

# KORG EP-1

KORG COLLECTION

# Owner's Manual



# KORG

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# Introduction

Thank you for purchasing Korg's EP-1 software synthesizer. To help you get the most out of your new instrument, please read this manual carefully.

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## About the Korg Collection EP-1

### **New technology, classic sound**

The EP-1 provides incredible recreations of seven classic tine and reed electric pianos, along with modeled vintage effects. Based on Korg's Multi-Dimensional Synthesis (MDS), the EP-1 delivers natural real-time expression without the limitations of ordinary sample playback. For instance, you'll appreciate the natural decay and astonishingly smooth gradation of dynamics from pp to ff, without tell-tale split points - just like the real instruments. Real-time control over noise elements, including mechanical key-off noises controlled by release velocity, gives your performances even greater realism and detail.

This technology was first presented in 2011 as one of the 9 engines in Kronos. Since then, Nautilus has added one new tine model with a series of updates. This plug-in version features an engine based on the latest EP-1 sound engine.

Multi-Dimensional Synthesis (MDS) is Korg's proprietary sound engine system. In developing EP-1, we first meticulously sampled the tonal changes produced by electric pianos across a wide range of keystroke strengths, selecting the finest individual electric pianos that offer excellent playability as instruments. By separating the pitch components and noise components such as hammer and key release and re-synthesizing them under separate control, we were able to recreate all the tonal changes of electric pianos. As a result, we achieved a sound engine system that reacts extremely naturally to player control, with sound editing performance, touch sensitivity, and temporal changes in sound that could not be expressed with sample playback methods.

The smooth tonal changes from soft to intense touch are naturally free of the noticeable boundaries typical of velocity switching. The temporal changes like decay and release also achieve a natural feeling different from those produced by envelope generators.

### **MIDI control**

There are two different mechanisms for MIDI control. The Mod Matrix provides 30 slots for modulating parameters from MIDI sources, while the MIDI Map lets you directly move knobs and switches from your favorite MIDI controller for programming and automation.

### **Effects**

The EP-1 offers three insert effects and a dedicated reverb slot. There are 31 effects types to choose from, including everything from vintage pedals, guitar amps, and tape delay to modern reverse delays and shimmer reverb.

### **Smooth Sound Transitions**

Smooth Sound Transitions let previously-played voices and effects ring out naturally when you change sounds.

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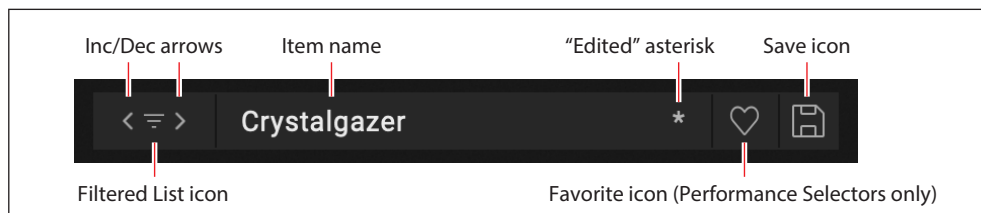
## User Interface Elements

### **Selectors**

EP-1 keeps track of sounds using a database. This includes Performances, Effects Presets, and Set Lists. In the UI, Performances and Effects Presets appear as Selectors:

## Introduction

### Selector



This shows the currently selected item. Use the < and > arrows to step through them one by one, or click on the name to bring up a browser window (see “Sound Browser” on page 7). An asterisk “\*” to the right of the name shows that the item has been edited from its saved version.

**Important:** the arrows step through the list of items according to the Sound Browser window’s sort order, and filtered by the window’s Categories, Collections, and search text. Each individual selector remembers these settings for as long as EP-1 is open and unless a new parent sound is selected (for example, the Performance is the parent sound of IFX 2).

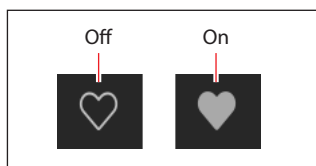
If some items are hidden due to the selected Categories, Collections, and search text, the Filtered List icon appears between the < and > arrows. To clear the filters and show all items in the list, click the Filtered List icon. Alternatively, open the Sound Browser and adjust the filters as desired. For more information, see “Sound Browser” on page 7.

Press the Save icon to bring up the Save dialog.

Right-click/control-click (macOS) on the name to bring up a contextual menu. For most items, this includes options for saving and renaming.

For Performances only, the Selector includes the Favorite indicator. This lets you quickly mark Performances as favorites. You can then find them later via the “Favorite” Category. Other data types can also be marked as favorites from the Sound Browser and Librarian, but there wasn’t room to include the icon in the smaller Selectors.

*Favorite icon (Performance Selectors only)*



## Knobs and sliders

To edit knob values, drag vertically. To edit slider values, drag in the direction of the slider.

Hold Option/Alt while dragging to edit in fine increments.

Most settings can also be edited by hovering the cursor over the control, and then using the mouse wheel or dragging on the trackpad. The exception is when the controls are in a scrolling list, such as the Mod Matrix or MIDI Map. In these lists, the mouse wheel and trackpad drag are used for scrolling, and so they are disabled for editing (to avoid unintended changes).

Double-click knobs and sliders to set them to default values.

---

## Conventions in this manual

In this manual, the following text styles indicate:

- **Parameter Names** (silkscreen text is simply written in CAPITAL LETTERS)
- *Parameter Values*

# Getting Started

## Installation and updates

EP-1 uses the Korg Software Pass application for installation and updates. Optionally, the software can check for updates automatically; see “Check for Updates” on page 12.

Your software license is registered to your Korg ID. You can download the Korg Software Pass application and manage your Korg ID at <https://id.korg.com>.

### Where are sounds stored?

The sound database is stored in a dedicated folder structure. This can be created anywhere during the installation process, but as defaults we recommend:

- macOS: /Users/Shared/KORG/EP-1/System
- Windows: \Users\Public\Documents\KORG\EP-1\System

## Play page layout



### 1: Performance Select

This shows the currently selected Performance. Use the < and > arrows to step through Performances one by one, or click on the name to bring up a browser window (see “Sound Browser” on page 7). Note that the sounds available via the arrows may be filtered by settings made in the Sound Browser, such as selected Categories or Collections. Right-click/control-click (macOS) on the name to bring up a contextual menu for saving and renaming. For more information, see “Selectors” on page 1.

### 2: Save

Click on the disk icon to bring up the Save dialog.

### 3: PLAY/LIBRARIAN

The buttons in the top of the main window select whether you're playing and editing sounds or working with the Librarian. For the most part, you can simply switch between these pages without thinking about it. It's important to note, however, that some menu commands are available only in Librarian mode, and that undo is handled separately for the Librarian.

#### Menu commands

Menu commands for file operations, such as importing, backing up, and restoring, are available only when the Librarian is active.

#### Undo/Redo

Undo/redo history is maintained separately for the Librarian and Play pages. The names of the undo/redo commands change to reflect this; for example, "Editor Undo: Value Change: Volume" or "Librarian Undo: Update Name."

### 4: Sync/Clock & Tempo

#### Sync To Host

**[Off, On]**

This only appears when running as a plug-in, as opposed to a standalone application.

When **Sync To Host** is *On*, all tempo-related parameters will synchronize to the tempo from the DAW. When it is *Off*, they will use the tempo saved in the Performance.

#### Clock

This only appears when running as a standalone application, as opposed to a plug-in.

**[Internal, External, Auto]**

*Internal*: Tempo-related parameters will use the Performance's Tempo setting, described below. Use this when playing the EP-1 by itself.

*External*: The tempo will synchronize to incoming MIDI Clock messages. If MIDI clocks are not being received, tempo-related features will not function.

*Auto*: This combines the functionality of *Internal* and *External*, so that you don't have to manually switch between the two:

- If MIDI Clocks are not being received, the EP-1 uses its internal tempo.
- If MIDI Clocks are being received, they control the tempo. If the clocks stop for more than 500 ms, the EP-1 switches back to internal tempo.

#### Tempo

**[40.00...300.00]**

This is the stored tempo for the Performance. It applies only if **Sync To Host** is *Off* (when running as a plug-in) or when **Clock** is set to *Internal* or *Auto* (when running stand-alone); otherwise, it is grayed out.

### 5: Volume

This controls the overall volume of the Performance. Use the slider or numeric readout to make adjustments, and view the results on the meter behind the slider.

### 6: Main Menu

This menu gives access to the Settings window (including velocity and aftertouch curves, interface options, Scale and Set List selection, etc.), undo/redo, user interface size scaling, "About" information, and Librarian-specific commands. For details, see "Main Menu" on page 11.

### 7: EP-1 Keyboard

In this area, you will see the instrument that matches the currently selected model. You can play the keyboard with the mouse or trackpad controls, or change the parameters by controlling the knobs. All parameters that can be controlled in this area can also be controlled in the Main tab, described in the next section.

## 8: Parameter Info and MIDI Map

This shows the name and numeric or text value of the selected parameter. You can use this for precise numeric editing, if desired.

The area to the right shows the MIDI Map assignment for the selected parameter. The MIDI Map page (see page 26) shows all of the MIDI Map assignments at once.

## 9: Tab Contents

The content of the currently selected page is displayed. You can change the page to be displayed using the Page tabs. The MAIN page is a screen where you can see all the basic settings related to the sound of this plugin at a glance. In addition to the three insert effects and the representative parameters of the reverb, it displays all the parameters of the electric piano.

### Insert Effects



The Performance has three effects in series. These are compact interfaces for those effects. You can set the effects type, select presets for that effects type, turn the effect on and off, and edit the three or four most important parameters. Some effects have many more parameters available in the detailed views on the EFFECTS page. In addition to simply clicking on the EFFECTS tab at the Page tabs, you can jump there by double-clicking on the labels (e.g. “FX 1”) of the compact effects.

For more information, see “EFFECTS” on page 19.

### Reverb

The fourth effects slot works a bit differently. It is a send effect, with the send level set by the knob to the left. It also hosts only the reverb effects types (which are also available in FX 1-3, in case you want to use them in the middle of a serial effects chain). Finally, since it is set up in a send configuration, reverbs in this slot are always 100% wet, without a wet/dry knob. For more information, see “REVERB” on page 22.

### Reverb Send

Controls the amount of signal sent to the Reverb, in dB.

## 10: Page tabs

This is the tab area where you select the content to be displayed in the Tab Contents. In addition to the MAIN page, there are FX1-3 and Reverb pages, a Mod Matrix page for controlling parameters with MIDI messages, and a MIDI MAP page.

## 11: Online Help

When you hover over a parameter or control, this area shows a brief explanation of what it does or how it works. This area also shows the specific action that will be affected by Undo and Redo; see below.

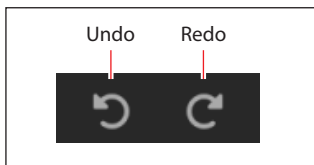
## 12: Undo/Redo

The EP-1 supports multiple levels of undo and redo for most actions, including importing data, deleting, renaming, editing Set Lists, editing parameters, and so on. For instance, you could import a bundle file containing a thousand objects, edit the knobs, rename all of your Performances, and finally add a new modulation routing to mod wheel, and then safely undo all of those actions in turn.

The counter-clockwise arrow (“go back”) is Undo, and the clockwise arrow (“go forward”) is Redo. Hover over the arrows, and the Online Help area shows the action which will be undone or redone.

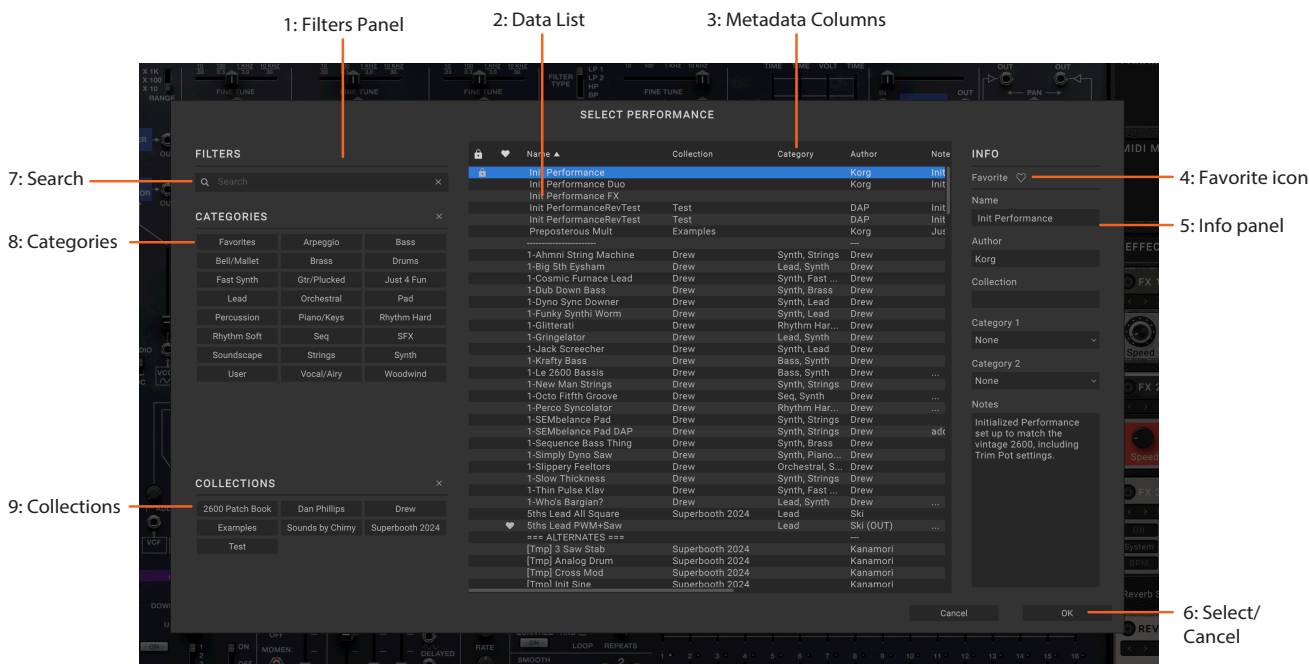


## Getting Started



Undo/redo history is maintained separately for the Librarian and Edit pages. The names of the undo/redo commands change to reflect this; for example, “Editor Undo: Value Change: Volume” or “Librarian Undo: Update Name.”

# Sound Browser



## Overview

The Sound Browser is used for selecting sound data, including Performances and Effects Presets. For editing metadata (such as name, Categories, etc.), use the Librarian instead.

### 1: Filters Panel

The selections here help you narrow down the number of items in the Data List. Set the Search, Categories, and/or Collections as desired. The Filters Panel can be resized by dragging its right edge, to show one, two, or three columns of Categories and Collections.

**Important:** The Search, Categories, and Collections settings continue to affect data selection, even after the Sound Browser is closed. Each individual selector remembers these settings for as long as EP-1 is open and unless a new parent sound is selected (for example, the Performance is the parent sound of the Effects Preset). For more information, see “Selectors” on page 1.

### 2: Data List

This shows the list of selectable sound data (Performances in the example above), as filtered by the Search, Category, and Collection settings in the Filters Panel. Click on an item in the list to select it for auditioning, or use the keyboard up/down arrows to browse through items one by one. Click in the list and type a few letters to select sounds by name. Double-click (or press OK) to select and close the browser.

### 3: Metadata columns

For each item, the list shows the Name, Collection, Category, Author, and Notes, as well as whether or not the item is locked factory data. You can drag the tops of the columns to re-arrange them, or to resize the columns.

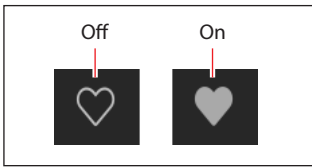
Click on a column heading to sort; click again to reverse the sort order. The triangle icon shows which column is selected for sorting, and the direction of the triangle (up or down) shows the sort order.

### 4: Favorite icon

Click on the heart to mark (or un-mark) an item as a Favorite. You can then find them later via the “Favorite” Category.

## Getting Started

*Favorite icon*



## 5: Info panel

This panel lets you view the metadata for the selected items, including the Name, Collection, Categories 1 & 2, Author, and Notes. The Inspector panel can be resized by dragging its left edge.

## 6: Select/Cancel

Press Select to confirm the selection and close the window, or Cancel to revert to the previous selection.

## 7: Search

Type into this field to filter the list by searching for text in any of the metadata fields. Click on the “X” to clear the field.

## 8: Categories

Categories let you filter by the type of sound, such as basses, leads, bells, etc. Each sound can be assigned to two Categories, and each data type has its own list of Categories. Click on a Category name to filter by that Category; click on the “X” to deselect all Categories.

When searching by Category, a sound will be shown if either of its Categories match the search criteria.

This section also includes “Favorites,” which shows all sounds which you’ve marked as favorites. You can use the Favorites selection in combination with any other Categories.

## 9: Collections

Collections let you filter sounds by group, such as factory sounds, expansion packs, or your own projects. Each sound can be assigned to one Collection. Click on a Collection name to filter by that Collection; click on the “X” to deselect all Collections.

## Saving Sounds

The Performance is the main way of selecting, editing, and saving sounds. While you can save Effects Presets, you don't have to do so: all data is contained in the Performance.

Similarly, when you load Effects Presets into a Performance, a new copy of the data is created in the Performance.

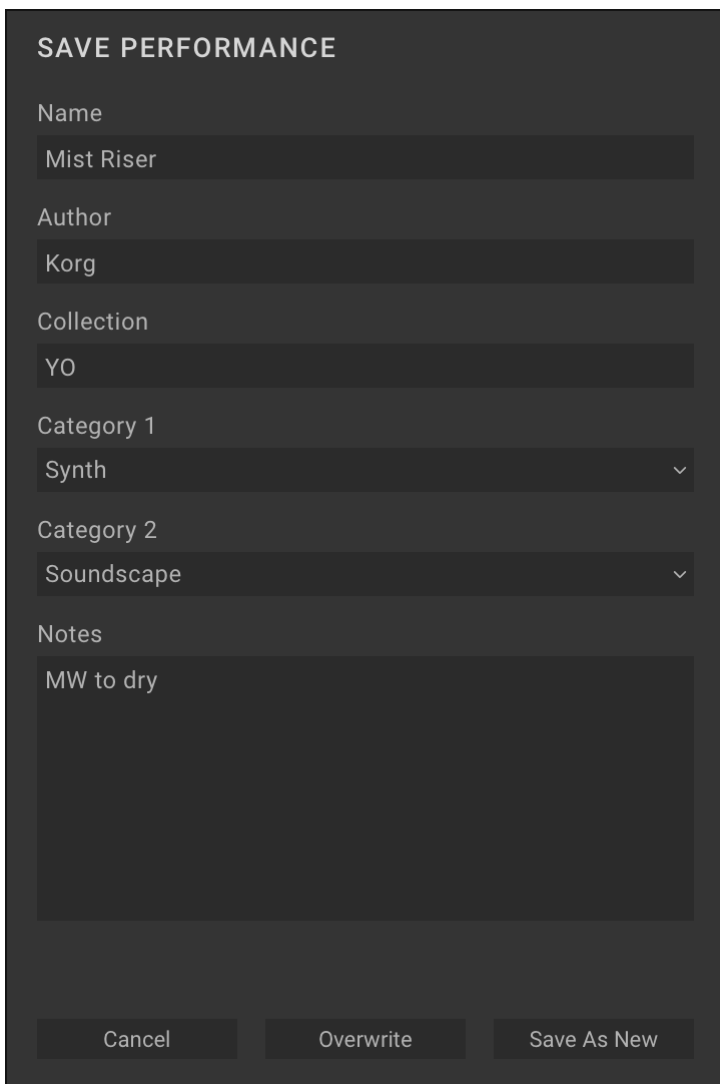
Any edits affect only the local copy inside the Performance, and not the original data. This lets you edit freely without worrying about affecting other sounds.

To save a sound or preset:

1. **Go to the Selector for the sound or preset. For more information, see “Selectors” on page 1.**
2. **Press the Save icon, or right-click/control-click (macOS) on the name to open the contextual menu and select the Save command.**

The Save dialog will appear:

*Save dialog*



**SAVE PERFORMANCE**

Name  
Mist Riser

Author  
Korg

Collection  
YO

Category 1  
Synth

Category 2  
Soundscape

Notes  
MW to dry

Cancel Overwrite Save As New

3. **Set the Name, Author, Collection, and Categories as desired.**

You can also edit all of this metadata later, using the Librarian window.

**⚠ Important:** changing the name does not automatically make a new copy of the sound! Always use **Save As New** when you want to make a copy.

4. **Save the sound, using either Overwrite or Save As New.**

To overwrite the existing sound, use **Overwrite**. To make a new copy and leave the existing sound unchanged, use **Save As New**. Factory sounds may be write-protected, in which case only “Save As New” is available.

### Renaming Effects Presets

As described above, Performances store all of the data for their Effects Presets, including the names. Because of this, you can rename any of these elements without saving them separately, as long as you then save the enclosing Performance. To do so:

Right-click/control-click (macOS) on the name and select the Rename... command in the contextual menu.

5. **Select Rename.**
6. **Enter the new name, and press OK to confirm.**

Names can be up to 24 characters long.

7. **Make sure to save the Performance once you're done.**

---

## Mod Matrix and MIDI Map

There are two different ways to control sliders, knobs, buttons, and switches from MIDI: the Mod Matrix, and MIDI Mapping. They work differently, and are designed for different purposes. You can assign either (or both!) Mod Matrix routings or MIDI Map entries by right-clicking on a slider, knob, or other control to bring up the contextual menu.

### Mod Matrix

The Mod Matrix is for modulating parameters—for example, controlling filter cutoff via velocity, or vibrato depth via the Mod Wheel. Mod Matrix routings modulate up or down (or sometimes both) from the parameter value. They do not edit the parameter value, and so sliders, knobs, etc. won't change in response. Mod Matrix settings are stored with the individual Performance.

### MIDI Map

The MIDI Map is for programming or entering automation from a MIDI controller. MIDI Map entries let you assign parameter values for both the maximum and minimum controller values (e.g. CC values of 0 and 127), and then interpolate between them. Control via the MIDI Map edits the parameter values, and moves the sliders, knobs, etc. accordingly. MIDI Map settings are stored globally, and shared by all Performances.

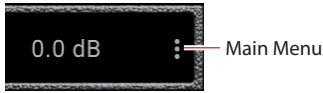
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## Automation

Automation from the plug-in host is supported for most, but not all, modulatable parameters. Most non-modulatable settings cannot be automated, including modulation routings themselves (sources and intensities), effects type selection, cable connections, and so on.

# Main Menu

This menu gives access to the Settings window (including velocity and aftertouch curves, interface options, Scale and Set List selection, etc.), undo/redo, user interface size scaling, “About” information, and Librarian-specific commands. Open the main menu by clicking on the three vertical dots at the top-right of the window:



## Settings

This opens the Settings dialog, which includes Scale and Set List selection, velocity and aftertouch curves, interface options, and more. See “Settings” on page 12.

## Audio/MIDI Settings (standalone only)

This includes audio output and MIDI input/output settings for the stand-alone application.

## Size

[50%... 150%]

This scales the entire user interface to be smaller or larger.

## Import...

This is available only when the Librarian is active. It imports one or more files from disk. For more information, see “Importing data” on page 30.

## Export Bundle of All User Sounds...

This is available only when the Librarian is active. It exports a bundle of all non-write-protected data, for backing up or transferring all of your custom sounds at once.

## Load MIDI Map...

You can save and load MIDI Map configurations—for instance, one for use with a KORG Keystage, and another for use with a wavestate. MIDI Map files are saved separately to disk (not within the EP-1 database) with the suffix “ep1midimap.” This menu command opens a standard file dialog to load a MIDI Map file.

## Save MIDI Map...

MIDI Map files are saved separately to disk (not within the EP-1 database) with the suffix “ep1midimap.” This menu command opens a standard file dialog to save the current MIDI Map to a file.

## Reset MIDI Map To Default

This menu command resets the MIDI Map to the factory defaults.

## Undo

Returns to the state prior to the previous operation. This applies to any edits made in the Editor windows - for instance, editing synthesis parameters, effects or creating modulation routings, and so on. In the Librarian, it applies to edits of metadata (such as names and categories), Set List edits, creation of new Set Lists, object duplication and deletion, and data Import. The system supports multiple undos, so that you can step backwards and forwards through a series of actions.

Undo/redo history is maintained separately for the Librarian and Edit modes. The names of the undo/redo commands change to reflect this; for example, “Editor Undo: Value Change: Volume” or “Librarian Undo: Update Name.”

## Redo

Returns to the state prior to executing the “Undo” command. The system supports multiple redos, so that you can step backwards and forwards through a series of actions.

## Open Online Manual

This opens the latest version of the PDF manual in your browser.

## Open Help Center

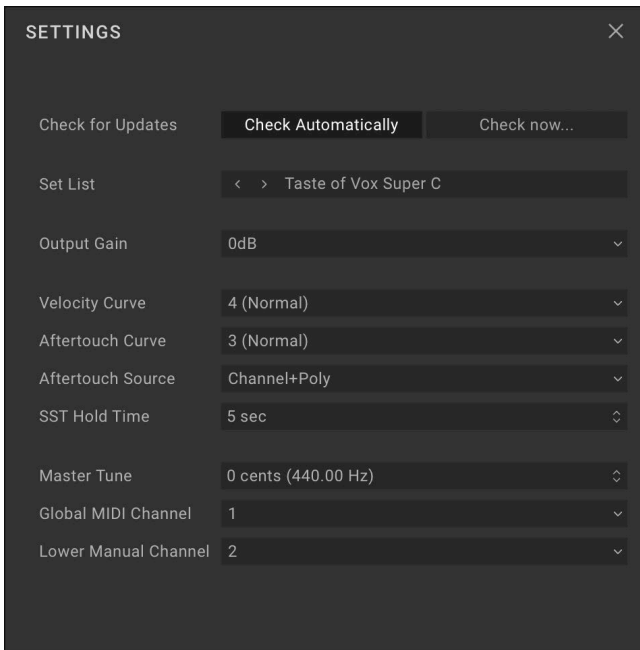
This opens the Korg app Help Center (<https://support.korguser.net>) in your browser.

## About

This shows the software version number and abbreviated credits. EP-1 is the result of a team effort, built through the talents of many more people than can be listed on-screen!

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## Settings



Open this dialog using the **Settings** selection in the Main Menu.

### Check for Updates

**[Check Automatically, Check now...]**

*Check Automatically:* When this is enabled, the software checks at startup to see if a new version is available. If so, a dialog appears with a download link.

*Check now...:* When this is pressed, the software checks for a new version immediately.

### Set List

**[List of Set Lists]**

This selects the active Set List. You can store many Set Lists, and change between them as you like. You can also set this by using the **Make Active** command in the Librarian's contextual menu.

### Output Gain

**[0 dB...+12 dB]**

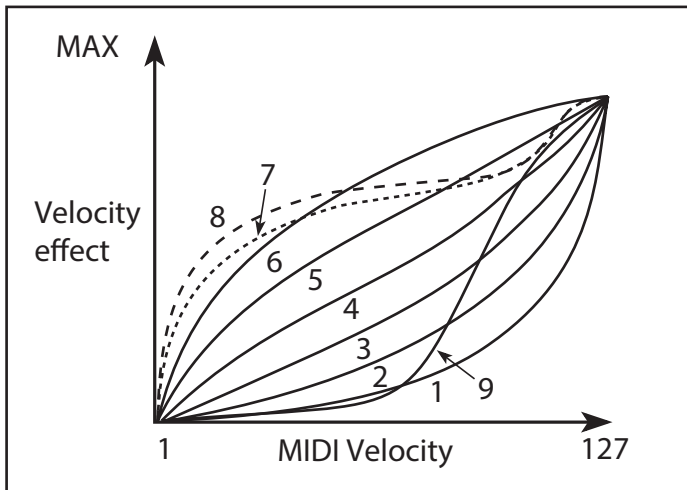
Increases the overall output of the plug-in by up to 12 dB. The default is 0 dB.

### Velocity Curve

**[1 (Heavy), 2, 3, 4 (Normal), 5, 6, 7, 8 (Light), 9 (Wide)]**

This controls how the volume and/or tone responds to variations in keyboard playing dynamics (velocity). Choose the curve that is most appropriate for your controller, playing strength and style.

Velocity curve



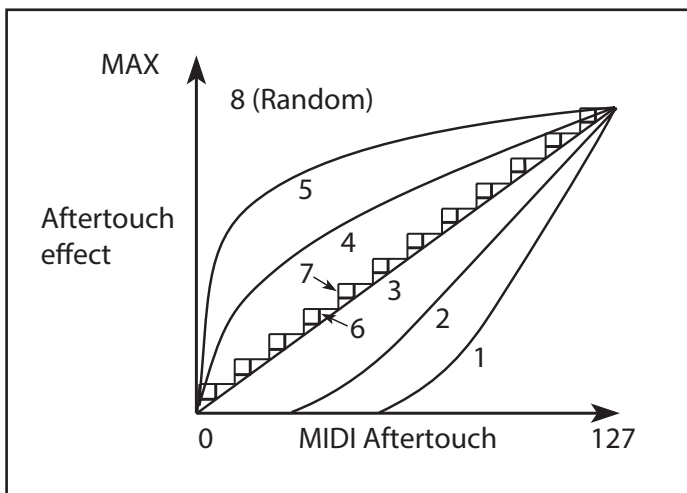
- 1 (Heavy), 2, 3: These are for heavy playing; most of the variation occurs in the upper velocity range.
- 4 (Normal): This is the default.
- 5, 6: These are for lighter playing.
- 7: This is for very light playing, at the expense of control in the middle of the range.
- 8 (Light): This curve produces the most uniform output, for when velocity sensitivity is not desired.
- 9 (Wide): This curve is designed for the heavier touch of weighted keyboards.

**Aftertouch Curve**

[1 (Heavy), 2, 3 (Normal), 4, 5 (Light), 6 (24-step), 7 (12-step), 8 (Random)]

This setting controls how the sounds respond to variations in pressure applied to the keyboard while playing a note (aftertouch). Choose the curve that is most appropriate for your controller, playing strength and style.

Aftertouch curve



- 1 (Heavy), 2: These are for heavy playing; most of the variation occurs with stronger pressure.
- 3 (Normal): This is the default.
- 4, 5 (Light): These produce changes even with light pressure.
- 6 (24-step), 7 (12-step): These curves result in 24 or 12 steps, respectively. If Aftertouch is modulating pitch with an intensity of one octave, 7 (12-step) lets you use Aftertouch to play a chromatic scale. (For similar results, you could also use a Mod Processor set to Quantize.)
- 8 (Random): This is a random curve. Use this to create special effects, or for applying unpredictable modulation.



## Aftertouch Source

**[Off, Channel, Poly, Channel+Poly]**

This lets you instantly re-configure the synth to take advantage of controllers with Poly Aftertouch.

*Off:* All aftertouch will be ignored.

*Channel:* The mod source “Aftertouch” receives Channel Aftertouch. Poly Aftertouch can still be used via the dedicated Poly AT mod source.


*Poly:* The mod source “Aftertouch” receives Poly Aftertouch. Channel Aftertouch is ignored.

*Channel+Poly:* The mod source “Aftertouch” receives both Channel and Poly Aftertouch. If both are sent simultaneously, the most recent value is used.

## Master Tune

**[-50 (427.47Hz)...+50 (452.89Hz)]**

This adjusts the overall tuning in one-cent units, over a range of  $\pm 50$  cents. (A cent is 1/100 of a semitone.) At the default of 0, A4 = 440 Hz.

 The value shown for A4's frequency assumes that the Scale is set to Equal Temperament. If a different Scale is selected, the actual frequency of A4 may be different.

## Global MIDI Channel

**[1...16]**

This is the main MIDI channel, used for notes, controllers, MIDI Mapping, and the Mod Matrix.

## Scale

**[List of scales]**

This selects a microtuning scale. The selection is saved globally for the standalone application, and separately for each plug-in instance in a DAW session. The default is Equal Temperament. For more information, see “Scales” on page 57.

## (Scale Key)

**[C...B]**

This sets the root key of the scale. Key applies only to repeating 12-note scales.

*Note:* Specific combinations of Scale and Key may skew the reference tuning pitch. For example, A4 might become 442 Hz, instead of 440 Hz. Use Master Tune to correct this, if necessary.

## SST Hold Time

**[0 ms...60 sec]**

This controls the duration of Smooth Sound Transitions. It sets how long reverbs, delays, and note releases continue to ring out after a new sound has been selected. The timer starts after all notes from the previous sound are no longer being held down, and the sustain pedal is released.

# EP-1 Keyboard



---

## Overview

In this area, you will see the instrument that matches the currently selected model. You can play the keyboard with the mouse or trackpad controls, or change the parameters by using the knobs. All parameters that can be controlled in this area can also be controlled in the Main tab, described in the next section.

## MAIN tab



## Model

### Model (Model Type)

**[Tine EP I Early, Tine EP I Late, Tine EP II, Tine EP V, Tine EP DMP, Reed EP 200, Reed EP 200A]**

This selects the electric piano model. There are two basic types, Tine and Reed, reflecting the two standard electric piano technologies. Without getting too specific, Reed pianos are “whirly” and Tine pianos may take you down familiar “roads.”

## Output

### Volume

**[0...10.0]**

This controls the volume level. The default is 8.0.

## Tone

Note that Reed models do not have these parameters.

### Bass

**[-10.0...+10.0]**

This boosts/cuts the low-frequency.

### Treble

**[-10.0...+10.0]**

This boosts/cuts the high-frequency.

## Vibrato

### On/Off

**[On, Off]**

This enables the Vibrato effect.

Note that Reed EP models do not have this parameter. The original instruments had only a knob, without a separate on/off switch. To turn off the vibrato completely on the Reed EP models, set the intensity 0.0.

## MAIN tab

### Speed

*[0...10.0]*

This controls the rate of the Vibrato effect. The default is 5.0.

### Intensity

*[0...10.0]*

This controls the depth of the Vibrato effect. The default is 5.0.

## Amp & Cabinet

### On/Off

*[On, Off]*

This enables the amp and cabinet modeling.

### Drive

*[0...10.0]*

This controls the amount of overdrive and distortion in the amp. At lower settings, the amp is very clean; as you increase the Drive, it gets dirtier and more distorted. The output level is compensated, so increasing Drive causes only a moderate increase in perceived volume.

---

## Oscillators and Others

### Harmonic Sound

#### Level

*[0...100]*

This controls the volume level of the main pitched part of the sound.

#### Decay

*[-100...+100]*

This controls the decay time, including both the timbre and the level.

#### Release

*[-100...+100]*

This controls the release time, including both the timbre and the level.

### Noise

#### Attack Noise Level

*[0...100]*

This controls the volume level of the attack noise.

#### Release Noise Level

*[0...100]*

This controls the volume level of the release noise. This level is also scaled by the volume of the harmonic sound at the time of release.

#### Bright (Attack Brightness)

*[-18.0...+0.0...+18.0]*

This controls the brightness of the attack noise.

## **MAIN tab**

### **Hammer (Hammer Width)**

*[-100...+100]*

This controls the width of the hammer.

### **Pitchbend**

#### **Up**

*[-60...0...+60]*

This sets the maximum amount of pitch bend up in semitones.

#### **Down**

*[-60...0...+60]*

This sets the maximum amount of pitch bend down in semitones.

### **Key Touch**

#### **Key Touch**

*[-10...+10]*

This controls the volume and tone in response to the incoming note-velocity. When you turn up this control, you can get louder and brighter sound (in a fortissimo style). On the other hand, when you turn it down, you will get with a wider range of dynamics from a strong fortissimo to a delicate pianissimo. This is suitable when intonation is important, such as solo-play and vocal accompaniment.

# EFFECTS

1: On/Off      2: Effect Type



3: Effect Preset

## Overview

Each Performance has three insert effects, and a dedicated reverb slot. They are arranged in the order shown in the tabs: FX1, FX2, FX 3 and REVERB.

These are the detailed interfaces for those effects. You can set the effects type, select presets for that effects type, turn the effect on and off, and edit all of the parameters. In addition to simply clicking on the EFFECTS tab at the top of the window, you can jump here by double-clicking on the background or labels of the compact effects.

For detailed information on effects parameters, please see the online help at the bottom of the window.

### 1. Effect On/Off

Click on the power button to the left of the effect number (FX 1/2/3) to turn effects on and off.

### 2. Effect Type

For each effect, you can select a **Type** (aka algorithm) and a **Preset** within that **Type**. See the full list of Effect Types below.

### 3. Effect Preset

These are the presets available for the selected **Type**.

## Compressor/EQ

### Red Compressor

Need to play chordal passages with smooth, even dynamics? Then, look no further: this mono compressor is modeled on a pedal whose clean sound made it hugely popular.

### Modern Compressor

This is a stereo compressor with a modern sound.

### Parametric EQ

This is a stereo EQ with a single adjustable parametric band. Presets may include additional EQ.

## Guitar

### Guitar Amp

This mono effect models a selection of guitar amps and speaker cabinets, for everything from subtle saturation to roaring distortion.

## Vintage Screamer

This is a true stereo version of a classic green overdrive pedal.

## Vox Wah

This mono effect is modeled on the unique “throaty” tones of two legendary VOX wah pedals: the V847 and the V848 Clyde McCoy model.

---

## Chorus/Flanger

### Modern Chorus

This stereo effect adds thickness and warmth to the sound by modulating the delay time of the input signal.

### Vintage Chorus

This models a mono chorus best-known for being built into a guitar amp. **Speed** and **Depth** provide a broader range of sounds than the original device.

### Harmonic Chorus

This stereo effect applies chorus only to higher frequencies—particularly useful for bass sounds. Some presets use feedback to turn the chorus into a flanger.

### EP Chorus

This is inspired by a rare chorus built into a famous modified tine piano.

### Polysix Ensemble

This models the mono-in, stereo-out ensemble effect built into the classic Korg Polysix synthesizer.

### Unison Ensemble

This unique stereo effect creates a rich, wide sound like multiple oscillators playing in unison. The DEPTH and RATE parameters simulate the detuning of the oscillators, and the VOICE parameter is used to simulate the number of oscillators.

### Black Chorus/Flanger

This is modeled after a classic mono-in, stereo-out chorus known for both crystal-clean tone and quiet operation, and especially well-suited to tine electric pianos.

### Vintage Flanger

A model of a truly classic mono analogue flanger. This amazing stomp-box’s bucket-brigade technology provides a sweeping, whooshing sound, perfect for chords.

---

## Phaser

### Black Phase

This mono phaser is inspired by a classic European pedal effect.

### Orange Phase V2

This is an improved model of a family of mono phaser pedals—in “90” and “100” versions—which are favorites on many recordings. It’s useful for adding sparkle, animating chord passages, and widening and fattening the sound.

### Small Phase

This models a classic mono phaser made in New York City during the 70s, with its warm, rich tone and liquid transparency.

### Modern Phaser

This is a modern, stereo phaser effect.

## Modulation

### CX-3 Rotary Speaker

This effect models a vintage rotary speaker, with detailed control over both timbre and behavior.

### CX-3 Vibrato/Chorus

This effect models the scanning chorus and vibrato circuitry of a vintage organ.

### Ring Modulator

This stereo effect creates a metallic sound by modulating the input via an LFO-controlled oscillator.

### Tremolo

This stereo effect modulates volume with an LFO, optionally controlled by an envelope follower.

---

## Delay

### Stereo/Cross Delay

This true-stereo delay provides up to 2,730 msec of delay time.

### Tape Echo

This effect models a tape echo with up to three playback heads, including tape saturation.

### Reverse Delay

This effect includes a reverse delay followed by additional left and right delays. Presets provide various feedback options.

### Auto Reverse

This phrase-based delay can be controlled either by audio or MIDI input. When controlled by audio, it waits until you've finished playing and then repeats the last portion of it, backwards in time.

---

## Reverb

### Overb

The Overb features a high-quality, diffusion-based reverb core, including randomization for richer and smoother reverb timbres.

### Early Reflections

This provides different early reflection patterns, useful for small ambiences, gated reverbs, and reverse effects.

### Spring

This reverb simulates the spring reverbs used in [guitar amps and organs](#).

### Iverb

A smooth, high-definition reverb with a natural echoing sound.

### Shimmer

An unusual reverb including pitch-shift and feedback. The pitch shift interval changes depending on the TYPE parameter, with sounds ranging from sparkling to mysterious effects.



# REVERB



Send Level

## Overview

The Reverb slot works a bit differently from the others. It is a send effect, with the send level set by the knob on the [MAIN](#) tab. It also hosts only the reverb effects types; see “Reverb” on page 21. Finally, since it is set up in a send configuration, reverbs in this slot are always 100% wet, without a wet/dry knob.

Other than that, everything works [identically to the other effects](#); see “EFFECTS” on page 19.

# MOD MATRIX

MAIN	FX 1	FX 2	FX 3	REVERB	MOD MATRIX	MIDI MAP
SOURCE	DESTINATION			INTENSITY	SOURCE 2	
Mod Wheel CC 1	▼	Vibrato Intensity	▼	8.0	◁	Off
Mod Wheel CC 1	▼	Vibrato Speed	▼	1.5	◁	Off
Mod Wheel CC 1	▼	FX1 Wet/Dry	▼	-30.70	◁	Off
Off	▼	Off	▼	n/a		Off
Off	▼	Off	▼	n/a		Off
Off	▼	Off	▼	n/a		Off
Off	▼	Off	▼	n/a		Off
Off	▼	Off	▼	n/a		Off
Off	▼	Off	▼	n/a		Off
Off	▼	Off	▼	n/a		Off

## Mod Matrix Overview

The Mod Matrix is for modulating parameters—for example, controlling filter cutoff via velocity, or vibrato depth via the Mod Wheel. Mod Matrix routings modulate up or down (or sometimes both) from the parameter value. They do not edit the parameter value, and so sliders, knobs, etc. won't change in response. Mod Matrix settings are stored with the individual Performance.

Most parameters can be modulated via the Mod Matrix. Each modulation routing includes a primary modulation source, an intensity, and a secondary modulation source; the three are multiplied together to create the modulation amount. A single destination, such as Expression, can have any number of incoming modulation routings, up to the Performance's total limit of 30 routings. For descriptions of the available modulation sources, see “Modulation Sources” on page 24.

## Creating and deleting modulation routings

### Adding modulation routings on the Main and Effects pages

You can quickly add a routing for any switch, drawbar, knob, or slider:

1. **Right-click/control-click (MacOS) on a slider, knob, or other control to bring up the contextual menu.**
2. **Select the “Add Mod Routing” command.**

Providing that the parameter is modulatable and that a Mod Matrix slot is available, the window will change to the Mod Matrix and a new routing will be created with the selected parameter as the Destination.

3. **Assign a modulation source from the menu. Alternatively, right-click on the Source, select MIDI Learn from the contextual menu, and generate a CC from your MIDI controller.**
4. **Set the Intensity as desired.**

The maximum Intensity is typically +/- the full range of the parameter, so that regardless of the programmed value, modulation can always reach the minimum or maximum values.

5. **Optionally, assign a second modulator (the Intensity Mod Source), whose value will multiply that of the main Source.**

For example, you could route Velocity to the III drawbar, with the effect of Velocity modulated by the Mod Wheel.

### Adding modulation routings on the Mod Matrix page

You can also manually add modulation routings in the Mod Matrix window. To do so:

1. **Click on the Destination for a Mod Matrix Slot.**

A menu appears with all of the available modulation destinations.

Choose the desired Destination.

Once the Destination is selected, follow steps 3 through 5 under “Adding modulation routings on the Main and Effects pages,” above.

### Deleting a modulation routing

To delete a modulation routing:

1. **In the Mod Matrix, set the modulation routing's Destination to Off.**

# Modulation Sources

## Controllers

### Off

This means that no modulation source is selected.

### Mod Wheel CC 1

This is the standard Mod Wheel (unipolar MIDI CC#1).

### Damper CC 64

This is the damper or sustain pedal (unipolar MIDI CC#64).

### Pitch Bend

This is the Pitch Bend wheel (MIDI Pitch Bend). You can use this as a modulator, in addition to its hard-wired control of pitch.


For the direct control of pitch, each Program has settings for Pitch Bend Range Up and Down. These are set by the numbers next to the Pitch Bend wheel in the Keyboard section of the Mod Source panel. Up and Down can be set independently, from -60 to +60 semitones.

### Pitch Bend+ and Pitch Bend-

These let through only positive or negative pitch bend movements, respectively, ignoring the other polarity.

### Velocity

This is the note-on velocity, representing how hard the note is played on the keyboard.

 **Important:** Only the Key Contacts parameters can be modulated separately for each note. However, Velocity is still available for modulation of most other parameters, such as drawbar levels; in those cases, the last-received Velocity affects all sounding notes.

### Exponential Velocity

This is MIDI note-on velocity through an exponential curve. Low velocities won't have very much effect, and the differences between lower velocities won't be very noticeable. On the other hand, high velocities produce increasingly greater effects, and the differences between higher velocities will be more pronounced.

### Release Velocity

This is the note-off velocity, representing how quickly the note is released from the keyboard.

### Gate and Gate+Damper

Gate is triggered by a new note after all notes have been released, such as at the beginning of a phrase. Gate+Damper is similar, except that it is triggered by a new note-on after all notes and the damper are released.

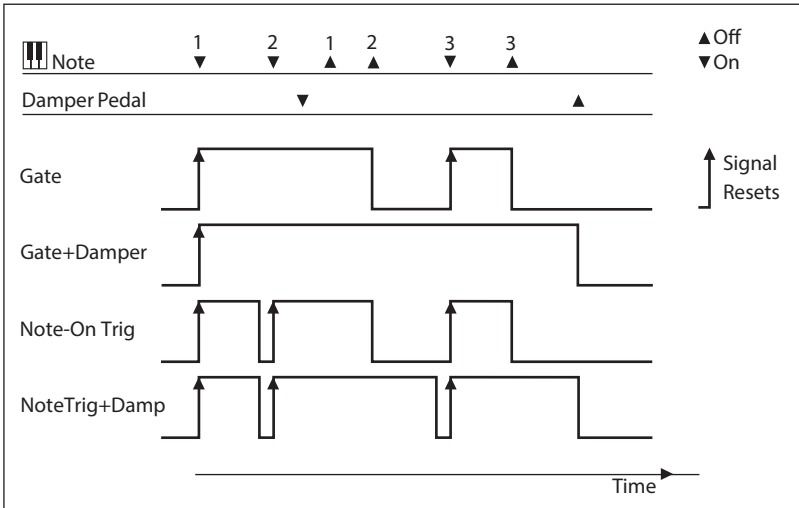
### Note-On Trig and NoteTrig+Damp

Note-On Trig is similar to Gate, but it triggers with every new note-on, even in the middle of a legato phrase.

NoteTrig+Damp includes the damper pedal in the equation, as shown in the diagram below.

## Modulation Sources

*Gate, Gate+Damper, Note-On Trig, and NoteTrig+Damp*



### Note Number

This provides simple key tracking. C4 is the center, with a value of 0. Below C4 is negative, to a minimum at MIDI note 0; above C4 is positive, to a maximum at MIDI note 127.

### Aftertouch and Poly Aftertouch

These are MIDI Channel Aftertouch and Poly Aftertouch, respectively, representing pressure on the keyboard after note-on. Aftertouch can be globally switched to respond to Channel Aftertouch, Poly Aftertouch, both, or neither; for details, see "Aftertouch Source" on page 14.

### CC +

This is a list of MIDI CCs 1 to 119, interpreted as unipolar signals. MIDI values 0-127 are zero to maximum modulation.

### CC +/-

This is a list of MIDI CCs 1 to 119, interpreted as bipolar signals. MIDI value 64 is 0; values below 64 produce negative modulation, and values above 64 produce positive modulation.

# MIDI Map

MAIN				FX 1				FX 2				FX 3				REVERB				MOD MATRIX				MIDI MAP			
NAME	CC#	MIN	MAX	NAME	CC#	MIN	MAX	NAME	CC#	MIN	MAX	NAME	CC#	MIN	MAX	NAME	CC#	MIN	MAX	NAME	CC#	MIN	MAX				
Model Type	77	Tine EP 1 Early	Reed EP 200A	Harmonic Sound Decay	75	-100	+100	Preamp Volume	7	0.0	10.0	Harmonic Sound Release	72	-100	+100	Noise Attack Level	71	0	100	Preamp Treble	107	-10.0	+10.0	Noise Release Level	31	0	100
Preamp Bass	108	-10.0	+10.0	Noise Attack Brightness	24	-18.0	+18.0	Preamp Vibrato On/Off	102	Off	On	Noise Hammer Width	18	-100	+100	Key Touch	79	-10	+10	Preamp Vibrato Intensity	20	0.0	10.0				
Preamp Vibrato Speed	83	0.0	10.0					Amp/Cabinet Enable	105	Off	On																
Amp/Cabinet Drive	93	0.0	10.0					Harmonic Sound Level	19	0	100																

## MIDI Map Overview

The MIDI Map is for programming or entering automation from a MIDI controller. MIDI Map entries let you assign parameter values for both the maximum and minimum controller values (e.g. CC values of 0 and 127), and then interpolate between them. Control via the MIDI Map edits the parameter values, and moves the sliders, knobs, etc. accordingly. MIDI Map settings are stored globally, and shared by all Performances.

## Creating and deleting MIDI Map assignments

### Adding a MIDI Map CC assignment

You can quickly add mappings directly from the EP-1 front panel, main panel or from any effects panel:

1. Right-click/control-click (MacOS) on a slider, knob, or other control to bring up the contextual menu.
  2. Select the “MIDI Map Learn” command, and generate a CC from your MIDI controller.
- Alternatively, select “Assign MIDI Map” and select the desired CC manually from the list.
3. Optionally, go to the MIDI Map page and set MIN and MAX values for the CC mapping.

MIN is the value corresponding to CC value 0; MAX is the value corresponding to CC value 127. To create an inverted response, set the MIN higher than the MAX. Remember that the MIDI Map is global; for sound-specific modulation, use the Mod Matrix instead.

### Only one assignment per MIDI CC

Only one assignment is allowed for each MIDI CC. If you assign a CC which was already assigned to a different parameter, the previous assignment will be changed to “None.” You can then edit the previous assignment as desired.

### Editing a MIDI Map CC assignment

Once created, assignments can be edited the same way as they were created:

1. Right-click/control-click (MacOS) on an entry in the MIDI Map to bring up the contextual menu.
2. Select the “MIDI Map Learn” command, and generate a CC from your MIDI controller.

Alternatively, select “Assign MIDI Map” and select the desired CC manually from the list.

### Deleting a MIDI Map CC assignment

To delete a modulation routing:

1. On the MIDI Map page, right-click/control-click (MacOS) on the assignment to bring up the contextual menu.

Alternatively, right-click on the knob, slider, button etc. on the Main or Effects pages.

2. Select “Delete CC Assign” from the menu.

## Saving and loading MIDI Map configurations

You can save and load MIDI Map configurations—for instance, one for use with a KORG Keystage, and another for use with a wavestate. MIDI Map files are saved separately to disk (not within the EP-1 database) with the suffix “ep1midimap.”

### Saving the MIDI Map configuration

To save the current MIDI Map configuration, including all assignments shown on the MIDI Map page:

1. **Select Save MIDI Map... from the main menu.**

A standard file dialog will appear.

2. **Give the file a descriptive name, and press Save to save the file.**

### Loading a MIDI Map configuration

 **Important:** This will overwrite the current MIDI Map, replacing all assignments shown on the MIDI Map page.

To save the current MIDI Map configuration, including all assignments shown on the MIDI Map page:

1. **Select Load MIDI Map... from the main menu.**

A standard file dialog will appear.

2. **Select the desired MIDI Map file, and press Open to load it.**
- 

## Resetting the MIDI Map to factory defaults

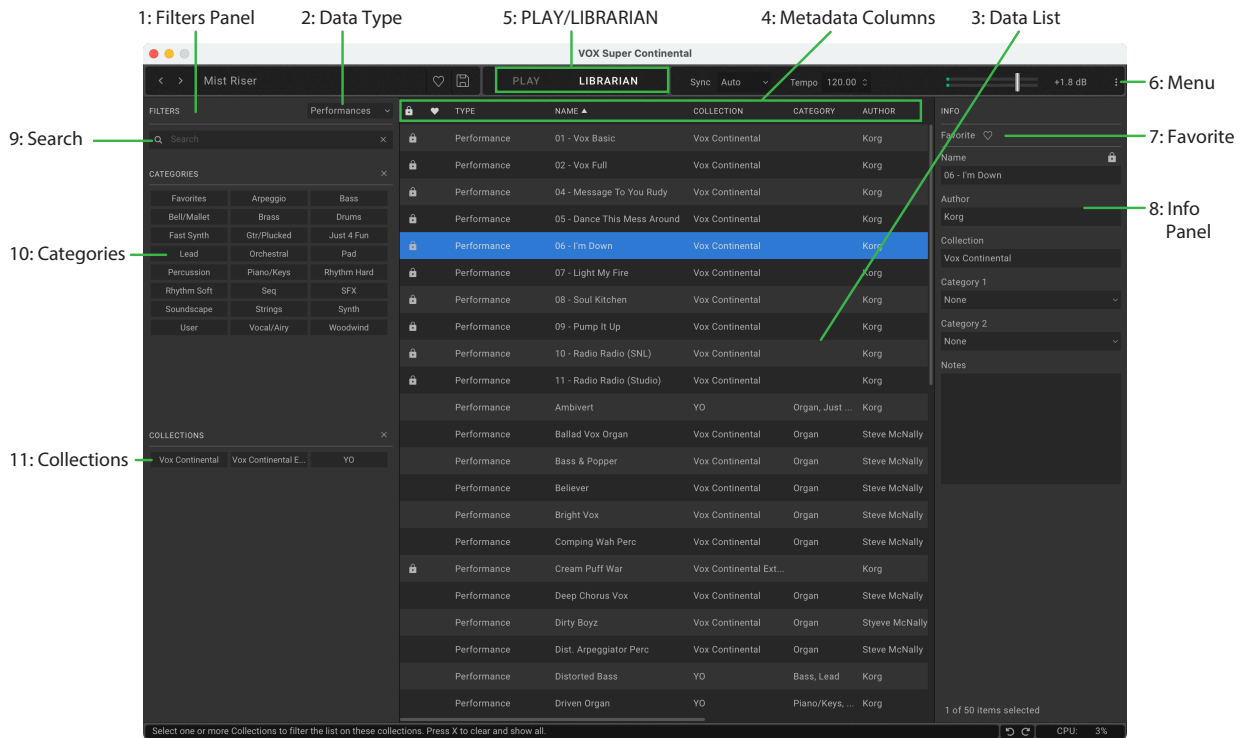
If you like, you can quickly reset the MIDI Map to the default assignments. To do so:

1. **Select “Reset MIDI Map To Default” from the main menu.**

A confirmation dialog will appear, warning that this will overwrite the current MIDI Map.

2. **Press OK to confirm, or Cancel to exit without making changes.**

# LIBRARIAN



## What's the Librarian for?

The Librarian page shows all of the contents of the EP-1. It's most useful for editing metadata for your own sounds, and for importing and exporting data. For selecting sounds, use the pop-up sound browser instead.

### 1: Filters Panel

The selections here help you narrow down the number of items in the Data List. Set the Data Type, Search, Categories, and/or Collections as desired. The Filters Panel can be resized by dragging its right edge, to show one, two, or three columns of Categories and Collections.

### 2: Data type

The Librarian can show Performances, Scales, Effects presets, and Set Lists. This menu chooses which type(s) of data are shown in the list. *All Data* shows all types of data at once.

### 3: Data List

This shows lists of all the data in the EP-1 database, as filtered by the Search, Data Type, Category, and Collection settings in the Filters Panel.

#### Selection

Click on an item in the list to select it for metadata editing or export. Double-clicking on Performances and Set Lists will also select them for playing.

Select multiple non-continuous items by holding down the command key on MacOS, or the Ctrl key in Windows. You can also select a range of items by using Shift.

#### Lock icons: factory data is write-protected

All of the data shipped from the factory is write-protected, including Performances, Effects presets, and so on. This is shown by the lock icons in the list and at the top of the Inspector panel. Factory sounds can't be deleted, and their original versions can't be changed, including metadata such as name, author etc. However, you can duplicate them and then edit however you'd like.

## 4: Metadata columns

For each item, the list shows the Type, Name, Collection, Category, Author, and Notes, as well as whether or not the item is locked factory data. You can drag the top of the columns to re-arrange them, or to resize the columns.

Click on a column heading to sort; click again to reverse the sort order. The triangle icon shows which column is selected for sorting, and the direction of the triangle (up or down) shows the sort order.

## 5: PLAY/LIBRARIAN

The buttons in the top of the main window select whether you're playing and editing sounds or working with the Librarian. For more information, see "3: PLAY/LIBRARIAN" on page 4.

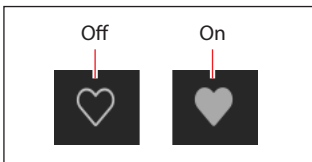
## 6: Menu

This menu gives access to the Settings window (including velocity and aftertouch curves, interface options, Scale and Set List selection, etc.), undo/redo, user interface size scaling, "About" information, and Librarian-specific commands.

## 7: Favorite icon

Click on the heart to mark (or un-mark) an item as a Favorite. You can then find them later via the "Favorite" Category. Unlike other metadata, you can change the Favorite setting even for locked factory data.

*Favorite icon*



## 8: Info Panel

This panel lets you view and edit the metadata for the selected items, including the Name, Collection, Categories 1 & 2, Author, and Notes. If more than one item is selected, and the items have different settings for a metadata field (such as the name or category), the field shows the note "<Multiple Values.>"

If the lock icon is shown, the selection includes factory data, and the fields cannot be edited. You can, however, copy text to paste elsewhere.

The Inspector panel can be resized by dragging its left edge.

## 9: Search

Type into this field to filter the list by searching for text in any of the metadata fields. Click on the "X" to clear the field.

## 10: Categories

Categories let you filter by the type of sound, such as basses, leads, bells, etc. Each sound can be assigned to two Categories, and each data type—Performances, Scales, etc.—has its own list of Categories. Click on a Category name to filter by that Category; click on the "X" to de-select all Categories.

When searching by Category, a sound will be shown if either of its Categories match the search criteria.

This section also includes "Favorites," which shows all sounds which you've marked as favorites. You can use the Favorites selection in combination with any other Categories.

## 11: Collections

Collections let you filter sounds by group, such as factory sounds, expansion packs, or your own projects. Each sound can be assigned to one Collection. Click on a Collection name to filter by that Collection; click on the "X" to de-select all Collections.



## Librarian contextual menu

Right-click or control-click (macOS) on an item to bring up the contextual menu. Menu commands are still available when multiple items are selected in the list.

### Export...

Exports the selected items to individual files on disk. For more information, see “Exporting data” on page 31.

### Export Bundle...

This command is available if multiple items are selected. It exports all the selected items to a single file on disk. Use this for distributing a set of sounds, for example.

### Duplicate

This duplicates the selected item.

### Delete

This removes the selected data. When used with Set List Slots, the Slots are changed to use the Init Performance.

### New Set List

This creates a new Set List, with all Slots set to the Init Performance. It is available from the Librarian when showing either All Data or Set Lists.

### Open Set List Editor

When a Set List is selected, this opens a Set List window for that Set List. If multiple Set Lists are selected, it opens windows for each of them.

### Open Scale Editor

When a scale is selected, this opens the Scale Editor for that scale. See “Scales” on page 33 .

### Make Active

When a Performance is selected in the list, this selects the item for playing. (Double-clicking has the same effect.)

When a Set List is selected in the list, this activates that Set List and changes the Set List parameter in the Settings dialog.

---

## Import and export

The **Import** and **Export** commands let you:

- Load new sounds
- Transfer data from one installation of EP-1 to another
- Back up and restore data

### Importing data

To import data into EP-1:

1. **In the menu, select the Import... command.**

A standard file open dialog will appear.

2. **Select the file(s) to import.**

You can select and import multiple files at once.

3. **Press the Open button.**

The data in the file(s) will be imported into the database. A message will appear to confirm the import, including information about which files have been added.

### Data conflicts

If some of the imported data appears to be different or updated versions of the internal data, a dialog will appear with the text:

“A different or changed item already exists in the database for <item name>”

## LIBRARIAN

The dialog offers several options:

*Cancel*: the item will not be imported.

*Overwrite*: the item will be imported, replacing the version in the EP-1 database.

*Make Unique*: the item will be imported, and its UUID (see “UUIDs” on page 31) will be changed so that it does not conflict with the version already in the EP-1.

*Apply to All*: the choice of Cancel, Overwrite, and Make Unique will be applied to all conflicting files in the Import.

If a Set List is imported, and some of its constituent Performances were made unique, then the Set List is edited to point to the new Performances.

## UUIDs

EP-1 uses a database to keep sounds organized. Internally, sounds are identified not by their names, but rather by a unique tag attached to the file, called a UUID (“Universally Unique Identifier”). This means that even if a sound’s name has been changed, the system still knows it’s the same sound.

When you write a sound, “Overwrite” keeps the UUID the same, and “Save As New” creates a new UUID.

When you import data, the UUIDs in the sounds to be imported are compared with those already in the database. If a sound has the same UUID, but its contents are different, you’ll see the dialog described under “Data conflicts” on page 30.

## Exporting data

When exporting two or more pieces of data, you can either save them as separate files or as a single Bundle file.

### Exporting as separate files

To export data from EP-1 as separate files on disk:

1. **In the Librarian, select the data that you’d like to export.**
2. **Right-click/control-click (macOS) on one of the items, to open the contextual menu.**
3. **In the menu, select the Export... command.**

A standard file open dialog will appear.

4. **Navigate to the location to save the files.**
5. **Press Open to select the current directory and save the files.**

### Exporting as a bundle

To export multiple pieces of data from EP-1 as a single bundle file:

1. **In the Librarian, select the data that you’d like to export.**
2. **Right-click/control-click (macOS) on one of the items, to open the contextual menu.**
3. **In the menu, select the Export Bundle... command.**
4. **Navigate to the location to save the bundle, and enter a name for the file.**
5. **Press Save to save the bundle file.**

### Exporting all user data

To export all of your custom data as a single bundle file, without saving the write-protected factory sounds:

1. **In the menu, select the Export Bundle of All User Sounds... command.**
2. **Navigate to the location to save the bundle, and enter a name for the file.**
3. **Press Save to save the bundle file.**

This exports a bundle of all non-write-protected data, for backing up or transferring all of your custom sounds at once.

## Importing and exporting Set Lists

Set Lists refer to up to 64 Performances. When you export a Set List, both the Set List and its referenced Performances are saved together. This makes it easy to import and export groups of sounds.

## File Types

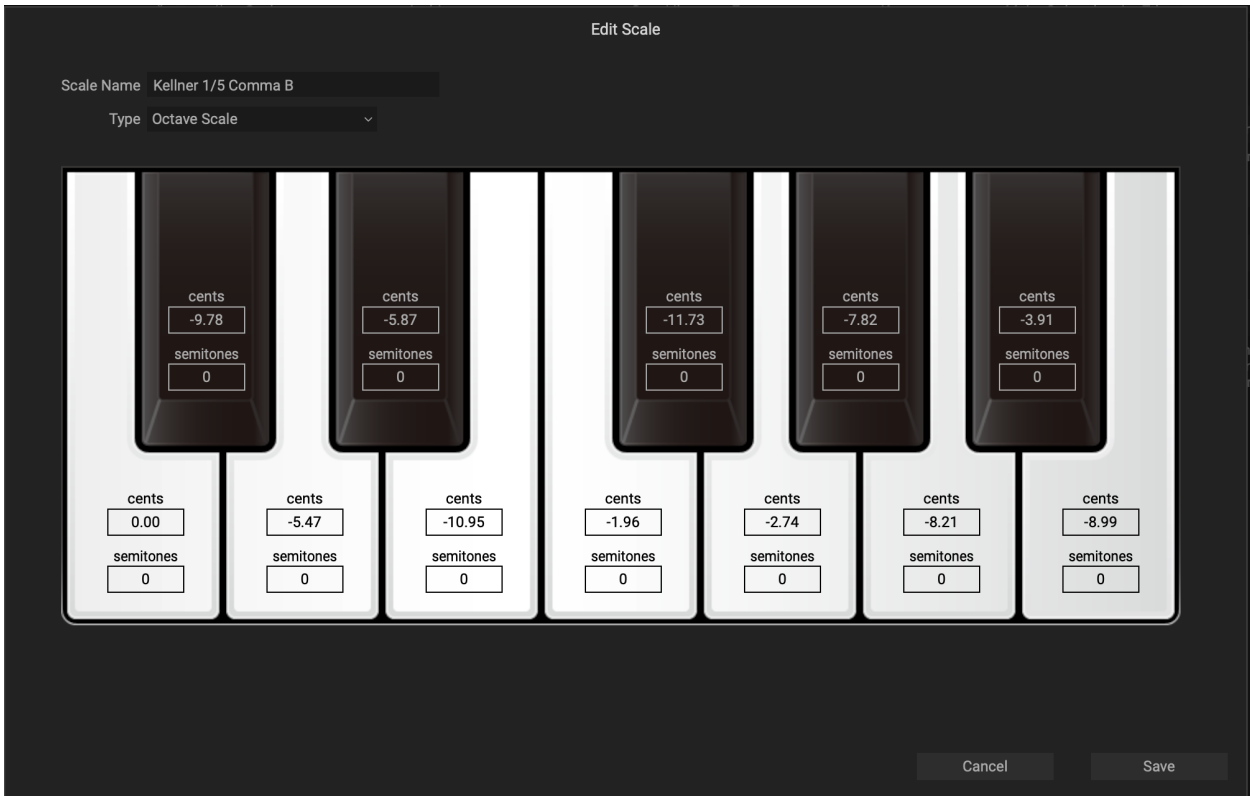
EP-1 uses the file types below.

Type	Extension	Contents
Performance	ep1perf	A single item of the specified type.
Effect	kceffect	

**LIBRARIAN**

<b>Type</b>	<b>Extension</b>	<b>Contents</b>
Set List	ep1setlist	One Set List and all of its referenced Performances
Bundle	ep1bundle	Multiple items of any type.
MIDI Map	ep1midimap	MIDI Map: only on disk, not shown in Librarian

# Scales



## Overview

Scales allow you to re-tune individual notes to play music from many different cultures, recreate historic temperaments, or experiment with new sonorities. The system supports both repeating 12-note scales and full 128-note tuning maps. 12-note Scales can be transposed using the separate Scale Key parameter (see page 14). Scales are saved with the “korgscale” extension, and can be shared with other KORG instruments including the wavestate and modwave.

## Editing Scales

To edit Scales:

1. Go to the Librarian window.
2. Set FILTERS (at the top of the left panel) to Scales.

The main section of the window will change to show the installed Scales.

3. Double-click on an unlocked Scale, or right-click on an unlocked Scale and select Open Scale Editor from the contextual menu.

⚠ Only unlocked user Scales can be edited. To create an editable version of a locked, factory scale, right-click on the Scale and select **Duplicate** from the contextual menu.

4. Edit the scale as desired; see “Scale settings,” below.

**Note:** even if the Scale is currently active as the Performance or Global Scale, edits only take effect after the Scale has been saved.

5. Press Save to save the edited Scale, or Cancel to exit and discard the changes.

⚠ **Important:** Save always overwrites the existing Scale data, even if you change the name. To create a new Scale, use the **Duplicate** command first, and then edit the duplicate Scale.

## Using Scales

Scales are selected in the Settings window. The selection is saved globally for the standalone application, and separately for each plug-in instance in a DAW session. For more information, see “Scale” on page 14.

## Scale settings

### Scale Name

[Text]

This lets you edit the name of the Scale.

 **Important:** Save always overwrites the existing Scale data, even if you change the name!

### Type

[*Octave Scale, Octave Scale, A=Master Tune, 128 Note Scale*]

There are three supported scale types:

*Octave Scale* is a standard 12-note scale which repeats every octave.

*Octave Scale, A=Master Tune* is similar to the above, except that the Scale is automatically adjusted so that the pitch for A matches the Master Tune setting (e.g., A=440Hz), regardless of the Scale Key.

*128 Note Scale* allows separate tuning of each MIDI note, for Scales which don't repeat on octave boundaries.

### Cents

[*-100...+100*]

Each note can be detuned by up to 100 cents, flat or sharp.

### Semitones

[*-127...+127*]

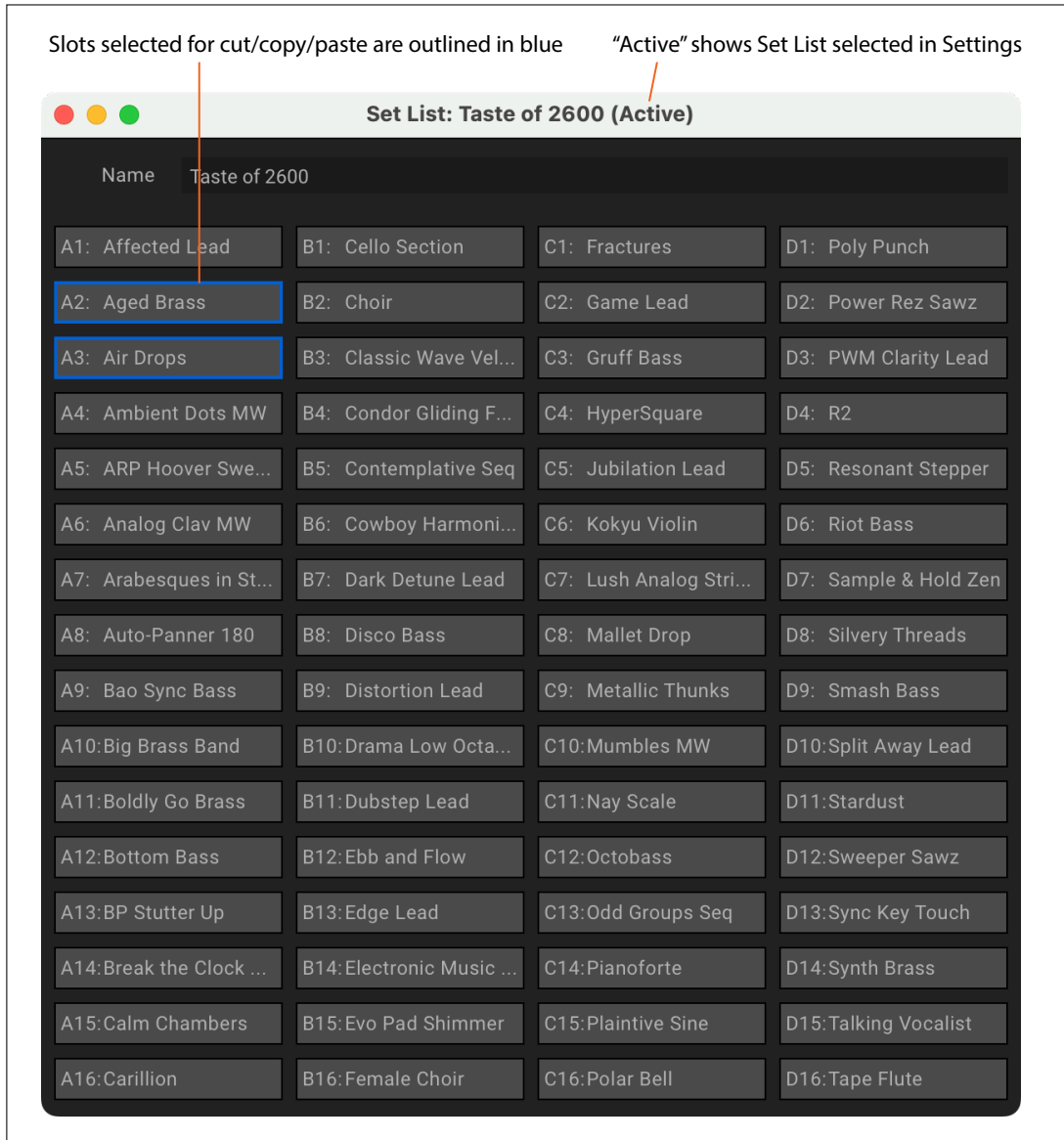
The **Semitones** parameter lets you detune a note by up to the entire MIDI range. As a simple example, to make the C key play a D pitch, set **Semitones** to +2. This is useful for scales which do not repeat on octave boundaries, or for repeated notes within an octave scale.

# Set Lists

## Set List window

This window shows all 64 Slots of a Set List. You can open multiple Set List windows at once. If one of the windows shows the active Set List (as configured in the Settings dialog), the note “(Active)” appears after its name in the title bar.

*Set List window*



The name of the Set List is shown both in the window’s title bar, and in an editable field at the top of the window. Selected Slots are shown with a blue outline. You can select multiple non-continuous Slots by holding down the command key on MacOS, or the Ctrl key in Windows. Alternatively, select a range of Slots by using Shift.

## Using Set Lists

Set Lists let you group and order Performances for gigs or projects. A Set List has 64 Slots, arranged into four banks A-D, corresponding to MIDI Program Change messages 1-64. Note that Set Lists don’t contain separate copies of their sounds; they just point to Performances stored in the database.

## Editing Set Lists

### Duplicating Set Lists

To duplicate a Set List:

1. In the Librarian, set the Data Type to Set List.
2. Select one or more Set Lists.
3. Right-click/Control-click on one of the selected Set Lists to bring up the contextual menu.
4. Select the Duplicate command.

The selected Set List(s) will be duplicated, with a number appended to their name.

### Adding Performances to a Set List

To add Performances to a Set List:

1. In the Librarian, set the Data Type to Set Lists or All Data, and double-click on a Set List.

This will open the Set List window.

2. In the Librarian, set the Data Type to Performances or All Data, and select one or more Performances.
3. Click and hold on a selected Performance, and drag it over a Slot in the Set List window.

The Performance will be pasted over the Slot. If you're dragging multiple Performances, they will be pasted over the Slot and immediately subsequent Slots, as necessary.

### Re-arranging Slots in a Set List, or copying from one Set List to another

You can re-arrange the Slots in a Set List, such as using cut, copy, paste, and insert, using either contextual menu commands (right-click, or control-click on MacOS) or drag-and-drop.

You can open multiple Set List windows at once. If one of the windows shows the active Set List, the note "(Active)" appears after its name in the title bar.

#### Using commands in the contextual menu

To re-arrange Slots using the contextual menu:

1. Select the Slots that you'd like to copy, cut, or delete.

You can select two or more non-continuous Slots using command-click on MacOS, or Ctrl-click in Windows. Alternatively, select a continuous range of Slots by using Shift-click.


2. Select the Cut, Cut and Shift Slots, Copy, or Delete command, as desired.

Bring up the contextual menu by right-clicking/control-clicking on one of the selected Slots. For details on how these work, especially Cut and Shift Slots, see "Cut and Shift Slots" on page 37.

If you delete a Slot, its contents are replaced by the Init Performance.

If using Paste or Insert Before, continue:

3. Select the destination Slot.

 **Important:** if multiple Slots are selected, only the lowest-numbered selection affects the Paste or Insert Before operation; other selections are ignored. For more information, see "Paste" on page 37 and "Insert Before" on page 37.

4. Select the Paste or Insert Before command, as desired.

#### Using drag-and-drop

To re-arrange Slots using drag-and-drop:

1. Select the Slots that you'd like to copy or cut.
2. Click and drag on top of a Slot to Paste, or to the space between Slots to Insert Before.

The effect on the original Slots depends on whether or not you hold the Option key (MacOS) or Alt key (Windows), and whether you're dragging within a single Set List or from one Set List to another, as shown in the table below.

Destination	Drag action	Edit action	Affect on Original Slots
Same Set List	On top of a Slot	Paste	Changed to Init Performance
	On top of a Slot, holding Option/Alt	Paste	Remain unchanged
	Between Slots	Insert Before	Removed, as with Cut and Shift Slots
	Between Slots, holding Option/Alt	Insert Before	Remain, shifted down with the rest of the Slots

## Set Lists

Destination	Drag action	Edit action	Affect on Original Slots
Different Set List	On top of a Slot	Paste	Original Slots always remain unchanged
	Between Slots	Insert Before	

Note that dragging to a different Set List always leaves the original Slots intact; option-drag is not required.

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## Set List contextual menu

Right-click or control-click (macOS) on a Slot to bring up the contextual menu.

### Delete

This removes the selected Slot, and changes it to use the Init Performance.

Note that factory data may not be deleted or changed. Also, there must always be at least one Set List; if there is only a single Set List in the system, it cannot be deleted.

### Cut

This cuts the selected Set List Slot(s), placing them on the clipboard, and changes them to use the Init Performance.

### Cut and Shift Slots


This cuts the selected Set List Slot(s), and shifts all other Slots to fill in the gap. The newly empty Slots at the end of the Set List will be filled by the Init Performance.

### Copy

This copies the selected Set List Slot(s), and places their data on the clipboard for use in Paste or Insert Before.

### Paste

This replaces the selected Set List Slot, and potentially subsequent Slots, with the data on the clipboard. If multiple Slots are selected, only the lowest-numbered selection affects the Paste operation; other selections are ignored.

 **Important:** if the clipboard contains multiple Slots, Paste will start with the first selected Slot and then replace as many Slots as necessary, regardless of how many other Slots are selected. For example, if there are four Slots on the clipboard, and you select Slots A3 and A7 and then Paste, Slots A3, A4, A5, and A6 will be replaced with the data from the clipboard.

### Insert Before

This inserts the data on the clipboard into the Set List before the selected Set List Slot, and shifts subsequent Slots to make room. Slots at the end of the Set List will be “pushed off the end” and removed.

As with Paste, if multiple Slots are selected, only the lowest-numbered selection affects the Insert Before operation; other selections are ignored.



# Troubleshooting

Please check the following points if you experience problems.

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## No sound

- Are the main Level or any other volume-related parameters set to 0?
  - Is your computer set to produce sound?
  - If you're using Windows, open the Control Panel and check "Sound and Audio Device Properties."
  - If you're using macOS, check System Settings/Sound and the Audio Devices section of Audio MIDI Setup (in Applications/Utilities).
  - If you're using your computer's sound card, is the sound card set up correctly?
  - If you've connected an audio device to your computer, is the audio device set up so that sound is being output from it?
  - If you're using the stand-alone version, have you made the appropriate settings in the **Audio/MIDI Settings** window? See "Audio/MIDI Settings (standalone only)" in the settings.
- 

## The sound has clicks, pops, or noise, or CPU load is heavy

You may experience clicks, pops, or noise if your computer's CPU is experiencing a heavy load.

If you are having this type of problem, try the following.

- If other applications are running, close them.
  - Reduce the maximum polyphony of the synthesizer you're using.
  - In the **Audio/MIDI Settings** window, increase the audio buffer size. Note that this will also increase the latency (the delay before you hear sound).
- 

## Sound is delayed

Latency is determined by "the number of samples" x "the number of buffers." If you are using a plug-in host, adjust the buffer size in the host application. If you are using the stand-alone version, go to the **Audio/MIDI Settings** window and set the **Audio Buffer Size** to the lowest setting that still allows stable operation.

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## Can't control the software synthesizer from a MIDI device connected to the computer

- Are your computer and MIDI device connected correctly?
- Is the connected MIDI device detected by your computer?
- If you're using Windows, open the Control Panel and check Sound and Audio Device Properties/Hardware.
- If you're using macOS, open the MIDI section of Audio MIDI Setup (in Applications/Utilities), and make sure that your MIDI device is detected.
- If you are using the stand-alone version, go to the **Audio/MIDI Settings** window and confirm that the desired MIDI controller is selected.

# Specifications

- Maximum polyphony: 256 (depending on the computer's CPU)
- Standalone operation or as a VST3/AU/AAX Native plug-in instrument
- Real-time MIDI control and automation is supported

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## Operating requirements

### MacOS

- OS: macOS 11 Big Sur or later (with latest updates)
- CPU: Apple M1 or better, or Intel Core i5 or better (for Intel, Core i7 or better recommended)
- Memory: 8 GB RAM or more (16 GB RAM or more recommended)
- Storage: 2 GB or more free space (SSD recommended)
- Internet connection
- Plug-in: AU, VST3, AAX (64-bit only)

### Windows

- OS: Windows 10 or later, 64-bit (with latest updates); 32-bit operating systems are not supported
- CPU: Intel Core i5 or better (Core i7 or better recommended)
- Memory: 8 GB RAM or more (16 GB RAM or more recommended)
- Storage: 2 GB or more free space (SSD recommended)
- Internet connection
- Plug-in: VST3, AAX (64-bit only)

\* Appearance and specifications of this product are subject to change without notice.

# Support and service

If you have questions about the product, please contact the Korg distributor for the country in which you purchased it.

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## Before you contact us

- Before you contact us, check whether this manual or the Korg app Help Center (<https://support.korguser.net>) has an answer for your question.
  - Please be aware that we cannot answer questions about products that are not made by Korg (such as third-party software, controllers, or audio devices), or general questions about creating songs or sounds.
- 

## Information to provide when contacting us

In order for us to help you, we'll need the following information:

- Your name
- The name and version of the product (you can find the version using the About command in the three-dot menu)
- Your computer hardware and operating system name and version
- Your question (provide as much detail as possible)

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