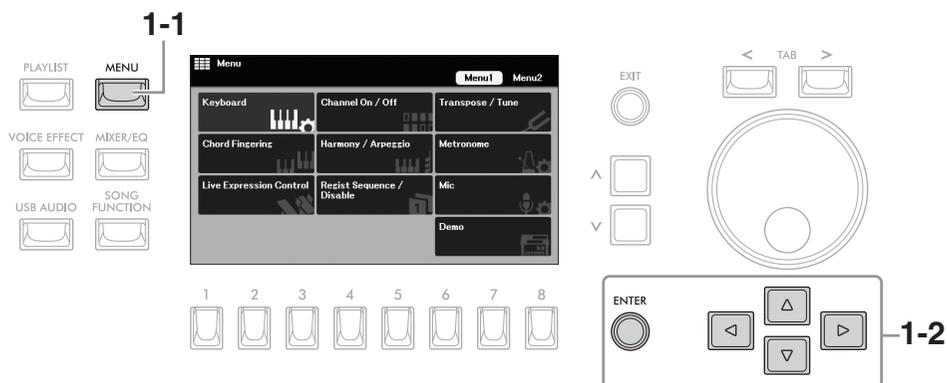
CAUTION

Do not listen with the headphones at high volume for long periods of time. Doing so may cause hearing loss.

Making Basic Settings

You can make settings of the language shown on the display and the Auto Power Off function. You can also check the firmware version of this instrument on the same setting display below.

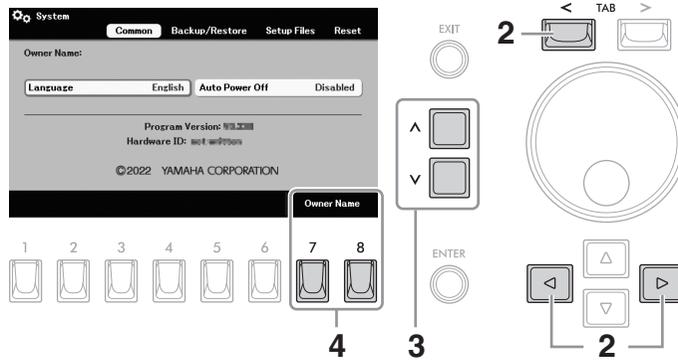
1 Call up the operation display.

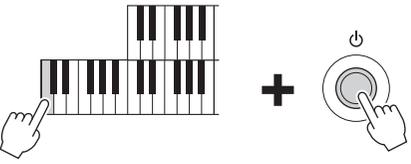


1-1 Press the [MENU] button to call up the “Menu” display.

1-2 Move the cursor to “System” by using the Cursor buttons [▲][▼][◀][▶], and then press the [ENTER] button.

- 2** Press the TAB [◀] button to select the “Common” tab, and then use the Cursor buttons [◀][▶] to move the cursor to the desired item.



Language	Determines the language (“English” or “Chinese”) used in the display for messages.
Auto Power Off	<p>Determines the amount of time that elapses before the power is automatically turned off by the Auto Power Off function (page 14). To disable Auto Power Off, select “Disabled” here.</p> <p>NOTICE Any data which is not saved via the Save operation will be lost if the power automatically turns off. Make sure to save your data before this happens.</p> <p>■ Disabling Auto Power Off (simple method) Turn the power on while holding down the lowest key on the Lower Keyboard. A message appears briefly, then the instrument starts up with the Auto Power Off function disabled.</p> 

- 3** Use the [^]/[v] buttons to select the value.

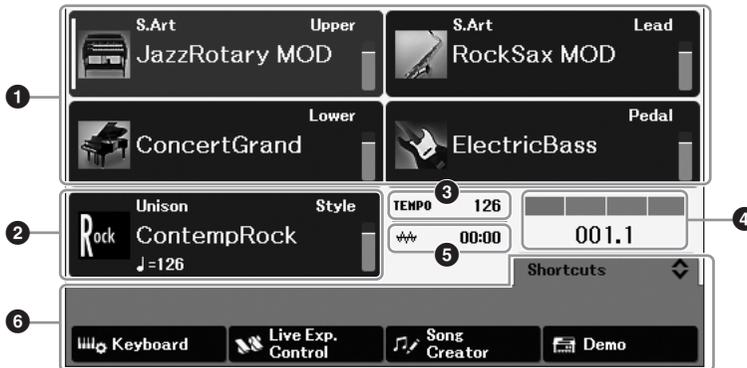
- 4** If desired, press one of the [7]/[8] (Owner Name) buttons to input your name which appears in the opening display (called up when the power is turned on).

For instructions on entering characters, refer to page 30.
To return to the previous display, press the [EXIT] button.

Basic Operations

Main Display Configuration

The Main display appears when the power is turned on, and can be quickly called up by pressing the [MENU] and [EXIT] buttons simultaneously. This display provides comprehensive at-a-glance information on the current settings.



1 Voice area

Indicates the currently selected Voice names for each of the keyboard parts, Upper Keyboard Voice, Lead Voice, Lower Keyboard Voice and Pedal Voice (page 34). On/off status and volume for each Voice are indicated at the right. For the Lead Voice and Pedal Voice, the assigned keyboard parts to play these Voices are indicated here.

2 Style area

Indicates the currently selected Style name (page 44). When the [ACMP] button is turned on, the detected chord during your keyboard performance will be displayed. When the Song containing the chord data is played back, the current chord name will be displayed.

3 Tempo area

Indicates the current tempo in Style or Song playback.

4 Beat/Bar

Displays the current position (beat/bar) in Style playback or Song playback.

5 Audio file area

Indicates the elapsed playback time of the current Audio file (page 76). During audio recording, the "REC" icon flashes here.

6 Quick Access area

Allows you to access various functions quickly. You can switch the Quick Access area among the following four types by using the [Λ]/[V] buttons on the Main display.

• Regist Sequence



For confirming the currently selected Registration Bank name (page 84), and for using the Registration Sequence function (see the Reference Manual on the website, Chapter 8).

- **Shortcuts**



For registering your desired functions as shortcuts to call them up instantly (page 24).

- **Live Exp. Control**



For confirming or assigning the functions for each of the Expression Pedals and Footswitches (page 58).

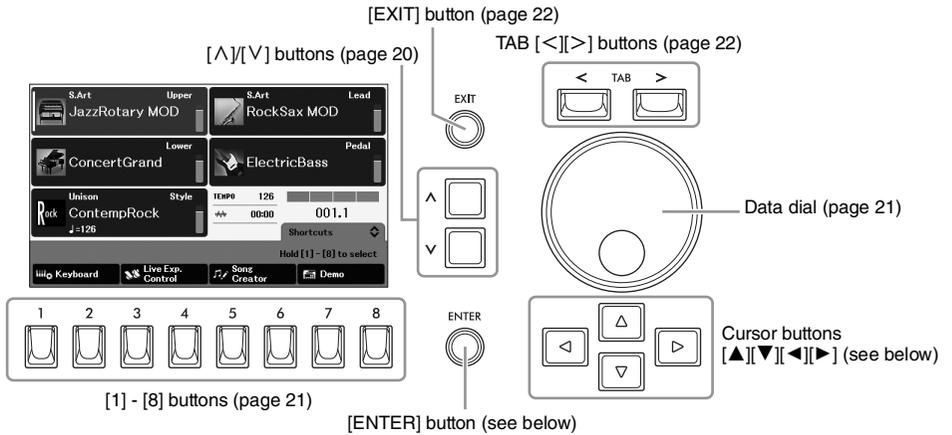
- **Multi Pad**



For using the Multi Pad function (page 59).

Display-based Controls

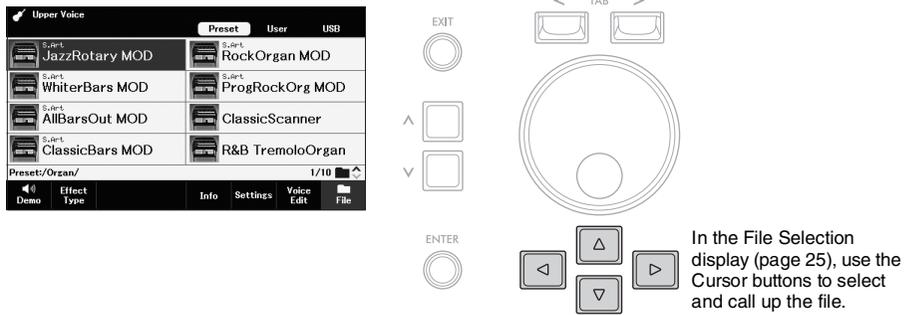
The items shown in the LCD can be selected or changed by the controls around the display.



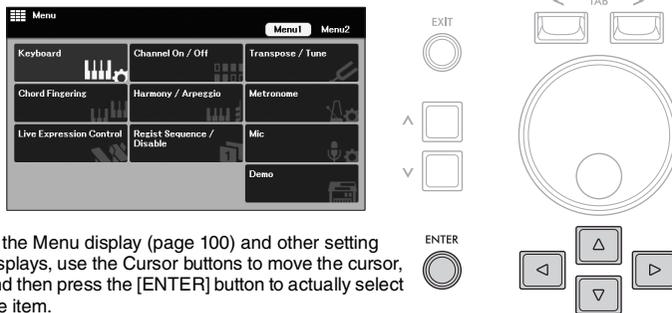
Cursor buttons [▲][▼][◀][▶] and [ENTER] button

The Cursor buttons are used to move the on-display cursor. There are two types of display. One is the type in which the item is selected (and called up) only by moving the cursor, and the other is the type in which you need to press the [ENTER] button after moving the cursor to actually call up the item.

■ Example 1



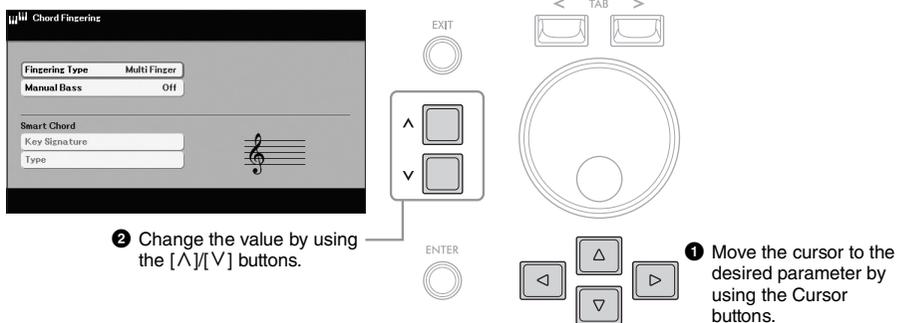
■ Example 2



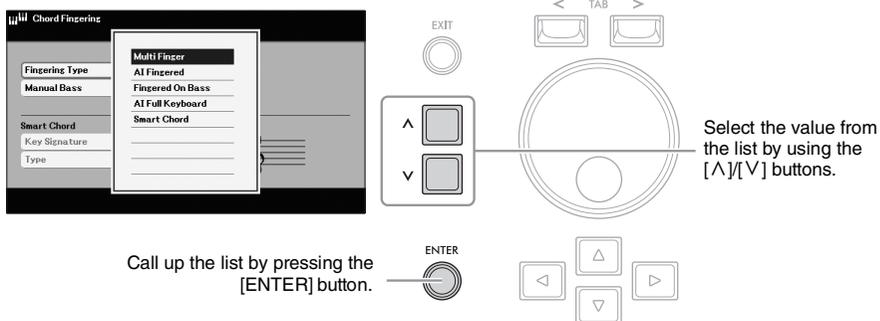
[^]/[v] buttons

The [^]/[v] buttons are used to change or adjust the value of the selected parameter. Move the cursor to the desired parameter by using the Cursor buttons [▲][▼][◀][▶], and then use the [^]/[v] buttons to change the value. Depending on the selected parameter, pressing the [ENTER] button can call up the list of the values.

■ Changing parameter values



■ Selecting a value from the list (if the list exists)



NOTE

To reset the selected parameter value to its default, press both the [^] and [v] buttons simultaneously.

The [^]/[v] buttons can also be used in the following ways.

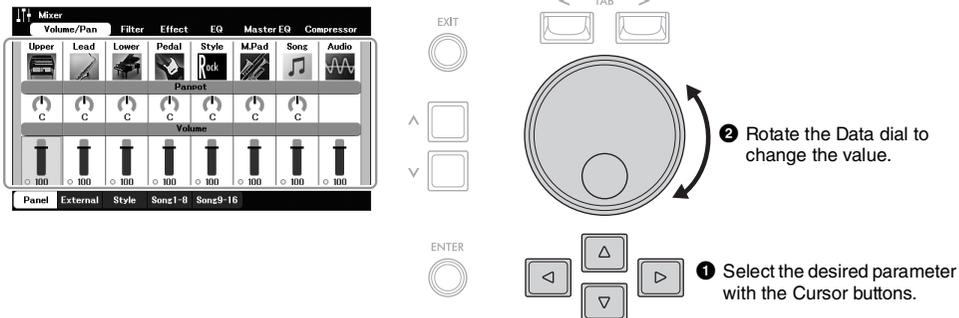
- Switching the menu of the Quick Access area on the Main display (page 17)
- Selecting the next higher or lower folder in the File Selection displays (page 25)

Data dial

Depending on the selected display, the Data dial can be used in the following two ways.

■ Changing parameter values

You can conveniently use the Data dial to change the value of parameters you selected with the Cursor buttons.



This convenient technique also works well with pop-up parameters such as Tempo and Transpose. Simply press the appropriate button (ex., TEMPO [+]), and then rotate the Data dial to set the value.

■ Selecting content files (Voice, Style, Song, and so on)

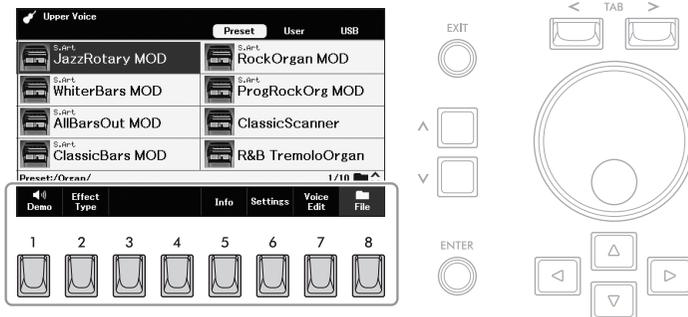
On the File Selection displays (page 25), rotate the Data dial to move the cursor, and then press the [ENTER] button to actually select and call up the file.

NOTE

In most procedures when selecting the file or item described throughout this manual, the Cursor buttons [▲][▼][◀][▶] are used, though the Data dial may also conveniently be used.

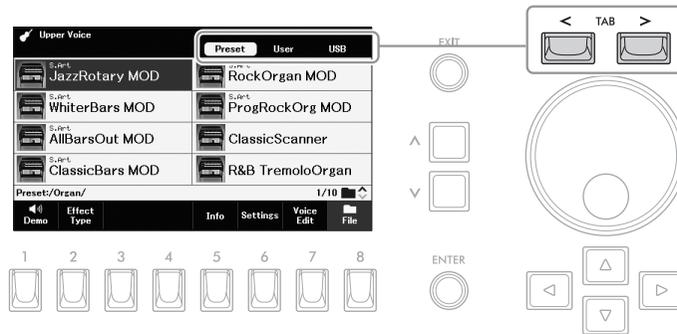
[1] – [8] buttons

The [1] – [8] buttons are used to make selections for functions shown directly above them. You can operate the function or call up the window for the function assigned to the [1] – [8] buttons by pressing these buttons.



TAB [**<**][**>**] buttons

These buttons are used mainly to change the pages of displays that have “tabs” at the top.



[EXIT] button

Pressing the [EXIT] button returns to the previously indicated display. Pressing the [EXIT] button repeatedly returns to the default Main display (page 17).



Instruction Conventions in this Manual

Throughout this manual, instructions with multiple steps are given in convenient shorthand, with arrows indicating the proper sequence.

Example:

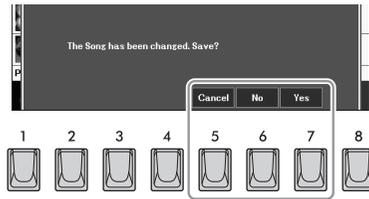
[MENU] → Cursor buttons [**▲**][**▼**][**◀**][**▶**] **System**, [ENTER] → TAB [**<**][**>**] **Backup/Restore**

The example above describes a three-step operation:

- 1) Press the [MENU] button.
- 2) Move the cursor to “**System**” by using the Cursor buttons [**▲**][**▼**][**◀**][**▶**], and then press the [ENTER] button.
- 3) Use the TAB [**<**][**>**] buttons to select the “**Backup/Restore**” tab.

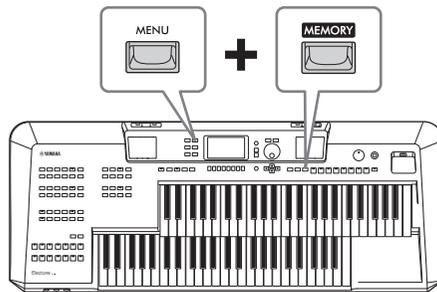
Messages Shown in the Display

A message (information or confirmation dialog) sometimes appears on the display to facilitate operation. When the message appears, press one of the [1] – [8] buttons corresponding to the message.



Calling Up the Desired Display Instantly — Direct Access

With the convenient Direct Access function, you can instantly call up the desired display. While holding down the [MENU] button, press the button (or move the Second Expression Pedal or Footswitches) corresponding to the desired display. For example, pressing the [MENU] button and the [MEMORY] button simultaneously calls up the display in which the Registration Memory information (page 84) can be confirmed.



For the applicable displays, refer to the “Direct Access Chart” in the Data List on the website.

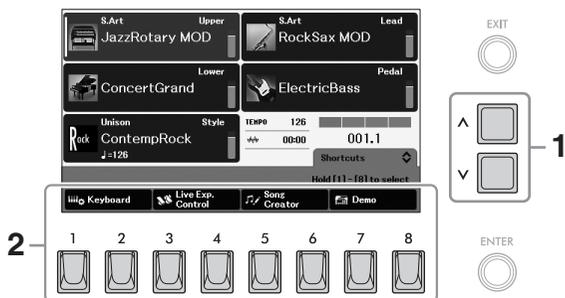
Customizing the Shortcuts on the Main Display

You can replace the four shortcuts in the Quick Access area at the bottom of the Main display with your desired functions from the Menu (page 101). This allows you to quickly call up often-used functions from the Main display.

1 On the Main display, use the [^]/[v] buttons to call up “Shortcuts” in the Quick Access area.

NOTE

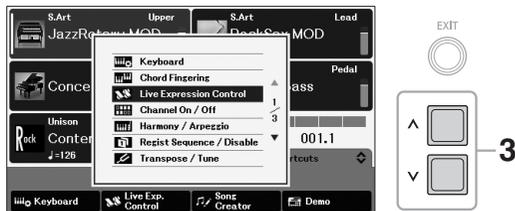
The Main display can be called up by pressing the [MENU] and [EXIT] buttons simultaneously.



2 Press and hold one of the [1] – [8] buttons, which corresponds to the function to be replaced.

The function list equivalent to the functions in the Menu (page 101) appears.

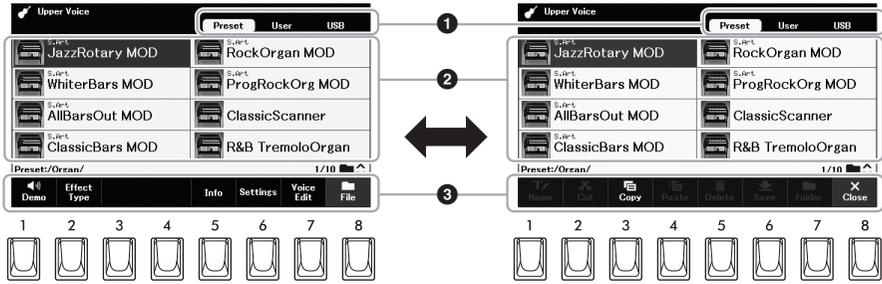
3 Use the [^]/[v] buttons to select the desired function.



The function list is closed automatically, and the selected function appears above the button you pressed in step 2, allowing you to call up the function instantly.

File Selection Display Configuration

The File Selection display is for selecting Voices, Styles, Songs, Multi Pads and other data (files). The File Selection display appears when you press one of the Voice or Style category buttons, etc.



1 Location (drive) of data

- **Preset** Location where pre-programmed (preset) data is stored.
- **User** Location where recorded or edited data is saved. Installed Expansion Pack data (page 43) are also saved here in the **"Expansion"** folder.
- **USB** Location where data saved on the USB flash drive is shown. The recorded or edited data can also be saved here. This appears only when a USB flash drive is connected to the [USB TO DEVICE] terminal.

NOTE
Before using a USB flash drive, be sure to read "Connecting USB Devices" on page 94.

2 Selectable data (files)

The files that can be selected on this display are shown. If two or more pages exist, you can call up another page by holding one of the Cursor buttons ([▶] or [▼] to the next page, and [◀] or [▲] to the previous one) continuously. The current page number and total pages are indicated at the right bottom corner.

3 File/Close

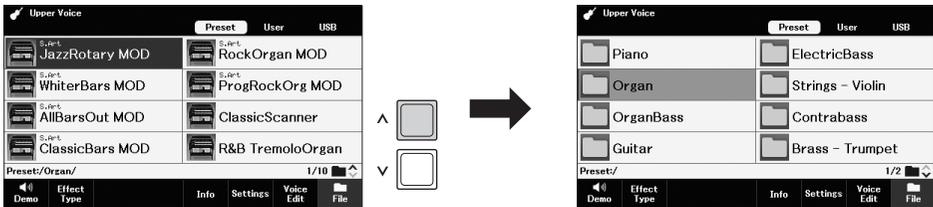
At the bottom of the File Selection display, you can toggle the indication between **"File"** and **"Close"** by pressing the [8] button. Pressing the [8] button when **"File"** is shown calls up the File Management menu (page 26), while pressing the [8] button when **"Close"** is shown closes the File Management menu and calls up the function names related to the current file (Voice, Style, Song, Multi Pads, etc.).

Calling up a higher or lower level folder

When files are in a folder, a folder icon is shown at the right corner, allowing you to call up the higher or lower level folder by using the [▲]/[▼] buttons.

Example of the Preset Voice Selection display

The Preset Voices are categorized and contained in appropriate folders.



This display shows the Voices in a folder.

The next highest level (folder) is shown. Each folder contains appropriately categorized Voices.

File Management

You can save, name, copy, move, delete files, and you can create folders to manage the files with the buttons located lower area in the File Selection display. For information on the File Selection display, refer to page 25.

NOTE

Before using a USB flash drive, be sure to read "Connecting USB Devices" on page 94.

Restrictions for protected files

Protected files, such as most commercially available data, are copy protected to prevent illegal copying or accidental erasure. If you select such a file in the USB flash drive, an indication appears above the file name, and you can call up the relevant explanation by pressing the [4] (**Security**) button.

Saving a File

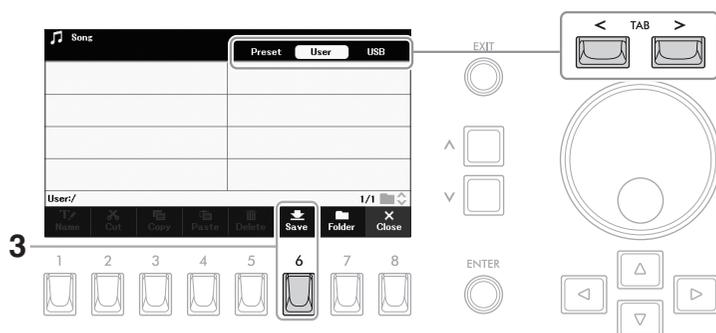
You can save your original data (such as Songs you've recorded) as a file to the instrument or USB flash drive.

- 1 In the File Selection display, use the TAB [\leftarrow][\rightarrow] buttons to select the tab ("User" or "USB") to which you want to save the data.**

If you want to save the data within an existing folder, also select the folder here.

NOTE

Files cannot be saved to the "Preset" tab or the "Expansion" folder (page 43) in the "User" tab.



- 2 Make sure that "Save" is shown at the bottom of the display.**

If it is not shown, press the [8] (**File**) button to call it up.

- 3 Press the [6] (Save) button.**

The Character Entry window is called up.

- 4 Enter the file name (page 30).**

Pressing the [ENTER] button in the Character Entry window saves the file, and the file will be automatically located at the appropriate position among the files in alphabetical order in the File Selection display.

NOTE

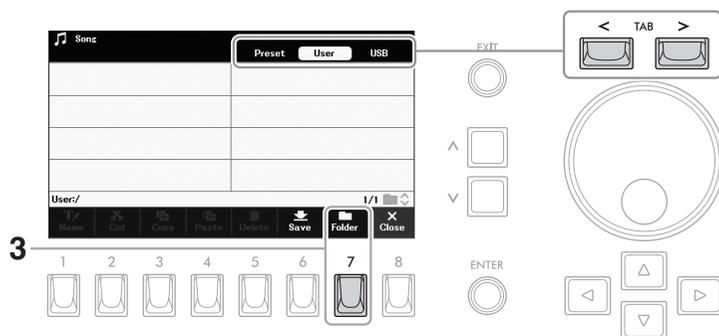
- To cancel the Save operation, press the [EXIT] button in the Character Entry window.
- In the "User" tab, the maximum total number of files which can be stored differs depending on the file size and the length of the file names.

Creating a New Folder

You can create folders to make it easier to find your original data.

1 In the File Selection display, use the TAB [\leftarrow][\rightarrow] buttons to select the tab (“User” or “USB”) to which you want to create a new folder.

If you want to create a new folder within an existing folder, select the desired folder here.



NOTE

- A new folder cannot be made in the “Preset” tab or the “Expansion” folder (page 43) in the “User” tab.
- The maximum number of files/folders which can be saved in a folder is 500.
- In the “User” tab, no more than three folder levels can be created. The maximum total number of files/folders which can be saved differs depending on the file size and the length of the file/folder names.

2 Make sure that “Folder” is shown at the bottom of the display.

If it is not shown, press the [8] (File) button to call it up.

3 Press the [7] (Folder) button.

The Character Entry window is called up.

4 Enter the name of the new folder (page 30).

The created folder will be automatically located at the appropriate position among the folders in alphabetical order.

NOTICE

Do not use “Expansion” for the folder name. Otherwise, all data contained in the “Expansion” folder will be lost when an Expansion Pack (page 43) is installed.

NOTE

To cancel creating a new folder, press the [EXIT] button in the Character Entry window.

Renaming a File/Folder

You can rename files/folders.

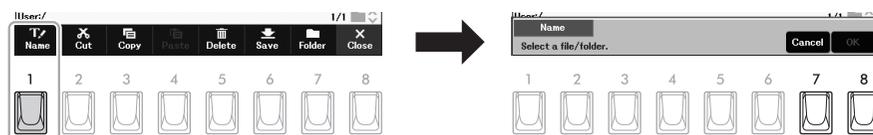
1 In the File Selection display, use the TAB [\leftarrow][\rightarrow] buttons to select the tab (“User” or “USB”) which contains the desired file/folder.

2 Make sure that “Name” is shown at the bottom of the display.

If it is not shown, press the [8] (File) button to call it up.

3 Press the [1] (Name) button.

The window for the Rename operation appears at the bottom of the display.



NOTE

Files and folders in the “Preset” tab or the “Expansion” folder (page 43) in the “User” tab cannot be renamed.

4 Move the cursor to the desired file/folder by using the Cursor buttons [▲][▼][◀][▶], and then press the [ENTER] button.

5 Press the [8] (OK) button to confirm the file/folder selection.
The Character Entry window is called up.

6 Enter the name of the selected file or folder (page 30).
The renamed file/folder appears on the display at the appropriate position among the files in alphabetical order.

NOTE

To cancel the Rename operations, press the [EXIT] button in the Character Entry window.

NOTICE

Do not use “Expansion” for the folder name. Otherwise, all data contained in the “Expansion” folder will be lost when an Expansion Pack (page 43) is installed.

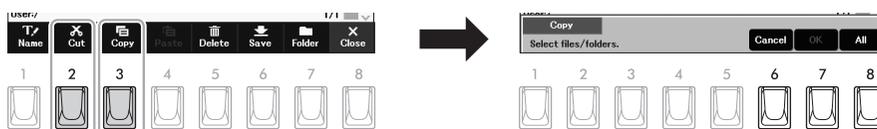
Copying or Moving Files

You can copy or cut files and paste them to another location (folder). You can also copy folders (but not move them) by using the same procedure.

1 In the File Selection display, use the TAB [<][>] buttons to select the tab (“User” or “USB”) which contains the desired file/folder.

2 Make sure that “Copy” and “Cut” is shown at the bottom of the display.
If they are not shown, press the [8] (File) button to call them up.

3 Press the [3] (Copy) button to copy or [2] (Cut) to move.
The window for the Copy/Cut operation appears at the bottom of the display.



NOTE

- Files in the “Preset” tab cannot be moved. They can only be copied to the “User” tab.
- Files in the “Expansion” folder (page 43) in the “User” tab cannot be copied/moved.
- Preset Songs copied to the User drive are indicated by “Prot.” above the Song names on the Song Selection display. These cannot be copied or moved to USB flash drives.

4 Move the cursor to the desired file/folder by using the Cursor buttons [▲][▼][◀][▶], and then press the [ENTER] button.

Pressing the [ENTER] button selects (highlights) the file/folder. To cancel the selection, press the [ENTER] button again.

Press the [8] (All) button to select all files/folders indicated on the current display including the other pages. To cancel the selection, press the [8] (All Off) button again.

5 Press the [7] (OK) button to confirm the file/folder selection.

6 Select the destination tab (“User” or “USB”) to paste the file/folder, by using the TAB [<][>] buttons.

If necessary, move the cursor to the destination folder by using the Cursor buttons [▲][▼][◀][▶], and then press the [ENTER] button.

7 Press the [4] (Paste) button to paste the file/folder selected in step 4.

The pasted file/folder appears on the display at the appropriate position among the files in alphabetical order.

NOTE

To cancel the Copy/Move operation, press the [6] (Cancel) button.

Deleting Files/Folders

You can delete individual or multiple files/folders.

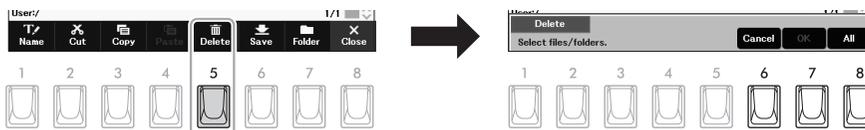
1 In the File Selection display, use the TAB [\leftarrow][\rightarrow] buttons to select the tab (“User” or “USB”) which contains the desired file/folder.

2 Make sure that “Delete” is shown at the bottom of the display.

If it is not shown, press the [8] (**File**) button to call it up.

3 Press the [5] (Delete**) button.**

The window for the Delete operation appears at the bottom of the display.



4 Move the cursor to the desired file/folder by using the Cursor buttons [\uparrow][\downarrow][\leftarrow][\rightarrow], and then press the [ENTER] button.

Pressing the [ENTER] button selects (highlights) the file/folder. To cancel the selection, press the [ENTER] button again.

Press the [8] (**All**) button to select all files/folders indicated on the current display including the other pages. To cancel the selection, press the [8] (**All Off**) button again.

5 Press the [7] (OK**) button to confirm the file/folder selection.**

6 Follow the on-display instructions.

- **Yes**..... Deletes the file/folder
- **Yes All** .. Deletes all selected files/folders
- **No** Leaves the file/folder as is without deleting
- **Cancel** .. Cancels the Delete operation

NOTE

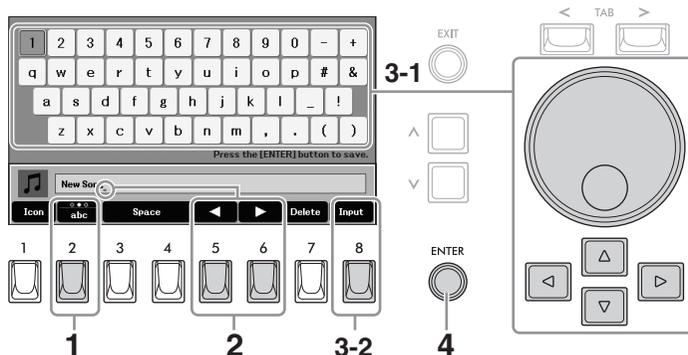
Files and folders in the “Preset” tab or the “Expansion” folder (page 43) in the “User” tab cannot be deleted.

NOTE

To cancel the Delete operation, press the [6] (**Cancel**) button.

Entering Characters

This section covers how to enter characters for naming your files/folders, etc. This Character Entry window allows you to input only single-byte characters, regardless of the language setting (page 15).



1 Select the type of character by pressing the [2] button.

- **ABC**Capital letters, numbers, marks
- **abc**Lowercase letters, numbers, marks
- **Symbol**Symbols, marks

2 Use the [5]/[6] buttons to move the underline in the Entry box to the desired position.

3 Enter the characters.

3-1 Move the cursor to the character you wish to enter by using the Cursor buttons [**▲**][**▼**][**◀**][**▶**] or the Data dial.

3-2 Press the [8] (**Input**) button to actually enter the character.
For more information on entering characters, refer to “Other character-entry operations” below.

4 Press the [ENTER] button to save the file/folder with the new name and return to the previous display.

NOTE

- The following marks cannot be entered for a file/folder name.
\\ : * ? " < > |
- File names can contain up to 41 characters and folder names can contain up to 50 characters.
- To cancel the character-entering operation, press the [EXIT] button.

Other character-entry operations

■ Deleting characters

Move the underline in the Entry box to the character you wish to delete by using the [5]/[6] buttons, and then press the [7] (**Delete**) button. To delete all characters at once, press and hold the [7] (**Delete**) button.

■ Entering spaces

Press one of the [3]/[4] (**Space**) buttons.

■ Selecting custom icons for files (shown at left of file name)

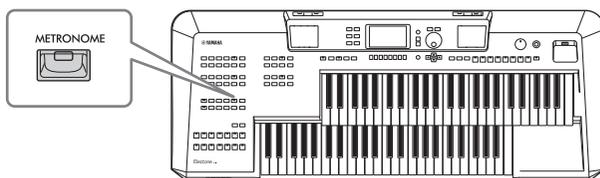
1. Press the [1] (**Icon**) button to call up the “**Icon Select**” display.
2. Move the cursor to the desired icon by using the Cursor buttons [**▲**][**▼**][**◀**][**▶**] or Data dial.
The display includes several pages. Use the TAB [**<**][**>**] buttons to select the desired pages.
3. Press the [8] (**OK**) button to apply the selected icon.

NOTE

To cancel the operation, press the [7] (**Cancel**) button.

Using the Metronome

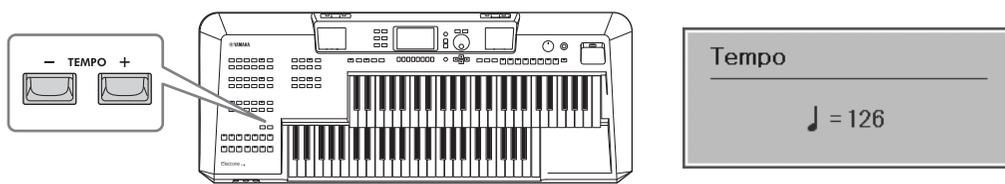
The [METRONOME] button lets you start or stop the metronome. The metronome provides a click sound, giving you an accurate tempo guide when you practice, or letting you hear and check how a specific tempo sounds.



Adjusting the Tempo

The TEMPO [+] and [-] buttons let you change the playback tempo of the metronome, Style or Song. Pressing either button calls up the Tempo pop-up display. Press the TEMPO [+] or [-] button to increase or decrease the tempo over a range of 5 – 500 beats per minute. Holding down either button can change the value continuously.

To reset the tempo to the default value, press both TEMPO [+] and [-] buttons simultaneously.



While the Tempo pop-up display is shown, the Data dial or the [^]/[v] buttons can also be used to adjust the tempo.

Changing the Metronome Settings

You can also change the time signature, volume and sound of the metronome: [MENU] → Cursor buttons [▲][▼][◀][▶] **Metronome**, [ENTER].

For more information, refer to the Reference Manual on the website, Chapter 1.

Data Backup

You can back up all data saved in the User drive (except protected files and Expansion Pack data) and all settings of the instrument to a USB flash drive as a single file (extension: .bup). The backup file can be restored to the instrument again, allowing you to recall the panel settings and performance data you created previously.

For information on the settings that can be backed up, refer to the “Backup/Restore” column of the “Parameter Chart” in the Data List on the website.

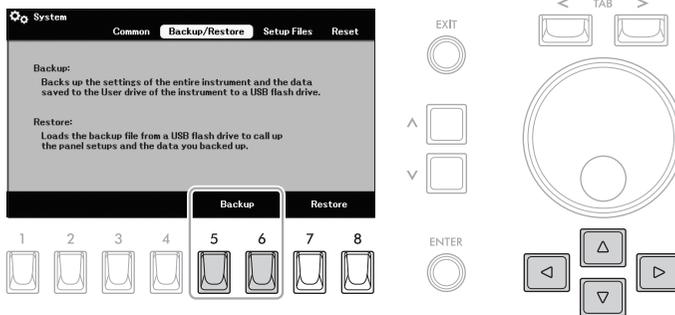
1 Connect a USB flash drive to the [USB TO DEVICE] terminal for the backup destination.

2 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **System**, [ENTER] → TAB [◀][>] **Backup/Restore**

3 Use the [5]/[6] (Backup) buttons to save the data to the USB flash drive.

When confirmation messages appear, follow the on-display instructions.



NOTICE

Completing the backup/restore operation may take a few minutes. Do not turn off the power during backup or restoring. Otherwise, data may be lost or damaged.

NOTE

- Before using a USB flash drive, be sure to read “Connecting USB Devices” on page 94.
- You can also back up files in the User drive such as Voice, Song and Registration Memory by copying them individually to a USB flash drive as desired. For instructions, refer to page 28.
- You can also back up System settings, MIDI settings and User Effect settings individually via [MENU] → Cursor buttons [▲][▼][◀][▶] **System** → TAB [◀][>] **Setup Files**. For details, refer to the Reference Manual on the website, Chapter 11.

Restoring the Backup File

To do this, use the [7]/[8] (**Restore**) buttons in the “**Backup/Restore**” tab (see above). When confirmation messages appear, follow the on-display instructions. When the operation is completed, the instrument will be restarted automatically.

NOTICE

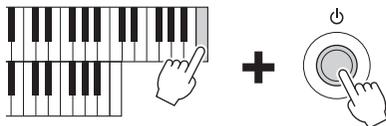
If any of the files (such as Songs or Styles) in the User drive of the instrument have the same name with the data contained in the backup file, the data are overwritten by restoring the backup file. Move or copy the files in the User drive of the instrument to USB flash drive before restoring (page 28).

Resetting to the Factory-programmed Settings

While holding the right-most key on the Upper Keyboard, turn the power on. This resets the settings of the entire instrument (referred to as the System Setup parameters) to their factory default settings. Refer to the “Parameter Chart” in the Data List on the website for details about which parameters belong to System Setup.

NOTE

The recorded Songs (page 71), Expansion Packs (page 43), and other files saved to this instrument are not reset by this operation.

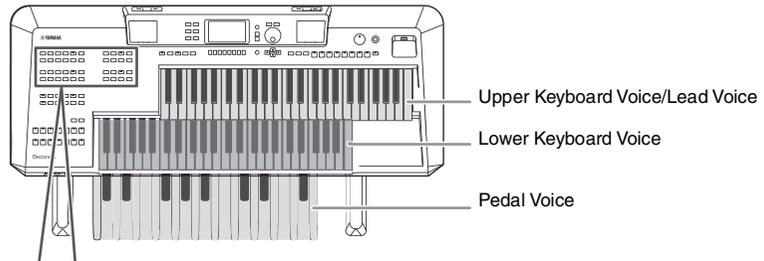


You can also reset specified settings to the factory default value or delete all files/folders in the User drive. Call up the operation display: [MENU] → Cursor buttons [▲][▼][◀][▶] **System**, [ENTER] → TAB [>] **Reset**. For details, refer to the Reference Manual on the website, Chapter 11.

1 Voices – Playing the Keyboard with Various Sounds –

This instrument features a wide variety of exceptionally realistic instrumental Voices, including piano, organ, guitar, strings, brass, wind instruments and more. Any of these Voices can be played on the Upper Keyboard, Lower Keyboard and Pedalboard.

Up to two Voices (Upper Keyboard Voice and Lead Voice) can be played together in a layer on the Upper Keyboard, while each of the Lower Keyboard and Pedalboard uses a single Voice. You can select a Voice for each of these four keyboard parts, by using the buttons on the upper left of the panel.



Voices for the Upper Keyboard

Two Voices can be played together in a layer.

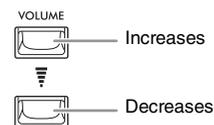
UPPER KEYBOARD VOICE					LEAD VOICE				
STRINGS	BRASS	WOODWIND	SYNTH	ON/OFF	VOLUME	VOLIN	SYNTH	ON/OFF	VOLUME
PIANO	ORGAN	GUITAR	WORLD	USER		FLUTE	TRUMPET	USER	

LOWER KEYBOARD VOICE					PEDAL VOICE				
STRINGS	BRASS	WOODWIND	SYNTH	ON/OFF	VOLUME	CONTRABASS	ELEC. BASS	ON/OFF	VOLUME
PIANO	ORGAN	GUITAR	WORLD	USER		ORGAN BASS	SYNTH BASS	USER	

Voice for the Lower Keyboard

Voice for the Pedalboard

- ❶ **Voice category buttons**,
[USER] button..... For selecting a Voice (page 35).
- ❷ **[ON/OFF] button** For turning each part on or off (page 35).
- ❸ **VOLUME buttons** For adjusting the volume for each part.



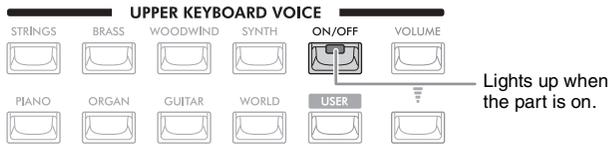
Depending on the selected Voice, the Voice is played monophonically (single note only) even if two or more keys are pressed simultaneously. This is ideal for lead or solo instruments such as trumpet and saxophone. You can see this mono/poly setting and other current settings for each Voice part on the “**Voice Effect**” display, called up by pressing the [VOICE EFFECT] button (page 42).

NOTE

You can use another keyboard part for playing the Lead Voice or Pedal Voice in the display called up via [MENU] → Cursor buttons [▲][▼][◀][▶] **Keyboard**, [ENTER].

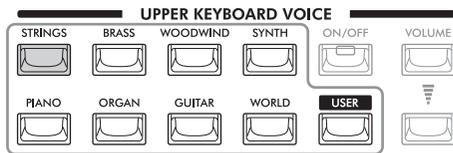
Playing Preset Voices

1 Turn on the [ON/OFF] button for the desired part.



2 Press one of the Voice category buttons or the [USER] button of the desired part to call up the Voice Selection display.

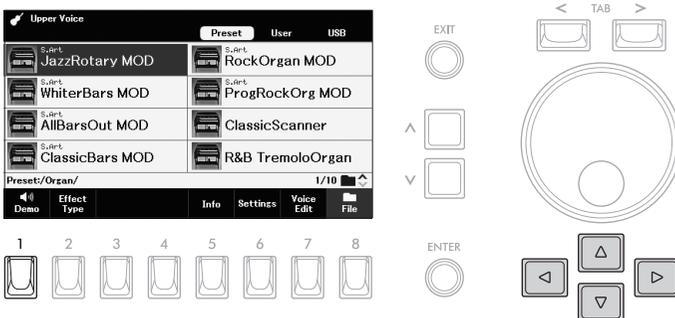
The preset Voices are categorized and contained in appropriate folders. Voice category buttons correspond to the categories of the preset Voices, however some preset Voices (such as Contrabass for the Upper Keyboard Voice) do not have any category buttons. For the preset Voices with no category buttons, the [USER] button can be used.



When you select a preset Voice by using the [USER] button, you need to select the “Preset” tab by pressing the [◀] button, and then press the [^] button to call up the Voice category folders. After that, move the cursor to the desired category by using the Cursor buttons [▲][▼][◀][▶], and then press the [V] button.

3 Use the Cursor buttons [▲][▼][◀][▶] to select the desired Voice.

If two or more pages exist, you can call up other pages successively by holding one of the Cursor buttons ([▶] or [▼]) to the next pages, and [◀] or [▲] to the previous pages). Pressing the same category button repeatedly also selects successive pages.



To listen to the Demo phrases for each Voice

Press the [1] (**Demo**) button to start the Demo for the selected Voice. To stop the demo, press the [1] button again.

NOTE

- For a list of preset Voices, refer to the Data List on the website.
- The [USER] button can also be used to select the Voices in the User drive, such as Expansion Voices (page 43), or Voices created with the Voice Edit function (refer to the Reference Manual on the website).
- Pressing only the category button switches the category and changes the Voice to the last selected one in that category. On the other hand, pressing the category button while holding down the [MENU] button allows you to call up the Voice Selection display without changing the current Voice.

NOTE

The Voice characteristics are indicated above the Preset Voice name. For details, see page 36.

NOTE

If “Demo” is not shown, press the [8] (**Close**) button to call it up.

4 Play the keyboard or Pedalboard to hear the Voice for the desired part.

5 Select Voices for the other parts by repeating steps 1 to 4.

You can confirm the Voice name for each part and its volume on the Main display called up by pressing the [EXIT] button.

6 Play the keyboard and Pedalboard by combining the Voices selected for each part.

If necessary, adjust the volume of the desired part by using the VOLUME buttons.

NOTE

If you change the Voice while pressing keys, the Voice of the previously played note is maintained and the changed Voice will sound from the next played note.

NOTE

You can save the Voice selection, on/off setting and Volume setting for each part to Registration Memory (page 85) for future recall.

Voice Types (Characteristics)

There are various Voice types, and some types as described below require special performance considerations. These particular types have an indication above the Voice name on the Voice Selection display or the Main display. For more explanations, refer to the Reference Manual on the website.



• S.Art (Super Articulation)

Super Articulation Voices recreate special note-transition techniques characteristically used in acoustic instrument performance, such as staccato, legato and slur. For details, see page 37.

• Organ Flutes

Organ Flutes Voices let you recreate a variety of vintage organ sounds by adjusting the flute footage levels and the percussive sounds, just like on conventional organs. For details, see page 38.

• Drums

Drum Voices let you play various drums and percussion instruments which are assigned to each key. For details on the Key assignments, refer to the "Drum/Key Assignment List" in the Data List on the website.

Holding the Lower Keyboard Voice (Lower Voice Hold)

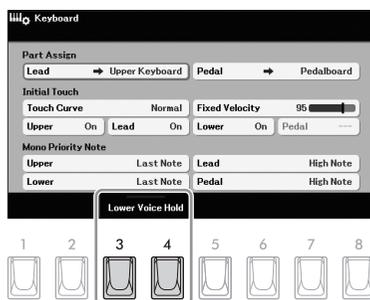
By turning on the Lower Voice Hold function, the Lower Keyboard Voice is maintained (held) even when the keys are released. Non-decaying Voices such as strings are held continuously, while decay-type Voices such as piano decay more slowly (as if the sustain pedal has been pressed).

This function can be used, for example, for more natural performance when you play along with Style playback (page 44) since the sound of the chord matching Style playback is maintained.

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Keyboard**, [ENTER]

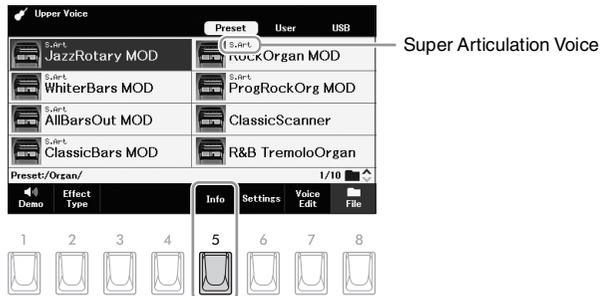
2 Press one of the [3]/[4] (**Lower Voice Hold**) buttons to turn on/off the Lower Voice Hold function.



If a Style or Song is played back, the Lower Keyboard Voice which is sounding stops when Style or Song playback stops.

Playing Super Articulation Voices

The Super Articulation Voices enable you to create subtle, very realistic musical expressions, simply by how you play or by pressing a Footswitch. **“S.Art”** is shown above the Voice name of Super Articulation Voices on the Voice Selection display or the Main display.



For performance instructions, you can call up the Information window of the selected Super Articulation Voice by pressing the [5] (**Info**) button on the Voice Selection display.

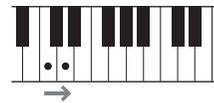
NOTE

If **“Info”** is not shown, press the [8] (**Close**) button to call it up.

Adding Articulation Effects by Playing the Keyboard

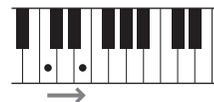
Example: “Saxophone” Voice

If you play a C note and then an adjacent D in a very legato way, you will hear the note change seamlessly, as though a saxophone player played it in a single breath.



Example: “ConcertGuitar” Voice

If you play a C note and then the E just above in a very legato but firm way, the pitch slides up from C to E.



Adding Articulation Effects by Using a Footswitch

You can add articulation effects by using a Footswitch, if you assign the articulation function to the Footswitch beforehand. Pressing the Footswitch triggers different playing effects, separate from your keyboard playing. For example, pressing the Footswitch while playing a saxophone Voice can produce breath noises or key noises, while doing the same for a guitar Voice can produce fret noises or body-tapping sounds. You can effectively intersperse these into the notes as you play.

To apply articulation effects by using the Footswitches, assign **“Articulation1”** or **“Articulation2”** to either Footswitch via [MENU] → Cursor buttons [▲][▼][◀][▶] **Live Expression Control**, [ENTER]. For details, refer to page 58.

NOTE

- S.Art Voices are compatible with other models which have those types of Voices installed; however, some Song or Style data you’ve created on the instrument using these Voices may not sound properly when played back on other instruments.
- S.Art Voices sound differently depending on the keyboard range, velocity, touch, etc. Hence, if you turn on a Keyboard Harmony effect, or change the Voice Settings, unexpected or undesired sounds may result.

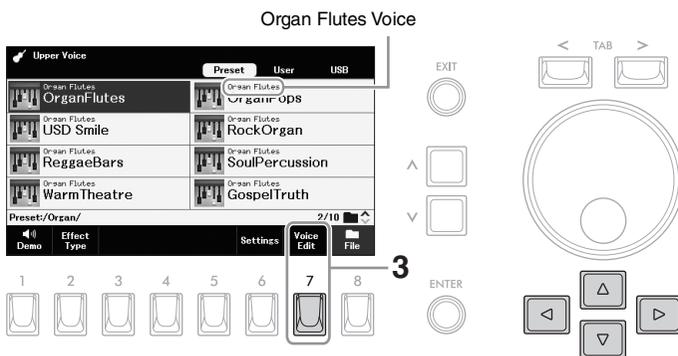
Creating Original Organ Flutes Voices

Just as on a traditional organ, you can create your own sound by increasing and decreasing the levels of the flute footages.

- 1 Press the [ORGAN] button (UPPER or LOWER KEYBOARD VOICE) to call up the “Organ” folder in the Voice Selection display.

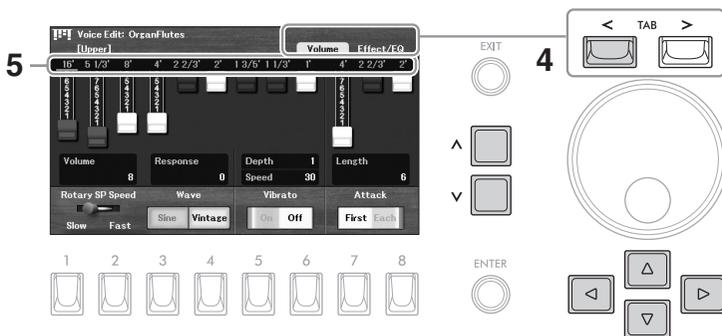


- 2 Use the Cursor buttons [▲][▼][◀][▶] to select an Organ Flutes Voice, indicated by “Organ Flutes” above the Voice name.



- 3 Press the [7] (Voice Edit) button to call up the “Voice Edit” display.

- 4 Press the TAB [<] button to select the “Volume” tab.



- 5 Adjust the footage settings which determine the basic sound of the Organ Flutes.

- 5-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to the desired footage number displayed above each footage lever.
- 5-2 Use the [^][v] buttons to adjust the value.

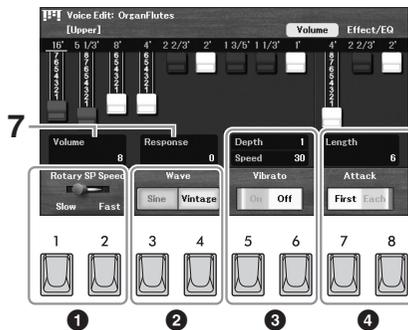
NOTE

If “Voice Edit” is not shown, press the [8] (Close) button to call it up.

NOTE

The term “footage” is a reference to the sound generation of traditional pipe organs, in which the sound is produced by pipes of different lengths (in feet). The longer the pipe, the lower the pitch becomes.

6 Make desired settings such as Rotary Speaker and Vibrato.



1	Rotary SP Speed	Use the [1]/[2] buttons to switch the Rotary Speaker speed between “ Slow ” and “ Fast .” This parameter is effective when the “ DSP Type ” name in the “ Effect/EQ ” tab contains “ Rotary ” or “ Rot ” and the DSP is turned on. For details, refer to the Reference Manual on the website.
2	Wave	Use the [3]/[4] buttons to selects the type of organ tone generation to be simulated. “ Sine ” produces a clean, clear sound. “ Vintage ” produces a gritty, slightly distorted sound.
3	Vibrato	Use the [5]/[6] buttons to turns the vibrato on or off. Move the cursor to “ Depth ” or “ Speed ” by using the Cursor buttons [▲][▼][◀][▶], and then use the [∧][∨] buttons to adjust the vibrato depth or speed.
4	Attack	Use the [7]/[8] buttons to switch attack modes between “ First ” and “ Each ”. Move the cursor to “ Length ” by using the Cursor buttons [▲][▼][◀][▶], and then use the [∧][∨] buttons to adjust the attack length of the sound. The attack length produces a longer or shorter decay immediately after the initial attack. The longer the value, the longer the decay time.

7 Adjust other parameters as desired.

7-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to “**Volume**” or “**Response**.”

Volume	Adjusts the overall volume of the Organ Flutes.
Response	Adjusts the response time of both the Attack and Release portions of the sound. The higher the value, the slower it becomes.

7-2 Use the [∧][∨] buttons to adjust the value.

8 Save the edited Organ Voice.

8-1 Press the TAB [>] button to call up the “**Effect/EQ**” page.

8-2 Press the [8] button to save the Organ Flutes Voice to the User drive. For instructions on saving, refer to page 26.

NOTE

For details on the “**Effect/EQ**” page, refer to the Reference Manual on the website.

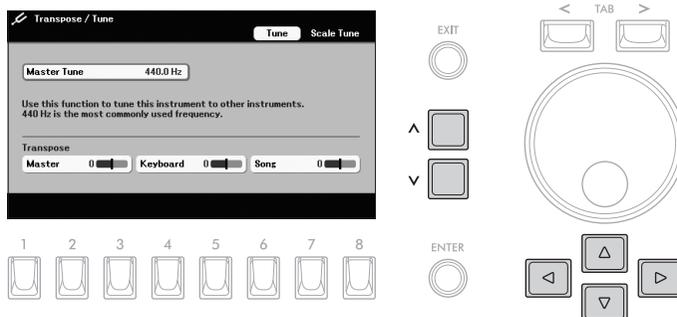
Changing the Pitch-related Settings (Master Tune, Transpose)

You can adjust the pitch of the entire instrument or individual parts.

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Transpose/Tune**, [ENTER] → TAB [◀] **Tune**

2 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to the desired parameter, and then set the value by using the [^]/[v] buttons.



Master Tune	Fine-tunes the pitch of the entire sound (with the exception of the Drum Voices, audio playback and microphone sound) in 0.2 Hz steps. By default, the pitch is set to 440.0 Hz according to equal temperament.	
Transpose	Transposes the pitch between -12 and 12 in semitone steps.	
	Master	Transposes the pitch of the entire sound (with the exception of the Drum Voices, audio playback and microphone sound).
	Keyboard	Transposes the pitch of the keyboard played Voices, including the chords played for triggering Style playback or the Chord Match function (page 60) of Multi Pad.
	Song	Transposes only the pitch of Song playback.

To reset the current value to its default, press the [^] and [v] buttons simultaneously.

Adjust the pitch of each keyboard part

You can also make detailed pitch settings (octave and tune) for each of the keyboard parts in the display called up via the Voice Selection display → [6] (**Settings**) → TAB [◀] **Tune**.

For more information, refer to the Reference Manual on the website.

Setting the Touch Response of the Keyboard (Initial Touch)

The instrument has a touch response function (Initial Touch) that lets you control the volume of notes according to how strongly or softly you play the keys. You can set Initial Touch on or off for each keyboard part assigned to the Upper or Lower Keyboard.

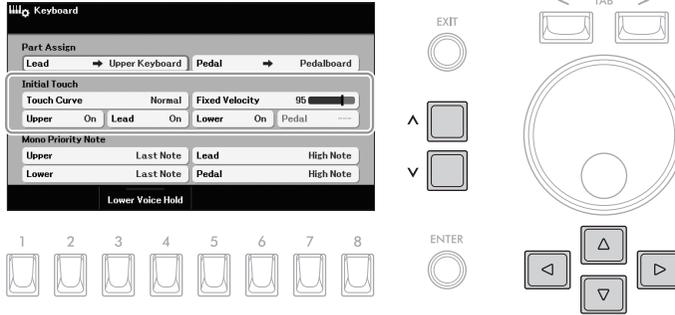
NOTE

Some Voices are purposely designed without Initial Touch, in order to emulate the true characteristics of the actual instrument (for example, conventional organs, which have no touch response).

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Keyboard**, [ENTER]

2 Make settings.



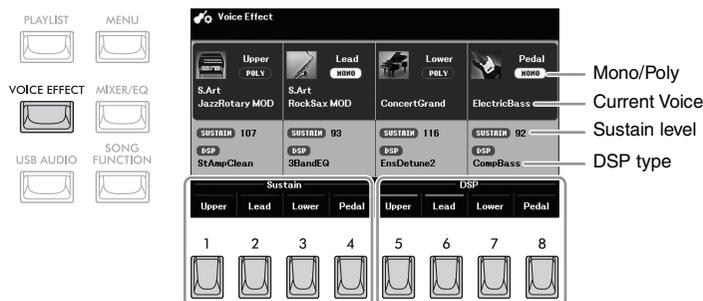
2-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to one of the “**Initial Touch**” parameters.

2-2 Use the [▲][▼] buttons to change the settings or to adjust the value.

<p>Touch Curve</p>	<p>Determines how the sound responds to your playing strength.</p> <ul style="list-style-type: none"> • Normal: Standard Touch Response. • Soft1: Produces high volume with moderate playing strength. • Soft2: Produces relatively high volume even with light playing strength. Best for players with a light touch. • Hard1: Requires moderately strong playing for high volume. • Hard2: Requires strong playing to produce high volume. Best for players with a heavy touch.
<p>Fixed Velocity</p>	<p>Determines the velocity level when “Initial Touch” for any part is set to “Off”. In other words, the volume is fixed to this level regardless of your playing strength.</p>
<p>Upper, Lead, Lower, Pedal</p>	<p>Set Initial Touch on or off for each keyboard part assigned to the Upper Keyboard, Lower Keyboard and Pedalboard. Initial Touch for “Lead” or “Pedal” cannot be set when “Pedalboard” is assigned to that part via “Part Assign” located at the upper part of this display. For details about part assignment, refer to the Reference Manual on the website.</p>

Applying Voice Effects

Pressing the [VOICE EFFECT] button calls up the “**Voice Effect**” display which provides at-a-glance information of the current settings of the each Voice part.



■ Current settings of the each keyboard part

Mono/Poly	Indicates the Voice is played monophonically or polyphonically. This can be set via the Voice Selection display → [7] (Voice Edit) → TAB [<][>] Common2 .
Current Voice	Indicates the Voice selected by using the Voice category buttons or the [USER] button.
Sustain level	Indicates the Sustain level (how long the sound sustains) when “ Sustain ” is turned on by using the [1] – [4] buttons. This can be set via the Voice Selection display → [7] (Voice Edit) → TAB [<] Common1 .
DSP type	Indicates the DSP type applied when the “ DSP ” is turned on by using the [5] – [8] buttons below. This can be set via the Voice Selection display → [2] (Effect Type).

For details on the “**Voice Edit**” display, refer to the Reference Manual on the website.

■ Settings that can be made by using the [1] – [8] buttons

[1]	Sustain	Upper	When this is turned on, all notes played on the keyboard have a longer sustain. Turning this to off immediately stops (damps) any sustained notes.
[2]		Lead	
[3]		Lower	
[4]		Pedal	
[5]	DSP	Upper	Turns the DSP (Digital Signal Processor) effect on or off for each keyboard part. With the DSP effects, you can add ambience and depth to your music in a variety of ways — such as adding reverb that makes you sound like you are playing in a concert hall — as well as other dynamic enhancements.
[6]		Lead	
[7]		Lower	
[8]		Pedal	

Adding New Contents — Expansion Packs

By installing Expansion Packs, you can add a variety of optional Voices and Styles to the “**Expansion**” folder in the User drive. The installed Voices and Styles can be selected via the [USER] button in the Voice category buttons (page 34) or Style category buttons (page 44), allowing you to expand your music performance and creation possibilities. You can purchase high quality Expansion Pack data created by Yamaha, or create your own original Expansion Pack data by using the “**Yamaha Expansion Manager**” software on your computer. For instructions on how to install the Expansion Packs, refer to the Reference Manual on the website.

For more information about Expansion Packs, access the following website:
<https://www.yamaha.com/2/electone/>

To obtain the “**Yamaha Expansion Manager**” software and its manuals, access the Yamaha Downloads website:
<https://download.yamaha.com/>

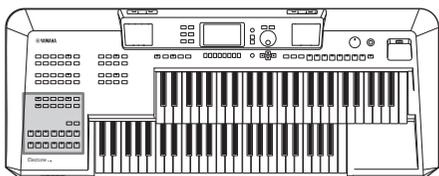
Advanced Features

Refer to the Reference Manual on the website, Chapter 1.



Metronome settings	[MENU] → Cursor buttons [▲][▼][◀][▶] Metronome , [ENTER]
Keyboard part-related settings	[MENU] → Cursor buttons [▲][▼][◀][▶] Keyboard , [ENTER]
Applying Harmony/Arpeggio	[MENU] → Cursor buttons [▲][▼][◀][▶] Harmony/Arpeggio , [ENTER] Voice Selection display → [6] (Settings) → TAB [>] Arpeggio
Pitch-related settings	
• Scale Tuning	[MENU] → Cursor buttons [▲][▼][◀][▶] Transpose/Tune , [ENTER] → TAB [>] Scale Tune
• Pitch settings for each keyboard part	Voice Selection display → [6] (Settings) → TAB [<] Tune
Editing Voices	Voice Selection display → [7] (Voice Edit)
Disabling automatic selection of Voice Sets (effects, etc.)	Voice Selection display → [6] (Settings) → TAB [<][>] (Voice Set Filter)
Installing Expansion Pack data	[MENU] → Cursor buttons [▲][▼][◀][▶] Expansion , [ENTER] → [^] Pack Installation , [ENTER]

2 Styles – Playing Rhythm and Accompaniment –



The instrument features various accompaniment and rhythmic backing patterns (called “Styles”) in a variety of different musical genres including pop, jazz, and many others. The Style features Auto Accompaniment patterns, letting you produce automatic accompaniment playback simply by playing chords on the Lower Keyboard. This lets you automatically recreate the sound of a full band or orchestra — even if you’re playing by yourself.

Playing a Style with the Auto Accompaniment

1 Press one of the STYLE category buttons or the [USER] button to call up the Style Selection display.

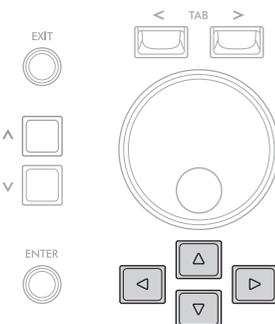
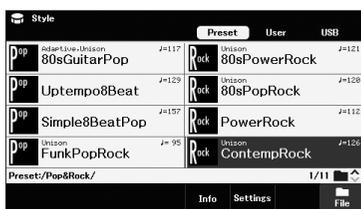


NOTE

- For a list of preset Styles, refer to the Data List on the website.
- Expansion Styles (page 43), Styles created with the Style Creator function (refer to the Reference Manual on the website), or Styles copied to the User drive (page 28) can be called up via the [USER] button.
- Pressing only the category button switches the category and changes the Style to the last selected one in that category. On the other hand, pressing the category button while holding down the [MENU] button allows you to call up the Style Selection display without changing the current Style.

2 Select the desired Style by using the Cursor buttons [▲][▼][◀][▶].

If two or more pages exist, you can call up another page by holding one of the Cursor button ([▶] or [▼] to the next page, and [◀] or [▲] to the previous one) continuously. Pressing the same category button repeatedly also changes through the next pages.



3 Press the [ACMP] button to turn on the Auto Accompaniment.



The Lower Keyboard is enabled for use as the chord section, and chords played in this section are automatically detected and used to generate fully automatic accompaniment with the selected Style. The Pedal Voice does not sound while the [ACMP] button is on.

NOTE

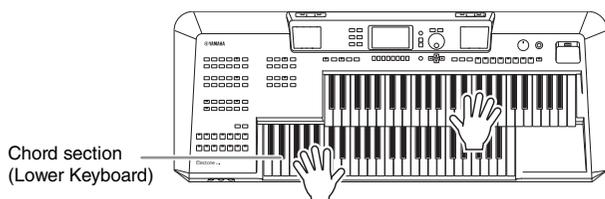
- By changing the Chord Fingering type (page 49), you can specify the chords by using the Pedalboard and Upper Keyboard, as well as the Lower Keyboard.
- If you turn on the Manual Bass function (page 48), you can use the Pedalboard to play the bass part of the Style (even when the [ACMP] button is on).

4 Press the [SYNC START] button to enable synchronized start.



5 As soon as you play a chord on the Lower Keyboard, the selected Style starts.

Try playing chords on the Lower Keyboard and play a melody on the Upper Keyboard.



NOTE

The chord specified in the chord section is shown on the Main display (page 17).

NOTE

You can adjust the volume for Style playback by using the STYLE VOLUME buttons, just like the VOICE VOLUME buttons (page 34).

6 Press the [START] button to stop Style playback.

You can also stop playback by pressing the ENDING/rit. [1] – [3] buttons (page 46).



Style Characteristics

The Style types and their defining characteristics are indicated above the Style name on the Style Selection display or the Main display.

- **Adaptive**: see page 53
- **Unison**: see page 50
- **DJ**: The DJ Styles contain their own special chord progressions, so you can add chord changes to your performance simply by changing the root key. The Multi Pad (page 59) data in the "**DJ Phrase**" folder are specially created for these Styles.

For other types, refer to the Reference Manual on the website.



Style file compatibility

This instrument uses the SFF GE file format (page 113). This instrument can play back existing SFF files, but they will be saved in the SFF GE format when the file is saved (or pasted) in this instrument. Please keep in mind that the saved file can only be played back on instruments that are compatible with the SFF GE format.

Operating Style Playback

A Style consists of rhythm and accompaniment (chords, etc.) parts. The buttons for Style playback are covered here.

To Start/Stop Playing

■ [START] button

Starts playback of the current Style. When the [ACMP] button is turned off, only the rhythm part of the Style is played back. Pressing this button again stops playback.



■ [ACMP] button

Turns the Auto Accompaniment on/off. If you turn on the [ACMP] button, both the rhythm part and auto accompaniment can be played back according to the detected chords during Style playback. The Pedalboard does not sound while the [ACMP] button is on.



■ [SYNC START] button

This puts the Style playback in standby. The Style starts playing back when you press any key on the keyboard (when the [ACMP] button is off) or you play a chord in the chord section (when the [ACMP] button is on). While a Style is playing back, pressing this button stops the Style and puts playback in standby.



■ [SYNC STOP] button

Make sure that the [ACMP] button is on, and then press the [SYNC STOP] button and play the keyboard. You can start and stop the Style anytime you want by simply playing or releasing the keys in the chord section.

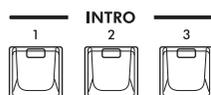


NOTE

When the Chord Fingering type (page 49) is set to "All Full Keyboard," Sync Stop is disabled.

■ INTRO [1] – [3] buttons

The instrument features three different Intro sections that let you add an introduction at the beginning of Style playback. After pressing one of the INTRO [1] – [3] buttons, start playback of the Style. When the Intro finishes playing, Style playback automatically shifts to the Main section.



NOTE

The INTRO [1] section consists of only the Rhythm part while INTRO [2] and [3] consist of all the parts as well as the Rhythm part. When you play INTRO [2] or [3], in order to have the complete Intro section sound properly, you need to play chords in the chord section with the [ACMP] button turned on.

■ ENDING/rit. [1] – [3] buttons

The instrument features three different Ending sections to add an ending before stopping Style playback. When you press one of the ENDING/rit. [1] – [3] buttons while Style is playing back, the Style will automatically stop after the ending is played. You can have the ending gradually slow down (ritardando) by pressing the same ENDING/rit. button once again, while the ending is playing.



NOTE

If you press the ENDING/rit. [1] button when the Style is playing, a fill-in automatically plays before the ENDING/rit. [1].

Changing Pattern Variation (Sections) During Style Playback

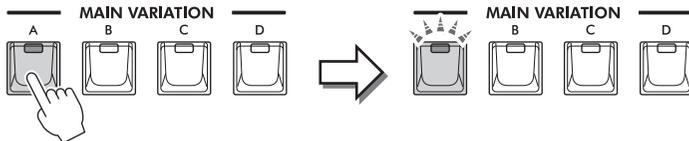
Each Style features four different Main sections, four Fill-in sections and a Break section. By using these sections effectively, you can easily make your performance sound more dynamic and professional. The section can be freely changed while the Style is playing back.

■ MAIN VARIATION [A] – [D] buttons

Press one of the MAIN VARIATION [A] – [D] buttons to select the desired Main section (the button lights). Each contains an accompaniment pattern of a few measures and it plays indefinitely. Pressing the selected MAIN VARIATION button again maintains the same section, but plays an appropriate fill-in pattern to spice up the rhythm and break the repetition.

NOTE

For “**Adaptive**” Styles, Main Variations change automatically depending on how dynamically you play. For details, refer to page 53.



Press the selected Main section (lit) again.

The fill-in of the selected Main section plays (flashes).

Automatically Changing One Touch Settings with the Main Sections (OTS Link)

One Touch Setting (OTS) is a convenient feature that automatically calls up the most appropriate panel settings (Voices or effects, etc.) for the currently selected Style. When the [OTS LINK] button is turned on, pressing a different MAIN VARIATION button (A – D) automatically calls up a One Touch Setting appropriate for the selected Main section.



NOTE

- You can call up the information window to confirm which Voices are prepared for each Main section (A – D) of the current Style by pressing the [5] (**Info**) button. If “**Info**” is not shown, press the [8] (**Close**) button to call it up. Gray color for a Voice name indicates that the corresponding part is currently turned off.
- When using the Adaptive Style function (page 53), the OTS is not called up when the Main sections are changed automatically, even if the [OTS LINK] button is turned on.
- When you change the Voice after the OTS is called up, or when the Main section is changed without pressing any MAIN VARIATION buttons (such as when using the Adaptive Style function), you can recall the previous OTS by turning the [OTS LINK] button off and turning it on again.

Adding a Fill-in when changing the Main section

By default, the Auto Fill-in function is turned on and pressing any of the MAIN VARIATION [A] – [D] buttons as you play automatically plays a fill-in section. This function can be turned on or off from the display called up via the Style Selection display → [6] (**Settings**) → TAB [<] **Settings**.

■ [BREAK] button

This lets you add dynamic breaks in the rhythm of the accompaniment. Press the [BREAK] button during Style playback. When the one-measure Break pattern finishes playing, the Style playback automatically shifts to the Main section.



About the lamp status of the section buttons (INTRO/MAIN VARIATION/BREAK/ENDING)

- Lit:** The section is currently selected.
- Flashing:** The section will be played next, following the currently selected section.
* The MAIN VARIATION [A] – [D] buttons also flash during fill-in playback.
- Off:** The section is not currently selected.

Adjusting the Volume Balance

You can adjust the volume balance among the keyboard parts (Upper Keyboard Voice, Lower Keyboard Voice, Pedal Voice, Lead Voice), the Style, the Multi Pad, the Song, the USB Audio Player, the microphone sound, and the sound input from the external devices. These can be adjusted in the “**Volume/Pan**” tab on the “**Mixer**” display. For details, refer to page 91.

Adjusting the Tempo

The TEMPO [+] and [-] buttons (page 31) let you change the playback tempo of Style, Song and Metronome.

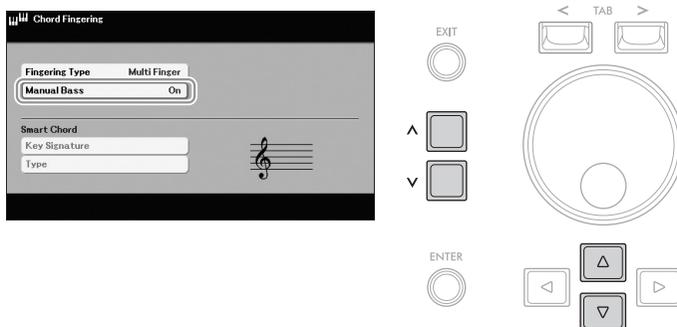
Playing the Bass part of the Style with the Pedalboard (Manual Bass)

When the Manual Bass function is turned on, the bass part of the Style is muted allowing you to play that part with the Pedal Voice.

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Chord Fingering**, [ENTER]

2 Turn on the Manual Bass function.



2-1 Use the Cursor buttons [▲][▼] to move the cursor to “**Manual Bass.**”

2-2 Use the [^]/[v] buttons to select “**On.**”

3 Play back the Style with the Auto Accompaniment (page 44) while playing the bass part by using the Pedalboard.

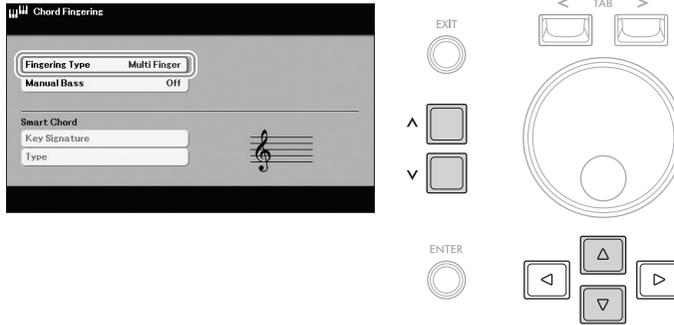
Setting the Chord Fingering Type

The Chord Fingering type determines how the chords are detected when you play along with Style playback with the [ACMP] button turned on. By default, Chord Fingering type is set to **"Multi Finger,"** but you can change it.

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Chord Fingering**, [ENTER]

2 Select the Fingering type.



2-1 Use the Cursor buttons [▲][▼] to move the cursor to **"Fingering Type."**

2-2 Use the [^][v] buttons to select the type.

<p>Multi Finger</p>	<p>Detects chords played on the Lower Keyboard in either of two ways below.</p> <p>Single Finger This method lets you easily play chords on the Lower Keyboard using only one, two or three fingers.</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="312 1078 495 1232"> <p>C</p> <p>Major chord Press the root key only.</p> </div> <div data-bbox="532 1078 714 1263"> <p>Cm</p> <p>Minor chord Simultaneously press the root key and a black key to its left.</p> </div> <div data-bbox="751 1078 934 1263"> <p>C7</p> <p>Seventh chord Simultaneously press the root key and a white key to its left.</p> </div> <div data-bbox="985 1078 1167 1263"> <p>Cm7</p> <p>Minor seventh chord Simultaneously press the root key and both a white and black key to its left.</p> </div> </div> <p>Fingered This lets you specify the chord by pressing the notes that comprise a chord on the Lower Keyboard when the [ACMP] button is turned on. Fingered recognizes the various chord types which are listed on the Reference Manual on the website and can be looked up using the Chord Tutor function called up via [MENU] → Cursor buttons [▲][▼][◀][▶] Chord Tutor, [ENTER]. For details about Chord Tutor, refer to the Reference Manual on the website.</p>
<p>All Fingered</p>	<p>Basically, this is the same as Fingered, with the exception that less than three notes can be played to indicate the chords (based on the previously played chord, etc.).</p>
<p>Fingered On Bass</p>	<p>Accepts the same fingerings as Fingered; however, the lowest note played on the Pedalboard is used as the bass note, allowing you to play "on bass" chords. (In the Fingered type, the root of the chord is always used as the bass note.)</p>

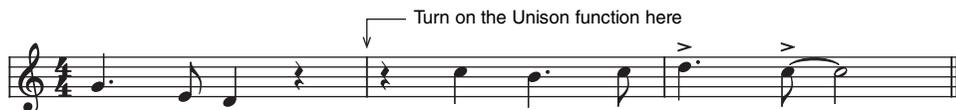
AI Full Keyboard	Detects chords in the Upper Keyboard, Lower Keyboard and Pedalboard. Chords are detected in a way similar to Fingered, even if you split the notes between the Upper and Lower Keyboards—for example, by playing a bass note on the Pedalboard and a chord on the Lower Keyboard, or by playing a chord on the Lower Keyboard and a melody on the Upper Keyboard. Extended chords (such as 9th, 11th and 13th) cannot be recognized.
Smart Chord	Allows you to easily control the Style with just a single finger as long as you know the key of the music you are playing, even if you don't know any chord fingering. Appropriate chords suited for the specified music genre will sound whenever you press a single note on the Lower Keyboard, as if you were playing the “right” chords. For details, refer to the Reference Manual on the website.

Playing in Unison or Adding Accents to Style Playback (Unison & Accent)

The powerful Unison & Accent function gives you expressive and nuanced control over Style playback, letting you create various musical variations in the accompaniment. With the Unison function, you can play a melody and have it reproduced in unison (i.e., the same melody is played by multiple instruments) or tutti (i.e., all parts are played at the same time)—expressively enhancing your performance and letting you create dynamic phrases. With the Accent function, accents are automatically generated by adding notes to Style playback according to your playing strength (or accents you play). This allows you to temporary change or interrupt the regular rhythm patterns. For the Styles compatible with the Unison & Accent function, “**Unison**” is indicated above the Style name.

Example:

Your performance

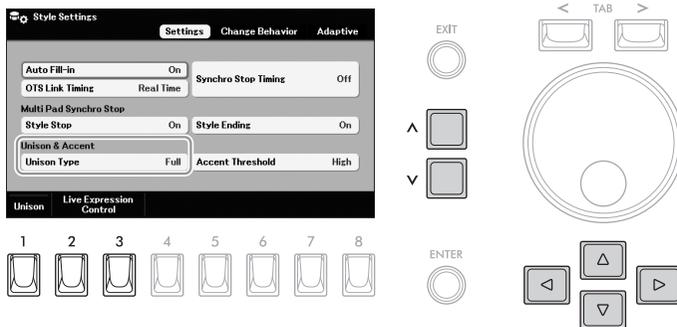


Sounds you hear



Using the Unison Function

- 1 Select a compatible Style which has a “*Unison*” indication above the Style name on the Style Selection display.
- 2 Call up the operation display.
Style Selection display → [6] (**Settings**) → TAB [<] **Settings**
- 3 Select the type of the Unison function.



3-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to “*Unison Type*.”

3-2 Use the [^][v] buttons to select the type.

Full	Suitable for a one-hand performance. In this type, all the accompaniment parts are played in unison with your performance. This can be used relatively easily even by a beginner.
Separate	Suitable for a both-hands performance. In this type, the accompaniment parts suitable for each of the Upper and Lower Keyboard are played in unison with your performance independently. For example, low-pitched sound musical instruments (such as bass guitar, baritone saxophone, and contrabass) are played in unison with the Lower Keyboard, and solo musical instruments (such as flute) are played with the Upper Keyboard.

- 4 Press the [ACMP] button to turn it on.
- 5 Play the keyboard along with Style playback.
- 6 At the desired timing (the point you want to play in Unison), turn on the Unison function by pressing and holding the Left Footswitch.

Releasing the Left Footswitch turns off the Unison function, and then you can play the keyboard with normal playback. By default, you can use the Left Footswitch to turn the Unison function on/off, however, the Footswitch function can be changed in the “*Live Expression Control*” display called up by using the [2]/[3] (**Live Expression Control**) buttons. For instructions on this display, refer to page 58.

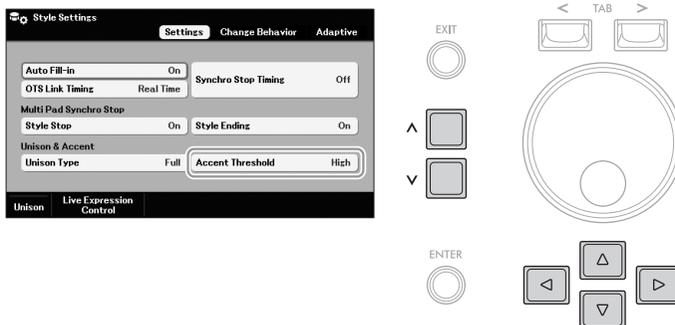
You can also turn on/off the Unison function by pressing the [1] (**Unison**) button.

NOTE

When the Manual Bass function is turned on (page 48), the bass part does not sound.

Using the Accent Function

- 1 Select a compatible Style and call up the operation display (steps 1 – 2 on page 51).
- 2 Set the “Accent Threshold” parameter to something other than “Off.”



- 2-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to “Accent Threshold.”
- 2-2 Use the [^]/[v] buttons to select the level at which the accents are added depending on your playing strength.

High	Requires strong playing (higher velocity) to have the Style generate accents.
Medium	Standard setting.
Low	Allows you to have the Style generate accents even with relatively light playing strength (lower velocity).

If you want to turn off the Accent function, select “Off” here.

- 3 **Play the keyboard along with Style playback.**
Accents are added at the timing at which you play the keys strongly.

Automatically Shifting the Main Variations (Adaptive Style)

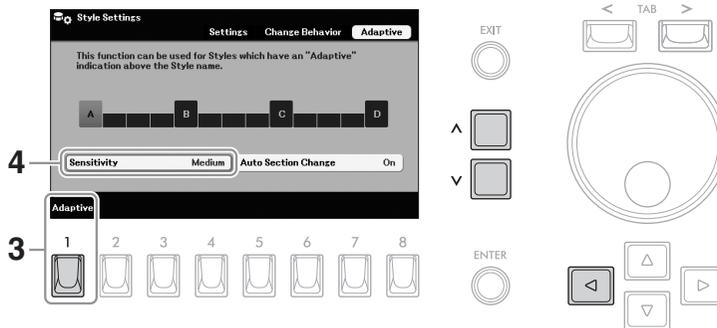
When a compatible Style is selected and the Adaptive Style function is turned on, the Main variations change automatically depending on how dynamically you play the keyboard (such as playing strength and numbers of notes you play) without needing to press the MAIN VARIATION buttons. In between the Main A, B, C and D sections, there are more variations for the Adaptive Style. From these variations, the most appropriate variation for your current performance is played back. For example, as you play the keyboard more dynamically, the Auto Accompaniment of the Style increases in dynamic intensity. Naturally, the opposite is also true; you can bring the dynamics down by playing more sparsely.

1 Select a compatible Style which has an “Adaptive” indication above the Style name on the Style Selection display.

2 Call up the operation display.

Style Selection display → [6] (Settings) → TAB [>] **Adaptive**

3 Press the [1] (Adaptive) button to turn on the Adaptive function.



4 Select the sensitivity to determine how the variations respond to your performance.

4-1 Press the Cursor button [◀] to move the cursor to “Sensitivity.”

4-2 Use the [^]/[v] buttons to select the sensitivity.

Hard	Requires strong playing for making changes. Suitable for energetic music such as rock music.
Medium	Medium sensitivity.
Easy	Changes easily even with light playing strength. Suitable for gentle music such as ballad music.

5 Play the keyboard along with the Auto Accompaniment of the Style (page 44).

Disabling the Auto Section Change function

By default, the Main variation shifts cross over the sections A, B, C and D, however, you can limit the changes within the variations so that they're close to the current Main variation. For example, when Main B is selected, the variation never changes to A, C or D. To do this, move the cursor to “**Auto Section Change**” by pressing the Cursor button [▶], and then select “**Off**” by using the [^]/[v] buttons. When you want to make large variation changes, use the MAIN VARIATION buttons.

Turning Each Part (Channel) of the Style On/Off

A Style generally consists of eight parts (channels) listed below. You can add variations and change the feeling of a Style by selectively turning parts on/off as the Style plays.

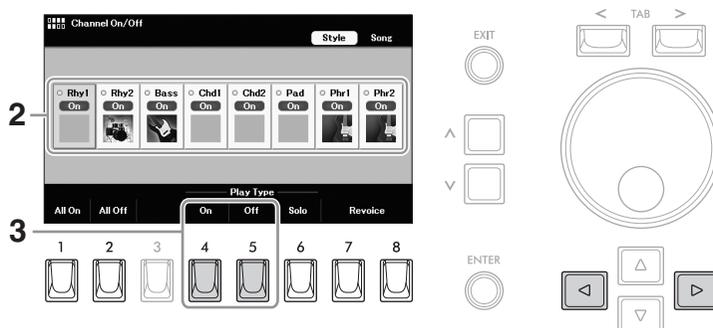
Parts of the Style

- **Rhy1, 2** (Rhythm 1, 2): These are the basic parts of the Style, containing the drum and percussion rhythm patterns.
- **Bass**: The bass part uses various appropriate instrument sounds to match the Style.
- **Chd1, 2** (Chord 1, 2): These are rhythmic chord backing parts, commonly used with piano or guitar Voices.
- **Pad**: This part is used for sustained instruments such as strings, organ, choir, etc.
- **Phr1, 2** (Phrase1, 2): These parts are used for punchy brass stabs, arpeggiated chords, and other extras that make the accompaniment more interesting.

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Channel On/Off**, [ENTER] → TAB [◀] **Style**

2 Use the Cursor buttons [◀][▶] to move the cursor to the desired part.



3 Press the [4] (On) or [5] (Off) button to turn the selected part on or off.

If you want to play back only the selected part (solo playback), press the [6] (**Solo**) button. To cancel solo playback, press the [6] (**Solo**) button again. You can turn all parts on or off by pressing the [1] (**All On**) or [2] (**All Off**) button.

NOTE

You can save the settings here to Registration Memory (page 85).

To change the Voice for each channel

Press one of the [7]/[8] (**Revoice**) buttons to call up the Voice Selection display (page 35), and then select the desired Voice.

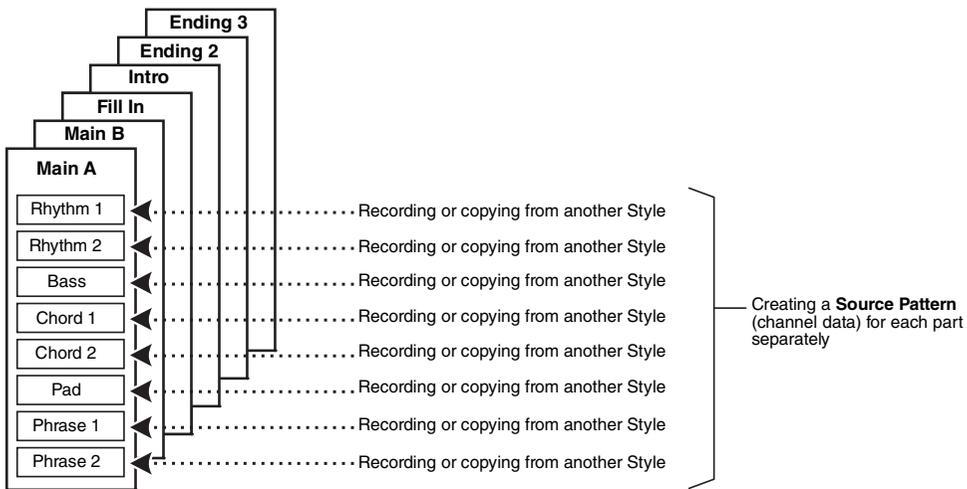
Creating/Editing Styles (Style Creator)

The Style Creator function lets you create original Styles by recording rhythm patterns from the keyboard and using already-recorded Style data. Basically, you should select a preset Style that is closest to the type you want to create, and then record each part (the rhythm pattern, bass line, chord backing, or phrase) for each Section.

This section gives you a brief introduction of the Style Creator function. For instructions on how to use the function, refer to the Reference Manual on the website.

Style Data Structure — Source Patterns

A Style is made up of different Sections (Intro, Main, Ending, etc.), and each Section has eight separate parts, each with recorded data (channel data), and which are referred to as “Source Patterns.” With the Style Creator feature, you can create a Style by separately recording the Source Pattern for each channel, or by importing pattern data from other existing Styles.



Editing the Rhythm Part of a Style (Drum Setup)

The Rhythm parts of a preset Style consist of preset “**Drums**” Voices (page 36), and each drum sound is assigned to a separate note. You may want to change the sounds and the note assignments, or make more detailed settings such as volume balance, effect, etc. By using the Drum Setup function of the Style Creator, you can edit the Rhythm part of a Style and save it as an original Style. For details, refer to the Reference Manual on the website.

Adding New Contents — Expansion Packs

Extra Styles can be added by installing the Expansion Pack. For details, refer to page 43.

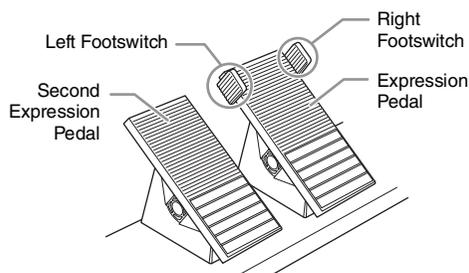
Advanced Features

Refer to the Reference Manual on the website, Chapter 2.



Playing Style with the Smart Chord feature	[MENU] → Cursor buttons [▲][▼][◀][▶] Chord Fingering , [ENTER]
Learning how to play specific chords (Chord Tutor)	[MENU] → Cursor buttons [▲][▼][◀][▶] Chord Tutor , [ENTER]
Style playback related settings	Style Selection display → [6] (Settings)
Creating/editing Styles (Style Creator)	[MENU] → Cursor buttons [▲][▼][◀][▶] Style Creator , [ENTER]
• Realtime Recording	→ TAB [◀] Basic
• Editing the rhythm part of a Style (Drum Setup)	→ TAB [◀] Basic → [7]
• Style Assembly	→ TAB [◀][>] Assembly
• Editing data for each channel	→ TAB [◀][>] Channel Edit
• Making Style File Format settings	→ TAB [>] SFF Edit

3 Live Expression Control – Applying Effects to Your Performance with the Expression Pedals and Footswitches –



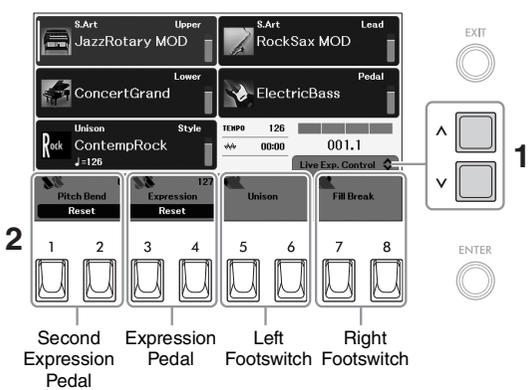
The Expression Pedals and Footswitches give you convenient foot control over various functions. For example, you can adjust the volume or apply effects to your performance by using your foot while you play the keyboards.

Using the Expression Pedals and Footswitches

3

- 1 On the Main display, use the [^]/[v] buttons to call up “Live Exp. Control” in the Quick Access area.**
The assigned function and the current setting value for each of the Expression Pedals and Footswitches are shown in this area.

NOTE
The Main display can be called up by pressing the [MENU] and [EXIT] buttons simultaneously.



- 2 Press the Expression Pedals up and down, or press the Footswitches with your foot to control the assigned functions.**

Default Functions

Controller	Function	Description
Expression Pedal	Expression	Press up and down to adjust the overall volume.
Second Expression Pedal	Pitch Bend	Press up and down to bend notes up or down while playing the keyboards. The Second Expression Pedal returns to the original position automatically when released and the pitch returns to normal.
Left Footswitch	Unison	Hold to apply the Unison function (page 51). Releasing it turns off the Unison function.

Live Expression Control – Applying Effects to Your Performance with the Expression Pedals and Footswitches –

Controller	Function	Description
Right Footswitch	Fill Break	Press to play a Break pattern during Style playback. Same as the [BREAK] button of the Style control (page 47).

■ Resetting the Value to the Default

Pressing one of the [1]/[2] or [3]/[4] (**Reset**) buttons can reset the assigned function's value for the corresponding Expression Pedal to the default.

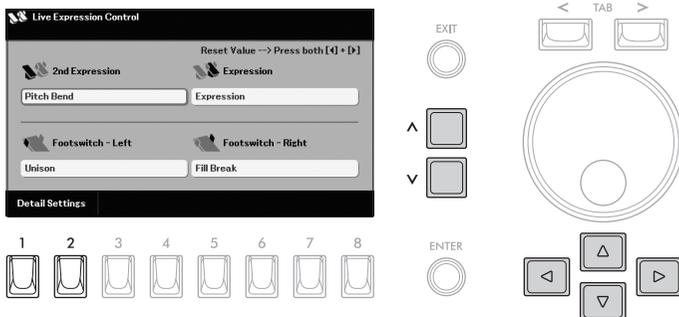
Changing the Functions assigned to the Expression Pedals and Footswitches

You can change the functions assigned to the Expression Pedals and Footswitches. For a list of the assignable functions and the details, refer to the Reference Manual on the website.

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Live Expression Control**, [ENTER]

2 Assign functions to each of the Expression Pedals and Footswitches.



NOTICE

The settings on the “Live Expression Control” display will be reset to the default when you turn off the instrument. To save the settings, register them to the Registration Memory (page 85) before turning off the instrument.

NOTE

Depending on the panel settings or how you press the controllers, you may not notice any change to the parameter value or the controllers may not work properly, even if you press them.

2-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to the desired controller.

2-2 Select the desired function to be assigned by using the [^][v] buttons. Pressing the [ENTER] button can call up the list in which the functions are categorized.

2-3 If necessary, make settings of the selected function, such as which parts are affected by the function by using the [1]–[8] buttons. Depending on the selected function, there may be no settings available here. For the function which has “Detail Settings” ([1]/[2] buttons), pressing one of these buttons calls up the window for making detailed settings. For details, refer to the Reference Manual on the website.

NOTE

Pressing both Cursor [◀] and [▶] buttons together on this display lets you reset all values for the functions assigned to each of the Expression Pedals to their default.

Advanced Features

Refer to the Reference Manual on the website, Chapter 3.



Detailed Settings for Assigned Functions

[MENU] → Cursor buttons [▲][▼][◀][▶] **Live Expression Control**, [ENTER]

4 Multi Pads

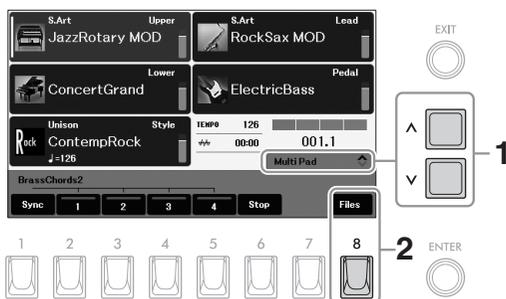
– Adding Musical Phrases to Your Performance –

The Multi Pads can be used to play a number of short prerecorded rhythmic and melodic sequences adding impact and variety to your keyboard performances. Multi Pads are grouped in Banks of four each. The instrument features a variety of Multi Pads in a variety of different musical genres.

Playing the Multi Pads

This section covers how to play back Multi Pads by themselves. However, you can also play the Multi Pads during playback of a Style/Song to make your performance more interesting.

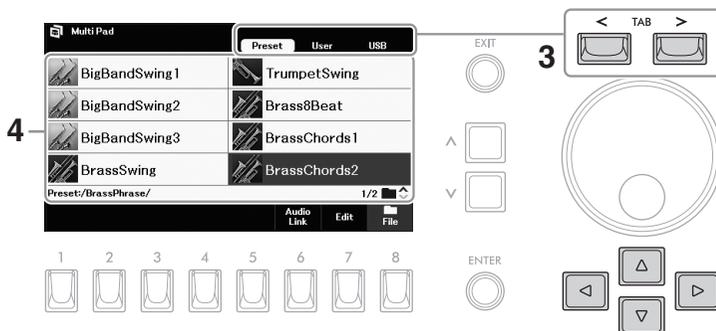
- 1 On the Main display, use the [^]/[v] buttons to call up “Multi Pad” in the Quick Access area.



NOTE

The Main display can be called up by pressing the [MENU] and [EXIT] buttons simultaneously.

- 2 Press the [8] (Files) button to call up the Multi Pad Bank Selection display.
- 3 Use the TAB [<][>] buttons to select the location (“Preset,” “User” or “USB”) of the desired Multi Pad Bank.



NOTE

The “USB” tab appears only when a USB flash drive is connected to the [USB TO DEVICE] terminal.

NOTE

While using the USB Audio Player/Recorder function (page 76), the Audio Link Multi Pad function (page 61) cannot be used.

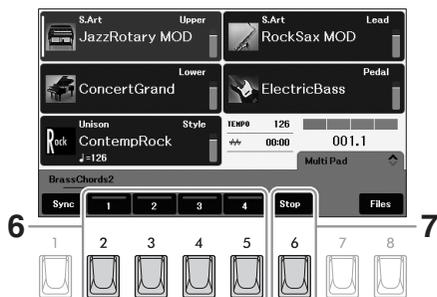
- 4 Use the Cursor buttons [▲][▼][◀][▶] to select the desired Multi Pad Bank.

Press the [^] button to call up the next higher level folder to which the Multi Pads are categorized. If two or more pages exist, you can call up another page by holding one of the Cursor button ([▶] or [▼] to the next page, and [◀] or [▲] to the previous one) continuously.

5 Press the [EXIT] button to return to the Main display.

6 Press any of the [2] – [5] buttons to play a Multi Pad phrase.

The corresponding phrase for the button starts playing back in its entirety at the current tempo. You can play up to four Multi Pads at the same time.



NOTE

- There are two types of Multi Pad data. Some types will play back once and stop when they reach to the end. Others will be played back repeatedly (loop).
- Pressing the pad during its playback will stop playing and begin playing from the top again.
- While the Style or Song is playing back, Multi Pad playback starts at the top of the next measure. When the Style or Song is stopped, Multi Pad playback starts immediately.

7 Press the [6] (Stop) button to stop playback of the Multi Pad(s).

If you want to stop specific pads, simultaneously hold down the [6] (Stop) button and press the pad(s) you wish to stop.

NOTE

While the Style or Song is playing back, pressing the STYLE [START] or SONG CONTROL [■] (Stop) button also stops playback of the Multi Pad(s). While both the Style and Song is playing back, pressing the SONG CONTROL [■] (Stop) button stops playback of the Song, Style and Multi Pad(s).

About the lamp status of the Multi Pad 1–4 buttons in the display

- **Blue:** Indicates that the corresponding pad contains data (phrase).
- **Orange:** Indicates that the corresponding pad is playing back.
- **Orange (flashing):** Indicates that the corresponding pad is in standby (Synchro Start; see page 61).
- **Off:** Indicates the corresponding pad contains no data and cannot be played.

Assigning Multi Pad Start/Stop control to the Footswitch

You can control the Start/Stop of the Multi Pads by assigning this function to the Footswitch on the display called up via [MENU] → Cursor buttons [▲][▼][◀][▶] **Live Expression Control**, [ENTER]. For details about how to assign, refer to page 58.

Using Chord Match

When the STYLE [ACMP] button is on, Multi Pad phrases automatically change in pitch to match the chord you play in the chord section (page 45). Play the chord in the chord section before/after pressing one of the Multi Pads ([2] – [5] buttons).

NOTE

- Some Multi Pads are not affected by Chord Match.
- The Multi Pads categorized in the "DJ Phrase" folder are specially created for the DJ Styles (page 45), and only the root key can be changed.

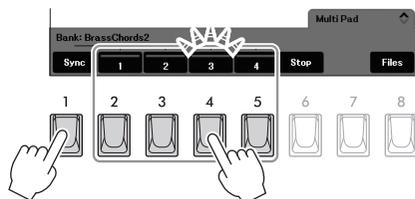
Using the Multi Pad Synchro Start Function

You can start Multi Pad playback by playing the keyboard or by starting Style playback.

1 Select a Multi Pad Bank and return to the Main display (steps 1 – 5 on page 59.)

2 While holding the [1] (Sync) button, press the desired button or buttons from [2] – [5].

The lamps of the corresponding buttons on the display flash in orange, indicating the standby status.



NOTE

To cancel the standby status of the selected Pad, carry out the same operation, or simply press the [6] (**Stop**) button to cancel the status of all Pads.

3 Start playback of the Multi Pad.

- When the [ACMP] button is off, press any note, or start playback of a Style.
- When the [ACMP] button is on, play a chord in the chord section (page 45), or start playback of a Style.

If you put a Multi Pad in standby during Style or Song playback, pressing any note (when the [ACMP] button is off) or playing a chord in the chord section (when the [ACMP] button is on) will start Multi Pad playback at the top of the next measure.

NOTE

When two or more Multi Pads are in the standby status, pressing any one of them starts simultaneous playback of all of them.

Advanced Features

Refer to the Reference Manual on the website, Chapter 4.



Creating Multi Pads (Multi Pad Creator)

[MENU] → Cursor buttons [▲][▼][◀][▶] **Multi Pad Creator**, [ENTER]

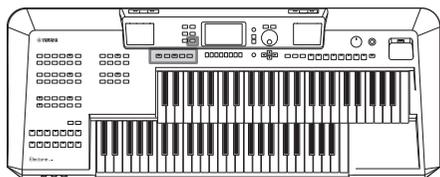
Creating Multi Pads with audio files (Audio Link Multi Pad)

Multi Pad Bank Selection display → [6] (**Audio Link**)

Editing Multi Pads

Multi Pad Bank Selection display → [7] (**Edit**)

5 Songs – Playing, Practicing and Recording Songs –



For this instrument, “Song” refers to MIDI data which include preset Songs, commercially available MIDI format files, etc. Not only can you play back a Song and listen to it, but you can also play the keyboards and Pedalboard along with Song playback and record your own performance as a Song.

MIDI Songs and Audio Files

There are two kinds of data that can be recorded and played back on this instrument: MIDI Songs and audio files. A MIDI Song is comprised of your keyboard performance information and is not a recording of the actual sound itself. The performance information refers to which keys are played, at what timing, and at what strength—just as in a musical score. Based on the recorded performance information, the tone generator outputs the corresponding sound. Since MIDI Song data contains the information such as keyboard part and Voice, you can practice effectively by viewing the score, turning the particular part on or off, or changing Voices. An audio file is a recording of the performed sound itself. This data is recorded in the same way as that used with voice recorders, etc. Audio data in WAV format can be played back on this instrument just like playing it on your smartphone or portable music player, etc.

NOTE

For instructions on playback and recording of audio files, refer to page 76.

Playback of Songs

You can play back the following types of Songs.

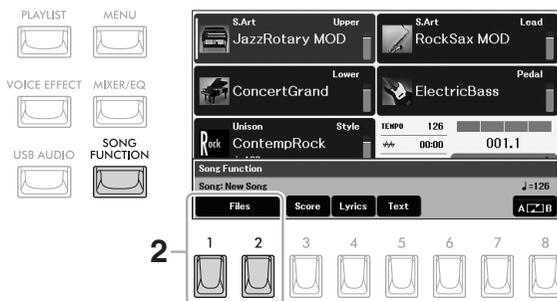
- Preset Songs (in the “**Preset**” tab of the Song Selection display)
- Your own recorded Songs (page 71)
- Commercially available Song data: SMF (Standard MIDI File)

If you want to play back a Song in a USB flash drive, connect the USB flash drive containing the Song data to the [USB TO DEVICE] terminal beforehand.

NOTE

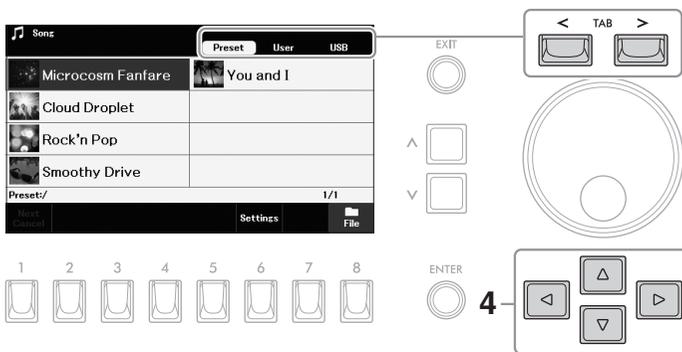
Before using a USB flash drive, be sure to read “Connecting USB Devices” on page 94.

1 Press the [SONG FUNCTION] button to call up the “**Song Function**” window.



2 Press one of the [1]/[2] (**Files**) buttons to call up the Song Selection display.

- 3 Use the TAB [\leftarrow][\rightarrow] buttons to select the location (“Preset,” “User” or “USB”) of the desired Song.**



NOTE

The “USB” tab appears only when a USB flash drive is connected to the [USB TO DEVICE] terminal.

- 4 Use the Cursor buttons [\blacktriangle][\blacktriangledown][\blacktriangleleft][\blacktriangleright] to select the desired Song.**

- 5 Press the SONG CONTROL [\blacktriangleright /||] (Play/Pause) button to start playback.**



Queuing the next Song for playback

While a Song is playing back, you can queue up the next Song for playback. This is convenient for chaining it to the next Song smoothly during live performance. While a Song is playing back, select the Song you want to play next in the Song Selection display, and then press the [ENTER] button. The “Next” indication appears at the upper right of the corresponding Song name. To cancel this setting, press the [1] (Next Cancel) button.

NOTE

If “Next Cancel” is not shown, press the [8] (Close) button to call it up.

- 6 Press the SONG CONTROL [\blacksquare] (Stop) button to stop playback.**



NOTE

By default, when the selected Song reaches the end, playback stops automatically. If you want to repeat playback, change the “Repeat Mode” setting (page 69).

Playback-related Operations



- **Synchro Start**

While playback is stopped, hold down the SONG CONTROL [■] (Stop) button and press the [▶/||] (Play/Pause) button. The [▶/||] (Play/Pause) button flashes, indicating standby status. You can start playback as soon as you play the keyboards or the Pedalboard. To cancel the Synchro Start function, press the [■] (Stop) button.

- **Pause**

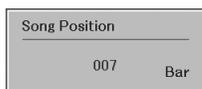
Press the [▶/||] (Play/Pause) button during playback. Pressing it again resumes Song playback from the current position.

- **Rewind/Fast Forward**

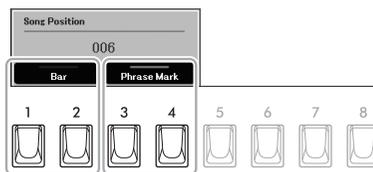
Press the [◀◀] (Rewind) or [▶▶] (Fast forward) button during playback or while the Song is stopped. Pressing either of them once moves back/forward one measure. Holding either of them scrolls backward/forward continuously.

While the Song position pop-up below is shown on the display, you can also use the Data dial to adjust the value.

For Songs not containing Phrase Marks



For Songs containing Phrase Marks



You can specify the units used when rewinding/fast-forwarding the Song by pressing one of the [1]/[2] (**Bar**) or [3]/[4] (**Phrase Mark**) buttons.

NOTE

Phrase Mark is a pre-programmed marker in certain Song data, which indicates a specific location in the Song.

- **Adjusting the Tempo**

See page 31.

- **Adjusting the Volume Balance**

You can adjust the volume balance among the parts (Song, keyboard parts and other parts), or among each Song channel in the “**Mixer**” display (page 91).

- **Transposing the Song Playback**

See page 40.

Displaying Music Notation (Score)

You can view the music notation (score) of the selected Song.

- 1 Select a Song (steps 1 – 4 on page 62).**
- 2 Press the [SONG FUNCTION] button to call up the “Song Function” window.**
- 3 Press the [3] (Score) button to call up the Score display.**

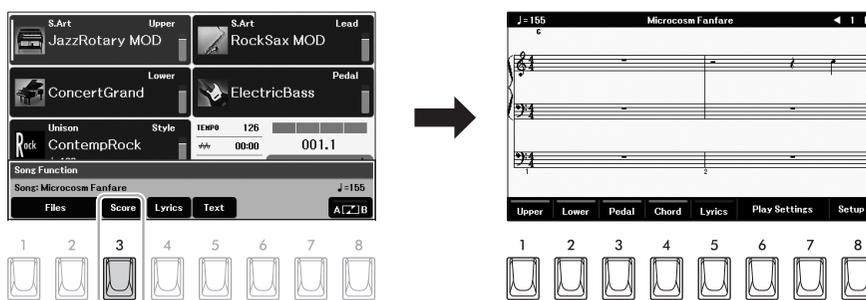
You can look through the entire notation by using the TAB [<][>] buttons when the Song playback is stopped. When playback is started, the “ball” bounces along through the score, indicating the current position. You can change the displayed notation style by using the [1] – [8] buttons. For details, refer to the Reference Manual on the website.

NOTE

This instrument can display the score of preset Songs, your recorded Song, or commercially available MIDI files (only those which allow devices to indicate notation).

NOTE

The displayed notation is generated by the instrument based on the Song data. As a result, it may not be exactly the same as commercially available sheet music of the same song — especially when displaying notation of complicated passages or many short notes.



Displaying Lyrics

When the selected Song contains lyrics data, you can view it on the instrument's display.

1 Select a Song (steps 1 – 4 on page 62).

2 Press the [SONG FUNCTION] button to call up the “Song Function” window.

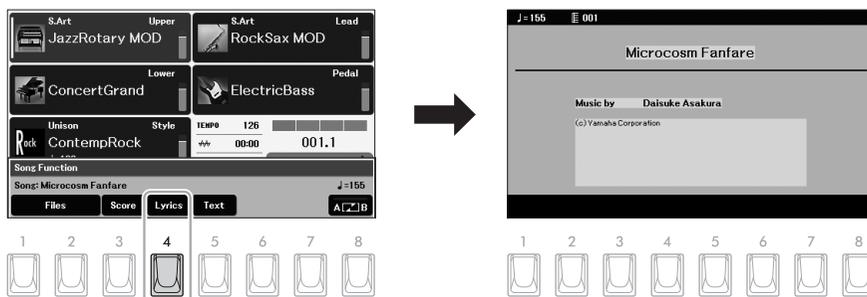
3 Press the [4] (Lyrics) button to call up the Lyrics display.

When the Song contains lyrics data, the lyrics are shown on the display. You can look through the entire lyrics by using the TAB [<][>] buttons when Song playback is stopped.

As Song playback starts, the color of the lyrics changes, indicating the current position.

NOTE

You can also use the Footswitch to turn the pages by assigning the function to the Footswitch (page 58).



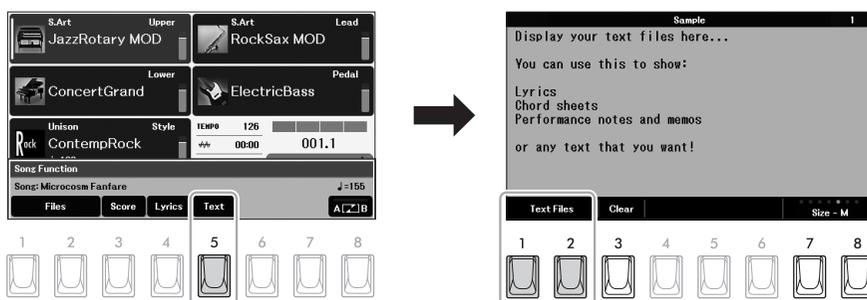
Displaying Text

Regardless of whether a Song is selected or not, you can view the text file (.txt) in the connected USB flash drive created by using a computer. This feature enables various useful possibilities, such as the showing of lyrics, chord names, and text notes.

The Text display can be called up by pressing the [5] (Text) button in the “**Song Function**” window above. To view a text file on the Text display, press one of the [1]/[2] (Text Files) buttons to call up the File Selection display, and then select the desired file. After that, press the [EXIT] button return to the Text display.

NOTE

- Information about Text File selection can be memorized to the Registration Memory (page 85).
- If you want to view Chinese text, select “Size - L2” by pressing one of the [7]/[8] buttons repeatedly.



If necessary, you can change the font size and type by pressing one of the [7]/[8] (Size) buttons repeatedly. For fonts not indicated with a “P,” the letters are uniformly spaced in the same width, and are suitable for displaying lyrics with chord names, since the positions of chord names are fixed to the corresponding lyrics. For fonts indicated with a “P,” the letters and spacings have different widths, and are suitable for displaying lyrics without chord names or explanatory notes.

Pressing the [3] (Clear) button can clear the text from the display (This operation does not delete the text file in the USB flash drive).

Turning Each Part (Channel) of the Song On/Off

A Song consists of 16 separate channels (parts). You can independently turn each channel of the selected Song playback on or off.

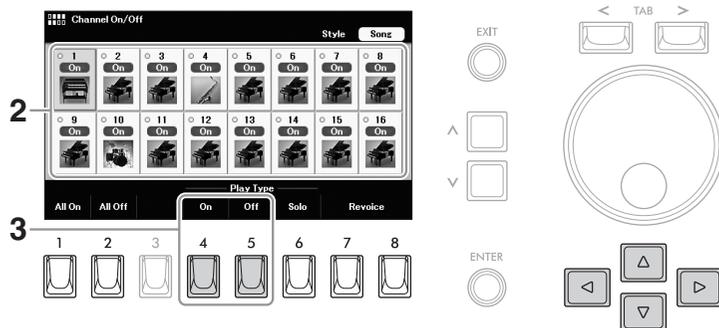
NOTE

You can change the channel assignment in the “**Play Part Assign**” setting called up via [SONG FUNCTION] → [1]/[2] (**Files**) → [6] (**Settings**).

1 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Channel On/Off**, [ENTER] → TAB [➤] **Song**

2 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to the desired channel.



3 Press the [4] (On) or [5] (Off) button to turn the selected channel on or off.

If you want to play back only the selected channel (solo playback), press the [6] (**Solo**) button. To cancel solo playback, press the same button again. You can turn all channels on or off by pressing the [1] (**All On**) or [2] (**All Off**) button.

NOTE

You can save the settings here to Registration Memory (page 85).

To change the Voice for each channel

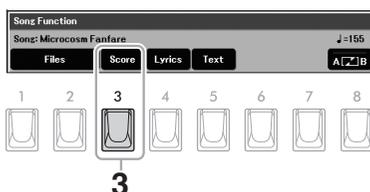
Press one of the [7]/[8] (**Revoice**) buttons to call up the Voice Selection display for the selected channel, and then select the desired Voice.

One-handed Practice with the Guide Function

You can mute the Upper Keyboard Voice part for practicing that part on your own while you view the notes to play in the Score display. The explanations here apply when you practice the Upper Keyboard Voice part with **“Follow Lights”** of the Guide functions. You can also practice at your own pace — since the accompaniment waits for you to play the notes correctly. In the Score display, you can see the note to play and the current position.

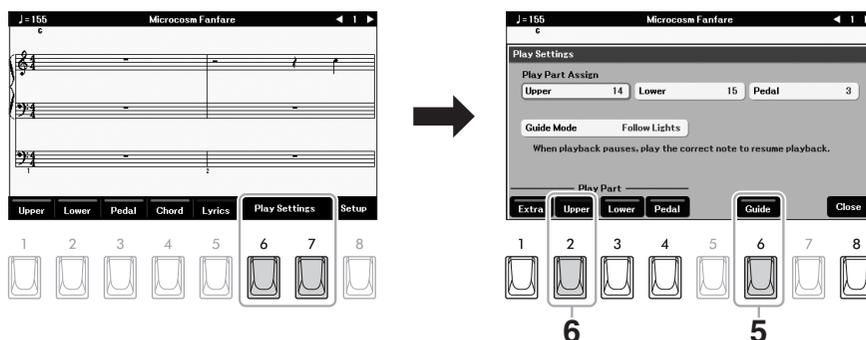
1 Select a Song (steps 1 – 4 on page 62).

2 Press the [SONG FUNCTION] button to call up the “Song Function” window.



3 Press the [3] (Score) button to call up the Score display.

4 Press one of the [6]/[7] (Play Settings) buttons to call up the “Play Settings” window.



5 Press the [6] (Guide) button to turn the Guide function on.

6 Press the [2] (Upper) to turn off the Upper Keyboard part, and then press the [8] (Close) button to close the window.

The Upper Keyboard part is muted and the Guide for the Upper Keyboard part is enabled. You can now play that part by yourself.

7 Press the SONG CONTROL [▶/||] (Play/Pause) button to start playback.

Practice the muted part while viewing the Score display. The playback of the other parts will wait for you to play the notes correctly.



NOTE

- Pressing one of the [1] – [3] buttons in the Score display can turn off the notation for the corresponding part. For details, refer to the Reference Manual on the website.
- If you want to change the channel assignment for each part, press the [8] (Setup) button and then change the settings. For details, refer to the Reference Manual on the website.

8 After you practice, press one of the [6]/[7] (*Play Settings*) buttons to call up the “*Play Settings*” window, and then press the [6] (*Guide*) button to turn the Guide function off.

Other Guide functions

In addition to the “*Follow Lights*” function explained above, there are more functions in the Guide features, for practicing the timing of playing the keys (*Any Key*), for Karaoke (*Karao-key*) or for practicing a song at your own pace (*Your Tempo*). To use these functions, change the “*Guide Mode*” setting in the “*Play Settings*” window.

For more information, refer to the Reference Manual on the website.

Repeat Playback

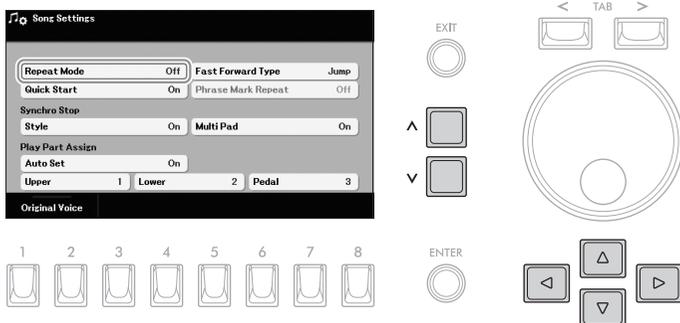
The Song Repeat functions can be used to repeatedly play back a Song, multiple Songs, or a specific range of measures in a Song.

Selecting the Repeat Mode for Song playback

1 Call up the operation display.

[SONG FUNCTION] → [1]/[2] (*Files*) → [6] (*Settings*)

2 Select the Repeat Mode.



2-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to “*Repeat Mode*.”

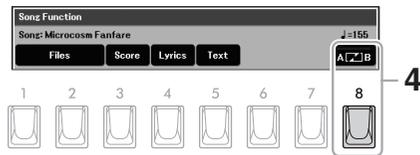
2-2 Use the [^][v] buttons to select the repeat playback mode.

Off	Plays through the selected Song, and then stops.
Single	Plays through the selected Song repeatedly.
All	Continues playback through all the Songs in the current folder (where the selected Song is located) repeatedly.
Random	Continues playback at random through all the Songs in the current folder (where the selected Song is located) repeatedly.

Specifying a Range of Measures and Playing them Back Repeatedly (A-B Repeat)

1 Select a Song (steps 1 – 4 on page 62).

2 Press the [SONG FUNCTION] button to call up the “Song Function” window.

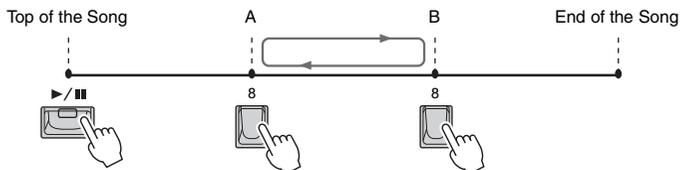


3 Press the SONG CONTROL [▶/||] (Play/Pause) button to start playback.



4 Specify the repeat range.

Press the [8] (A B) button at the starting point (A) of the range to be repeated. Press the [8] (A B) button again at the ending point (B). After an automatic metronome lead-in (to help guide you into the phrase), the range from Point A to Point B is played back repeatedly.



NOTE

- Specifying only Point A results in repeat playback between Point A and the end of the Song.
- When you want to repeat from the top of the Song to a specified point in the middle:
 1. Press the [8] (A B) button, and then start Song playback.
 2. Press the [8] button again at the ending point (B).

5 To stop playback, press the SONG CONTROL [■] (Stop) button.

The Song position returns to Point A and pressing the [▶/||] (Play/Pause) button lets you start from that point.

After you've finished practicing, press the [8] (A B) button to turn off Repeat playback.

Specifying the repeat range while Songs are stopped

1. Fast-forward the Song to Point A by using the SONG CONTROL [▶▶] (Fast forward) button, and then press the [8] (A B) button.
2. Fast-forward the Song to Point B, and then press the [8] button again.

Recording Your Performance

You can record your performance and save it as a MIDI file (SMF format 0) to the User drive of the instrument or a USB flash drive. With this method, you can independently record the Upper Keyboard Voice part and Lower Keyboard Voice part, or re-record a specific section and edit other settings (such as Voice) after saving the data.

NOTE

Audio data such as the sound input from the [MIC] and [AUX IN] jacks, etc. cannot be recorded to the MIDI Songs. If you want to record such data, use the USB Audio Recorder function (page 79).

Three recording methods are available:

- **Quick Recording**..... **See the section below**
You can record all parts of your performance at once without regard for the part/channel assignment.
- **Recording each keyboard part, Style and Multi Pad independently**..... **page 72**
You can record parts assigned to the Upper Keyboard, Lower Keyboard, Pedalboard, Multi Pad playback and Style playback independently.
- **Recording specific channels individually (Multi Track Recording)**..... **page 74**
You can record data to each part one-by-one over a different channel number, to create a single, multi-part Song. The channel/part assignments can be freely changed.

Quick Recording

This simple method lets you start recording immediately without specifying the parts or channels you want to record to. For Quick Recording, each part will be recorded to the following channels.

Channel	1	2	3	4	5-8	9-16
Part	Upper Keyboard Voice	Lower Keyboard Voice	Pedal Voice	Lead Voice	Multi Pad	Style

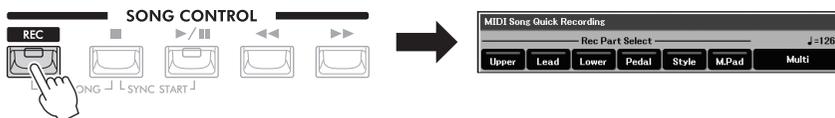
1 Before recording, make the necessary settings, such as Voice/Style selection.

2 Press the SONG CONTROL [REC] button and the [■] (Stop) button simultaneously.

A blank Song for recording is automatically set, and the Song name is set to "New Song."



3 Press the [REC] button.



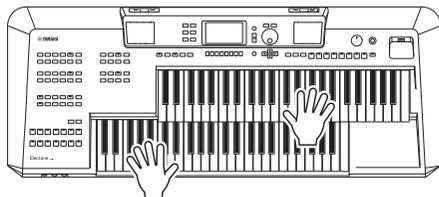
The "MIDI Song Quick Recording" window is called up. Also, the [REC] and [▶/||] (Play/Pause) buttons flash, indicating the standby status.

NOTE

- If the "MIDI Song Multi Recording" window is shown, press one of the [7]/[8] (Quick) buttons to call up the "MIDI Song Quick Recording" window.
- To cancel the recording, press the [REC] button again before going on to step 4.

4 Start recording.

You can start recording in several different ways: by playing the keyboards and the Pedalboard, starting a Style, playing a Multi Pad or pressing the SONG CONTROL [▶/||] (Play/Pause) button.



5 After you finish your performance, press the [■] (Stop) to stop recording.

A message may appear prompting you to save the recorded data.



To hear the recorded performance, press the [▶/||] (Play/Pause) button.

6 Save the recorded performance as a Song.

6-1 Press the [SONG FUNCTION] button to call up the “*Song Function*” window, and then press one of the [1]/[2] (*Files*) buttons to call up the Song Selection display.

6-2 Save the recorded data as a file by following the instructions on page 26.

NOTICE

The recorded Song will be lost if you change to another Song or you turn the power off without carrying out the Save operation.

Recording each Keyboard part, Style and Multi Pad independently

You can record parts assigned to the Upper Keyboard, Lower Keyboard, Pedalboard and Style playback independently.

1 Before recording, make the necessary settings, such as Voice/Style selection.

2 Press the SONG CONTROL [REC] button and the [■] (Stop) button simultaneously.

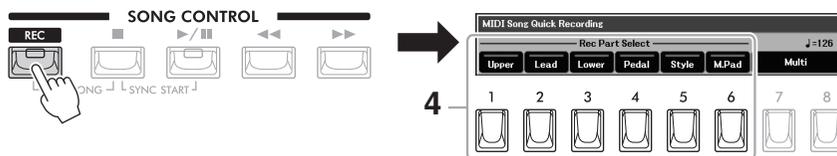
A blank Song for recording is automatically set, and the Song name is set to “*New Song*.”



NOTE

If you want to add data to an existing Song, select the desired Song and then press only the [REC] button here. In this case, skip step 3.

3 Press the [REC] button.



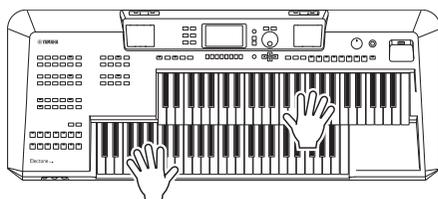
The “**MIDI Song Quick Recording**” window is called up. Also, the [REC] and [▶/||] (Play/Pause) buttons flash, indicating the standby status.

4 Use the [1] – [6] buttons to turn on the desired parts for recording.

[1]	Upper	Upper Keyboard Voice
[2]	Lead	Lead Voice
[3]	Lower	Lower Keyboard Voice
[4]	Pedal	Pedal Voice
[5]	Style	Style parts
[6]	M.Pad	Multi Pad parts

5 Start recording.

You can start recording in several different ways: by playing the keyboards and the Pedalboard, starting a Style, playing a Multi Pad, or pressing the SONG CONTROL [▶/||] (Play/Pause) button.



6 After you finish your performance, press the [■] (Stop) to stop recording.

A message may appear prompting you to save the recorded data.



To hear the recorded performance, press the [▶/||] (Play/Pause) button.

7 Record your performance of other part(s) by repeating steps 3 to 6 above.

In step 4, set the parts which have not yet been recorded to on so that they will be recorded.

8 Save the recorded performance as a Song.

8-1 Press the [SONG FUNCTION] button to call up the “**Song Function**” window, and then press one of the [1]/[2] (**Files**) buttons to call up the Song Selection display.

8-2 Save the recorded data as a file by following the instructions on page 26.

NOTE

- If the “**MIDI Song Multi Recording**” window is shown, press one of the [7]/[8] (**Quick**) buttons to call up the “**MIDI Song Quick Recording**” window.
- To cancel the recording, press the [REC] button again before going on to step 5.

NOTICE

Previously recorded data will be overwritten if you set the already recorded parts to be recorded.

Recording specific Channels individually (Multi Track Recording)

You can create a Song consisting of 16 channels by recording your performance to each part one-by-one over a different channel number. This enables you to create a complete piece which would otherwise be difficult, or even impossible to play live.

1 Before recording, make the necessary settings, such as Voice/ Style selection.

2 Press the SONG CONTROL [REC] button and the [■] (Stop) button simultaneously.

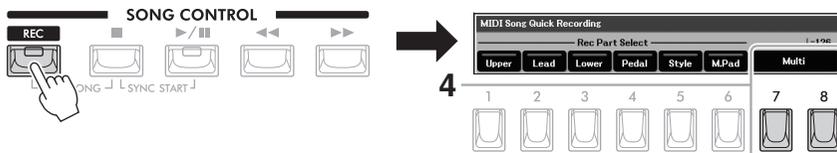
A blank Song for recording is automatically set, and the Song name is set to "New Song."



NOTE

If you want to add data to an existing Song, select the desired Song and then press only the [REC] button here. In this case, skip step 3.

3 Press the [REC] button.



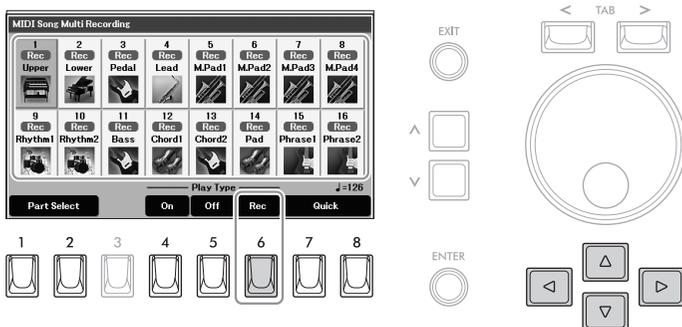
NOTE

When the [REC] button is pressed, the last used window "MIDI Song Quick Recording" or "MIDI Song Multi Recording" is called up. You can switch between these windows by pressing one of the [7]/[8] buttons.

The "MIDI Song Quick Recording" window is called up. Also, the [REC] and [▶/||] (Play/Pause) buttons flash, indicating the standby status.

4 Press one of the [7]/[8] (Multi) buttons to call up the "MIDI Song Multi Recording" window.

5 Specify the channel for recording.



NOTICE

Previously recorded data will be overwritten if you set channels which have recorded data to "Rec."

NOTE

When you adding data to an existing Song, you can set each channel to play or mute while recording by using the [4] (On) and [5] (Off) buttons.

NOTE

To cancel the recording, press the [REC] button again before going on to step 5.

5-1 Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to the desired channel.

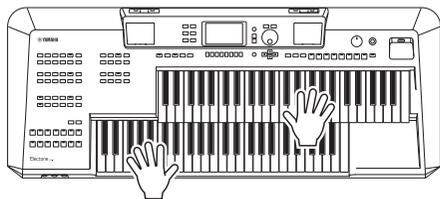
5-2 Press the [6] (Rec) button to set the desired channel to "Rec."

To cancel the "Rec" status of the channel, press the [6] (Rec) button again.

If necessary, change the part assignment by using the [1]/[2] (Part Select) buttons.

6 Start recording.

You can start recording in several different ways: by playing the keyboards and the Pedalboard, starting a Style, playing a Multi Pad, or pressing the SONG CONTROL [▶/||] (Play/Pause) button.



7 After you finish your performance, press the [■] (Stop) button to stop recording.

A message may appear prompting you to save the recorded data.



To hear the recorded performance, press the [▶/||] (Play/Pause) button.

8 Record your performance to another channel by repeating steps 4 to 6 above.

9 Save the recorded performance as a Song.

9-1 Press the [SONG FUNCTION] button to call up the “*Song Function*” window, and then press one of the [1]/[2] (*Files*) buttons to call up the Song Selection display.

9-2 Save the recorded data as a file by following the instructions on page 26.

NOTICE

The recorded Song will be lost if you change to another Song or you turn the power off without carrying out the Save operation.

Advanced Features

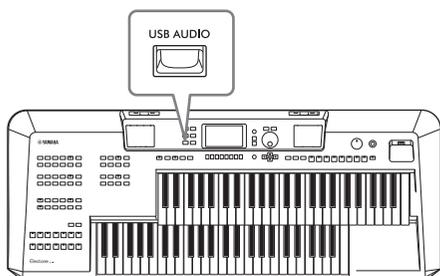
Refer to the Reference Manual on the website, Chapter 5.



Editing Music Notation settings	[SONG FUNCTION] → [3] (Score) → [1] – [8] buttons
Using the Auto Accompaniment features with Song playback	SONG CONTROL [■] (Stop) + [▶/] (Play/Pause) → [SYNC START] (Style control) → STYLE [START]
Song playback related settings	[SONG FUNCTION] → [1]/[2] (<i>Files</i>) → [6] (Settings)
Editing Songs (Song Creator)	[MENU] → Cursor buttons [▲][▼][◀][▶] Song Creator , [ENTER]
• Selecting the setup parameters recorded to the top position of the Song	→ TAB [<][>] Setup
• Re-recording a specific section — Punch In/Out	→ TAB [<] Rec Mode
• Editing channel events	→ TAB [>] Channel → Cursor buttons [▲][▼][◀][▶] Quantize/Delete/Mix/Transpose , [ENTER]

6 USB Audio Player/Recorder

– Recording and Playing Audio Files –



The convenient USB Audio Player/Recorder function allows you to play back audio files (WAV) saved to a USB flash drive — directly from the instrument. Moreover, since you can record your performances and recordings as audio files (WAV) to a USB flash drive, it is possible to play back the files on computer, share them with your friends, and record your own CDs to enjoy as well.

NOTE

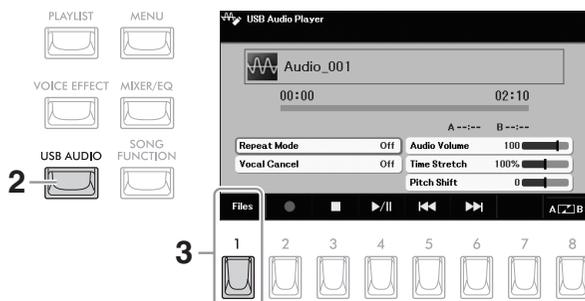
For instructions on playback and recording of MIDI files (Songs), refer to page 62.

Playing Back Audio Files (USB Audio Player)

You can play back audio files of WAV format (44.1 kHz sample rate, 16-bit resolution, stereo) that have been saved to the USB flash drive.

1 Connect the USB flash drive containing the audio files to the [USB TO DEVICE] terminal.

2 Press the [USB AUDIO] button to call up the “USB Audio Player” display.



3 Press the [1] (Files) button to call up the Audio File Selection display.

NOTE

DRM (Digital Rights Management) protected files cannot be played back.

NOTE

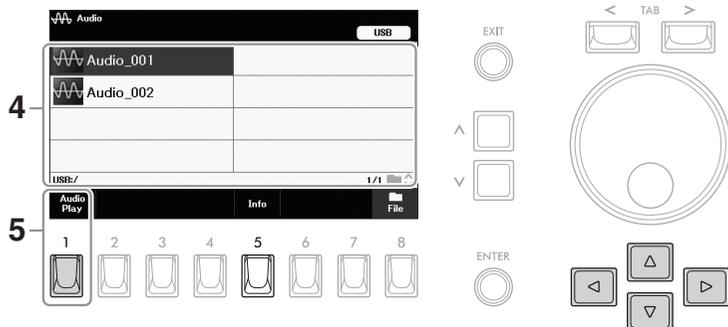
Before using a USB flash drive, be sure to read “Connecting USB Devices” on page 94.

NOTE

While using the USB Audio Player/Recorder function, the Audio Link Multi Pad function (page 61) cannot be used.

4 Select the desired file by using the Cursor buttons

[▲][▼][◀][▶].



NOTE

Audio files take a slightly longer time to load than other files.

Viewing Audio file information

Pressing the [5] (**Info**) button calls up the Information window from which you can view the file name, sample rate etc. of the selected file.

NOTE

If "**Info**" is not shown, press the [8] (**Close**) button to call it up.

5 Press the [1] (**Audio Play**) button to start playback.

The display automatically returns to the "**USB Audio Player**" display.

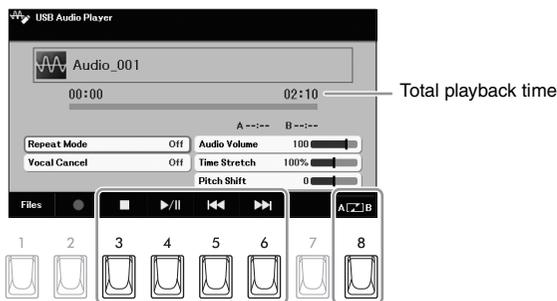
6 To stop playback, press the [3] (■) button.

NOTICE

Never attempt to disconnect the USB flash drive or turn the power off during playback. Doing so may corrupt the USB flash drive data.

Playback-related Operations

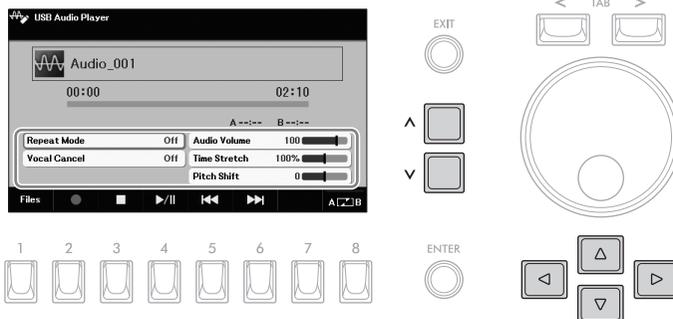
You can control Audio playback by pressing the [3] – [6] buttons on the "**USB Audio Player**" display.



[3]	■ (Stop)	Stops playback.
[4]	▶/ (Play/Pause)	Starts or pauses playback at the current position.
[5]	◀◀ (Prev.)	Pressing this changes the file to the previous one; holding it moves continuously back through the current file (in seconds).
[6]	▶▶ (Next)	Pressing this changes the file to the next one; holding it moves continuously forward through the current file (in seconds).
[8]	A B	Just as with Songs in MIDI format (page 70), audio files can also be played back repeatedly within the specified section (between the A and B points). During playback, press this button at the starting point (A), and then press the button again at the ending point (B) to start repeat playback between the A and B points. To cancel this setting, press this button again.

Making detailed settings for Audio playback

You can make detailed settings related to Audio playback on the “**USB Audio Player**” display. Use the Cursor buttons [▲][▼][◀][▶] to move the cursor to the desired parameter, and then use the [^]/[v] buttons to set the parameters.



<p>Repeat Mode</p>	<p>Selects the repeat mode of Audio playback.</p> <ul style="list-style-type: none"> • Off: Plays through the selected file, and then stops. • Single: Plays through the selected file repeatedly. • All: Continues playback through all the files in the folder containing the current file repeatedly. • Random: Randomly and repeatedly plays back all files in the folder containing the current file.
<p>Vocal Cancel</p>	<p>The Vocal Cancel function cancels or attenuates the center position of the stereo sound. This lets you sing “karaoke” style with just instrumental backing, or play the melody part on the keyboard, since the vocal sound is usually at the center of the stereo image in most recordings. First select an Audio file, and then turn this function on/off. If you select another audio file, this setting will be switched to off.</p> <p>NOTE</p> <ul style="list-style-type: none"> • Though the Vocal Cancel function is highly effective on most audio recordings, the vocal sound on some songs may not be completely canceled. • Vocal cancel does not affect the Audio Input Sound (page 98) from external devices.
<p>Audio Volume</p>	<p>Adjusts the playback volume of an Audio file.</p>
<p>Time Stretch</p>	<p>Adjusts the playback speed of an Audio file by stretching or compressing it. The value can be adjusted from 75% to 125% and the default value is 100%. Higher values result in a faster tempo. If you select another audio file, this setting will be restored to the default value.</p> <p>NOTE</p> <p>Changing the playback speed of an Audio file may change its tonal characteristics.</p>
<p>Pitch Shift</p>	<p>Shifts the pitch of an Audio file in semitone steps (from -12 to 12). If you select another audio file, this setting will be restored to the default value.</p>

Recording Your Performance as Audio (USB Audio Recorder)

You can record your performance as an audio file (WAV format — 44.1 kHz sample rate, 16-bit resolution, stereo) directly to a USB flash drive. This instrument allows you to record up to 80 minutes per single recording, though this may differ depending on the capacity of the USB flash drive.

NOTE

If you want to record various parts separately or edit the data after recording, record as a MIDI Song (page 71).

Sounds that can be recorded:

- Sounds produced by your performance: Keyboard parts (Upper Keyboard Voice, Lower Keyboard Voice, Lead Voice, Pedal Voice), Song parts, Style parts and Multi Pad parts.
- Microphone sound input from the [MIC] jack (page 81).
- Audio input from the connected external devices (pages 97 – 98).

NOTE

If you want to record your keyboard performance and microphone sound separately, record your keyboard performance as a MIDI Song (page 71), and then record the microphone sound by using the USB Audio function.

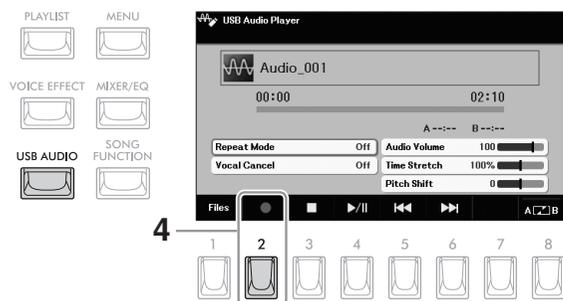
NOTE

Audio Link Multi Pads (page 61) cannot be recorded.

- 1 Connect the USB flash drive to the [USB TO DEVICE] terminal.
- 2 Make the necessary settings such as Voice/Style selection.
- 3 Press the [USB AUDIO] button to call up the “USB Audio Player” display.

NOTE

Before using a USB flash drive, be sure to read “Connecting USB Devices” on page 94.



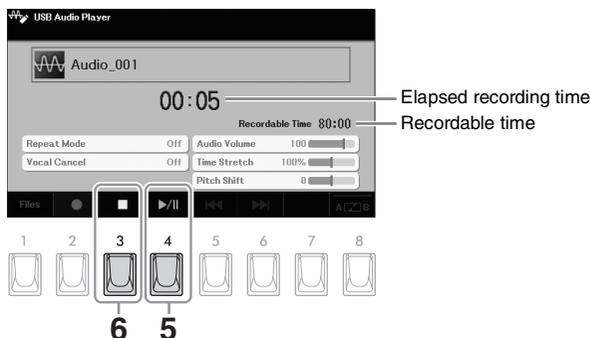
- 4 Press the [2] (●) button to enter recording standby. The Recording icon (●) on the display flashes.
- 5 Start recording by pressing the [4] (▶/||) button, and then start your performance. The elapsed recording time is shown in the display while recording.

NOTE

You can use the metronome (page 31) while recording; however, the metronome sound will not be recorded.

NOTICE

Never attempt to disconnect the USB flash drive or turn the power off during recording. Doing so may corrupt the USB flash drive data or the recording data.



6 After you finish your performance, press the [3] (■) button to stop recording.

Recorded data is automatically saved to the USB flash drive as a file with the name automatically set.

7 Press the [4] (▶/||) button to play back the recorded performance.

To see the file of the recorded performance in the File Selection display, press the [8] (*Files*) button.

NOTE

The recording operation continues, even if you close the “**USB Audio Player**” display by pressing the [EXIT] button. Press the [USB AUDIO] button to call up the “**USB Audio Player**” display again, and then stop the recording by pressing the [3] (■) button.

NOTE

Keep in mind that if you make a mistake in your performance, you cannot correct it by overwriting an existing file. Delete the recorded file on the File Selection display, and then record your performance again.

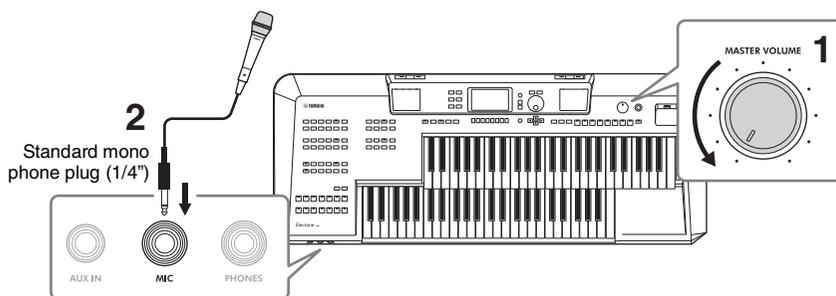
7 Microphone – Sing Along with Song Playback or Your Own Performance –

By connecting a microphone to the [MIC] jack, you can enjoy singing along with your keyboard performance or with Song playback. The instrument outputs your vocals through the built-in speakers.

Connecting a Microphone

- 1 Before turning on the power of the instrument, turn down the [MASTER VOLUME] dial to the minimum position.

NOTICE
To avoid damage to the devices or to the built-in speakers by an excessive signal when connecting (or disconnecting) the microphone, first set the [MASTER VOLUME] dial to the minimum position.



- 2 Connect the microphone to the [MIC] jack on the front panel.
- 3 Turn on the power of the instrument, and then adjust the volume by using the [MASTER VOLUME] dial.

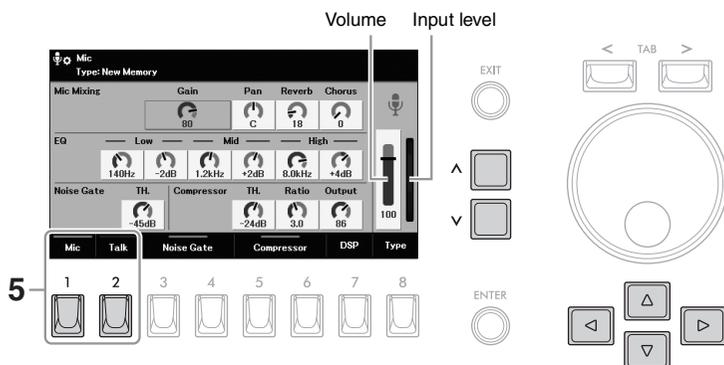
NOTE
Make sure you are using a conventional dynamic microphone.

If necessary, also turn on the power of the connected microphone.

- 4 Call up the operation display.
[MENU] → Cursor buttons [▲][▼][◀][▶] Mic, [ENTER]

- 5 Press the [1] (Mic) button to turn it on.

NOTE
If you want to make announcements between your performances, you can instantly call up the settings for talking by turning on the [2] (Talk) button. For details, refer to the Reference Manual on the website.



6 Make the basic settings for using a microphone.

6-1 Use the Cursor buttons [**▲**][**▼**][**◀**][**▶**] to move the cursor to “**Gain**,” “**Pan**” or the Volume meter.

Gain	Adjust the input level while checking the Input Level meter at the right end. Make sure to adjust it so the meter lights in green or yellow. When the input level is too high, it lights in red.
Pan	Adjusts the stereo position of the microphone sound.
Volume	Adjusts the output volume of the microphone sound.

6-2 Use the [**^**][**v**] buttons to adjust the value while inputting your voice into the microphone.

7 If necessary, adjust the effect (“**Reverb**” and “**Chorus**”) depth and other parameters.

7-1 Use the Cursor buttons [**▲**][**▼**][**◀**][**▶**] to move to the desired parameter.
For details on each parameter, refer to the Reference Manual on the website.

7-2 Use the [**^**][**v**] buttons to adjust the value while inputting your voice into the microphone.

Applying Desired Effects to the Microphone Sound

The Reverb and Chorus adjusted here are applied to entire instrument sound as well as the microphone. If you want to apply an additional effect to the microphone sound, select the effect type for the microphone via the [7] (**DSP**) button.

Disconnecting the microphone

1 Set the [MASTER VOLUME] dial to the minimum position.

2 Disconnect the microphone from the [MIC] jack.

Advanced Features

Refer to the Reference Manual on the website, Chapter 7.



Making and saving the microphone settings

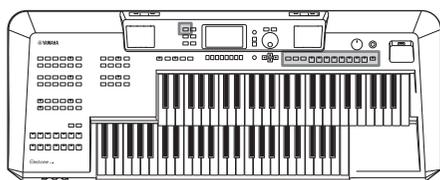
[MENU] → Cursor buttons [**▲**][**▼**][**◀**][**▶**] **Mic**, [ENTER]

Applying desired Effect to the microphone sound

[MENU] → Cursor buttons [**▲**][**▼**][**◀**][**▶**] **Mic**, [ENTER] → [7] (**DSP**)

8 Registration Memory/Playlist

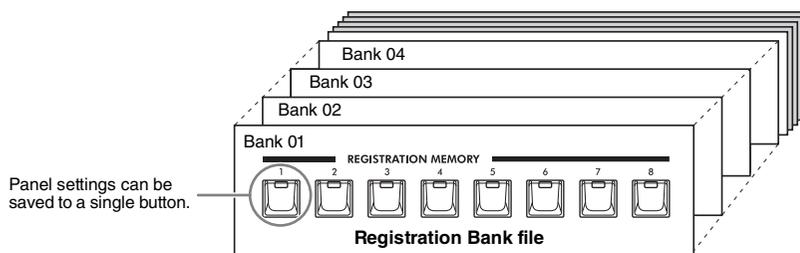
– Saving and Recalling Custom Panel Setups –



The Registration Memory and Playlist functions allow you to call up your custom panel settings instantly.

■ Registration Memory (page 84)

You can register your custom panel settings (such as combinations of Voices for each keyboard part and Style) to each of the REGISTRATION MEMORY [1] – [8] buttons. You can also save all eight registered panel setups as a single Registration Bank file. If you select a Registration Bank file beforehand, you can easily call up the registered settings simply by pressing a button during your performance.

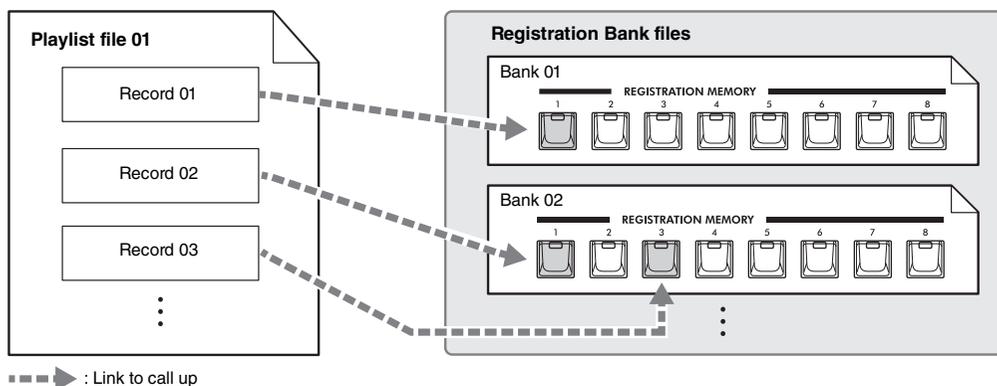


■ Preset Registration Bank files

The instrument features a variety of pre-programmed Registration Memory samples (Preset Registration Bank files) that let you instantly call up settings for your performance, without having to specially program Registration Memory settings yourself. This lets you conveniently and enjoyably play various music genres, but also lets you edit and save them as your original Registration Memory Bank files. For details about the Preset Registration Bank files, refer to the Data List on the website.

■ Playlist (page 86)

The Playlist function allows you to create custom performance lists. A Playlist contains links to call up Registration Bank files for each piece you play. Each link to the Registration Memory is called a “Record,” and you can collectively store the Playlist Records as a single Playlist file. Each Playlist Record can directly recall a specified Registration Memory number in the selected Registration Bank file. By using the Playlist, you can select only the desired files from the huge number of the Registration Bank files without having to change the Bank file configuration.



Saving and Recalling Panel Setups with Registration Memory

Calling Up Panel Setups from Registration Memory

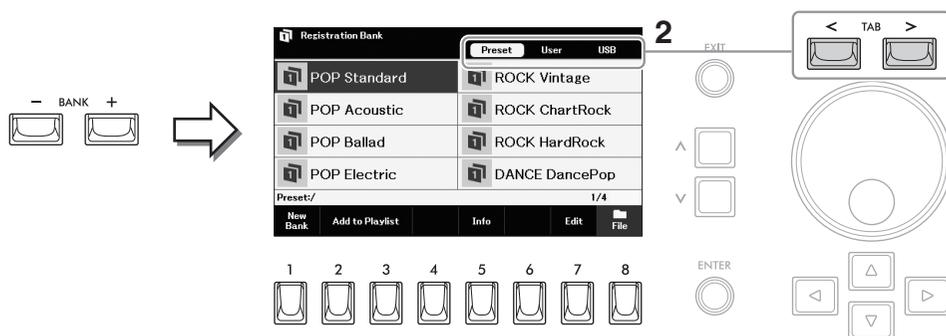
The preset Registration Bank files and your custom panel setups saved as a bank file (page 86) can be called up by the following procedure. For details on the preset Registration Bank files, refer to the Data List on the website.

NOTICE

If the REGISTRATION MEMORY buttons contain the setup data (but have not yet saved as a Bank), calling up a Registration Memory of a new Bank will erase the previously memorized data. Save your important data as a Bank file (page 86) before calling up a Registration Memory.

1 Use the BANK [+]/[-] buttons to call up the Registration Bank Selection display.

Pressing either button selects the next or previous Registration Bank file and simultaneously calls up the Registration Bank Selection display. On the other hand, pressing both buttons calls up the Registration Bank Selection display without changing the Registration Bank file.



2 Use the TAB [<][>] buttons to select the location (“Preset,” “User” or “USB”) of the desired Bank.

3 Use the Cursor buttons [▲][▼][◀][▶] to select the desired Bank.

Confirming the Registration Memory Information

In the Registration Bank Selection display, press the [5] (**Info**) button to call up the Information window, showing which Voices and Style are memorized to the REGISTRATION MEMORY [1] – [8] buttons of the selected Registration Bank. This window consists of two pages: Voice-related and Style-related. You can alternate between the two by using the [1]/[2] (**Voice**) or [3]/[4] (**Style**) buttons.

NOTE

If “**Info**” is not shown, press the [8] (**Close**) button to call it up.

4 Press one of the REGISTRATION MEMORY [1] – [8] buttons to call up the desired panel setups.

NOTE

The “**USB**” tab appears only when a USB flash drive is connected to the [USB TO DEVICE] terminal.

NOTE

When recalling the setups including file selection of Song, Style, text, etc. from a USB flash drive, make sure that the appropriate USB flash drive including the registered Song/Style is connected into the [USB TO DEVICE] terminal. Before using a USB flash drive, be sure to read “Connecting USB Devices” on page 94.

NOTE

You can add the selected Bank file to the current Playlist (page 86) as a Record via the [2]/[3] (**Add to Playlist**) buttons.

NOTE

Turning the [DISABLE] button on can disable recall of specific item(s). For instructions, refer to the Reference Manual on the website.

Registering Your Panel Setups

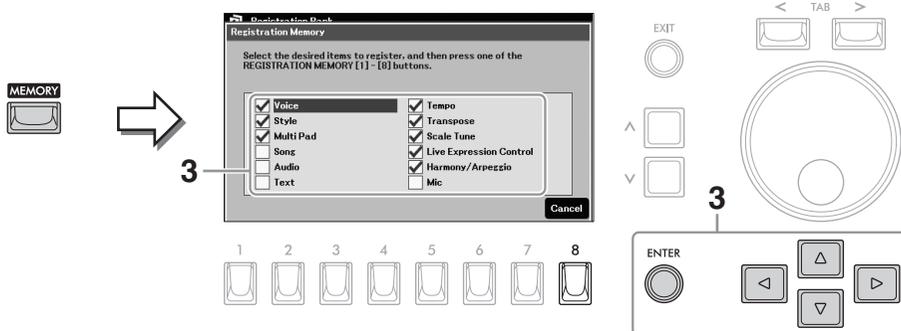
NOTICE

All of the REGISTRATION MEMORY [1] – [8] buttons contain the setup data. If you register your panel setups to these buttons, the previously memorized data will be erased and replaced by the new one. If you want to keep the data memorized to these buttons, save them as a Bank file (page 86).

1 Make the desired panel settings, such as those for Voices, Styles and Effects.

For a list of parameters that can be registered with the Registration Memory function, refer to the “Registration” section of the “Parameter Chart” in the Data List on the website.

2 Press the [MEMORY] button in the REGISTRATION MEMORY to call up the “Registration Memory” window.

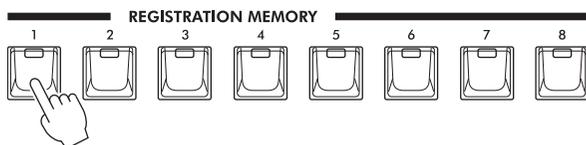


3 Determine the groups you want to register.

Move the cursor to the desired item by using the Cursor buttons [▲][▼][◀][▶], and then enter (or remove) the corresponding checkmark by pressing the [ENTER] button. To cancel the operation, press the [8] (**Cancel**) button.

4 Press one of the REGISTRATION MEMORY [1] – [8] buttons to which you wish to memorize the panel setup.

The lamp of the button flashes in blue while memorizing is in process, and then lights in blue, indicating that the number button is selected.



5 Register various panel setups to other buttons by repeating steps 1 – 4.

The registered panel setups can be recalled by simply pressing the desired number button.

6 If necessary, save the all eight registered panel setups as a single Registration Bank file (page 86).

NOTE

If you want to reset all current Registration Memories to the original factory default, press the [1] (**New Bank**) button on the Registration Bank selection display (page 86).

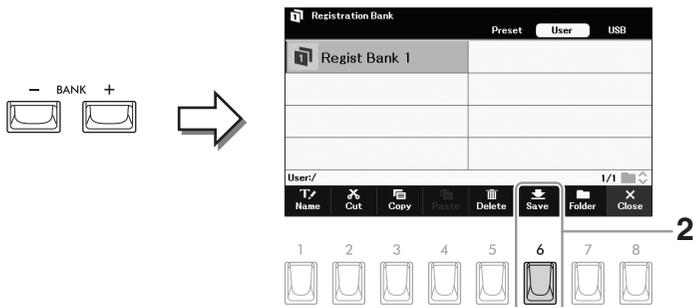
NOTE

The panel setups registered to the numbered buttons are maintained even when you turn off the power.

Saving the Registration Memory as a Bank file

You can save all panel setups registered to the eight buttons as a single Registration Bank file.

- 1 Press one of the BANK [+]/[-] buttons to call up the Registration Bank Selection display.



- 2 Save the data as a Bank file by following the instructions on page 26.

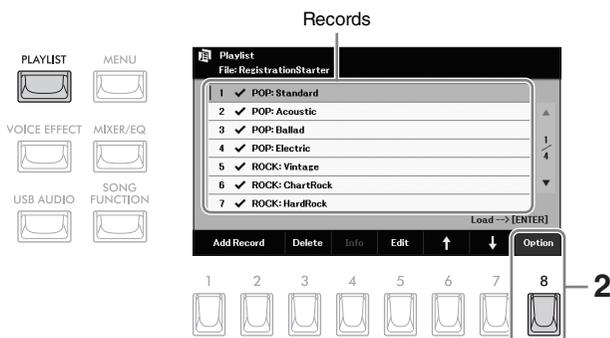
Using Playlists to Manage a Large Repertoire of Panel Setups

The Playlist is useful for managing multiple set lists for your performances. You can select only the desired files from a large repertoire (the huge number of the Registration Bank files) and create a new set list for each performance. The preset Playlist samples in which preset Registration Bank files are linked to call up are also provided. For details on the preset Registration Bank, refer to the Data List on the website.

Recalling Panel Setups via the Playlist

- 1 Press the [PLAYLIST] button to call up the “*Playlist*” display.

The preset Playlist appears for the first time, and to use this preset Playlist, steps 2 – 6 below can be skipped. From the next time, the last selected Playlist file will appear.

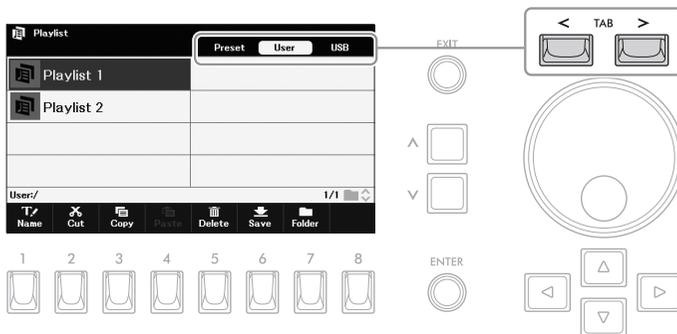


- 2 Press the [8] (*Option*) button to call up the operation window.

- 3 Press the [7] (*Files*) button to call up the Playlist File Selection display.



- Use the TAB [**<**][**>**] buttons to select the location (“Preset,” “User” or “USB”) of the desired Playlist.



NOTE

The “USB” tab appears only when a USB flash drive is connected to the [USB TO DEVICE] terminal.

- Use the Cursor buttons [**▲**][**▼**][**◀**][**▶**] to select the desired Playlist.

- Press the [EXIT] button to return to the “Playlist” display.

- Move the cursor to the desired Record (link to a Bank file) by using the Cursor buttons [**▲**][**▼**], and then press the [ENTER] button.

The Registration Bank registered as the Playlist Record is recalled and the “Action” (page 89) you’ve made is executed.

NOTE

You can call up the Registration Bank Information window (page 84) by pressing the [4] (**Info**) button.

Changing the Order of the Records in the Playlist

- On the “Playlist” display, move the cursor to the desired Record for moving by using the Cursor buttons [**▲**][**▼**].
- Press the [6] (**↑**) button to move the Record upward in the list, or the [7] (**↓**) button to move the Record downward.
- Save the edited Playlist file (step 5 on page 90).

Deleting the Record from the Playlist

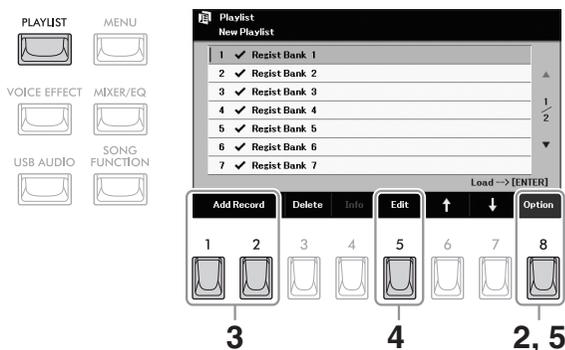
- On the “Playlist” display, move the cursor to the desired Record to delete by using the Cursor buttons [**▲**][**▼**].
- Press the [3] (**Delete**) button to delete the selected Record.
A confirmation message appears. If you want to cancel the operation, press the [6] (**No**) button here.
- Press the [7] (**Yes**) button to actually delete the Record.
- Save the edited Playlist file (step 5 on page 90).

Adding a Record (Link to a Bank file) to a Playlist

By adding Records to a Playlist, you can directly recall desired Registration Bank files from the Playlist for each performance.

1 Press the [PLAYLIST] button to call up the “*Playlist*” display.

The Playlist file which was selected the last time appears.

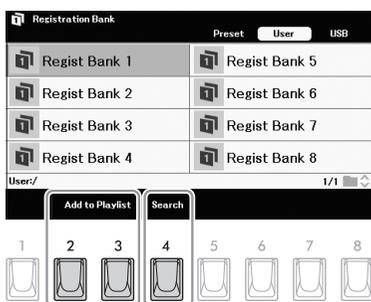


2 If you want to create a new Playlist, press the [8] (Option) button to call up the operation window, and then use the [3]/[4] (Create New Playlist) buttons to clear the list on the “*Playlist*” display.

After the list is cleared, press the [8] (x) button to close the window.



3 Press one of the [1]/[2] (Add Record) buttons to call up the Registration Bank Selection display for selecting a Bank file to register as a Playlist Record.



■ To add a Record by directly selecting Registration Bank files:

3-1 Press one of the [2]/[3] (Add to Playlist) buttons to call up the “*Add to Playlist*” window.

3-2 Move the cursor to the desired Bank file by using the Cursor buttons [▲][▼][◀][▶], and then press the [ENTER] button.

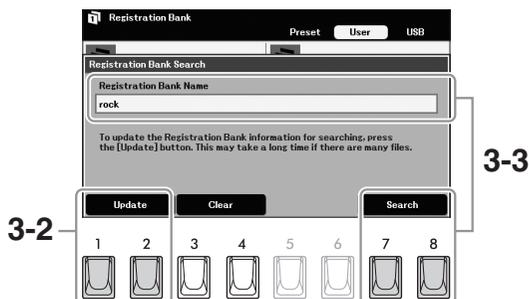
If you want to select all files shown in the current folder including the other pages, press the [8] (All) button.

3-3 Pressing the [7] (OK) button closes the window, and the new Records are added to the bottom of the Playlist.

■ **To add a Record by using the search function:**

3-1 Press the [4] (**Search**) button to call up the “**Registration Bank Search**” window.

3-2 If necessary, use the [1]/[2] (**Update**) buttons to update the data used for searching.
 This operation is needed when new Registration Bank files are added or the USB flash drive containing Bank files is connected, in order to register these files as search targets.



3-3 Enter the keyword(s) to search for the desired Registration Bank file, and then press one of the [7]/[8] (**Search**) buttons.

Pressing one of the [3]/[4] (**Clear**) buttons can clear keywords you have input.

3-4 From the search result, move the cursor to the desired Bank file by using the Cursor buttons [▲][▼][◀][▶], and then press the [ENTER] button. If you want to select all files, press the [8] (**All**) button.

3-5 Pressing the [7] (**OK**) button closes the display, and the new Records are added to the bottom of the Playlist.

NOTE

You can search for several different keywords simultaneously by inserting a space between each. Up to 100 items can be shown in the search result.

NOTE

If a USB flash drive which contains any files/folders with long names (named by using an external device such as a computer), the search result may not appear.

4 If necessary, edit the Record.

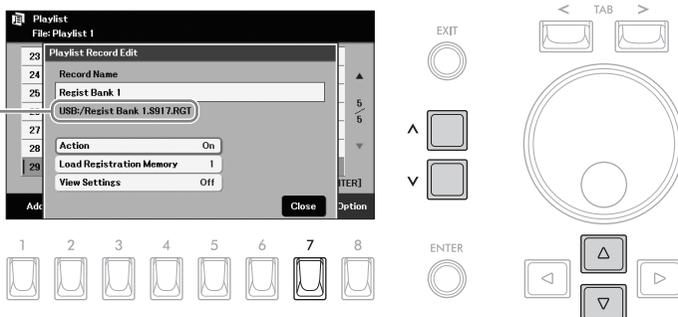
The newly added Playlist Record simply recalls the selected registration Bank file. If you want to set more detailed settings (such as directly recalling a specified Registration Memory number), you can edit the Record.

4-1 Select the Record to be edited by using the Cursor buttons [▲][▼].

4-2 Press the [5] (**Edit**) button to call up the “**Playlist Record Edit**” window.

4-3 Use the Cursor buttons [▲][▼] to select the item to be edited.

File path of the Registration Bank file linked to the Record. This file will be recalled by selecting the Record.



Record Name	Determines the name of the Record. Pressing the [ENTER] button calls up the Character Entry window (page 30) and lets you edit the name.
Action	<p>Additional actions after selecting the Record and recalling the Bank. Set this to “On” to call up the following actions.</p> <ul style="list-style-type: none"> • Load Registration Memory: Recalls the Registration Memory corresponding to the number selected here. • View Settings: Displays the view (score, lyrics or text) selected here. When “Off” is selected, no view is displayed. <p>These settings are shown at right of the Record name on the Playlist display.</p>

4-4 Press the [7] (**Close**) button to close the “**Playlist Record Edit**” window.
If necessary, repeat step 4 to edit other records.

5 Save all Records as a single Playlist file.

5-1 Press the [8] (**Option**) button to call up the operation window.

5-2 Press the [7] (**Files**) button to call up the Playlist File Selection display.

5-3 Save the Records as a Playlist file by following the instructions on page 26.

Advanced Features

Refer to the Reference Manual on the website, Chapter 8.



Renaming the Registration Memory

Registration Bank Selection display → [7] (**Edit**) → [1] (**Name**)

Disabling recall of specific items (Disable)

[MENU] → **Regist Sequence/Disable**, [ENTER] → TAB [>]
Disable

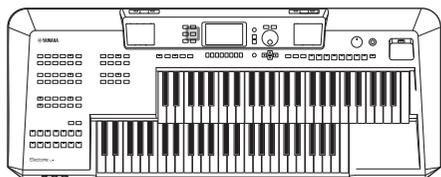
Calling up Registration Memory numbers in order (Registration Sequence)

[MENU] → **Regist Sequence/Disable**, [ENTER] → TAB [<]
Registration Sequence

Copying the Playlist Records from another Playlist (Append Playlist)

[PLAYLIST] → [8] (**Option**) → [5]/[6] (**Append Playlist**)

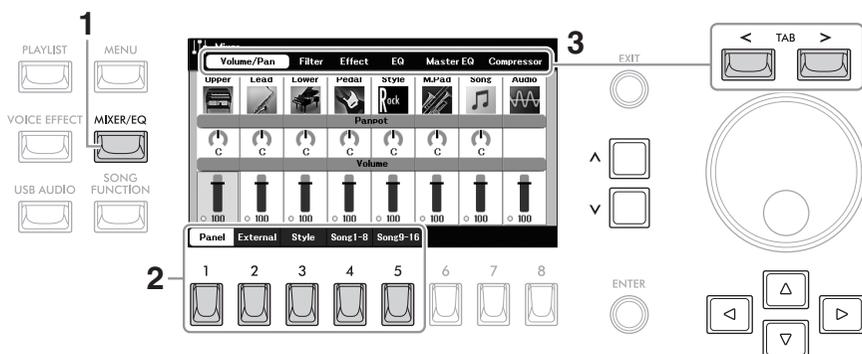
9 Mixer – Editing the Volume and Tonal Balance –



The Mixer gives you intuitive control over aspects of the keyboard parts and Style/Song channels, including volume balance and the timbre of the sounds. It lets you adjust the levels and stereo position (pan) of each Voice to set the optimum balance and stereo image, and lets you set how the effects are applied.

Basic Procedure

1 Press the [MIXER/EQ] button to call up the “Mixer” display.



2 Press one of the [1] – [5] buttons to select the parts for editing.

[1]	Panel	Select this when you want to adjust the balance among the keyboard parts (Upper Keyboard Voice, Lead Keyboard Voice, Lower Voice and Pedal Voice), entire Style part, entire Multi Pad part, entire Song part, and Audio playback via the USB Audio Player function.
[2]	External	Select this when you want to adjust the balance among the microphone sounds (Mic), sounds via [AUX IN] jack (AUX IN), via [USB TO HOST] terminal (USB), and USB wireless LAN adaptor (WLAN). NOTE “ WLAN ” appears only when the separately sold USB wireless LAN adaptor UD-WL01 (may not be available depending on the area) is connected to the instrument.

[3]	Style	Select this when you want to adjust the balance among the parts of the Style. <ul style="list-style-type: none"> • Rhy1, Rhy2: These are the basic parts of the Style, containing the drum and percussion rhythm patterns. • Bass: The bass part uses various appropriate instrument sounds to match the Style. • Chd1, Chd2: These comprise the rhythmic chord backing, commonly consisting of piano or guitar Voices. • Pad: This part is used for sustained instruments such as strings, organ, choir, etc. • Phr1, Phr2: These parts are used for punchy brass stabs, arpeggiated chords, and other extras that make the accompaniment more interesting.
[4]	Song 1-8	Select this when you want to adjust the balance among all the parts (channels) of the Song.
[5]	Song 9-16	

3 Use the TAB [**<**][**>**] buttons to select the page for the parameters to be edited.

Volume/Pan	For adjusting volume and panning for each part and changing the Voice.
Filter	For adjusting the Harmonic Content (resonance) and sound brightness for each part.
Effect	For selecting an effect type and adjusting its depth for each part.
EQ	For adjusting equalization parameters to correct the tone or timbre of the sound for each part.

Unlike the other pages, select the following pages when you want to adjust the tonal characteristics of the entire sound (except for audio received via the USB Audio Player function and Audio Input Sounds) of this instrument.

Master EQ	For selecting the Master EQ (Equalizer) type applied to the entire sound. The related parameters can be edited and saved as your original Master EQ type.
Compressor	For turning the Master Compressor on/off and selecting its type. The related parameters can be edited and saved as your original Master Compressor type.

4 Use the Cursor buttons [**▲**][**▼**][**◀**][**▶**] to move the cursor to the desired parameter, and then use the [**∧**][**∨**] buttons to set the value for each part.

5 Save your Mixer settings.

■ To save the “Panel” settings:

Register them to Registration Memory (page 85).

■ To save the “External” settings:

For the “**Mic**” settings, register them to Registration Memory (page 85).

For other settings (**AUX IN**, **USB**, **WLAN**), the save operation is not necessary. These settings are retained even when the power is turned off.

■ To save the “Style” settings:

Save them as a Style file to the User drive or USB flash drive. If you want to recall the settings for future use, select the Style file saved here.

1. Call up the operation display.
[MENU] → Cursor buttons [▲][▼][◀][▶] **Style Creator**, [ENTER]
2. After a message appears, prompting you to edit the existing Style or create a new Style, press one of the [5]/[6] (**Current Style**) buttons.
3. Press the [8] button to call up the Style Selection display, and then save the settings as a Style file (page 26).

■ To save the “Song” settings:

First register the edited settings as part of the Song data (Setup data), and then save the Song to the User drive or USB flash drive. If you want to recall the settings for future use, select the Song file saved here.

1. Call up the operation display.
[MENU] → Cursor buttons [▲][▼][◀][▶] **Song Creator**, [ENTER]
2. Use the TAB [<][>] buttons to select the “**Setup**” tab.
3. Move the cursor to the desired item to be saved by using the Cursor buttons [▲][▼][◀][▶], and then enter (or remove) the corresponding checkmark by pressing the [ENTER] button.
4. Use the [6]/[7] (**Apply**) buttons to actually apply the changes.
5. Press the [8] button to call up the Song Selection display, and then save the settings as a Song file (page 26).

Advanced Features

Refer to the Reference Manual on the website, Chapter 9.



10 Connections

– Using Your Instrument with Other Devices –

⚠ CAUTION

Before connecting the instrument to other electronic devices, turn off the power of all the devices. Also, before turning any devices on or off, make sure to set all volume levels to minimum (0). Otherwise, damage to the devices, electrical shock, or even permanent hearing loss may occur.

NOTICE

Do not place any external devices in an unstable position. Doing so may cause the device to fall and result in damage.

Connecting USB Devices ([USB TO DEVICE] terminal)

You can connect a USB flash drive or a USB wireless LAN adaptor (sold separately) to the [USB TO DEVICE] terminal. This lets you save data you've created on the instrument to the USB flash drive (page 26). You can also connect the instrument to a smart device via wireless LAN (page 97).

NOTE

The USB wireless LAN adaptor (UD-WL01) may not be available depending on your area.

Precautions when using the [USB TO DEVICE] terminal

This instrument features a built-in [USB TO DEVICE] terminal. When connecting a USB device to the terminal, be sure to handle the USB device with care. Follow the important precautions below.

NOTE

For more information about the handling of USB devices, refer to the owner's manual of the USB device.

■ Compatible USB devices

- USB flash drive
- USB wireless LAN adaptor (UD-WL01; may not be available depending on your area)

Other USB devices such as a USB hub, computer keyboard or mouse cannot be used. The instrument does not necessarily support all commercially available USB devices. Yamaha cannot guarantee operation of USB devices that you purchase. Before purchasing a USB device for use with this instrument, please visit the following web page:
<https://download.yamaha.com/>

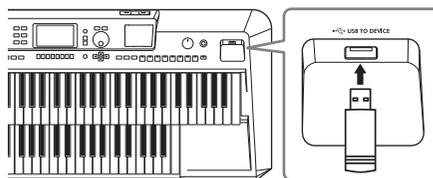
Although USB devices 2.0 to 3.0 can be used on this instrument, the amount of time for saving to or loading from the USB device may differ depending on the type of data or the status of the instrument. USB devices 1.1 cannot be used on this instrument.

NOTICE

The rating of the [USB TO DEVICE] terminal is a maximum of 5V/500mA. Do not connect USB devices having a rating above this, since this can cause damage to the instrument itself.

■ Connecting a USB device

When connecting a USB device to the [USB TO DEVICE] terminal, make sure that the connector on the device is appropriate and that it is connected in the proper direction.



NOTICE

- Avoid connecting or disconnecting the USB device during playback/recording and file management operations (such as Save, Copy, Delete and Format), or when accessing the USB device. Failure to observe this may result in "freezing" of the operation of the instrument or corruption of the USB device and the data.
- When connecting then disconnecting the USB device (and vice versa), make sure to wait a few seconds between the two operations.
- Do not use an extension cable when connecting a USB device.

■ Using USB Flash Drives

By connecting a USB flash drive to the [USB TO DEVICE] terminal, you can save your custom data to the connected drive, as well as read data from it.

Number of USB flash drives that can be used

Only one USB flash drive can be connected to the [USB TO DEVICE] terminal.

Formatting a USB flash drive

You should format the USB flash drive only with this instrument (see below). A USB flash drive formatted on another device may not operate properly.

NOTICE

The format operation overwrites any previously existing data. Make sure that the USB flash drive you are formatting does not contain important data.

To protect your data (write-protect)

To prevent important data from being inadvertently erased, apply the write-protect provided with each USB flash drive. If you are saving data to the USB flash drive, make sure to disable write-protect.

Turning off the instrument

When turning off the instrument, make sure that the instrument is NOT accessing the USB flash drive by playback/recording or file management (such as during Save, Copy, Delete and Format operations). Failure to do so may corrupt the USB flash drive and the data.

Formatting a USB Flash Drive

When a USB flash drive is connected, a message may appear prompting you to format the USB flash drive. If so, carry out the format operation.

NOTICE

The format operation deletes any previously existing data. Make sure that the USB flash drive you are formatting does not contain important data.

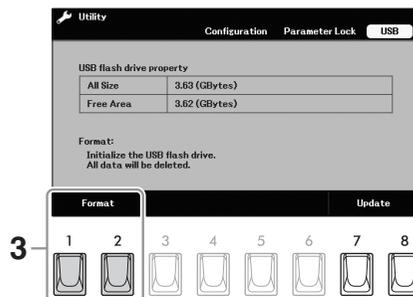
1 Connect a USB flash drive for formatting to the [USB TO DEVICE] terminal.

2 Call up the operation display.

[MENU] → Cursor buttons [▲][▼][◀][▶] **Utility**, [ENTER] → TAB [➤] **USB**

3 Press one of the [1]/[2] (**Format**) buttons to format the USB flash drive.

When "**Format**" is not active, press one of the [7]/[8] (**Update**) buttons to ensure that the USB flash drive is recognized.



4 Press the [7] (**Yes**) button to actually carry out the Format operation.

NOTE

To cancel the Format operation, press the [6] (**No**) button.

Connecting to a Computer ([USB TO HOST] terminal)

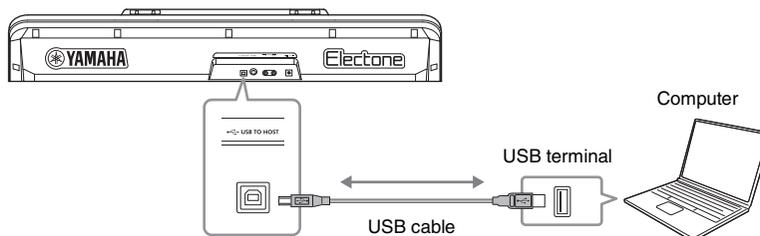
By connecting a computer to the [USB TO HOST] terminal, you can transmit/receive MIDI data or Audio data between the instrument and the computer. For details on using a computer with this instrument, refer to “Computer-related Operations” on the website.

⚠ CAUTION

If you are using a DAW (digital audio workstation) application with this instrument, set the Audio Loopback function (see below) to off. Otherwise, a loud sound may occur, depending on the settings of the computer or the application software.

NOTICE

Use an AB type USB cable of less than 3 meters. USB 3.0 cables cannot be used.



NOTE

- When using a USB cable to connect the instrument to your computer, make the connection directly without passing through a USB hub.
- The instrument will begin transmission a short time after the USB connection is made.
- For information on setting up your sequence software, refer to the owner's manual of the relevant software.

Transmitting/Receiving Audio Data (USB Audio Interface function)

By connecting a computer or a smart device to the [USB TO HOST] terminal via a USB cable, digital audio data can be transmitted/received. This USB Audio Interface function provides the following advantages:

NOTE

- When transmitting or receiving audio signals by using a computer running Windows, the Yamaha Steinberg USB Driver should be installed to the computer. For details, refer to the “Computer-related Operations” on the website.
- For instructions on connecting to a smart device, refer to the “Smart Device Connection Manual” on the website.

■ Playing back audio data with high sound quality

This gives you direct, clear sound in which the sound quality has less noise and deterioration than that from the [AUX IN] jack.

■ Recording your performance on the instrument as audio data by using recording software or music production software

The recorded audio data can be played back on the computer or smart device.

Turning Audio Loopback On/Off

This allows you to set whether Audio Input Sound (page 98) from the external device is output to a computer or a smart device or not along with the performance played on the instrument. To output the Audio Input Sound, set the Audio Loopback to “On.”

For example, if you want to record the Audio Input Sound as well as the sound played on the instrument by using the connected computer or smart device, set this to “On.” If you intend to record only the sound played on the instrument by using the computer or smart device, set this to “Off.”

The setting can be made via [MENU] → Cursor buttons [▲][▼][◀][▶] **Utility**, [ENTER] → TAB [◀] **Configuration** → Cursor buttons [▲][▼][◀][▶] **Audio Loopback**.

NOTE

- With Audio Recording (page 79), the Audio Input Sound from the external device is recorded when this is set to “On,” and not recorded when set to “Off.”
- The sound cannot be output to a device connected by the [AUX IN] jack.

Connecting to a Smart Device ([USB TO HOST] terminal/ [AUX IN] jack)

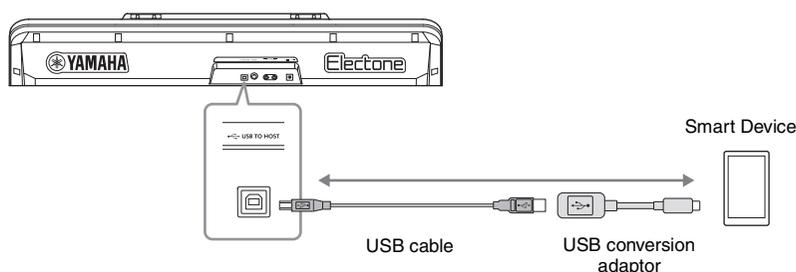
Connecting a smart device such as a smart phone or tablet provides the following advantages:

- By connecting to the [USB TO HOST] terminal via USB cable, you can use compatible smart device apps and transmit/receive audio data (USB Audio Interface function; page 96).
- By connecting to the [AUX IN] jack, you can hear the sound output from the smart device through the built-in speakers of the instrument.

NOTE

To use compatible smart device apps, you can also connect a smart device by using a USB wireless LAN adaptor (UD-WL01; sold separately and may not be available in some areas).

For instructions on connecting to the [AUX IN] jack, refer to page 98. For instructions on connection by using a method other than via [AUX IN] jack, refer to the “Smart Device Connection Manual” on the website. For details about using compatible smart device apps, refer to the next section.



NOTICE

- Use an AB type USB cable of less than 3 meters. USB 3.0 cables cannot be used.
- Do not place your smart device in an unstable position. Doing so may cause the device to fall and result in damage.

Using a Smart Device App

By connecting to a smart device and using the compatible apps below, you can get more enjoyment out of this instrument.

■ Rec'n'Share

This lets you record audio and video of your performances and then share the recorded data with the world.

■ Chord Tracker

This analyzes the audio file stored in your smart device, and then automatically generates and displays the chord chart, so that you can practice the song.

For details on the apps and the compatible smart devices, access the web page of the respective apps on the following page:

<https://www.yamaha.com/2/kbdapps/>

Listening to Audio Playback by an External Device through the Instrument's Speaker ([AUX IN] jack/[USB TO HOST] terminal)

Audio playback by the connected device can be output from the instrument's speaker. To input audio, connect an external device by one of the following methods.

- Connecting to the [AUX IN] jack by using an audio cable (see below)
- Connecting to the [USB TO HOST] terminal by using a USB cable (USB Audio Interface function; page 96)

For information about connection with a smart device, refer to page 97.

Audio Input Sound

In this manual, "Audio Input Sound" refers to audio input to the instrument from the external devices connected by these methods.

NOTE

- The volume of the Audio Input Sound can be adjusted from the external device.
- You can adjust the volume balance among the sounds of the instrument and the Audio Input Sound in the "Mixer" display (page 91).
- You can set whether the Audio Input Sound from the external device is output to a computer or a smart device or not along with the performance played on the instrument. For details, refer to "Turning Audio Loopback On/Off" on page 96.

Connecting to an Audio Player by using an Audio Cable

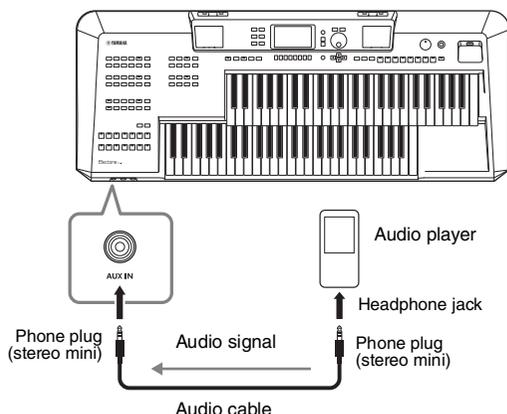
You can connect the headphone jack of an audio player such as a smartphone to the instrument's [AUX IN] jack, letting you hear the audio playback on the connected audio player from the built-in speakers of the instrument.

NOTICE

To avoid damage to the devices, first turn on the power to the external device, and then to the instrument. When turning off the power, first turn off the power to the instrument, and then to the external device.

NOTE

When connecting to computer or a smart device, you can also connect via the [USB TO HOST] terminal (page 96).



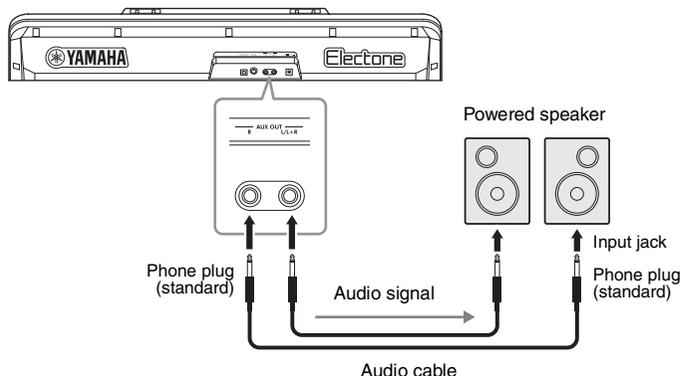
The input signal from the [AUX IN] jack is affected by the setting of the instrument's [MASTER VOLUME] dial, and the volume balance with other sounds played on this instrument can be adjusted from the "Mixer" display (page 91).

Minimizing noise of the input sound via Noise Gate

By default, this instrument cuts unwanted noise from the input sound. However, this may result in wanted sounds also being cut, such as the soft decay sound of a piano or acoustic guitar. To avoid this, set "AUX IN Noise Gate" to off via [MENU] → Cursor buttons [▲][▼][◀][▶] **Utility**, [ENTER] → TAB [◀] **Configuration**.

Connecting an External Stereo System (AUX OUT [R]/[L/L+R] jacks)

You can connect a stereo system to amplify the instrument's sound by using the AUX OUT [R] / [L/L+R] jacks.



NOTICE

- To avoid possible damage, first turn on the power to the instrument, and then to the external device. When turning off the power, first turn off the power to the external device, and then to the instrument. Since this instrument's power may automatically be turned off due to the Auto Power Off function (page 14), turn off the power to the external device, or disable Auto Power Off when you do not intend to operate the instrument.
- Do not route the output from the AUX OUT jacks to the [AUX IN] jack. If you make this connection, the signal input at the [AUX IN] jack is output from the AUX OUT jacks and then back again, creating a feedback loop that could make normal performance impossible, and may even damage the equipment.

NOTE

- Use audio cables and adaptor plugs having no (zero) resistance.
- Use only the [L/L+R] jack for connection with a monaural device.

You can use the instrument's [MASTER VOLUME] dial to adjust the volume of the sound output to the external device.

Connecting a Microphone ([MIC] jack)

You can connect a microphone to the [MIC] jack (standard 1/4" phone jack). For instructions, refer to page 81.

Advanced Features

Refer to the Reference Manual on the website, Chapter 10.

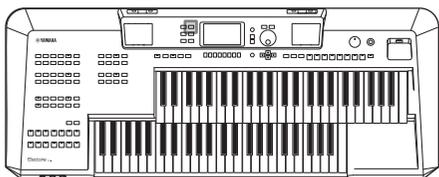


Making MIDI related settings

[MENU] → Cursor buttons [▲][▼][◀][▶] **MIDI**, [ENTER]

11 Menu

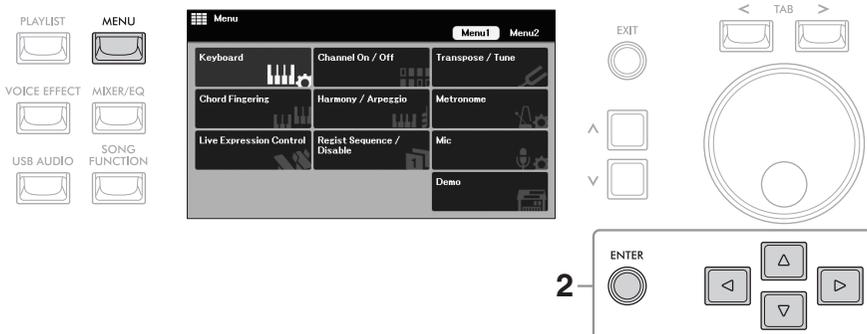
– Making Global Settings and Using Advanced Features –



The Menu provides a variety of convenient settings and tools for the instrument. These include general settings that affect the entire instrument, as well as detailed settings for specific functions. Also included are advanced Creator features, such as for Styles, Songs and Multi Pads.

Basic Procedure

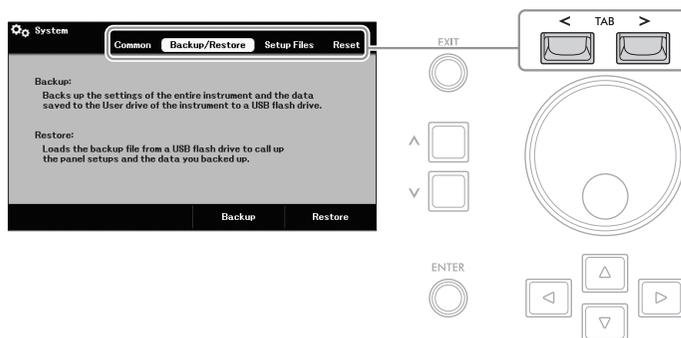
1 Press the [MENU] button to call up the “Menu” display.



2 Move the cursor to the desired function by using the Cursor buttons [▲][▼][◀][▶], and then press the [ENTER] button to call up the corresponding display.

The “Menu” display consists of two pages (Menu1/Menu2). You can switch between these pages by using the TAB [<][>] buttons, although the Cursor buttons [▲][▼][◀][▶] or Data dial can also be used. You can register often-used functions as shortcuts in the Quick Access area at the bottom of the Main display. For details, refer to page 24.

3 If the display consists of multiple pages (tabs), use the TAB [<][>] buttons to select the desired page.



4 Make the desired settings or operations on the relevant page.

Function List

This list briefly explains what you can do in the displays which are called up via the [MENU] button. For more information, refer to the page and chapter references indicated below.

Menu1		Description	Owner's Manual	Reference Manual
Keyboard		For making the keyboard related settings, such as part assignment and Initial Touch.	Page 41	Chapter 1
Channel On/Off	Style	For turning each part (channel) of the selected Style on/off.	Page 54	–
	Song	For turning each part (channel) of the selected Song on/off.	Page 67	
Transpose/Tune	Tune	For fine-tuning the pitch of the entire instrument in approx. 0.2 Hz steps.	Page 40	–
	Scale Tune	For selecting the scale type and tuning the pitch of the desired note (key) in cents.	–	Chapter 1
Chord Fingering		For selecting the Chord Fingering type or turning the Manual Bass function on/off.	Pages 48, 49	Chapter 2
Harmony/Arpeggio		For selecting the Harmony or Arpeggio type and making related settings.	–	Chapter 1
Metronome		For setting the metronome volume, sound and time signature.	–	Chapter 1
Live Expression Control		For setting the functions assigned to the Expression Pedals and Footswitches.	Page 58	Chapter 3
Regist Sequence/Disable	Registration Sequence	For setting the order for calling up Registration Memory settings when using the Footswitches.	–	Chapter 8
	Disable	For selecting the setting groups (Voice, Style, etc.) that are to remain unchanged even when you call up panel setups by using the Registration Memory function.		
Mic		For making microphone related settings.	Page 81	Chapter 7
Demo		For playing back the demonstration video in which you can learn about this instrument.	Page 9	–

Menu2		Description	Owner's Manual	Reference Manual
Style Creator		For creating a Style by editing the preset Style, or by recording Style channels one by one.	Page 55	Chapter 2
Song Creator		For creating a Song by editing the recorded Song or by re-recording a specific section.	–	Chapter 5
Multi Pad Creator		For creating a Multi Pad by editing a preset Multi Pad, by recording a new one, or by using an audio file.	–	Chapter 4
Chord Tutor		Displays an example of how to play a chord that corresponds to the specified chord name.	–	Chapter 2
MIDI		For making MIDI-related settings.	–	Chapter 10
Expansion		For installing Expansion Packs for adding extra Voices or Styles downloaded from the website or created by using the Yamaha Expansion Manager.	Page 43	Chapter 1
Utility	Configuration	For making general settings such as speaker output, AUX IN Noise Gate, Audio Loopback, and IAC, etc.	Pages 15, 96, 98	Chapter 11
	Parameter Lock	For selecting the parameters (effects, Fingering type, etc.) that are to remain unchanged when the panel setups are changed via Registration Memory, One Touch Setting, etc.	–	Chapter 11
	USB	Indicates the capacity of the connected USB flash drive, and allows you to format it.	Page 95	–
System	Common	Indicates the firmware version of this instrument, and lets you make basic settings, such as the language for the display and the Auto Power Off function.	Page 15	–
	Backup/Restore	For backing up and restoring the settings and data saved in the User drive of the instrument.	Page 32	–
	Setup Files	For saving and recalling the specified settings of the instrument.	–	Chapter 11
	Reset	For restoring the instrument settings to their factory defaults.	–	Chapter 11
Wireless LAN *		For making settings for connecting the instrument to a smart device, such as a smartphone or tablet, via a USB wireless LAN adaptor.	–	Chapter 10

* **"Wireless LAN"** appears only when the USB wireless LAN adaptor (UD-WL01; sold separately and may not be available in some areas) has been connected once.

Troubleshooting

Overall	
A click or pop is heard when the power is turned on or off.	This is normal. Electrical current is being applied to the instrument.
The power is automatically turned off.	This is normal and due to the Auto Power Off function. If necessary, change the setting of the Auto Power Off function (page 16).
Noise is heard from the instrument's speakers.	Noise may be heard if a mobile phone is used near the instrument or if the phone is ringing. Turn off the mobile phone, or use it further away from the instrument.
Noise is heard from the instrument's speakers or headphones when using the instrument with an app on a smart device, such as a smartphone or tablet.	When you use the instrument along with the app on your smart device, we recommend that you set Wi-Fi to on after enabling "Airplane Mode" on that device in order to avoid noise caused by communication.
In the LCD, there are some specific points that are always lit or unlit.	These are the result of defective pixels and occasionally occur in TFF-LCDs; they do not indicate a problem in operation.
There is a slight difference in sound quality among different notes played on the keyboard.	This is normal and is a result of the instrument's sampling system.
Some Voices have a looping sound.	
Some noise or vibrato is noticeable at higher pitches, depending upon the Voice.	
The overall volume is too low or no sound is heard.	The master volume may be set too low. Set it to an appropriate level with the [MASTER VOLUME] dial.
	The Expression Pedal may not be pressed down. Press it down with your toe.
	The volume for the Keyboard part you are playing or the Style being played back may be too low. Adjust the volume by using the VOLUME buttons for that part.
	All keyboard parts are set to off. Use the part [ON/OFF] button to turn on the part (page 34).
	The volume of the individual parts may be set too low. Raise the volume in the "Mixer" display (page 91).
	Make sure the desired channel is set to "On" (pages 54, 67).
	Headphones are connected, disabling the speaker output. Unplug the headphones.
	Make sure that the Speaker setting is set to "On" or "Headphone Switch": [MENU] → Cursor buttons [▲][▼][◀][▶] Utility , [ENTER] → Configuration . For details, refer to the Reference Manual on the website, Chapter 11.
The sound is distorted or noisy.	The volume may be turned up too high. Make sure all relevant volume settings are appropriate.
	This may be caused by certain effects or filter settings. Check the effect or filter settings and change them accordingly in the "Mixer" display, referring to the Reference Manual on the website, Chapter 9.
Not all simultaneously played notes sound.	You are probably exceeding the maximum polyphony (page 111) of the instrument. When the maximum polyphony is exceeded, the earliest played notes will stop sounding, letting the latest played notes sound.
	The Voice you are playing may be set to Mono. Depending on the Voice, only monophonic (single note) play may be available, even if two or more keys are pressed simultaneously. The "Mono/Poly" setting can be changed via Voice Selection display → [7] (Voice Edit) → TAB [◀][>] Common2 .

The keyboard volume is lower than the Song/Style playback volume.	The volume of the keyboard parts may be set too low. Adjust the volume by using the VOLUME buttons for each part, or in the "Mixer" display (page 91).
Some characters of the file/folder name are garbled.	The language settings have been changed. Set the appropriate language for the file/folder name (page 15).
An existing file is not shown.	The file extension (.MID, etc.) may have been changed or deleted. Manually rename the file, adding the appropriate extension, on a computer.
	Data files with names of more than 50 characters cannot be handled by the instrument. Rename the file, reducing the number of characters to 50 or less.
Voice	
The Voice selected from the Voice Selection display does not sound.	Make sure that the part [ON/OFF] button for the desired part is turned on (page 34), and the appropriate part is played.
	Adjust the volume of each part by using the VOLUME buttons (page 34).
	The part assignment for the Lead Voice or the Pedal Voice might have been changed. If you turn on the [OTS LINK] button (page 47), the part assignment might be changed automatically. Check the keyboard parts to play these Voices on the display called up via [MENU] → Cursor buttons [▲][▼][◀][▶] Keyboard , [ENTER]. For details, refer to the Reference Manual on the website, Chapter 1.
A strange "flanging" or "doubling" sound occurs. The sound is slightly different each time the keys are played.	Two parts are assigned to the same keyboard (Upper Keyboard, Lower Keyboard or Pedalboard) and both parts are set to play the same Voice. Turn off or change the Voice of one of the parts.
Some Voices will jump an octave in pitch when played in the upper or lower registers.	This is normal. Some Voices have a pitch limit which, when reached, causes this type of pitch shift.
The Touch Response function does not work.	Initial Touch is set to "Off," or a Voice with no Touch Response (such as Organ) has been selected. Turn on Initial Touch for the desired part (page 41). There is no Touch Response for the Pedalboard.
No sound is heard when the Pedalboard is played.	Raise the volume of the Pedal Voice by using the PEDAL VOICE VOLUME buttons.
	When the STYLE [ACMP] button is turned on, the Pedalboard does not sound. If you want to play the Pedalboard during Auto Accompaniment playback, turn on the Manual Bass function (page 48).
	The part assignment for the Pedalboard might be not appropriate. Make sure that the "Pedalboard" is assigned for the "Pedal Voice." This setting can be made via [MENU] → Cursor buttons [▲][▼][◀][▶] Keyboard , [ENTER]. For details, refer to the Reference Manual on the website, Chapter 1.
The Lower Keyboard Voice is held even when the keys are released.	The Lower Voice Hold function (page 36) is turned on. Turn the function off via [MENU] → Cursor buttons [▲][▼][◀][▶] Keyboard , [ENTER].
Style	
The Style does not start even when the [START] button is pressed.	The Rhythm channel of the selected Style may not contain any data. Turn the [ACMP] button on and play keys in the chord section of the keyboard (page 45) to sound the accompaniment part of the Style.
Only the rhythm channel plays.	Make sure the Auto Accompaniment function is turned on; press the [ACMP] button.
	Make sure to play keys in the chord section of the keyboard (page 45).
Styles in a USB flash drive cannot be selected.	If the size of the Style data is large (about 120 KB or greater), the Style cannot be selected because the data is too large to be handled by the instrument.
Cymbal or drum sounds are added unintentionally.	When the Style which has a "Unison" indication above the Style name is selected, accents are automatically generated depending on your playing strength. If you do not want to add accent sounds, set the "Accent Threshold" parameter to "Off" (page 52).

Song	
Songs cannot be selected.	This may be because the language settings have been changed. Set the appropriate language for the Song file name.
	If the size of the Song data is large (about 300 KB or greater), the Song cannot be selected because the data is too large to be handled by the instrument.
Song playback stops before the Song is finished.	The Guide function is turned on. (In this case, playback is "waiting" for the correct key to be played.) Make sure to turn off the Guide function (page 68) after practicing.
The measure number is different from that of the score in the Song Position display, shown by pressing the [◀◀] (Rewind)/ [▶▶] (Fast forward) buttons.	This happens when playing back music data for which a specific, fixed tempo is set.
When playing back a Song, some channels do not play.	Playback of these channels may be set to "Off." Set the channels to "On" to play them back (page 67).
The tempo, beat, measure and music notation is not displayed correctly.	Some Song data for the instrument has been recorded with special "free tempo" settings. For such Song data, the tempo, beat, measure and music notation will not be displayed correctly.
While using the Guide function, Song playback stops and does not go forward even when the correct keys are played.	It might be because you are playing a higher or lower octave. The octave setting differs depending on the selected Voice. You can shift the octave for each keyboard part via the Voice Selection display → [6] (Settings) → TAB [◀] Tune . You can also change the octave setting for the Voice via the Voice Selection display → [7] (Voice Edit) → TAB [◀] Common1 . For details, refer to the Reference Manual, Chapter 1.
USB Audio Player/Recorder	
A message indicating the drive is busy appears, and the recording is aborted.	Make sure to use a compatible USB flash drive (page 94).
	The USB flash drive may not have enough memory. Check the Recordable Time on the display (page 79).
	If you are using a USB flash drive to which data has already been recorded, check first that no important data remains on the device, and then format it (page 95) and try recording again.
Audio files cannot be selected.	The file format may not be compatible with the instrument. The compatible format is only WAV. The DRM protected files cannot be played back.
Recorded file is played back at a different volume compared to when it was recorded.	The audio playback volume has been changed. Setting the volume value to 100 plays back the file at the same volume as when it was recorded (page 78).
Microphone	
The microphone input signal cannot be recorded.	The microphone input signal cannot be recorded as a Song (in MIDI format). Record by using the USB Audio Recorder function (page 79).
Mixer	
The sound seems strange or different than expected when changing a rhythm Voice (Drum kit, etc.) of the Style or Song from the Mixer.	When changing the rhythm/percussion Voices (Drum kits, etc.) of the Style and Song, the detailed settings related to the drum Voice are reset, and in some cases you may be unable to restore the original sound. You can restore the original sound by selecting the same Song or Style again.
Connections	
The speakers do not switch off when a pair of headphones is connected to the [PHONES] jack.	The Speaker setting is "On." Change the speaker setting to " Headphone Switch " via [MENU] → Cursor buttons [▲][▼][◀][▶] Utility , [ENTER] → Configuration .
The Wireless LAN icon is not shown in the Menu display even though the USB wireless LAN adaptor is connected.	Disconnect the USB wireless LAN adaptor and connect it again.
Sound input to the [AUX IN] jack is interrupted.	The output volume of the external device connected to the [AUX IN] jack of this instrument is too low. Increase the output volume of the external device. The volume level reproduced via this instrument's speakers can be adjusted by using the [MASTER VOLUME] dial. The Noise Gate function may be cutting off the soft sounds. If this happens, turn off the " AUX IN Noise Gate " parameter (page 98).

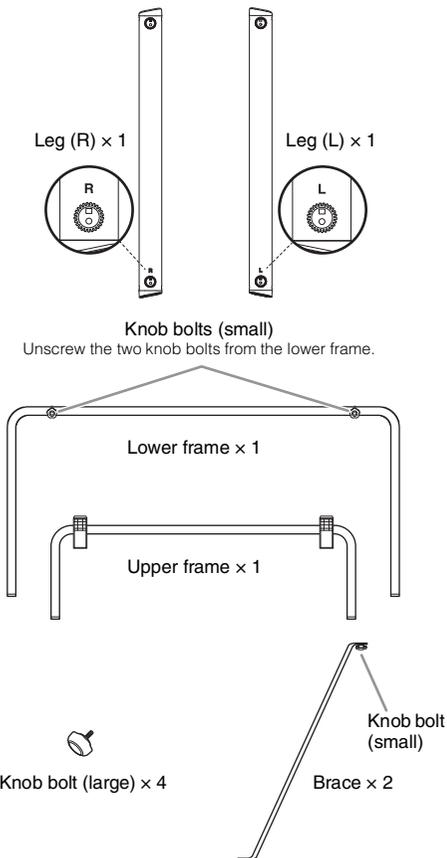
Assembly

Stand Assembly

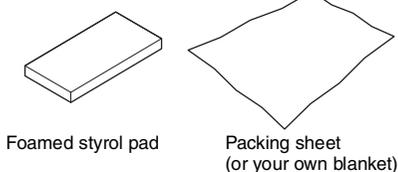
⚠ CAUTION

- Assembly should be carried out by at least two persons.
- Assemble the stand on a hard and flat floor with ample space.
- To disassemble, reverse the assembly sequence.

1 Confirm that all parts shown in the illustration are provided.



To protect the floor, use the packing materials below.



2 Insert the upper and lower frames to the legs (L and R).

2-1 Spread the packing sheet or a large soft cloth, such as a blanket, to protect the floor.

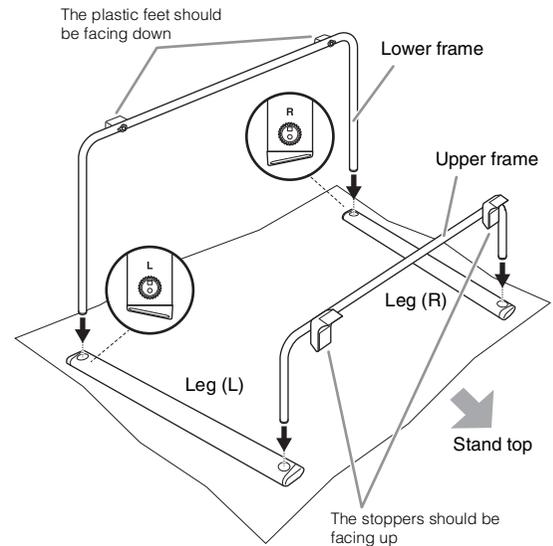
NOTICE

Failure to do so might result in damage to the floor.

2-2 Place the legs (L and R) as shown in the illustration.

Position the legs so that you can see the "L" and "R" markings at the lower end of the legs.

2-3 Insert the upper and lower frames into the legs firmly.



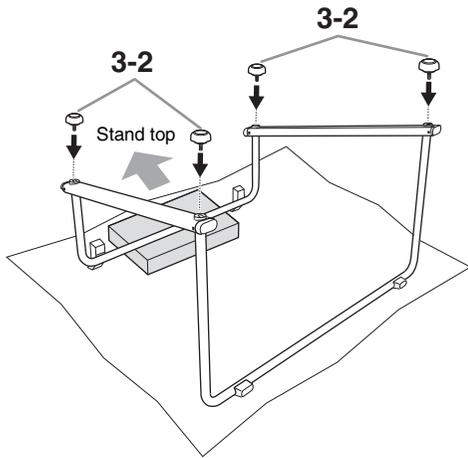
3 Secure the legs and the upper and lower frames.

3-1 Turn over the legs and frames, being careful to not separate them and keep them properly connected, as shown in the illustration.

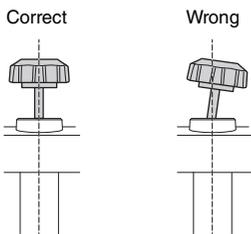
Make sure to place the foamed styrol pad under the upper frame to prevent the stopper from touching the floor and possibly breaking.

⚠ CAUTION

When turning over the legs and frames, be sure to do it with two people. The inserted frame may come off and cause injury.

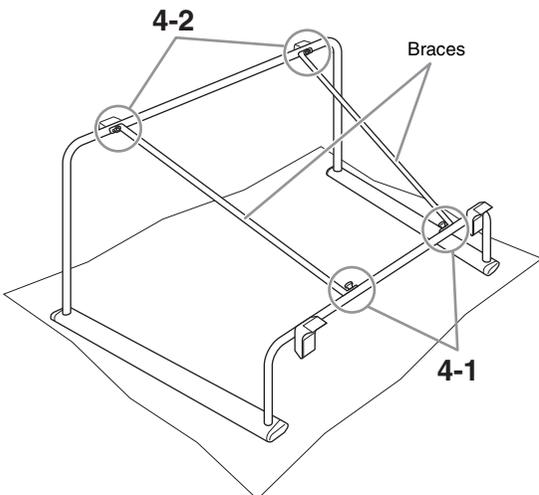


3-2 Securely tighten the legs and the upper and lower frames using four knob bolts (large). Insert the knob bolts straight into the frames, and make sure to tighten them until the knobs come in contact with the legs surface.



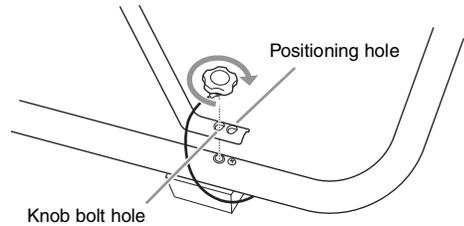
If the knob bolts cannot be inserted smoothly, pull the frame toward the stand top while inserting the bolt.

4 After turning over the legs and frames again, attach the braces to the upper and lower frame.



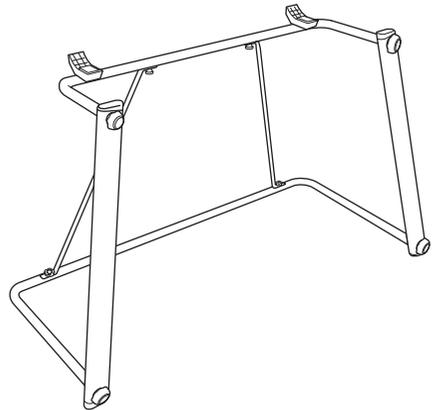
4-1 Attach two braces to the upper frame by using the knob bolt (small) of the brace. Tighten the knob bolt (small).

4-2 Put the positioning hole of the brace onto the screw on the lower frame, and then tighten the knob bolt (small).



5 Raise the stand by holding the legs.

Make sure there is no rattling noise when you shake the stand. If not so, tighten all knob bolts securely.



Stand assembly is completed.

NOTE

When disassembling the stand and removing the braces, the knob bolts (small) may be difficult to loosen. In this case, loosen the knob bolts (small) while moving the braces lightly to the front, back, left, and right.

CAUTION

After completing the assembly, please follow the cautions listed below to avoid the possibility of injury to you or others, or damage to the instrument.

- Always place the stand on a flat, stable surface.
- Make sure the stand is sturdy and safe, and all knob bolts are tight and firm before use.
- Do not use the stand for anything other than its designed purpose.

Placing the Pedal Unit

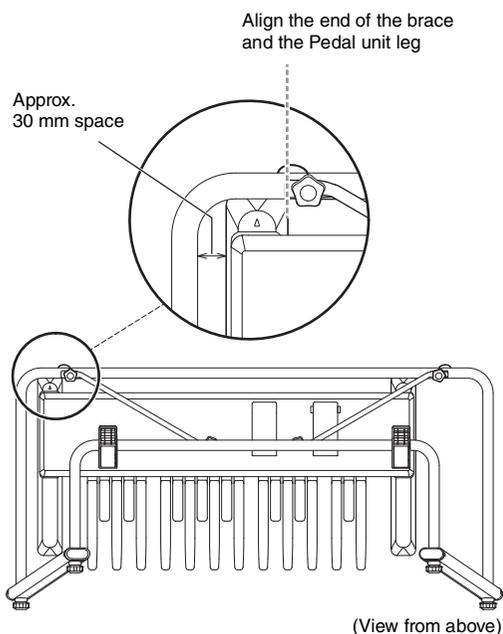
⚠ CAUTION

Take care not to drop the Pedal unit or to pinch your finger(s).

1 Assemble the Pedal unit by following the instructions in the Owner's Manual of the Pedal unit.

2 Place the Pedal unit.

Keep the approximately 30 mm space between the left side of the Pedal unit and the lower frame.



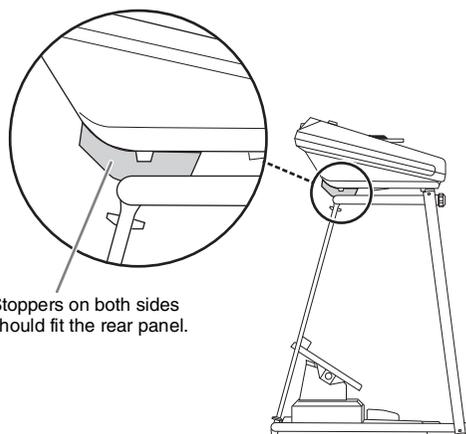
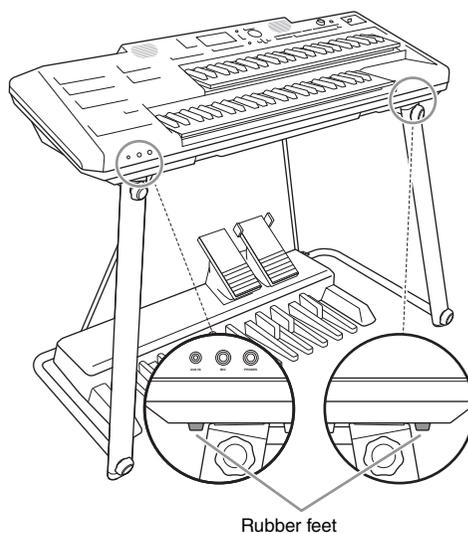
Installing and Connecting the Main Unit

⚠ CAUTION

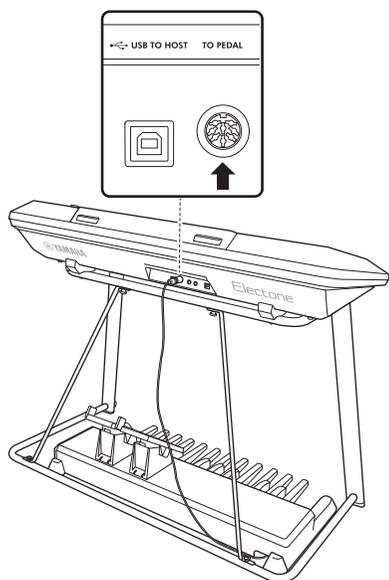
- Be careful not to drop the Main unit or to get your fingers caught between the Main unit and the stand parts.
- Do not hold the keys. Since this may damage or result in a malfunction.
- Before connecting or disconnecting the Pedal unit, turn the power of the Main unit off.
- Do not apply excessive force to the Main unit as it may cause the stand to overturn or the Main unit to drop.

1 Mount the Main unit.

Hold the Main unit horizontally (with two people), and place it on the stand, aligning the rear panel with the stoppers on the stand. Make sure that the rubber foot on the bottom of the Main unit fits outside of the stand frames.



2 Connect the Pedal cord plug to the [TO PEDAL] jack on the rear of Main unit.



Post-assembly checklist

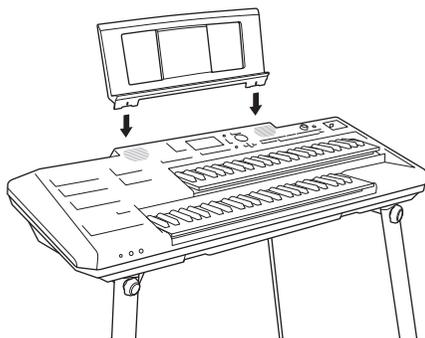
Once you've completed the assembly, check the following points:

- Are there any parts left over?
If so, read the assembly instructions again and correct any mistakes you might have made.
- Does the instrument make a rattling noise when you play it or move it?
If so, take the Main unit off from the stand and properly tighten all knob bolts.

Also, if the Main unit makes a creaking noise or seems unsteady when you play it, refer carefully to the assembly instructions and diagrams and re-tighten all knob bolts.

Attaching the Music Rest

Insert the music rest into the slots of the Main unit as shown.



Using the Bench

⚠ WARNING

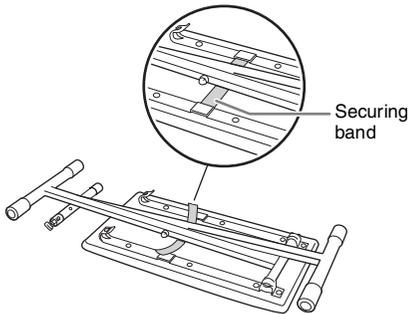
- Always place the bench on a flat, stable surface. Placing the bench on uneven surfaces may result in it becoming unstable or overturn, and possibly result in injury.
- Keep special watch over any small children, since the bench is not stable compared to benches of four legs.

⚠ CAUTION

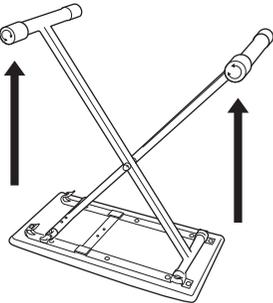
Be careful not to get your finger(s) caught while assembling.

1 Place the bench on the floor with the seating surface face down.

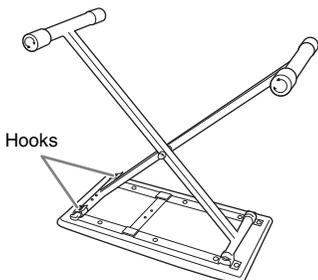
Untie the securing band on the legs, and put the ends into the pockets on both sides.



2 Pull the legs up slowly with both hands.

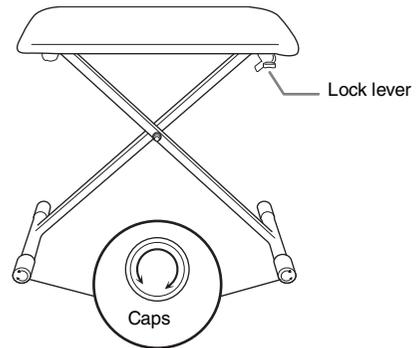


3 Open the legs, then secure one side to the hooks (as shown), making sure they are locked in.



4 Turn over the bench as shown in the illustration.

The lock is at the rear side of the bench. To keep the bench from teetering, rotate the caps of the rear side as necessary.

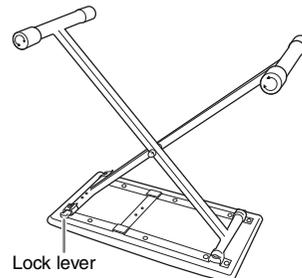


NOTE

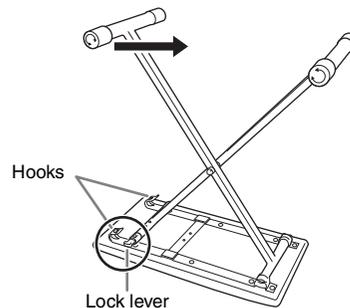
When rotating the caps, pull them outward slightly (about 10 mm) for ease in rotating. After making adjustments, push them back inside.

Folding the Bench

1 Put the bench on the floor with the seating surface face down.



2 Press the lock lever downward, and then move the legs to release one side from the hooks.



3 Reverse the sequence of steps 1 – 2 at left to fold the bench back down.

Specifications

Product Name		Digital Organ	
Size/Weight	Overall	Dimensions (W x D x H)	1,220 mm x 596 mm x 942 mm (1,220 mm x 598 mm x 1,109 mm, with music rest)
		Weight	36.1 kg (36.4 kg, with music rest)
	Main Unit	Dimensions (W x D x H)	1,149 mm x 443 mm x 218 mm
		Weight	12.0 kg (12.3 kg, with music rest)
	Pedal Unit (PK-20)	Dimensions (W x D x H)	929 mm x 480 mm x 312 mm (with the Expression Pedals installed)
		Weight	11.9 kg
	Stand	Dimensions (W x D x H)	1,220 mm x 596 mm x 762 mm
		Weight	6.4 kg
	Bench	Dimensions (W x D x H)	638 mm x 324 mm x 580 mm
		Weight	5.8 kg
Control Interface	Keyboard	Number of Keys (Upper Keyboard)	49 (C-C)
		Number of Keys (Lower Keyboard)	49 (C-C)
		Type	FSA Keyboard
		Initial Touch	Upper Keyboard, Lower Keyboard
	Pedal Unit (PK-20)	Number of Keys (Pedalboard)	20 (C-G)
		Left Footswitch	Yes
		Right Footswitch	Yes
		Expression Pedal	Yes
	Display	Second Expression Pedal	Yes
		Type	TFT Color WQVGA LCD
		Size	480 x 272 dots (4.3 inch)
	Panel	Language	English, Simplified Chinese
		Language	English
Voices	Tone Generation	Tone Generation Technology	AWM Stereo Sampling
	Polyphony (max.)		128
	Preset	Number of Voices	919 Voices + 43 Drum/SFX Kits + 480 XG Voices
		Featured Voices	67 S.Art, 20 Organ Flutes, 25 MegaVoice, 28 Sweet!, 64 Cool!, 81 Live!
	Compatibility		XG, GS (for Song playback), GM, GM2
Keyboard Part		Upper, Lower, Lead, Pedal	
Effects	Reverb Block		52 Preset + 30 User
	Chorus Block		106 Preset + 30 User
	DSP Block		295 Preset + 30 User
	Master Compressor		5 Preset + 30 User
	Master EQ		5 Preset + 30 User
	Part EQ		32
	Intelligent Acoustic Control (IAC)		Yes
	Mic Effects		Noise Gate x 1, Compressor x 1, 3-Band EQ x 1
Styles	Preset	Number of Styles	450
		Featured Styles	405 Pro Styles, 34 Session Styles, 10 DJ Styles, 1 Free Play
		Fingering	Multi Finger, AI Fingered, Fingered On Bass, AI Full Keyboard, Smart Chord
		Style Control	INTRO x 3, MAIN VARIATION x 4, FILL x 4, BREAK, ENDING x 3
	Other Features	One Touch Setting (OTS)	4 for each Style (OTS Link)
		Adaptive Style	69
		Unison & Accent	107
Compatibility		Style File Format (SFF), Style File Format GE (SFF GE)	

Songs (MIDI)	Preset	Number of Preset Songs	5
	Recording	Number of Tracks	16
		Data Capacity	approx. 300 KB/Song
		Function	Quick Recording, Multi Track Recording
	Format	Playback	SMF (Format 0 & 1), XF
Recording		SMF (Format 0)	
USB Audio Recorder	Recording Time (max.)		80 minutes/Song
	Format	Playback	WAV (44.1 kHz, 16-bit, stereo)
		Recording	WAV (44.1 kHz, 16-bit, stereo)
	Time Stretch		Yes
	Pitch Shift		Yes
Vocal Cancel		Yes	
Functions	Voices	Harmony	Yes
		Arpeggio	Yes
		Panel Sustain	Yes
		Mono/Poly	Yes
		Voice Information	Yes
	Styles	Style Creator	Yes
		OTS Information	Yes
	Songs	Song Creator	Yes
		Score Display Function	Yes
		Lyrics Display Function	Yes
		Guide	Follow Lights, Any Key, Karao-Key, Your Tempo
	Multi Pads	Multi Pad Creator	Yes
		Number of Preset Multi Pad Banks	188
		Number of On-screen Pads	4 per Bank
		Audio Link Multi Pad	Yes
	Registration Memory	Number of Buttons	8 per Bank
		Control	Bank Select, Registration Sequence, Disable
		Number of Preset Registration Banks	28
	Playlist	Number of Records (max.)	500
		Number of Preset Records	28
	USB Audio Interface		44.1 kHz, 16-bit, stereo
	Demo		Yes
	Overall Controls	Metronome	Yes
		Tempo Range	5 – 500
		Transpose	-12 – 0 – +12
		Tuning	414.8 – 440.0 – 466.8 Hz (approx. 0.2 Hz increments)
		Scale Type	9 Types
Miscellaneous	Text Display Function	Yes	
Expandability (Expansion Packs)	Expansion Voice		Yes (approx. 100 MB max.)
	Expansion Style		Yes (Internal Memory)
Storage and Connectivity	Storage	Internal Memory	Approx. 20 MB
		External Drives	USB flash drive
	Connectivity	DC IN	16 V
		Headphones	Standard stereo phone jack
		Microphone	Standard mono phone jack
		AUX IN	Stereo mini jack
		AUX OUT	L/L+R, R
TO PEDAL	Yes		

Storage and Connectivity	Connectivity	USB TO DEVICE	Yes
		USB TO HOST	Yes
Sound System	Amplifiers	(15 W + 5 W) × 2	
	Speakers	(12 cm + 8 cm) × 2	
Power Supply	AC Adaptor	PA-300C (Output: DC 16 V, 2.4 A)	
	Power Consumption	20 W	
	Auto Power Off	Yes	
Included Accessories		<ul style="list-style-type: none"> • Owner's Manual (this book) • Online Member Product Registration • Music rest • Stand • Bench • Pedal unit PK-20 with corresponding Owner's Manual 	
Separately Sold Accessories (May not be available depending on your area.)		<ul style="list-style-type: none"> • AC adaptor: PA-300C • Headphones: HPH-50/HPH-100/HPH-150 	

The contents of this manual apply to the latest specifications as of the publishing date. To obtain the latest manual, access the Yamaha website then download the manual file. Since specifications, equipment or separately sold accessories may not be the same in every locale, please check with your Yamaha dealer.

Formats



"GM (General MIDI)" is one of the most common Voice allocation formats. "GM System Level 2" is a standard specification that enhances the original "GM" and improves Song data compatibility. It provides for increased polyphony, greater Voice selection, expanded Voice parameters, and integrated effect processing.



XG is a major enhancement of the GM System Level 1 format, and was developed by Yamaha specifically to provide more Voices and variations, as well as greater expressive control over Voices and effects, and to ensure compatibility of data well into the future.



GS was developed by the Roland Corporation. In the same way as Yamaha XG, GS is a major enhancement of the GM specifically to provide more Voices and Drum kits and their variations, as well as greater expressive control over Voices and effects.



The Yamaha XF format enhances the SMF (Standard MIDI File) standard with greater functionality and open-ended expandability for the future. This instrument is capable of displaying lyrics when an XF file containing lyric data is played.



"SFF (Style File Format)" is an original Style file format by Yamaha which uses a unique conversion system to provide high-quality automatic accompaniment based on a wide range of chord types. "SFF GE (Guitar Edition)" is an enhanced format of SFF, which features improved note transposition for guitar tracks.

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Published 07/2022
MWES-A0



VEH4180