



**Professional Sampler**

**TORAIZ SP-16**

**TSP-16**

**Firmware Version.1.5**

**Operating Instructions Addendum**

## Contents

Before Start .....	7
Check Your Firmware Version.....	8
Firmware Ver.1.5.....	9
1.    LIVE SAMPLING .....	9
1.1.    Open the LIVE SAMPLING screen.....	9
1.2.    Start sampling.....	9
1.3.    Adjusting the playback start position of a sample .....	10
1.4.    Saving a sample .....	10
1.5.    Close the LIVE SAMPLING screen .....	11
2.    AUDIO INPUT BPM .....	12
Firmware Ver.1.4.....	13
1.    Copying and deleting sequences .....	13
1.1.    Opening the sequence edit screen.....	14
2.    Copying and deleting tracks.....	15
2.1.    Opening the track edit screen.....	16
3.    Deleting scene files .....	17
4.    Swapping tracks .....	18
5.    Others.....	19
5.1    Zoom in/out of the enlarged waveforms .....	19
5.2    Clearing triggers .....	19
5.3    Extended sample length up to 64 seconds .....	19
5.4    MUTE function .....	19
5.5    Undoing dynamic recording.....	19
5.6    Behavior when pressing the BACK button on the BROWSE screen .....	19
5.7    Folder structure.....	20
5.8    Folder structure.....	20
5.9    Dave Smith Filter settings.....	20
FIRMWARE Ver.1.3 .....	21

1.	Scale Setting (SET SCALE) .....	21
1.1.	Opening the SET SCALE screen .....	23
1.2.	Selection of scale.....	23
1.3.	Area settings .....	24
1.4.	Changing ROOT NOTE (for MIDI tracks/TORAIZ AS-1 tracks) .....	24
1.5.	Changing KEY SHIFT (for SAMPLE tracks).....	24
1.6.	Selection of PITCH/NOTE .....	24
1.7.	Changing TIME STRETCH (for SAMPLE tracks).....	24
1.8.	Root key/Octave key.....	24
2.	Export/Import of scene files (SCENE MANAGER) .....	25
2.1.	Export of scene files .....	25
2.2.	Import of scene files.....	26
2.3.	SCENE BPM.....	26
3.	ANALOG FILTER SETTING (MIXER) .....	28
3.1.	Settings.....	28
4.	New FX (FX1, MASTER/SEND FX) .....	29
4.1.	PHASER .....	29
4.2.	DUCKER.....	30
5.	BYPASS (TRACK MENU) .....	32
5.1.	BYPASS settings .....	32
6.	BANK SELECT / PROGRAM CHANGE (TRACK MENU) .....	35
6.1.	Sending BANK SELECT .....	35
6.2.	Sending PROGRAM CHANGE .....	36
7.	Track Attribute when using with TORAIZ AS-1 .....	37
7.1.	Preset switch .....	38
7.2.	MIDI NOTE settings.....	38
7.3.	MIDI CC settings.....	38

8. Others.....	40
8.1 Selection of LFO parameters.....	40
8.2 Parameters assignable to Touch Strip .....	43
8.3 Zoom in/out of the enlarged waveforms .....	44
8.4 Programing triggers when performing in SLICE mode.....	44
<b>FIRMWARE Ver.1.2 .....</b>	<b>45</b>
1. MIDI IN .....	45
1.1. Enabling/disabling to receive individual MIDI messages.....	45
1.2. MIDI channel settings (MIDI IN) .....	46
2. MIDI OUT .....	47
2.1. Enabling/disabling to transmit individual MIDI messages .....	47
2.2. MIDI OUT channel settings .....	48
2.3. MIDI NOTE settings (MIDI NOTE, SEQUENCE) .....	49
2.4. MIDI CC settings (MIDI CC1/CC2) .....	51
3. SLICE (SET SLICE) .....	52
3.1. Opening the SET SLICE screen.....	53
3.2. Adding a slice .....	53
3.3. Deleting a slice .....	53
3.4. Equally slicing a sample into set number of slices .....	53
3.5. Slice selection and edit slice points .....	53
3.6. Adjustment of a slice.....	53
3.7. Assignment of slices to performance pads.....	54
4. New Insert FX (FX1).....	55
4.1. MULTI MODE FILTER.....	56
4.2. DELAY (INSERT) .....	57
4.3. LO-FI.....	58
4.4. COMPRESSOR (INSERT) .....	59
4.5. DISTORTION.....	60
5. LFO settings (LFO).....	61

5.1.	Selection of target parameters .....	62
5.2.	Selection of LFO shape .....	63
5.3.	Detailed setting of LFO behavior .....	63
5.4.	LFO parameter settings .....	63
6.	NEW MASTER/SEND FX .....	65
6.1.	COMPRESSOR (MASTER/SEND) .....	66
7.	Audio Rendering (RENDER AUDIO) .....	67
7.1.	Selection of rendering target .....	67
7.2.	Selection of rendering mode.....	67
7.3.	Selection of reverberation process .....	68
7.4.	Selection of saving destination .....	68
7.5.	Starting audio rendering .....	68
8.	Arrangement (ARRANGER).....	70
9.	Others.....	71
<b>FIRMWARE Ver.1.1 .....</b>		<b>72</b>
1.	PRO DJ LINK (BPM/QUANTIZE, UTILITY) .....	72
1.1	Synchronizing Sequences using PRO DJ LINK .....	73
1.2	PRO DJ LINK Setting .....	73
2	PROJECT Related Features.....	74
2.1	SAVE AS PACKAGE .....	74
2.2	Copying Current SCENE to Other Projects.....	75
3	New Insert FX.....	77
3.1	2 BAND EQ.....	77
3.2	MULTI MODE FILTER.....	78
4	Metronome / Count-in Feature .....	79
4.1	METRONOME Setting.....	79
4.2	COUNT IN Setting .....	79
5	BROWSE Related Function .....	80
5.1	PREVIEW Setting .....	80

5.2	UNLOAD.....	80
6	Sequence Edit Feature.....	81
6.1	Removing triggers.....	81
6.2	Quantizing Triggers .....	81
7	PITCH mode range setting for the TOUCH STRIP .....	82
	List of Corrections for Operating Instructions.....	83
	Appendix 1. MIDI implementation Chart .....	85
	NOTE.....	85
	CC (Control Change).....	87
	Pitch Bend .....	88
	Mode Message .....	88
	Appendix 2. List of features using SHIFT key .....	89

## Before Start

The Operating Instructions for the TORAIZ SP-16 was written based on firmware version 1.0.

This document describes added features when firmware version 1.1, 1.2, 1.3, 1.4 and 1.5 were released and the list of corrections for the Operating Instructions.

Here is a list of additions for firmware version 1.5:

- LIVE SAMPLING
- AUDIO INPUT BPM

Here is a list of additions for firmware version 1.4:

- Copying and deleting sequences
- Copying and deleting tracks
- Deleting scene files
- Swapping tracks

Here is a list of improvement for firmware version 1.4:

- Waveform zoom in/out
- Clearing triggers
- Extended sample length up to 64 seconds
- MUTE function
- Undoing dynamic recording
- Behavior when pressing the BACK button on the BROWSE screen
- Folder structure
- Project menu
- Dave Smith Filter settings

Here is a list of additions for firmware version 1.3:

- SET SCALE
- Export/Import of Scene files
- Analog filter setting
- Insert effect (2 new effects)
- Master/Send effect (1 new effect)
- Bank Select/ Program Change
- Track Attribute when using with TORAIZ AS-1

Here is a list of improvement for firmware version 1.3:

- BYPASS
- Zoom in/out of enlarged waveform

- Programing triggers when performing in SLICE mode

Here is a list of additions for firmware version 1.2:

- MIDI IN
- MIDI OUT
- SET SLICE
- LFO
- INSERT EFFECT (1 expanded feature and 4 new features)
- MASTER /SEND EFFECT (toggle feature, new types of FX have been added)
- AUDIO RENDERING

Here is a list of additions for firmware version 1.1:

- PRO DJ LINK
- Project Package / Copying SCENEs across projects
- 2 BAND EQ and MULTIMODE FILTER added to insert FX
- Metronome / Count-in feature
- Browse related feature
- Sequence edit feature
- PITCH mode range setting for the TOUCH STRIP

Detailed explanation for added features mentioned above are described in this document.

## Check Your Firmware Version

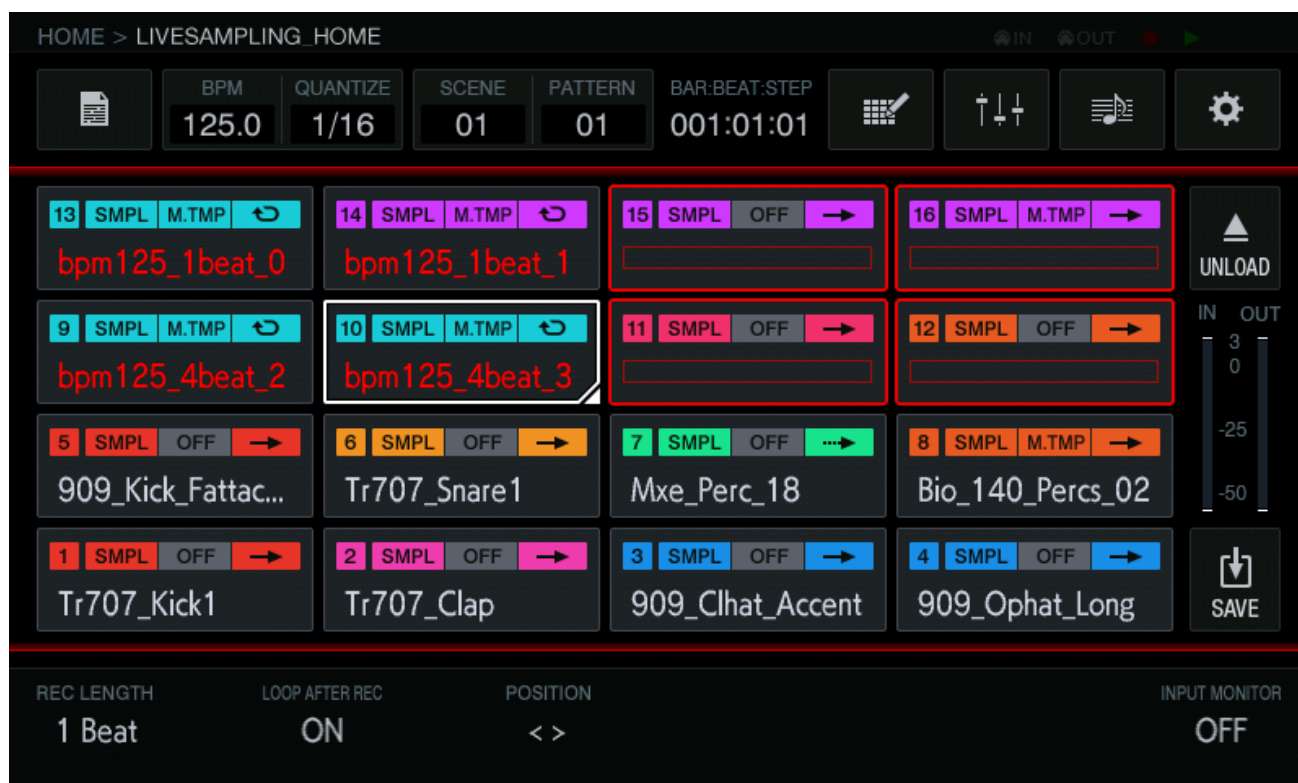
1. **Turn on the unit.**
2. **Tap [UTILITY] button in the HOME screen. The UTILITY screen appears.**
3. **Turn the rotary selector to scroll down to the second row from the bottom. There, you will be able to see the firmware currently running on your unit.**
  - \* Make sure the unit is ver.1.4 or higher.
4. **Tap [UTILITY] button again to exit the UTILITY screen.**



## Firmware Ver.1.5

### 1. LIVE SAMPLING

You can immediately start sampling of the sound coming from the [INPUT] terminals for your performances.



#### 1.1. Open the LIVE SAMPLING screen

Press [SHIFT] + [TRACK] to open the LIVE SAMPLING screen.

Adjust the level of sound using the [INPUT LEVEL] control before sampling. Turn on the INPUT MONITOR to output the sound to the headphones.

#### 1.2. Start sampling

Press a performance pad where no sample is loaded.

- The sample name is shown in red.
- Some functions, such as unloading and saving, are restricted during sampling.

If a sample is already loaded in the performance pad for which you wish sampling, unload the sample as described below.

1. Tap the track you want to unload the sample.

Multiple tracks can be selected by tapping tracks while pressing the [SHIFT] button.

2. Tap UNLOAD to start unloading.

The sampling length can be set in [REC LENGTH].

- You can set the value from 1/4, 1/2, 1, 2, 4, 8, 16 beats and MANUAL.

- If you select MANUAL, you can finish sampling by pressing the same performance pad. If you don't press the performance pad, the sampling continues up to 64 seconds.

Turn on [LOOP AFTER REC] if you want to start loop playback immediately after finishing sampling.

- ON: The sample is played automatically from the beginning after sampling.

- OFF: The sample is not played after sampling finishes.

Sampling finishes when:

- i) The sample length reaches the length set in [REC LENGTH].
- ii) When MANUAL is selected, the same performance pad is pressed again.

### **1.3. Adjusting the playback start position of a sample**

1. Tap the track you want to adjust the start position and then tap again to open the adjustment screen.

You can also open the screen by turning the rotary selector to select a track and then pressing it.

2. Turn the parameter 3 adjustment knob to adjust the start position.

### **1.4. Saving a sample**

You can create a sample and save it in media where the project you're loading is saved.

The sample will be deleted if you load another project or turn off the power before saving the sample.

- 1 Tap the track where the sample you wish to save is loaded.

Multiple tracks can be selected by tapping tracks while pressing the [SHIFT] button.

2 Tap SAVE to start saving.

The [SAVING...] message is shown during saving.

When the saving completes, the sample name shown in red turns white.

The samples are saved under PIONEER DJ SAMPLER/Samples/Saved/[Project name].

- Some functions are restricted during sampling.

## 1.5. Close the LIVE SAMPLING screen

Press the [HOME] or [BACK] button to exit the sampling mode and return to the HOME screen.

You can also exit the sampling mode by pressing the [TRACK], [MUTE], [SLICE] or [SCALE] button and the screen returns to the HOME.

Tap any button with screen transition to return to the HOME screen and exit the sampling mode.

## 2. AUDIO INPUT BPM



### 1 AUDIO INPUT BPM

The BPM of the sound from the [INPUT] terminals is automatically analyzed and displayed.

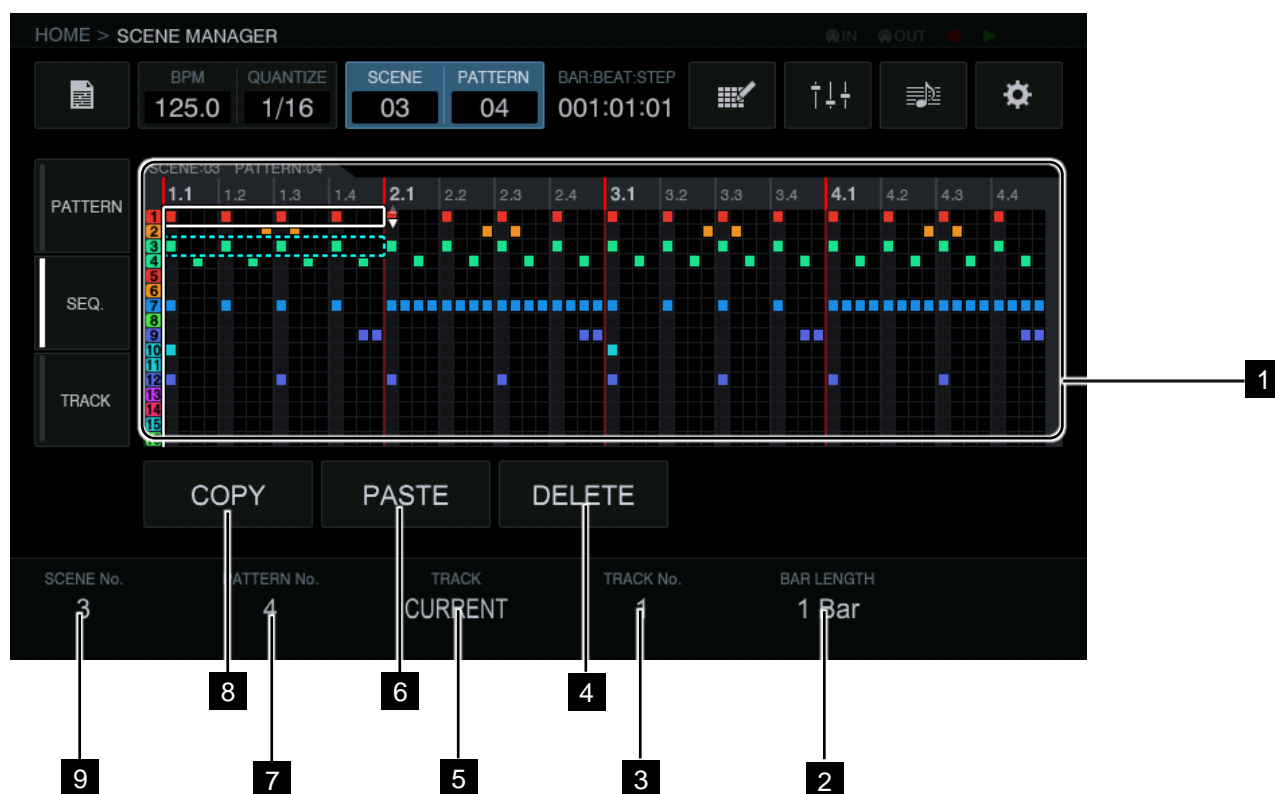
The measurement range of the BPM: 70 ~ 180.

For some tracks, correct measurement may not be possible.

When the BPM cannot be detected, the previously detected BPM value is displayed and flashes.

## Firmware Ver.1.4

### 1. Copying and deleting sequences



#### 1 Sequence display area

Turn the rotary selector to select a sequence.

You can switch between the horizontal and vertical direction by pressing the rotary selector.

#### 2 BAR LENGTH

Selects 1 bar or 4 bars of the sequence to copy or delete.

#### 3 TRACK No.

Selects a track.

#### 4 DELETE

Deletes the selected sequence.

#### 5 TRACK

Selects 1 track or all (16 tracks) of the sequence to copy or delete.

## **6** PASTE

Pastes the copied sequence to the selected location.

This cannot be pressed if nothing is copied. In that case, the [PASTE] button is grayed out.

## **7** PATTERN No.

Selects the pattern.

## **8** COPY

Copies the selected sequence.

The sequence that is copied has an indicator (dotted-line frame) to indicate that it is copied.

## **9** SCENE No.

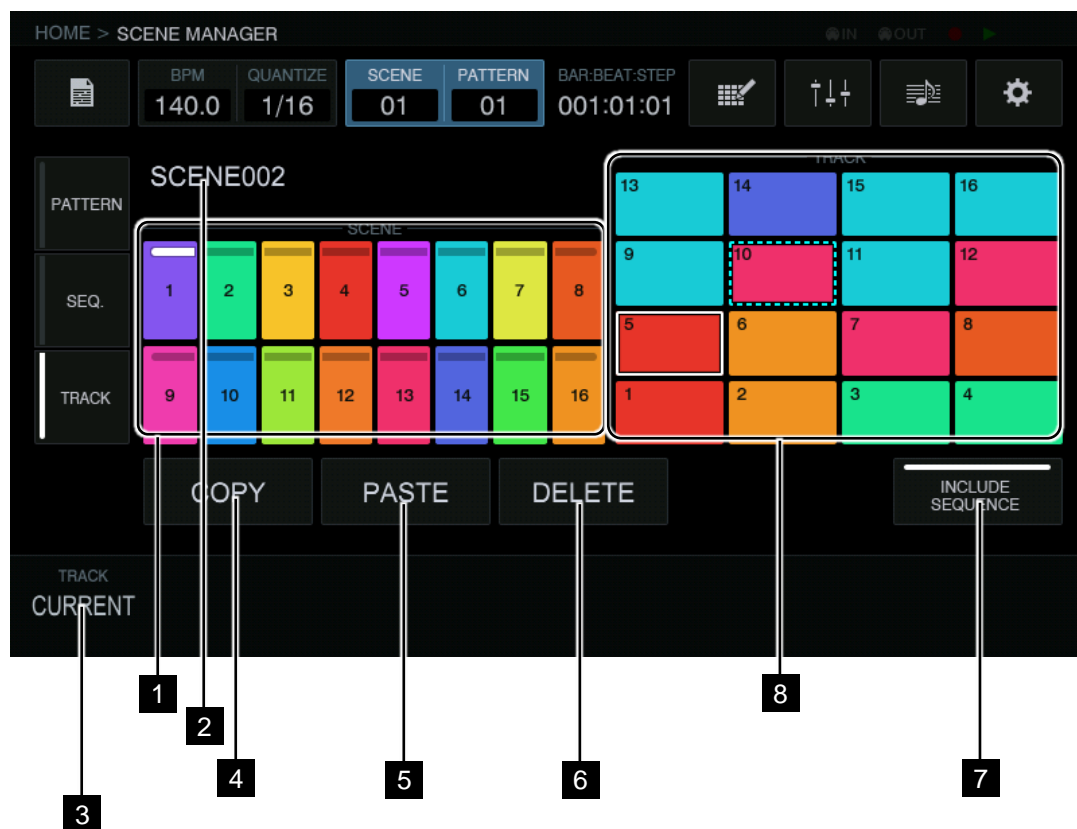
Selects the scene.

### 1.1. Opening the sequence edit screen

Tap [SCENE/PATTERN] to display the SCENE MANAGER screen.

Tap the [SEQ.] tab to display the sequence edit screen.

## 2. Copying and deleting tracks



### 1 Scene display area

Turn the rotary selector to select a scene. Press the rotary selector to move the focus to the track display area.

You can tap the touch key on the touch display to select a scene.

The indicator at the top of the touch key is lit in white for the selected scene.

### 2 Scene name

Displays the selected scene name.

This is not displayed if a scene name has not been set.

### 3 TRACK

Selects 1 track or all (16 tracks) of the sequence to copy or delete.

### 4 COPY

Copies the selected track.

The copied track has an indicator (dotted-line frame) to indicate that it is copied.

## **5** PASTE

Pastes the copied track to the selected location.

This cannot be pressed if nothing is copied. In that case, [PASTE] is grayed out. Also, [PASTE] cannot be tapped when the focus is on a scene while a track is copied. In that case, [PASTE] is grayed out.

## **6** DELETE

Deletes the selected track.

A confirmation pop-up is displayed when deleting a track.

## **7** INCLUDE SEQUENCE

Tap [INCLUDE SEQUENCE] to turn on, and you can copy including the sequence.

## **8** Track display area

Turn the rotary selector and press it to select a track.

You can select a track by tapping a touch key on the touch display.

### 2.1. Opening the track edit screen

Tap [SCENE/PATTERN] to display the SCENE MANAGER screen.

Tap the [TRACK] tab to display the track edit screen.



### 3. Deleting scene files

To delete a file with the .scn extension in the scene folder of an internal flash memory or USB memory device:

**1 Open the SCENE MANAGER screen and tap [PATTERN].**

**2 Select a scene and tap [FILE].**

A pop-up window appears.

**3 Turn the rotary selector to select [DELETE] and then press it.**

The file list appears.

**4 Turn the rotary selector to select the scene you wish to delete and then press it.**

A confirmation pop-up window appears. Tap [OK] to start deleting of the file.

## 4. Swapping tracks

**1** On the track setting screen, turn the rotary selector to select a track you wish to swap and then press it.

[SWAP FROM] appears.



**2** Turn the rotary selector to move [SWAP TO] to the track of the swap destination and then press it.

The tracks are swapped.



## 5. Others

### 5.1 Zoom in/out of the enlarged waveforms

The function to zoom in/out the waveform in the PLAYBACK screen and the SAMPLING/EDIT screen has been improved.

In addition to [S] (START) and [E] (END) buttons, [L] (LOOP START) button will be at the center of the screen when zooming in/out the enlarged waveform.

Tap [S], [E] or [L] button. While the button is selected, turn the rotary selector to zoom in/out the waveform.

The selected button will move to the center of the screen and you can zoom in/out the waveform based on this position.

### 5.2 Clearing triggers

Hit the performance pad while pressing the [PATTERN] button to clear all triggers from the track.

### 5.3 Extended sample length up to 64 seconds

Sample length extended up to 64 seconds. Therefore, recording length (REC LENGTH) on the SAMPLING/EDIT screen also extended up to 64 seconds. For details, please refer to the list of corrections.

### 5.4 MUTE function

Unmuted tracks can continue playing when a muted track is triggered in the same CHOKE group. The CHOKE setting is disabled in such a case.

### 5.5 Undoing dynamic recording

After dynamic recording of pad performances, press [SHIFT]+[REC] to undo the recording.

Please refer to Appendix 2. List of features using SHIFT key.

### 5.6 Behavior when pressing the BACK button on the BROWSE screen

When [FOLDER] is displayed on the BROWSE screen, press the [BACK] to select the folder of the next higher level.

If the top folder is selected, the BROWSE screen will be closed.

If you want to close the BROWSE screen immediately, press and hold the [BACK] button.

## 5.7 Folder structure

For the shared use of projects, samples and scene files among TORAIZ SP-16, DJS-1000 and DJS TSP Project Creator, the names of folders to store projects, samples and scene files have been changed as follows.

Project: /PIONEER DJ SAMPLER/Projects/

Sample: /PIONEER DJ SAMPLER/Samples/

Scene file: /PIONEER DJ SAMPLER/Scenes/

The destination to store rendered audio files has been changed as: /PIONEER DJ SAMPLER/RenderedAudio/

## 5.8 Folder structure

The feature [COPY CURRENT SCENE TO] has been removed from the PROJECT MENU.

Please use the feature [IMPORT/EXPORT] from the SCENE MANAGER file.

## 5.9 Dave Smith Filter settings

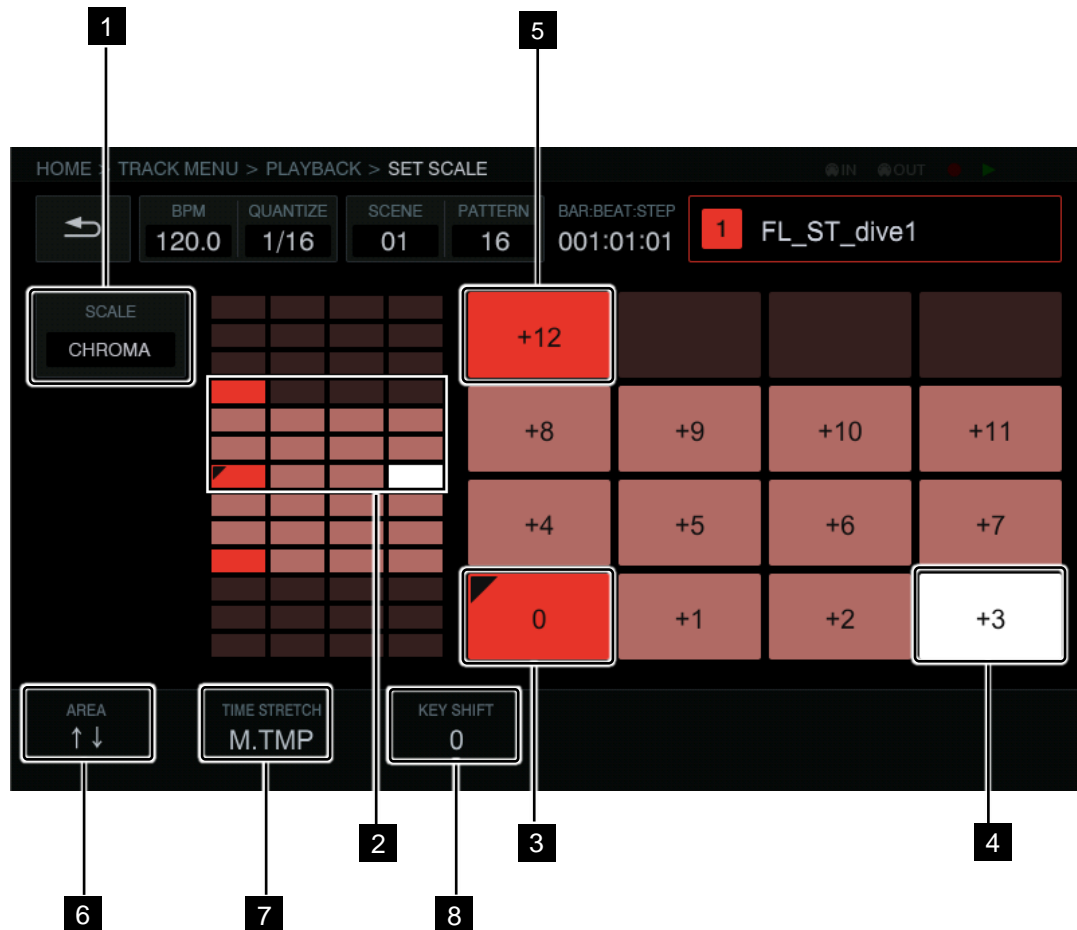
Dave Smith Filter settings can be saved per scene.

## FIRMWARE Ver.1.3

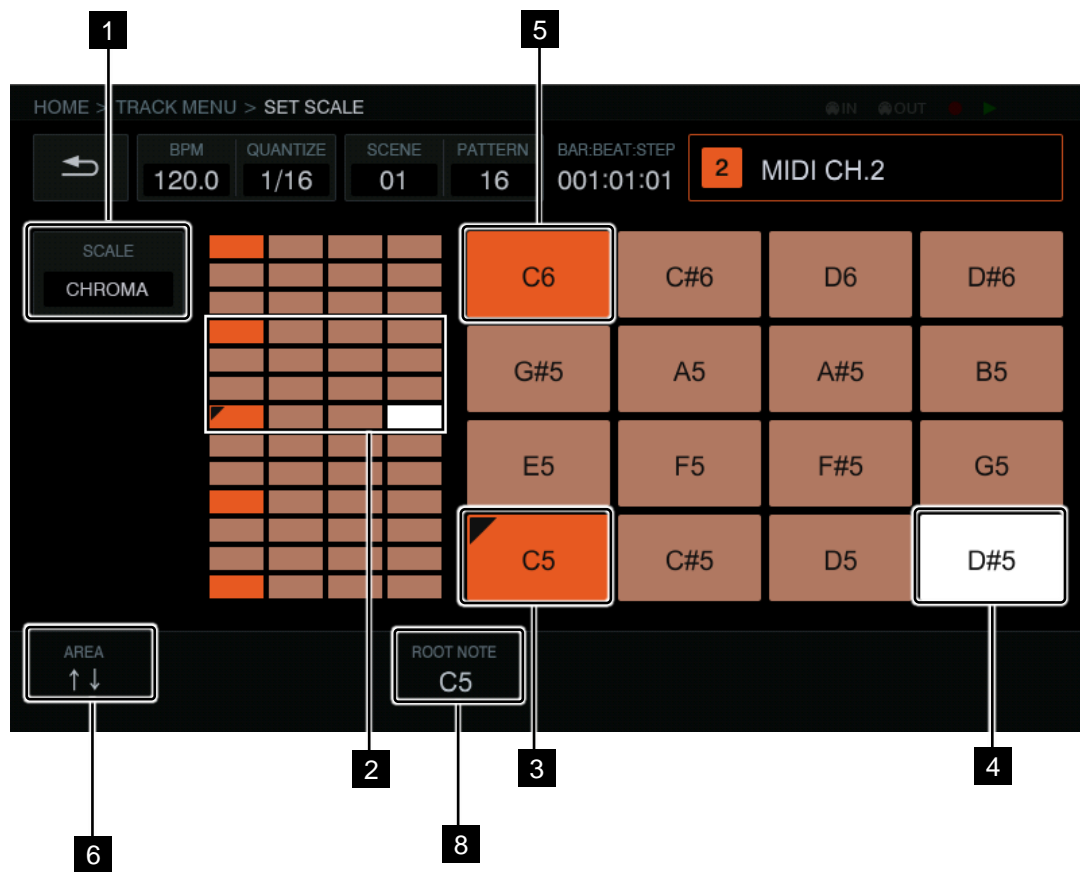
### 1. Scale Setting (SET SCALE)

Detailed settings for SCALE mode have been added.

For SAMPLE tracks



For MIDI tracks/TORAIZ AS-1 tracks



**1** SCALE button

You can set a scale.

**2** Pad area

Area assigned to the performance pads is displayed.

**3** Root key

Root key is displayed with a dog-ear icon.

**4** Selected key

The key you last selected by pressing a pad lights in white.

Press a 16-step key to program a trigger with pitch variation of the selected key.

**5** Octave key

A higher/lower octave root key is displayed in dark color.

**6** AREA

You can set the area of the keys assigned to the performance pads.

**7** TIME STRETCH

This setting enables you to stretch a sample to make it in sync to the tempo.

This setting can only be used for SAMPLE tracks.

## 8 KEY SHIFT (for sample tracks) / ROOT NOTE (for MIDI tracks/TORAIZ AS-1 tracks)

You can adjust the key of the scale (keynote).

### 1.1. Opening the SET SCALE screen

For SAMPLE tracks, tap the [SET SCALE] button in the PLAYBACK screen to move to the SET SCALE screen.

For MIDI tracks/TORAIZ AS-1 tracks, tap the [SET SCALE] button in the TRACK MENU screen to move to the SET SCALE screen.

### 1.2. Selection of scale

Tap the [SCALE] button and turn the rotary selector to a scale you wish to use and press it. You can select the following scales. When you select a scale, only notes on the scale will be assigned to the performance pads.

	Name	Abbreviated Name
1	Chromatic	CHROMA
2	Ionian	IONIAN
3	Dorian	DORIAN
4	Phrygian	PHRYGIAN
5	Lydian	LYDIAN
6	Mixolydian	MIXOLYDN
7	Aeolian	AEOLIAN
8	Locrian	LOCRIAN
9	Major Pentatonic	M. PENTA
10	Minor Pentatonic	m. PENTA
11	Whole Tone	WHOLE T.
12	Diminish	DIMINISH
13	Combination Diminish	COMBO D
14	Altered	ALTERED
15	Major Blues	M. BLUES
16	Minor Blues	m. BLUES
17	Raga Bhairav	RAGA B.
18	Raga Gamanasrama	RAGA G.
19	Raga Todi	RAGA T.
20	Hawaiian	HAWAIIAN
21	Ryukyu	RYUKYU
22	Japanese Miyakobushi	JP MIYAKO

### 1.3. Area settings

Turn the parameter 1 adjustment knob to set the area assigned to the performance pads. You can check the area at the Pad Area.

### 1.4. Changing ROOT NOTE (for MIDI tracks/TORAIZ AS-1 tracks)

Turn the parameter 3 adjustment knob to change the ROOT NOTE. The new keynote is displayed above the parameter 3 adjustment knob.

### 1.5. Changing KEY SHIFT (for SAMPLE tracks)

Turn the parameter 3 adjustment knob to change the KEY SHIFT. The keynote will be shifted as you shift the KEY. When the KEY SHIFT is 0 (zero), the key will be identical to PITCH in the PLAYBACK screen. When the KEY SHIFT is changed, the key will shift based on the pitch.

### 1.6. Selection of PITCH/NOTE

The PITCH/NOTE you last selected by pressing a pad lights in white. When you hit a 16-step key, the PITCH\*/ NOTE\*\* corresponding to the selected key will be modulated on the trigger (step modulation).

\* sample tracks

\*\* MIDI tracks

### 1.7. Changing TIME STRETCH (for SAMPLE tracks)

This setting enables you to stretch a sample to be in sync to the tempo. The range of tones will change as below.

OFF : Scale performance up to  $\pm 24$  semitones

RWSMPL : Performance only with root key

M.TMP : Scale performance up to  $\pm 12$  semitones

### 1.8. Root key/Octave key

The playback pitch of the root key is the sum of the PITCH value set in the PLAYBACK screen and the KEY SHIFT value set in this screen. An octave key is the key one octave higher/lower than the root key.

MIDI tracks / TORAIZ AS-1 tracks: The key set at ROOT NOTE equals the actual root note.

An octave key is the key one octave higher/lower than the root key.

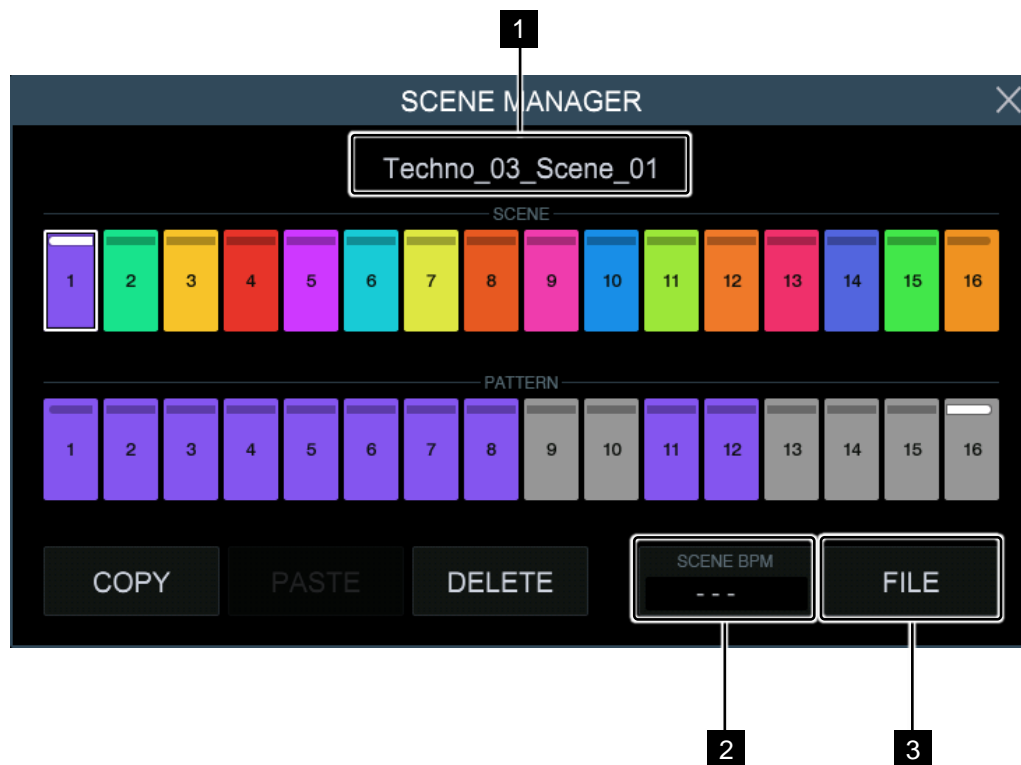


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## 2. Export/Import of scene files (SCENE MANAGER)

You can export your created patterns as a SCENE file and use it in other projects.

You can also set the BPM when the scene is played individually.



### 1 SCENE name

The name of a scene file is displayed.

### 2 SCENE BPM button

You can set BPM of a scene. The BPM of the scene is displayed.

### 3 FILE button

You can read and write scene files.

### 2.1. Export of scene files

You can export sound sources used in a selected scene to a file format that can be used in other projects and the TSP-16.

Tap the scene you wish to export on the SCENE MANAGER screen. When you tap the [FILE] button, a pop-up window appears. Turn the rotary selector to select [EXPORT] and press it.

Enter the name of the scene using the keyboard on the screen.

If you save the file in the TSP-16, tap the [SAVE] button. To save it in a USB flash device, tap [SAVE TO USB].

Extension of scene files: .scn

The files are saved in the Scenes folder located under PIONEER DJ SAMPLER/Scenes/... .

## 2.2. Import of scene files

You can import .scn files in the Scenes folder in the TSP-16 or a USB flash device.

Tap the scene you wish to import on the SCENE MANAGER screen. When you tap the [FILE] button, a pop-up window appears. Turn the rotary selector to select [IMPORT] and press it to show a list of scene files.

Turn the rotary selector to select a scene you wish to import and press it to start import.

## 2.3. SCENE BPM

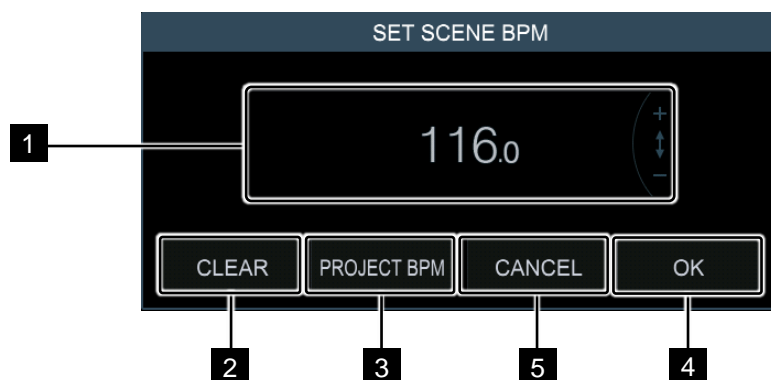
You can set BPM per scene. The scene BPM value is applied to all patterns in the scene. You cannot set BPM of each pattern if you set the scene BPM.

When a pattern in the scene is selected, BPM of the pattern will be changed to the value of the scene BPM, regardless of the BPM you set on the BPM/QUANTIZE screen. If the BPM value is not set for the scene, "---" is displayed on the scene BPM button, and the BPM selected on the BPM/QUANTIZE screen is applied to the playback.

You can adjust the tempo during playback of the pattern by changing the BPM value set on the BPM/QUANTIZE screen. However, the BPM value is not reflected to the scene BPM. The scene BPM is set at the BPM setting on the SCENE MANAGER screen.

When you add a pattern of a scene with a BPM value on the ARRENGER screen, the BPM value is changed to the scene BPM value. However, you can change the setting using the parameter adjustment knob.

Tap the [SCENE BPM] button on the SCENE MANAGER screen.



**1** SCENE BPM setting

Turn the rotary selector to change scene BPM.

**2** CLEAR button

Tap the button to reset the scene BPM. The display changes to "---". When a pattern of this scene is played, its BPM is the BPM you set on the BPM/QUANTIZE screen. When you export the scene, the scene will be exported with the BPM you set on the BPM/QUANTIZE screen.

**3** PROJECT BPM button

The BPM value is the value you set at the BPM/QUANTIZE screen.

**4** OK button

Press this button to fix the scene BPM value and close the pop-up screen.

**5** CANCEL button

Press this button to cancel the change and restore its previous value when the pop-up screen opened and close the screen.

---

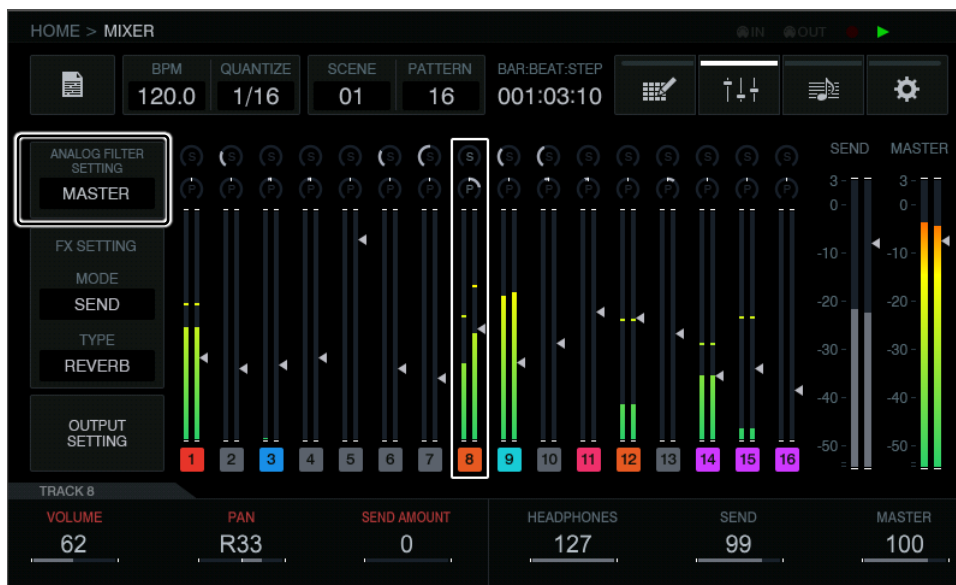
### 3. ANALOG FILTER SETTING (MIXER)

You can insert the analog filter to a track.

- You can use it only once: Pre FX, Post FX or master output.
- When rendering, you cannot apply analog filter effect.

#### 3.1. Settings

Tap the [ANALOG FILTER SETTING] button at the MIXER screen.



Turn the rotary selector to select an INSERT TRACK and push it. Turn the rotary selector to select from TRACK 1 through TRACK 16, or MASTER and push it.

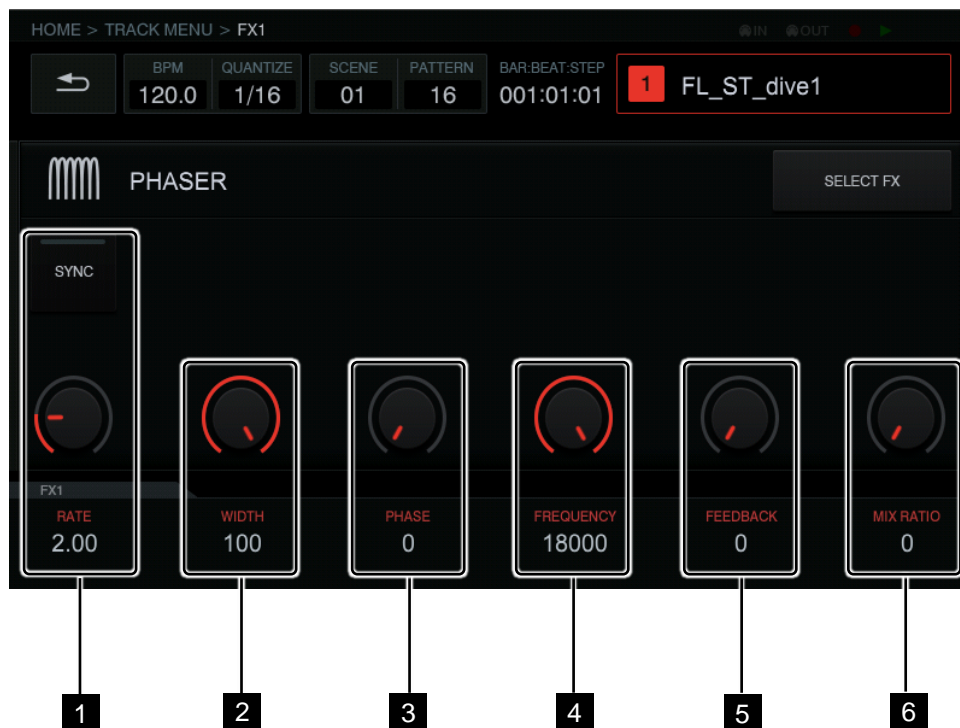
When using it to a track, you can select to insert the filter before or after FX1 is applied.

Turn the rotary selector and select [Insert Order] and push it. Then turn the rotary selector to select Pre FX (if you wish to apply filter before insert FX) or Post FX (if you wish to apply filter after insert FX) and push it.

## 4. New FX (FX1, MASTER/SEND FX)

Three new effects have been added: PHASER and DUCKER for INSERT FX and PHASER for MASTER/SEND FX.

### 4.1. PHASER



#### 1 RATE

You can set LFO rate depending on the SYNC status.

SYNC OFF: The range is from 0.01 Hz to 10 Hz.

SYNC ON: The range is from 1/16BEAT to 64/1BEAT.

#### 2 WIDTH

You can change the maximum range of filter cutoff frequency for LFO. The range is from 0 % to 100 %.

#### 3 PHASE

You can change phase difference of LFO L/R. The range is from 0° to 180°.

#### 4 FREQUENCY

You can change the maximum frequency range to which filter is applicable. The range is from 300 Hz to 18 kHz.

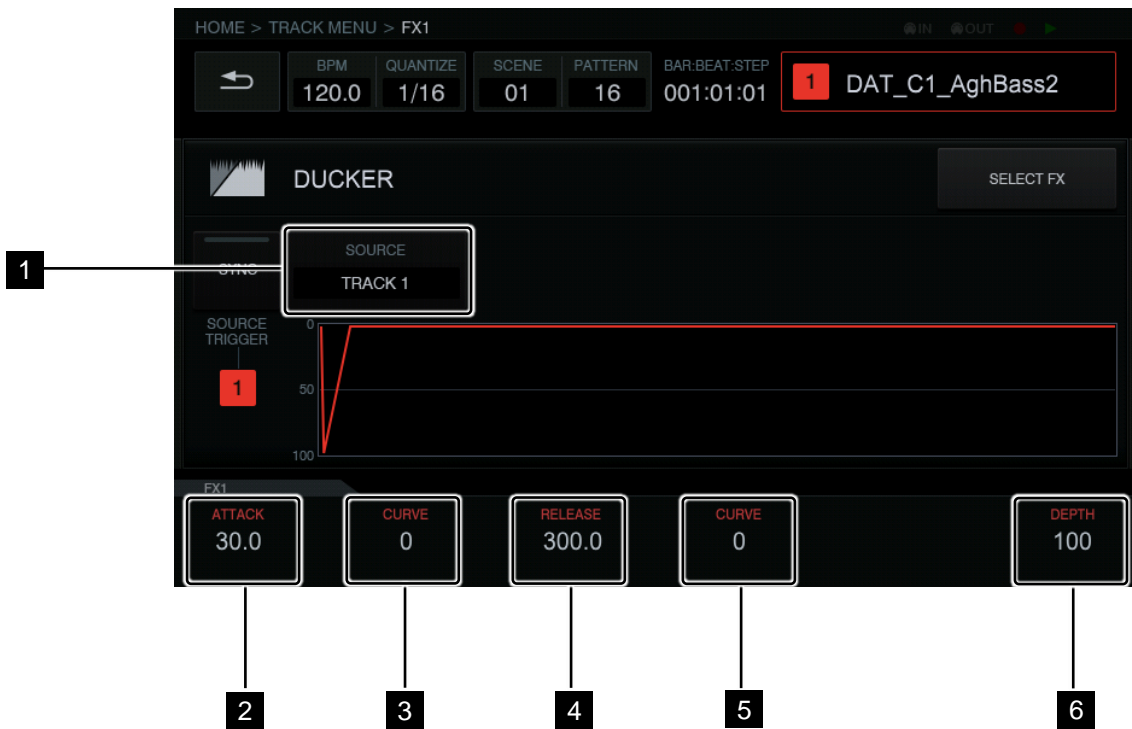
#### 5 FEEDBACK

You can change feedback value. The range is from 0 % to 99 %.

## 6 MIX RATIO

You can change mix ratio of the original sound and sound with effects. The range is from 0 % to 99 %.

### 4.2. DUCKER



#### 1 Selection of trigger source

You can select trigger source from Track 1 through Track 16.

#### 2 ATTACK

You can set the time taken for fade out when the source is triggered based on SYNC status.

SYNC OFF: You can set time taken for fade out. The range is from 0 ms to 1000 ms.

SYNC ON: You can change the time taken for fade out by the number of steps. The range is from 0 step to 4 steps.

#### 3 ATTACK CURVE

You can set the ATTACK CURVE. The range is from – 100 % to 100 %.

#### 4 RELEASE

You can set the time taken for the volume to return to maximum based on SYNC status.

SYNC OFF: You can set the time from when the volume is down to when the volume returns to maximum. The range is from 0.1 ms to 2000 ms.

SYNC ON: You can set the number of steps from when the volume is down to when the volume returns to maximum. The range is from 0.25 step to 128 steps.

## **5** RELEASE CURVE

You can set the RELEASE CURVE. The range is from – 100 % to 100 %.

## **6** DEPTH

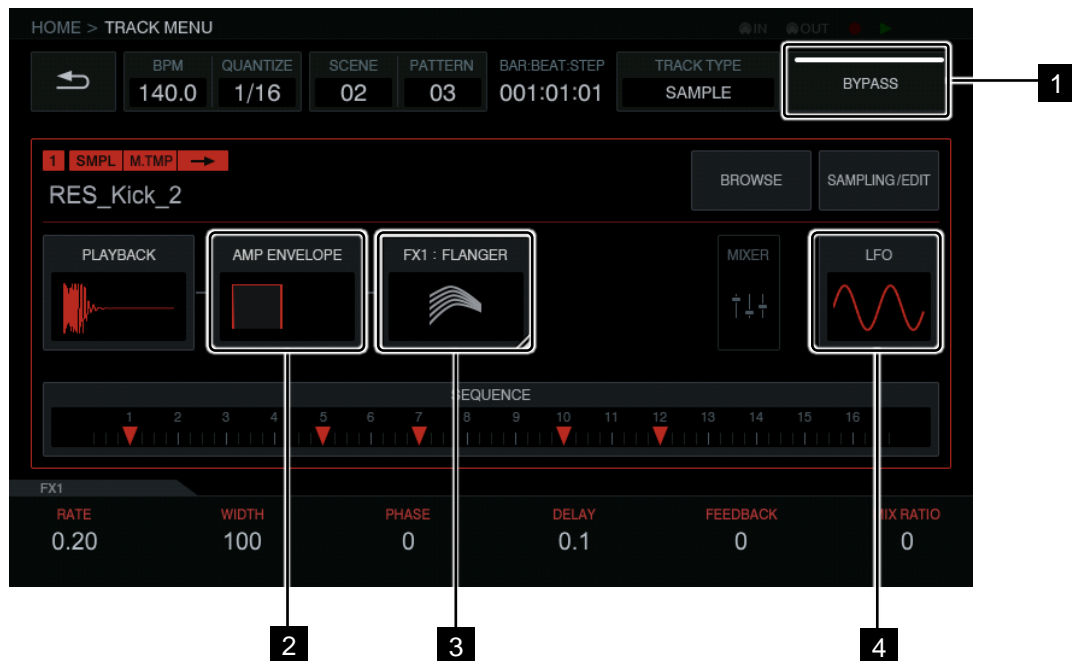
You can control how deep the volume is down. The range is from 0 % to 100 %.

## 5. BYPASS (TRACK MENU)

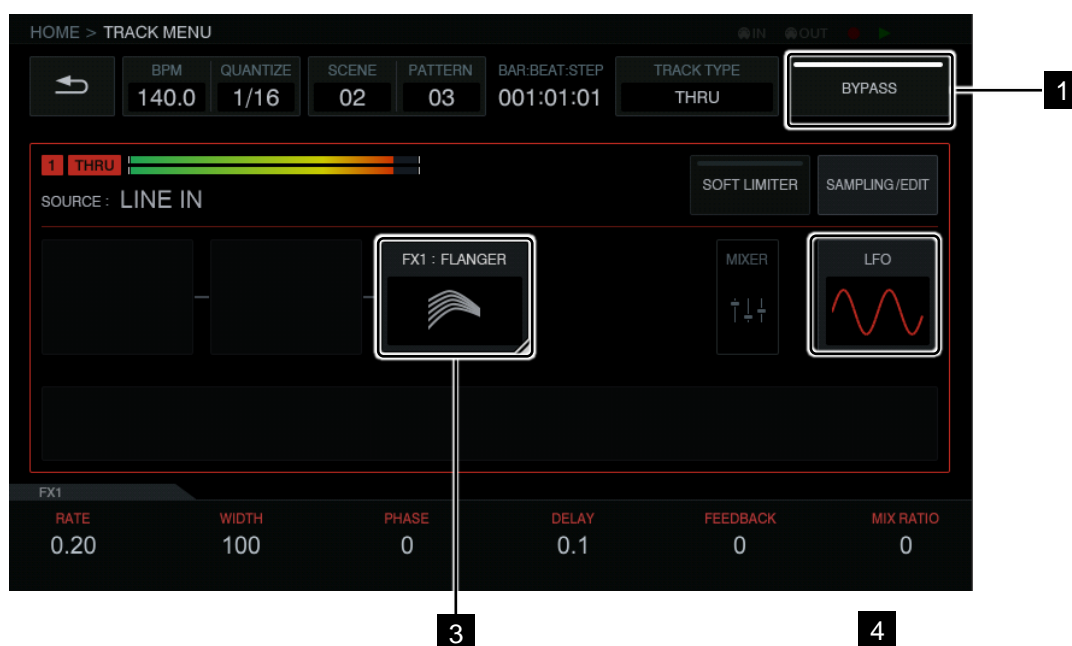
### 5.1. BYPASS settings

BYPASS behavior has been changed in Ver.1.3. Tap the BYPASS button to start BYPASS setting mode. You can individually bypass modules in TRACK MENU.

- TRACK MENU screen for SAMPLE tracks

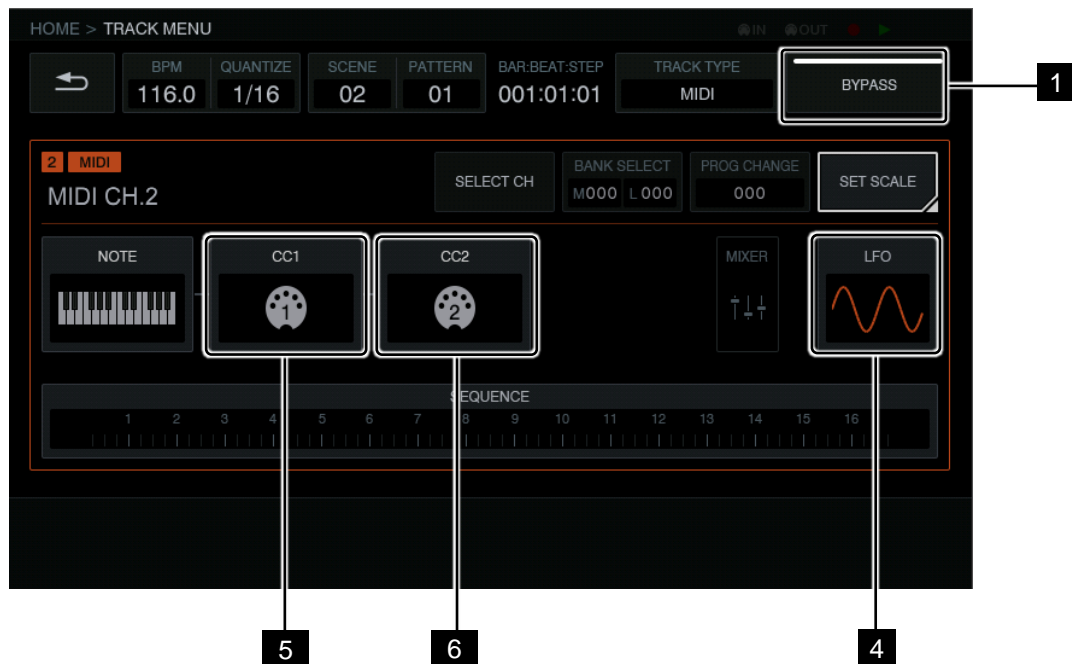


- TRACK MENU screen for THRU tracks





- TRACK MENU screen for MIDI tracks/TORAIZ AS-1 tracks



#### 1 BYPASS button

The behavior of this button has been changed when it is turned ON/OFF.

ON: You can select whether bypassing modules described below (2 ~ 6) or not.

OFF: When you tap one of the buttons described below (2 ~ 6), the screen will switch to the setting screen of the module. The setting screen of modules that are set to be bypassed will not open.

The following description is the behavior when it is turned on.

#### 2 AMP ENVELOPE button

Tap the button to bypass AMP ENVELOPE module setting (toggle).

#### 3 FX1 button

Tap the button to bypass FX1 ENVELOPE module setting (toggle).

#### 4 LFO button

Tap the button to bypass LFO module setting (toggle).

#### 5 CC1 button

Tap the button to bypass LFO CC1 module setting (toggle).

#### 6 CC2 button

Tap the button to bypass LFO CC2 module setting (toggle).

You can individually set whether bypassing the following modules.

SAMPLE tracks	AMP ENVELOPE
	FX1
	LFO
MIDI tracks/AS-1 tracks	CC1
	CC2
	LFO
THRU tracks	FX1
	LFO

When the thumbnail icon on the button is not displayed, the process is bypassed. Tap to toggle to bypass or not.

---

## 6. BANK SELECT / PROGRAM CHANGE (TRACK MENU)

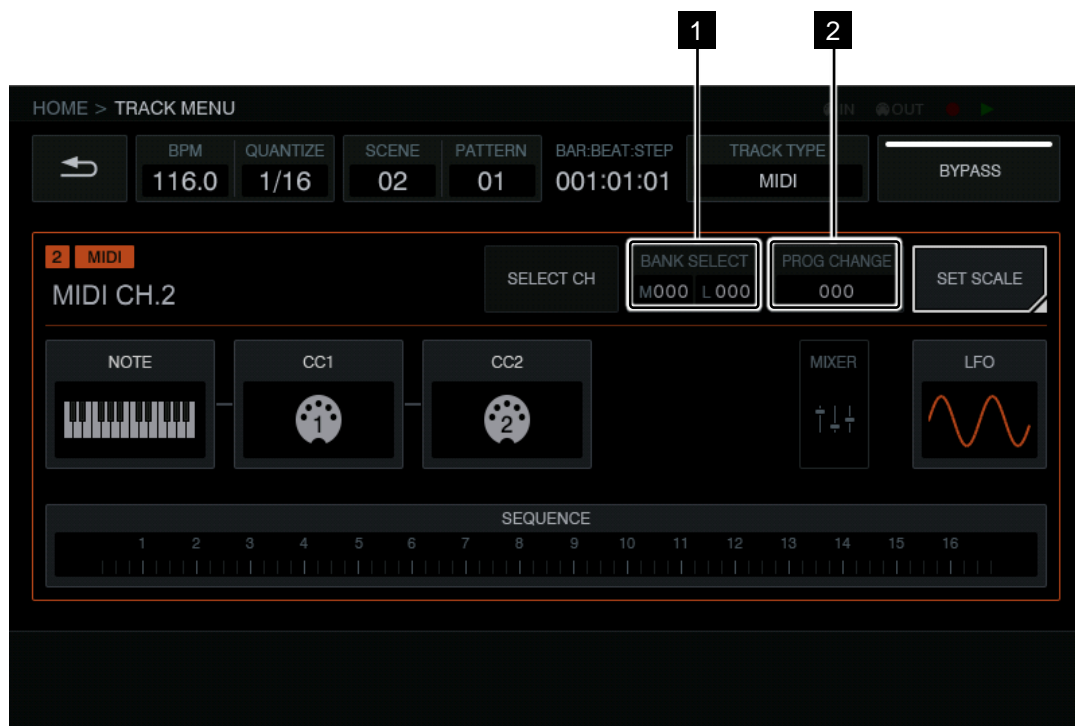
When using MIDI tracks (or TORAIZ AS-1 tracks), you can send messages for bank selection and program change.

Connect to DIN MIDI terminal

1. Connect the MIDI IN terminal of an external MIDI device with the MIDI OUT/THRU terminal of this unit using a MIDI cable.
2. Tap the [UTILITY] at HOME screen to open the UTILITY screen.
3. Select [DIN MIDI] at MIDI I/F SELECT in the MACHINE SETTING category.

Connect to USB terminal

1. Connect your computer with the USB-B terminal of this unit using a USB cable.
2. Tap the [UTILITY] at HOME screen to open the UTILITY screen.
3. Select [USB MIDI] at MIDI I/F SELECT in the MACHINE SETTING category.



### 1 BANK SELECT button

You can change the Bank value to send.

### 2 PROG CHANGE button

You can change the Program Change value to send.

#### 6.1. Sending BANK SELECT

Tap the [BANK SELECT] button on the TRACK MENU screen for MIDI tracks.

If you wish to change MSB, tap MSB area. To change LSB, tap LSB area.

Turn the rotary selector to select the value you wish. Tap the [OK] button to finalize the value and the popup screen will close.

The value you set is displayed at the [BANK SELECT] button.

## 6.2. Sending PROGRAM CHANGE

Tap the [PROG CHANGE] button on the TRACK MENU screen for MIDI tracks.

Turn the rotary selector to select the value you wish. Tap the [OK] button to finalize the value and the popup screen will close.

The value you set is displayed at the [PROG CHANGE] button.

- You can set Bank Select/Program Change value per scene. You can change programs of the external MIDI device in accordance with the switch of scenes.

---

## 7. Track Attribute when using with TORAIZ AS-1

Dedicated track attribute for TORAIZ AS-1 has been added. It is useful when using the analog synthesizer TORAIZ AS-1 connected via MIDI OUT.

1. Connect the MIDI IN terminal of a TORAIZ AS-1 with the MIDI OUT/THRU terminal of this unit using a MIDI cable.
2. Tap the [UTILITY] at HOME screen to open the UTILITY screen
3. Select [DIN MIDI] at MIDI I/F SELECT in the MACHINE SETTING category.
4. Set TORAIZ AS-1 [GLOBAL SETTING] as follows:

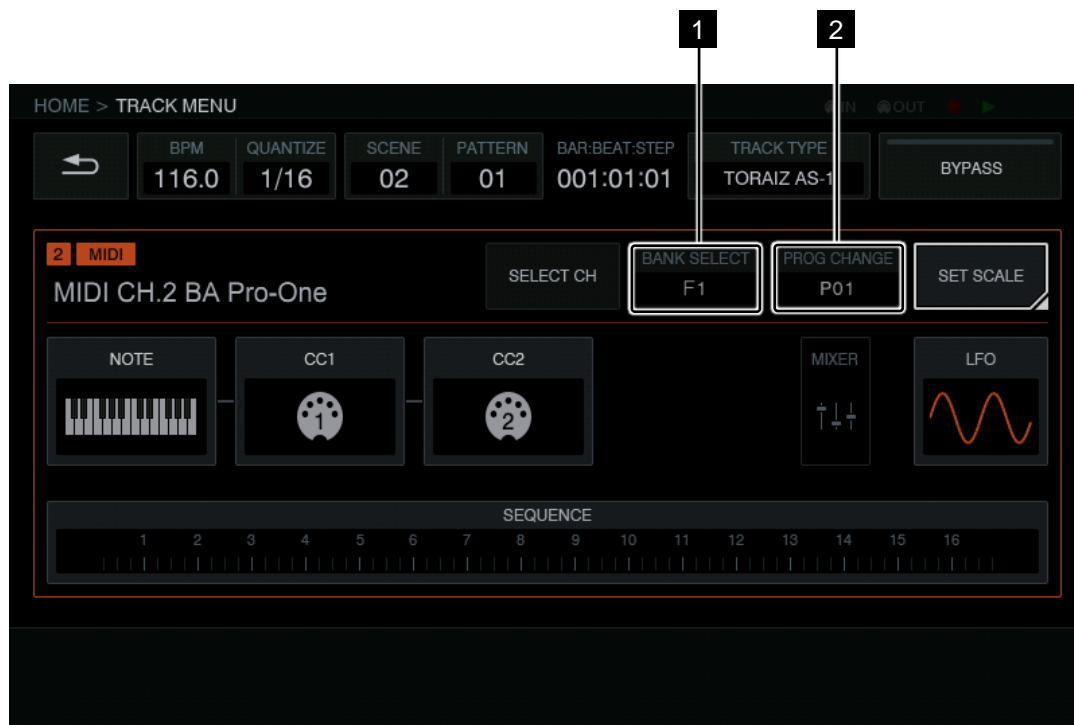
**MIDI Channel: ALL or any channel**

**MIDI Param Rcv: CC**

**MIDI Control Enable: On**

Tap the [TRACK TYPE] button at the TRACK MENU screen of a track you wish to play using the TORAIZ AS-

1. Turn the rotary selector to select [TORAIZ AS-1].



- 1 BANK SELECT button

You can change Bank value where Preset is saved.

## 2 PROG CHANGE button

You can change Program Change value to send.

### 7.1. Preset switch

You can select AS-1 program using Bank Select and Program Change.

Tap the [BANK SELECT] button. Turn the rotary selector to select a Bank with Preset you wish to call and push it to fix the Bank. You can select as follows:

[U1] ~ [U5]: User Bank

[F1] ~ [F5]: Factory Bank

TAP the [PROG CHANGE] button. Turn the rotary selector to select a Program you wish to call and push it to fix the Program. You can set Bank Select/Program Change value per scene.

### 7.2. MIDI NOTE settings

You can set MIDI NOTE just as you do for MIDI tracks. However, you cannot set this for NOTE2, NOTE3 and NOTE4 because TORAIZ AS-1 does not play chords.

### 7.3. MIDI CC settings

Tap the [CC1] button or [CC2] button to open setting screen for TORAIZ AS-1 MIDI CC parameters.



## 1 CC number selection button

You can set CC number from PARAMETER 1 to PARAMETER 6.

- You cannot change PARAMETER1 (Pitch Bend) and PARAMETER2 (After Touch) in the CC1 setting screen.

## **2** ACTIVE button

You can toggle ACTIVE of PARAMETER 1 through PARAMETER 6 on and off.

## **3** CC value

You can set CC value from PARAMETER 1 to PARAMETER 6.

## 8. Others

### 8.1 Selection of LFO parameters

Parameters for DUCKER and PHASER in FX1 category and those for MIXER category have been added



Category	Parameter
PLAYBACK	PITCH
	START
	LOOP START
	LENGTH
AMP ENVELOPE	VELOCITY
	ATTACK
	HOLD
	RELEASE
FX1	2 BAND EQ B1 Q
	2 BAND EQ B1 FREQUENCY
	2 BAND EQ B1 GAIN
	2 BAND EQ B2 Q
	2 BAND EQ B2 FREQUENCY
	2 BAND EQ B1 B2 GAIN
	CHORUS RATE
	CHORUS WIDTH
	CHORUS PHASE
	CHORUS DELAY
	CHORUS MIX RATIO
	COMPRESSOR RATIO
	COMPRESSOR ATTACK
	COMPRESSOR RELEASE
	COMPRESSOR THRESHOLD
	COMPRESSOR OUTPUT GAIN
	COMPRESSOR MIX RATIO
	DELAY TIME
	DELAY FEEDBACK
	DELAY HI CUT
	DELAY MIX RATIO
	DISTORTION DRIVE
	DISTORTION LO FREQ
	DISTORTION HI FREQ

	DISTORTION DYNAMICS
	DISTORTION TONE
	DISTORTION MIX RATIO
	DUCKER ATTACK
	DUCKER CURVE (ATTACK)
	DUCKER RELEASE
	DUCKER CURVE (RELEASE)
	DUCKER DEPTH
	FLANGER RATE
	FLANGER WIDTH
	FLANGER PHASE
	FLANGER DELAY
	FLANGER FEEDBACK
	FLANGER MIX RATIO
	LO-FI PREAMP
	LO-FI REDUCTION
	LO-FI BIT DEPTH
	LO-FI CUTOFF
	LO-FI RESONANCE
	LO-FI MIX RATIO
	MULTI MODE FILTER CUTOFF
	MULTI MODE FILTER GAIN
	MULTI MODE FILTER RESONANCE
	MULTI MODE FILTER GLIDE
	MULTI MODE FILTER MIX RATIO
	PHASER RATE
	PHASER WIDTH
	PHASER FREQUENCY
	PHASER FEEDBACK
	PHASER MIX RATIO

MIDI NOTE	VELOCITY
	LENGTH
MIDI CC1	PARAMETER 1 PITCH BEND
	PARAMETER 2 AFTER TOUCH
	PARAMETER 3
	PARAMETER 4
	PARAMETER 5
	PARAMETER 6
MIDI CC2	PARAMETER 1

	PARAMETER 2
	PARAMETER 3
	PARAMETER 4
	PARAMETER 5
MIXER	PARAMETER 6
	VOLUME
	PAN
	SEND AMOUNT

## 8.2 Parameters assignable to Touch Strip

DUCKER parameters for FX1 category and PHASER parameters for MIXER category have been added as assignable parameters.

PLAYBACK	AMP ENVELOPE	FX	
PITCH	VELOCITY	2BAND EQ B1 Q	DUCKER ATTACK
	ATTACK	2BAND EQ B1 FREQUENCY	DUCKER RELEASE
	HOLD	2BAND EQ B1 GAIN"	DUCKER CURVE
	RELEASE	2BAND EQ B2 Q	DUCKER DEPTH
		2BAND EQ B2 FREQUENCY"	FLANGER RATE
		2BAND EQ B2 GAIN	FLANGER WIDTH
		CHORUS RATE	FLANGER PHASE
		CHORUS WIDTH	FLANGER DELAY
		CHORUS PHASE	FLANGER FEEDBACK
		CHORUS DELAY	FLANGER MIX RATIO
		CHORUS MIX RATIO	LO-FI PREAMP
		COMPRESSOR RATIO	LO-FI REDUCTION
		COMPRESSOR ATTACK	LO-FI BIT DEPTH
		COMPRESSOR RELEASE	LO-FI CUT OFF
		COMPRESSOR THRESHOLD	LO-FI RESONANCE
		COMPRESSOR GAIN	LO-FI MIX RATIO
		COMPRESSOR MIX RATIO	MULTI MODE FILTER CUT OFF
		DELAY TIME	MULTI MODE FILTER GAIN
		DELAY FEEDBACK	MULTI MODE FILTER RESONANCE
		DELAY HI CUT	MULTI MODE FILTER GLIDE
		DELAY MIX RATIO	MULTI MODE FILTER MIX RATIO
		DISTORTION DRIVE	PHASER RATE
		DISTORTION LO FREQ	PHASER WIDTH
		DISTORTION HI FREQ	PHASER PHASE
		DISTORTION DYNAMICS	PHASER FREQUENCY
		DISTORTION TONE	PHASER FEEDBACK
		DISTORTION MIX RATIO	PHASER MIX RATIO"

MIDI NOTE	MIDI CC1	MIDI CC2	MIXER	LFO	SEQUENCE
VELOCITY	PARAMETER1 PITCH BEND	PARAMETER1	VOLUME	SPEED	RETRIGGER CNT
LENGTH	PARAMETER2 AFTER TOUCH	PARAMETER2	PAN	DEPTH	RETRIGGER SPD
	PARAMETER3	PARAMETER3	SEND AMOUNT		
	PARAMETER4	PARAMETER4			
	PARAMETER5	PARAMETER5			
	PARAMETER6	PARAMETER6			

### 8.3 Zoom in/out of the enlarged waveforms

The function to zoom in/out the waveform in the PLAYBACK screen and the SAMPLING/EDIT screen has been improved.

Tap [S] (START) or [E] (END) button to select. When you turn the rotary selector to zoom in/out the waveform, the selected button will move to the center of the screen. You can zoom in/out the waveform based on this position.

Tap the button again to cancel. When you select one and then tap the other, the other button will be selected.

When neither of the two is selected, the waveform is zoomed in/out based on the center of the waveform displayed on the screen.

### 8.4 Programing triggers when performing in SLICE mode

You can program triggers when performing in SLICE mode as the following two ways.

1. Hit a pad you wish to play in SLICE mode, then press a 16-step key of the step you wish to modulate.
  2. While pressing a 16-step key of the step you wish to modulate, hit a pad you prefer.
- You can program triggers when performing in SCALE mode in a similar way (step input).

## FIRMWARE Ver.1.2

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### 1. MIDI IN

A new feature MIDI IN has been added: MIDI messages can be received from an external MIDI device. You can use sound sources and manipulate various parameters on this unit through the use of external MIDI hardware including sequences.

Connect a MIDI device to the DIN MIDI terminals

1. **Connect the MIDI OUT terminal of an external MIDI device with the MIDI IN terminal of this unit using a MIDI cable.**
2. **Tap the [UTILITY] at HOME screen to open the UTILITY screen.**
3. **Select [DIN MIDI] or [DIN MIDI (THRU H/W)] at MIDI I/F SELECT in the MACHINE SETTING category.**

Connect a MIDI device to the USB terminal

1. **Connect your computer with the USB-B terminal of this unit using a USB cable.**
2. **Tap the [UTILITY] at HOME screen to open the UTILITY screen.**
3. **Select [USB MIDI] at MIDI I/F SELECT in the MACHINE SETTING category.**

#### 1.1. Enabling/disabling to receive individual MIDI messages

Receiving MIDI messages can be enabled/disabled at [UTILITY] -> [PROJECT SETTING (MIDI IN)] category].

Item	Values
CLOCK	ENABLE/DISABLE

ENABLE : TSP-16 will playback in sync to the tempo of MIDI CLOCK from an external MIDI device.

DISABLE : TSP-16 will not receive MIDI CLOCK from an external MIDI device.

Item	Values
START/STOP/CONTINUE	ENABLE/DISABLE

ENABLE : TSP-16 will receive START/STOP/CONTINUE message from an external MIDI device.

DISABLE : TSP-16 will not receive START/STOP/CONTINUE messages from an external MIDI device.

Item	Values
NOTE/CC	ENABLE/DISABLE

ENABLE : You can use TSP-16 based on NOTE/CC (including Pitch Bend) from an external MIDI device.

DISABLE : TSP-16 will not receive NOTE/CC (including Pitch Bend) messages from an external MIDI device.

Item	Values
SONG POSITION	ENABLE/DISABLE

ENABLE : Playback position will be determined by song position pointer (SPP) from an external MIDI device.

DISABLE : TSP-16 will not receive SPP messages from an external MIDI device.

## 1.2. MIDI channel settings (MIDI IN)

Open [UTILITY] -> [PROJECT SETTING (MIDI IN)] category] to set MIDI channel (MIDI IN).

Item	Values
CHANNEL MAPPING	- (Channel setting popup screen will open.)

You can specify with MIDI channels (CH.1 - CH.16) you are using per track (TRACK1 - TRACK16). Select [OFF] to tracks you do not wish to receive MIDI messages.

- You cannot set the same MIDI channel to multiple tracks. One MIDI channel should be set to only one track.

Item	Values
CHANNEL MAPPING RESET	- (RESET)

Reset MIDI channels you selected at CHANNEL MAPPING. When reset, track No. and MIDI channel will revert to default of the same number.

TRACK1 : CH.1

TARCK2 : CH.2

.....

TRACK16: CH.16

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## 2. MIDI OUT

A new feature MIDI OUT has been added: MIDI messages can be transmitted to an external MIDI device. You can control the external device using its sound sources by playing this unit or using MIDI sequences on this unit.

Connect a MIDI device to the DIN MIDI terminals

1. **Connect the MIDI OUT terminal of an external MIDI device with the MIDI OUT/THRU terminal of this unit using a MIDI cable.**
2. **Tap the [UTILITY] at HOME screen to open the UTILITY screen.**
3. **Select [DIN MIDI] at MIDI I/F SELECT in the MACHINE SETTING category.**

Connect a MIDI device to the USB terminal

1. **Connect your computer with the USB-B terminal of this unit using a USB cable.**
2. **Tap the [UTILITY] at HOME screen to open the UTILITY screen.**
3. **Select [USB MIDI] at MIDI I/F SELECT in the MACHINE SETTING category.**

After you complete the connection setting mentioned above, tap the [TRACK TYPE] button at the TRACK MENU screen of the track you wish to play based on MIDI message, and select [MIDI] using the rotary selector.

For detailed settings for MIDI NOTE and MIDI control change (MIDI CC) transmitted when you use MIDI tracks, please refer to “2.3. MIDI NOTE settings (MIDI NOTE, SEQUENCE)” and “2.4.MIDI CC settings (MIDI CC1/CC2)”.

### 2.1. Enabling/disabling to transmit individual MIDI messages

Transmitting MIDI messages can be enabled/disabled at [UTILITY] -> [PROJECT SETTING (MIDI OUT)] category].

Item	Values
CLOCK	ENABLE/DISABLE

ENABLE : MIDI CLOCK will be transmitted based on the tempo of the TSP-16 to an external MIDI device.

DISABLE : MIDI CLOCK will not be transmitted to an external MIDI device.

Item	Values
START/STOP/CONTINUE	ENABLE/DISABLE

ENABLE : START/STOP/CONTINUE messages will be transmitted to an external MIDI device.

DISABLE : START/STOP/CONTINUE messages will not be transmitted to an external MIDI device.

Item	Values
NOTE/CC	ENABLE/DISABLE

ENABLE : NOTE/CC (including Pitch Bend) will be transmitted to an external MIDI device.

DISABLE : NOTE/CC (including Pitch Bend) will not be transmitted to an external MIDI device.

Item	Values
SONG POSITION	ENABLE/DISABLE

ENABLE : Song position pointer (SPP) will be transmitted to an external MIDI device.

DISABLE : Song position pointer (SPP) will NOT be transmitted to an external MIDI device.

## 2.2. MIDI OUT channel settings

To set MIDI OUT channels, tap the [SELECT CH] button at the TRACK MENU screen of the MIDI track that transmits MIDI. Select a channel from the popped-up screen.

To reset the selected MIDI OUT channel, go to the UTILITY screen -> PROJECT SETTING (MIDI OUT) category and do [CHANNEL MAPPING RESET].

Item	Values
CHANNEL MAPPING RESET	- (RESET)

Reset MIDI channels you selected at the TRACK MENU screen. When reset, track No. and MIDI channel will revert to default of the same number.

TRACK1 : CH.1

TARCK2 : CH.2

.....

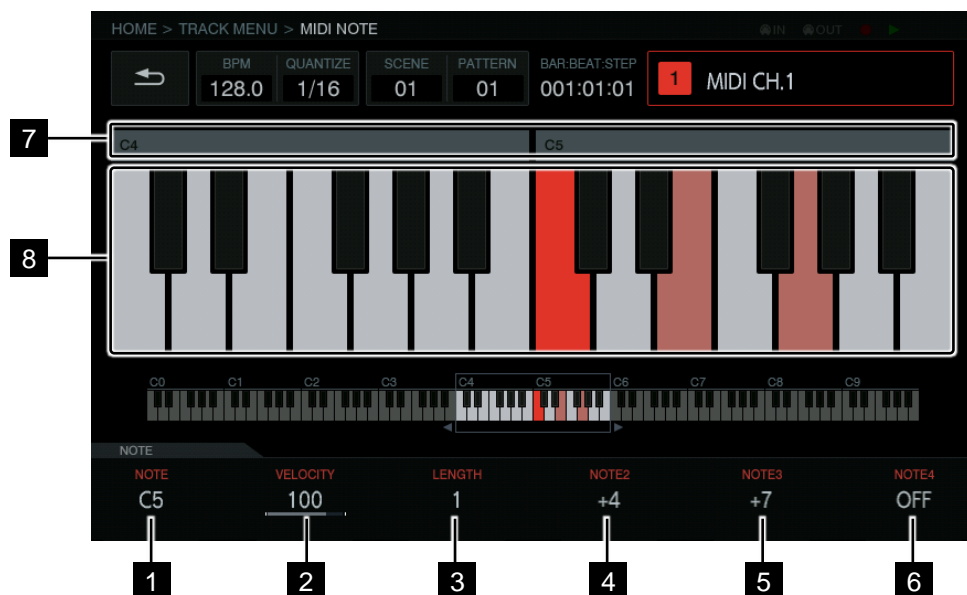
TRACK16: CH.16



## 2.3. MIDI NOTE settings (MIDI NOTE, SEQUENCE)

You can set a MIDI NOTE to output when pressing pads of a MIDI track or triggered by a sequence. Up to 4 MIDI NOTES can be triggered by setting harmony in addition to a base NOTE. In the same manner as a SAMPLE TRACK, you can input MIDI NOTE Triggers to the step sequencer or you can enjoy dynamic recording of your performance using the pads.

- SLICE mode cannot be used for MIDI tracks.



### 1 NOTE

You can set NOTE number from C0 to B9.

### 2 VELOCITY

You can set velocity from OFF or 1 to 127.

### 3 LENGTH

You can set length from 0.25STEP to 64STEP.

### 4 NOTE2

You can set the 2<sup>nd</sup> note of chords based on the NOTE number set at [NOTE] from -127 ~ OFF ~ +127.

### 5 NOTE3

You can set the 3<sup>rd</sup> note of chords based on the NOTE number set at [NOTE] from -127 ~ OFF ~ +127.

### 6 NOTE4

You can set the 4<sup>th</sup> note of chords based on the NOTE number set at [NOTE] from -127 ~ OFF ~ +127.

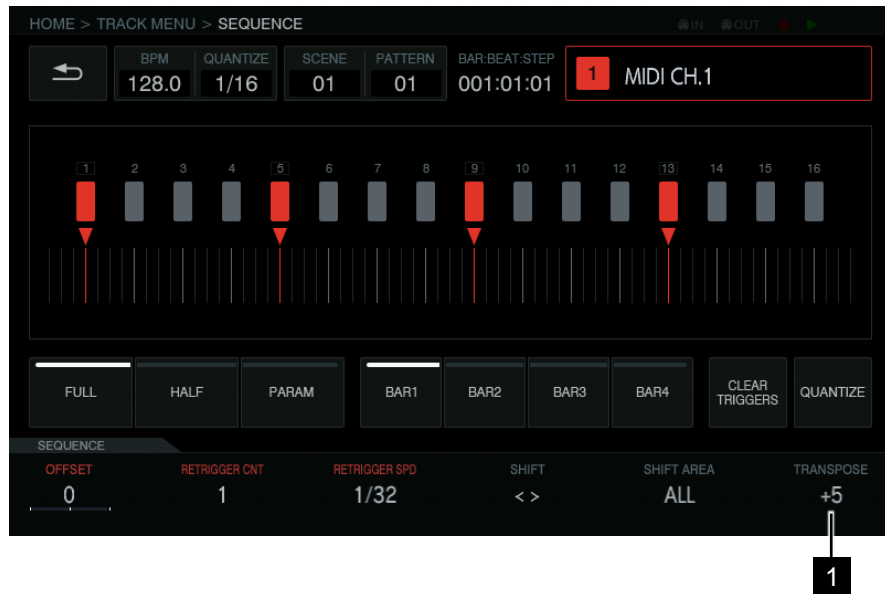
### 7 Octave number display

Octave number from C0 to C9 will be displayed.

### 8 Keyboard display

NOTE set at [NOTE] will appear in track color. NOTE set at [NOTE2], [NOTE3] and [NOTE4] will be shown in a light track color.

Using TRANSPOSE feature (HOME > TRACK MENU > SEQUENCE >TRANSPOSE), you can shift the entire NOTE outputted from a MIDI track in semitones. Turn the parameter 6 adjustment knob to change TRANSPOSE value on the SEQUENCE screen.

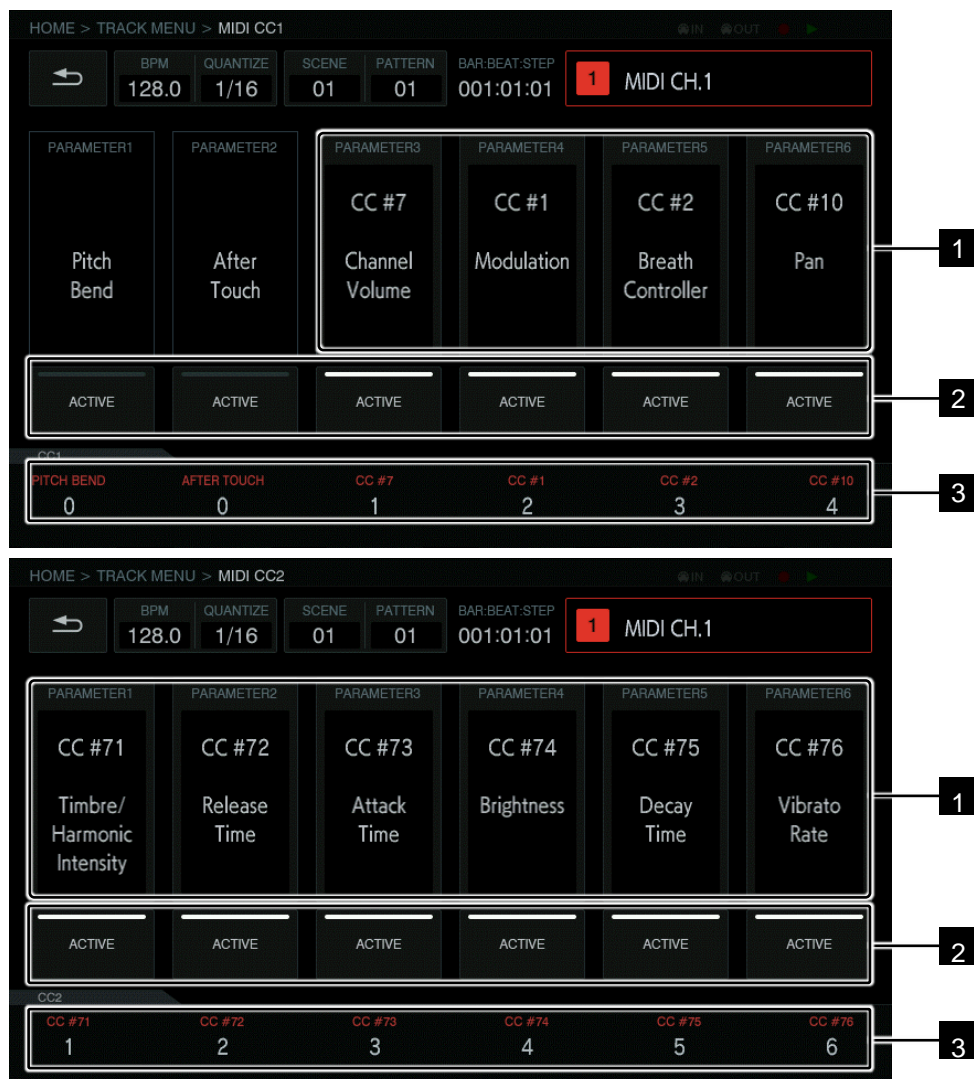


## 1 TRANSPOSE

You can change the TRANSPOSE value from -24 to +24.

## 2.4. MIDI CC settings (MIDI CC1/CC2)

You can set MIDI control change (CC) sent when pressing pads of a MIDI track or triggered by a sequence.



### 1 CC number select button

You can set CC number from PARAMETER 1 to PARAMETER 6.

- You cannot change PARAMETER1 (Pitch Bend) and PARAMETER2 (After Touch) in the CC1 screen.

### 2 ACTIVE button

You can toggle ACTIVE of PARAMETER 1 through PARAMETER 6 on and off.

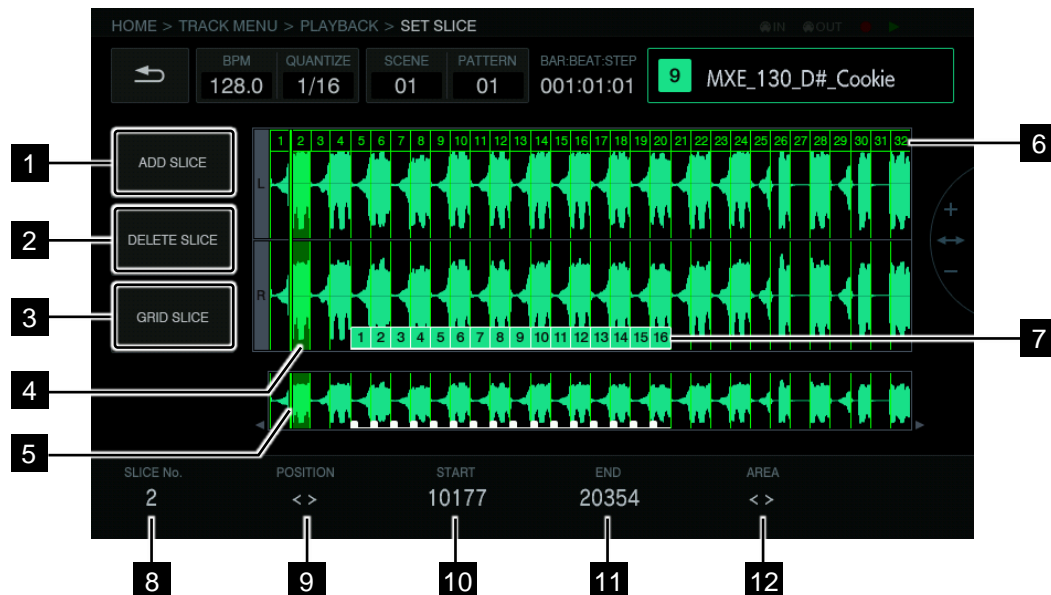
### 3 CC value

You can set CC value from PARAMETER 1 to PARAMETER 6.

### 3. SLICE (SET SLICE)

In this version, precise setting is available when you play in the SLICE mode:

- Adding and deleting slices
- Equally slice a sample into set number of slices.
- Individually set the start and end of each slice.
- Set the range of the slices assigned to the performance pads.



**1** ADD SLICE button.

You can add a new slice.

**2** DELETE SLICE button

You can delete a selected slice.

**3** GRID SLICE button

A pop-up window will appear to equally divide a sample to a designated number of slices.

**4** Position bar

The position of slice points you set at [POSITION] will be shown as a green bar.

**5** Display of the selected slice

Selected slices will be shown in transparent green on the selected slice.

**6** SLICE markers

Number of each slice will be shown.

**7** PAD markers

Pad markers will be shown on the slices assigned to performance pads. Their colors reflect the colors of the correspondent pads.

**8** SLICE No.

You can select a slice.

## **9** POSITION

You can move the position of slice points.

## **10** START

You can set the starting point of the slice you selected.

## **11** END

You can set the ending point of the slice you selected.

## **12** AREA

You can set the area of the slices assigned to the performance pads.

### 3.1. Opening the SET SLICE screen

Tap the [SET SLICE] button at the PLAYBACK screen to move to the SET SLICE screen.

### 3.2. Adding a slice

Tap the [ADD SLICE] button to add a new slice. The slice will be added with its starting point set at the Position bar. When a slice is added, the number of the slice markers will be updated. When the number of slices reached to the maximum (64), the [ADD SLICE] button is grayed out, and you cannot add a slice.

### 3.3. Deleting a slice

Tap the [DELETE SLICE] button to delete the selected slice. If you select the first slice or there is only one slice, the [DELETE SLICE] is grayed out and you cannot delete the slice.

### 3.4. Equally slicing a sample into set number of slices

Tap the [GRID SLICE] button to open a popup window. Turn the rotary selector to set the number to partition and tap [OK]. The sample will be equally divided by the number you set. Divided slices are numbered from the top and slice markers will be displayed.

### 3.5. Slice selection and edit slice points

Select slices and slice points for manipulation.

#### Selecting a slice

Turn the parameter 1 adjustment knob to select a slice. The number of the slice marker will be shown in [SLICE No.]. The selected slice is shown in transparent green.

#### Editing slice points

Turn the parameter 2 adjustment knob to move the position bar. The slice with the position bar will be shown in transparent green. The No. of the slice is shown in [SLICE No.].

### 3.6. Adjustment of a slice

#### Adjustment of starting points

Turn the parameter 3 adjustment knob to adjust a starting point. You cannot adjust it in the first slice.

#### Adjustment of the ending points

Turn the parameter 4 adjustment knob to adjust an ending point. You cannot adjust it in the last slice.

### 3.7. Assignment of slices to performance pads

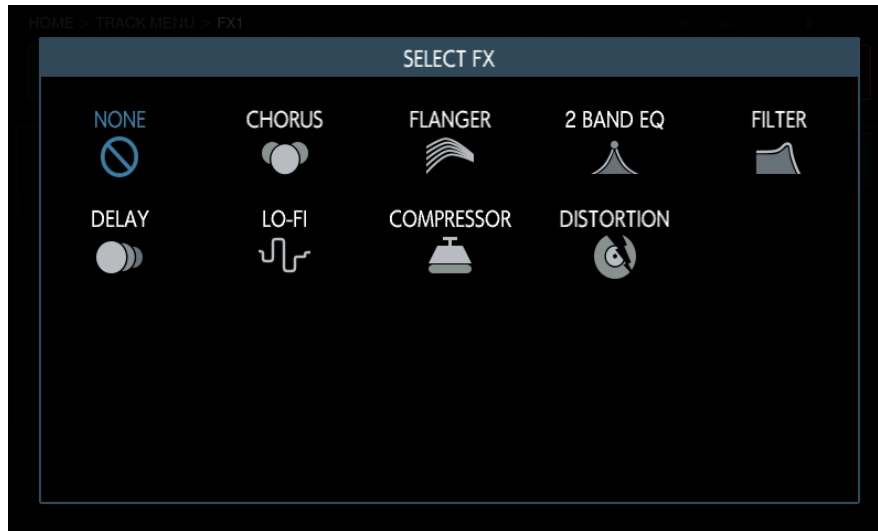
Turn the parameter 5 adjustment knob to set the range of the slice assigned to the performance pads.

The colors of the slices reflect those of correspondent performance pads. Up to 16 slices can be specified by PAD markers.

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#### 4. New Insert FX (FX1)

Four new effects have been added: DELAY, LO-FI, COMPRESSOR and DISTORTION for INSERT FX. MULTI MODE FILTER has been improved.



## 4.1. MULTI MODE FILTER



### 1 TYPE button

You can select a filter type from HPF, LPF and BPF.

### 2 SLOPE button

You can select cutoff characteristics of a filter. You can select 12 dB/Oct or 24 dB/Oct.

### 3 CUT OFF

You can change cutoff frequency of a filter from 20 Hz to 20000 Hz.

### 4 GAIN

You can change GAIN of a filter from -30 dB to 15 dB.

### 5 RESONANCE

You can change resonance of a filter from 0.2 dB to 10 dB.

### 6 GLIDE

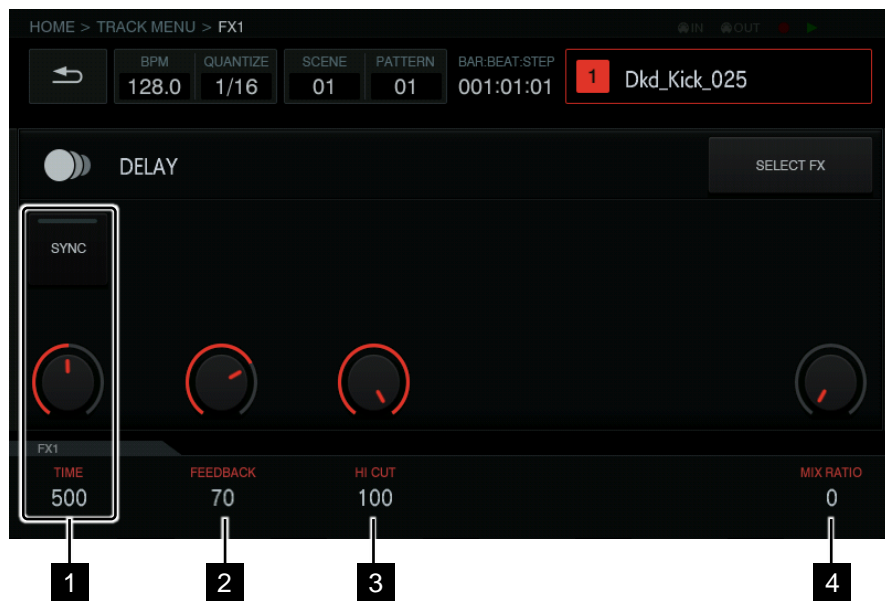
You can change the glide during the time when frequency is reaching the value set at [CUT OFF]. The range of the GLIDE is from 0 to 100. It is effective in changing filter cutoff frequency over time using step modulation feature.

### 7 MIX RATIO

You can change mix ratio of the original sound and effect sound (0 to 100).



## 4.2. DELAY (INSERT)



### 1 TIME

You can change delay time.

SYNC OFF: 10 ms ~ 1000 ms

SYNC ON: 1/8 BEAT ~ 2/1 BEAT

### 2 FEEDBACK

You can change delay feedback (0 % ~ 100 %).

### 3 HI CUT

You can change Feedback Hi-Cut. (0 to 100).

### 4 MIX RATIO

You can change mix ratio of the original sound and effect sound (0 % to 100 %).

### 4.3. LO-FI



**1** FILTER TYPE button

You can select a filter type from HPF, LPF, BPF and OFF.

**2** PRE/POST button

You can choose where to apply effect you selected at [FILTER TYPE]: before or after REDUCTION and BIT DEPTH.

**3** PREAMP

You can change audio volume before REDUCTION and BIT DEPTH (0 dB ~ 42 dB).

**4** REDUCTION

You can change sampling frequency when resampling (44 Hz ~ 44100 Hz).

**5** BIT DEPTH

You can change bit depth when resampling (1 - 16, 24 and OFF).

**6** CUT OFF

You can change cutoff frequency of a filter from 20 Hz to 20000 Hz.

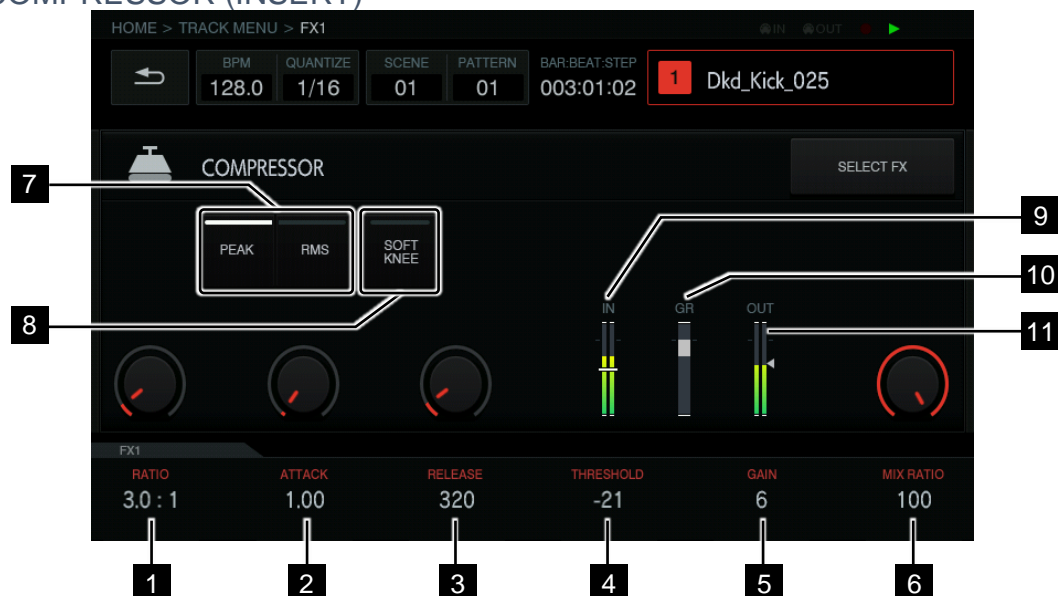
**7** RESONANCE

You can change resonance of a filter from 0.2 dB to 10 dB.

**8** MIX RATIO

You can change mix ratio of the original sound and effect sound (0 % to 100 %).

## 4.4. COMPRESSOR (INSERT)



### 1 RATIO

You can change RATIO (1:1 ~ 30:1).

### 2 ATTACK

You can change ATTACK (0.05 ms ~ 1000 ms).

### 3 RELEASE

You can change RELEASE (10 ms ~ 4000 ms).

### 4 THRESHOLD

You can change THRESHOLD (-52 dB ~ 0 dB).

### 5 GAIN

You can change OUTPUT GAIN (0 dB ~ 50 dB).

### 6 MIX RATIO

You can change mix ratio of the original sound and effect sound (0 % to 100 %).

### 7 PEAK/RMS button

You can choose PEAK or RMS.

PEAK : Compression is applied based on actual level of the sound.

RMS : Compression is applied based on the average level of the sound.

### 8 SOFT KNEE button

You can choose SOFT KNEE on or off.

### 9 INPUT level meter

The level of input audio to COMPRESSOR is indicated. THRESHOLD marker will be indicated on the meter.

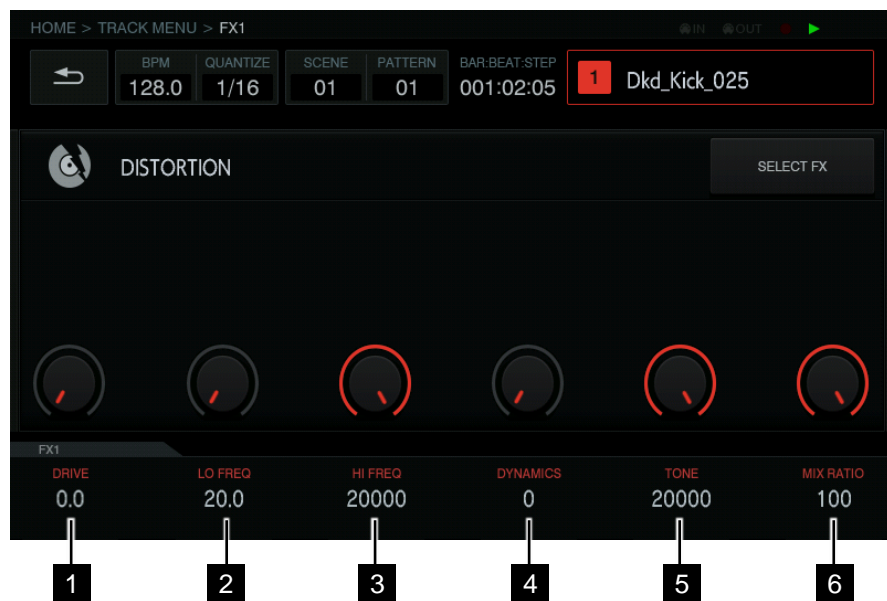
### 10 GAIN REDUCTION meter

The GAIN REDUCTION volume is indicated.

### 11 OUTPUT level meter

The level of output audio after COMPRESSOR is indicated. GAIN marker will be indicated on the meter.

## 4.5. DISTORTION



### 1 DRIVE

You can change the DRIVE (distortion amount) from 3 dB to 40dB.

### 2 LO FREQ

You can change cut off frequency of the high pass filter (20 Hz ~ 20000 Hz).

### 3 HI FREQ

You can change cut off frequency of the low pass filter (20 Hz ~ 20000 Hz).

### 4 DYNAMICS

You can change DYNAMICS (volume of distorted sound) from 0 % to 100 %.

### 5 TONE

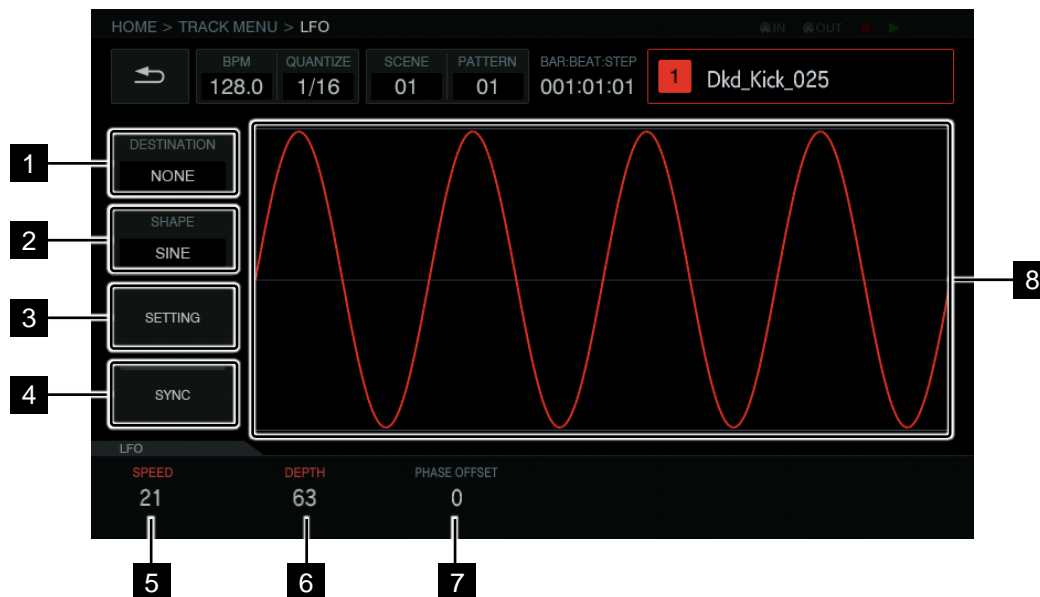
You can change cut off frequency of the high pass filter applied to distorted sound (20 Hz ~ 20000 Hz).

### 6 MIX RATIO

You can change mix ratio of the original sound and effect sound (0 % to 100 %).

## 5. LFO settings (LFO)

LFO (Low Frequency Oscillator: LFO) has been added for track modulation for various parameters.



### 1 DESTINATION button

You can choose the parameter used for LFO modulation.

### 2 SHAPE button

You can choose an LFO shape.

### 3 SETTING button

You can set LFO behavior in detail.

### 4 SYNC button

You can set ON/OFF to sync SPEED parameter of each STEP.

### 5 SPEED

You can set LFO cycle.

### 6 DEPTH

You can set amount of LFO to be applied to the parameter.

### 7 PHASE OFFSET

You can set LFO start phase.

### 8 LFO waveform display

LFO waveform display is displayed based on the value of SHAPE, DEPTH and PHASE OFFSET.

## 5.1. Selection of target parameters

Tap the [DESTINATION] button to select parameters for LFO modulation. You can select 1 parameter per track.

Category	Parameter		
PLAYBACK	PITCH		DISTORTION TONE
	START		DISTORTION MIX RATIO
	LOOP START		FLANGER RATE
	LENGTH		FLANGER WIDTH
			FLANGER PHASE
AMP ENVELOPE	VELOCITY		FLANGER DELAY
	ATTACK		FLANGER FEEDBACK
	HOLD		FLANGER MIX RATIO
	RELEASE		LO-FI PREAMP
FX1	2 BAND EQ B1 Q		LO-FI REDUCTION
	2 BAND EQ B1 FREQUENCY		LO-FI BIT DEPTH
	2 BAND EQ B1 GAIN		LO-FI CUTOFF
	2 BAND EQ B2 Q		LO-FI RESONANCE
	2 BAND EQ B2 FREQUENCY		LO-FI MIX RATIO
	2 BAND EQ B1 B2 GAIN		MULTI MODE FILTER CUTOFF
	CHORUS RATE		MULTI MODE FILTER GAIN
	CHORUS WIDTH		MULTI MODE FILTER RESONANCE
	CHORUS PHASE		MULTI MODE FILTER GLIDE
	CHORUS DELAY		MULTI MODE FILTER MIX RATIO
	CHORUS MIX RATIO		
	COMPRESSOR RATIO		
	COMPRESSOR ATTACK	MIDI NOTE	VELOCITY
	COMPRESSOR RELEASE		LENGTH
	COMPRESSOR THRESHOLD	MIDI CC1	PARAMETER 1 PITCH BEND
	COMPRESSOR OUTPUT GAIN		PARAMETER 2 AFTER TOUCH
	COMPRESSOR MIX RATIO		PARAMETER 3
	DELAY TIME		PARAMETER 4
	DELAY FEEDBACK		PARAMETER 5
	DELAY HI CUT		PARAMETER 6
	DELAY MIX RATIO	MIDI CC2	PARAMETER 1
	DISTORTION DRIVE		PARAMETER 2
	DISTORTION LO FREQ		PARAMETER 3
	DISTORTION HI FREQ		PARAMETER 4
	DISTORTION DYNAMICS		PARAMETER 5
			PARAMETER 6

- Even if you selected a target parameter, no LFO effect will be applied if effects or MIDI track, etc. including the parameters are not assigned.

## 5.2. Selection of LFO shape

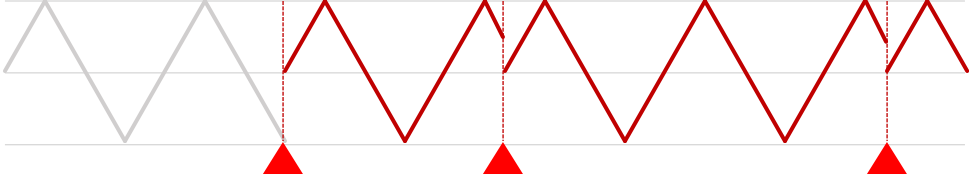
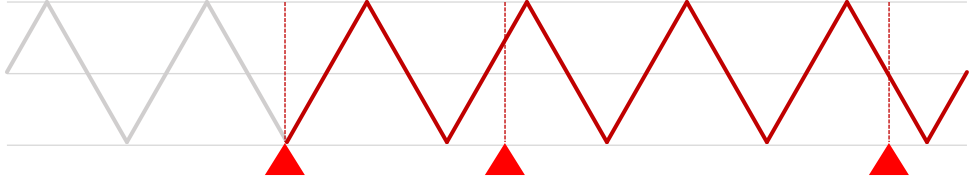
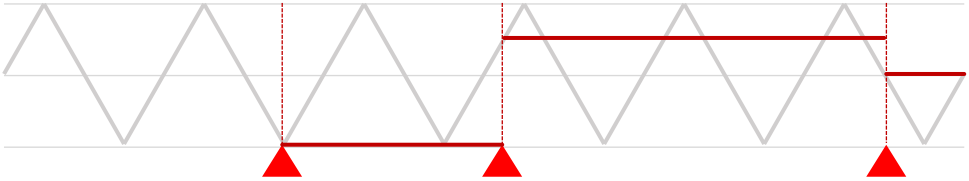
Tap the [SHAPE] button to select an LFO shape from the following 7 types: SINE, TRIANGLE, SAW, SQUARE, PULSE 25, PULSE 12 and RANDOM. The selected waveform will be shown on the LFO waveform display unit. When you select [RANDOM], a new RANDOM shape will be created each time you switch shapes.

## 5.3. Detailed setting of LFO behavior

Tap the [SETTING] button to open a popup screen for detailed settings of LFO behavior. You can set [Mode] and [Trigger On].

### Mode

You can set the trigger behavior of the LFO. Three types of modes are available: Trigger, Free and Sample & Hold. Each is described as follows.

Mode	Move
Trigger	LFO will restart on each trigger. 
Free	LFO will oscillate in the background regardless of trigger. 
Sample & Hold	LFO will oscillate in the background regardless of trigger, however holds the value when triggered. 

▲...Trigger    —... Applied parameter    —...LFO oscillating in the background

### Trigger On

You can select a type of Trigger of the sequencer to activate LFO Trigger in the Mode setting.

Full : LFO Trigger will activate only on Full Trigger.

Full & Half : LFO Trigger will activate on Full trigger and Half trigger.

## 5.4. LFO parameter settings

Turn the parameter adjustment knobs to set SPEED, DEPTH and PHASE OFFSET values.

### SPEED

Turn the parameter 1 adjustment knob to set LFO cycle. The setting range will be changed as follows depending on the [SYNC] button status.

[SYNC] button OFF : 0 ~ 127

[SYNC] button ON : 1/2, 1, 2, 3, 4, 8, 12, 16, 32, 48, 64, 128 (unit: STEP)

### DEPTH

Turn the parameter 2 adjustment knob to set amount of LFO to be applied to the parameter selected at the DESTINATION button. The range is from – 64 ~ 0 ~ 63. When the DEPTH value is minus (-), the waveform will invert. A waveform depending on the DEPTH value will be displayed the LFO waveform display unit.

### PHASE OFFSET

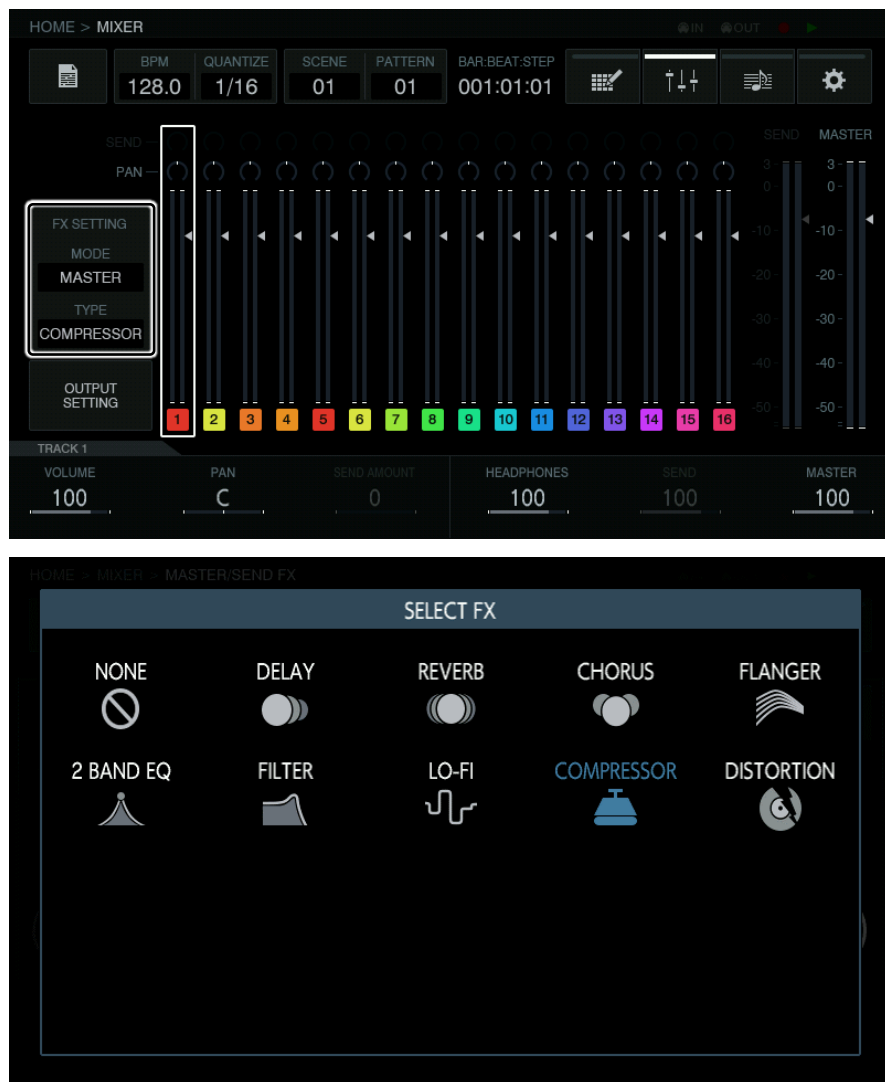
Turn the parameter 3 adjustment knob to set LFO start phase. The range is from 0 % ~ 99 %. The phase will go around one cycle and return to 0%. A waveform based on the PHASE OFFSET value will be displayed the LFO waveform display unit.



## 6. NEW MASTER/SEND FX

In addition to SEND FX, MASTER FX has been added. In MASTER/SEND FX, one FX can be used either as a MASTER FX or a SEND FX.

Now, all INSERT FX can also be used either as MASTER FX or SEND FX.



## 6.1. COMPRESSOR (MASTER/SEND)

The LOOK AHEAD setting can be used when using a COMPRESSOR as a MASTER/SEND FX.



### 1 MASTER/SEND selection button

You can select MASTER or SEND for FX.

### 2 LOOK AHEAD button

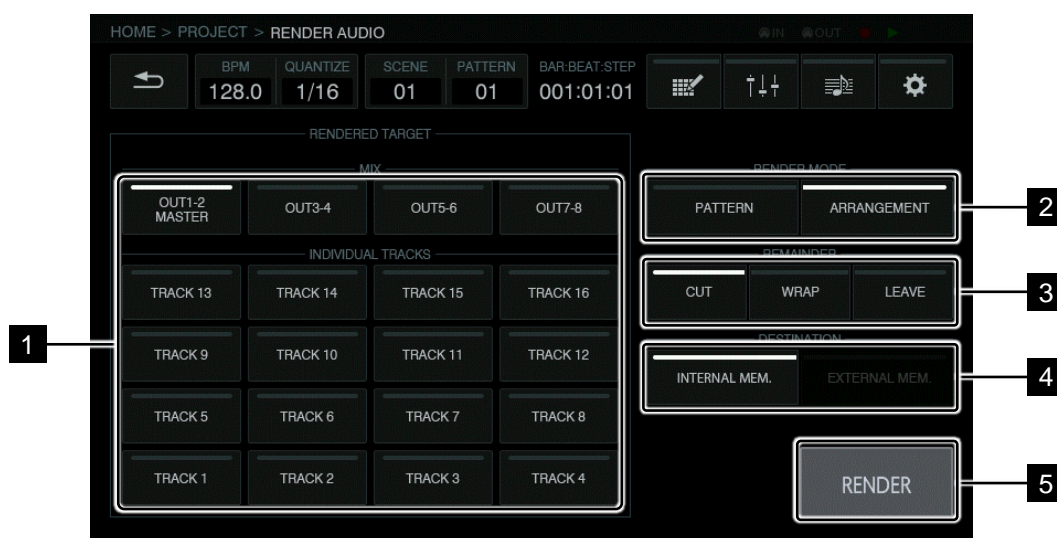
Select ON/OFF for LOOK AHEAD. When it is ON, A look-ahead buffer is added to analyze the waveform beforehand, enabling compression for sharp, powerful transient.

## 7. Audio Rendering (RENDER AUDIO)

RENDER AUDIO feature has been added to render PROJECTs into .WAV (44.1 kHz, 24 bit) as separate tracks/groups/mix.

Tap the [PROJECT] button at HOME screen and select [RENDER AUDIO] in the PROJECT menu.

Sequences or audio output from this unit will stop during audio rendering.



### 1 RENDERED TARGET button

You can select tracks/mix for rendering.

### 2 RENDER MODE button

You can select render mode.

### 3 REMAINDER button

You can select how to process the remaining tail of the rendered WAV files.

### 4 DESTINATION button

You can select destination to save the rendered WAV files.

### 5 RENDER button

Press the button to start rendering.

### 7.1. Selection of rendering target

Tap the [RENDERED TARGET] button to select target rendering. You can turn the [RENDERED TARGET] button ON/OFF, and up to 20 rendering are available. The rendering target is as follows:

MIX : OUT1-2 MASTER, OUT3-4, OUT5-6, OUT7-8

INDIVIDUAL TRACKS : TRACK 1 ~ TRACK 16

### 7.2. Selection of rendering mode

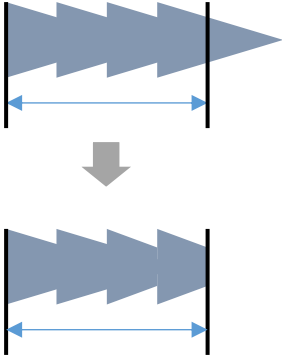
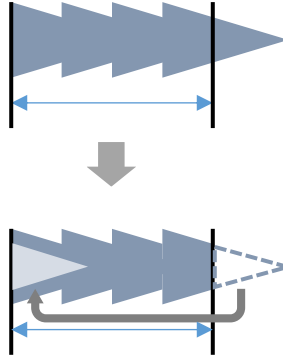
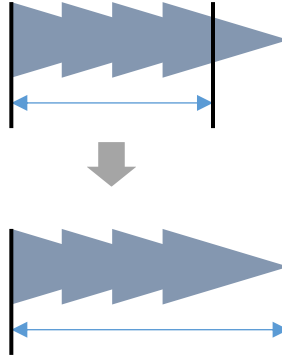
Tap the [RENDER MODE] button to select PATTERN or ARRANGEMENT:

PATTERN : Current pattern will be rendered.

ARRANGEMENT : Arrangement created in the ARRANGER screen will be rendered.

### 7.3. Selection of reverberation process

Tap the [REMAINDER] button to select how to process the remaining tail of the rendered audio (remainder sound of reverb, etc.). Each process is described as follows.

Process	CUT	WRAP	LEAVE
Description	The sound will cut based on the length of the pattern or arrangement.	Any sounds exceeding the length of the arrangement will be added (wrapped around) to the beginning of the audio.	Leaves the remainder of the sound.
Waveform image			

- When selecting [ARRANGEMENT], [LEAVE] is automatically selected and [CUT] and [WRAP] cannot be selected.

### 7.4. Selection of saving destination

Tap the [DESTINATION] button to select destination to save WAV. files:

INTERNAL MEM : The files are saved in a built-in flash device of this unit.

EXTERNAL MEM : The files are saved in an external USB flash device of this unit. (If an USB flash device is not inserted into this unit, it is not displayed.)

- Destination of WAV files:

When RENDER MODE is PATTERN : /PIONEER DJ SAMPLER/RenderedAudio/[*project name*]/Pattern/.....

When it is ARRANGEMENT : /PIONEER DJ SAMPLER/RenderedAudio/[*project name*]/Arrangement/....

- File name:

When RENDER MODE is PATTERN : [Scene No.][Pattern No.][Rendering name].wav

When RENDER MODE is ARRANGEMENT : [Rendering name].wav

### 7.5. Starting audio rendering

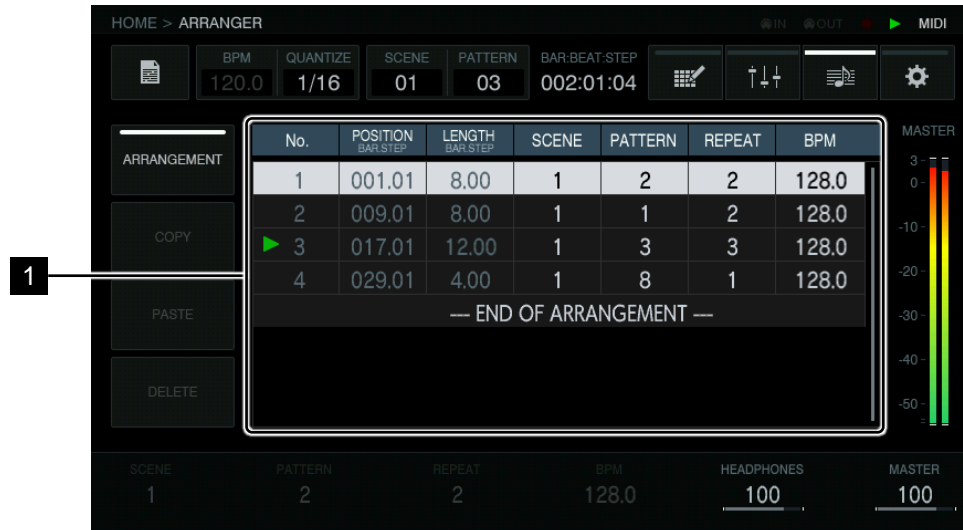
Tap the [RENDER] button to start rendering. During audio rendering, a popup screen will open showing a progress bar. To cancel audio rendering, tap the [CANCEL] button. After audio rendering, a popup screen will open to inform that rendering has successfully finished. Then, tap the [OK] button to end audio rendering.

When audio rendering failed due to lack of memory capacity or exceeded file size limit, another popup screen will open to let you know that file saving failed.

- You cannot access audio files after rendering from the sample browse screen of this unit. Save them in your computer for edit and mastering.
- The result of the rendering under the same condition is always overwritten. After rendering, be sure to move or copy the file to your computer.
- The rendering feature is only enabled for sample tracks.
- When rendering, you cannot apply analog filter effect.
- When saving an arrangement, maximum file size for rendering is 2 GB.

## 8. Arrangement (ARRANGER)

More detailed information has been added to the arrangement display area in the ARRANGER screen. The added items are POSITION and LENGTH.



### 1 The arrangement display area

Various information for arrangement is shown in the area.

No. : Arrangement row number is indicated.

POSITION : Arrangement position from the beginning (BAR-STEP) is indicated.

LENGTH : The length of the selected pattern (BAR-STEP) is indicated.

SCENE : The scene number is indicated.

PATTERN : The pattern number is indicated.

BPM : BPM value which can be set individually is indicated.

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## 9. Others

- PAD / BUTTON BRIGHTNESS setting has been added to the UTILITY screen as a dimmer for LED pads and buttons for the performance pads and step sequencer.
- PRO DJ LINK and MIDI CLOCK can be used at the same time to sync DJ equipment and connected external MIDI device using MIDI OUT.
- You can use the TSP-16 as a SYNC hub for DJ system and electronic instrument.
- More DJ players support the MASTER PLAYER SELECT (AUTO) feature of PRO DJ LINK as listed below.

Compatible DJ players

as of 2017.11.21

MODEL	Support status	
	MASTER PLAYER SELECT (AUTO)	MASTER PLAYER SELECT (MANUAL)
CDJ-2000NXS2	Firmware: Ver.1.51 or higher	Supported
CDJ-TOUR1	Firmware: Ver.1.21 or higher	Supported
XDJ-1000MK2	Firmware: Ver.1.10 or higher	Supported
XDJ-1000	Firmware: Ver.1.10 or higher	Supported
XDJ-700	Firmware: Ver.1.10 or higher	Supported
CDJ-2000NXS	Firmware Ver. 1.40 or higher	Supported
CDJ-900NXS	Firmware Ver. 1.30 or higher	Supported
CDJ-2000	N/A	Supported
CDJ-900	N/A	Supported

Download the latest firmware:

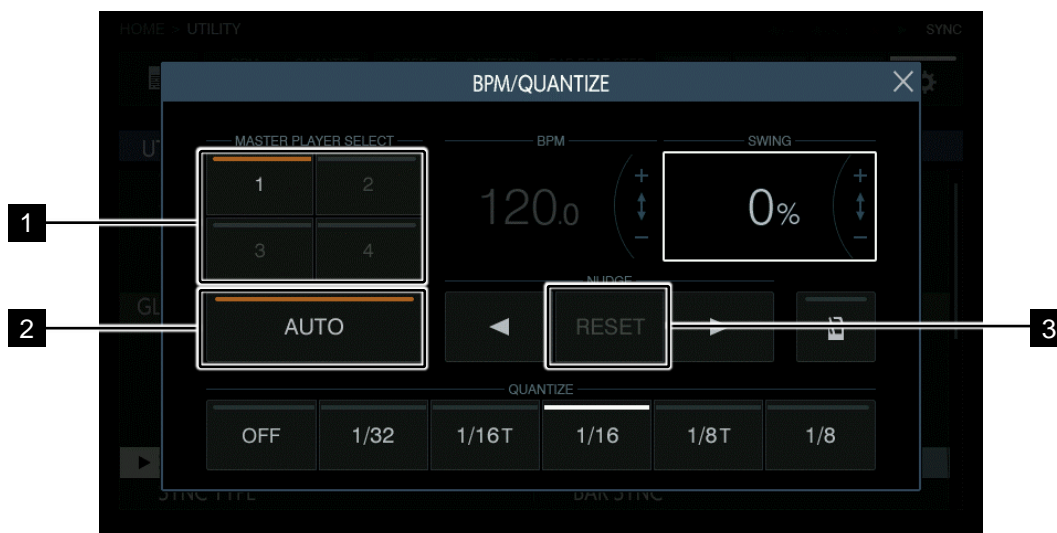
<http://www.pioneerdj.com/en/support/software/>

Note: To enable MASTER PLAYER SELECT (AUTO), all DJ players connected via PRO DJ LINK must be the compatible players with supported firmware listed above.

## FIRMWARE Ver.1.1

### 1. PRO DJ LINK (BPM/QUANTIZE, UTILITY)

You can SYNC the TORAIZ SP-16 to PRO DJ LINK compatible DJ players. By connecting the unit to a CDJ/XDJ with a LAN cable, you will be able to playback sequences in synchronization with tempo, beat and bar.



#### 1 MASTER PLAYER SELECT Button

You can select the MASTER DJ player. The numbers on the button correspond with the player number.

- When the DJ player is not properly connected, the number will blink. When the player is not connected, the number will turn grey and become inactive.
- Tap the button and the indicator will be lit in white.
- When AUTO button is active, the indicator on the selected DJ player button will be lit in amber.
- Buttons 1 to 4 are mutually exclusive.

#### 2 AUTO Button

When turned on, the MASTER DJ player will be selected automatically.

- When AUTO button is active, the indicator on the selected DJ player button will be lit in amber.

#### 3 RESET Button

When tapped, the offset value set by nudging will reset and the sequence will snap back to the grid received from the DJ player.

- When the beat has been offset using nudge, the button will turn white and active, when the beat is on grid, the button will turn grey and become inactive.



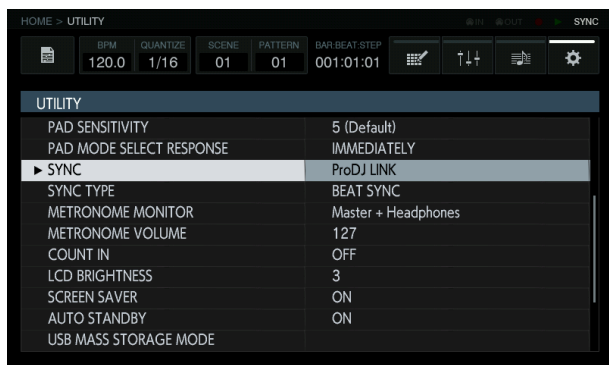
## 1.1 Synchronizing Sequences using PRO DJ LINK

### 1. Setting the UTILITY

Change the settings as below in the UTILITY screen.

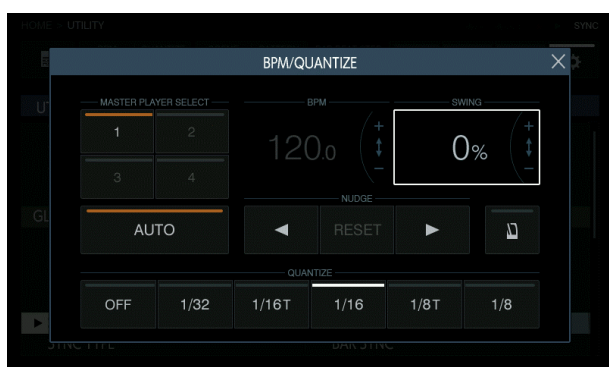
SYNC : PRO DJ LINK

SYNC TYPE : You can choose from, BPM SYNC, BEAT SYNC and BAR SYNC.



### 2. Select the MASTER Player

Tap [BPM/QUANTIZE] and open the BPM/QUANTIZE popup. Tap [MASTER PLAYER SELECT] button and select the MASTER player. You can also tap [AUTO] and automatically select the MASTER player.



### 3. Play the Sequence

Press the [ ► ] button and playback the sequence. If the tempo of the master player is changed, the unit will playback in synchronization to the master player.

## 1.2 PRO DJ LINK Setting

Settings for PRO DJ LINK is done in the UTILITY screen.

Item	Values
SYNC TYPE	BPM SYNC, BEAT SYNC, BAR SYNC

BPM SYNC : The unit will playback in sync to the tempo.

BEAT SYNC : The unit will playback in sync to the beat, in addition to the tempo.

BAR SYNC : The unit will playback in sync to the bar, in addition to beat and tempo.

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## 2 PROJECT Related Features

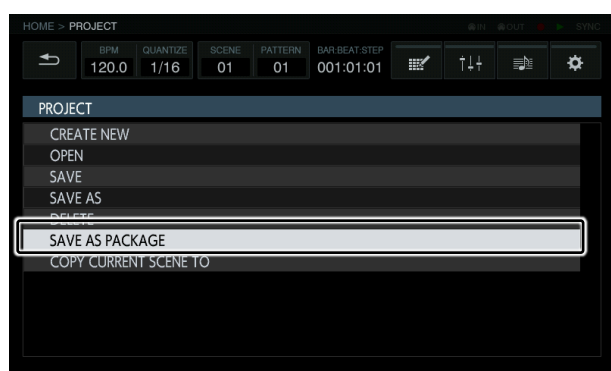
SAVE AS PACKAGE and COPY CURRENT SCENE TO have been added to the PROJECT menu. You can save all the samples used in a project together with the project and save it as a PACKAGE, making it easier to exchange projects between other TORAIZ SP-16 users. You can also copy the current SCENE to an open SCENE slot in a different project.

### 2.1 SAVE AS PACKAGE

➤ Saving a package

#### 1. Select [SAVE AS PACKAGE] in the PROJECT menu.

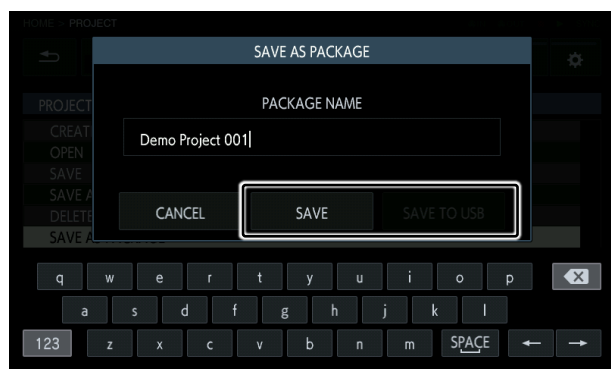
A PACKAGE naming popup will open.



#### 2. Enter package name and tap [SAVE] or [SAVE TO USB].

[PACKAGE Name].tpkg file will be saved to /PIONEER DJ SAMPLER/Projects/ folder. This file path is the same both in internal memory and USB device.

- If a PACKAGE with the same name exists, an overwrite confirmation popup will open.



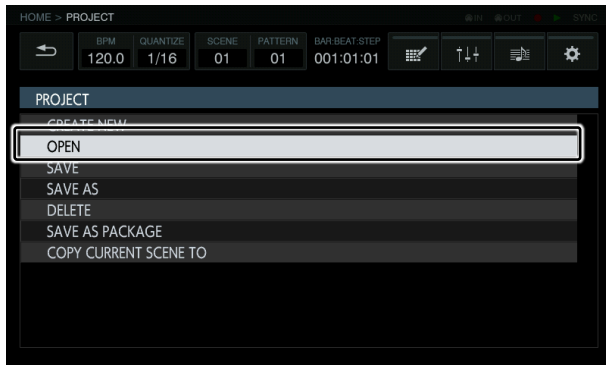
➤ Opening a PACKAGE

#### 1. Place PACKAGE file to folder.

Copy the PACKAGE file (extension: .tpkg) to the /PIONEER DJ SAMPLER/Projects/ folder in the internal flash memory or USB device.

## 2. Open the **PACKAGE** file from the **PROJECT** menu.

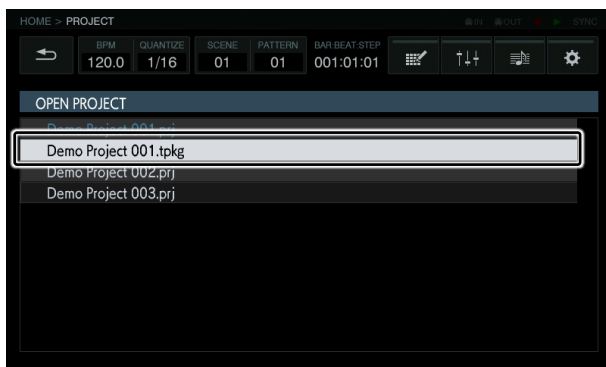
A list of the projects and packages is displayed.



## 3. Open the **.tpkg** file.

A confirmation popup will appear. Tap [OK] and the **PACKAGE** will be loaded.

- If you save an imported package as a project, the samples included in the package will be copied to PIONEER DJ SAMPLER /Samples/[Imported]/[Project Name]/

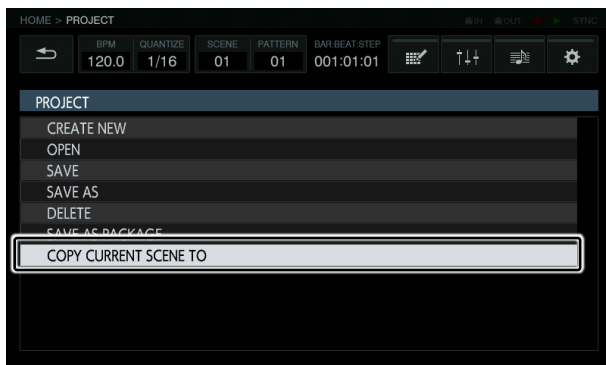


## 2.2 Copying Current **SCENE** to Other Projects

### 1. Make sure you are currently selecting the **SCENE** you wish to copy.

Select a **SCENE** using [SCENE] button or **SCENE** MANAGER.

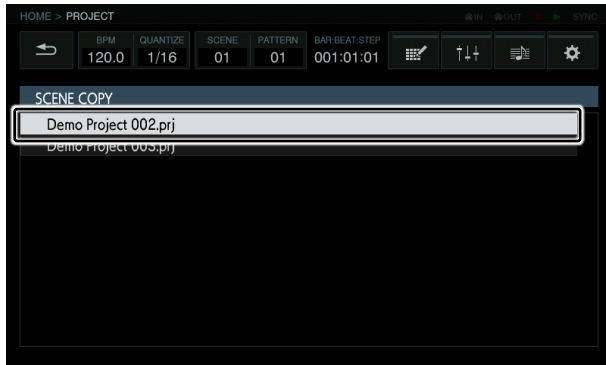
### 2. Select [**COPY CURRENT SCENE TO**] in the **PROJECT** menu.



### 3. Select the **PROJECT** you wish to copy the current **SCENE** to.

The Current SCENE will be copied to the selected PROJECT and popup will appear telling you that the SCENE was copied successfully.

- The SCENE will be copied to the youngest numbered SCENE slot.
- If the selected PROJECT does not have any open SCENE slots, a WARNING message will appear, and the SCENE will not be copied.



### 3 New Insert FX

2 BAND EQ and MULTI MODE FILTER has been added to insert FX.

#### 3.1 2 BAND EQ



#### 1 BAND TYPE Button

You can choose which filter type to use in BAND1 and BAND2. There are five filter types you can choose from. HPF, LPF, PEAK, HI-SHELF, LO-SHELF.

#### 2 Q

You can set the Q value for the filter for BAND1 and BAND2. The Q value can be set from 0.1 to 10.

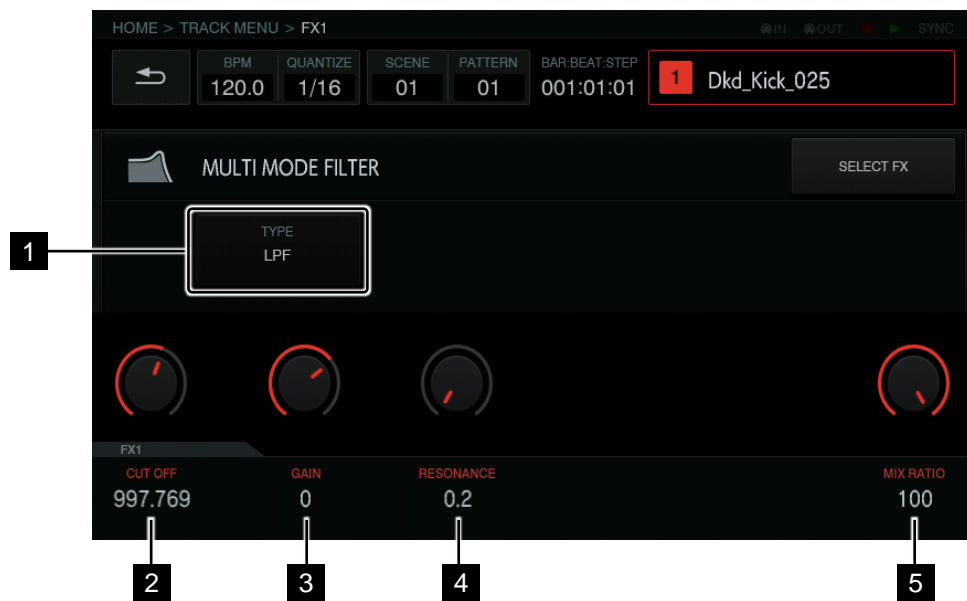
#### 3 FREQUENCY

You can set the frequency of the filter for BAND1 and BAND2. The FREQUENCY can be set from 20 to 20000Hz.

#### 4 GAIN

You can set the GAIN value for the filter for BAND and BAND2. The GAIN value can be set from -30dB to 15dB.

## 3.2 MULTI MODE FILTER



### 1 TYPE Button

You can choose which filter type to use. There are three filter types you can choose from, HPF, LPF and BPF.

### 2 CUT OFF

You can set the cut off frequency of the filter. The cut off frequency can be set from 20 to 20000 Hz.

### 3 GAIN

You can set the gain value for the filter. The gain value can be set from -30 dB to 15 dB.

### 4 RESONANCE

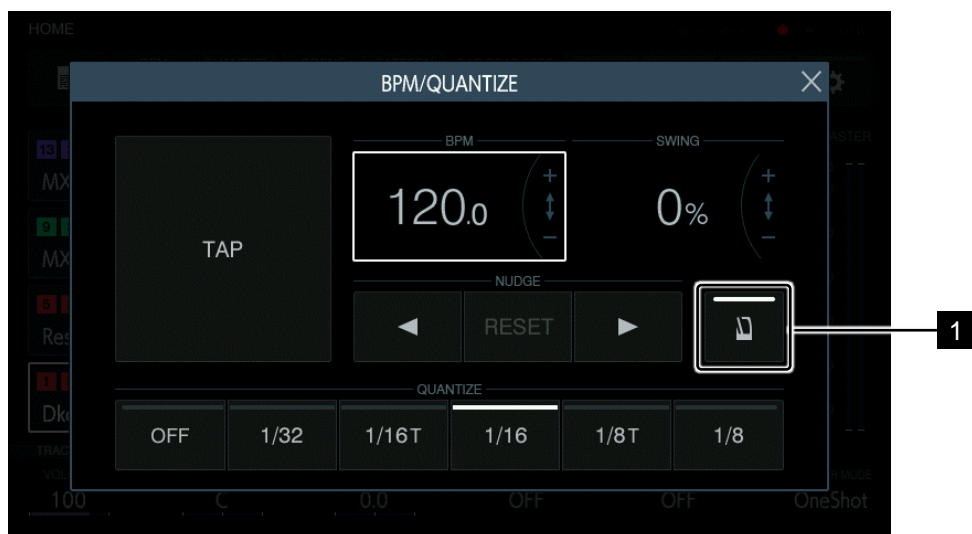
You can set the resonance of the filter. The resonance value can be set from 0.2 to 10.

### 5 MIX RATIO

You can set the MIX ratio of the filter. The MIX ratio value can be set from 0 to 100.

## 4 Metronome / Count-in Feature

A Metronome and count-in feature has been added.



### 1 METRONOME Button

Toggles METRONOME on and off.

#### 4.1 METRONOME Setting

Tap the [METRONOME] button and turn the metronome on. When the metronome is turned on, the indicator on the button will light up in white. The metronome will play during playback. Settings related to the metronome can be changed in the UTILITY menu.

Item	Value
METRONOME MONITOR	Master + Headphones, Headphones
METRONOME VOLUME	0 to 127

METRONOME MONITOR : The output destination the METRONOME sound will play.

METRONOME VOLUME : The volume of the METRONOME sound.

#### 4.2 COUNT IN Setting

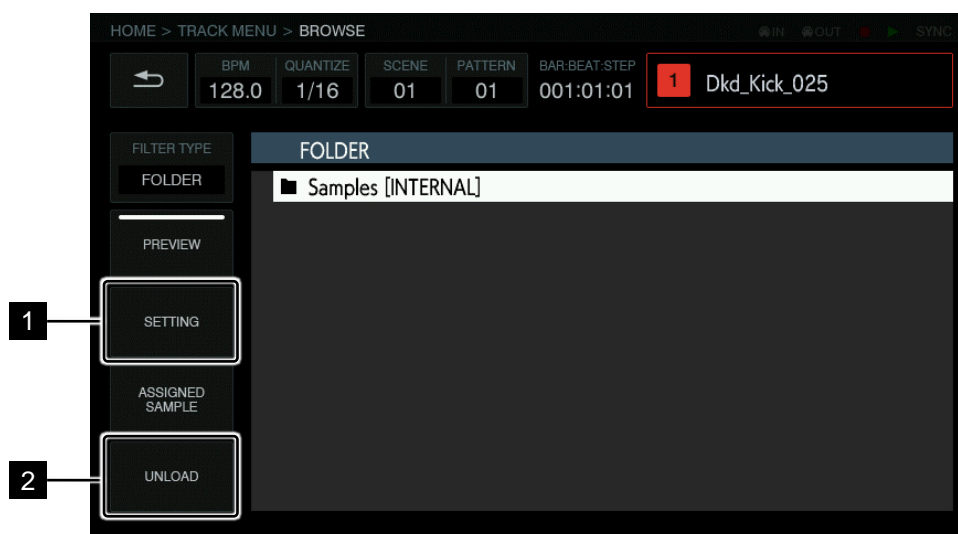
When COUNT IN is active, there will be a pre-count of the metronome before the sequence starts playback. A useful feature in dynamic recording.

COUNT IN settings can be changed in the UTILITY menu.

Item	Value
COUNT IN	OFF, 1 BAR, 2 BAR

## 5 BROWSE Related Function

A PREVIEW setting popup and UNLOAD function has been added to the BROWSE screen.



### 1 SETTING Button

A popup will appear for the setting of PREVIEW options.

### 2 UNLOAD Button

Tap to unload a sample from the TRACK you have assigned it to.

### 5.1 PREVIEW Setting

Tap the [SETTING] button and open the SETTING popup. Use the rotary selector to navigate and change settings.

Item	Value
PREVIEW SETTING	Master + Headphones, Headphones
PREVIEW MONITOR	0 to 127

PREVIEW SETTING : PREVIEW sound output destination

PREVIEW MONITOR : PREVIEW sound output level

### 5.2 UNLOAD

Tap the [UNLOAD] Button in the BROWSE screen to unload a sample from the TRACK you have assigned it to. The sample will be un-assigned and the sample name will disappear.



## 6 Sequence Edit Feature

A CLEAR TRIGGER function and QUANTIZE function for the current TRACK has been added to the SEQUENCE screen.



### 1 CLEAR TRIGGERS Button

You can remove all the triggers from the current PATTERN sequenced in the step sequencer.

### 2 QUANTIZE Button

You can quantize all the triggers in the current PATTERN sequenced in the step sequencer to 16th notes.

### 6.1 Removing triggers

Tap the [CLEAR TRIGGERS] button to remove triggers from the current sequence. A popup will appear asking you to confirm. Tap [OK] to confirm or [CANCEL] to close popup without removing triggers.

### 6.2 Quantizing Triggers

Tap the [QUANTIZE] button to quantize triggers in the current sequence. Any triggers sequenced in an offset position will be quantized to the closest 16th note. This feature can be used when snapping triggers to the sequence after dynamic recording.

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## 7 PITCH mode range setting for the TOUCH STRIP

PITCH mode range setting for the TOUCH STRIP can be changed in the utility menu.

Item	Value
TOUCH STRIP SETTING (PITCH RANGE)	2 Bipolar Semitones, 4 Bipolar Semitones, 12 Bipolar Semitones

- Depending on the TIME STRETCH mode or PITCH value set in PLAYBACK, the actual pitch may not change when value exceeds the limit.

## List of Corrections for Operating Instructions

We would like to apologize for the errors we have made as listed below.

As of 2017.11.21

Page	Error Section	Error	Correction
10	PATTERN	A pattern length can be set on a step level from a minimum of <u>8 steps</u> to a maximum of 4 bars (64 steps)	You can set a pattern length by the step from a minimum of <u>4 steps</u> to a maximum of 4 bars (64 steps).
12	Switching the pattern	The timing for switching patterns <u>depends on the set quantize value.</u>	The timing of switching patterns <u>depends on the PATTERN QUANTIZE value set at [UTILITY].</u>
13	Muting a track (MUTE mode)	The performance pad corresponding to the muted track is <u>dimmed.</u>	The LED of the performance pad corresponding to the muted track is <u>turned off.</u>
13	Playing a scale performance (SCALE mode)	4 Press the [SCALE] button again. The [SCALE] button turns off and the <u>slice</u> performance mode ends.	4 Press the [SCALE] button again. The [SCALE] button turns off and the <u>scale</u> performance mode ends.
19	Fixed display area SCENE/PATTERN button	Opens <u>BPM/QUANTIZE</u> pop-up.	Opens <u>SCENE MANAGER</u> pop-up.
27	QUANTIZE button	<u>Tapping this multiple times to match the beat sets the BPM value to match that interval.</u>	<u>You can select the quantize value when hitting a performance pad during sequencer playback.</u>
33	SAMPLING/EDIT screen (figure)	(button name) SAVE <u>SELECTION</u>	(button name) SAVE <u>CHANGES</u>
34	SAVE SELECTION	SAVE <u>SELECTION</u>	SAVE <u>CHANGES</u>
34	SAVE SELECTION	A pop-up with a name <u>a</u> consecutive number entered and a software keyboard appear to enable you to assign a name.	A pop-up with a name <u>of</u> consecutive number entered and a software keyboard appear for you to enter the name.
33	REC LENGTH	When OFF, recording stops automatically when <u>32</u> seconds are exceeded after the start of recording.	When OFF, recording stops automatically when <u>32</u> seconds are exceeded after the start of recording.
33	REC LENGTH	OFF / 1 to 4 (BAR level)	<u>OFF / 1 to 8 (BAR level)</u>
34	SAVE SELECTION	<u>TORAIZ/Samples/</u>	<u>PIONEER DJ SAMPLER/Samples/Saved/[Project name]/</u>

35	Setting the playback method of the sample sound source  (PLAYBACK)	LOOP START POINT  <u>when TRIGGER MODE of the track is [LOOP One Shot] or [LOOP GATE]</u>	LOOP START POINT  <u>when LOOP is [ON]</u>
37	AMP ENVELOPE screen	(button name) <u>PRESET</u>	The PRESET button is not implemented. This figure is one of development but rejected presently.
37	AMP ENVELOPE screen	(button name) <u>SET UP</u>	(button name) <u>SETTING</u>
38	6 PRESET	Tapping this displays a list.	The PRESET function is not implemented. The content of this description was one of development but rejected presently.
38	7 SETUP	<u>SETUP</u>	<u>SETTING</u>
38	7 SETUP [Retrigger]	[Retrigger]: The operation of AMP ENVELOPE with respect to various special triggers can be set.	This function is not implemented. The content of this description was one of development but rejected presently.
41	When importing sound sources from a USB device	When a USB device is inserted into this unit, the <u>[TORAIZ]</u> folder is created automatically. Only sound sources placed in the [Samples] folder in this <u>[TORAIZ]</u> folder can be read by the BROWSE function (p.31).	When a USB device is inserted into this unit, the <u>[PIONEER DJ SAMPLER]</u> folder is created automatically. Only sound sources placed in the [Samples] folder in this <u>[PIONEER DJ SAMPLER]</u> folder can be read by the BROWSE function (p.31).

## Appendix 1. MIDI implementation Chart

A list of the functions the TSP-16 can recognize by the MIDI messages from an external device.

### NOTE

Trigger sample in each track. Samples can be triggered at any MIDI channel.

Function	NOTE No.	Remarks
TRACK1 Trigger	0	
TRACK2 Trigger	1	
TRACK3 Trigger	2	
TRACK4 Trigger	3	
TRACK5 Trigger	4	
TRACK6 Trigger	5	
TRACK7 Trigger	6	
TRACK8 Trigger	7	
TRACK9 Trigger	8	
TRACK10 Trigger	9	
TRACK11 Trigger	10	
TRACK12 Trigger	11	
TRACK13 Trigger	12	
TRACK14 Trigger	13	
TRACK15 Trigger	14	
TRACK16 Trigger	15	

TRACK corresponding to MIDI channel set at [CHANNEL MAPPING] at UTILITY will be triggered with PITCH. TIME STRETCH setting of a track is limited in the range of  $\pm 12$  when using master tempo (M.TMP).

Function	NOTE No.	Remarks
Sample Trigger (PITCH: -24)	24	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -23)	25	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -22)	26	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -21)	27	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -20)	28	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -19)	29	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -18)	30	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -17)	31	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -16)	32	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -15)	33	In case of M.TMP, PITCH: -12

Sample Trigger (PITCH: -14)	34	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -13)	35	In case of M.TMP, PITCH: -12
Sample Trigger (PITCH: -12)	36	
Sample Trigger (PITCH: -11)	37	
Sample Trigger (PITCH: -10)	38	
Sample Trigger (PITCH: -9)	39	
Sample Trigger (PITCH: -8)	40	
Sample Trigger (PITCH: -7)	41	
Sample Trigger (PITCH: -6)	42	
Sample Trigger (PITCH: -5)	43	
Sample Trigger (PITCH: -4)	44	
Sample Trigger (PITCH: -3)	45	
Sample Trigger (PITCH: -2)	46	
Sample Trigger (PITCH: -1)	47	
Sample Trigger (PITCH: $\pm 0$ )	48	Output Sample with original pitch
Sample Trigger (PITCH: +1)	49	
Sample Trigger (PITCH: +2)	50	
Sample Trigger (PITCH: +3)	51	
Sample Trigger (PITCH: +4)	52	
Sample Trigger (PITCH: +5)	53	
Sample Trigger (PITCH: +6)	54	
Sample Trigger (PITCH: +7)	55	
Sample Trigger (PITCH: +8)	56	
Sample Trigger (PITCH: +9)	57	
Sample Trigger (PITCH: +10)	58	
Sample Trigger (PITCH: +11)	59	
Sample Trigger (PITCH: +12)	60	
Sample Trigger (PITCH: +13)	61	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +14)	62	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +15)	63	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +16)	64	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +17)	65	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +18)	66	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +19)	67	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +20)	68	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +21)	69	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +22)	70	In case of M.TMP, PITCH: +12

Sample Trigger (PITCH: +23)	71	In case of M.TMP, PITCH: +12
Sample Trigger (PITCH: +24)	72	In case of M.TMP, PITCH: +12

## CC (Control Change)

Receives MIDI CC from an external device to control this unit.

Item		CC No.	Remarks
[TRACK]	VOLUME	7	
	PAN	10	
	TIME STRETCH	14	
	LOOP	15	
	TRIGGER MODE	16	
	SEND AMOUNT	17	
	MUTE	18	
[PLAYBACK]	PITCH	20	
	START	21	
	LOOP START	22	
	LENGTH	23	
[AMP ENVELOPE]	VELOCITY	26	
	ATTACK	27	
	HOLD	28	
	RELEASE	29	
[FX1]	Param1	46	
	Param2	47	
	Param3	48	
	Param4	49	
	Param5	50	
	Param6	51	
[SEQUENCE]	OFFSET	54	
	RETRIGGER CNT	55	
	RETRIGGER SPD	56	
[LFO]	SPEED	60	
	DEPTH	61	
	PHASE OFFSET	62	

Switching between SCENE and PATTERN: Just as the operation of the unit, switching to SCENE is fixed after receiving PATTERN. And switching between SCENE and PATTERN is disabled when the SAMPLING/EDIT screen is displayed. Other MIDI messages are ignored when switching between SCENE and PATTERN.

Function	CC No.	Remarks
Select SCENE	0	CC value $\geq$ 16, SCENE 16
Select PATTERN	32	CC value $\geq$ 16, PATTERN 16

### Pitch Bend

Pitch bend is available for a sample of a track corresponding to the MIDI channel set at [CHANNEL MAPPING] at the UTILITY. Enabled only when the MODE of touch strip is PITCH.

### Mode Message

Messages are received at a track corresponding to the MIDI channel set at [CHANNEL MAPPING] in the UTILITY. In Mode Message, ALL NOTE OFF is corresponded and current output audio will be paused.



## Appendix 2. List of features using SHIFT key

Operation	Status	Feature
[SHIFT] + PAD	PAD MODE: MUTE	All tracks other than the track you hit the pad are muted. / Hit the pad again to cancel MUTE for all. (Operating Instructions P.12)
[SHIFT] + PAD	PAD MODE: other than MUTE	Pause sample playback of the track
[SHIFT] + parameter adjustment knob	PLAYBACK: PITCH ~ LENGTH SAMPLING/EDIT: START/END, FX1 parameters	Precisely adjust parameters
[SHIFT] + rotary selector	BROWSE	The focus can be moved on a folder basis. (Operating Instructions P. 31)
[SHIFT] + rotary selector	PLAYBACK, SAMPLING/EDIT	The waveform can be vertically zoom in/out. (Operating Instructions P. 34)
[SHIFT] + rotary push	ARRANGER	Turn on the [ARRANGEMENT]. During pause: playback will start from the selected line. During playback: reserves jump of the playback position to the selected line. (The jump will be executed when the playback of the current line ended.)
[SHIFT] + [REC]	After dynamic recording	Undo the recording