










EFNOTE **mini**

Reference Guide
(for Ver 1.0)



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For the latest product information, please refer to the web below.

Product Information

ef-note.com/products/drums/EFNOTEmini

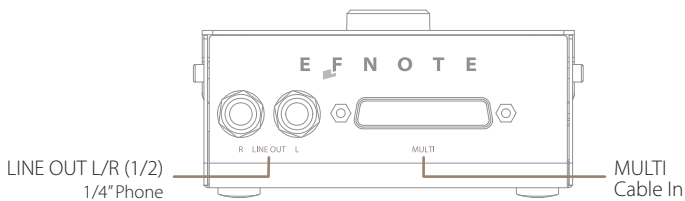
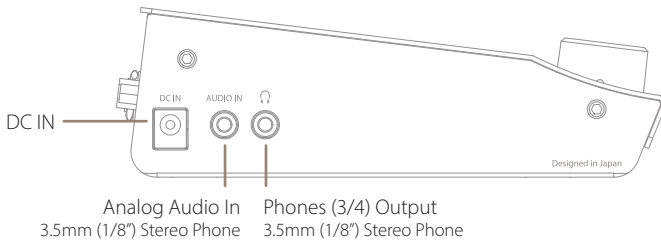
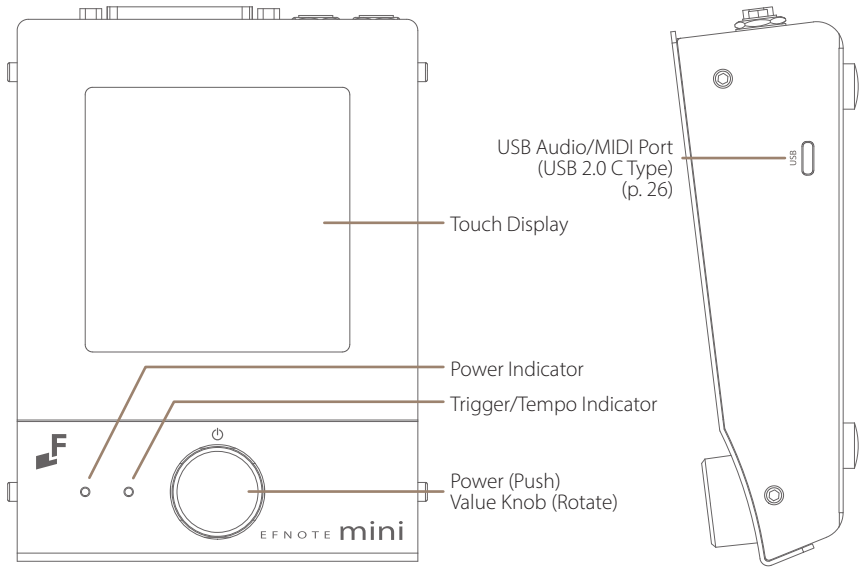


Product Info

- * Before using this product, read “IMPORTANT SAFETY INSTRUCTIONS” in the Quickstart Guide.
- * Read this guide in combination with the Quickstart Guide.
- * The information in this document might differ from the sound module you’re using due to differences of the firmware version. For the latest firmware update information, refer to the EFNOTE web.
- * All illustrations and screens appearing in this document are for the purpose of explaining operation, and may differ from the actual product or specifications.
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Basic Operation

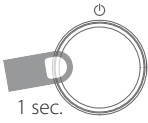
■ Sound Module



■ Power On/Off

Power On

1



2

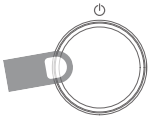


NOTE

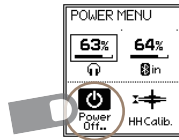
* After turning the power on, adjust the hi-hat before playing the drums to get the best playing feel (p. 20).

Power Off

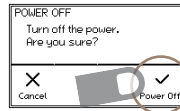
1



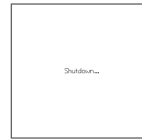
2



3



4

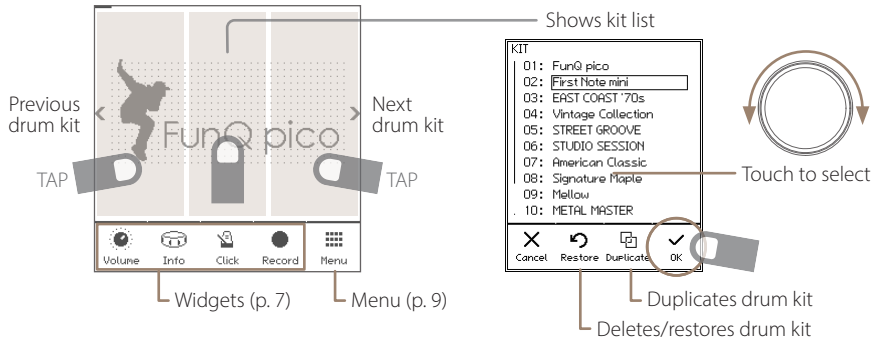


* Not doing this procedure may result in loss of changes.

* The power save function will turn power off automatically after specified period. It can be disabled (p. 23).

■ Home Screen

Switching drum kits




- * Preset drum kits can be edited, but cannot be renamed or deleted.
- * The edited preset drum kit can be restored by "Restore".
- * User drum kits are listed after the preset drum kits and sorted by the drum kit name.
- * Actual kit names may vary.


Opening the kit list

- 1 In the home screen, tap on the center of the kit name area.


Creating a new drum kit / Duplicate the drum kit (User drum kit)

- 1 Open the kit list, and select a drum kit as a source of duplication.
- 2 Tap  Duplicate.
- 3 Enter the new kit name and tap the OK.
Regarding the name entry window, see p. 13.

Restoring the preset drum kit

- 1 Open the kit list, and select a preset drum kit that you want to restore.
- 2 Tap , and tap the OK in the confirmation window.

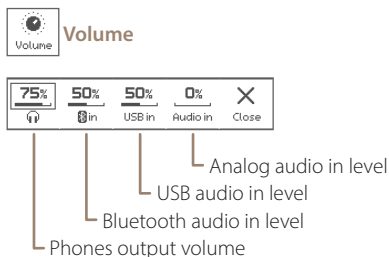
Deleting the user drum kit (duplicated drum kit)

- 1 Open the kit list, and select a user drum kit that you want to delete.
- 2 Tap , and tap the OK in the confirmation window.

■ Widgets

These widgets control various settings easily at the home screen.

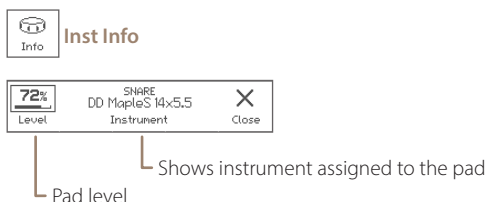
* Some other widgets can be open from the menu (p. 9).



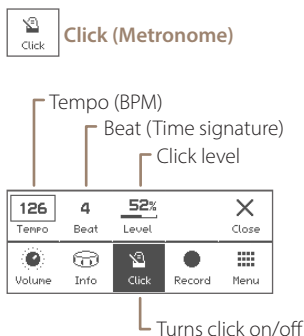
* The line out level can be linked with the phones level (p. 23).

* Be careful with loud audio volume.

CAUTION Be sure not to listen to audio at high volume. It can cause permanent hearing loss.



* Clipping may occur when exceeding 85%.



* For the detailed click setup, see (p. 15).

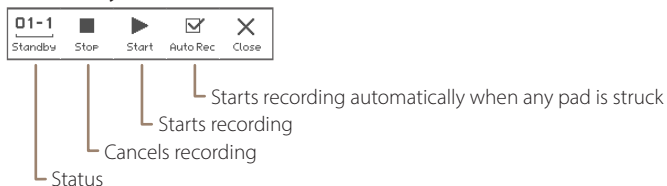
* When the drum kit is switched, the click sound will be interrupted while loading the kit.

Recorder

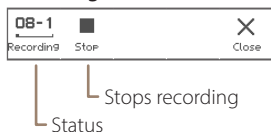
Records your drum performances by MIDI, for sound check on stage, transferring to your DAW, or later self review.



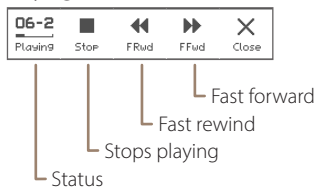
Rec Standby



Recording



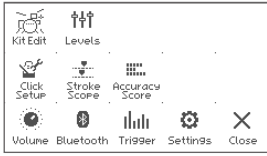
Playing



- * Any other audio/MIDI sources are not recorded.
- * Tempo and beat settings are not recorded.
- * If the recording widget is closed, the recording will be stopped.
- * The recorded data will be stored even if the power is turned off.
- * The playback will not send any MIDI data.

■ **Menu**

This menu takes you to the various screens.



Closes menu



Shows pad level faders
Edits drum kit, changes instrument on each pad



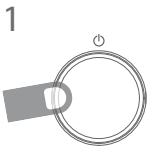
Configures click setup
Displays your strike points on time-line
Estimates your strike accuracy



Shows volume control
Connects Bluetooth device
Configures triggers (pads)
Configures general settings

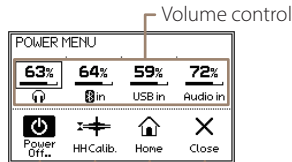
■ **Power Menu**

You can access the power menu from anywhere.



* Push the knob again to close the menu.

2



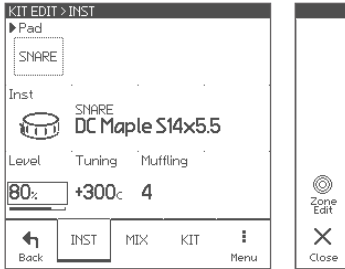
Volume control
Turns power off
Goes to the hi-hat calibration screen
Goes back to home screen
Closes menu

Menu

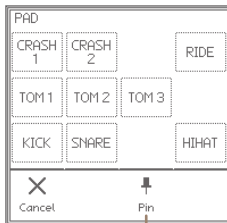
■ Drum Kit Edit

In this section, you can edit the drum kit.

INST



PAD window



When pinned, the selected pad is not changed by hitting a pad.

Parameters for each pad

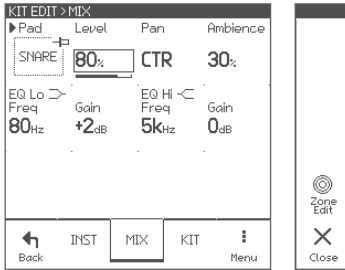
Pad	Opens the PAD window and selects an edit target pad. • Can be selected by hitting a pad.
Inst (icon)	Selects Inst group
Inst (name)	Selects Inst (sound for the pad)
Level	Adjusts pad level * Clipping may occur when exceeding 85%. * Adjusts all zones together • You can also adjust pad levels with faders in the Pad Levels screen (p. 14).
Tuning	Adjusts pitch in cent * Adjusts all zones together
Muffling	Adjusts mute amount (sustain) * Adjusts all zones together

Page Menu

Zone Edit	Edits each zone (p. 12)
------------------	-------------------------

* The only pad either TOM 2 or CRASH 2 can be connected, but both pads can be edited on the edit screen.

MIX



Parameters for each pad

Pad	Selects an edit target pad. • Can be selected by hitting a pad.
Level	Adjusts pad level * Clipping may occur when exceeding 85%.
Pan	Adjusts pan
Ambience	Adjusts ambience send amount
EQ Lo/Hi	Modifies sound character with shelving EQs

About the Inst, tone and zone

Each pad has some zones.

An Inst has three tones and some parameters in it.

When you assign an Inst to a pad, the three tones are assigned to each zone of the pad, and you can edit all zones at once.

You can also edit the each zone in the ZONE EDIT screen.

Zone	Pad				
	Kick	Snare	Toms	Crashes/Ride	Hi-Hat
A	Head			Bow	
B	-	Rim		Edge	
C	-	Side-Rim	-	Cup *	Pedal

* Ride only

Pad

Level, Tuning, Muffling, Pan, Ambience, EQ

Zone A
Level, Tuning, Muffling

Zone B
Level, Tuning, Muffling

Zone C
Level, Tuning, Muffling

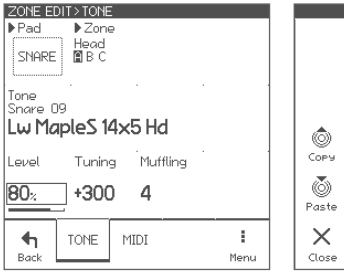
Inst

Tone A
Level, Tuning, Muffling

Tone B
Level, Tuning, Muffling

Tone C
Level, Tuning, Muffling

ZONE EDIT > TONE



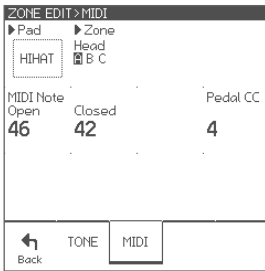
Parameters for each zone

Pad	Selects edit target pad
Zone	Selects edit target zone
Tone	Selects tone (sound for a zone)
Level	Adjusts zone level
Tuning	Adjusts pitch in cent
Muffling	Adjusts mute amount (sustain)

Page Menu

Copy/Paste	Copies/Pastes current zone (tone) settings
-------------------	--

ZONE EDIT > MIDI



Parameters for each zone

MIDI Note	Note number for current zone
Open	Note number for hi-hat open state on current zone
Closed	Note number for hi-hat closed state on current zone
Pedal CC	Control change number for hi-hat pedal

* If the note numbers or the control change numbers are changed, MIDI data previously recorded cannot be played back correctly.

About the MIDI messages

Pad		Note#
Kick		36
Snare	Head	38
	Rim	40
	Side-rim	37
Tom 1	Head	48
	Rim	50
Tom 2	Head	45
	Rim	47
Tom 3	Head	43
	Rim	58

Pad		Note#
HH Open	Bow	46*
	Edge	26*
	Pedal	44
	Splash	(CC#4=0)
HH Closed	Bow	42*
	Edge	22*
	Pedal	44
	Close	(CC#4=127)

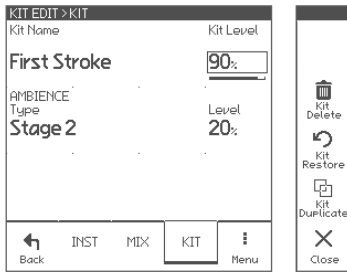
Pad		Note#
Crash 1	Bow	49
	Edge	55
Crash 2	Bow	57
	Edge	52
Ride	Bow	51
	Edge	59
	Cup	53

* The hi-hat pedal sends MIDI control change #4 with value in range from 0 (open) to 127 (tight closed), before the corresponding note message.

* The cymbal choke technique sends the polyphonic after touch (key after touch) message.

* The sound module does not send/receive the Program Change messages.

KIT



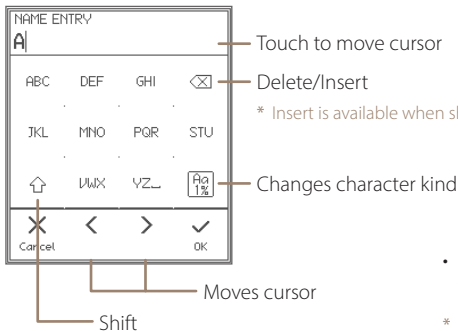
Parameters for each drum kit

Kit Name	Changes kit name * Preset kits cannot be renamed.
Level	Adjusts kit level
Ambience Type	Selects room type
Ambience Level	Adjusts ambience return level

Page Menu

Kit Duplicate	Duplicates drum kit. • About the name entry window, see p. 13. * Unique kit name is required.
Kit Restore	Restores this drum kit to initialized preset kit. (Preset kit only)
Kit Delete	Deletes this drum kit. (User kit only)

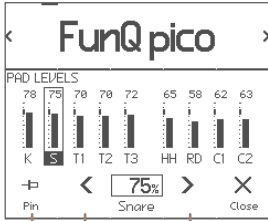
About the NAME ENTRY screen



- You can also change the selected letter with the value knob.

* At least one letter is required for a name.

■ Pad Levels



Selects a pad

When pinned, the selected pad is not changed by hitting a pad.

This is dedicated page for level control for all pads.

Parameters

Pad Level	Adjusts pad level * Clipping may occur when exceeding 85%.
------------------	---

- Target pad can be selected by hitting a pad.
- Pad level can also be adjusted in the drum kit edit, or in the Inst info widget in the home screen.

* The only pad either TOM 2 (T2) or CRASH 2 (C2) can be connected, but both pad levels can be adjusted on this screen.



Click Setup

TEMPO



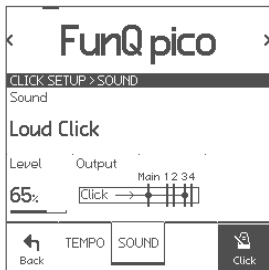
Touch to set tempo

You can configure the detailed click settings.

Parameters

Tempo	Sets tempo (BPM) • Also can be set by touching the scale.
Beat	Sets beat (time signature)
Note	Sets beat interval
Level	Sets click level

SOUND



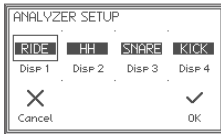
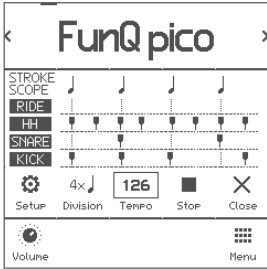
Turns click on/off

Parameters

Sound	Selects click sound
Output	Configures output routing



Stroke Scope



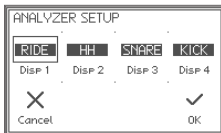
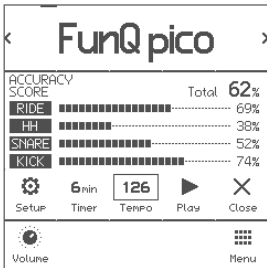
The stroke scope displays your strike timings on the time line to visualize your stroke accuracy against the metronome.

Parameters

Start/Stop	Starts/stops the stroke scope
Tempo	Sets tempo
Division	Changes the division of the scope window.
Setup	Shows the setup window to select which pads are displayed.
Volume	Shows the volume widget



Accuracy Score



The accuracy score estimates your stroke accuracies against the metronome and displays them with scores.

Parameters

Start/Stop	Starts/stops the accuracy score
Tempo	Sets tempo
Timer	Configures period of time until finish
Setup	Shows the setup window to select which pads are displayed.
Volume	Shows the volume widget

* The scores are just for your reference and does not reflect your exact stroke/performance skills.

* Flams or rolls may lower the scores.



Bluetooth



Connecting

- 1 Make sure the status is "Ready to pair". If the status is "OFF", tap it to turn on.



- 5 Make sure the status changes to "Connected", and your device name is displayed.



Controls Bluetooth input volume

The sound module comes with the Bluetooth connectivity to be connected with your smartphone.

Parameters

Status	<p>OFF: Bluetooth is turned off.</p> <p>ON:</p> <ul style="list-style-type: none"> • Ready to pair: No device is connected. • Connected: Device is connected.
Connected Device	<p>Displays currently connected device name</p> <ul style="list-style-type: none"> • Audio: Device name which is being connected as audio in device. • MIDI: Device name which is being connected as MIDI device.
Discoverable As	Device name of the sound module which is shown on your smartphone.
Reset	<p>Disconnects the device, clears all paired device information, and resets Bluetooth function.</p> <p>* This will take a minute to complete.</p>

On your smartphone

- 2 Turn Bluetooth on.
- 3 Find new device discoverable as "EFNOTE AUDIO xxx" or "EFNOTE MIDI xxx" (xxx is any value), and select it.
- 4 If pin code is required, enter "0000" (four zeros), and tap [Pair] or [Connect].

- 6 Now, you can listen to the audio playing on your smartphone.

* The sound may be loud, so please be careful with the volume setting.

* If you can't hear the sound, make sure your smartphone's volume is turned up.

CAUTION Be sure not to listen to audio at high volume. It can cause permanent hearing loss.

Disconnecting

1 Tap [Disconnect] on your smartphone.

Re-connecting

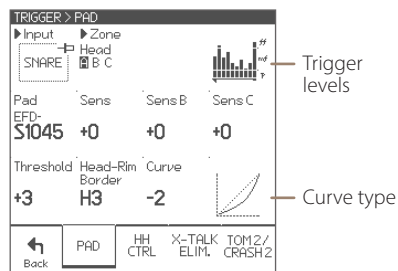
1 Tap [Connect] on your smartphone.

* About the operation of your smartphone, refer to the user guide of your smartphone.

Trigger

In this section, you can optimize the pad sensing settings as needed. The EFNOTE's trigger settings are already configured appropriately at the factory state.

PAD

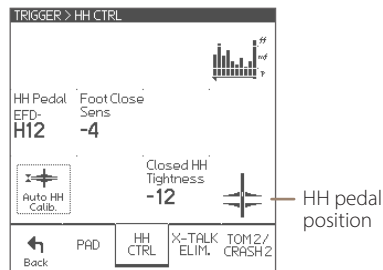


Parameters for each pad

Input	Selects optimizing target trigger input
Zone	Selects target zone
Pad	Selects the pad model which is connected to the input. * When the pad model is changed, internal trigger settings are automatically set to the appropriate values.
Sens	Adjusts sensitivity of the pad for all zones. The default value is 0.
Sens B	Adjusts zone B sensitivity of the pad. The default value is 0. * Only for the inputs zone B is available.
Sens C	Adjusts zone C sensitivity of the pad. The default value is 0. * Only for the inputs zone C is available.
Threshold	Adjusts threshold of the pad. Only when the trigger signal coming from the pad exceeds this level, the trigger is acquired. The default value is 0.
Head-Rim Border	Determines border between the head-shot and the rim-shot. When the rim-shot sound can be heard even though the head is struck, set it toward H. The default value is CTR. * Only for snare and tom inputs.
Curve	Adjusts the sensitivity of the pad in mf (middle) strike strength. The default value is 0.

* The only pad either TOM 2 or CRASH 2 can be connected, but both pads can be adjusted on this screen. See p. 22 for the detail.

HH CTRL



Parameters for HH pedal

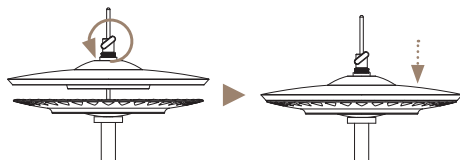
HH Pedal	Selects the HH pedal model
Foot Close Sens	Adjusts sensitivity of the foot-close and foot-splash of the hi-hat pedal. The default value is 0.
Auto HH Calib.	Calibrates hi-hat optical sensor automatically. For the procedure, see below.
Closed HH Tightness	Adjusts the hi-hat manually. <ul style="list-style-type: none"> If the hi-hat sound is not closed enough when firmly pressing the pedal, increase the value. When slightly releasing the pedal, if the hi-hat sound does not open easily, decrease the value. The default value is 0.

AUTO HI-HAT PEDAL CALIBRATION

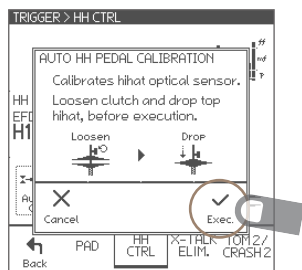
Adjusting the hi-hat brings the best hi-hat playing feel.

* You can access this feature using a shortcut from the power menu (p. 9).

- 1 Tap the Auto HH Calib .
- 2 Loosen the clutch, and drop the top hi-hat cymbal.

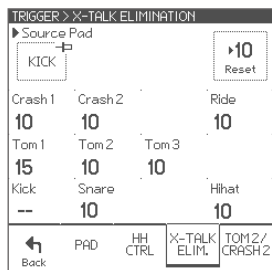


- 3 Tap the Exec to calibrate.



* After the auto calibration, the Closed HH Tightness will be set to +0.

X-TALK ELIM.

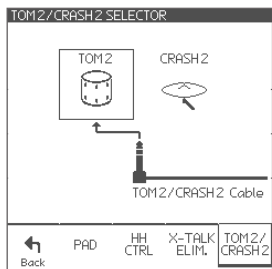


With this settings, you can cancel cross-talk which means that when you hit a pad, you also hear sounds coming from other pads, due to the vibration travel. This phenomenon can often happen when the two pads are mounted on the same stand.

Parameters for each pad

Source Pad	Selects the source pad of the vibration
Other pads	<p>Example:</p> <p>In case that you hear a Tom 1 sound when you play the kick pad, select the kick as source pad, and increase the value of the Tom 1 until the Tom 1 no longer sounds.</p> <p>* Note not to set the value too high.</p>
Reset	Resets values for all pads.

TOM 2/CRASH 2 SELECTOR

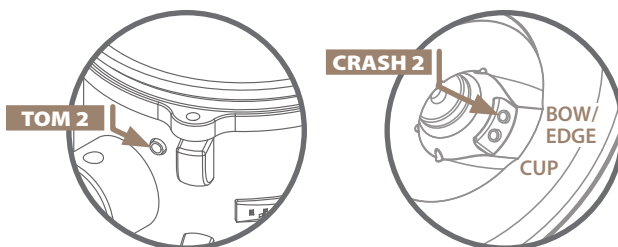


The "TOM 2/CRASH 2" cable is a selectable input for either pad – Tom 2 or Crash 2. Here, you can select which pad you connect to. With this setting, appropriate sounds are automatically assigned to the pad, according to the selected pad.

* Tom 2 and Crash 2 cannot be connected at the same time.

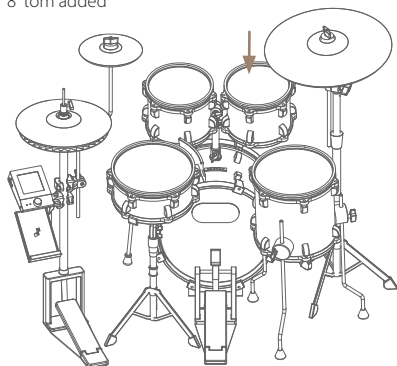
Parameters

TOM 2/ CRASH 2 Cable	TOM 2	Select when you connect a Tom 2 pad to the "TOM 2/CRASH 2 cable".
	CRASH 2	Select when you connect a Crash 2 pad to the "TOM 2/CRASH 2 cable". * Connect to the BOW/EDGE jack of the cymbal pad.

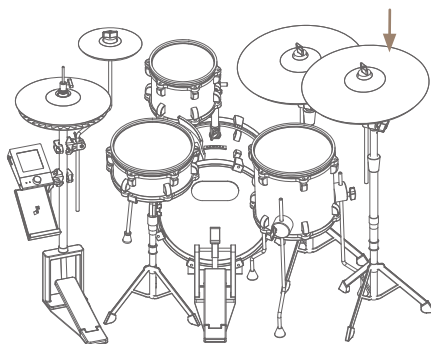


Customizing Examples

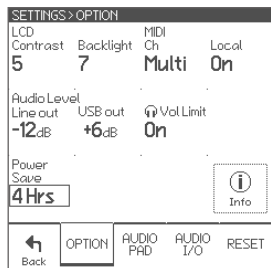
8" tom added



14" crash cymbal added



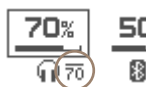
* For the items needed to add an optional pad, see the Quickstart Guide or web (p. 3).


Settings
OPTION

Multi MIDI channel

* Each channel setting is not changeable.


Pad	Ch	Pad	Ch
Kick	1	HH	6
Snare	2	Crash 1	7
Tom 1	3	Crash 2	8
Tom 2	4	Ride	9
Tom 3	5		



Phones Vol Limit ON

These parameters configure the system general settings.

Parameters

LCD	Contrast	Adjusts the display contrast * The LCD contrast is adjusted automatically depending on the surrounding temperature.
	Backlight	Adjusts display back light brightness
MIDI	Ch	Configures the MIDI channel for send/receive • Multi: Configures separate MIDI channels for each pad. See the "Multi MIDI channel" table.
	Local	This should be ON normally. When OFF, internal connection between the pad and the sound generator is inactivated.
Audio Level	Line Out	The line out level can be configured as fixed level or variable level. • 0dB: Maximum level • -6dB: Applies a 6dB attenuator • -12dB: Applies a 12dB attenuator • Link: Line out level is linked to the phones level setting
	USB Out	Adjusts USB audio output level for all channels • 0dB: Normal level • +6dB: Boosts 6dB
	 (Phones) Vol Limit	When ON, the headphones volume setting is limited up to 70%. This helps protect children's ears from loud audio volume. When ON, the "70%" icon is displayed near the volume setting as a figure on the left.
Power Save		Power save function will turn power off automatically after specified period has passed since it was last played or operated. You can specify this period of time, or disable it. • 30 min / 4 Hrs: Enables the power save • OFF: Disable the power save
Info		Displays the firmware version information

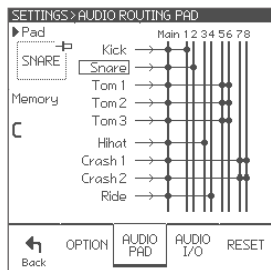
* About the USB connection, see p. 26.

CAUTION for the Phones Vol Limit

* Even if the headphones volume is limited, the volume may be too loud depending on the headphones you use, or audio input level settings.

Please note that this feature does not guarantee the protection of children's ears.

AUDIO PAD



In this screen, you can configure the audio output routings for each pad.

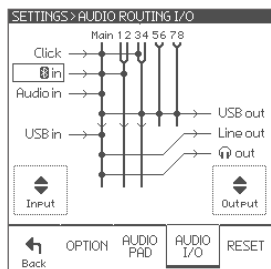
The sound module has a stereo main bus, and 8 channel buses.

The sounds from all pads always send to the main bus. Bus 1 to 4 are used for both analog and USB output. Bus 5 to 8 are used for USB output only.

Parameters

Pad	Selects edit target pad
Memory	The sound module keeps 4 different settings in the memory A/B/C/D. Changes are stored automatically to the memory currently selected.
Routing to 1--8	Select 1--8 when you want to send the pad sound to any of the bus 1--8. When adjacent two buses are selected, the pad sound will be stereo.

AUDIO I/O



In this screen, you can specify the audio in/out routings.

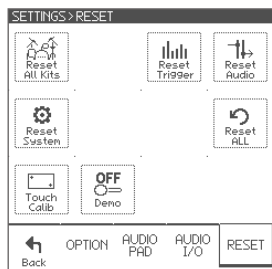
All inputs always send to the main bus.

Parameters

Input	Click	Selects the click sound destination
	Bluetooth in	Selects the Bluetooth audio destination
	Audio in	Selects the Audio in signal destination
	USB in	Selects the USB audio in signal destination
Output	USB out	Selects source bus for channel 1/2 of the USB audio out
	Line out	Selects the line out signal source: Main or bus 1/2
	Phones out	Selects the phones out signal source: Main or bus 3/4 * When using the phones out as line level output, set the phones volume to 60%. Clipping may occur when exceeding 67%.

* About the USB connection, see p. 26.

RESET



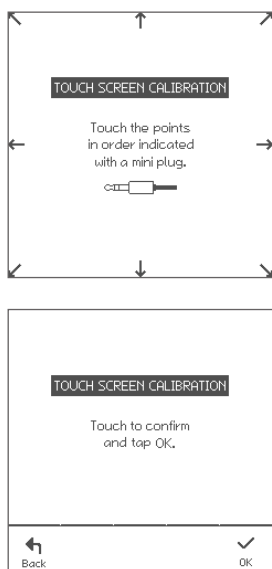
In this section, you can delete, initialize, or reset data and settings in specified area.

CAUTION With the reset operation, you will permanently lose the edited data or settings in the specified area

Parameters

Reset All Kits	Deletes all kit data, and then restores preset kits.
Reset Trigger	Initializes all trigger settings to the factory settings.
Reset Audio	Resets all audio routings and memories.
Reset System	Resets all system parameters.
Reset ALL	Deletes all data and resets all settings in the sound module, and then restores to the factory state.
Touch Calib	Shows the touch screen calibration
Demo	This should be OFF, normally. CAUTION If ON, all data and settings are deleted/initialized automatically every time you turn this sound module on.

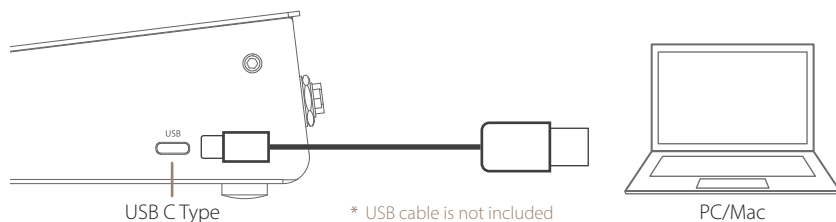
TOUCH SCREEN CALIBRATION



In case that you can't tap any button on the screen correctly, this calibration can adjust the touch screen.

- 1 Touch each point indicated on the screen step by step.
 - * Using a headphones' mini plug to touch is one idea on how to do this.
 - * Do not touch with your finger for the calibration.
 - * Be sure not to press too hard.
- 2 Touch the screen and confirm if the calibration is correct.
- 3 Tap the OK to finish.

Connecting to a PC/Mac



Supported function:

- USB Audio: 8-channel Output (48kHz/24bit) / 2-channel Input (48kHz/16bit)
- USB MIDI: In/Out

Supported computer:

Mac/Windows

For the latest supported OS information, refer to the web (p. 3).

Note for the Windows PC:

The ASIO driver installation is needed to use the USB audio. It provides high-quality USB audio streaming with 8-channel audio output.

The ASIO driver is available on the web (p. 3).

* About the USB connection to a computer, the operation is not guaranteed for all environments. Some computers may not be fully compatible.

* About the operation of computers or application softwares, please refer to their manuals.

Specifications

Trigger Interface

Input		Kick	Snare	Tom		Hi-Hat	Ride	Crash 1	Tom 2/Crash 2 *3
				1	3				
Supported Zone	Head/Bow	✓	✓	✓	✓	✓	✓	✓	✓
	Rim	-	✓	✓	✓	-	-	-	✓
	Side-Rim	-	✓*1	-	-	-	-	-	-
	Edge	-	✓	✓	✓	✓	✓	✓	✓
	Cup	-	-	-	-	-	✓*2	-	-

* 1: Uses the Side-Rim cable.

* 2: Uses the Ride Cup cable.

* 3: The "TOM 2/CRASH 2" cable is a selectable input for either pad – Tom 2 or Crash 2.
Tom 2 and Crash 2 cannot be connected at the same time. For the detail, see p. 22.

Audio / MIDI Interface

Audio	<ul style="list-style-type: none"> • Line (1/2) Output: 2x 1/4"TS Phone (+4dBu, Unbalanced) • Phones (3/4) Output: 3.5mm (1/8") Stereo Phone (320 mW + 320 mW @32Ω) • Audio Input: 3.5mm (1/8") Stereo Phone (+2dBu Max) • USB Audio: Mac/Windows ASIO, USB 2.0 Hi-Speed, 8-ch Output (48kHz/24bit) / 2-ch Input (48kHz/16bit), • Bluetooth Audio Input (A2DP)
MIDI	<ul style="list-style-type: none"> • USB MIDI In/Out • Bluetooth MIDI In/Out (Bluetooth Low Energy/GATT)

Others

Recorder	<ul style="list-style-type: none"> • Resolution: 480 TPQN • Tracks: 1 • Capacity: Approx. 8,000 Events
Drum Kit	<ul style="list-style-type: none"> • 30 * Including the preset drum kit

* Specification and design are subject to change without prior notice.

E F N O T E

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