

# SM120 Module

User Guide V1.01

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## USING THE UNIT SAFELY

### INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices.

⚠ WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. *Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

※About the Symbols

	The ⚠ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The ⚡ symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.
	The 🛑 symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.

#### ⚠ WARNING



Please connect the power plug with ground protected power outlet.



Do not open (or modify in any way) the unit or its AC adapter.



Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so).



Never use or store the unit in places that are: Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are damp (e.g., baths, washrooms, on wet floors); or are humid; or are exposed to rain; or are dusty; or are subject to high levels of vibration.



When using the unit with a rack or stand, the rack or stand must be carefully placed so it is level and sure to remain stable. If not using a rack or stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling.

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Be sure to use only the AC adapter supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adapter's body. Other AC adapters may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.



Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.



Do not excessively twist or bend the power cord, nor place heavy objects on it. It can damage the cord, producing severed elements and short circuits. Damaged cords may cause fire and shock hazards!



This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.



Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.



Immediately turn the power off and remove the AC adapter from the outlet when:

- The AC adapter, the power-supply cord, or the plug has been damaged.
- Smoke or unusual odor occurs.
- Objects have fallen into, or liquid has been spilled onto the unit.
- The unit has been exposed to rain (or otherwise has become wet).
- The unit does not appear to operate normally or exhibits a marked change in performance.



In Households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.



Protect the unit from strong impact. (Do not drop it!)



Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

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⚠ CAUTION



The unit and the AC adapter should be located so their location or position does not interfere with their proper ventilation.



Always grasp only the plug on the AC adapter cord when plugging into, or unplugging from, an outlet or this unit.

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At regular intervals, you should unplug the AC adapter and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.



Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of reach of children.



Never climb on top of, nor place heavy objects on the unit.



Never handle the AC adapter or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.



Before moving the unit, disconnect the AC adapter and all cords coming from external devices.



Before cleaning the unit, turn off the power and unplug the AC adapter from the outlet.



Whenever you suspect the possibility of lightning in your area, disconnect the AC adapter from the outlet.



Keep any caps you may remove and the included wing bolts in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

#### IMPORTANT NOTES!

### Power supply

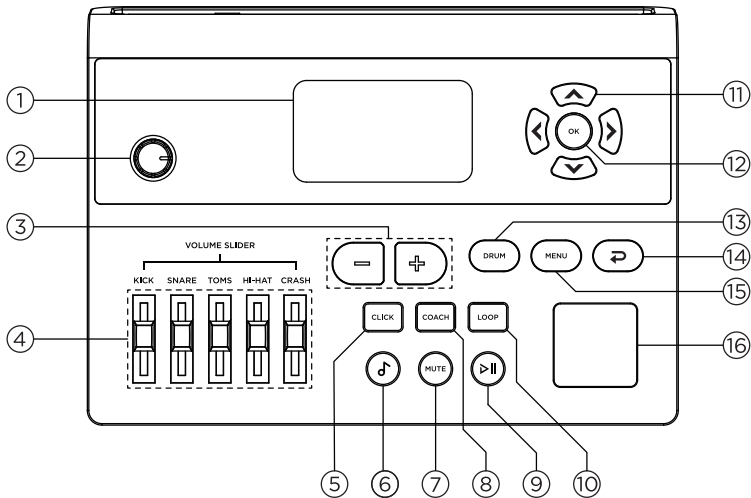
- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- The AC adapter will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

### Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.

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## TOP PANEL



### 1. Screen

This shows the drum kit name in playing mode, or other information displays will appear.

### 2. Volume knob

Adjusts the volume of the unite.

### 3. [+], [-]

Use these buttons to switch drum kits or to edit a value. Pressing the [+] button increases the value, and pressing the [-] button decreases it

### 4. Volume Slider

Slide the buttons to change the volumes of pads.

### 5. [CLICK]

Turns the metronome on/off. The button light flashes when the metronome is on. Long press the [CLICK] button to enter the interface of metronome setting.

### 6. [J]

Press this to play back a song or access the song-related settings.

### 7. [MUTE]

When a song is playing back, use this button to mute the drum part. The button is always light when the MUTE is on.

### 8. [COACH]

This activates the Coach function, allowing you to view your timing on the screen.

### 9. [PLAY/PAUSE]

Press to play back or stop a song.

### 10. [LOOP]

Short press to enter into LOOP interface, and then short press this button again to play back or stop the recording. The button light is always on when the recording. The metronome is automatically on when the recording. Long press to enter into LOOP settings interface.

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**11. Cursor [< > ^ v]**

Use these buttons to move the cursor on the screen.

**12. [OK]**

Press this button to save the setting or enter into submenu.

**13. [DRUM]**

Press this to access the basic DRUM screen.

**14. [↶]**

Press this button to return to upper level menu. The settings will be saved when press this button.

**15. [MENU]**

Press this button to set the menu.

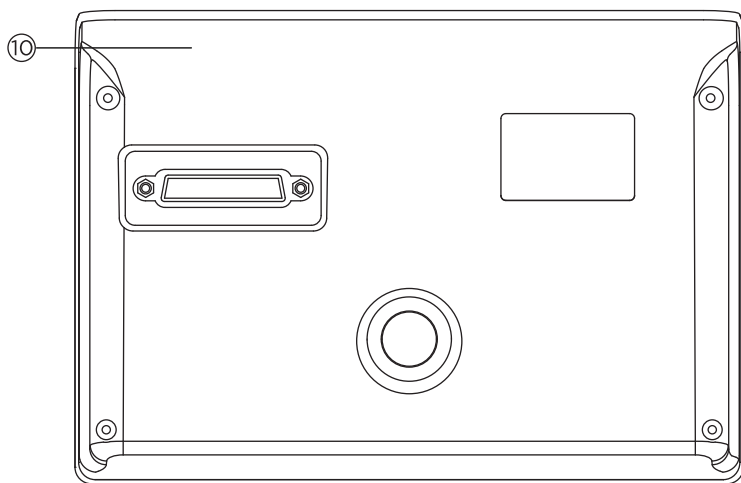
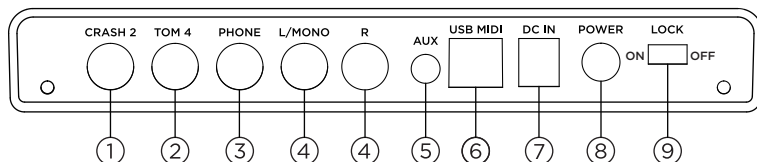
**16. [PAD]**

Review the sounds, when setting the sounds, press this button to listen the sounds. When tempo setting, hit this button continuously to set the tempo.

When Loop recording, use this button instead of a pad for loop recording.

※Please don't use drumstick to hit this pad.

## JACK PANEL



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### 1. CRASH 2

Use this jack to add a Crash.

### 2. TOM 4

Use this jack to add a Tom.

### 3. PHONE

Use for connecting stereo headphones.

Using this jack does not mute LINE OUTPUT.

### 4. MAIN OUT MONO L/R

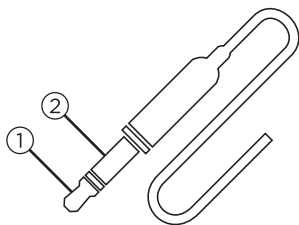
Connecting two jack cables send separate left and right audio signals down each cable, giving you stereo output to amplifier and other external audio equipment.

### 5. AUX

Use for connecting an external audio source such as cellphone, MP3, or CD players. The sound for this audio source will be output from both L/R jack and PHONE jack.

### Important notes

1/4" TS phone plug  
(mono, unbalanced)



1. Signal
2. Ground, shielding

### Note:

1. Use the audio cable correctly; otherwise, the device may fail to work properly.
2. This product does not have a sound equipment, requires to connect external audio equipment such as amplifier, loudspeaker, earphone, etc.
3. The instructions in the manual and the contents on the screen may be different from the actual ones because your device may be using a more advanced version of the system.

### 6. USB MIDI

Using as MIDI device to connect PC.

### 7. DC IN jack

Connect the included power adapter here.

### 8. POWER

Turns the power on/off.

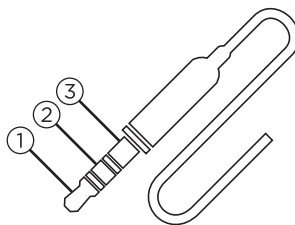
### 9. LOCK

Use for locking setting. Switch it to ON to enable the lock mode, and the parameter settings cannot be modified. Switch it to OFF to cancel the lock mode, and the parameter settings can be modified.

### 10. Trigger Input connector

Connecting the special cable connects the pads and pedals to the module.

Three-pole 1/8" mini phone jack  
(stereo, unbalanced)



1. Signal (left)
2. Signal (right)
3. Ground, shielding

## Use Guide

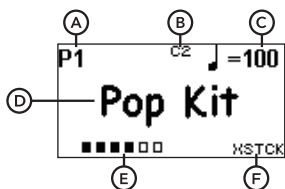
To prevent damage to your hearing, speakers and other audio equipment, reduce the volume and have the power off before connecting to any other equipment. Please make sure you are using the PHONE output for headphones and the MONO L/R output when connecting to amplifiers or mixers.

## Quick Use

According to the jack panel instructions, connect the power supply, audio equipment, etc. to the module. Press [POWER] button on the jack panel to start the unit and enter the main interface. You can use [-], [+] button to switch to different drum groups. Use the drumstick to hit each pad to play. After playing, press [POWER] button again to turn off.

## DRUM FUNCTION

Press [DRUM] to enter into the home page as below. You can use [+], [-] or [<], [>] to switch to different drum kits on this page.



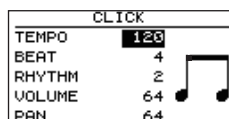
- A. Indicate the number of the current drum kit. P presents preset kit and U present user kit.
- B. Indicate the pad that triggered. The icon C2 means Crash 2.
- C. Indicate the tempo of metronome. You can use [^], [V] to adjust the tempo. Short press [CLICK] to turn on/off the metronome.

- D. Indicate the name of drum kit. The name of user kit can not be exceed 13 characters.
- E. Indicate the velocity of hitting. The greater the force, the more diamonds.
- F. Indicate cross-stick function. You can press OK to turn on/off the cross-stick on this page. The image XSTCK in above figure shows the cross-stick is closed.

## CLICK FUNCTION

Short press [CLICK] to turn on/off metronome. When turned on, the button light will flash.

Long press [CLICK] to enter into the setting page of metronome (as shown in the figure below). You can also enter the metronome setting page with [MENU] button.



Use [^], [V] to select the parameters to be adjusted. Use [+], [-] to modify the value or type of the selected parameter.

### Tempo

Use [+], [-] to change the value. Press [OK] to enter TAP mode. Hit any pad 4 times, the speed of the stroke will be calculated. Range: 20-240.



### Beat

Controls the number of clicks per measure, select from 1 to 16.



## Rhythm

7 different click patterns are available.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

## Volume

Controls the metronome volume.  
Range: 0-127.

## Pan

Controls the pan of the metronome output, 0=Fully Left, 64=Centre, 127=Fully Right.  
Range: 0-127.

## Sound

Controls the sound of the metronome, there are 5 built into the unit.

# COACH FUNCTION

This activates the Coach function, allowing you to view your timing on the screen.

K									
S									
T									
H									
C		x	x	x					
R									
ZOOM-					ZOOM+				

## ZOOM+

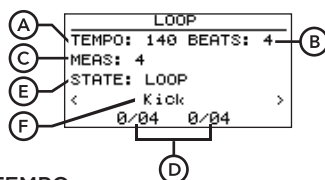
Each time you press [+], the display of one beat will be magnified. This lets you view one beat in greater detail.

## ZOOM-

Each time you press [-], the viewing area will expand. This lets you view more beats at once.

# LOOP FUNCTION

Short press [LOOP] to enter into LOOP mode. Then long press [LOOP] to enter into the setting of LOOP.



## A. TEMPO

It can be set in the settings of CLICK.

## B. BEATS

It also can be set in the settings of CLICK.

## C. MEAS

The number of Meas that will be recorded.  
Range: 1-16

## D. The progress of recording

It is recorded based on the section number and beat.

## E. STATE

Displays the current status.

## F. PAD

When loop recording, use this button instead of a pad to trigger the loop. You can use [<], [>] to choose the pad that you want.

# LOOP RECORDING

In LOOP mode, press [LOOP] again to enter the recording mode.

At this time, the indicator light is steady on, metronome automatically on, strike any pad or pedal to start the recording. It records in a loop according to the set number of sections, and then plays the recorded rhythm, the user can be in any section to add the needed rhythm. Press [LOOP] again to end recording.

### Note:

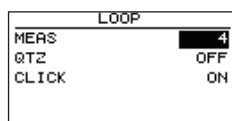
1. The unit can only save one loop file, when record again, the previous recorded file will be overwritten.
2. If the maximum number of recorded notes (1000) is exceeded, the recording will stop automatically.

## LOOP PLAYBACK

In LOOP mode, press [▶||] to loop playback the recorded MIDI.  
Press [▶||] again to stop the playing.

## LOOP SETTINGS

Long press [LOOP] to enter LOOP settings. (As shown below)



### MEAS

The number of Meas that is recorded.  
Range: 1-16

### QTZ

Quantize note. Automatically corrects the recorded beats as the setting value. This allows you to get cleaner performances without the tiny time discrepancies felt in natural performances.

Value: OFF, 1/4, 1/8, 3/8, 1/16, 3/16, 1/32, 1/64

### CLICK

Turn it on to open the metronome and turn it off to close.

## SONG MODE

Press [P] to enter into song mode.  
(As shown below)



### A. Song name

It shows the name of the selected song, using [<], [>] to switch songs.

### B. Song volume

Use [+], [-] to adjust the volume.

### C. The image for loop playback

Press [^], mark the starting point of loop play and display “(”  
Press [^] again, mark the end of the loop and display “(↔)”.  
Press [^] a third time, close the loop playback.

### Note:

The minimum loop length of the built-in song is one section, and the maximum loop length is the whole song.

### D. Playback Progress

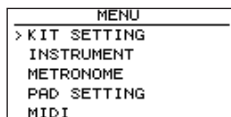
The current progress of the song.

## Playing a song

press [▶||] to play the song.  
Press [▶||] again to stop the playing.  
Each time you press [MUTE], the drum part will be muted or nu-muted.

## MENU

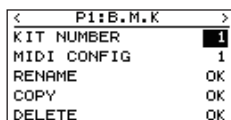
Press [MENU] to enter the setting of MENU. (As shown below)



Use [^] and [v] to select the option to set, press [OK] to enter the setting, press [P] to return to the drum kit interface.

## KIT SETTING

Use [<] and [>] to select the drum kit to be modified, use [^] and [v] to select the parameters to be modified, press [P] to save and return to the previous interface.



### KIT NUMBER

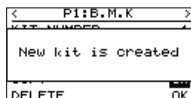
Drum kit serial number, use [+], [-] to adjust the row sequence of current drum kit.

### MIDI CONFIG

Select one from the 4 sets of MIDI codes for each drum kit and use [+] and [-] to switch MIDI CONFIG.

### RENAME

Rename the current drum kit and press [OK] to enter the edit interface. Use [< > ^ v] to move the cursor to select characters, press [+] to enter, and press [-] to delete characters. After the input is complete, press [OK] to save and return. Press [P] to cancel the operation and return to the previous interface.

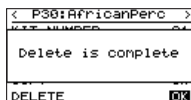


## COPY

Press [OK] to copy the current drum kit and enter into the edit interface.

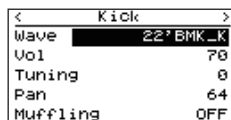
## DELETE

To delete the current drum kit, press [OK] to pop up the confirmation interface (preset drum kit cannot be deleted), press [OK] again to confirm the deletion, press [P] to cancel the operation and return to the previous interface.



## INSTRUMENT

Before modifying a drum kit, go to the drum kit interface (home page) and select the drum kit to be modified. Use the [<], [>] or hit the pad to be modified to switch to the pad to be modified (automatic switching Settings need to be turned on, see "Other Settings"); Use [^] and [v] to select the parameters to be modified. Use [P] to return to the previous interface.



### WAVE

Gives you the ability to adjust individual sound for each pad. Use [+] and [-] to switch sound. You can also press [OK] to enter the sound list interface, as shown below.



At this interface, use [+], [-] or [^], [V] to select sound. Long press [+], [-] to quickly browse the sound list; Press [P] to return to the previous interface.

## VOL

Adjust the volume of sounds for each pad.  
Range: 0-127

## Tuning

Tune a sound up or down, default is 0.  
Range: +/- 12 dB

## Pan

Controls the pan of output, 0=Fully Left, 64=Centre, 127=Fully Right  
Range: 0-127

## Muffling

Adjust the amount of muffling effect on an individual sound. The default is OFF. This only works on parts of sounds.  
Range: 1-4

# PAD SETTING

Use the [<], [>] or hit the pad to be modified to switch to the pad to be modified (automatic switching Settings need to be turned on, see "Other Settings") ; Use [^] and [V] to select the parameters to be modified. Use [P] to return to the previous interface.



## Sensitivity

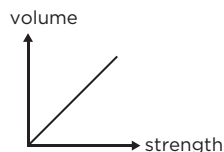
Changes how sensitive the pad is, adjust from 1-32. 1 is low sensitivity, 32 is most sensitive.

## Curve

This setting allows you to control the relation between playing velocity (striking force) and changes in volume. Liner type is the default type.

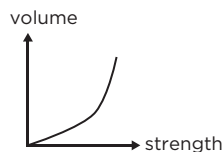
### linear

The default type of velocity. The sound volume increases evenly as you hit the pad harder.



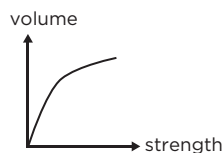
### log

The sound volume reaches maximum velocity quicker. Ideal for sounds that you want to get to maximum velocity without much dynamic range.



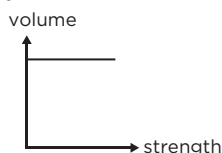
### exp

The sound reaches maximum velocity slower, ideal for sounds that have extra nuance.



max

The sound is at the maximum velocity.



### Mask Time

This setting prevents double triggering.

When playing a trigger (specially kick trigger), the beater can bounce back and hit the head a second time immediately after the intended note-with acoustic drums sometimes the beater stays against the head-this causes a single hit to “double trigger” (two sounds instead of one). The Mask Time setting helps to prevent this. Once a pad has been hit, any additional trigger signals occurring within the specified “Mask Time” will be ignored.



When set to high value, it will be difficult to play very quickly. Set this to as low a value as you can.

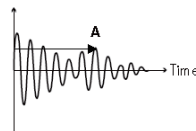
If the second hit is stronger than the previous one, the mask time will no longer be in effect.

If two or more sounds are being produced when you strike the head just once, then adjust Retrig Level. Range: 1-32

### Retrig Level

This setting prevents spurious re-triggering.

Important if you are using acoustic drum triggers. Such triggers can produce altered waveforms, which may also cause inadvertent sounding at Point A in the following figure (Re-trigger).



This occurs in particular at the decaying edge of the waveform. Re-trigger Level detects such distortion in and prevents re-triggering from occurring. When set to high value, it will be difficult to play very quickly. Range: 1-10

### Anti-cross

This setting allows a trigger signal to be received only when the pad is above a determined dynamic level (velocity). This can be used to prevent a pad from sounding because of vibrations from other pad. In the following example, B will sound but A and C will not sound. When set to a higher value, no sound is produced when the pad is struck lightly. Gradually raise the “Anti-cross” value while striking the pad. Check this and adjust accordingly. Repeat this process until you get the perfect setting for your playing style.

### DR (Dynamic Range)

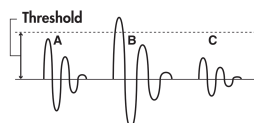
This setting allows a trigger signal to be received range between peak value with minimum value.

When set to higher value, it will be larger range for the trigger signal.

### Threshold

This setting is to adjust the allowed min. striking force for generating sounds.

When set to higher value, there is no sound for slight hit.



# MIDI-RELATED SETTINGS

MIDI	
CHANNEL	9
MIDI IN	ON
MIDI OUT	ON
SYSTEM REAL	ON
MIDI CODE	OK

Use [^], [V] to select the parameters to be adjusted, and use [+], [-] to modify the value or type of the selected parameters.

## CHANNEL

MIDI channel number for transfer.  
Range: 0-15

## MIDI IN

Specifies whether MIDI messages sent from an external MIDI device will be received (ON) or not received (OFF). Default value is ON.

## MIDI OUT

Specifies whether MIDI messages will be transmitted to an external MIDI device (ON) or not transmitted (OFF). Default value is ON.

## System Real

MIDI device information output.  
Default value is OFF.

## MIDI CODE

Specifies a MIDI code for a pad.  
When the MIDI code of several pads is same, “\*” will appear before the MIDI code.  
Press [OK] button to enter into the page as below.

< MIDI CONFIG 1 >	
Kick	36/C2
Snare	38/D2
Snare Rim	40/E2
Tom1	48/C3
Tom1 Rim	50/D3
Tom2	45/B2
Tom2 Rim	47/B2

Use [<] and [>] to switch MIDI code sets, use [^] and [V] to select the pad that needs to be modified, use [+] and [-] to modify the values, use [↵] to save and return to the previous interface.

## MIDI MAP

Kick	Head	C2	36
Snare	Head	D2	38
	Xtick	C#2	37
	Rim	E2	40
HH	Pedal close	G#2	44
	Close head	F#2	42
	Close rim	A#0	22
	Open head	A#2	46
	Open half head	B0	23
	Open rim	D1	26
	Open half rim	C1	24
Ride	Head	D#3	51
	Rim	B3	59
	Bell	A4	69
Tom4	Head	F2	41
	Rim	D#2	39
Tom3	Head	G2	43
	Rim	A#3	58
Tom2	Head	A2	45
	Rim	B2	47
Tom1	Head	C3	48
	Rim	D3	50
Crash	Head	D#3	49
	Rim	G3	55
Crash2	Head	A3	57
	Rim	E3	52

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## OPTIONS SETTING

OPTIONS	
LCD CONTRAST	18
AUTO TRACE	ON
HEAD/RIM LINK	OFF
SAVE OPTIONS	OK
LOAD OPTIONS	OK

Use [^] and [V] to select the parameters to be adjusted, and use [+] and [-] to modify the value or type of the selected parameters.

### LCD CONTRAST

Adjust the display contrast.

Range: 0-20

### AUTO TRACE

Turn on or off the pad tracking function. When the function is turned on, hitting pad will automatically trigger the setting interface.

The default value is ON.

### HEAD/RIM LINK

It is the switch that associate head shot sound and rim shot sound.

When it is on, modify the sound of the head shot, the associated rim shot sound will be also modified, but when modify the sound of rim shot, the sound of head shot will not be modified.

### SAVE OPTIONS

Saves all Settings.

### LOAD OPTIONS

Restores the last saved settings of and restarts.

### RESET

Restore factory Settings.

