Data Editor for XW-PD1

User's Guide

Use this manual in combination with the
User's Guide that comes with the Instrument.

CASIO®

Contents

General Guide

What kind of application is Data Editor?

Data Editor is application software that runs on a computer and provides you with the capabilities below.

- Computer-based control over TRACKFORMER* parameters
- Computer-based storage of TRACKFORMER user data
- Transfer of user data files from a computer to TRACKFORMER
- Conversion of SMF format files to phrase data files
- Conversion of WAVE files to and from user sample data files
- Adjustment of TRACKFORMER pad sensitivity
- * CASIO XW-PD1 TRACKFORMER

MIDI Data Communication Function Precautions

MIDI Data Communication Function

This software includes a function for performing MIDI data communication with TRACKFORMER. Note the points below whenever using the MIDI data communication function.

- TRACKFORMER must be connected to the computer to enable the MIDI data communication functions. For details about how to connect, refer to the TRACKFORMER user documentation.
- To use the MIDI data communication function, you need to configure Data Editor MIDI settings and TRACKFORMER MIDI settings. For information about Data Editor MIDI settings, see "MIDI Settings" on page 28. For information about TRACKFORMER settings, see "Entering the MIDI Control Mode" in the User's Guide Tutorial.
- As a general rule, use Data Editor in a one computer and one TRACKFORMER unit configuration. Certain software and hardware settings, and connection conditions can cause problems with Data Editor and/or TRACKFORMER operation and even corruption of TRACKFORMER data when multiple TRACKFORMER units are connected to a computer.

Bulk Dump Data Transfer

This software includes a bulk dump data transfer function that allows MIDI data communication transfer of user data and other data.Note the points below whenever using the bulk dump data transfer function.

- Bulk dump data transfer may be disabled under certain TRACKFORMER operational conditions. If you experience a problem, display the tempo setting on TRACKFORMER, make sure you are not touching any pad, button, or other controller, and then try again.
- Step Sequencer playback stops and other normal TRACKFORMER operations are disabled while bulk dump data transfer is in progress. Keep this in mind if you are in the middle of a performance, etc.
- Do not perform any TRACKFORMER pad, button, or other controller operations while bulk dump data transfer is in progress. Doing so can cause problems with Data Editor and/or TRACKFORMER operation and even corruption of TRACKFORMER data.

Data Storage Function

This software includes a data storage function for saving the current TRACKFORMER setup using MIDI data communication.Note that data storage function conditions and precautions during use are the same as those for bulk dump data transfer.

Minimum Required Computer Environment

■ Supported Operating Systems

Windows Vista® *1

Windows® 7 *2

Windows® 8 *3

Windows® 8.1 *4

Mac OS® X (10.7.X, 10.8.X, 10.9.X)

*1:　Windows Vista (32bit version)

*2:　Windows 7 (32bit version, 64bit version)

*3:　Windows 8 (32bit version, 64bit version)

*4:　Windows 8.1 (32bit version, 64bit version)

■ Screen Settings

Resolution : At least 800×600 pixels

Color 　　 : At least 16 bit (Windows OS)

IMPORTANT!
- **Depending on your own individual hardware and/or software configuration, Data Editor may not operate properly even if your system meets the requirements described above.**

Data Editor Use Restrictions

- All rights to Data Editor (This Software) shall revert to CASIO COMPUTER CO., LTD.
- Any distribution of this Software, even following modification of its file configuration, contents, or other features, is prohibited.
- CASIO COMPUTER CO., LTD. makes no guarantees concerning this Software. IN NO EVENT SHALL CASIO COMPUTER CO., LTD. BE LIABLE FOR ANY DAMAGES, LOST PROFITS, OR CLAIMS BY THIRD PARTIES WHATSOEVER ARISING OUT OF THE USE OF OR INABILITY TO USE THIS SOFTWARE.
- You are granted the right to use this Software free of charge. As a general rule, you are free to share this Software with acquaintances and others solely for non-commercial purposes.
- CASIO COMPUTER CO., LTD. provides no support for this Software.
- The contents of this Software are subject to change without notice.
- The screen shots shown in this manual may differ from the screens that actually appear on your computer when using this Software.
- Except as specified by the GNU LESSER GENERAL PUBLIC LICENSE Version 2.1 (LGPL), no modification of this Software is allowed without the consent of CASIO COMPUTER CO., LTD.
- This Software uses the LGPL version of Qt library and operates by dynamically linking Qt library. You can obtain Qt library at: http://qt-project.org/ .
- For the full LGPL text, refer to the LGPL.txt file that comes with this Software's files.

Installation Procedure

Windows

1. Go to the CASIO Website, and download the required Data Editor file to your computer.

2. Unzip the downloaded file.

   This will create a folder named "CASIO DataEditor for XW-PD1" on your computer.

Mac

1. Go to the CASIO Website, and download the required Data Editor file to your computer.

2. Open the downloaded file.

   This will create an image named "CASIO DataEditor for XW-PD1". Copy the image to your application folder.

Starting Up Data Editor

Windows

1. Double-click the "CASIO DataEditor for XW-PD1" folder.

2. Inside the folder, double-click "DataEditorPD1.exe".

   This will start up Data Editor.

Mac

1. In your application folder, double-click "CASIO DataEditor for XW-PD1".

   This will start up Data Editor.

Exiting Data Editor

Click the close button [x] in the Data Editor title bar.

- Attempting to exit Data Editor while a data transfer or some other process is in progress will cause a confirmation message to appear. Clicking the [Yes] button cancels the ongoing process and exits Data Editor. For information about what happens if a process is cancelled part way through, see the sections of this manual that cover each mode.

Screen Elements

- The screen shots in this manual are for Windows 7.
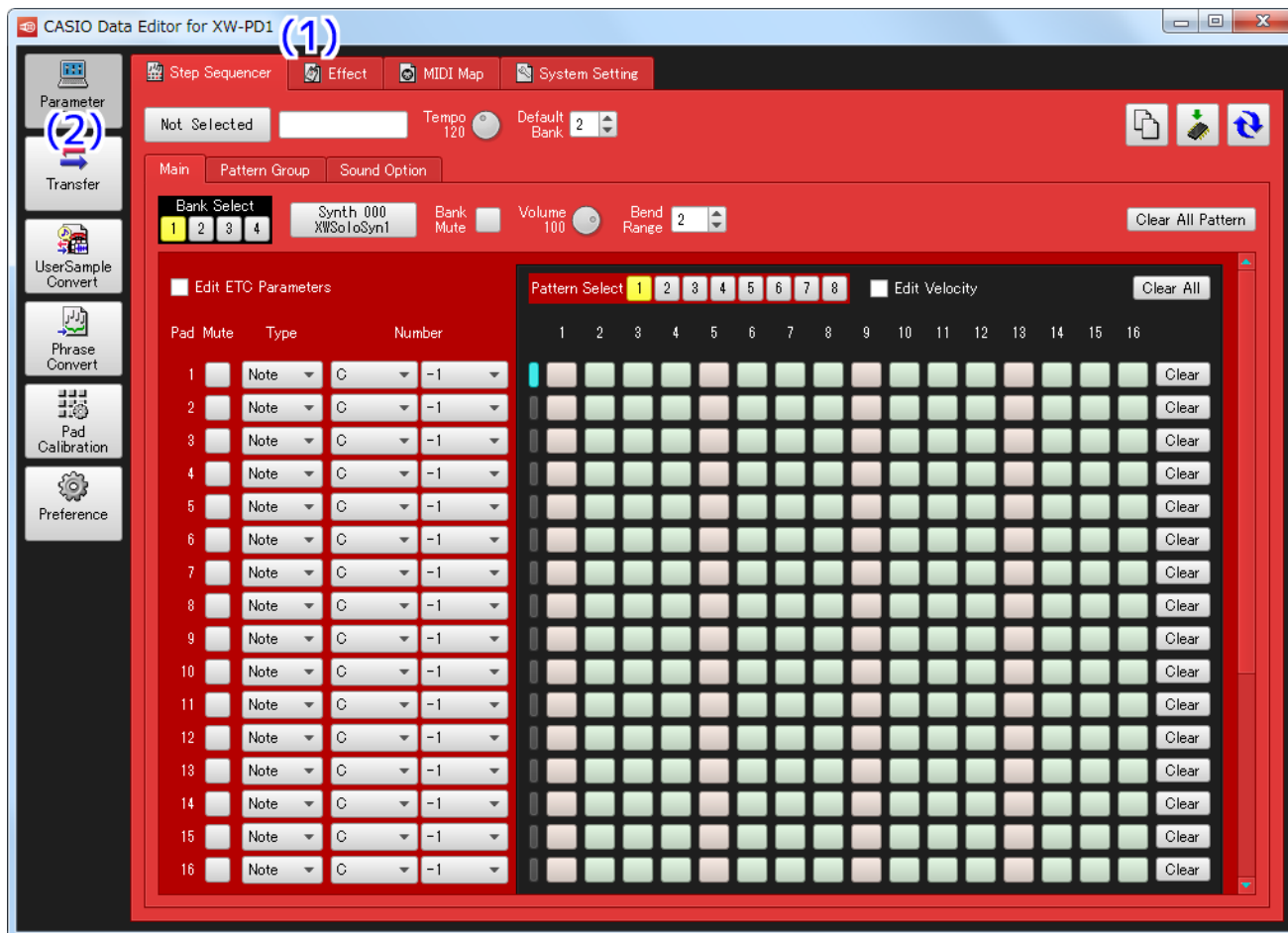
(1) Title bar

"<Disconnected>" appears where when there is no connection between the computer and TRACKFORMER. For information about how to connect, see "MIDI Data Communication Function Precautions" on page 4.

(2) Mode selection area

Select one of the mode names in this area to enter that mode. For details about each mode, see the sections of this manual that cover them.

Parameter Edit Mode

Function Overview

- Use this mode to modify TRACKFORMER parameter settings from your computer.
- Modifications are stored in the TRACKFORMER user area.

Important!

- This mode uses TRACKFORMER MIDI data communication, bulk dump data transfer, and data storage functions. Be sure to read the "MIDI Data Communication Function Precautions" on page 4 before using this mode.
- Some parameters cannot be modified with Data Editor and must be modified using TRACKFORMER controllers.

Editors Supported in This Mode

Step Sequencer Editor

- Use this editor to modify Step Sequencer parameter settings.
- For a list of parameters whose settings can be modified with this editor, see "Step Sequencer Data Structure" (page 34).

Effect Editor

- Use this editor to modify effect parameter settings.
- For a list of parameters whose settings can be modified with this editor, see "Effect Data Structure and Effect Type/ Parameter List" (page 37).

MIDI Map Editor

- Use this editor to modify MIDI map parameter settings.
- For a list of parameters whose settings can be modified with this editor, see "MIDI Map Data Structure" (page 46).

System Setting Editor

- Use this editor to modify system setting parameter settings.
- For a list of parameters whose settings can be modified with this editor, refer to the sections below.
  - User's Guide Tutorial: "Changing the Pad Velocity"
  - User's Guide Tutorial: "Changing the Initial Default Slice Length"
  - User's Guide Tutorial: "Configuring Other Settings" (excluding <SEQCOMMON>)

However, note that the parameter structures shown in the table below apply in the case of pad velocity.

Parameter Name	Settings	Overview
Velocity Curve	Fixed, Linear, Curve1, Curve2, Curve3	Velocity characteristic curve. When "Fixed", the same velocity is always output.
Fixed Velocity	1 to 127	Velocity value applied when "Fixed" is selected for Velocity Curve.

Screen Elements

- The screen shots in this manual are for Windows 7.

- Data Selector Dialog Box
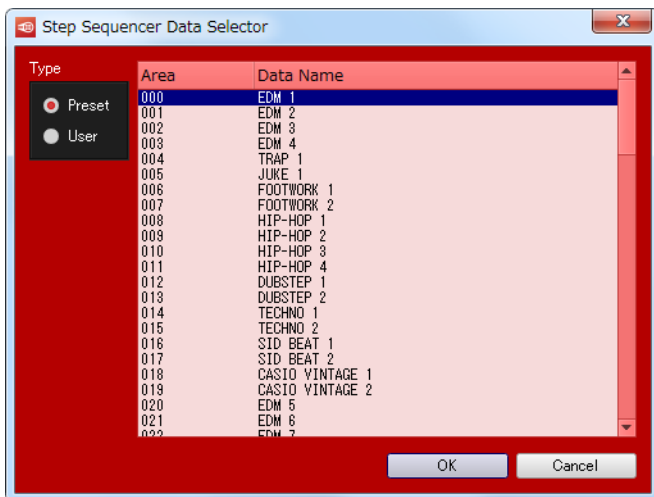
(1) Editor tabs

Use these tabs to navigate between editors.

(2) Data selector button

Selects the TRACKFORMER preset data or user data number.

(3) Data name box

Shows the data name. You can change the data name by inputting a name here.

(4) User data save button

Saves screen contents as TRACKFORMER user data.

(5) Reload button

Click to refresh Data Editor with the current TRACKFORMER setup.

■ Parameter Editing Operations

- Performing an operation with an on-screen button, box, or other controller on the screen immediately changes parameter settings and modifies TRACKFORMER operation.

■ Using Tabs

- Clicking a tab displays the corresponding editor.
- Right-clicking a tab displays a menu.
- A tab can be displayed as a separate window by selecting "Detach" on the right-click menu. This means you can have multiple tabs displayed simultaneously.
- Closing a detached window returns it to its tab.

Step Sequencer Editor and Effect Editor Common Operations

Selecting TRACKFORMER Data

1. Click the data selector button (2).

This displays the Data Selector dialog box.

2. Use the Data Selector dialog box to select the desired data and then click the [OK] button.

This recalls the selected data and applies it to TRACKFORMER. The data selector button (2) shows the currently selected area number.

Specifying a Data Name

1. Input the desired data name into the data name box (3) and then press your computer's [Enter] key.

- The data name you entered will be used by TRACKFORMER as the data name.
- For information about data name rules, see "Data Name Rules" (page 30).

Saving Modifications as TRACKFORMER User Data

1. Click the user data save button (4).

2. This displays an area selection screen.

3. Select the area where you want to save the data and then click the [OK] button.
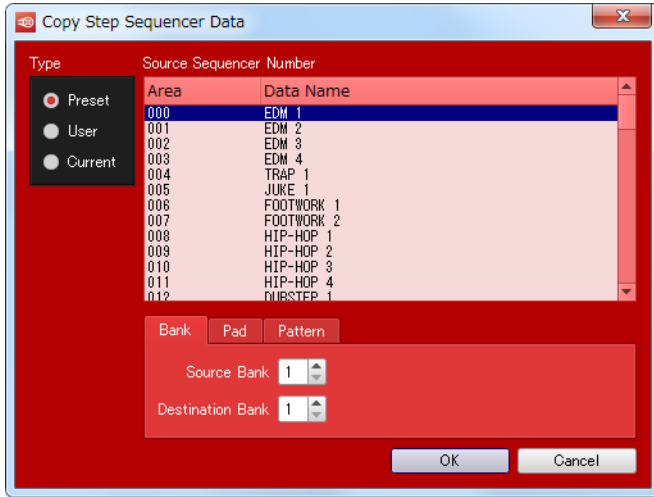
Step Sequencer Editor Operations

Copying a Section of TRACKFORMER Step Sequencer Data to Data Being Edited

- Clicking the copy button shown below will open a copy dialog box.
- Copy button

- Copy dialog box

- As with the data selector dialog box, select the Step Sequencer data number of the copy source. However, you need to select a data type other than "Current" for Type.
- To copy a bank, tap the "Bank" tab at the bottom of the dialog box. On the tab screen that appears, select the copy source bank number and the copy destination bank number (bank number of the data being edited), and then click the [OK] button.
- To copy a pad, tap the "Pad" tab at the bottom of the dialog box. On the tab screen that appears, select the copy source bank number and pad number, and the copy destination bank number and pad number (bank number and pad number of the data being edited), and then click the [OK] button.
- To copy a pattern, tap the "Pattern" tab at the bottom of the dialog box. On the tab screen that appears, select the copy source pattern number and the copy destination pattern number (pattern number of the data being edited), and then click the [OK] button.

Copying a Section of Step Sequencer Data being Edited to the Data Being Edited

1. **In the procedure under "Copying a Section of TRACKFORMER Step Sequencer Data to Data Being Edited", select "Current" for Type.**
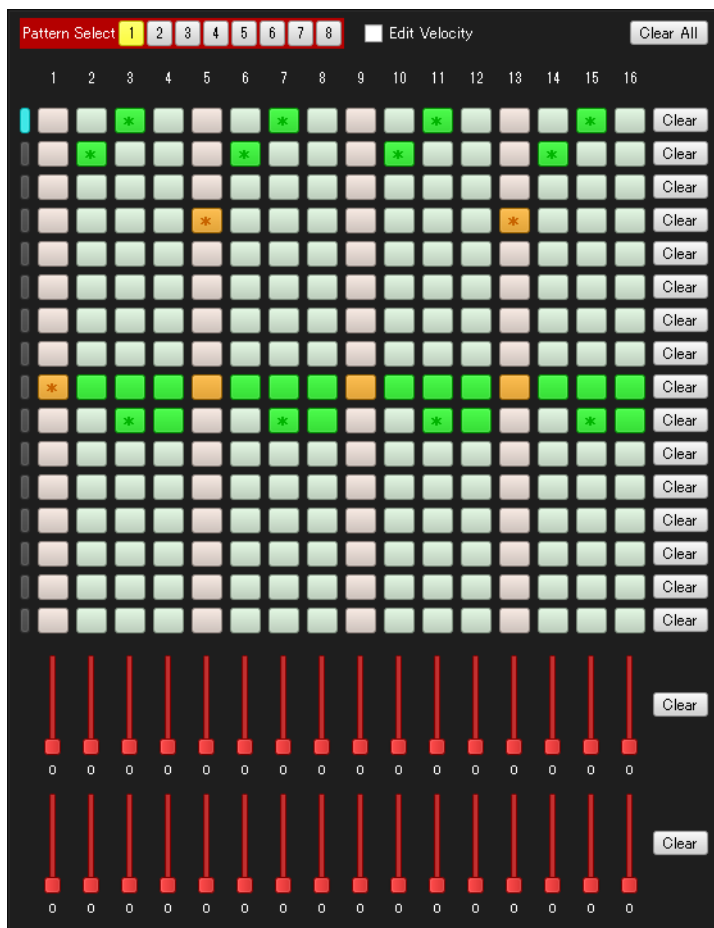
   Selecting "Current" will cause the area number list to become blank.

2. **Configure appropriate bank number, pad number, pattern number and other settings, and then click the [OK] button.**

   This copies data being edited from one bank, pad, and pattern location to another.

Using the Step Input Panel

- Panel

- Step Buttons

Off		On		Tied	
		✳	✳		

- Each click of a step button toggles it between on and off.

- Right-clicking a step button ties it to the next turned on step button to the left of (before) it. If there is no turned on step button to the left of the right-clicked button, all the buttons from button 1 up to and including the right-clicked button will become tied.

- Clicking a step button that is on or tied will turn off the clicked button and all buttons tied to it.

- Clicking the [Clear] button to the right of a pad line turns off all 16 step buttons in that line and initializes their velocity.

- Clicking the [Clear] button to the right of a control part line initializes all 16 step values of the control pads.

- Clicking the [Clear All] button performs operations equivalent to clicking all of the [Clear] buttons described above.

- Selecting the "Edit Velocity" check box displays a velocity input panel under the currently selected pad. The input panel can be used to configure velocity settings for each step.

- To toggle a pad between being selected or deselected, click one of the pad's step buttons or click the button to the left of the step buttons.

Effect Editor Operations

Testing the Effect Being Edited

- Click the [Test Effect] button. This performs a test of the effect data you are currently editing.

- Click the button again to stop the test.

- Operating the TRACKFORMER FX1 knob, FX2 knob, or ASSIGNABLE fader while a test is in progress will modify the parameter assigned to the controller that is operated.

- The velocity value sent to the effect being tested depends on the location where the [Test Effect] button is clicked. Clicking the left side of the [Test Effect] button results in a small velocity value, while clicking the right side results in a large velocity value.

Swapping Block B and Block C Data

- Click the [Swap B/C] button.

- This swaps the data of effect Block B with the data of effect Block C.

- Note that the block data will not be swapped if the current data type of effect Block C is one that cannot be set for effect Block B.

Using the Step Back Pattern Input Panel

- For information about step back patterns, see "Step Back" (page 38).

- The overall step back pattern is edited by combining individual patterns.

- Pressing the [+] button moves the pattern towards the back and inputs a new pattern.

- Pressing the [−] button deletes the pattern.

- Performing a "From" and/or "Length" operation for a pattern causes the figure that shows the step back effect to be refreshed accordingly.

Using the Gater Pattern Input Panel

- For information about gater patterns, see "Gater" (page 40).

- Each click of a button toggles it between on and off.

- Right-clicking a button that is off turns on all buttons between it and the next turned on button before it. Right-clicking a button that is on turns off all buttons between it and the next turned off button before it.

Transfer Mode

Function Overview

Use this mode to perform the operations below.

- Save user data you created with TRACKFORMER to your computer.
- Transferred user data files from your computer to TRACKFORMER.
- Delete TRACKFORMER user data.
- Delete user data stored on your computer.

Important!

- This mode uses TRACKFORMER MIDI data communication and bulk dump data transfer functions. Be sure to read the "MIDI Data Communication Function Precautions" on page 4 before using this mode.

Screen Elements

- The screen shots in this manual are for Windows 7.
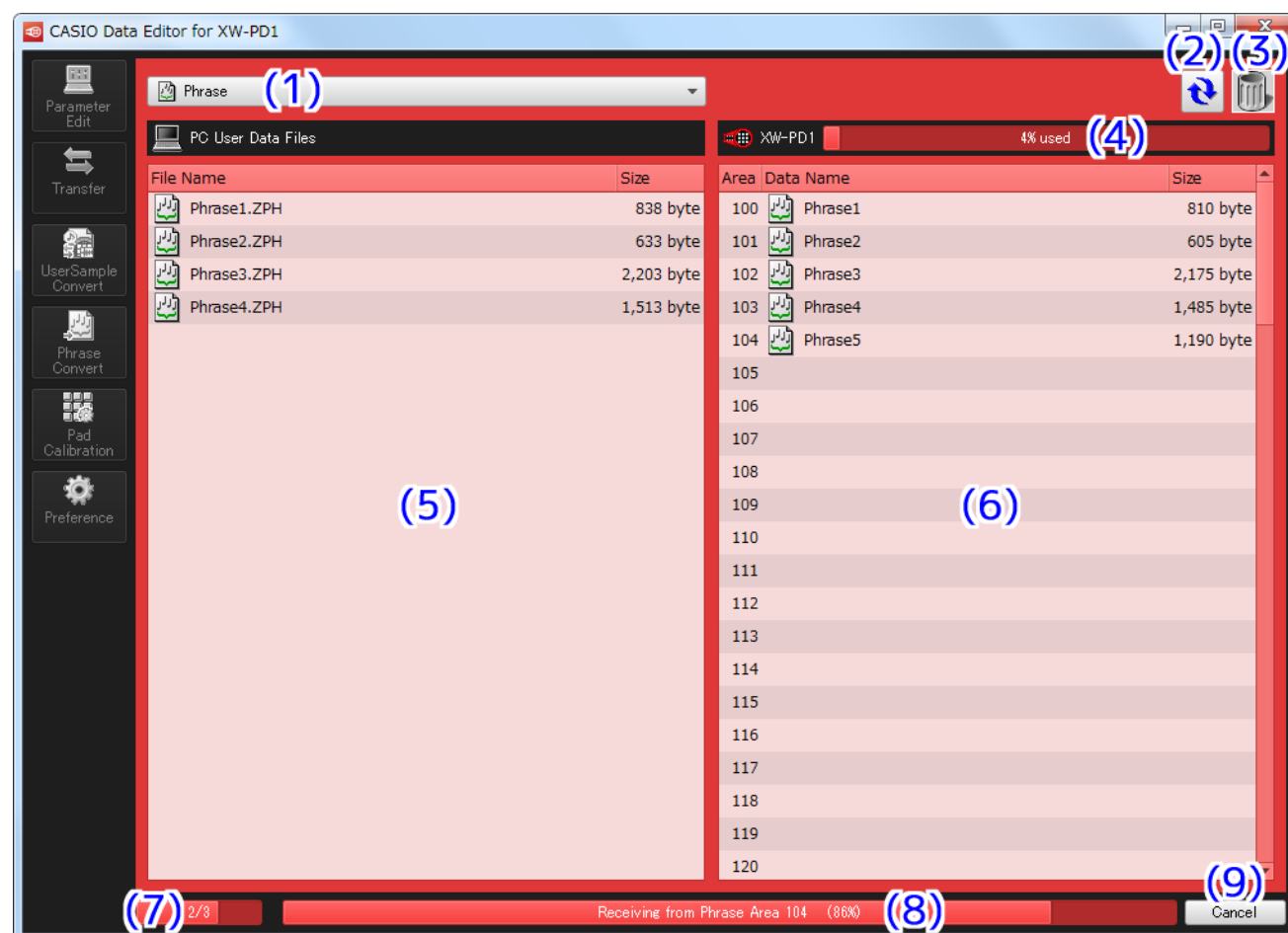
(1) Data type selection box

Selects that data type to be handled by this mode. The files that appear in the computer file list (5) and the data in the TRACKFORMER data list depend on the data type selected here.

(2) Reload button

Refreshes the computer file list (5) and TRACKFORMER data list (6).Note that while this mode is being used, Data Editor does not automatically refresh its display contents when user data is modified by TRACKFORMER or when the computer data file folder (page 27) is modified by an operation other than a Data Editor operation. In such cases, click the reload button to refresh display contents.

(3) Trash

Delete TRACKFORMER data or computer files by placing them in here.

(4) Memory usage bar

Shows the current amount of TRACKFORMER memory used. The memory usage bar is displayed while "Phrase" is selected with the data type selection box (1). Memory usage cannot exceed 100%.

(5) Computer file list

Shows a list of files stored in your computer's data file folder (page 27).

(6) TRACKFORMER data list

Shows a list of user data stored in TRACKFORMER memory.

(7) Overall progress bar

Shows the progress of multiple processes that are scheduled and being executed. This bar is displayed only while a process is being executed.

(8) Individual process progress bar

Shows the progress of the process currently being executed. This bar is displayed only while a process is being executed.

(9) Cancel button

Click to cancel an on-going transfer or data delete process. This button is displayed only while a process is being executed.

Operation Procedures

To transfer data from TRACKFORMER to your computer

1. **Use the data type selection box (1) to select the type of data you want to transfer to the computer.**

2. **In the TRACKFORMER data list (6), find the data you want to transfer to the computer.**

3. **Drag the data to be transferred from the TRACKFORMER data list (6) to the computer file list (5).**

   Data transfer processes are scheduled, and executed in sequence. Each time a transfer is completed, the transferred file appears in the computer file list (5).

IMPORTANT!
- **File sizes shown in the computer file list (5) are different from the file sizes of the original files in the TRACKFORMER data list (6).**

To transfer data from a computer to TRACKFORMER

1. **Use the data type selection box (1) to select the type of data you want to transfer to the computer.**

2. **In the computer data list (5), find the file you want to transfer to TRACKFORMER.**

3. **In the TRACKFORMER data list (6), find the area to which you want to transfer the data.**

4. **Drag the data to be transferred from the computer file list (5) to the TRACKFORMER data list (5).**

   Data transfer processes are scheduled, and executed in sequence. As each transfer process is complete, the transferred data appears in the TRACKFORMER data list (6). If there is already data in the transfer destination area you selected, an overwrite confirmation message will appear just before the transfer process to that area is executed. Note that overwritten data cannot be recovered. To overwrite the existing data with the newly transferred data, click the [Yes] button.

IMPORTANT!
- **File sizes shown in the TRACKFORMER file list (6) are different from the file sizes of the original files in the computer data list (5).**

To delete data from TRACKFORMER memory

1. **Use the data type selection box (1) to select the type of data you want to delete from TRACKFORMER.**

2. **In the TRACKFORMER data list (6), find the data you want to delete.**

3. **Drag the data to be transferred from the TRACKFORMER data list (6) to trash (3).**

   Data delete processes are scheduled, and executed in sequence. As each delete process is complete, the deleted data is removed from the TRACKFORMER data list (6).

To delete user data files from your computer

1. **Use the data type selection box (1) to select the type of data you want to delete from your computer.**

2. **In the computer data list (5), find the file you want to delete.**

3. **Drag the data to be transferred from the computer file list (5) to trash (3).**

   Data Editor trash works the same way as the trash function of your computer's operating system.

To rename a user data file on your computer

1. **In the computer file list (5), click the file you want to rename so it becomes selected, and then click it again.**

2. **This will enable file name input, so input the new file name.**

3. **After the file name is the way you want, press your computer's [Enter] key.**

To cancel an on-going transfer or delete process

Clicking the [Cancel] (9) button that appears while a transfer or TRACKFORMER data delete process is in progress will display a cancel confirmation dialog box. Click the [Yes] button to cancel the process.

This will cancel the current on-going process as well as all other scheduled processes.

IMPORTANT!
* **A process that has already been completed cannot be cancelled.**

User Sample Convert Mode

Function Overview

Use this mode to perform the operations below.

- Convert WAVE files to and from user sample data files.
- Convert user sample data files to WAVE files.

Important!

- This mode only supports reading of WAVE files of the format shown below.

> **Data format: Linear PCM**
> **Quantization bit rate: 8bit/sample unsigned, 16bit/sample signed, 24bit/sample signed, 32bit/sample signed**

- Some WAVE files may not be supported even if they meet the above requirements.
- WAVE files saved by this mode are the format shown below.

> **Data format: Linear PCM**
> **Quantization bit rate: 16 bit/sample unsigned**
> **Sampling frequency: 42819 Hz**
> **Channels: Monaural**

- Using this mode to import a WAVE file that exceeds the allowable user sample data file length will cause the part that exceeds the allowable length to be cut off automatically.
- To transfer a converted user sample data file to TRACKFORMER, use the Data Editor Transfer mode.

Screen Elements

- The screen shots in this manual are for Windows 7.

- The bottom of the screen appears as shown below while a conversion process is in progress.

(1) Reload button

Refreshes the WAVE file list (3) and user sample data file list (4). Note that while this mode is being used, Data Editor does not automatically refresh display contents when the computer data file folder (page 27) is modified by an operation other than a Data Editor operation. In such cases, click the reload button to refresh display contents.

(2) Trash

Delete WAVE files or user sample data files by placing them in here.

(3) WAVE file list

Shows a list of WAVE files stored in your computer's data file folder (page 27).

(4) User sample data file list

Shows a list of user sample data files stored in your computer's data file folder (page 27).

(5) User sample data length setting box

Two maximum user sample data lengths are supported by TRACKFORMER: 3 seconds and 9 seconds. Use this setting to specify the user sample data length of the file converted from a WAVE file.

(6) Tempo sync setting panel

Playback of user sample data on TRACKFORMER can be synced with a current temp value. This panel can be used to enable or disable tempo syncing, and to specify what tempo should be applied to the conversion source WAVE file.

(7) Overall progress bar

Shows the progress of multiple conversion processes that are scheduled and being executed. This button is displayed only while a conversion process is being executed.

(8) Individual item progress bar

Shows the progress of the conversion process currently being executed. This button is displayed only while a conversion process is being executed.

(9) Cancel button

Click to cancel an on-going conversion process. This button is displayed only while a conversion process is being executed.

Operation Procedures

To convert a WAVE file to a user sample data file

1. In the WAVE file list (3), find the WAVE file you want to convert.

2. Drag the file from the WAVE file list (3) to the user sample data file list (4).

Data conversion processes are scheduled, and executed in sequence. Each time a process is completed, the converted file appears in the user sample data file list (4).

To convert a user sample data file to a WAVE file

1. In the user sample data file list (4), find the user sample data file you want to convert.

2. Drag the file from the user sample data file list (4) to the WAVE file list (3).

Data conversion processes are scheduled, and executed in sequence. Each time a process is completed, the converted file appears in the WAVE file list (3).

To delete a WAVE file or a user sample data file

1. In the WAVE file list (3) or user sample data file list (4), find the file you want to delete.

2. Drag the file from the WAVE file list (3) or user sample data file list (4) to trash (2).

Data Editor trash works the same way as the trash function of your computer's operating system.

To rename a WAVE file or user sample data file

1. In the WAVE file list (3) or user sample data file list (4), click the file you want to rename so it becomes selected, and then click it again.

2. This will enable file name input, so input the new file name.

3. After the file name is the way you want, press your computer's [Enter] key.

To cancel an on-going conversion process

- Clicking the [Cancel] (11) button that appears while a process is in progress will display a cancel confirmation dialog box. Click the [Yes] button to cancel the process.
  This will cancel the current on-going conversion process as well as all other scheduled processes.

Phrase Convert Mode

Function Overview

Use this mode to convert SMF format 0, 1 files to phrase data files, and to save the results.

Important!

- Some MIDI files may not be supported even if they are SMF format 0, 1.
- To transfer a converted phrase data file to TRACKFORMER, use the Data Editor Transfer mode.

Screen Elements

- The screen shots in this manual are for Windows 7.
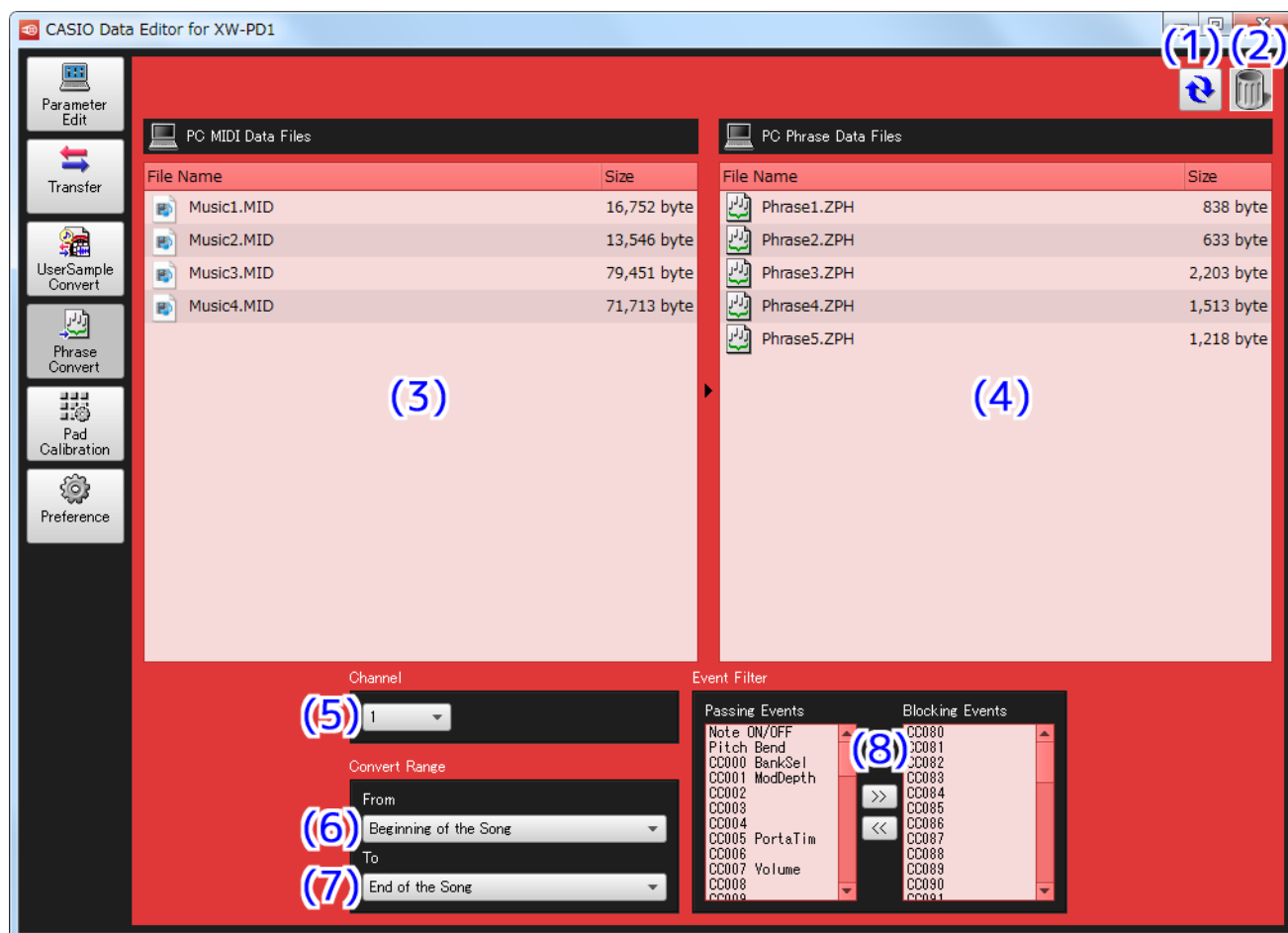
- The bottom of the screen appears as shown below while a conversion process is in progress.
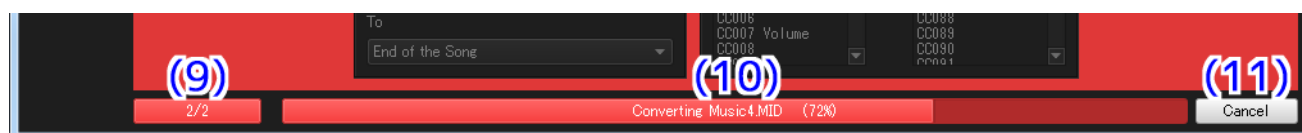
(1) Reload button

Refreshes the MIDI file list (3) and phrase data file list (4). Note that while this mode is being used, Data Editor does not automatically refresh display contents when the computer data file folder (page 27) is modified by an operation other than a Data Editor operation. In such cases, click the reload button to refresh display contents.

(2) Trash

Delete MIDI files or phrase data files by placing them in here.

(3) MIDI file list

Shows a list of MIDI files stored in your computer's data file folder (page 27).

(4) Phrase data file list

Shows a list of phrase data files stored in your computer's data file folder (page 27).

(5) Conversion channel selection box

Specifies the channel for conversion to phrase data.

(6) Conversion start point selection box

Specifies the start point for conversion to phrase data.

(7) Conversion end point selection box

Specifies the end point for conversion to phrase data.

(8) Event filter setting panel

When converting to a phrase data file, specifies whether or not specific events within the MIDI file should be excluded. The "Passing Events" list on the left shows events that will be converted. The "Blocking Events" list on the right shows events that will be excluded.

(9) Overall progress bar

Shows the progress of multiple conversion processes that are scheduled and being executed. This button is displayed only while a conversion process is being executed.

(10) Individual item progress bar

Shows the progress of the conversion process currently being executed. This button is displayed only while a conversion process is being executed.

(11) Cancel button

Click to cancel an on-going conversion process. This button is displayed only while a conversion process is being executed.

Operation Procedures

To convert a MIDI file to a phrase data file

1. In the MIDI file list (3), find the MIDI file you want to convert.

2. Drag the file from the MIDI file list (3) to the phrase data file list (4).

Data conversion processes are scheduled, and executed in sequence. Each time a process is completed, the converted file appears in the phrase data list (4).

Configuring Conversion Process Settings

■ To specify the conversion target channel

Use the conversion channel selection box (5) to specify which MIDI file channel's data should be used for conversion to a phrase data file. Data that is not of the selected channel is ignored.

■ To specify the conversion process start point

Use the conversion start point selection box (6) to specify the conversion process start point inside the conversion channel specified by the conversion channel selection box (5).

- Beginning of the Song

  Converts from beginning of the data.
- 1st Note

  Converts from the first note.
- Beginning of the Measure of 1st Note

  Converts from the first note at the beginning of the measure.
- 1st Event

  Converts from the first conversion target event.
- Beginning of the Measure of 1st Event

  Converts from the measure that has the first conversion target event.

■ To specify the conversion process end point

Use the conversion end point selection box (7) to specify the conversion process end point inside the conversion channel specified by the conversion channel selection box (5).

- End of the Song

  Converts up to the end of the data.
- Last Event

  Converts up to the last conversion target event.
- End of the Measure of Last Event

  Converts up to the end of the measure that contains the last conversion target event.

■ To specify events to be excluded from conversion

1. **In the "Passing Events" list on the left side of the event filter setting panel (8), select an event you want to exclude.**

2. **Click the right arrow (>>) button between the two event filter setting (8) panel lists.**

   This will move the selected event from the "Passing Events" list to the "Blocking Events" list, making it an excluded event.

■ To specify events to be included in conversion

1. **In the "Blocking Events" list on the right side of the event filter setting panel (8), select an event you want to include.**

2. **Click the left arrow (<<) button between the two event filter setting (8) panel lists.**

   This will move the selected event from the "Blocking Events" list to the "Passing Events" list, making it an included event.

   The events below can excluded or included.
   • Note On/Off
   • Pitch Bend
   • Control Change Number 000 to 119

To delete a MIDI file or phrase data file

1. **In the MIDI file list (3) or phrase data file list (4), find the file you want to delete.**

2. **Drag the file from the MIDI file list (3) or phrase data file list (4) to trash (2).**

   Data Editor trash works the same way as the trash function of your computer's operating system.

To rename a MIDI file or phrase data file

1. **In the MIDI file list (3) or phrase data file list (4), click the file you want to rename so it becomes selected, and then click it again.**

2. **This will enable file name input, so input the new file name.**

3. **After the file name is the way you want, press your computer's [Enter] key.**

To cancel an on-going conversion process

• Clicking the [Cancel] (11) button that appears while a process is in progress will display a cancel confirmation dialog box. Click the [Yes] button to cancel the process.
   This will cancel the current on-going conversion process as well as all other scheduled processes.

Pad Calibration Mode

Function Overview

Use this mode to adjust of TRACKFORMER pad sensitivity.

Important!

- This mode uses TRACKFORMER MIDI data communication and data storage functions. Be sure to read the "MIDI Data Communication Function Precautions" on page 4 before using this mode.

Screen Elements

- The screen shots in this manual are for Windows 7.
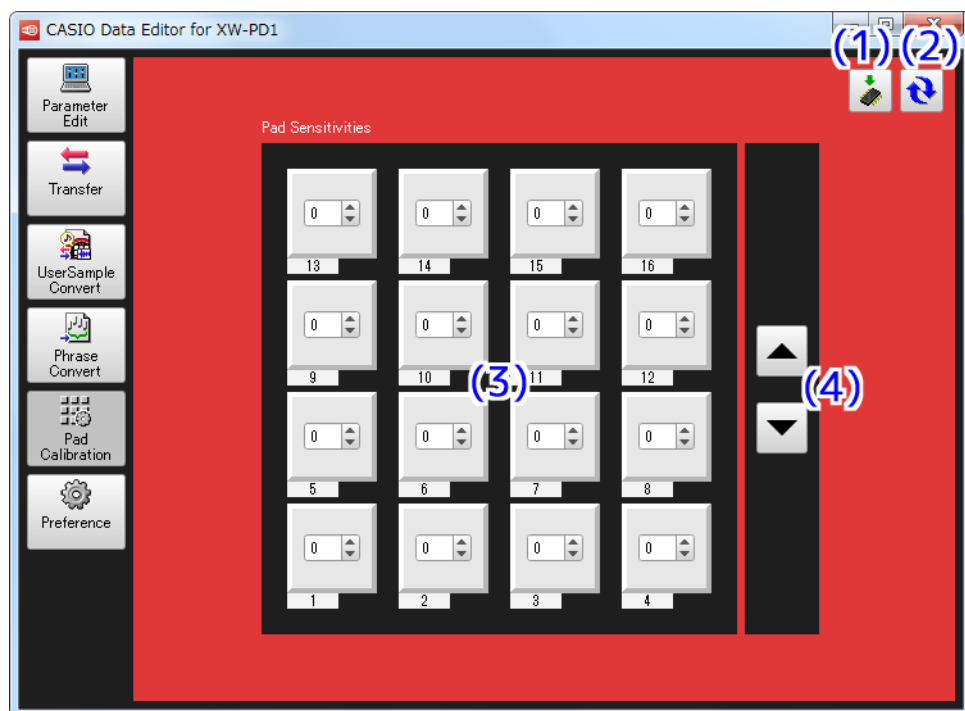
(1) Save button

Saves configured sensitivity values to TRACKFORMER. Sensitivity values saved to TRACKFORMER are automatically applied whenever power is turned on. This button is disabled until current TRACKFORMER sensitivity settings are read by pressing the reload button (2) is pressed.

(2) Reload button

Reads the current TRACKFORMER sensitivity values. Read sensitivity values are displayed in the pad sensitivity adjustment panel (3).

(3) Pad sensitivity adjustment panel

Use this panel to make adjustments to the sensitivity value of each individual pad.

(4) All pad sensitivity adjustment panel

Use these buttons to raise or lower the sensitivity values of all pads at the same time. Press the up button to raise the values, or the down button to lower the values.

Configuring Settings

1. **Press the reload button (2) to read current TRACKFORMER sensitivity values.**

2. **While tapping TRACKFORMER pads, use the pad sensitivity adjustment panel (3) to raise or lower sensitivity value until the desired sensitivity is reached.**

3. **To raise or lower the sensitivity values of all pads at the same time, use the all pad sensitivity adjustment buttons (4).**

4. **After adjusting all of the pads to the desired sensitivity, press the save button (1) to save them to TRACKFORMER.**

IMPORTANT!
- **If you do not save track sensitivity values, they will be discarded when you turn off TRACKFORMER.**

Preference Mode

Function Overview

Use this mode to perform the operations below.

- Configure MIDI device settings
- Configure folder settings

Screen Elements

- The screen shots in this manual are for Windows 7.
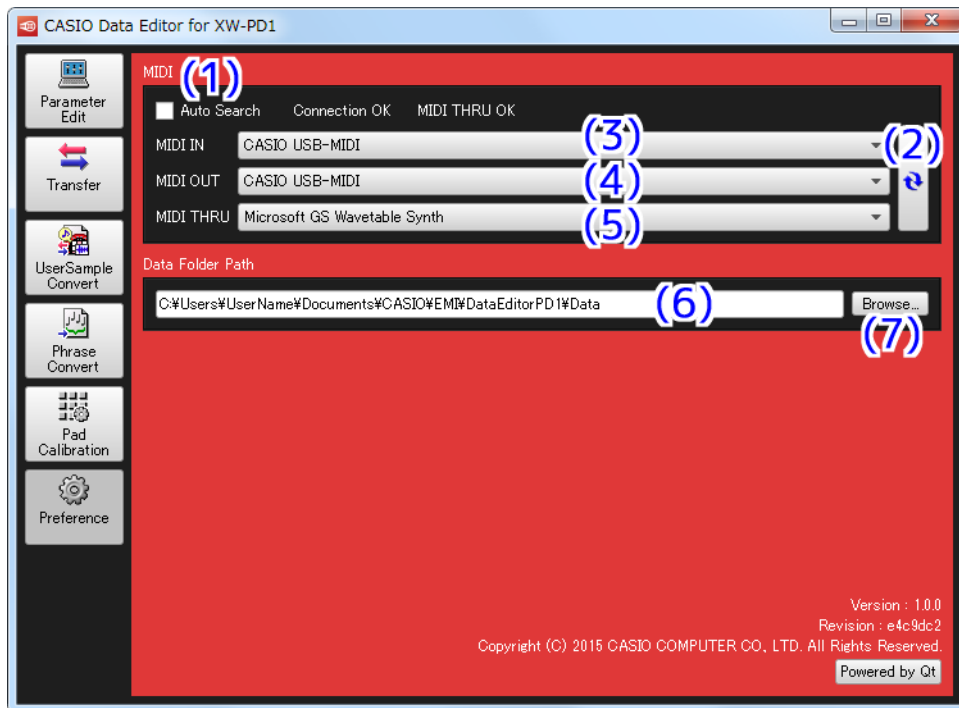
(1) Auto Search

Selecting this check box enables auto TRACKFORMER search and connection.

(2) MIDI device reload button

Reloads the MIDI device.

(3) MIDI IN device

Selects the MIDI IN device.

(4) MIDI OUT device

Selects the MIDI OUT device.

(5) MIDI THRU device

Selects the MIDI THRU device. MIDI messages sent from a MIDI IN device are sent as-is to the MIDI THRU device. However, MIDI messages used for communication between TRACKFORMER and Data Editor are not sent.

(6) Data file folder

Shows the path specified as the storage destination of files. The files placed in this folder are displayed in the applicable mode's computer file list.

(7) Data file folder path selection button

Displays a dialog box for specifying the storage destination of files.

Configuring Settings

■ MIDI Settings

- Select the Auto Search check box (1) to establish a USB connection between TRACKFORMER and your computer by USB. Selecting this check box enables auto TRACKFORMER search and connection.
- If there is some other equipment between TRANSFORMER and your computer, clear the Auto Search check box (1), and configure MIDI IN device (3) and MIDI OUT device (4) manually.
  - The message "Connection OK" will appear next to Auto Search (1) when TRACKFORMER and the computer connect successfully. If connection fails for some reason, the message "Failed to Connect to XW-PD1" will appear. If this happens, try the countermeasures provided for the "Communication Error" error message (page 32).
- Configure MIDI THRU device settings manually. If you do not plan to use MIDI THRU, select the "No Assign" setting.
  - Successful connection with the MIDI THRU device will cause the message "MIDI THRU OK" to appear to the right of the "Connection OK" or "Failed to Connect to XW-PD1" message. If MIDI THRU connection fails, the message "MIDI THRU NG" will appear.

■ Folder Setting

- Click the data file folder path selection button (7) and specify the desired folder.

Helpful Tips

Scrolling by Dragging with the Right Mouse Button

Scroll bars, like the one shown below, may appear for some lists or panes in the various modes. If the mouse pointer is located within the range of a scrollable display element, you can also scroll up, down, left, or right by a holding down the right mouse button as you drag in the desired direction.
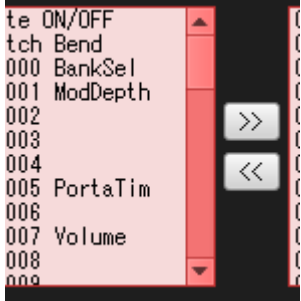
Using a File in a Particular Location on Your Computer

Drag and drop of files is supported from a window outside of File Editor into a mode's file list or data list. Drag and drop can be used to copy files to the Data Editor data file folder (page 27) and to directly transfer or convert files without using the data file folder.

IMPORTANT!
* **Drag and drop is not supported for files with a file name extension that is not supported by Data Editor.**

Data Name Rules

Step sequencer, effect, sample, and phrase data items have unique names, and TRACKFORMER displays the applicable name when a data item is selected. Data item names are assigned in accordance with the name of the file selected for a send operation in the Transfer mode. When you save data in the Parameter Edit mode, you can assign the name you want using the data name box. Data names are subject to the rules below.

- A Step Sequencer data name can be up to 15 characters long. Names of all other types of data can be up to 12 characters long.
- The table below shows supported characters for data names. Any character that is not included in this table is replaced by an underline character (_).

0	1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I	J
K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z	#	—	_	(Space)

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User Data

	Icon	File Name Extension	Deletable	Remarks
Step Sequencer data		.ZSS	Yes	–
Effect data		.ZFX	Yes	–
User sample data		.ZWT	Yes	The area that can be sent with the Transfer mode depends on the file size. The Transfer mode treats short and long user sample data types separately.
Phrase data		.ZPH	Yes	Since overall Phrase area memory capacity is limited, a transfer operation that exceeds TRACKFORMER memory capacity is not allowed.
MIDI map data		.ZMM	No	–
System setting data		.ZST	No	–

Error Messages

Certain operations, TRACKFORMER conditions, the Data Editor environment, and other factors may cause error messages to appear. Use the table below to look up the error message and find out what actions are required by you.

Message	Cause	Required Action
Already Running	Attempting to start up Data Editor while it is already running.	Use the running instance of Data Editor.
Bulk Dump is Disabled	TRACKFORMER set up is not compatible with bulk dump data transfer.	Display the tempo setting on TRACKFORMER, make sure you are not touching any pad, button, or other controller, and then try again.
Communication Error	Generation of a communication error with TRACKFORMER.	• Confirm that TRACKFORMER is correctly connected to your computer. • Confirm that TRACKFORMER MIDI settings and Data Editor MIDI settings are compatible with each other. For information about TRACKFORMER settings, see "Entering the MIDI Control Mode" in the User's Guide Tutorial. For information about Data Editor MIDI settings, see "MIDI Settings" on page 28. • If another application is running, exit it. • Make sure there is only one TRACKFORMER unit connected to the computer. • Do not connect multiple computers to a single TRACKFORMER unit while Data Editor is running. • Do not operate TRACKFORMER while a data communication operation is in progress. • If you are using a USB hub or extension cable, check the connection and correctly reconnect, if necessary. • If the measures above do not resolve the problem, try turning of TRACKFORMER and restarting Data Editor.
File Read Error	Error generated while reading a file and/or folder.	• Check if the file and/or folder actually exists. • On your computer, check if the file and/or folder can be imported by attempting to import it into another application, etc. • Check if the file is being used by another application. • Check if the data file folder path contains special characters. • If the file name contains special characters, specify a data file folder in a location that results in the path name consisting of all single-byte characters.
File Write Error	Write error generated while creating a file and/or folder.	• Check if the location you are attempting to write to actually exists. • Check if the file and/or actually exists. • On your computer, check the write/read only status of the file and/or folder, and check if it can be written to by attempting to write to it with another application, etc. • If you are using a USB flash drive or other memory device, make sure that the protect switch is not in the write disable position. • Check if the file is being used by another application. • Check if there is enough remaining memory capacity on your computer and/or the USB flash drive. • Check if the data file folder path contains special characters. • If the file name contains special characters, specify a data file folder in a location that results in the path name consisting of all single-byte characters.

Message	Cause	Required Action
File Format Error	File format not supported by File Editor.	Unsupported file formats cannot be used with File Editor, so use a different file.
	Corrupted file data.	The corrupted file cannot be used with File Editor. If you have another, uncorrupted, copy of the same data on TRACKFORMER, save it and use the uncorrupted file.
Memory Full	User data memory is full.	Delete phrase data you no longer need to free up memory.
File Too Large	The result of a conversion operation is phrase data that exceeds the maximum size supported by TRACKFORMER.	Adjust the size of the segment being converted and the event filter.
Keyboard Data is Different	Display information does not correctly reflect the data in TRACKFORMER memory.	Click the reload button to refresh the screen contents.
Phrase Convert Error	Conversion start point and end point could not be specified because there is no valid event in the MIDI file.	• Check the phrase conversion settings. • Select a MIDI file that contains a valid event.

Appendix

Step Sequencer Data Structure

Name			Settings	Description
Name			–	Data name 15 characters max.
Tempo			60 to 200	Sequencer performance tempo
Pattern Group Enable			Off, On	Off: Auto pattern switching disabled
Pattern Group			(Group 1 to 4)	Parameters of each pattern group
	Length		1 to 16	Number of patterns that make up a pattern group
	Max Step		1 to 16	For playback of each pattern, specifies up to which step should be played.
	Swing		0% to 100%	Percentages of sound duration of even number steps and odd number steps. 50% specifies the same percentage for both, while a larger number lengthens even number steps.
	Pattern Sequence		(Sequence 1 to 16)	Pattern playback sequence and method. Patterns specified by Number (below) are played back, starting from Sequence 1.
		Number	1 to 8	Playback pattern number
		Key Shift	−24 to 0 to 24	Key shift amount during pattern playback
Master EQ Enable			Off, On	Master equalizer enable/disable
Master EQ			(Low, Low Mid, High Mid, High)	Parameters of each master equalizer band
	Frequency		Low: 50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz	Reference frequency for band volume adjustment
			Low Mid, High Mid: 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1.0kHz, 1.3kHz, 1.6kHz, 2.0kHz, 2.5kHz, 3.2kHz, 4.0kHz, 5.0kHz, 6.3kHz, 8.0kHz	
			High: 6.0kHz, 8.0kHz, 10kHz, 13kHz, 16kHz	
	Gain		−12 to 0 to 12	Volume gain/damping factor of the band specified by Frequency
Reverb Send			0 to 127	Reverb conditions when the reverb effect is no applied by a pad
Maximizer Gain			Off, 1 to 127	How much the sound pressure of output sound should be raised
Default Bank			Banks 1 to 4	Number of the bank whose pads are operational immediately after the Step Sequencer number is changed
Bank			(Banks 1 to 4)	Parameters of each bank
	Type		Drum, Melody, Synth (Bank1 only), Sample	Bank pad set type
	Number		Refer to the User's Guide Tutorial: "Pad Set Tone List".	Of the current pad set types, specifies which data to allocate.
	Volume		0 to 127	Bank volume level
	Bend Range		0 to 24	Pitch change amount of bank sounds by pitch bend
	Mute		Off, On	Bank mute

Name				Settings	Description
Pad Data				(Pads 1 to 16)	Parameters of each part
	Type			Bank Type not Drum: Note, Effect, Phrase	Sound and effect type when a pad is tapped
				Bank Type is Drum: Sound, Effect, Phrase, Sample	
	Number			Type is Note: C-1 to G9	Of the current pad types, specifies which data to allocate.
				Type is Effect: (Refer to User's Guide Tutorial: "Effect List")	
				Type is Phase: (Refer to User's Guide Tutorial: "Tone Type: Phrase")	
				Type is Sound: (Refer to User's Guide Tutorial: "Tone Type: Sound")	
				Type is Sample: 0 to 35	
	Switch Type			Momental, Toggle	Momental: On while pad is pressed, off while pad is released.
					Toggle: Each press of pad toggles between on and off.
	Retrigger			Off, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 3/8, 1/2, 1T, 3/4, 1	Number of measures a sound should be sounded while a pad is pressed. Nothing is sounded when this setting is "Off".
	Fx Line Select			All, Current, Bank1, Bank2, Bank3, Bank4, Internal, External	Setting can be configured when Pad Type is Effect. Specifies to which sound an effect is applied when this pad is pressed.
	Sampling Play Style			Gate, Loop, Oneshot	Setting can be configured when Pad Type is Sample.
					Gate: The sample is played once, as long as the pad is depressed until the end. Releasing the pad stops playback.
					Loop: Sample playback repeats as long as the pad is depressed. Releasing the pad stops playback.
					One-Shot: Pressing the pad plays back the sample once, all the way through. The sample does not stop until playback reaches the end, even if the pad is released.
	Assign Group			Off, 1 to 8	Setting can be configured when Pad Type is Sound or Sample. Excludes sounding of pads of the same group number.
	Sound Volume			0 to 127	Setting can be configured when Pad Type is Sound or Sample. Pad volume level.
	Key Shift			−24 to 0 to 24	Setting can be configured when Pad Type is not Effect. Pad key shift amount.
	Mute			Off, On	Pad mute
	Pattern			(Patterns 1 to 8)	Pad pattern data
		Step Data		(Steps 1 to 16)	16 steps of pad data
			Note	Off, On, Tie	Step-by-step Off/On/Tie status
			Velocity	2 to 127	Step-by-step velocity

Name				Settings	Description
Control Data				(Parts 1 and 2)	Control part data
	Target			None, Bend, CC 00 to 97, FX1 Knob, FX2 Knob	Target of control part operation
	Smooth			Off, On	Enables/disables interpolation of value transition between steps
	Pattern			(Patterns 1 to 8)	Control part pattern data
		Step Data		(Steps 1 to 16)	16 steps of control part data
			Value	Target is Bend: –128 to 0 to 127 Target is not Bend: 0 to 127	Step-by-step control values Minus values are used only when Target is Bend.

Effect Data Structure and Effect Type/Parameter List

Effect Data Structure

Name			Settings	Description
Name				Data name 12 characters max.
Block			(Blocks A, B, C, D)	Parameters for each block
	Type		No Assign, and type of each effect of "Effect System" in the User's Guide Tutorial.	Effect type No Assign: No effect applied.
	Assignable Parameters		(Number of effect parameters depends on the Type.)	Effect parameters that can be controlled by knobs or faders
		Default	Depends on the effect parameter.	Effect parameter initial default setting used when the FX KNOB REFLECT setting is "Off"
		Min	Depends on the effect parameter.	Minimum possible value that can be specified for this effect parameter
		Max	Depends on the effect parameter.	Maximum possible value that can be specified for this effect parameter
		Controller Assign	None, FX1 Knob, FX2 Knob, ASSIGNABLE Fader	Specifies whether or not knob and/or fader operations are reflected in this effect parameter when an effect parameter is being applied. When being reflected, "Min" is the value when the knob or fader is moved fully to the left. "Max is the value at the full right position. Specifying a "Max" that is smaller than "Min" causes the value to become smaller when the knob or fader is moved to the right.
		Velocity Assign	Off, On	Specifies whether or not the velocity when a pad is tapped is reflected in this effect parameter. When reflected, the effect is applied in the vicinity of the "Min" value when the pad is lightly tapped, and in the vicinity of the "Max" value in the case of a strong tap. Specifying a "Max" that is smaller than "Min" causes the parameter value to become smaller as the velocity increases.
	Non Assignable Parameters		(Data structure depends on Type.)	Effect parameters that cannot be controlled by knobs or faders

Effect Type and Parameter List

■ Effects that can be assigned to Block A only

Roll

Performs loop playback for the specified time using the effect start point as a base point.

Parameter Name	Settings	Description
Tempo Sync	See "LFO and Other Speeds".	See "LFO and Other Speeds".
Frequency	See "LFO and Other Speeds".	See "LFO and Other Speeds".
Retrigger	0 to 127	After loop playback is performed the number of times specified by this value, the base point moves to the current point in time.
Feedback	0 to 127	A smaller value lowers the volume level with each loop. The volume level does not lower when this setting is 127.
Overdub	0 to 127	Volume level of an input sound overdubbed onto a loop playback sound when the sound is input. Specifying a value of 0 disables overdubbing.

Reverse Roll

Performs reverse loop playback for the specified time using the effect start point as a base point.

• Parameters are the same as those for Normal Roll.

Step Back

You can use step back to return the playback sound up to four beats back from the current playback position. Patterns can be assembled to control how the return is performed.

Parameter Name	Settings	Description
Keep	Off/On	On: Playback continues to the end even if the pad is released partway through the pattern.
Transform	See the explanation below.	Transforms pattern contents and plays them.
Pattern	–	Step Back playback pattern. This is a non-assignable parameter.

Transform Parameter Settings

Normal : Plays the pattern as-is.

Reverse : Plays the pattern from the end to the beginning.

Skip : Skips one pattern and plays.

Stick : With the first set of pattern data as Layer 1, odd numbered "from" are changed to 0 and even numbered "from" are changed to 128 and then play back is performed.

Random : Each set of pattern data's "from" is changed randomly and then playback is performed.

Shuffle : The arrangement of pattern data sets is randomly re-arranged and then playback is performed.

Patterns

• Up to 32 sets of pattern data can be linked.

• For each set of pattern data, you can specify from how far back (from) and for how long (length) to play back.

• The playback speed is uniform speed and playback direction is forward only.

• "from" and "length" can be specified a value that divides four beats into 128 segments. When "from" is 128, playback is performed from exactly four beats back.

Tape Stop

Creates the effect of stopping a turntable with your hand, and releasing or moving the turntable. When assigned to a pad, pressing the pad starts deceleration, and then stops playback after a short while. Releasing the pad after that causes the turntable to accelerate and then return to its original speed.

Parameter Name	Settings	Description
Deceleration	0 to 127	Rate of deceleration. A larger value increases the rate of deceleration.
Acceleration	0 to 127	Rate of acceleration. A larger value increases the rate of acceleration.

LFO Scratch

This effect is a scratch operation by the ASSIGNABLE fader performed in accordance with LFO. Other effects cannot be used at the same time.

Parameter Name	Settings	Description
LFO Type	See "LFO Type Setting Options"	Selects the LFO waveform.
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Depth	0 to 127	A larger value increases the LFO amplitude.

■ Effects that can be assigned to Block B and Block C

Filter

The filter applies a band limit on sound height.

Parameter Name	Settings	Description
Filter Type	See the explanation below	Selects the filter type.
Cutoff	0-127	Reference frequency for cutoff. A larger value specifies a higher reference frequency.
Resonance	0-127	A larger value specifies greater resonance.
LFO Type	See "LFO Type Setting Options"	Selects the LFO waveform.
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Depth	0 to 127	A larger value increases the LFO amplitude.
Fade-in Speed	See "LFO and Other Speeds"	Speed at which an effect is gradually applied from the point where it is not applied when it starts.

Type Settings

LPF : Cuts high sounds.

BPF : Cuts low sounds.

HPF : Cuts high sounds and low sounds.

LPF-HPF : Operates as a LPF when the Cutoff value is less than 64. Operates as a HPF when the Cutoff value is 64 or greater.

Flanger

Applies reverberation to sound that produces an intense ringing and metallic effect

Parameter Name	Settings	Description
LFO Type	See "LFO Type Setting Options"	Selects the LFO waveform.
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Depth	0 to 127	A larger value increases the LFO amplitude.
Feedback	0 to 127	A larger value specifies greater feedback.
Wet Level	0 to 127	A larger value increases the flanger sound volume.

Tremolo

Uses the LFO to shift the volume level.

Parameter Name	Settings	Description
LFO Type	See "LFO Type Setting Options"	Selects the LFO waveform.
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Depth	0 to 127	A larger value increases the LFO amplitude.

Gater

Mutes sound output in accordance with the pattern.

Parameter Name	Settings	Description
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
PatternLength	1 to 32	Number of steps in a pattern. Any steps following the specified value are disregarded.
Pattern	–	Output/mute pattern. This is a non-assignable parameter.

Patterns

- Each cycle is equally divided into 32 steps.

- Each step has an On/Off setting. When a step is on, input sounds are allowed to pass as-is, while sound is muted by an off step.

Pitch Shifter

Changes the shift of a sound.

Parameter Name	Settings	Description
Pitch	–64 to 0 to 63	How much a pitch is shifted upwards and downwards. Raising this setting by 1 raises the pitch by 25 cents.
Chromatic	Off, On	On: Allows changes of pitch in 100-cent (semitone) units relative to the sound source.
Quality	1, 2, 3	A larger value results in a greater time difference between sounding of the sound source and sounding of the shifted tone, for better sound quality.
Dry Level	0 to 127	Output volume level of a sound that is not pitch shifted
Wet Level	0 to 127	Output volume level of pitch shifted sound
LFO Type	See "LFO Type Setting Options"	Selects the LFO waveform.
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Depth	0 to 127	A larger value increases the LFO amplitude.
Fade-in Speed	See "LFO and Other Speeds"	Speed at which an effect is gradually applied from the point where it is not applied when it starts

Distortion

Distorts the sound.

Parameter Name	Settings	Description
Depth	0 to 127	How much the input sound should be distorted
Output Level	0 to 127	Output volume level
Tone Color	0 to 127	Reference frequency of the low pass filter applied to the output tone. A smaller values produces a more muffled sound.

Crusher

Intentionally lowers the resolution of a tone.

Parameter Name	Settings	Description
Decimation	0 to 127	A larger value lowers the sampling frequency.
Bit Crush	0 to 6	A larger value lowers the amplitude resolution.

Ring Modulator

Multiplies the input tone with a sawtooth wave to create a metallic ring tone.

Parameter Name	Settings	Description
OSC Frequency	0 to 127	Sawtooth wave frequency. A larger values specifies a higher frequency.
Dry Level	0 to 127	Output sound volume level
Wet Level	0 to 127	Output ring modulated sound volume level

Noise Generator

Generates white noise.

Parameter Name	Settings	Description
Input Level	0 to 127	Input volume level. 0: Output sound is noise only.
Noise Level	0 to 127	Generated noise volume level
LPF Cutoff	0 to 127	Reference frequency of the low pass filter applied to the noise. A larger value specifies a higher frequency.
HPF Cutoff	0 to 127	Reference frequency of the high pass filter applied to the noise. A larger value specifies a higher frequency.
LFO Type	See "LFO Type Setting Options"	Selects the LFO waveform
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Depth	0 to 127	A larger value increases the LFO amplitude.

■ Effects that can be assigned to Block C only

Panner

Panner controls the orientation of the sound.

Parameter Name	Settings	Description
LFO Type	See "LFO Type Setting Options"	Selects the LFO waveform.
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Speed	See "LFO and Other Speeds"	See "LFO and Other Speeds".
LFO Depth	0 to 127	A larger value increases the LFO amplitude.
Center	–64 to 0 to 63	Central angle of the LFO amplitude. A negative (–) value is towards the left, while a positive (+) value is towards the right.

Delay

Delay produces a repeat effect and more expansive sound by delaying the input sound and creating feedback.

Parameter Name	Settings	Description
Tempo Sync	See "LFO and Other Speeds"	See "LFO and Other Speeds".
Time	See "LFO and Other Speeds"	See "LFO and Other Speeds".
Time Ratio L	0 to 127	Delay time ratio of the specified Time for the left side sound. 127: As specified by Time.
Time Ratio R	0 to 127	Delay time ratio of the specified Time for the right side sound. 127: As specified by Time.
Feedback Type	See the explanation below	Delay sound type
Feedback Level	0 to 127	Delay sound volume level
Feedback Damp	0 to 127	Damping amount of the high range of the delay sound. A larger value specifies faster damping.
Input Level	0 to 127	Input volume level
Wet Level	0 to 127	Delay sound output volume level

• Feedback Type Settings

LR Mix : Delay sound is average of left and right channel sounds.

L Only : Delay sound is left channel sound.

R Only : Delay sound is right channel sound.

• Maximum Delay Time

The maximum delay time for Delay is approximately 1.5 seconds. In cases that certain Tempo and Tempo Sync values require a longer delay time, the delay time is rounded to the maximum delay time.

■ Effects that can be assigned to Block D only

Reverb

Reverb generates reverberation in the input sound that simulates performance in a room, hall, or other venue, which is mixed with the sound source and then output.

Parameter Name	Settings	Description
Send	0 to 127	Volume level of the sound input to the reverb sound generation process
Level	0 to 127	Reverb sound output volume level
Time	0 to 127	Reverb sound sustain time

IMPORTANT!
• **Reverb itself is always operational even when this effect is not being applied. The Send parameter of the always operational reverb can be changed using step sequencer settings, but the Level and Time settings are fixed. The Reverb effect temporarily changes the Send, Level, and Time settings.**

■ LFO Types

This section explains the LFO types that can be selected with each effect.

LFO type name	Description
Off	No change with the passage of time.
Sine	Sine wave
Triangle	Triangle wave
Square	Square wave
SawUp	Upward sawtooth waveform over time
SawDown	Downward sawtooth waveform over time
PumpSoft	Downwardly convex curve that rises over time
PumpMid	Steeper curve than PumpSoft
PumpHard	Steeper curve than PumpMid
Random1	Randomly changed value. Relatively slow value change.
Random2	Randomly changed value. Relatively sharp value change.

■ LFO Type Setting Options

The table below shows the four LFO type setting options available for each effect.

Effect	LFO Types
Tremolo	Sine, Triangle, Square, SawUp, SawDown, PumpSoft, PumpMid, PumpHard, Random1, Random2
Noise	Off, Sine, Triangle, Square, SawUp, SawDown, PumpSoft, PumpMid, PumpHard, Random1, Random2
LFO Scratch	Sine, Triangle, Random2
Other than the above	Off, Sine, Triangle, Square, SawUp, SawDown, Random1, Random2

■ LFO and Other Speeds

The following settings can be synced with the current tempo: LFO Speed, Gater Speed, Roll and Reverse Roll Frequency, Delay Time and Filter, and Pitch Shifter Fade-in Speed. The parameters in this section are related to such syncing.

Tempo Sync

The table below shows the four available Tempo Sync setting options.

Setting Options	Description
Off	Speed is not synced with the current tempo. The speed parameter setting range is 0 to 127, and speed only is affected by this setting value. A larger value increases speed.
On	Speed is synced with the current tempo. The syncing method is selected in accordance with the speed parameter.
On(2)	Speed is synced with the current tempo. Selectable syncing methods are limited to powers of 2 (1/2, 1/4, 1/8, etc.)
On(3)	Speed is synced with the current tempo. Selectable syncing methods are limited to triplicate types (2/3, 1/3, 1/6, etc.)

LFO and Other Speed Setting Options

When the Tempo Sync setting is something other than "Off", selectable syncing methods depend on the effect. Refer to the table below for details. The beats in the table correspond to one cycle in the case of LFO Speed, Gater Speed and Roll, and Reverse Roll Frequency, to input sound delay time in the case of Delay Time, and to the time until fade-in is complete in the case of Fade-in Speed.

Effect	Synced Beat
Delay	2, 3/2, 4/3, 1, 3/4, 2/3, 1/2, 3/8, 1/3, 1/4, 3/16, 1/6, 1/8, 3/32, 1/12, 1/16
Roll, ReverseRoll	4, 3, 8/3, 2, 3/2, 4/3, 1, 3/4, 2/3, 1/2, 3/8, 1/3, 1/4, 3/16, 1/6, 1/8, 3/32, 1/12, 1/16, 3/64, 1/24, 1/32
Other than the above	16, 12, 32/3, 8, 6, 16/3, 4, 3, 8/3, 2, 3/2, 4/3, 1, 3/4, 2/3, 1/2, 3/8, 1/3, 1/4, 3/16, 1/6, 1/8, 3/32, 1/12, 1/16

MIDI Map Data Structure

Name			Settings	Description
Page			(Pages 1 to 16)	Operation set for pad, knob, and fader operations
	Pad		(Pads 1 to 16)	Parameters that control behavior when a pad is operated
		Type	Note, CC	Type of data output when a pad is operated Note: Pressing a pad outputs a note number. CC: Pressing a pad outputs a control change number. Value is based on pad velocity.
		Value	Type is Note:C-1 to G9 Type is CC:0 to 127	Note number or control number output when a pad is operated
		Min	0 to 127	Minimum output velocity or control change value Light tap outputs a value in the vicinity of this value.
		Max	0 to 127	Maximum output velocity or control change value Strong tap outputs a value in the vicinity of this value. Specifying a "Max" that is smaller than "Min" causes a large value to be output by a light tap and a small value to be output by a strong tap.
		Switch Type	Momental, Toggle	Momental: On while pad is pressed, off while pad is released. Toggle: Each press of pad toggles between on and off.
		MIDI Out Channel	1ch to 16ch	MIDI message output channel
		Retrigger	Off, 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2T, 3/8, 1/2, 1T, 3/4, 1	Number of measures a sound should be sounded while a pad is pressed. Nothing is sounded when this setting is "Off".
	Knob/Fader		(FX1 Knob, FX2 Knob, ASSIGNABLE Fader)	Parameters that control behavior when a knob or fader is operated
		CC Number	0 to 127	Note control number output when a knob or fader is operated
		Min	0 to 127	Minimum output control change value. Moving the knob or fader fully to the left outputs this value.
		Max	0 to 127	Maximum output control change value. Moving the knob or fader fully to the right outputs this value. Specifying a "Max" that is smaller than "Min" causes the value to become smaller when the knob or fader is moved to the right.
		MIDI Out Channel	1ch to 16ch	MIDI message output channel

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