

Yamaha Expansion Manager

Owner's Manual

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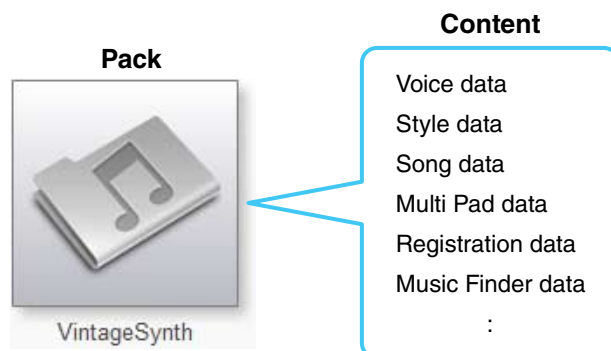
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This owner's manual assumes that you are already familiar with basic Windows/Mac operations. If you are not, please refer to the owner's manual which came with your Windows/Mac software before using this application.

Overview of *Yamaha Expansion Manager*

The term “Pack” is used to refer to a full set of Voice, Style, Song, and other data (collectively referred to as “content” below) for use on Yamaha digital instruments.

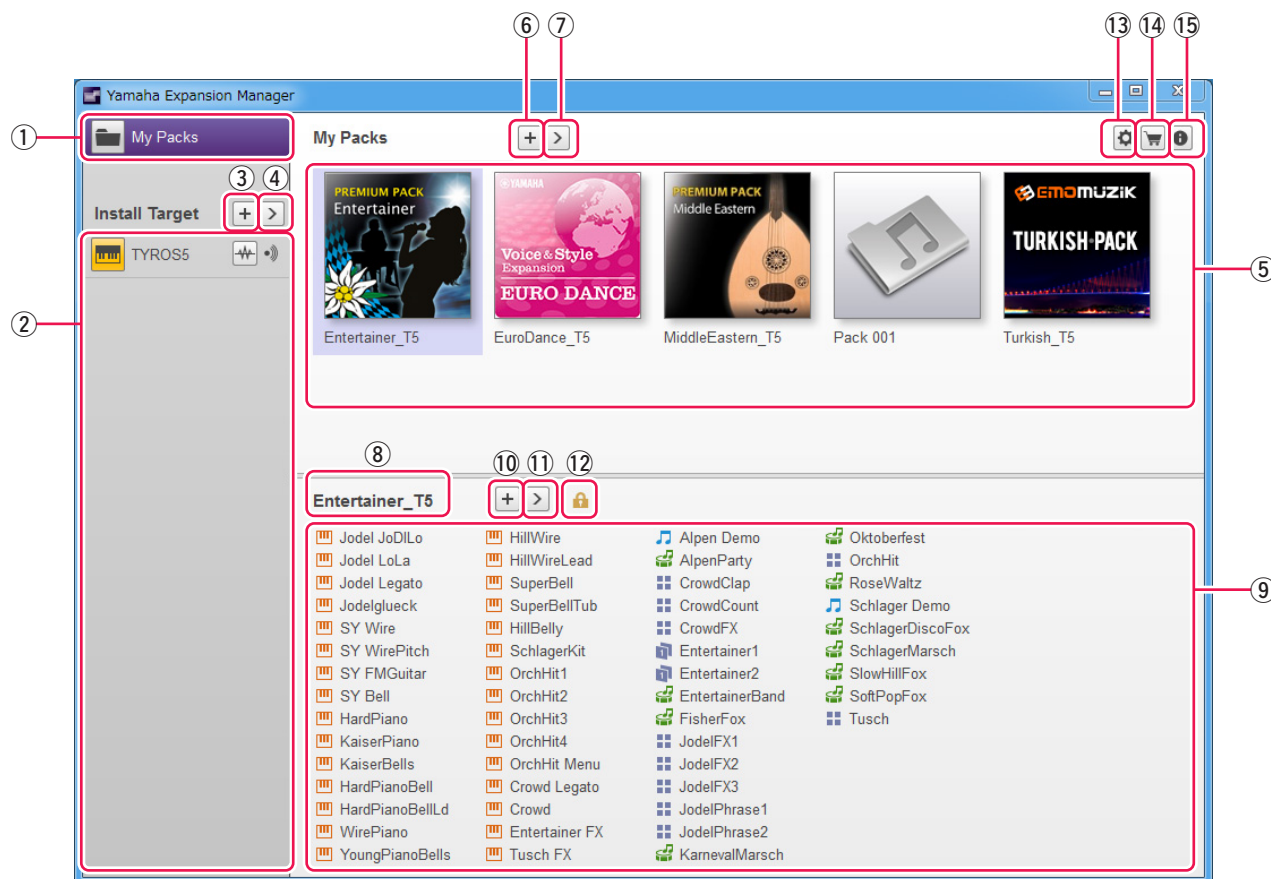


***Yamaha Expansion Manager* can be used with Packs to perform the following:**

- Management of Pack data
- Installation of Pack data on a digital instrument
- Creation of your own original Packs
- Creation of your own original Voices

Screen Items & Functions



The *Pack Manager* window shown below is displayed whenever the application is launched. Here, you can import Packs and install them on your digital instrument.



① *My Packs* button

The term “My Packs” is used to refer to Packs that you have imported or created. Click *My Packs* to display all Packs in the *Pack list* ⑤ (on the *My Packs* page).

② *Install Target* list

This area shows a list of instruments on which Pack data can be installed.  is displayed when the instrument is connected via wireless network.  (Add User Wave button) is displayed if the instrument’s preset Voices can be edited.

③ *Add Install Target* button

This button can be used to manually add instruments to the *Install Target* list.

④ *Edit Install Target* button

Click this button with an Install Target selected to display a menu for editing the *Install Target* list.

⑤ *Pack* list

This area shows all of the Packs that you have imported or created.

⑥ *Add Pack* button

Click this button to add to the *Pack* list by importing Packs or creating new ones.

⑦ **Pack Edit button**



Click this button to display a menu for editing the Pack selected in the *Pack* list.

⑧ **Pack name**

This area shows the name of the currently selected Pack.

⑨ **Content list**

This area shows all of the content included in the Pack currently selected in the *Pack* list. Each item of Pack content is identified using its name and the corresponding icon from the following table.

Voice (Normal Voice)	 
Voice (Drum Voice)	 
Style	
Audio Style	
Song	
Audio	
Multi Pad	
Ensemble Voice	
Registration	
Music Finder	
Text	

Orange icons show Voices based on a preset Voice from an instrument. During editing, they can be played only by the instrument itself.
White icons show Voices created using the Voice Edit function. During editing, they can be played by the software.

⑩ **Add Content button**

Click this button to display a menu for adding content to the *Content* list. This button will not be displayed in the case of protected Packs, such as any that you have purchased, and you will not be able to add content to them.

⑪ **Content Edit button**

Click this button to display a menu for editing content. This button will not be displayed in the case of protected Packs, such as any that you have purchased, and you will not be able to edit their content.

⑫ **Protected icon**

This icon is displayed whenever you select a protected Pack.

⑬ **Device Setting button**

Click this button to open the *Device Setting* window. On this window, you can make the settings required to listen to the Voice currently being edited using an audio interface, MIDI keyboard, or other similar devices.

⑭ **Shop button**

Click this button to launch your default browser and visit the *Yamaha MusicSoft* web site.

⑮ **About Yamaha Expansion Manager button**

Click this button to display the current version number, copyright details, and other information on the *Yamaha Expansion Manager* application.

Managing Pack Data

Importing Packs and managing your library

- 1.** Click *My Packs* on the *Pack Manager* window.
- 2.** Click the *Add Pack* button and then select *Import Pack* from the menu displayed.
- 3.** When the file selector dialog is displayed, select the file containing the Pack you wish to install and click *Open*.
- 4.** If a user verification dialog is then displayed, enter your User ID and password.

Your Pack will now be imported.

The icons for all imported Packs will be displayed in the *Pack* list on the *My Packs* page. When you select a Pack by clicking the corresponding icon, all of its content will be displayed in the *Content* list.

NOTE

- You can also import a Pack by dragging and dropping its file into the *Pack* list on the *My Packs* page.
- SoundFont files (.sf2) can also be imported as Packs. The SoundFont format was developed by Creative Labs and differs considerably from the format used in this software. Accordingly, it may not be possible to accurately convert all of the data from .sf2 files. If imported data does not produce the expected sounds, use this software's editing functions to make the necessary adjustments.

Deleting an imported Pack

- 1.** Select the Pack to be deleted by clicking its icon in the *Pack* list on the *My Packs* page.
- 2.** Click the *Pack Edit* button and select *Delete* from the menu displayed.
- 3.** Click *Delete* when asked to confirm whether you wish to proceed.

Your Pack will now be deleted.

The icons for deleted Packs will be removed from the *Pack* list.

Installing Pack Data on a Digital Instrument

First of all, ensure that your computer is connected to the correct network.

1. Add the digital instrument on which you wish to install Pack content to the *Install Target* list.

As described below, this can be done in two different ways—using a USB flash drive or via wireless network.

Adding using a USB flash drive

- 1-1.** Plug the USB flash drive into the digital instrument in question and save the corresponding *Instrument Info* file to the USB flash drive.

NOTE

- Details on the USB flash drives that can be used with your digital instrument can be found on the following web site.
<http://download.yamaha.com>
- Refer to the *Owner's Manual* or *Reference Manual* that came with your digital instrument for instructions on how to save its *Instrument Info* file.

- 1-2.** Plug the USB flash drive into your computer and click the *Add Install Target* button in the *Yamaha Expansion Manager* application.

- 1-3.** Select *Import Instrument Info* from the menu displayed.

- 1-4.** When the file selector dialog is displayed, select the *Instrument Info* file that you exported from your digital instrument.

The instrument will now be added to the *Install Target* list.

Adding via wireless network

- 1-1.** Connect your digital instrument and computer to the same wireless network or wireless access point.

NOTE

Refer to the *Owner's Manual* or *Reference Manual* that came with your digital instrument for instructions on how to connect it to a wireless network.

- 1-2.** Click the *Add Install Target* button in the *Yamaha Expansion Manager* application.

- 1-3.** Select *Search Instruments* from the menu displayed.

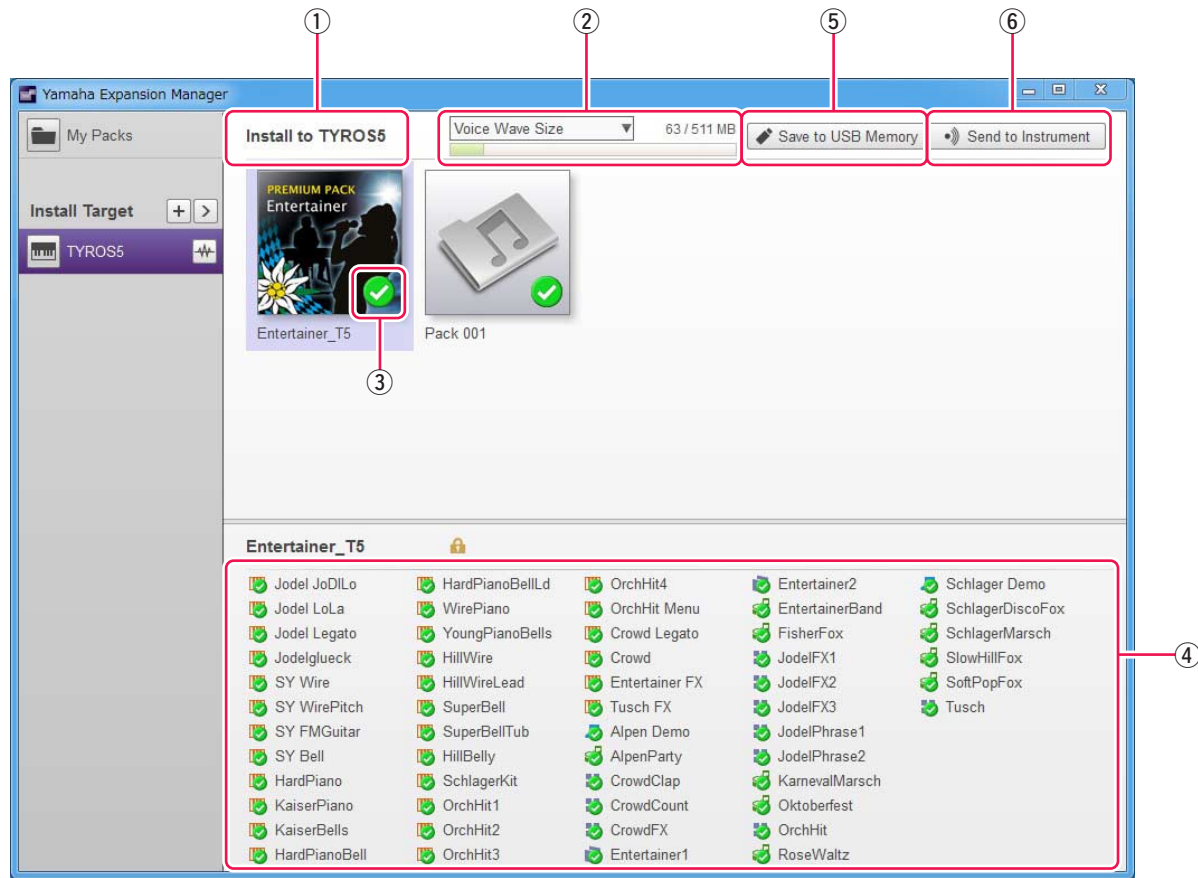
The instrument will now be added to the *Install Target* list.

2. Select the digital instrument on which you wish to install the Pack content.

Click the digital instrument added to the *Install Target* list in the previous step.

3. Select the Pack or content to install on the digital instrument.

A screen similar to that shown below will be displayed when you select an Install Target.



- ① The name of the selected Install Target is shown here.
- ② This area displays size information related to Wave-format audio files for Voices or Audio Styles. Click ▼ to select either Voice Wave Size or Audio Style Wave Size.
The left side indicates the combined size for Voices or Audio Styles already installed on the instrument and for Voices or Audio Styles selected in the Content list. The right side indicates the total capacity available for Voices or Audio Styles on the instrument selected for installation. If you have connected the instrument using a wireless network, the total size for Voices or Audio Styles from the previous wireless installation (Step 4) is also shown on the very left.
- ③ This button indicates whether or not the Pack is to be installed. Click to toggle between installation of all or none of the Pack's content. Depending on the selection status, this button is displayed in one of the three following ways.

	All of the Pack's content will be installed.
	Some of the Pack's content will be installed.
	None of the Pack's content will be installed.

- ④ These buttons can be used to specify whether or not individual content items from the selected Pack are to be installed. Click any item of Pack content to toggle its selection status on or off. You can also drag the selection range over multiple items to toggle them all on or off together. In such a case, the selection status of all selected Pack content items will depend on whether the first item in the selection range is toggled on or off.

Click any Pack or content item you wish to install and verify that is displayed on its icon.

4. Install the selected Pack(s) and content on your digital instrument.

As described below, this can be done in two different ways—using a USB flash drive or via wireless network.

Installation using a USB flash drive

- 4-1.** Plug a USB flash drive into your computer and click *Save to USB Memory* ⑤ in the *Yamaha Expansion Manager* application.
- 4-2.** Click *Yes* when asked to confirm whether you wish to proceed. A user verification dialog may then be displayed. If so, enter the User ID and password you used when adding the Pack(s) to the *My Packs* page.
- 4-3.** When the file save dialog is displayed, select a destination for saving the Pack content to be installed.
- 4-4.** Click *Open* to start saving the content file to the USB flash drive. A window showing the state of progress will be displayed.
- 4-5.** When the Pack content has been saved, remove the USB flash drive from your computer, plug it into the digital instrument, and import the content.

NOTE

Refer to the *Owner's Manual* or *Reference Manual* that came with your digital instrument for instructions on how to import Pack content from a USB flash drive.

This completes the process for installation using a USB flash drive.

Installation via wireless network

- 4-1.** Click *Send to Instrument* ⑥ in the *Yamaha Expansion Manager* application.
- 4-2.** Click *Yes* when asked to confirm whether you wish to proceed. A user verification dialog may then be displayed. If so, enter the User ID and password you used when adding the Pack(s) to the *My Packs* page.
- 4-3.** Click *OK* when asked to confirm whether you wish to install the Pack content. *Yamaha Expansion Manager* will now start installing on your digital instrument. A window showing the state of progress will be displayed.

Installation via wireless network will be complete when this window disappears.

Creating Your Own Original Packs

1. Create a new Pack on the *My Packs* page.

1-1. Click *My Packs* on the *Pack Manager* window.

1-2. Click the *Add Pack* button and then select *Create Pack* from the menu displayed.

2. If necessary, edit the newly created Pack.

2-1. Select the Pack by clicking its icon in the *Pack* list.

2-2. Click the *Pack Edit* button to display an edit menu, and then change the Pack's icon or name. The items available for selection from the menu are as follows.

- ***Export Pack***

Used to display a file save dialog and export the Pack.

- ***Change Image***

Used to change the Pack's icon. When clicked, a file selection dialog will be displayed, allowing you to choose an image file with a .jpeg, .jpg, or .png file extension. The image from the selected file will then be used as the Pack's icon.

- ***Rename***

Renames the Pack.

- ***Delete***

Deletes the Pack.

NOTE

You cannot use *Export Pack*, *Change Image*, or *Rename* with protected Packs, such as any that you have purchased.

3. Add content to the Pack.

Content is added either by importing content files (see below) or by creating new Normal and Drum Voices (page 11).

3-1. Click the *Add Content* button and then click *Import Content* on the menu displayed.

3-2. In the file selection dialog displayed, select the content file you wish to add.

The selected content will now be added to the end of the *Content* list.

NOTE

You can also add content by dragging the corresponding file onto the *Content* list.

4. Edit the content as required.

NOTE

Protected content cannot be edited.

4-1. Select the content you wish to edit by clicking it in the *Content* list.

4-2. Click the *Content Edit* button to display an edit menu, and then edit the content. The items available for selection from the menu are as follows.

- ***Edit Voice***

Used to create your own original Voice by editing the selected Normal Voice or Drum Voice (page 12). This option is not available if you have selected non-Voice content or multiple items.

- ***Edit Program Change***

Used to display the *Program Change Mapping* window and assign Program Change numbers to the Voices contained in the Pack. To do so, you can drag a Voice name and drop it at the position for the Program Change number you wish to assign. The Voice at that position will be assigned the original Program Change number of the dropped Voice.

- ***Rename***

Changes the name of the selected content. This option is not available if you have selected multiple items of content.

- ***Cut***

Stores the selected content file as cut data. When you paste the cut data, the selected content file will be moved (i.e., the original will be deleted).

- ***Copy***

Stores the selected content file as copy data. When you paste the copy data, the selected content file will be copied (i.e., the original will be retained).

- ***Paste***

Moves or copies the content file stored as cut or copy data to the end of the *Content* list.

- ***Delete***

Deletes the selected content file.

5. Export the Pack file.

5-1. Select the Pack by clicking its icon in the *Pack* list.

5-2. Click the *Pack Edit* button to display an edit menu, and then click *Export Pack*.

5-3. When the file save dialog is displayed, navigate to folder in which you wish to save your Pack and then export it.

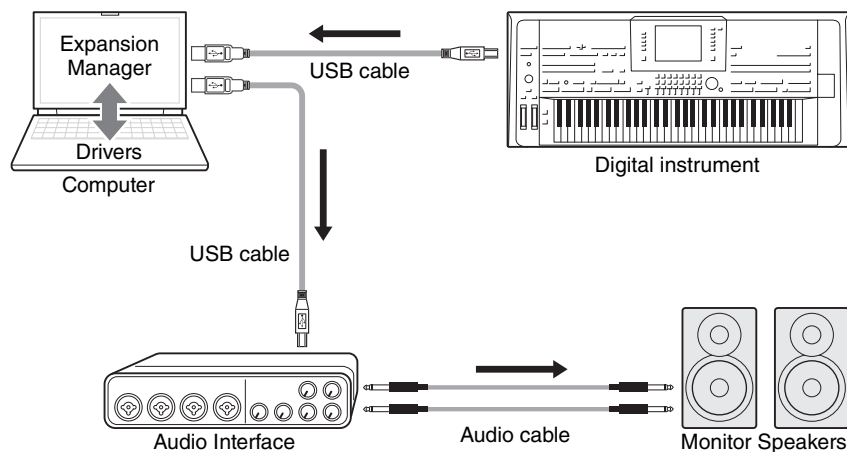
This completes the procedure for creating an original Pack.

Creating Your Own Original Voices

Two different types of original Voice can be created—Normal Voices and Drum Voices. A Normal Voice comprises Common settings and a number of Elements; a Drum Voice comprises Common settings and a number of Drum Keys. By assigning Wave files (i.e., WAV or AIFF audio data) to each of these Elements or Drum Keys, you can create your own original Normal Voice or Drum Voice. These new Voices are then stored as Pack content.

Tips

It can be very convenient when creating and editing Expansion Voices if you can listen to the sounds produced with the current settings. In order to do this, devices such as an audio interface and MIDI keyboard will need to be connected to the computer on which you have installed *Yamaha Expansion Manager*. You will also need to install drivers for these devices on your computer. Please refer to the user's manual that came with each device for instructions on how to install its driver.

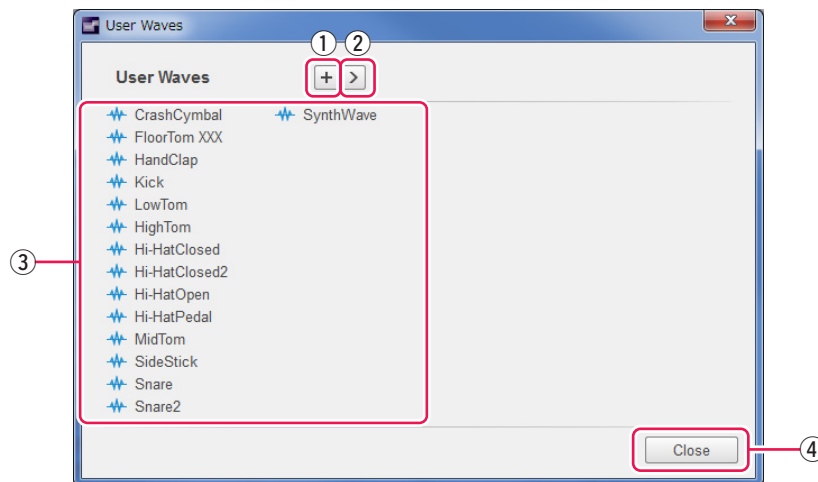


If you wish to create a Voice by editing one of the preset Voices from a specific instrument, the sound can be played only on the instrument during editing. Make sure to connect that instrument directly to your computer by using a USB cable before starting the following procedure.

1. In the *Pack* list on the *Pack Manager* window, select the *Pack* in which you wish to store your new Voice.

Refer to page 5 for details on how to import Packs, or page 9 for details on how to create a new Pack.

2. If you wish to edit a preset Voice from an instrument, click the *Add User Wave* button from the *Install Target* list on the *Pack Manager* window, and then add the Wave file you wish to use.



- ① Used to add User Waves.
- ② Used to display the *Edit User Wave* menu.
 - **Rename**
Used to change the name of the selected Wave file.
 - **Delete**
Used to delete the selected Wave file.
- ③ Displays a list of User Waves that are available for use.
- ④ Used to close the *User Waves* window.

3. Click the *Add Content* button on the *Pack Manager* window, select one of the following on the menu displayed, and add content.

- **Create Normal Voice:** Used to assign Waves to Elements and create a new Normal Voice. The lowest available Program Change number will be assigned to the new Voice, but you can change this later.
- **Create <model name> Custom Normal Voice** (displayed only when an instrument with editable preset Voices is connected to your computer): Used to create a Normal Voice by editing a preset Voice from the indicated instrument. Click the Voice you wish to edit from the displayed Voice list, and then click *OK*.
- **Create Drum Voice:** Used to assign Waves to Drum Keys and create a new Drum Voice. The lowest available Program Change number will be assigned to the new Voice, but you can change this later.
- **Create <model name> Custom Drum Voice** (displayed only when an instrument with editable preset Voices is connected to your computer): Used to create a Drum Voice by editing a preset Voice from the indicated instrument. Click the Voice you wish to edit from the displayed Voice list, and then click *OK*.
- **Import Content:** Used to import existing content. When the file selection dialog is displayed, select the file you wish to import.

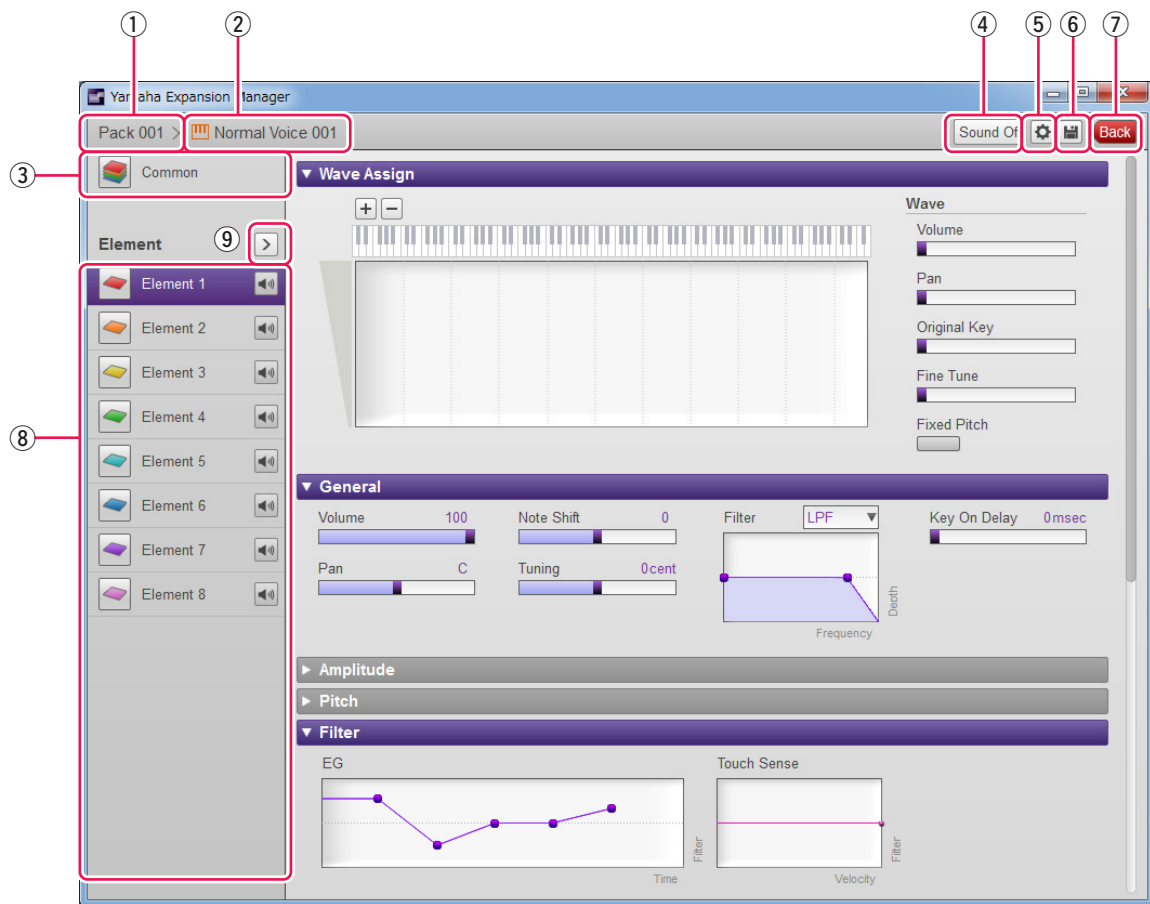
The new Voice or imported content will now be added to the end of the *Content* list.


4. Click the *Content Edit* button and select *Edit Voice* from the menu displayed.

A *Voice Editor* window similar to that shown below will now be displayed.

NOTE

- Refer to page 10 for details of the other items on the *Content Edit* menu.
- Depending on the Voice you are editing, it may not be possible to change certain parameters.



- ① The name of the Pack containing the Voice currently being edited.
- ② The name of the Voice currently being edited.
- ③ Click to open the *Common* window.
- ④ Click to stop the sound being played.
- ⑤ Click to open the *Device Setting* window. On this window, you can make the settings required to listen to the Voice currently being edited using an audio interface, MIDI keyboard, or other similar devices.
- ⑥ Click to save the Voice currently being edited.
- ⑦ Click to end Voice editing and return to the *Pack Manager* window.
- ⑧ If editing a Normal Voice: Click any of Elements 1 through 8 to display its detailed settings on the right of the window. You can click  to toggle the corresponding Element on and off (i.e., muting).
If editing a Drum Voice: This shows the range of the keyboard that can be edited as Drum Keys (i.e., C \sharp -1 to G5). Click any of the Drum Keys to display its detailed settings on the right of the window.
- ⑨ Click to display a menu for editing of the currently selected Element or Drum Key.

• **Cut**

Stores the selected Element or Drum Key as cut data. When you paste the cut data, the selected Element or Drum Key will be moved.

• **Copy**

Stores the selected Element or Drum Key as copy data. When you paste the copy data, the selected Element or Drum Key will be copied.

• **Paste**

Moves or copies the Element or Drum Key stored as cut or copy data to the currently selected one.

• **Delete**

Deletes the currently selected Element or Drum Key.


- **Change to other Voice Element/Change to other Voice Drum Key**

(Displayed only when creating a Voice based on a preset Voice from an instrument.)

Replaces the currently selected Element or Drum Key with an Element or Drum Key from another Voice. When the window is displayed, select the Voice Element or Drum Key to replace the current selection.

- **Change to new Element with User Wave/Change to new Drum Key with User Wave**

(Displayed only when creating a Voice based on a preset Voice from an instrument.)

Replaces the currently selected Element or Drum Key with a new Element or Drum Key using a User Wave. When the window is displayed, select the User Wave to replace the current selection. You can also click  to add a different User Wave to the list as a replacement.

5. Configure the Common settings, which apply to all Elements or Drum Keys, as required.

Refer to *Configuring Common Settings* (below) for more details.

6. Edit the Elements or Drum Keys to create your own original Voice.

For details, refer to either *Creating a Normal Voice* (page 17) or *Creating a Drum Voice* (page 21) as appropriate.

7. Listen to the Voice you have created, and if necessary, repeat Step 5 and Step 6 to edit further.

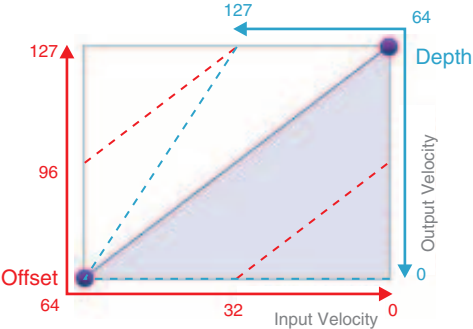
8. Click the *Save* button ⑥ to save the edited Voice.

This completes the procedure for creating an original Voice.

Configuring Common Settings

This section describes in detail the procedure for Step 5 above. To start, click the *Common* button on the *Voice Editor* window. Then, in the window displayed, make the required Common settings (below) for all Elements or Drum Keys.

● General

Volume	Adjusts the volume of the current edited Voice.
Touch Sense	<p>Sets the sensitivity to input velocities when the Voice is being played using a keyboard. You can make adjustments by dragging the <i>Offset</i> and <i>Depth</i> points within the graph.</p>  <p>Offset: Determines the velocity sensitivity, or how much the level of the Voice changes in response to your playing strength (velocity).</p> <p>Depth: Determines the amount by which received velocities are adjusted for the actual velocity effect.</p>

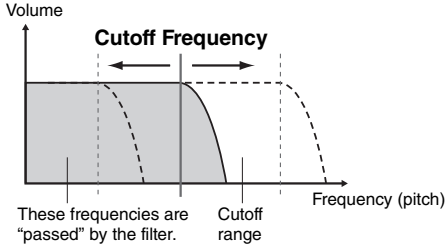
Right Octave	Transposes the pitch in units of one octave when the Voice is used for the instrument's right part.
Left Octave	Transposes the pitch in units of one octave when the Voice is used for the instrument's left part.
Mono/Poly *	Determines whether the edited Voice is played monophonically or polyphonically
Portamento Time *	<p>Sets the portamento time (pitch transition time) when the edited Voice is set to Mono above.</p> <p>NOTE The Portamento Time determines the pitch transition time. Portamento is a function that creates a smooth transition in pitch from the first note played on the keyboard to the next.</p>

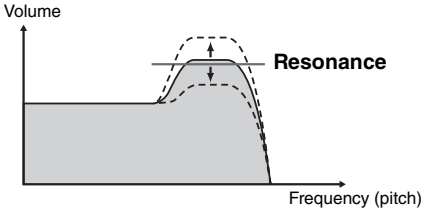
* Mono/Poly and Portamento Time are not available for Drum Keys.

● Controller

Modulation Filter	Determines the degree to which the MODULATION wheel modulates the Filter Cutoff Frequency.
Modulation Amplitude	Determines the degree to which the MODULATION wheel modulates the amplitude (volume).
Modulation LFO P. Mod	Determines the degree to which the MODULATION wheel modulates the pitch, or the vibrato effect.
Modulation LFO F. Mod	Determines the degree to which the MODULATION wheel modulates the Filter modulation, or the wah effect.
Modulation LFO A. Mod	Determines the degree to which the MODULATION wheel modulates the amplitude, or the tremolo effect.
After Touch Filter	Determines the degree to which Aftertouch modulates the Filter Cutoff Frequency.
After Touch Amplitude	Determines the degree to which Aftertouch modulates the amplitude (volume).
After Touch LFO P. Mod	Determines the degree to which Aftertouch modulates the pitch, or the vibrato effect.
After Touch LFO F. Mod	Determines the degree to which Aftertouch modulates the Filter modulation, or the wah effect.
After Touch LFO A. Mod	Determines the degree to which Aftertouch modulates the amplitude, or the tremolo effect.

● Sound

Filter Brightness	<p>Determines the cutoff frequency or effective frequency range of the filter (see diagram). Higher values result in a brighter sound.</p> 
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Filter Harmonic Cont.	<p>Determines the emphasis given to the cutoff frequency (resonance), set in Filter Brightness above (see diagram). Higher values result in a more pronounced effect.</p> 
AEG Attack	Determines how quickly the sound reaches its maximum level after the key is played. The lower the value, the quicker the attack.
AEG Decay	Determines how quickly the sound reaches its sustain level (a slightly lower level than maximum). The lower the value, the quicker the decay. The lower the value, the quicker the decay.
AEG Release	Determines how quickly the sound decays to silence after the key is released. The lower the value, the quicker the decay.
Vibrato Depth	Determines the intensity of the Vibrato effect. Higher settings result in a more pronounced Vibrato.
Vibrato Speed	Determines the speed of the Vibrato effect.
Vibrato Delay	Determines the amount of time that elapses between the playing of a key and the start of the Vibrato effect. Higher settings increase the delay of the Vibrato onset.

● Effect

Reverb Depth	Adjusts the reverb depth.
Chorus Depth	Adjusts the chorus depth.
Insertion Effect On/Off	Determines whether the Insertion Effect is on or off.
Insertion Effect Category	Selects the Insertion Effect category.
Insertion Effect Type	Selects the Insertion Effect type. Select a type after selecting a category.
Insertion Effect Depth	Adjusts the Insertion Effect depth.

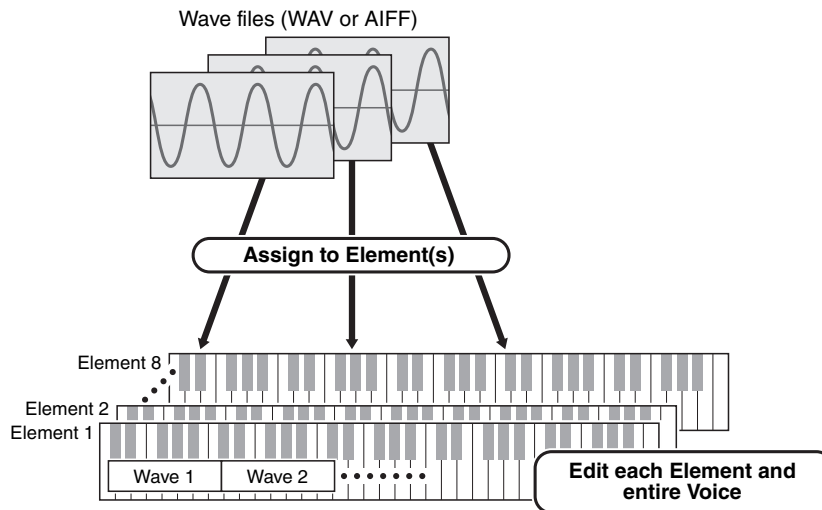
● EQ

Low Frequency	Sets the frequency of the equalizer's low-frequency band.
Low Gain	Sets the volume boost for the equalizer's low-frequency band.
High Frequency	Sets the frequency of the equalizer's high-frequency band.
High Gain	Sets the volume boost for the equalizer's high-frequency band.

This completes the procedure for Step 5 on page 14. You should now proceed to Step 6.

Creating a Normal Voice

This section describes in detail the procedure for Step 6 on page 14 when you are creating an original Normal Voice. This involves assigning Wave files to each of the Elements that make up the Voice. You can either start from an empty Normal Voice or modify an existing one by adding Waves and/or changing its settings.

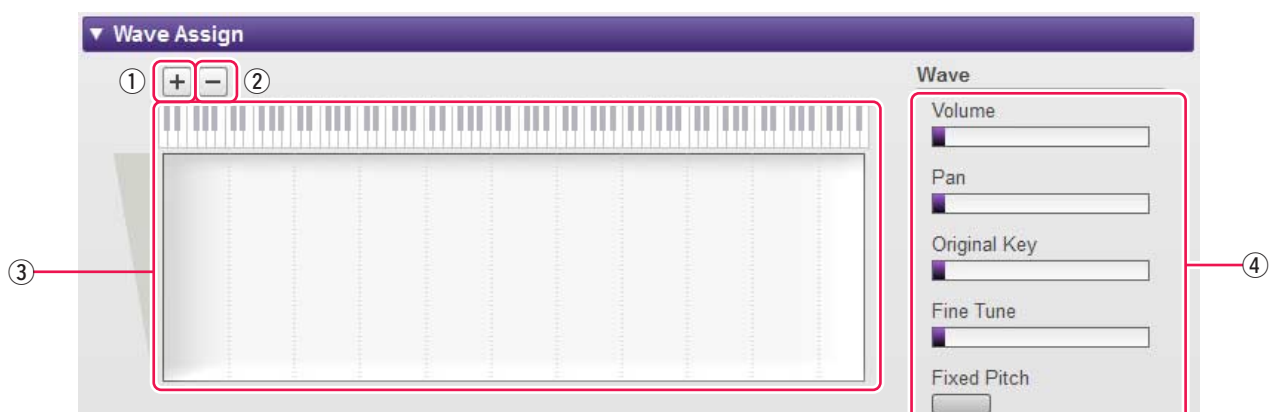


- 1.** Open the *Element* window by clicking the button for the Element to which you wish to assign Waves.
- 2.** Assign Waves to that Element.

2-1. Click the *Add Wave* button ① in the *Wave Assign* menu.

NOTE

You will be unable to use the *Wave Assign* menu if an Element from a preset Voice is selected.



- 2-2.** When the file selection dialog is displayed, select the Wave file(s) you wish to add. When a file is added in this way, a rectangle showing the Wave's playing zone will be displayed in the *Wave Mapping* area ③. To delete a Wave file, click its playing zone and then the *Delete Wave* button ②. Double-clicking a playing zone opens a file selection dialog, allowing you to select a new Wave file to replace the current one.
- 2-3.** If necessary, drag the playing zone in the *Wave Mapping* area ③ to adjust the ranges of note numbers and velocities to which it will respond when the keyboard is played. Specifically, the range of note numbers is set by drag-

ging left and right; the range of velocities, up and down. You can drag a playing zone to move it as is, or you can move individual corners to resize it. You can also perform these tasks by pressing an arrow key (↑, ↓, ←, or →) or by pressing one of these keys with CTRL or Command held down.

If necessary, click the on-screen keyboard to play the corresponding note. The closer to the top you click, the greater the velocity value.

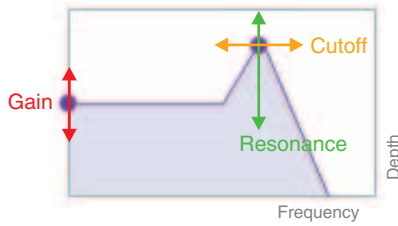
2-4. Make any additional settings for the selected Wave as required.

Volume	Sets the volume.
Pan	Sets the stereo panning position.
Original Key	Sets the root note. When this note is played on the keyboard, the Wave will be played at its original pitch.
Fine Tune	Finely adjusts the pitch.
Fixed Pitch	When this is set to on, all keys will play the Wave sound at the same pitch. When set to off, the pitch of the Wave sound changes according to the key played, based around the original pitch (set at Original Key above).

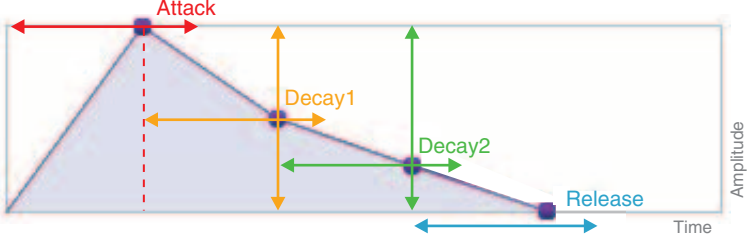
This completes the procedure for assigning Waves to an Element.

3. Configure the Element settings as required.

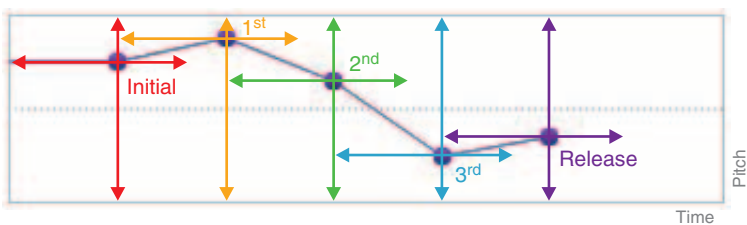
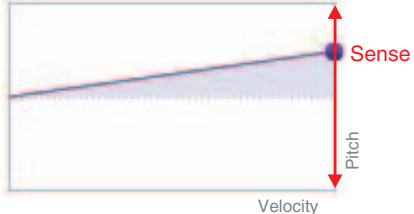
● **General**

Volume	Sets the volume.
Pan	Sets the stereo panning position.
Note Shift	Sets the pitch in semitone units.
Tuning	Finely adjusts the tuning.
Filter	<p>Sets the filter. (A filter allows frequencies in a certain band to pass through but attenuates all others; in this way, it can be used to shape the sound.) The filter type can be set using the drop-down menu above the graph, and the gain, cutoff, and resonance can be set by dragging the corresponding points inside the graph.</p>  <p>Gain: Sets the basic level at which frequencies pass through the filter.</p> <p>Cutoff: Sets the filter's cutoff frequency.</p> <p>Resonance: Sets the intensity of the filter's resonance.</p>
Key On Delay	Sets how long it takes for the sound to be produced after a key is played.

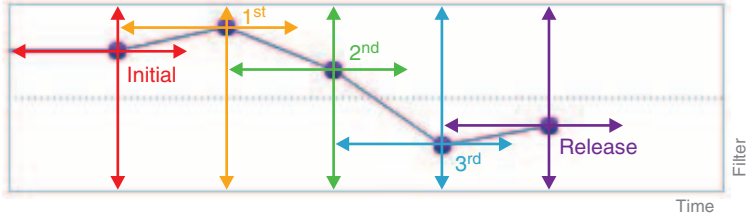
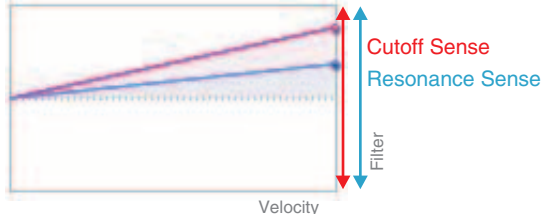
● Amplitude

Amplitude EG	<p>By dragging the <i>Attack</i>, <i>Decay1</i>, <i>Decay2</i>, and <i>Release</i> points within the graph, you can define how the amplitude will change over time between pressing a key and the sound fading away completely.</p>  <p><i>Release</i> represents the amount of time from <i>Decay2</i> (and normally indicates how long it takes after the key is released until the sound fades away completely); however, if the amplitude for <i>Decay2</i> is set to "0", it represents the duration from <i>Decay1</i>.</p>
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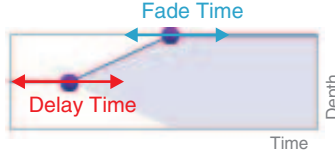
● Pitch

Pitch EG	<p>By dragging the <i>Initial</i>, <i>1st</i>, <i>2nd</i>, <i>3rd</i>, and <i>Release</i> points within the graph, you can define how the pitch will change over time between pressing a key and the sound fading away completely.</p> 
Pitch Touch Sense	<p>By dragging the point up and down within the graph, you can set the sensitivity of pitch to velocities.</p> 

● Filter

Filter EG	<p>By dragging the <i>Initial</i>, <i>1st</i>, <i>2nd</i>, <i>3rd</i>, and <i>Release</i> points within the graph, you can set how the cutoff frequency will change over time between pressing a key and the sound fading away completely.</p> 
Filter Touch Sense	<p>By dragging the <i>Cutoff Sense</i> and <i>Resonance Sense</i> points up and down within the graph, you can set the sensitivity of the filter's cutoff frequency and the resonance to velocities.</p> 

● LFO

Wave	Selects the LFO waveform.
Speed	Adjusts the speed (frequency) of LFO variation.
Time	<p>By dragging the <i>Delay Time</i> and <i>Fade Time</i> points left and right within the graph, you can set how the effect of the LFO changes over time.</p>  <p>Delay Time: Adjusts the delay between key-on and the beginning of the LFO effect.</p> <p>Fade Time: Adjusts the length of the LFO fade-in time, beginning after the Delay Time (above) and ending when the LFO reaches full amplitude.</p>
A. Mod Depth	Sets the depth of modulation applied when the LFO is used for amplitude modulation.
P. Mod Depth	Sets the depth of modulation applied when the LFO is used for pitch modulation.
F. Mod Depth	Sets the depth of modulation applied when the LFO is used for frequency modulation.
Key On Reset	When this is set to on, the LFO phase is reset with each note-on event.

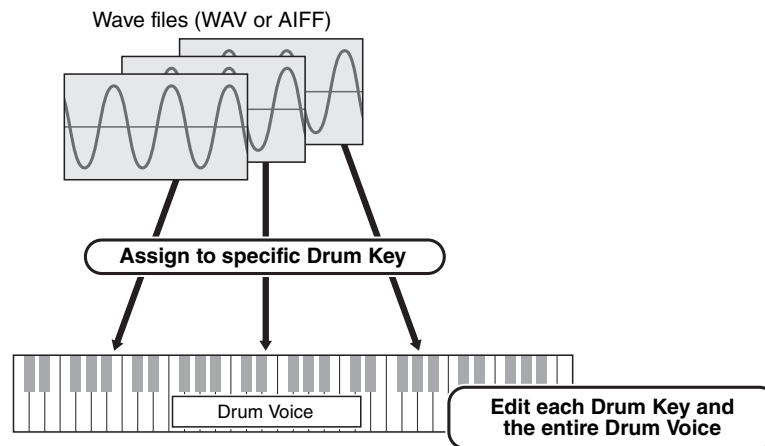
4. Repeat Step 1 through Step 3 to edit the other Elements.

Using the *Element Edit* button (page 13, ⑨) on the *Voice Editor* window, you can also copy the settings from an edited Element to another.

This completes the Normal Voice procedure for Step 6 on page 14. You should now proceed to Step 7.

Creating a Drum Voice

This section describes in detail the procedure for Step 6 on page 14 when you are creating an original Drum Voice. This involves assigning Wave files to each of the Drum Keys that make up the Voice. You can either start from an empty Drum Voice or modify an existing one by adding Waves and/or changing its settings.



1. Open the *Drum Key* window by clicking the Drum Key to which you wish to assign Waves.

2. Assign Waves to that Drum Key.

2-1. Click the *Add Wave* button ① in the *Wave Assign* menu.

NOTE

You will be unable to use the *Wave Assign* menu if a Drum Key from a preset Voice is selected.



2-2. When the file selection dialog is displayed, select the Wave file(s) you wish to add. When a file is added in this way, a rectangle showing the Wave's playing zone will be displayed in the *Wave Mapping* area ③. To delete a Wave file, click its playing zone and then the *Delete Wave* button ②. Double-clicking a playing zone opens a file selection dialog, allowing you to select a new Wave file to replace the current one.

2-3. If necessary, drag the playing zone in the *Wave Mapping* area ③ up and down to adjust the range of velocities to which it will respond when the keyboard is played. You can drag a playing zone to move it as is, or you can move the edges to resize it. You can also perform these tasks by pressing an arrow key (↑ or ↓) or by pressing one of these keys with CTRL or Command held down.

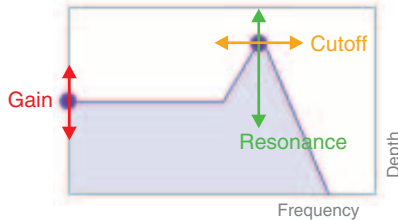
2-4. Make any additional settings for the selected Wave as required.

Volume	Sets the volume.
Pan	Sets the stereo panning position.
Coarse Tune	Sets the key in semitone units.
Fine Tune	Finely adjusts the pitch.

This completes the procedure for assigning Waves to a Drum Key.

3. Configure the Drum Key settings as required.

● **General**

Volume	Sets the volume.
Pan	Sets the stereo panning position.
Reverb Send	Sets the depth of the Drum Key's reverb effect (i.e., how much is applied).
Coarse Tune	Sets the key in semitone units.
Tuning	Finely adjusts the tuning.
Filter	<p>Sets the filter. (A filter allows frequencies in a certain band to pass through but attenuates all others; in this way, it can be used to shape the sound.) The filter type can be set using the drop-down menu above the graph, and the gain, cutoff, and resonance can be set by dragging the corresponding points inside the graph.</p>  <p>Gain: Sets the basic level at which frequencies pass through the filter.</p> <p>Cutoff: Sets the filter's cutoff frequency.</p> <p>Resonance: Sets the intensity of the filter's resonance.</p>
Receive Note Off	Sets whether or not the Drum Key will respond to Note Off messages. If set to "On", these messages will be received.
Alternate Group	Used to prevent the simultaneous playback of Drum Voices that do not sound natural together. For example, it would not normally be possible for hi-hat open and hi-hat close sounds to be produced at the same time, so they should be added to the same Alternate Group. The number of available groups is 127. This parameter should be set to "Off" for Drum Voices that can be played together with all others.

The following parameters are set in the same way as for Normal Voices.

● **Amplitude (page 19)**

● **Pitch (page 19)**

* *Pitch Touch Sense* is not available for Drum Voices.

● **Filter (page 20)**

● **LFO (page 20)**

4. Repeat Step 1 through Step 3 to edit the other Drum Keys.

Using the *Drum Key Edit* button (page 13, ⑨) on the *Voice Editor* window, you can also copy the settings from an edited Drum Key to another.

This completes the Drum Voice procedure for Step 6 on page 14. You should now proceed to Step 7.