

# Digital Drum Owner's Manual

# INFORMATION FOR YOUR SAFETY!

## THE FCC REGULATION WARNING (for USA)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

### CAUTION

The normal function of the product may be disturbed by Strong Electro Magnetic Interference. If so, simply reset the product to resume normal operation by following the owner's manual. In case the function could not resume, please use the product in other location.

## PRECAUTIONS

### PLEASE READ CAREFULLY BEFORE PROCEEDING

Please keep this manual in a safe place for future reference.

#### Power Supply

Please connect the designated AC adaptor to an AC outlet of the correct voltage.

Do not connect it to an AC outlet of voltage other than that for which your instrument is intended.

Unplug the AC power adaptor when not using the instrument, or during electrical storms.

#### Connections

Before connecting the instrument to other devices, turn off the power to all units. This will help prevent malfunction and / or damage to other devices.

#### Location

Do not expose the instrument to the following conditions to avoid deformation, discoloration, or more serious damage:

- Direct sunlight
- Extreme temperature or humidity
- Excessive dusty or dirty location
- Strong vibrations or shocks
- Close to magnetic fields

#### Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

#### Cleaning

Clean only with a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths.

#### Handling

Do not apply excessive force to the switches or controls.

Do not let paper, metallic, or other objects into the instrument. If this happens, remove the electric plug from the outlet. Then have the instrument inspected by qualified service personnel.

Disconnect all cables before moving the instrument.

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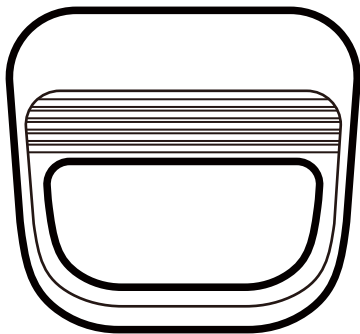
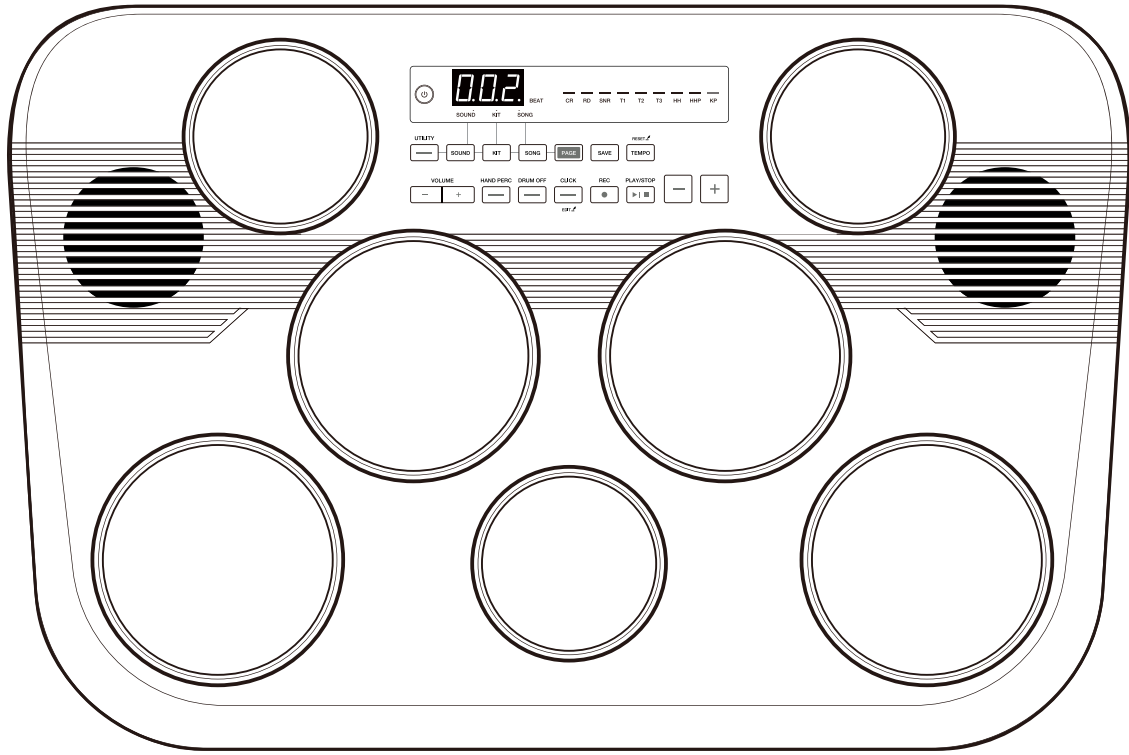
# Main Features

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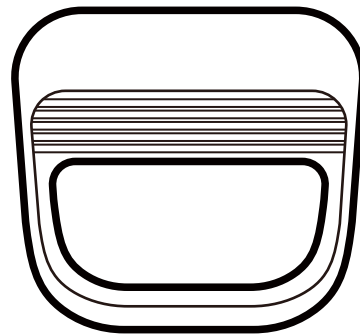
- **Rubber Pads** - Provides more durable hitting characteristics, and internal noise reduction treatment
- **Sound** - High quality, expressive acoustic and electronic drum & percussion sounds from around the world.
- **Song** - Play along with a wide variety of included music genres.
- **Record** - Record your drum and percussion performances.
- **Hand Percussion** - Providing an easy access for hand percussion performance.

# Panel & Display Description

## Drum Pad Description (default setting)



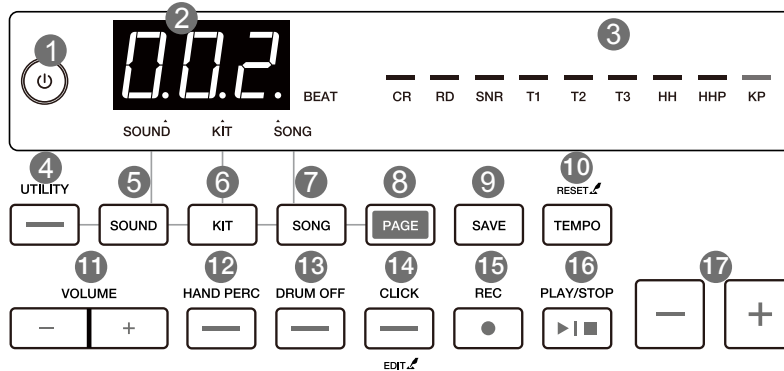
HI-HAT PEDAL



KICK PEDAL

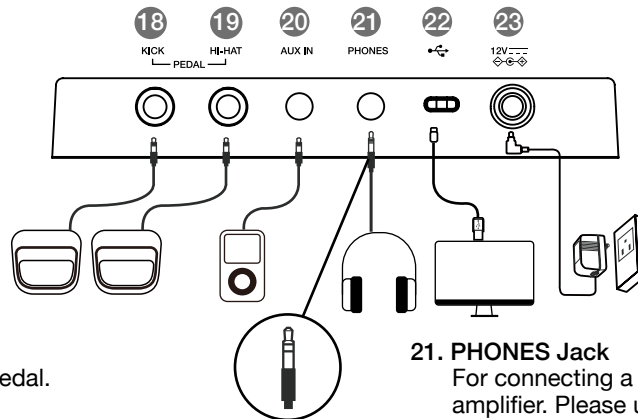
# Panel & Display Description

## Front Panel



- |   |  |   |
|---|--|---|
| <p><b>1. [POWER] Button</b><br/>Turn the power on or off.</p> <p><b>2. 3-Digit LED</b><br/>Display the current mode and parameters.</p> <p><b>3. Drum Pad Indicator / Page Indicator</b><br/>Drum pad indicator: blink.<br/>Page (sub-menu) indicator: stay lit.</p> <p><b>4. [UTILITY] Button</b><br/>Enter the Utility menu, then use the [PAGE] button to change the sub-menu.</p> <p><b>5. [SOUND] Button</b><br/>Enter the Sound menu, then use the [PAGE] button to change the sub-menu.</p> <p><b>6. [KIT] Button</b><br/>Enter the Kit menu, then use the [PAGE] button to change the sub-menu.</p> | <p><b>7. [SONG] Button</b><br/>Enter the Song menu, then use the [PAGE] button to change the sub-menu.</p> <p><b>8. [PAGE] Button</b><br/>Change the sub-menu of the current main menu.</p> <p><b>9. [SAVE] Button</b><br/>Save the current kit settings to a user kit.</p> <p><b>10. [TEMPO] Button</b><br/>Press to enter the Tempo menu.<br/>Long-press to reset to the default tempo of the current song.</p> <p><b>11. [VOLUME +/-] Buttons</b><br/>Adjust the master volume.</p> | <p><b>12. [HAND PERC] Button</b><br/>Enter Hand Percussion mode.</p> <p><b>13. [DRUM OFF] button</b><br/>Mute or unmute the drum part in a song.</p> <p><b>14. [CLICK] Button</b><br/>Press to turn the click on or off.<br/>Long-press to enter the Click menu, then use the [PAGE] button to change the sub-menu.</p> <p><b>15. [RECORD] Button</b><br/>Enter or exit Record mode.</p> <p><b>16. [PLAY/STOP] Button</b><br/>Play or stop playing a song.</p> <p><b>17. Data Button</b><br/>Adjust the parameters.</p> |
|---|--|---|

## Rear Panel



- |  |  |
|--|--|
| <p><b>18. KICK PEDAL Jack</b><br/>For connecting the Kick pedal.</p> <p><b>19. HI-HAT PEDAL Jack</b><br/>For connecting the Hi-Hat pedal.</p> <p><b>Note:</b> If connecting a kick pad or Hi-Hat pedal, please use a MONO cable.</p> <p><b>20. AUX IN Jack</b><br/>For connecting external audio player, such as an MP3.</p> | <p><b>21. PHONES Jack</b><br/>For connecting a pair of headphones or external audio amplifier. Please use a pair of headphones without a mic. Using headphones with a mic may cause the sound not normal.</p> <p><b>22. USB Jack</b><br/>For connecting to a computer or a portable power bank.</p> <p><b>23. Power Jack</b><br/>For connecting the specified power adapter.</p> |
|--|--|

# Getting Ready to Play

## Setting Up Power Supply

1. Connect the power adapter to the power jack on the rear panel.
2. Connect the other end of the power cord to an appropriate AC outlet.

### Notes:

1. Use the specified power adapter.
2. Even when the module is turned off, electricity is still flowing to the module at minimum level. Please unplug the module when it is not in use for a long time.
3. The module supports using USB power. Make sure to use high-quality USB-C cable and USB power adapter.
  - It supports USB power adapter of 5V/2A.
  - It supports portable power bank of 5V/2A. It may not supports all power bank brands.
  - When using the module to communicate with a computer/mobile device, make sure to use the DC12V power adapter to power the module, otherwise, it may not work normally.
  - When using USB power, the module will automatically reduce the output volume. In such a case, we suggest using headphones or external speakers.

## Turning On the Power

1. Press the [POWER] button to turn on the module. The display shows the current mode and parameter.
2. Use the [MASTER VOLUME +/-] buttons to adjust the volume. Strike the pads and listen with headphones, until you get an appropriate volume level.

### Notes:

1. Before turning on or off the power, make sure you have turned down the volume of all the connected equipment.
2. When using the power adapter, the maximum volume level can reach 16. When using USB power, the maximum volume level will be limited to 12.

## Turning Off the Power

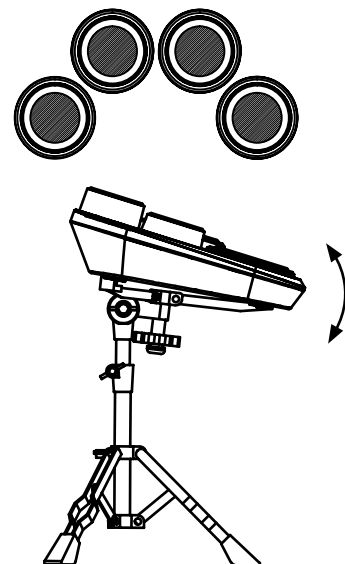
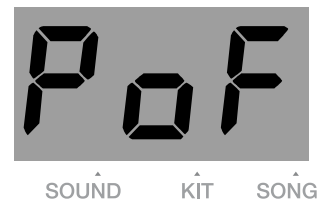
Press the [POWER] button to turn off the module. The display turns off.

## Auto Power Off

In order to save energy, the module will automatically turn off after 30 minutes if it is not in use (playing, striking, pressing button, etc.) To disable this function, hold the [PLAY/STOP] button and then turn on the power. The display will temporarily show “PoF”.

## Playing the Rubber Head Pad

1. When playing the rubber head pads, make sure not to strike the rim of the pads. If you strike the edge area of the pad, it may cause noise and crosstalk.
2. When mounting the module to a snare drum stand, make sure the drum pads are tilted properly towards the player. Doing this will help reduce the chance of striking the edge area of the rubber head pads. We suggest using a 14-inch snare drum stand.








# Drum Kits and Sounds

## Selecting a Drum Kit

1. Press the [KIT] button to enter the Kit menu. The kit indicator lights up on the display.
2. The display shows the current kit number. Use the data button to select a desired drum kit.

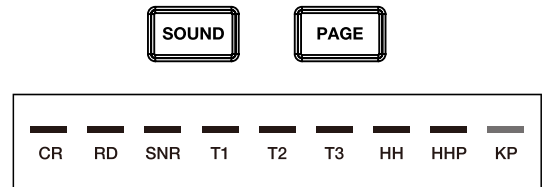
You can press the [PAGE] button to change the sub-menu.

Sub-menu	Display	Range	Description
Kit Number	   	1~45, U01~U10	Select a kit number.
Kit Volume		0~32	Adjust the kit volume.

## Selecting a Sound

You can change the sound for each drum pad.

1. Press the [SOUND] button to enter the Sound menu. The sound indicator lights up on the display.
2. Strike the pad that you want to edit. The corresponding pad indicator blinks.
3. Use the data button to select a sound including a USER sound. You can press the [PAGE] button to change the sub-menu.



## Saving a User Kit

1. Press the [SAVE] button. The current user kit number (such as "U01") blinks on the display.
2. Use the data button to select a user kit slot to save the setting [U01-U10].
3. Press the [SAVE] button again to confirm saving. The kit number on the display stops blinking.







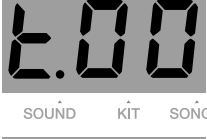





### Note:

Unsaved kit settings will be lost when you enter other menus or change the kit number.



# Drum Kits and Sounds

Sub-menu	Display	Range	Description
Num		1~273	Select a sound number.
Level		0~32	Adjust the sound volume.
Pan	  	-8~0~8	Adjust the pan of the sound.
Tune	  	-8~0~8	Adjust the pitch of the sound.
Reverb		0~16	Adjust the reverb level of the sound.
MIDI Note		0~99	The MIDI note will be sent via MIDI OUT.

# Song

## Selecting a Song

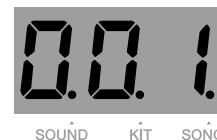
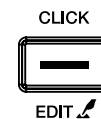
1. Press the [SONG] button to enter the Song menu. The song indicator lights up on the display.
2. The display shows the current song number. You can use the data button to select a song. If you select song No.1~100, it will loop playing this song. If you select song No.101~110 or a user song, it will play this song once and then stop.



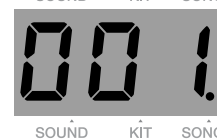
Sub-menu	Display	Range	Description
Song Num		1~100, U01~U05	Select a song number.
Song Vol		0~32	Adjust the song volume.
PAD LED ON/OFF		On, Off	Turn the pad indicator on/off for song playback. LoF: light off. Lon: light on.

## Playing a Song

1. Press the [PLAY/STOP] button to play or stop the current song. When song is playing, you can use the data button to select a song. The selected song will start playing when the current measure finished.
2. When song is playing, you can press the [CLICK] button to turn the click on or off.
3. When song is playing, the dots on the display blink with the song tempo. The three dots will blink at the same time at the first beat of each measure.
4. Press the [TEMPO] button to enter the Tempo menu. The display shows the current tempo. You can use the data button to change the tempo. If you long-press the [TEMPO] button, it will reset to the default tempo of the current song. You can press other menu buttons to exit the Tempo menu. Or if there's no operation within 3 seconds, it will automatically exit and go back the previous menu.



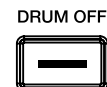
The First Beat  
BEAT



Other Beats  
BEAT

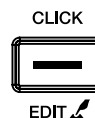
## Muting the Drums in a Song

1. Press the [DRUM OFF] button to mute the drum part of the current song. The button indicator turns on.
2. When the drum part is muted, the corresponding drum pad indicators will turn on according to the drum rhythm.
3. Press the [DRUM OFF] button again to unmute the drum part.







## Turning the Click On or Off

1. Press the [CLICK] button to start the click. The button indicator blinks in sync with the tempo.
2. Press the [CLICK] button again to turn off the click.



## Setting the Click Parameters

1. Long-press the [CLICK] button to enter the Click menu. The display shows the corresponding click parameter.
2. Use the data button to adjust the parameters. You can press the [PAGE] button to change the sub-menu.

Sub-menu	Display	Range	Description
Beat		0~9	Set the beat.
Rhythm Type		2 (half note) 4 (quarter note) 8 (eighth note) 3 (eighth note triplet) 16 (sixteenth note)	Set the rhythm of the click.
Volume		0~16	Set the click volume.
Sound		1~6	Set the click sound.

## Adjusting the Tempo

1. Press the [TEMPO] button to enter the Tempo menu. The display shows the current tempo.
2. Use the data button to change the tempo (30 ~ 280). If you long-press the [TEMPO] button, it will reset to the default tempo of the current song.
3. You can press other menu buttons to exit the Tempo menu. If there's no operation within 3 seconds, it will automatically exit and go back the previous menu.



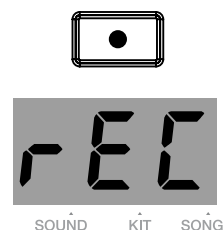
### Note:






The click tempo will change in sync with the current song tempo. When you change the song, the tempo will change along.

# Recording

## Prepare Recording

1. Press the [RECORD] button to enter Record mode. The display shows "rEC". The [RECORD] button indicator lights up. The [PLAY/STOP] button indicator blinks.
2. Press the [PAGE] button to change the sub-menu, then use the data button to adjust the parameters.



Sub-menu	Display	Range	Description
UserSong		U01~U05	Select a user song number.
Kit		1~45, U01~U10	Select a kit for recording.
Song		--- , 1~100	Select a song for accompaniment. "---" means no song is selected for accompaniment.
Beat		0~9	Click Beats: Available only when the Song sub-menu is set to "---".
Tempo		30~280	Set the tempo for recording. Note: It will use the song tempo when using song accompaniment. When no song is selected, it will use the default tempo of 120.

## Start / Stop Recording

1. In Record mode, press the [PLAY/STOP] button or strike a pad to start recording. The display shows the measure counts of recording. The dots on the display blink according to the selected tempo and beat. During recording, the [RECORD] and the [PLAY/STOP] button indicators stay lit.
2. Press the [PLAY/STOP] button to stop recording. The [RECORD] and the [PLAY/STOP] button indicators turn off.

### Notes:

1. It can record up to 8000 strikes. When recording is full, the display will show "FUL" and return to the Song menu.
2. When you edit kit settings, save the edited kit as a user kit before entering Record mode. If you use the unsaved kit settings for recording, when you play back this user song, it will sound different from recording.

# Utility Settings

In Utility Settings, you can set the global EQ and trigger parameters.

Global EQ: the 3-band EQ can adjust separately the bass (100Hz), the mid range (500~3KHz) and the treble (12KHz), in the adjustable range of -6dB~+6dB.

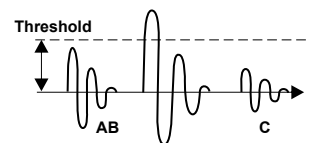
Trigger parameters: adjust the crosstalk, gain and threshold for a pad.



1. Press the [UTILITY] button to enter the Utility menu. The display shows the parameter of the current sub-menu.
2. Use the data button to adjust the parameter. Press the [PAGE] button to change the sub-menu.

Detailed parameters and their ranges:

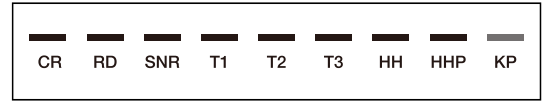
Sub-menu	Display	Range	Description
Reverb		0~4	Set the reverb level.
EQ High		1~9	Set the high-band gain, range is: 1=-3dB, 2=-2dB, 3=-1.5dB, 4=-1dB, 5=0dB, 6=1dB, 7=1.5dB, 8=2dB, 9=3dB
EQ Middle		1~9	Set the mid-band gain. Same range as the high-band gain.
EQ Low		1~9	Set the Low-band gain. Same range as the high-band gain.
Pad X-Talk		0~32	This setting helps prevent “crosstalk”. Crosstalk means when you strike a pad, the adjacent pad also produces sound. For example: when you hit the snare, tom1 also produces sound. In this case, you can gradually increase the “X-talk” value for tom1. Note: If the X-talk value is set too high, when two pads are being played at the same time, the one being struck less forcefully may not produce sound.
Pad Gain		0~32	Adjust the sensitivity of pads. Higher sensitivity allows the pad to produce a loud volume even when playing softly. Lower sensitivity makes the pad produce a low volume even when playing forcefully.
Pad Threshold		0~32	Setting the threshold of the pads. It will produce sound only when the trigger signal is above the threshold level. This setting can prevent unwanted sounding, such as crosstalk. If setting this value too high, it may not produce sound when striking softly. You can adjust the threshold in this way: 1. Set the value to a low level. 2. Raise the value gradually, and strike the pad to check, until you get an appropriate level.



# Utility Settings

## Notes:

1. These settings will be saved automatically when you turn off the power: utility settings, master volume, the number/volume/pad LED setting of the current song, the beat/volume/sound setting of the click.
2. Hold [UTILITY] + [SAVE] buttons and turn on the power, the utility settings, song number and master volume will be reset to the default settings.



# Hand Percussion

The module provides easy access to hand percussion practice.

1. Press the [HAND PERC] button to enter Hand Percussion mode. The current drum kit will change to use hand percussion kit. The pad sensitivity will automatically be re-adjusted to a higher level to be suit for hand practice.



2. Press the [HAND PERC] button again to exit this mode.

## Note:

When it enters Hand Percussion mode, the current song will change to use a song that has hand percussion kit. When you exit this mode, it will go back to use the previous song, and change the current drum kit accordingly.

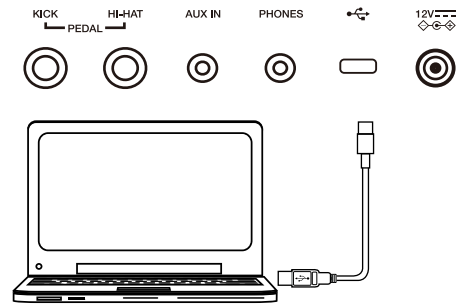
# Connecting to Computer

The module has a USB jack, which can be connected to a computer for MIDI input or MIDI output.

The module can work without installing a driver in the Windows operating system and MAC OSX, and be recognized in the name of “e-drum”.

**Note:**

The module is compatible with these USB ports: USB3.0, USB2.0 full speed, and USB high speed.



# Factory Reset

1. Push [POWER] button to turn the power off.
2. Hold [+] and [-] button and push [POWER] to finish factory reset.

**Note:** The operation will reset all data.

# Troubleshooting

Problem	Possible Cause and Solution
No sound.	Use the [VOLUME +/-] buttons to set an appropriate volume level.
No sound from the pads.	Make sure the pad volume is not set to "0".
No click sound.	1. Make sure the click is turned on. 2. Make sure the click volume is not set to "0".
The pad volume doesn't match the song playback volume.	Adjust the pad volume to match the song playback volume.
Cannot connect to computer.	1. Make sure the USB cable is connected correctly. 2. Make the connection again (keep the computer on, then turn the module on, then connect the USB cable). 3. The module should work without installing a driver.

# Prompt Messages

Message on display	Meaning
Pof	Auto Power Off function is disabled.
---	No data in the user sound.
NUL	No data in the user song.
FUL	The memory of the user song is full.

# Specifications

Pad	7 drum pads with touch sensitivity
Pedal	1 kick pedal, 1 Hi-hat pedal
Sounds	273 preset
Drum Kits	45 preset + 10 user
Songs	100 preset + 5 user
Control Buttons	POWER, VOLUME +/-, TEMPO, UTILITY, SOUND, KIT, SONG, PAGE, HAND PERC, DRUM OFF, CLICK, SAVE, RECORD, PLAY/STOP
Connectors	KICK Pedal, HI-HAT Pedal, AUX IN, PHONES, USB Type-C, DC IN
Power	DC 12V 2000mA
Dimensions LWH (mm)	618 x 383 x 130
Weight (kg)	3.38

\* All specifications and appearances are subject to change without notice.



# Drum Sound List

No.	Name
<b>KICK</b>	
1	Rock Kick
2	Fusion Kick
3	1970's Kick
4	Reggae Kick
5	Old School Kick
6	Magic Kick
7	Noise Kick
8	Lo-Fi Kick
9	Junkyard Kick
10	24" Acoustic Kick
11	24" Standard Kick
12	Brush Kick
13	Jazz Kick
14	Room Kick
15	Vintage Kick
16	HipHop Kick
17	Drum & Bass Kick
18	Electronic Kick 1
19	Dance Kick
20	FX Mix Kick
21	Techno Kick
22	808 Kick
23	909 Kick
24	Electronic Kick 2
<b>SNARE</b>	
25	14" Acoustic Snare
26	14" Standard Snare
27	14" Funk Snare
28	Brush Snare
29	14" Jazz Snare
30	14" Rock Snare
31	13" Damped Snare
32	Orchestra Snare
33	Orchestra Snare Rim
34	Room Snare
35	Fusion Snare
36	Big Band Snare
37	Vintage Snare
38	Live Snare
39	Reggae Snare
40	R&B Snare 1
41	808 Snare
42	909 Snare
43	R&B Snare 2
44	Electronic Snare
45	Power Snare
46	Dance Snare
47	Old School Snare
48	House Snare

49	Lo-Fi Snare
50	Junkyard Snare
51	Noise Snare
52	Drum & Bass Snare
53	Techno Snare
54	Techno Snare Rim
55	Magic Snare
56	Acoustic Snare Stick
57	Standard Snare Stick
58	Brush Snare Stick
59	Rock Snare Stick
60	Live Snare Stick
61	Room Snare Stick
62	Fusion Snare Stick
63	Brush Swirl
<b>Tom</b>	
64	Acoustic Tom 1
65	Acoustic Tom 2
66	Acoustic Tom 3
67	Acoustic Tom 4
68	Acoustic Tom 5
69	Acoustic Tom 6
70	Brush Tom 1
71	Brush Tom 2
72	Brush Tom 3
73	Brush Tom 4
74	Brush Tom 5
75	Brush Tom 6
76	Jazz Tom 1
77	Jazz Tom 2
78	Jazz Tom 3
79	Jazz Tom 4
80	Jazz Tom 5
81	Jazz Tom 6
82	808 Tom 1
83	808 Tom 2
84	808 Tom 3
85	808 Tom 4
86	808 Tom 5
87	808 Tom 6
88	909 Tom 1
89	909 Tom 2
90	909 Tom 3
91	909 Tom 4
92	909 Tom 5
93	909 Tom 6
94	Electronic Tom 1
95	Electronic Tom 2
96	Electronic Tom 3
97	Electronic Tom 4
98	Electronic Tom 5

99	Electronic Tom 6
100	Power Tom 1
101	Power Tom 2
102	Power Tom 3
103	Power Tom 4
104	Power Tom 5
105	Power Tom 6
106	Lo-Fi Tom 1
107	Lo-Fi Tom 2
108	Lo-Fi Tom 3
109	Lo-Fi Tom 4
110	Lo-Fi Tom 5
111	Lo-Fi Tom 6
112	Junkyard Tom 1
113	Junkyard Tom 2
114	Junkyard Tom 3
115	Junkyard Tom 4
116	Junkyard Tom 5
117	Junkyard Tom 6
118	Noise Tom 1
119	Noise Tom 2
120	Noise Tom 3
121	Noise Tom 4
122	Noise Tom 5
123	Noise Tom 6
124	Techno Tom 1
125	Techno Tom 2
126	Techno Tom 3
127	Techno Tom 4
128	Techno Tom 5
129	Techno Tom 6
130	Magic Tom 1
131	Magic Tom 2
132	Magic Tom 3
133	Magic Tom 4
<b>Ride</b>	
134	20" Funk Ride
135	808 Ride
136	909 Ride
137	Ride
138	House Ride
139	Lo-Fi Ride
140	Junkyard Ride
141	Noise Ride
<b>Crash</b>	
142	16" Acoustic Crash 1
143	16" Acoustic Crash 2
144	16" Acoustic Crash Edge
145	16" Rock Crash
146	16" Rock Crash Edge
147	808 Crash

# Drum Sound List

148	909 Crash
149	Electronic Crash
150	EDM Crash 1
151	EDM Crash 2
152	Brush Crash
153	Lo-Fi Crash
154	China
155	Splash
<b>Hihat</b>	
156	14" Acoustic Hi-hat Close
157	14" Acoustic Hi-hat Open
158	14" Acoustic Hi-hat Edge Close
159	14" Acoustic Hi-hat Edge Open
160	14" Acoustic Hi-hat Pedal
161	14" Acoustic Hi-hat Splash
162	Rock Hi-hat Close
163	Rock Hi-hat Open
164	Fusion Hi-hat Close
165	Fusion Hi-hat Open
166	Lo-Fi Hi-hat Close
167	Lo-Fi Hi-hat Open
168	Lo-Fi Hi-hat Edge
169	Lo-Fi Hi-hat Pedal
170	Lo-Fi Hi-hat Splash
171	808 Hi-hat Close
172	808 Hi-hat Open
173	808 Hi-hat Pedal
174	808 Hi-hat Splash
175	909 Hi-hat Close
176	909 Hi-hat Open
177	909 Hi-hat Pedal
178	909 Hi-hat Splash
179	Dance Hi-hat Close
180	Dance Hi-hat Open
181	Dance Hi-hat Pedal
182	Dance Hi-hat Splash
183	EDM_Hi-hat Close
184	EDM_Hi-hat Open
185	EDM_Hi-hat Pedal
<b>PERCUSSION 1</b>	
186	Vibra-slap
187	Vibraphone G3
188	Vibraphone A3
189	Vibraphone B3
190	Vibraphone C4
191	Vibraphone D4
192	Vibraphone E4
193	Vibraphone F4
194	Vibraphone G4
195	Vibraphone A4

196	Vibraphone B4
197	Vibraphone C5
198	Vibraphone D5
199	Vibraphone E5
200	Vibraphone F5
201	Vibraphone G5
202	Orchestra Timp C2
203	Orchestra Timp D2
204	Orchestra Timp E2
205	Orchestra Timp F2
206	Orchestra Timp G2
207	Orchestra Timp A2
208	Orchestra Timp B2
209	Orchestra Timp C3
210	Orchestra Timp D3
211	Orchestra Timp E3
212	Orchestra Timp F3
213	Orchestra Timp G3
214	Orchestra Timp A3
215	Orchestra Timp B3
216	Orchestra Timp C4
<b>PERCUSSION 2</b>	
217	Taiko Drum
218	Maracas
219	Sticks
220	Metronome Bell
221	Synthesis Percussion
222	High Q
223	Low Q
224	Mute Hi Conga
225	Open Hi Conga
226	Low Conga
227	High Bongo
228	Low Bongo
229	High Timbale 1
230	High Timbale 2
231	Low Timbale 1
232	Low Timbale 2
233	High Agogo
234	Low Agogo
235	Claves
236	Jingle Bell
237	Cowbell
238	Bell Tree
239	Tambourine
240	Cabasa
241	Long Guiro
242	Short Guiro
243	Wood Hi
244	Wood Low
245	Cuica Mute

246	Cuica Open
247	Triangle Mute
248	Triangle Open
<b>Chinese</b>	
249	Dagu 1
250	Dagu 2
251	Zhu ban
252	Nan Bang
253	Damuyu
254	Xiaomuyu 1
255	Xiaomuyu 2
256	Xiaomuyu 3
257	Xiaomuyu 4
258	Paigu 1
259	Paigu 2
260	Paigu 3
261	Mangluo 1
262	Mangluo 2
263	Mangluo 3
264	Daluo 1
265	Daluo 2
266	Dabo 1
267	Dabo 2
268	Xiaobo
269	Xiaoluo
270	Tenluo
271	Penglin 1
272	Dogluo
<b>Animal</b>	
273	Mute

# Drum Kit List

No.	Preset Kit Name
1	Standard 1
2	Hard Rock
3	Ballad
4	Acoustic
5	Latin Perc
6	Standard 2
7	Jazz Brush
8	Dacne
9	Rock
10	Jazz 1
11	808 1
12	909 1
13	Latin
14	Room
15	Jazz 2
16	Metal
17	Vibraphone
18	Electronic
19	Reggae
20	Fusion
21	Drum & Bass
22	Pop
23	Brush
24	World
25	Ska
26	Chinese Perc
27	Orchestra
28	Lo_Fi
29	1970's
30	Hip Hop
31	Big Band
32	Old School
33	Rock Ballad
34	808 2
35	909 2
36	Magic
37	Live
38	House
39	Percussion
40	Teckno
41	Vintage
42	Junkyard
43	Noise
44	Studio 1
45	Studio 2

User Kit	
46	Standard 1
47	Hard Rock
48	Ballad
49	Acoustic
50	Funk Band
51	Standard 2
52	Jazz Brush
53	Dacne
54	Rock
55	Jazz 1

# Song List

No.	Name
1	Gospel1
2	Gospel2
3	Pop Latin1
4	Pop Latin2
5	City Pop
6	Pop Fusion
7	Jazz Fusion
8	Hardcore
9	Slow R&B
10	City Funk
11	R&B1
12	Funk1
13	Medium Swing
14	Ele Dance
15	Disco1
16	Trance1
17	Hiphop1
18	Punk1
19	Punk2
20	Hardcore Rock
21	Pop Rock
22	Bossa Nova1
23	Salsa1
24	Reggae1
25	Mambo1
26	R&B Pop
27	Dance Pop1
28	Dance Pop2
29	Ele Pop
30	Blues Funk
31	Nu Jazz Funk
32	Funk2
33	Funk3
34	Pop Funk1
35	Pop Funk2
36	Retro Funk
37	Fusion1
38	Fusion2
39	Fusion3
40	Fusion4
41	Cool Jazz
42	Big Band 1
43	Big Band 2
44	Swing
45	3/4 Jazz
46	Jazz
47	Latin Jazz1
48	Latin Jazz2
49	Dance1
50	Disco House

51	Trance2
52	TripHop
53	Break Beat1
54	DanceFunk
55	HipHop
56	Dance2
57	Drum N'Bass2
58	Break Beat2
59	Classic Rock
60	Heavy Rock
61	Rock Ballad
62	Rock N'Roll
63	Rock
64	80's Metal
65	Shuffle
66	60's Rock
67	Samba1
68	Bossa Nova2
69	Salsa2
70	Ska
71	Raggae 2
72	Latin Rock1
73	Latin Rock2
74	Mambo2
75	Samba2
76	Latin Pop
77	Gtr Bossa
78	Latin Dance1
79	Latin Dance2
80	R&B2
81	Jazzy Funk
82	Blues
83	Country Pop
84	Country Blues
85	Ballad
86	Brit Pop
87	8Beat Pop
88	60's Pop
89	8Beat 1
90	8Beat 2
91	8BeatBallad1
92	8BeatBallad2
93	16BeatBallad1
94	16BeatBallad2
95	World
96	Latin
97	Disco2
98	Metal
99	Hard Rock
100	8Beat3

# GM Backing Sound List

PIANO	
1	Acoustic Grand Piano
2	Bright Acoustic Piano
3	Electric Grand Piano
4	Honky-Tonk Piano
5	E.Piano 1
6	E.Piano 2
7	Harpsichord
8	Clavi
MALLET	
9	Celesta
10	Glockenspiel
11	Music Box
12	Vibraphone
13	Marimba
14	Xylophone
15	Tubular Bells
16	Dulcimer
ORGAN	
17	Drawbar Organ
18	Percussive Organ
19	Rock Organ
20	Church Organ
21	Reed Organ
22	Accordion
23	Harmonica
24	Tango Accordion
GUITAR	
25	Nylon Guitar
26	Steel Guitar
27	Jazz Guitar
28	Clean Guitar
29	Muted Guitar
30	Overdriven Guitar
31	Distortion Guitar
32	Guitar Harmonics
BASS	
33	Acoustic Bass
34	Finger Bass
35	Pick Bass
36	Fretless Bass
37	Slap Bass 1
38	Slap Bass 2
39	Synth Bass 1
40	Synth Bass 2
STRINGS	
41	Violin
42	Viola
43	Cello
44	Contrabass
45	Tremolo Strings

46	Pizzicato Strings
47	Orchestral Harp
48	Timpani
STRINGS ENSEMBLE	
49	Strings Ensemble 1
50	Strings Ensemble 2
51	Synth Strings 1
52	Synth Strings 2
53	Choir Aahs
54	Voice Oohs
55	Synth Voice
56	Orchestra Hit
BRASS	
57	Trumpet
58	Trombone
59	Tuba
60	Muted Trumpet
61	French Horn
62	Brass Section
63	Synth Brass 1
64	Synth Brass 2
REED	
65	Soprano Sax
66	Alto Sax
67	Tenor Sax
68	Baritone Sax
69	Oboe
70	English Horn
71	Bassoon
72	Clarinet
PIPE	
73	Piccolo
74	Flute
75	Recorder
76	Pan Flute
77	Blown Bottle
78	Shakuhachi
79	Whistle
80	Ocarina
LEAD	
81	Lead1 (Square)
82	Lead2 (Sawtooth)
83	Lead3 (Calliope)
84	Lead4 (Chiff)
85	Lead5 (Charang)
86	Lead6 (Voice)
87	Lead7 (Fifths)
88	Lead8 (Bass & Lead)
PAD	
89	Pad1 (Newage)
90	Pad2 (Warm)

91	Pad3 (Polysynth)
92	Pad4 (Choir)
93	Pad5 (Bowed)
94	Pad6 (Metallic)
95	Pad7 (Halo)
96	Pad8 (Sweep)
EFFECTS	
97	FX1 (Rain)
98	FX2 (Soundtrack)
99	FX3 (Crystal)
100	FX4 (Atmosphere)
101	FX5 (Brightness)
102	FX6 (Goblins)
103	FX7 (Echoes)
104	FX8 (Sci-fi)
ETHNIC	
105	Sitar
106	Banjo
107	Shamisen
108	Koto
109	Kalimba
110	Bagpipe
111	Fiddle
112	Shanai
PERCUSSIVE	
113	Tinkle Bell
114	Agogo
115	Steel Drums
116	Wood Block
117	Taiko Drum
118	Melodic Tom
119	Synth Drum
120	Reverse Cymbal
SOUND EFFECTS	
121	Guitar Fret Noise
122	Breath Noise
123	Seashore
124	Bird Tweet
125	Telephone Ring
126	Helicopter
127	Applause
128	Gunshot

# GM Drum Kit List

	Standard Set	Room Set	Jazz Set	Rock Set
Note#	PC# 00	PC# 04	PC# 08	PC# 16
Eb1[27]	High Q	<-	<-	<-
E 1[28]	Slap	<-	<-	<-
F 1[29]	Scratch Push	<-	<-	<-
F#1[30]	Scratch Pull	<-	<-	<-
G 1[31]	Sticks	<-	<-	<-
G#1[32]	Square Click	<-	<-	<-
A 1[33]	Metronome Click	<-	<-	<-
Bb1[34]	Metronome Bell	<-	<-	<-
B 1[35]	Acoustic Bass Drum	<-	<-	<-
C 2[36]	Bass Drum	Room Kick	Jazz Kick	Rock Kick Drum
C#2[37]	Side Stick	<-	<-	<-
D 2[38]	Acoustic Snare	Room Snare 1	Jazz Snare 1	Rock Snare Drum1
Eb2[39]	Hand Clap	<-	<-	<-
E 2[40]	Electric Snare	Room Snare 2	Jazz Snare 2	Rock Snare Drum2
F 2[41]	Low Floor Tom	Room Low Floor	Jazz Low Floor	Rock Low Floor
F#2[42]	Closed Hi-hat	<-	<-	<-
G 2[43]	High Floor Tom	Room High Floor Tom	Jazz High Floor Tom	Rock High Floor Tom
G#2[44]	Pedal Hi-hat	<-	<-	<-
A 2[45]	Low Tom	Room Low Tom	Jazz Low Tom	Rock Low Tom
Bb2[46]	Open Hi-hat	<-	<-	<-
B 2[47]	Low-Mid Tom	Room Low-Mid Tom	Jazz Low-Mid Tom	Rock Low-Mid Tom
C 3[48]	High Mid Tom	Room High Mid Tom	Jazz High Mid Tom	Rock High Mid Tom
C#3[49]	Crash Cymbal 1	<-	<-	<-
D 3[50]	High Tom	Room High Tom	Jazz High Tom	Rock High Tom
Eb3[51]	Ride Cymbal 1	<-	<-	<-
E 3[52]	China Cymbal	<-	<-	<-
F 3[53]	Ride Bell	<-	<-	<-
F#3[54]	Tambourine	<-	<-	<-
G 3[55]	Splash Cymbal	<-	<-	<-
G#3[56]	Cowbell	<-	<-	<-
A 3[57]	Crash Cymbal 2	<-	<-	<-
Bb3[58]	Vibra-slap	<-	<-	<-
B 3[59]	Ride Cymbal 2	<-	<-	<-
C 4[60]	High Bongo	<-	<-	<-
C#4[61]	Low Bongo	<-	<-	<-
D 4[62]	Mute Hi Conga	<-	<-	<-
Eb4[63]	Open Hi Conga	<-	<-	<-
E 4[64]	Low Conga	<-	<-	<-
F 4[65]	High Timbale	<-	<-	<-
F#4[66]	Low Timbale	<-	<-	<-
G 4[67]	High Agogo	<-	<-	<-
G#4[68]	Low Agogo	<-	<-	<-
A 4[69]	Cabasa	<-	<-	<-
Bb4[70]	Maracas	<-	<-	<-
B 4[71]	Short Whistle	<-	<-	<-
C 5[72]	Long Whistle	<-	<-	<-
C#5[73]	Short Guiro	<-	<-	<-
D 5[74]	Long Guiro	<-	<-	<-
Eb5[75]	Claves	<-	<-	<-
E 5[76]	Hi Wood Block	<-	<-	<-
F 5[77]	LowWood Block	<-	<-	<-
F#5[78]	Mute Cuica	<-	<-	<-
G 5[79]	Open Cuica	<-	<-	<-
G#5[80]	Mute Triangle	<-	<-	<-
A 5[81]	Open Triangle	<-	<-	<-
Bb5[82]	Shaker	<-	<-	<-
B 5[83]	Jingle Bell	<-	<-	<-
C 6[84]	Bell Tree	<-	<-	<-
C#6[85]	Castanets	<-	<-	<-
D 6[86]	Mute Surdo	<-	<-	<-
Eb6[87]	Open Surdo	<-	<-	<-

# GM Drum Kit List

	Electric Set	Analog Set	Brush Set
Note#	PC# 24	PC# 25	PC# 40
Eb1[27]	<-	<-	<-
E 1[28]	<-	<-	<-
F 1[29]	<-	<-	<-
F#1[30]	<-	<-	<-
G 1[31]	<-	<-	<-
G#1[32]	<-	<-	<-
A 1[33]	<-	<-	<-
Bb1[34]	<-	<-	<-
B 1[35]	<-	<-	<-
C 2[36]	Electric Bass Drum	Analog Bass Drum	Brush Kick
C#2[37]	<-	Analog Rim Shot	<-
D 2[38]	Electric Snare 1	Analog Snare 1	Brush Tap
Eb2[39]	<-	Analog Clap	<-
E 2[40]	Electric Snare 2	Analog Snare 2	Brush Slap
F 2[41]	Electric Low Floor	Analog Low Floor	Brush Low Floor
F#2[42]	<-	Analog Closed Hi-hat	<-
G 2[43]	Electric High Floor Tom	Analog High Floor Tom	Brush High Floor Tom
G#2[44]	<-	Analog Pedal Hi-hat	<-
A 2[45]	Electric Low Tom	Analog Low Tom	Brush Low Tom
Bb2[46]	<-	Analog Open Hi-hat	<-
B 2[47]	Electric Low-Mid Tom	Analog Low-Mid Tom	Brush Low-Mid Tom
C 3[48]	Electric High Mid Tom	Analog High Mid Tom	Brush High Mid Tom
C#3[49]	<-	Analog Cymbal	<-
D 3[50]	Electric High Tom	Analog High Tom	Brush High Tom
Eb3[51]	<-	<-	<-
E 3[52]	<-	<-	<-
F 3[53]	<-	<-	<-
F#3[54]	<-	<-	<-
G 3[55]	<-	<-	<-
G#3[56]	<-	<-	<-
A 3[57]	<-	<-	<-
Bb3[58]	<-	<-	<-
B 3[59]	<-	<-	<-
C 4[60]	<-	<-	<-
C#4[61]	<-	<-	<-
D 4[62]	<-	<-	<-
Eb4[63]	<-	<-	<-
E 4[64]	<-	<-	<-
F 4[65]	<-	<-	<-
F#4[66]	<-	<-	<-
G 4[67]	<-	<-	<-
G#4[68]	<-	<-	<-
A 4[69]	<-	<-	<-
Bb4[70]	<-	<-	<-
B 4[71]	<-	<-	<-
C 5[72]	<-	<-	<-
C#5[73]	<-	<-	<-
D 5[74]	<-	<-	<-
Eb5[75]	<-	<-	<-
E 5[76]	<-	<-	<-
F 5[77]	<-	<-	<-
F#5[78]	<-	<-	<-
G 5[79]	<-	<-	<-
G#5[80]	<-	<-	<-
A 5[81]	<-	<-	<-
Bb5[82]	<-	<-	<-
B 5[83]	<-	<-	<-
C 6[84]	<-	<-	<-
C#6[85]	<-	<-	<-
D 6[86]	<-	<-	<-
Eb6[87]	<-	<-	<-

# MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	10ch	1-16ch	
	Changed	x	x	
Mode	Default	x	x	
	Messages	x	x	
	Altered	*****	*****	
Note Number	Note	0-127	0-127	
	True Voice	*****	0-127	
Velocity	Note On	o 9nH, V=1-127	1-127	
	Note Off	o (9nH, V=0)	0-127	
After Touch	key's	x	x	
	Channel	x	x	
Pitch Bend		x	o	
Control Change	0	x	o	Bank Select
	1	x	o	Modulation
	5	x	o	Portamento Time
	6	x	o	Data Entry
	7	x	o	Volume
	10	x	o	Pan
	11	x	o	Expression
	64	x	o	Sustain Pedal
	65	x	o	Portamento On/Off
	66	x	o	Sostenuto Pedal
	67	x	o	Soft Pedal
	80	x	o	Reverb Program
	81	x	o	Chorus Program
	91	x	o	Reverb Level
	93	x	o	Chorus Level
120	x	o	All Sound Off	
121	x	o	Reset All Controllers	
123	x	o	All Notes Off	
Program Change		x	o	
System Exclusive		x	o	
System Common	Song Position	x	x	
	Song Select	x	x	
	Tune Request	x	x	
System Real Time	Clock	x	x	
	Commands	o	x	Start/Stop
Aux Messages	Local On/Off	x	x	
	All Notes Off	x	x	
	Active Sensing	o	x	
	System Reset	x	x	

## Notes

o: Yes

x: No