

Korg KROME Sample Map Editor



Version 4.7




User's Manual








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● Attention ●

KROMATIC is not affiliated with KORG, Inc. in any way, nor is KORG responsible for its contents or operation. This unofficial tool was created based on the results of our analysis of the M1 for Krome Sound Library which is distributed by KORG. Because there is a possibility that our interpretation of that Library is incorrect, the use of this software is at your own risk.

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ACKNOWLEDGMENTS

Special thanks to Bill Harts for English translation of documents, testing and suggestions.

1. INTRODUCTION

Thank you for downloading KROMATIC. This is an unofficial tool for creating samples for the Korg KROME music workstation.

KROME is equipped with a large capacity sample memory for its price range. It is a high-performance music workstation, but does not have a sampler function. However, once KORG distributed the M1 tone library it became clear that it is possible to load external samples into the instruments memory. Specifically, when you power-up the instrument it enters a state that automatically reads additional sample data from the SD card. In this way, the internal sounds can be extended.

Unfortunately, the specification of the file format of this additional sample data is private. By analyzing the file format of the additional sample data independently, we have confirmed that it is possible to add any audio to KROME. With the KROMATIC software, and audio that was recorded on your own, you will be able to assign existing voice data as KROME sounds.

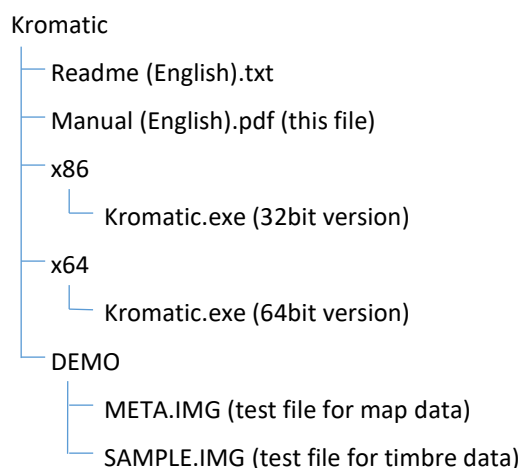
Using KROMATIC does not affect the usage or memory space of the original KROME sounds. You can expand the sound of KROME in KROMATIC, while continuing to enjoy music production with the original sounds.

2. PREREQUISITES AND REQUIREMENTS

KROMATIC uses the .NET Framework 4.6.2. Accordingly, before using, ensure you have installed .NET Framework 4.6.2 on your computer.

3. INSTALLING AND UNINSTALLING

There is no formal installation procedure. To deploy the program simply unzip the downloaded file to a convenient directory. It will generate a file structure as seen below. The ZIP file contains both a 32bit and 64bit version of KROMATIC so please use the version that matches your operating system.



This software does not use any registry entries.

To uninstall the program, simply delete the file structure.

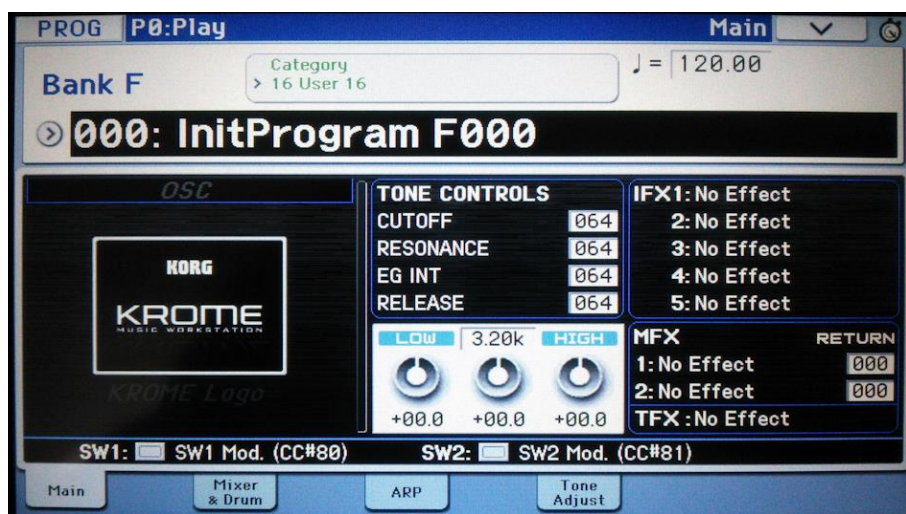
4. TESTING

The tone files META.IMG and SAMPLE.IMG (stored in the DEMO folder) are the tone files that have been generated using KROMATIC. To use them, please prepare an SD card for use in the KROME as described on Page 118 of the Krome Operating Guide. Once this is complete, use your computer to copy these two files to the root of the SD card. Note that it is necessary for the two files META.IMG and SAMPLE.IMG to be stored in the root directory of the SD card. They will not be loaded if you save them in a sub-folder.

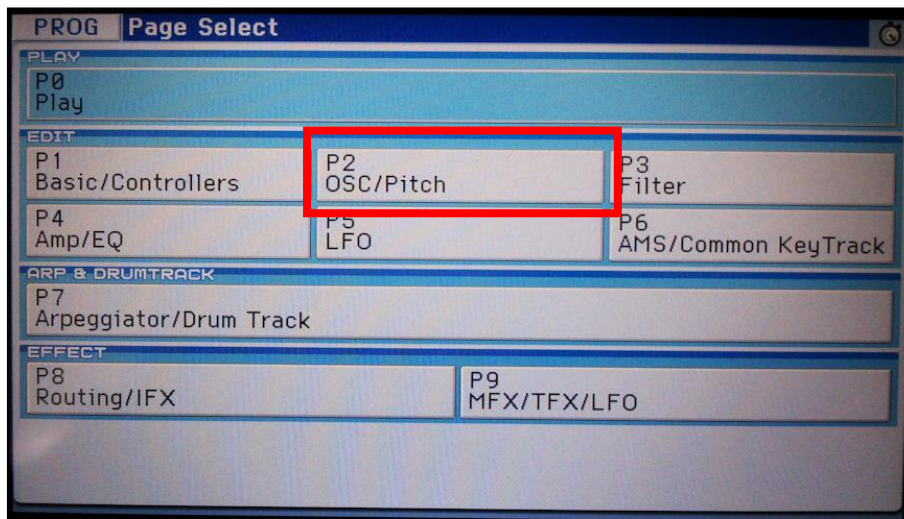
Turn OFF the power to the KROME keyboard, verify that the SD card is inserted, then turn ON the power. After the boot screen appears, a % completion bar is displayed as usual, followed by a screen of timbre data displayed as follows.



Let's check the added tone in Program mode for easy confirmation. Please select the initial program of InitProgram in Bank F.



Press the [PAGE] button to display the Page Select screen, and then select the P2 OSC/Pitch button from the menu that appears.

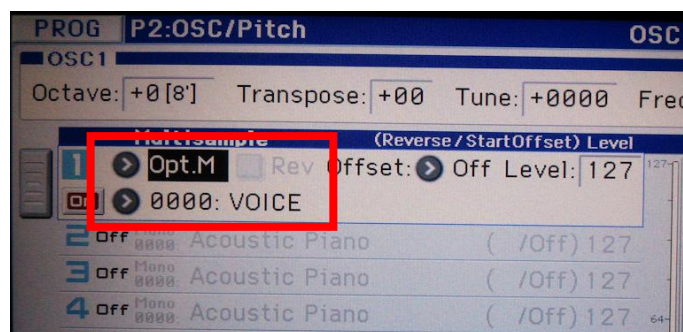


Please press the pop-up button on the Bank of Multisample of OSC1 Setup tab.



Ordinarily this menu will display Mono, Stereo, ML.M, and ML.St only, but now you should see that Opt.M and Opt.St have been added. Opt.M is the additional mono multi-sample bank, and Opt.St is the additional stereo multi-sample bank.

Select Opt.M, "0000: VOICE" to select the mono multi-sample.



When playing keys C4 to C5, you should be able to hear "Do re mi fa so ra shi do" in the author's voice.

To test the Stereo sample, first select the Bank "Opt.St". When you select the multi-sample "0001:STEREO-L" you should hear my voice saying "ah ~" (from the left channel) and "woh ~" (from the right channel). As seen above, by using KROMATIC, we are able to assign arbitrary audio data to KROME keys for performance.

Note: the sample data is loaded into volatile memory of KROME, and is lost when you turn off the power. It must be reloaded from the SD card on startup each time it is needed.

5. BASIC KNOWLEDGE

Here are the concepts necessary for understanding the creation and editing of additional KROME sounds in KROMATIC.

- Sample

We call each audio data file a Sample. KROMATIC will read a Sample from a .WAV file. The program also allows you to export the Sample to a .WAV file. When you assign the sound to a KROME drum kit, it will select a Sample.

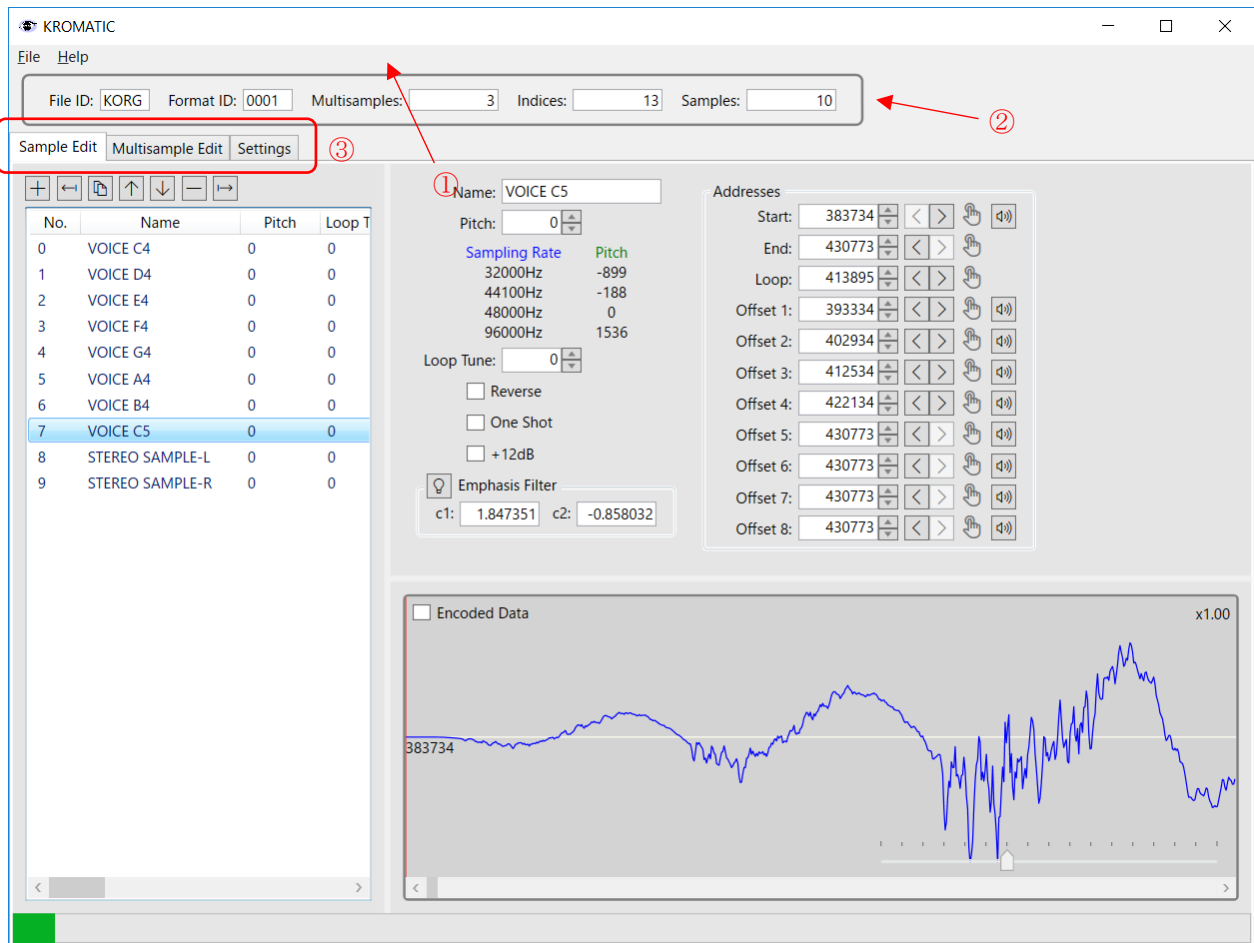
- Multi-Sample

Aggregated multiple Samples, that are each assigned to a keyboard voice range. When you assign a tone to a KROME oscillator, it will select a multi-sample.

- Index

Each zone in a multisample is called an Index. For example, on the 61-note keyboard, a multisample could be divided into five zones of one octave (12 keys) each, and each of these zones is referred to as an Index. You will assign a sample to each of these indexes.

6. KROMATIC SCREEN CONFIGURATION



The KROMATIC screen configuration is as shown above.

- ① Main menu
- ② Header view area
- ③ [Sample Edit] page, [Multisample Edit] page and [Settings] page

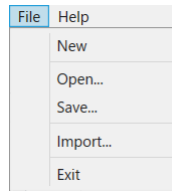
The following are explanations of these sections.

7. MAIN MENU

In the main menu, you can create a new file, read and existing file, and select the basic operations such as storage.

7.1 [FILE] MENU

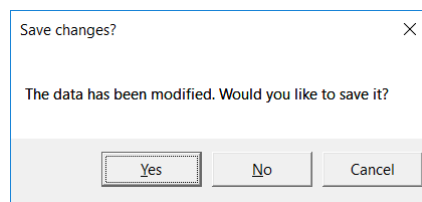
The [File] menu contains the following items.



7.1.1.1 [NEW]

This item discards any currently edited data, and then creates a starting point to build new data.

If you have changed the current data without saving it, you will see a confirmation message box like the following:

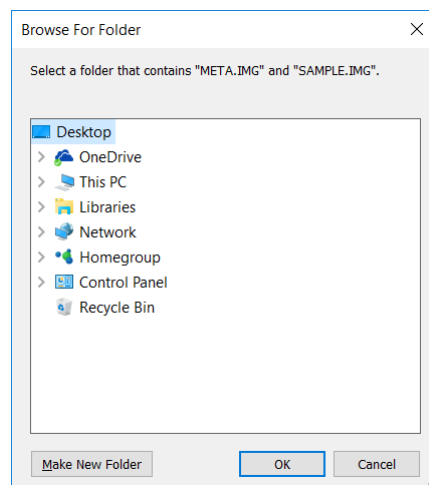


If you want to save, select [Yes], if you do not want to save select [No], or select [Cancel] if you want to end the New operation.

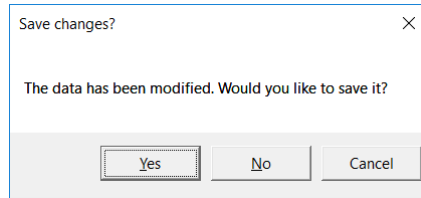
7.1.1.2 [OPEN]

This item reads an existing KROME additional tone color data file. The dialog box will prompt for the folder where the META.IMG and SAMPLE.IMG can be found.

Please select the folder.



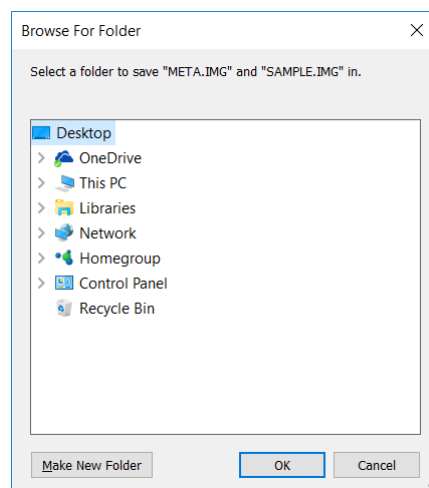
When you try to open a new file without saving the data currently being edited you will see a confirmation message box, such as the following.



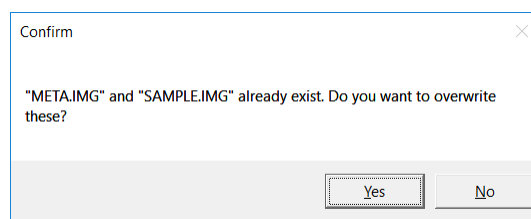
Select [Yes] you want to save, if you do not want to save select [No], if you want to stop the loading of files, please choose [Cancel].

7.1.3 [SAVE]

Saves the edited data as KROME additional tone color data file. The dialog box will allow you to specify the folder where you want to save the META.IMG and SAMPLE.IMG files.

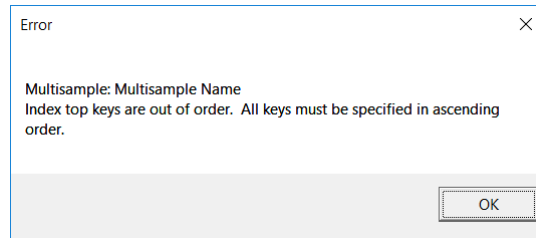


If there are already META.IMG and SAMPLE.IMG within the selected folder, you will see a confirmation message as follows:



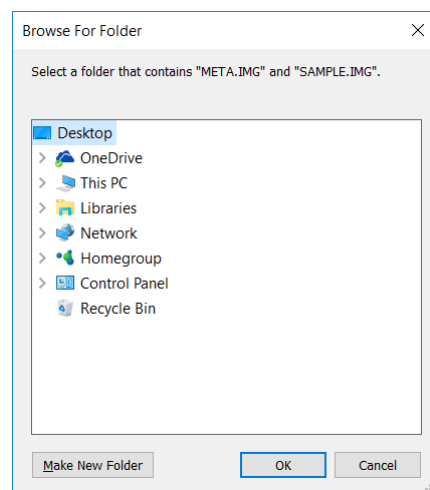
If okay to overwrite click [Yes], or if you decide not to save please click [No].

If some errors are found in Index settings of Multisamples, the following message will be shown. Modify the index settings correctly, and retry to save.

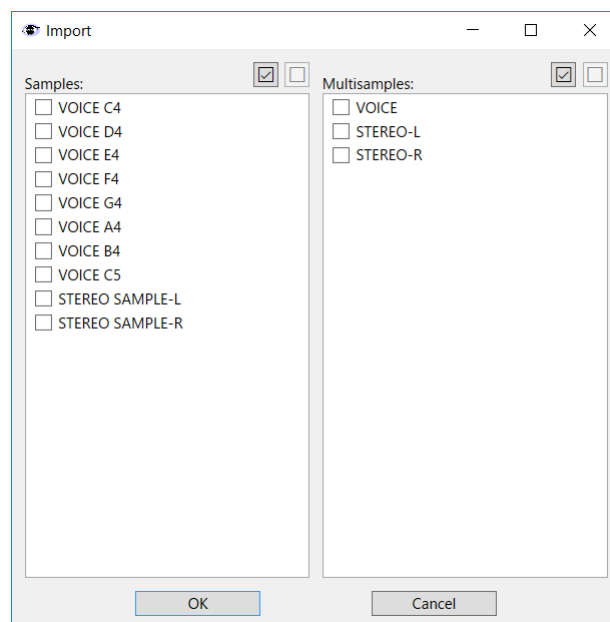


7.1.4 [IMPORT]

This item imports arbitrary Samples and Multisamples from an existing KROME additional sample data file. This allows you to add sounds from an existing data file, which is important because only one file can be active at a time. At first, the dialog box will prompt for the folder where the META.IMG and SAMPLE.IMG can be found. Please select the folder.



Next, the [Import] dialog box will be shown to choice Samples and Multisamples that you want to import.



Check from the Samples and Multisamples list, and push the [OK] button to import. If you want to break, click the [Cancel] button.

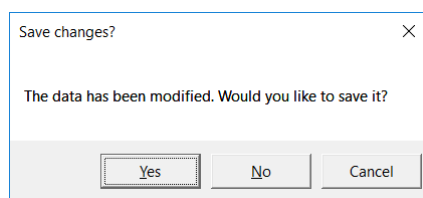
For selecting Samples and Multisamples, you can use the following buttons.

☒: Check all items

☐: Uncheck all items

7.1.5 [EXIT]

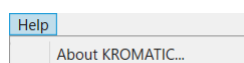
This ends KROMATIC operation. If you try to exit without saving the data currently being edited you will see a confirmation message box like the following.



If you want to save, select [Yes], [No] if you do not want to save, or if you want to continue running the application, please choose [Cancel].

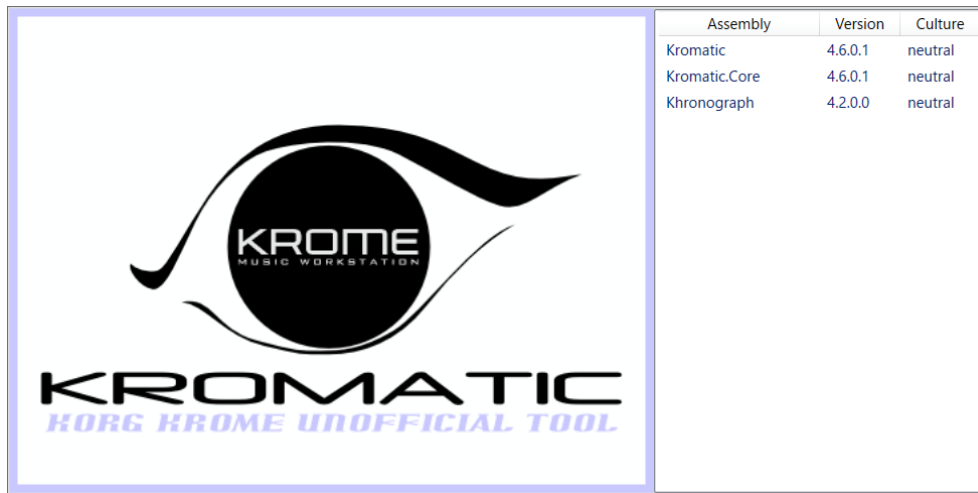
7.2 [HELP] MENU

The [Help] menu contains the following items.



7.2.1 [VERSION]

This will display the version information such as the following.



The dialog box will close when you click in the window.

8. HEADER VIEW

The Header view is used mainly for debugging purposes. It displays the information in the header of the META.IMG file.

File ID: <input type="text" value="KORG"/>	Format ID: <input type="text" value="0001"/>	Multisamples: <input type="text" value="3"/>	Indices: <input type="text" value="13"/>	Samples: <input type="text" value="10"/>
--	--	--	--	--

8.1 [FILE ID]

Displays the beginning of the File ID of META.IMG header.

8.2 [FORMAT ID]

Displays the beginning of the Format ID of META.IMG header.

8.3 [MULTISAMPLE]

Shows the total number of Multisamples to be written to the META.IMG header. This can be used for debugging purposes in order to check for any data discrepancy.

8.4 [INDEX]

Shows the total number of Indexes that are written to the META.IMG header. This can be used for debugging purposes in order to check for any data discrepancy.

8.5 [SAMPLE]

It will show the total number of Sample to be written to the META.IMG header. This can be used for debugging purposes in order to check for any data discrepancy.

9. [SAMPLE EDIT] PAGE

[Sample Edit] screen configuration of the page is as follows.

The screenshot shows the [SAMPLE EDIT] page with the following components:

- Sample List:** A table with columns No., Name, Pitch, and Loop T. It lists various voice samples (VOICE C4 to VOICE B4) and stereo samples (STEREO SAMPLE-L, STEREO SAMPLE-R). The entry 'VOICE C5' is selected.
- Sample Editing Area:** Contains controls for editing the selected sample. It includes fields for Name (VOICE C5), Pitch (0), Sampling Rate (32000Hz, 44100Hz, 48000Hz, 96000Hz), Pitch (-899, -188, 0, 1536), Loop Tune (0), and checkboxes for Reverse, One Shot, and +12dB. There is also an Emphasis Filter section with c1 (1.847351) and c2 (-0.858032) values.
- Addresses:** A section with Start (383734), End (430773), Loop (413895), and eight Offset values (Offset 1 to Offset 8) with their respective addresses and controls.
- Waveform:** A graph showing the audio data for the selected sample. The x-axis represents time, and the y-axis represents amplitude (x1.00). The waveform starts at address 383734.
- Data Capacity Indicator:** A green bar at the bottom of the page.

When you add a new sound, you first read the audio data from the .WAV file into this page. [Sample Edit] page can be configured from the Sample list and Sample editing area, it can then be adjusted freely using the size splitter in the center. In addition, the bottom of the page displays a data capacity indicator.

9.1 SAMPLE LIST

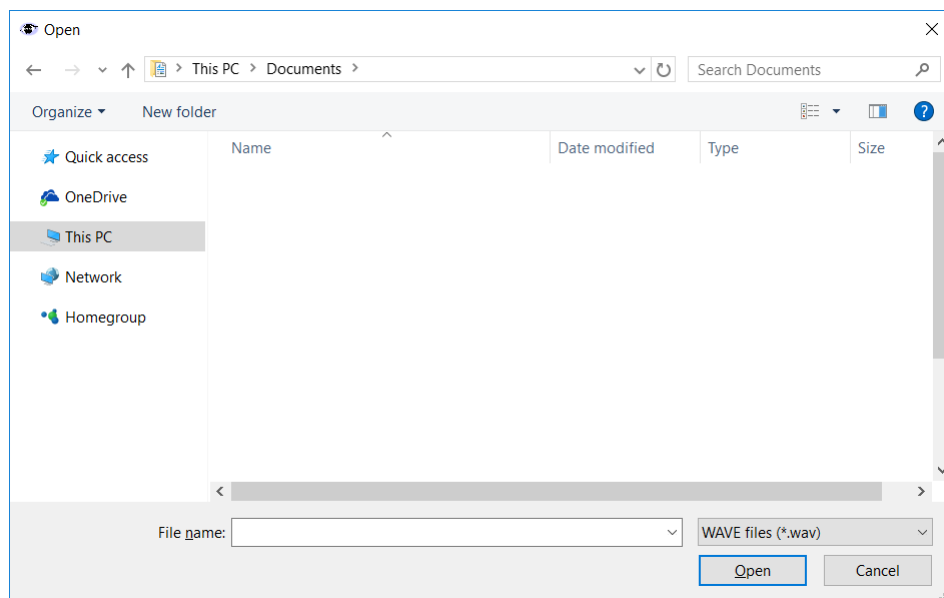
This is the Sample list that is displayed on the left side of the [Sample Edit] page. You have to display the Sample, which is stored in the tone color data that is currently being edited.

Once you select the Sample, the right side of the editing area is enabled, and you can edit the individual Sample.

At the upper right corner are three buttons: Sample Add, Sample Delete, and Sample Export.

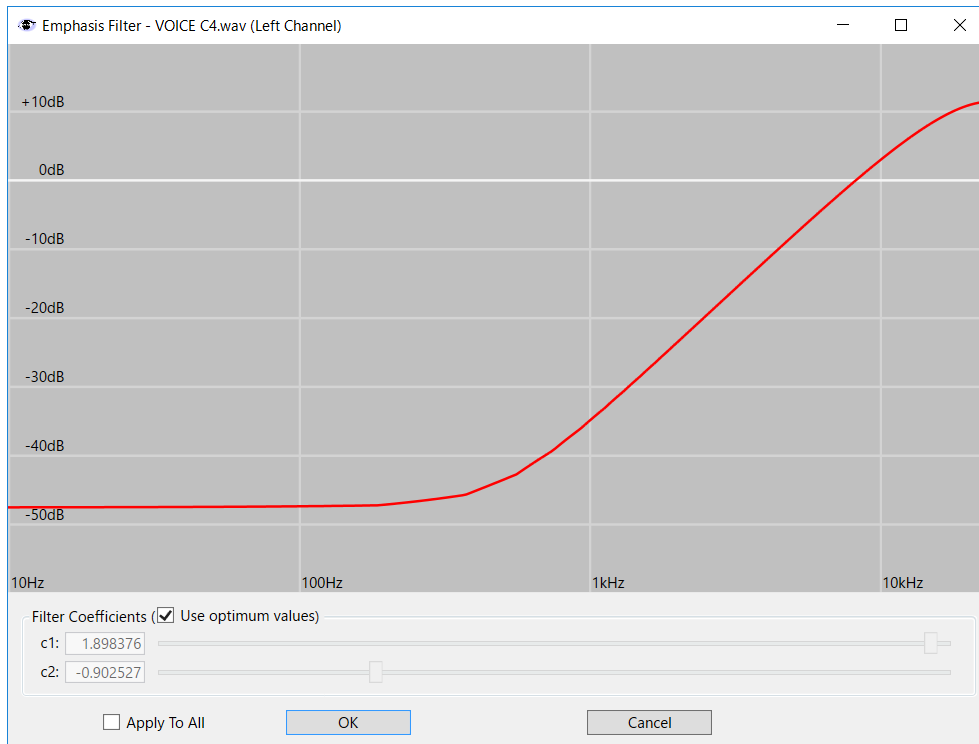
9.1.1.1 SAMPLE APPEND BUTTON (+)

Reads a new Sample from the WAVE file, and adds it to the end of the list. Displays the Open dialog box.



Select the WAVE file you want to add here, please press the [Open] button (you can select multiple files).

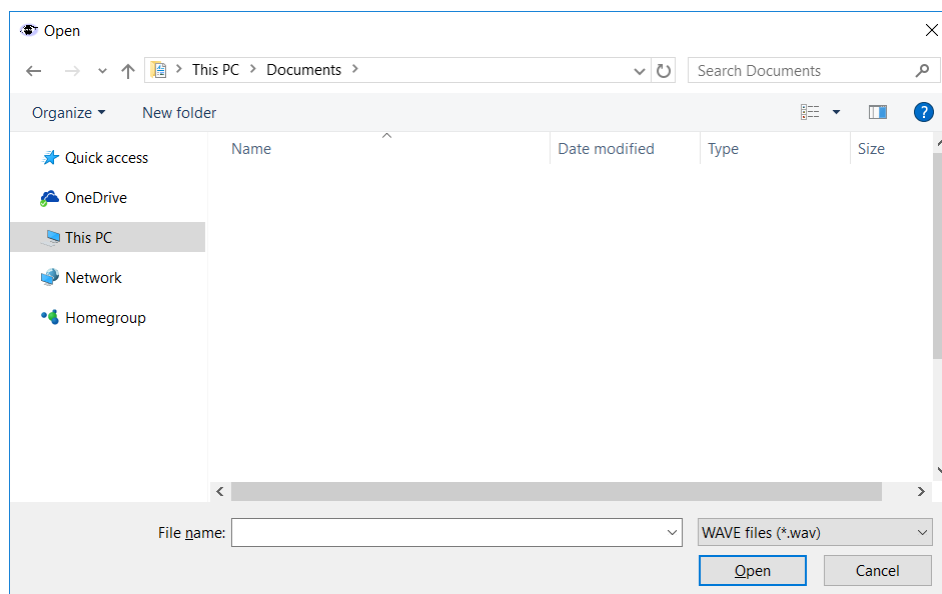
Next, set the pre-emphasis filter coefficients c_1 and c_2 that are used in sound encoding process (see [“About emphasis filter”](#) section).



These values can be edited by text boxes and sliders. Corresponding with these coefficients, filter impulse response is shown by red line. If you want to use optimum values for the sound data, check the [Use optimum values]. Select [OK] you want to load and encode the sound file, if you want to stop the loading of files, please choose [Cancel]. When multiple files are selected, the same coefficients are applied to all remaining sound files encoding by the [Apply To All] checkbox.

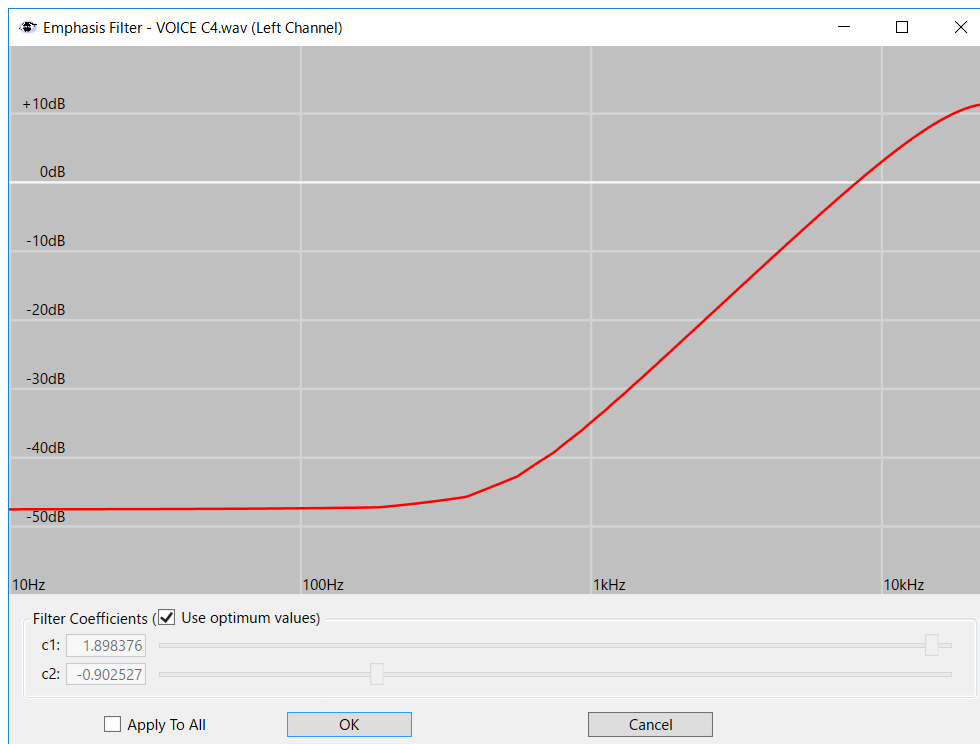
9.1.2 SAMPLE INSERT BUTTON ()

Reads a new Sample from the WAVE file, and inserts it to the selected position of the list. Displays the Open dialog box.



Select the WAVE file you want to add here, please press the [Open] button (you can select multiple files).

Next, set the pre-emphasis filter coefficients c_1 and c_2 that are used in sound encoding process (see “[About emphasis filter](#)” section).



These values can be edited by text boxes and sliders. Corresponding with these coefficients, filter impulse response is shown by red line. If you want to use optimum values for the sound data, check the [Use optimum values]. Select [OK] you want to load and encode the sound file, if you want to stop the loading of files, please choose [Cancel]. When multiple files are selected, the same coefficients are applied to all remaining sound files encoding by the [Apply To All] checkbox.

9.1.3 SAMPLE COPY BUTTON (📄)

Copy the Sample that is currently selected in the Sample list. This operation is useful when you try different settings for the same sample.

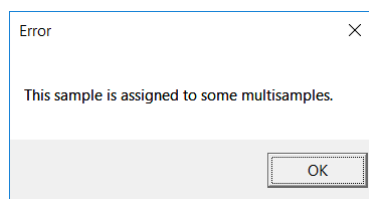
9.1.4 SAMPLE RE-ORDER BUTTON (⬆️⬆️)

Change the order of the Sample that is currently selected in the Sample list.

9.1.5 SAMPLE REMOVE BUTTON (🗑️)

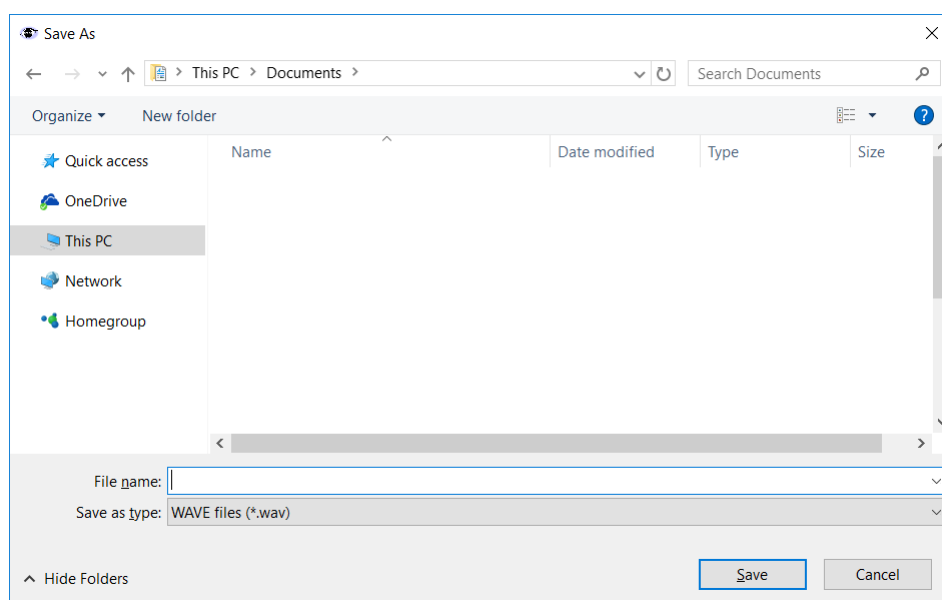
Deletes the Sample that is currently selected in the Sample list.

If you try to delete a Sample that has already been assigned to a Multisample, an error dialog box will appear that prevents deletion. First delete the assignment in the [Multisample Edit] page, then try deleting again.



9.1.3 SAMPLE EXPORT BUTTON (📁)

Writes the sample that is selected in the Sample list as a .WAV file. When this button is clicked, the following [Save As] dialog box appears.



Select the destination folder, enter the file name, then press the Save button.

9.2 SAMPLE EDITING AREA

The Sample editing area is displayed on the right side of the [Sample Edit] page. This area will continuously edit the data of the individual Sample that is selected in the list.

9.2.1 [NAME]

Names the Sample. Valid entries are a 24-character alphanumeric. If you specify a longer name, only the first 24 characters are used; the rest are ignored.

9.2.2 [PITCH]

This is mainly used for sampling rate correction. The displayed table shows the correspondence between the value of the sampling rate and the [Pitch] which seems to be as follows.

Sampling Rate	Pitch
32000Hz	-899
44100Hz	-188
48000Hz	0
96000Hz	1536

Incidentally, the number (is what sampling rate of this formula also KROME is estimated from it is 48000Hz) which was calculated by the following equation.

$$Pitch = 128 \times 12 \times \log_2 \left(\frac{Sampling\ Rate}{48000} \right)$$

9.2.3 [LOOP TUNE]

The loop playback (see section 9.2.5, below) may require pitch correction. A higher value raises the pitch, a lower value drops the pitch.

9.2.4 [REVERSE]

It will play the audio data in reverse.


9.2.5 [ONE SHOT]

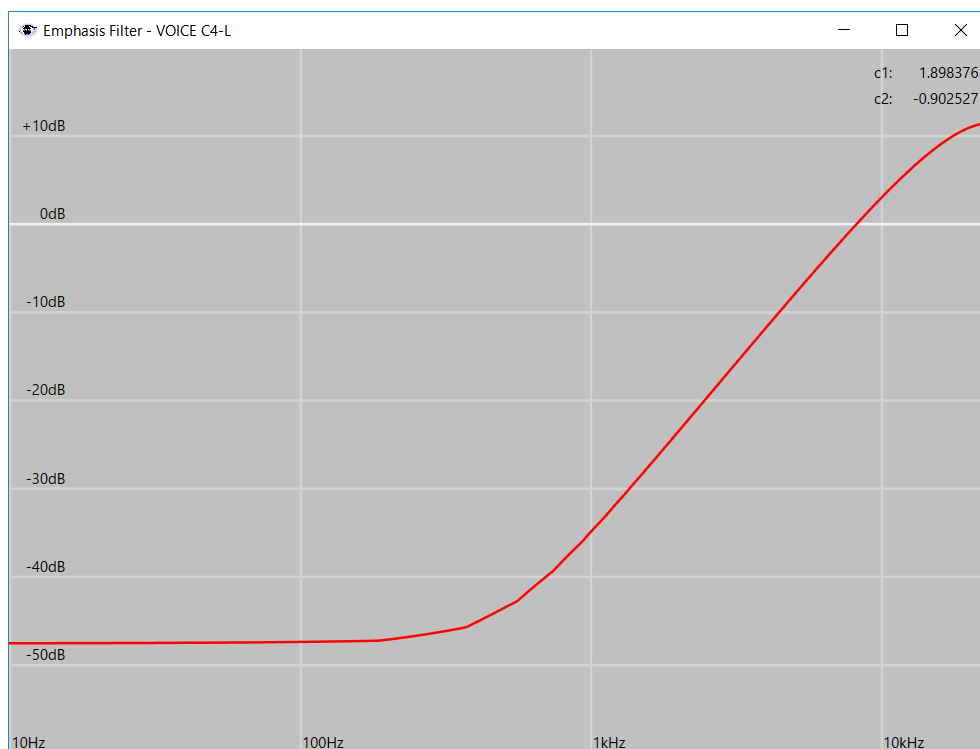
Audio data such as an organ tone is reproduced by playing from the Start address to the End address, and when a key is held down or sustain is applied, playback continuously repeats from the Loop address to the End address. This is usually undesirable in the case of a sample that includes decay, such as a drum. To disable Loop playback, check this box.

9.2.6 [+ 12DB]

This will boost the volume.

9.2.7 [EMPHASIS FILTER]


You can see the pre-emphasis filter coefficients that were used when the sound was encoded (see "[About emphasis filter](#)" section). These coefficients are used by KROME de-emphasis filter when the sound is decoded. By  button, the impulse response is shown.





9.2.8 [ADDRESSES]

Start, End, Loop, and Offset 1-Offset 8 set these respective addresses.

In addition to the Start address, it is possible to specify up to eight additional Offset points, each of which can be used as a playback start point. In addition to using the up-down arrow controls, you can efficiently set these fields using the following buttons:

: Move to the previous zero-crossing point



: Move to the next zero-crossing point

: Setting by tapping the waveform view

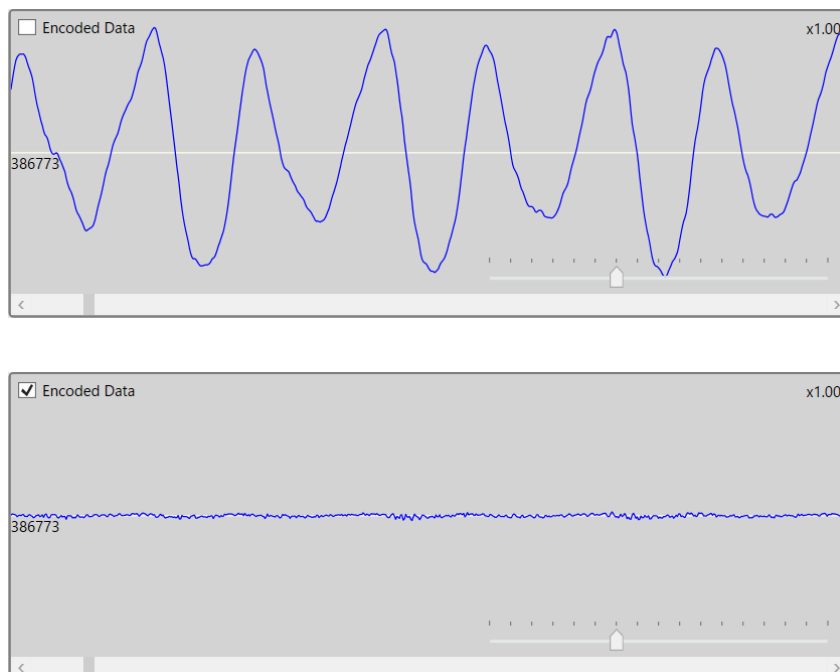
Also, if the [Sample Playback] on the [Settings] page is checked, you can click/hold the  button to playback the sample.

9.2.9 WAVEFORM VIEW

This area displays a Sample as a waveform. You can change the display magnification by moving the tracking bar.

If  is  in the [Addresses] group, you can enter the appropriate address by clicking the waveform position.

By [Encoded Data], You can see the encoded wave data after pre-emphasis filter.



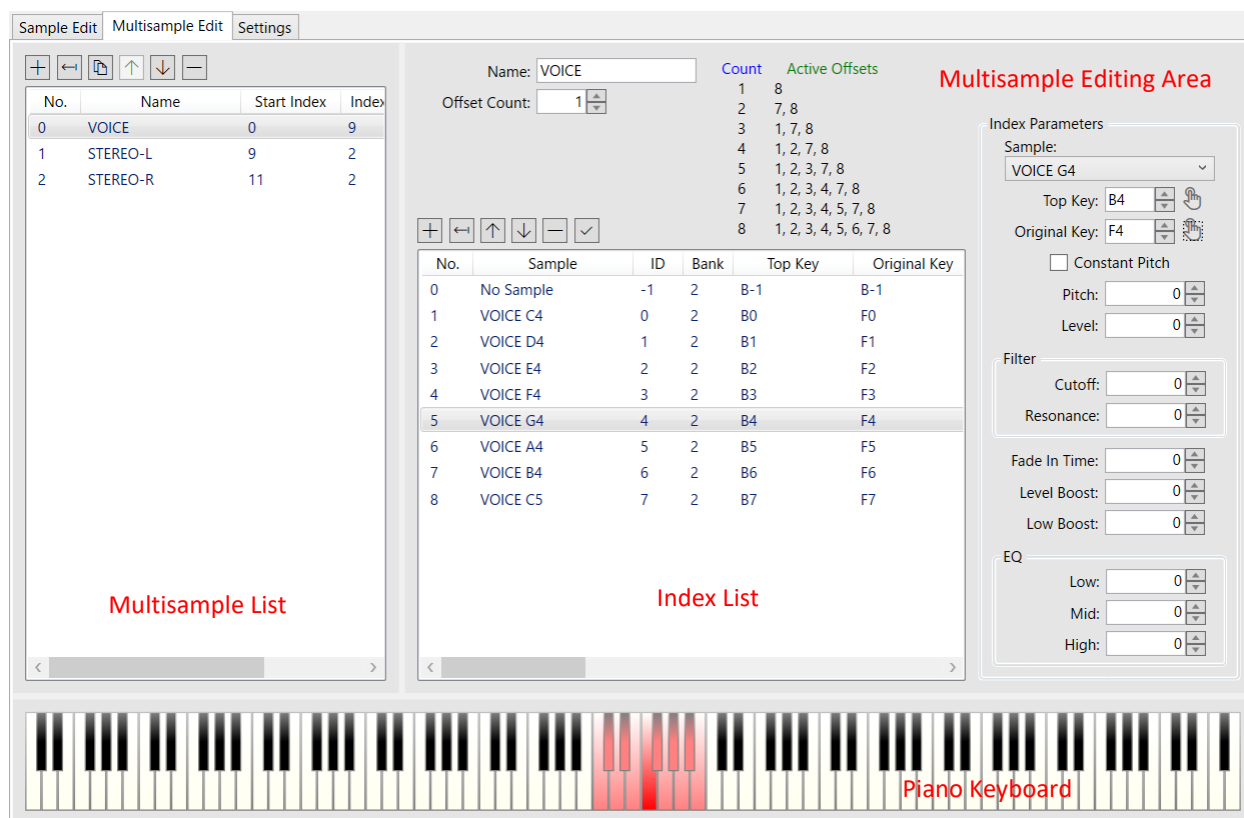
Generally, if pre-emphasis filter is effective, the amplitude of this wave will be lower.

9.3 DATA CAPACITY INDICATOR

Currently, KROMATIC supports additional sample files of up to 16MB, therefore, the sum of all Sample data many not exceed 16MB. The Data capacity indicator displays how much of the 16MB Sample data is currently used.

10. [MULTISAMPLE EDIT] PAGE

[Multisample Edit] screen configuration of the page is as follows.



The [Multisample Edit] page consists of the Multisample list, the Multisample editing area, and the Piano Keyboard. You can adjust the sizes of each area by dragging the splitter bars.

10.1 MULTISAMPLE LIST

The list of all Multisamples to be included in the KROME additional tone data file being edited is displayed on the left side of the page.

When you select a Multisample from this list, the Multisample editing area is enabled, you will be able to edit each Multisample's parameters.

10.1.1 MULTISAMPLE APPEND BUTTON (+)

Adds a new Multisample to the end of the list.

10.1.2 MULTISAMPLE INSERT BUTTON (⬅)

Inserts a new Multisample at the selected position in the list

10.1.3 MULTISAMPLE COPY BUTTON ()

Copy the Multisample that is currently selected in the Multisample list. This operation is useful to make a Stereo-Multisample.

10.1.4 MULTISAMPLE RE-ORDER BUTTON (,)

Changes the Multisample order in the Multisample list.

10.1.5 MULTISAMPLE REMOVE BUTTON ()

Removes the Multisample that is currently selected in the Multisample list.

10.2 MULTISAMPLE EDITING AREA

It is Multisample editing area that [Multisample Edit] is displayed on the right side of the page. We will continue to edit the individual Multisample selected in Multisample list.

10.2.1 [NAME]

This lets the user specify Multisample name. Valid format is a 24-character alphanumeric. If you specify a longer name, only the first 24 characters are accepted; the remainder are ignored.

10.2.2 [OFFSET COUNT]

You choose whether to enable a number of the Offset address that is set to Sample.

The number of Offset address that is selected here will be available on KROME. For example, if you have set this to 1, the Offset in the OSC Setup of Program mode P2 OSC / Pitch page of KROME as follows will only be selected one.

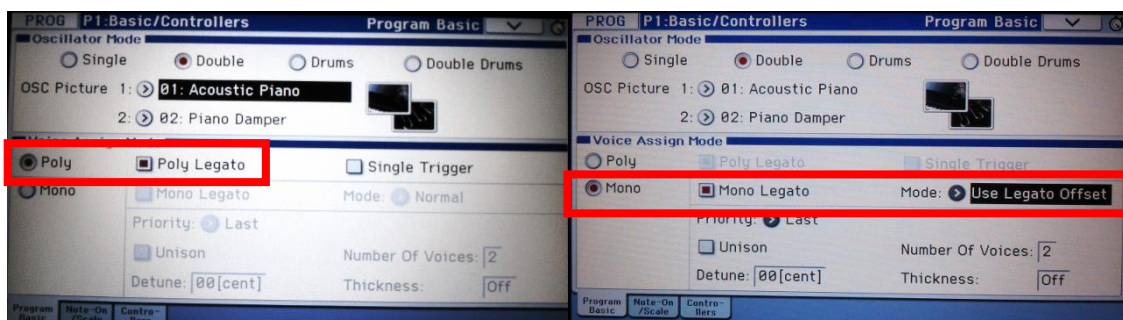


Here it needs attention is that this order of valid Offset address by the number of [Offset Count] varies. As you have also displayed in the window of KROMATIC,

[Offset Count] the order of the valid Offset addresses is as follows (why I do not understand this order of whether).

Offset Count	Order of Active Offsets
1	8
2	7, 8
3	1, 7, 8
4	1, 2, 7, 8
5	1, 2, 3, 7, 8
6	1, 2, 3, 4, 7, 8
7	1, 2, 3, 4, 5, 7, 8
8	1, 2, 3, 4, 5, 6, 7, 8

Offset 8 has a special meaning. In the case in which the settings for legato as follows in the Program Basic tab of P1 Basic/Controllers page, which is used when the legato playing.



10.2.3 [INDEX LIST]

Index in the Multisample are listed. When you select the Index that you want to edit here [Index Parameters] and piano keyboard is enabled, you can edit the Index.

Additional Index is at the top of the Index list, delete, there is a button for the validity check.

10.2.3.1 INDEX ADD BUTTON (+)

Adds a new Index at the end of the Index list.

10.2.3.2 INDEX INSERT BUTTON (←)

Inserts a new Index at the selected position of the Index list.

10.2.3.3 INDEX COPY BUTTON (📄)

Copies the Index that is currently selected in the Index list.

10.2.3.4 INDEX RE-ORDER BUTTON (↑, ↓)

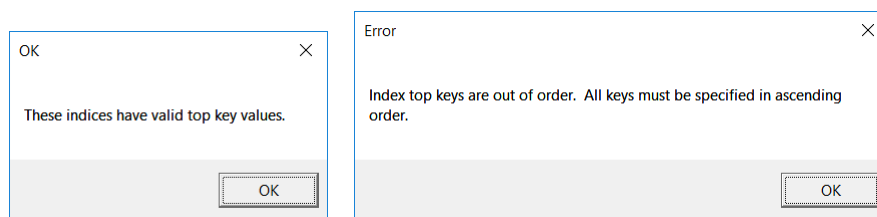
Changes the order of the selected Index in the Index list.

10.2.3.5 INDEX REMOVE BUTTON (🗑)

Removes the Index that is currently selected in the Index list.

10.2.3.6 INDEX VALIDITY CHECK BUTTON (✓)

This button checks the validity of the index. Specifically, it checks that the Top Key of the Index does not exceed the value of the next Index of Top Key. Since this ordering is a requirement of the KROME software, this check is performed automatically when writing out Multisample files.



10.2.3 [INDEX PARAMETERS]

If the Index is selected in the list [Index Parameters] is enabled, you can edit the values of individual Index.


10.2.3.1 [SAMPLE]

Selects the Sample to be assigned to the Index.

10.2.3.2 [TOP KEY]

Specifies the highest key in the zone of the index. The zone includes all keys from the Top Key of the previous zone up to this Top Key.

For example, suppose that you set a Top Key of C2 for index 001, and a Top Key of C3 for index 002. This means that the zone of index 001 will be C2 and lower, and the zone of index 002 will be D3–C3.

By clicking the  button, you can enter the key by tapping the piano keyboard.

10.2.3.3 [ORIGINAL KEY]

Sets the key that will play the sample at the pitch it was originally recorded at. This pitch will change in semitone steps relative to the original key.

For example, suppose that you recorded a sample with Original Key of F2. When the zone of the index is C2–B2, pressing the F2 key would playback the sample at its original pitch. Pressing F#2 *would playback the sample a semitone higher. Pressing E2 would playback the sample a semitone lower. The pitch of this sampled sound will change in semitone steps between C2 and B2, centered at F2.*

Note: If Constant Pitch is checked (see below,) all keys in the zone will play the sample at its original pitch.

By clicking the  button, you can enter the key by tapping the piano keyboard in the same way as [Top Key].

10.2.3.4 [CONSTANT PITCH]

Although normal instrument sound [Original Key] other than the pitch will be generated by the re-sample, in the case of a musical instrument that has no percussion, etc., the pitch, it is possible to make this check box to On, it will be able to fix the pitch.

10.2.3.5 [PITCH]

If the time to put together each Sample as Multisample, there are variations in the pitch of between Sample, and then corrected by this value. The higher the value the sound becomes higher, will be lower when small.

10.2.3.6 [LEVEL]

If the time to put together each Sample as Multisample, there are variations in the volume of between Sample, and then corrected by this value. The higher the value the sound is increased, it becomes smaller and smaller.

10.2.3.7 [FILTER]

Low-pass filter [Cutoff] and set the [Resonance], you can adjust the tone of each Index.

10.2.3.8 [FADE IN TIME]

Sample can be given a fade-in effect during playback.

10.2.3.9 [LEVEL BOOST]

When the value to the maximum in the [Level] parameter to become the original volume Sample, it is not possible to set only in the direction to reduce the sound to be larger than the original volume by setting the [Level Boost] Parameter can do.

10.2.3.10 [LOW BOOST]



You can be thick reinforce the sound by emphasizing the low frequency range.

10.2.3.11 [EQ]

[Low], [Mid], it will be able to correct the 3 by using a band EQ, timbre balance of each of the Index of [High].

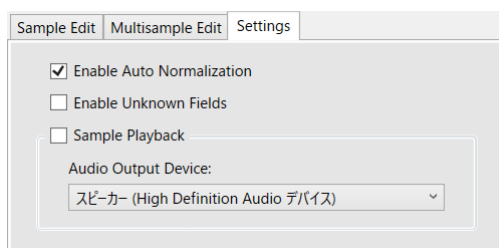
10.3 PIANO KEYBOARD

[Multisample Edit] On the right side of the page is a piano keyboard that is displayed at the bottom of the Multisample editing area. When you select the Index in the Index list, each of the pronunciation areas assigned the Index are displayed in pink, and the [Original Key] of the assigned Sample of the Index is displayed in red.

Also, by clicking the key if  is  in [Index Parameters] group, you can enter the corresponding note number.

11. [SETTINGS] PAGE

[Settings] page allows you to set various settings.



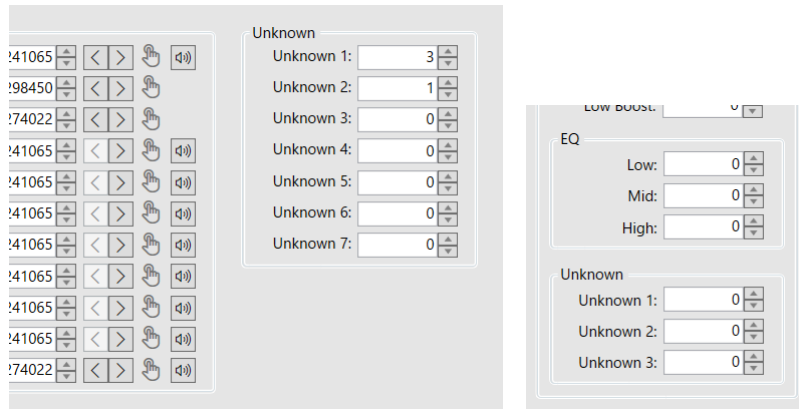
11.1 [ENABLE AUTO NORMALIZATION]

If this check box is checked, when WAVE files are read to KROMATIC, these sounds are normalized and its volume levels are maximized.

11.2 [ENABLE UNKNOWN FIELDS]

Although we have not completely analyzed certain fields yet, this function enables editing unknown parameter fields.

File ID: KORG	Format ID: 0001	Unknown 1: 0	Multisamples: 3	Unknown 2: 0	Indices: 13	Samples: 10
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


We do not know the function and meaning of these parameter fields. Please let us know if you learn something about them.

[Unknown] if these fields are inadvertently rewritten, there is a possibility that KROME may freeze (depending on the value.)

Change these parameters at your own risk.

11.1 [SAMPLE PLAYBACK]

Sets the sample playback enable or disable by the  button in the [Sample Edit] page. Please check this field to enable.

11.1.1 [AUDIO OUTPUT DEVICE]

Select the audio device to be used when the sample playback of using in the [Sample Edit] page.

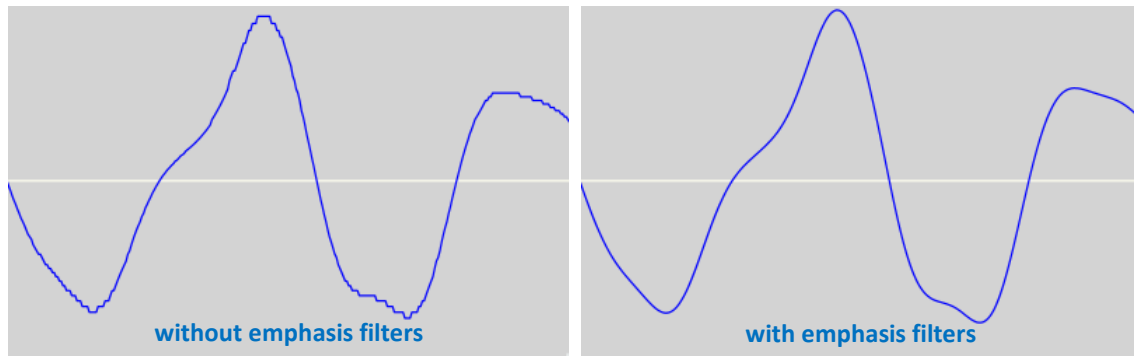
APPENDIX

A.1 ABOUT EMPHASIS FILTER

Sound data are compressed by non-linear quantization into the additional sound file. By combining non-linear quantization and pre-emphasis technique, higher sound quality can be realized.

KROME has a de-emphasis-filter. As a complement to this process, KROMATIC has implemented a pre-emphasis filter. By pre-emphasizing during the KROMATIC sample preparation phase, then de-emphasizing when reading into KROME, distortion and other artifacts can be minimized.

The followings are sound data that was not applied pre/de-emphasis filters and applied these filters.



You can see that the right wave is smoother than the left one.

KROME controls these filters by using by two parameters: c_1 and c_2 .

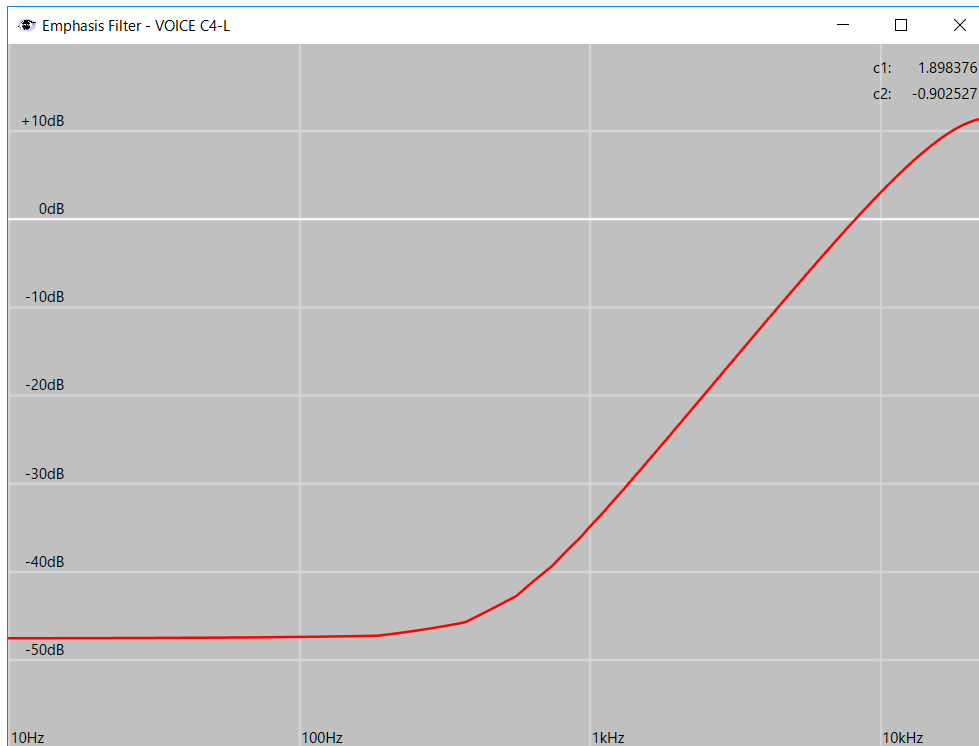
Pre-emphasis Filter (FIR):

$$y[t] = x[t] - c_1 \cdot x[t - 1] - c_2 \cdot x[t - 2]$$

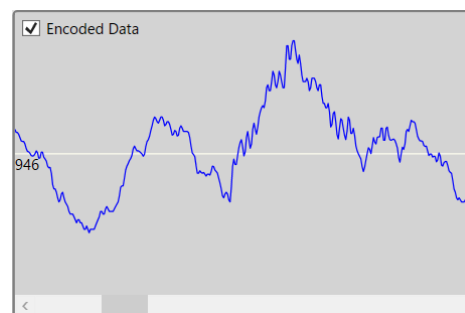
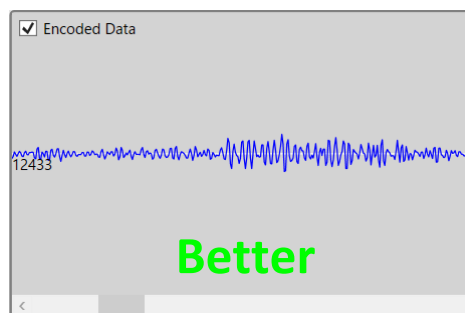
De-emphasis Filter (IIR):

$$y[t] = x[t] + c_1 \cdot y[t - 1] + c_2 \cdot y[t - 2]$$

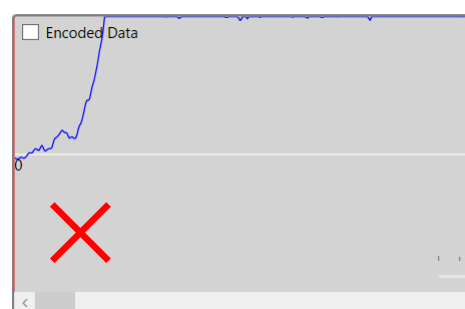
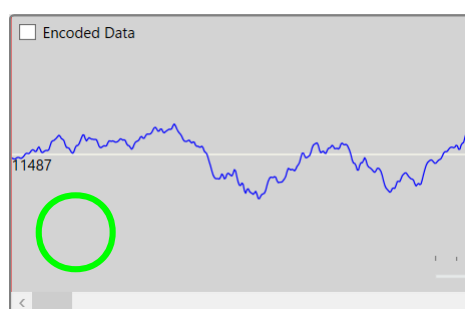
When $c_1 = 0$ and $c_2 = 0$, these filters are bypassed and have no effect. Usually, these values are selected to satisfy $0 \leq c_1$ and $c_2 \leq 0$, then the pre-emphasis filter will emphasize high frequency and the impulse response will appear as the following.



Generally, when the pre-emphasis filter is effective, the amplitude of the encoded wave will be lower.



Because the de-emphasis filter is an infinite impulse response (IIR) filter, the sound data will diverge depending on these parameters. Caution is required.

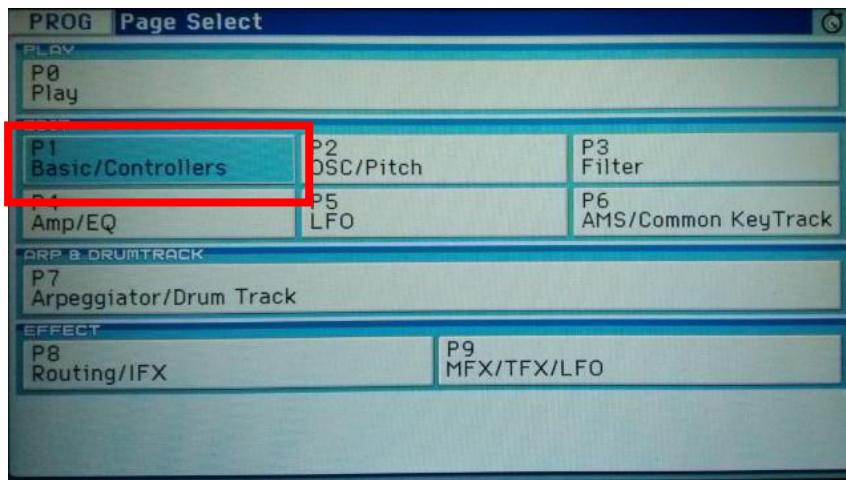


A.2 HINTS FOR SETTINGS

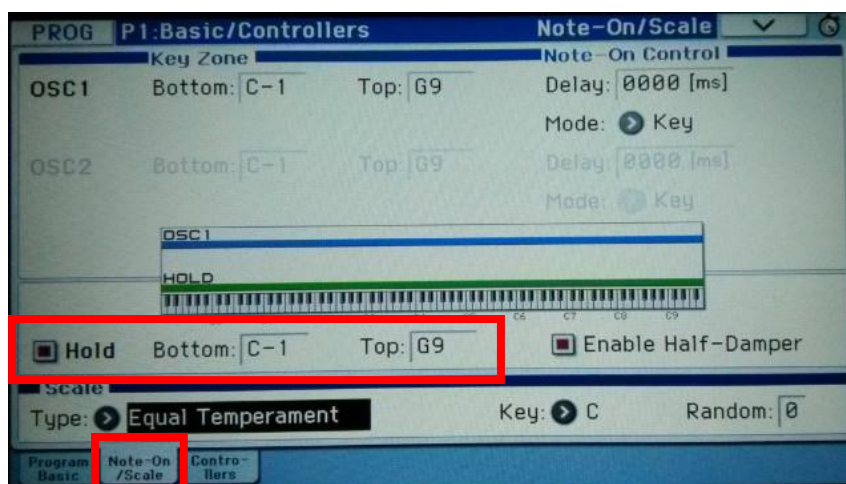
A.2.1 HOLD SETTINGS FOR MULTISAMPLE

Sometimes, there is a situation that you don't want to stop the sound by the key off. The hold settings enables that.

In Program mode, show the P1 Basic/Controllers page.



In the Note-On/Scale tab, set the Hold, the Bottom and the Top fields.



To avoid overlap by multiple triggers, check the Single Trigger in the Program Basic tab.

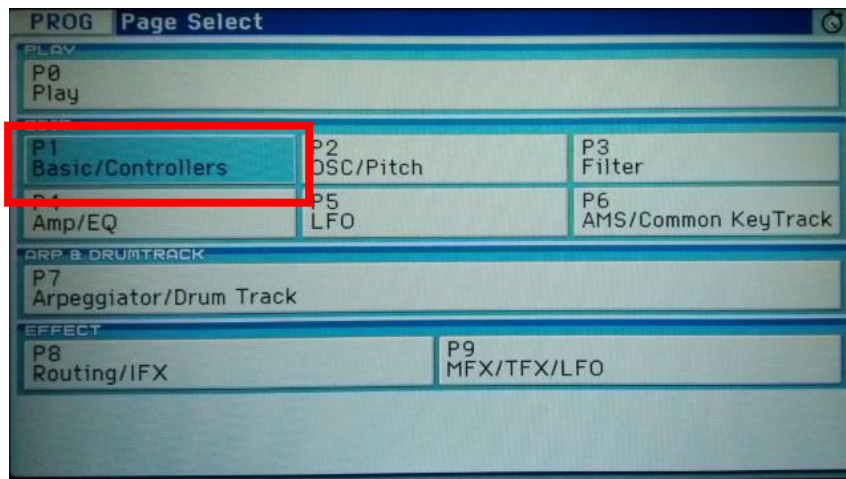


Please refer to the KROME parameter guide for details.

A.2.2 ASSIGNING SAMPLES TO DRUMKIT

For percussion sounds, to assign these samples to a drumkit is more suitable than using a multisample.

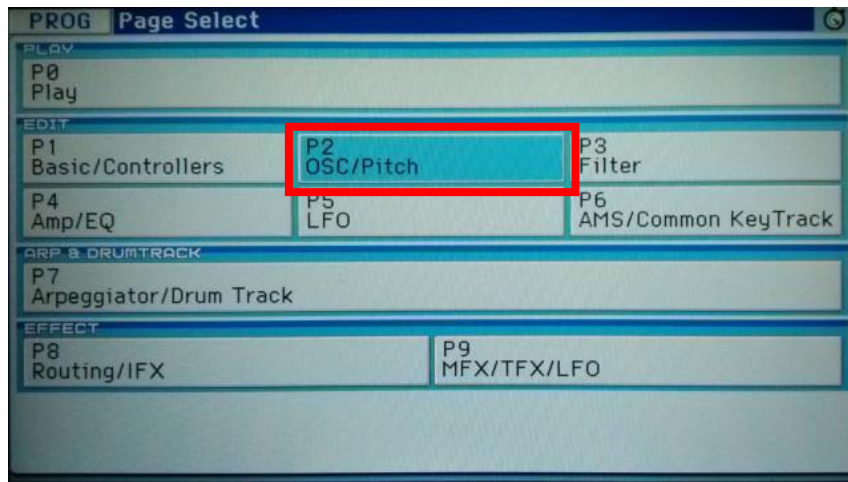
In Program mode, show the P1 Basic/Controllers page.



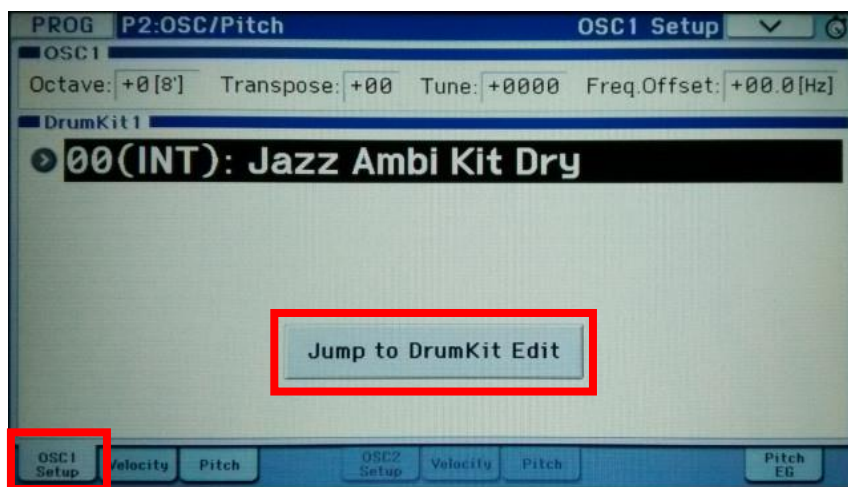
Select the Drums mode in the Oscillator Mode section of the Program Basic tab.



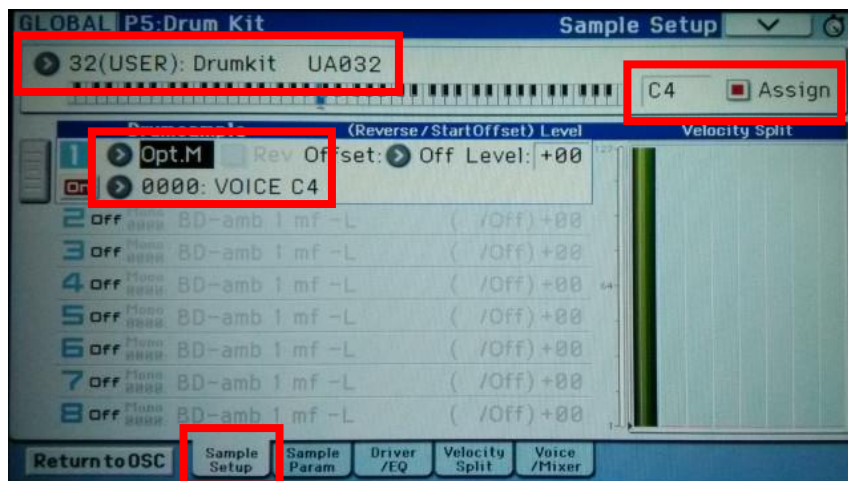
Show the P2 OSC/Pitch page.



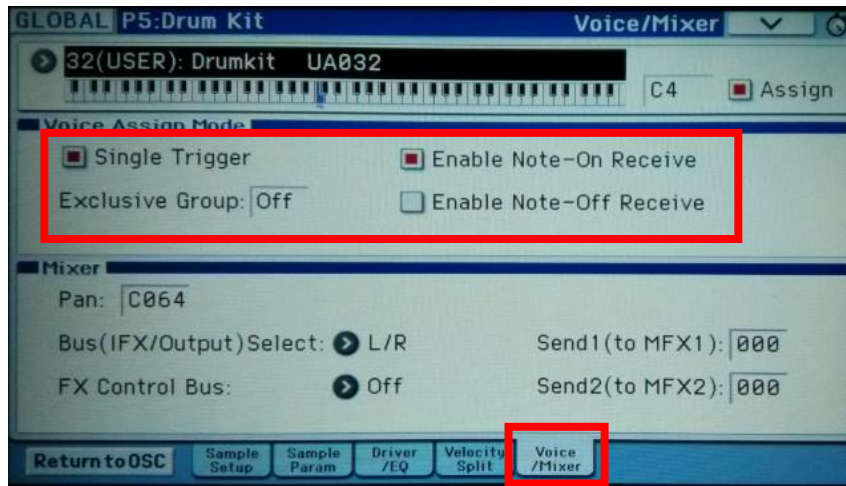
In OSC1 Setup tab, tap the Jump to DrumKit Edit button.



Set the DrumKit name, key assignments and Samples in the Sample Setup tab.



In the Voice/Mixer tab, set the Voice Assign Mode section for demanding voice trigger.



Please refer to the KROME parameter guide for details.