



POWERED BY CARLSBRO

**CSD120/CSD130**  
**DIGITAL DRUM USER GUIDE**

# Congratulations!

Thank you for purchasing this digital drum set. The drum set has been Developed to act and play like a drum set but with greater ease. Before you use the instrument, we recommend you to read through this manual.

## Taking care of Your Digital Drum Set

### Location

- Do not expose the unit to the following Conditions to avoid deformation, discoloration or more serious damage.
- Direct sunlight.
- High temperature (near a heat)source, Or in car during the day time).
- Disconnect all cables before moving

### Power Supply

- make sure to use the suitable AC adaptor, and also make sure the ac outlet voltage at your country matches the input voltage specified on the AC AC adaptor's label.
- Turn the power switch OFF When the Instrument is not in use.
- An AC adaptor should be unplugged from the AC outlet if the instrument is not be used for an extended period of time.
- Unplug the AC adaptor during electric storms.
- Avoid plugging the AC adaptor into
- The same AC outlet as appliance with high power consumption, such as electric heaters or ovens. Also avoid using multi-plug adaptors since these can result in reducing the sound quality, operation errors, and possibly damage.

### Turn Power OFF When Making Connections

- To avoid damage to the instrument and other devices to which it is Connected, turn the power switches of all related device OFF prior to connecting or disconnecting cables.

### Handling and Transport

- Never apply excessive force to the controls, connectors or other parts of the instrument.
- Always unplug cables by gripping the plug firmly, but not pulling on the cable.
- Disconnect all cables before moving The instrument.
- Physical shocks caused by dropping, bumping, or placing heavy objects on the instrument can result in scratches more serious damage.

### Cleaning

- Clean the unit with a dry soft cloth.
- A Slightly damp cloth may be used to Remove stubborn grime and dirt.
- Never use cleaners such as alcohol or thinner.
- Avoid placing vinyl object on top of The unit (uinyl can stick to and discolor the surface).

### Electrical Interference

- This instrument contains digital circuitry and may cause interference if placed too close to radio or television receivers. If this occurs, move the instrument further away from the affected equipment.

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# 1. Assembly

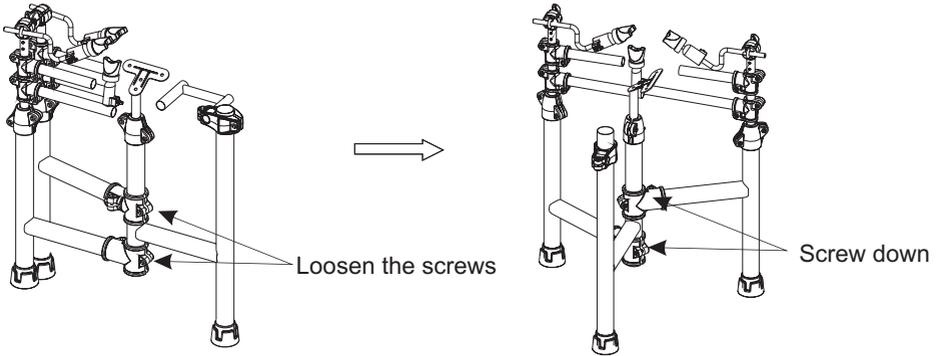
## Caution\*\*

- While adjusting the collar, please take extra care to avoid injury.
- Set the each part to the correct position.

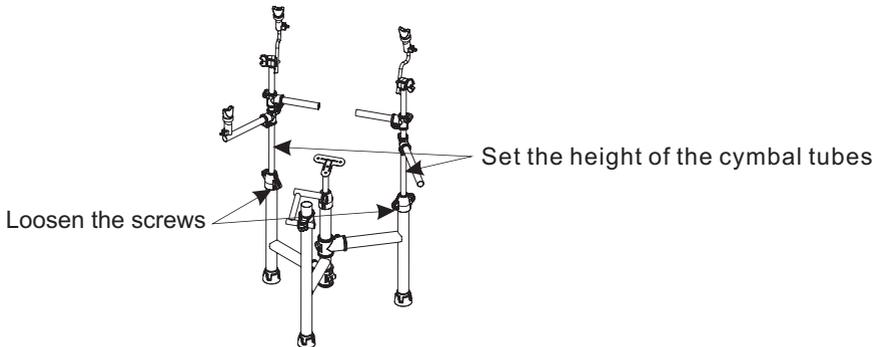
## Assembly steps:

### Drum stand assembly

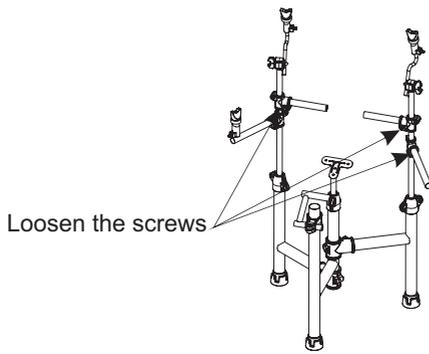
- 1). Take out the drum stand and loosen the screws of the collars.
- 2). Set the three master tube at 120° angle.
- 3). Screw down at the collars.



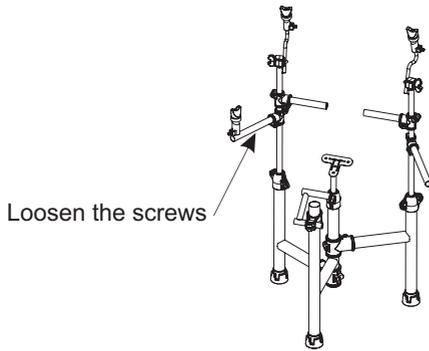
- 4). Loosen the screws at the collars.
- 5). Set the L/R cymbal tubes to the proper height.
- 6). Screw down to fix the cymbal tubes.



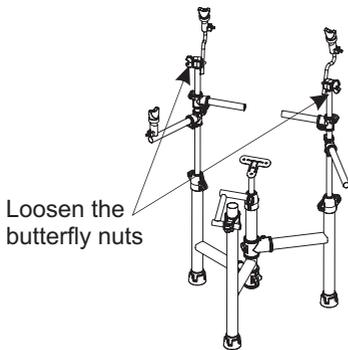
- 7). Loosen the screws at the collars.
- 8). Adjust the cymbal collars to proper height.
- 9). Screw down to fix the cymbal tubes.



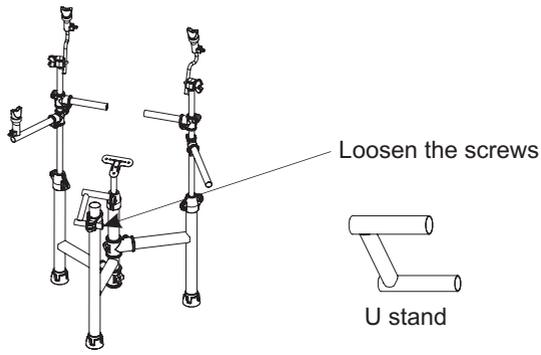
- 10). Loosen the screws at the collars.
- 11). Adjust the HI-HAT collars to proper height.
- 12). Screw down to fix the HI-HAT tubes.



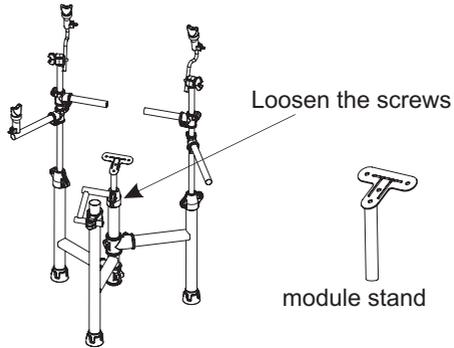
- 13). Loosen the butterfly nuts.
- 14). Adjust the cymbal rod to proper height and angle.
- 15). Tighten the butterfly nuts.



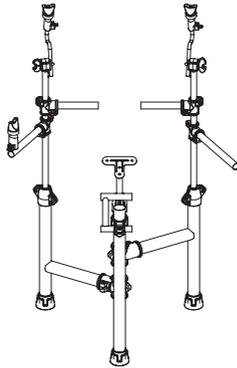
- 16). Loosen the screws at the collars.
- 17). Adjust the U stand of snare to proper position.
- 18). Screw down.



- 19). Loosen the screws at the collars.
- 20). Set the module stand to proper position.
- 21). Screw down.

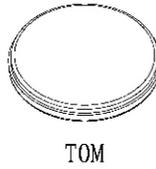
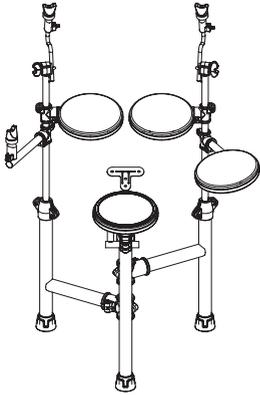
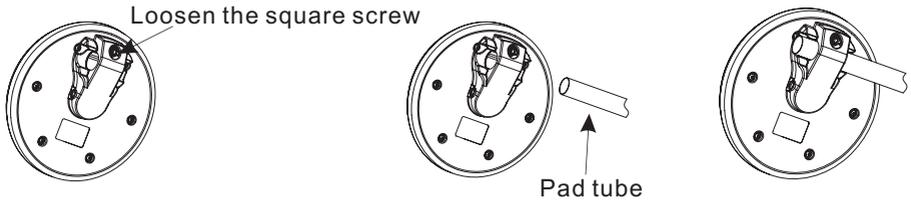


- 22). Adjust the balance of the drum stand.
- 23). Tighten all the screws at the collars. Tighten the clip screw.



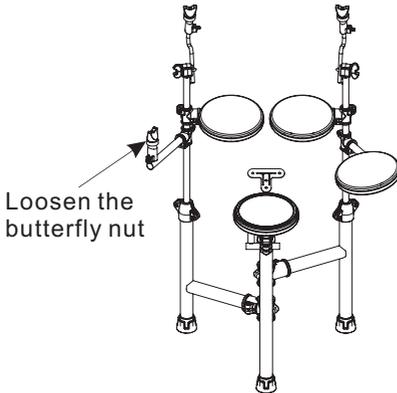
### Assemble the pads

- 1). Take out the pads (3 TOM and 1 Snare) . Loosen the square screw.
- 2). Assemble the pads onto the tubes and adjust the position.
- 3). Tighten the square screw.



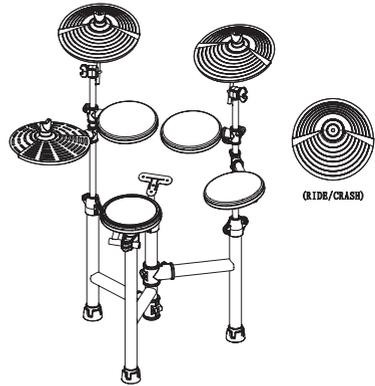
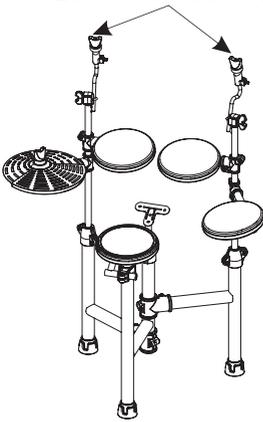
### Assemble the cymbals

- 1) Loosen the butterfly nut on the left side of the HI-HAT.
- 2) Assemble the HI-HAT cymbal.
- 3) Tighten the butterfly nut (Note: don't overtighten)



- 4). Loosen the butterfly nut on the cymbal rod.
- 5). Assemble the CRASH/RIDE cymbal onto the rod.
- 6). Tighten the butterfly nut (Note: don't overtighten)

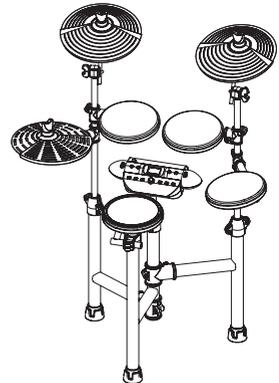
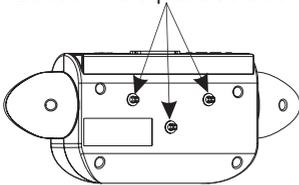
Loosen the butterfly nut



### Assemble the module

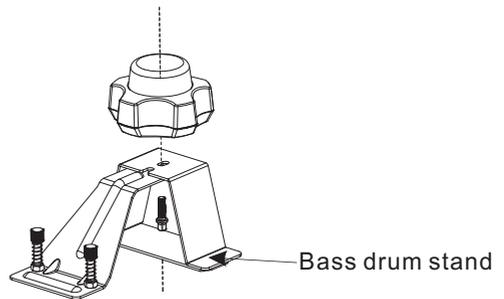
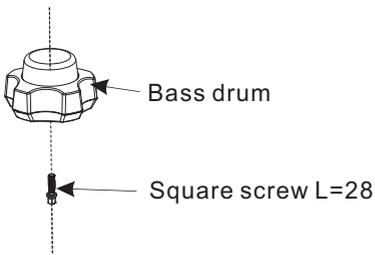
- 1). Loosen the square screws of the module.
- 2). Assemble the module onto the module stand.
- 3). Screw down.

Loosen the square screws



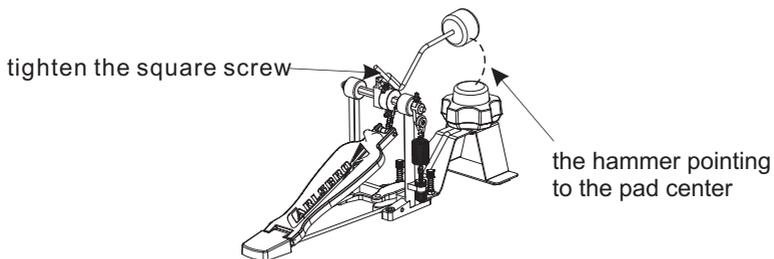
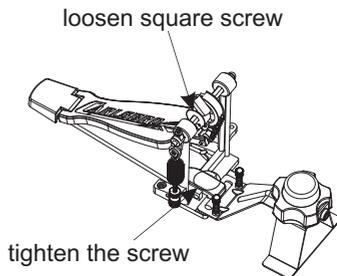
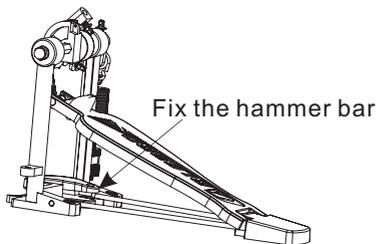
### Assemble the bass drum (only CSD130)

- 1). take out the bass drum and bass drum stand
- 2). loosen the square screw of the bass drum
- 3). assemble the bass drum on the stand
- 4). Tighten the square screw.



- 5). Fix the support bar to the pedal.
- 6). Fix the bass drum stand the hammer, and tighten the screw

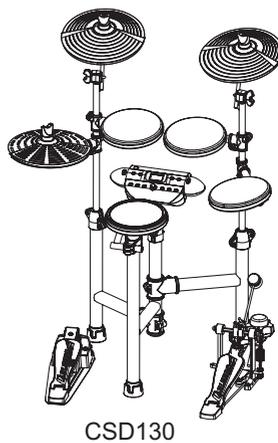
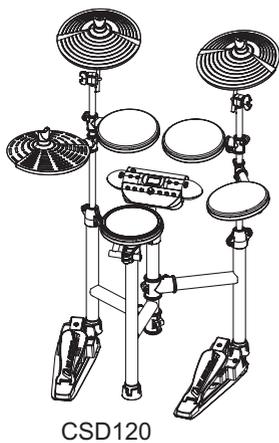
- 7). Loosen the square screw of the hammer
- 8). tighter the square screw to fix the hammer



### Assemble the pedal and the bass drum

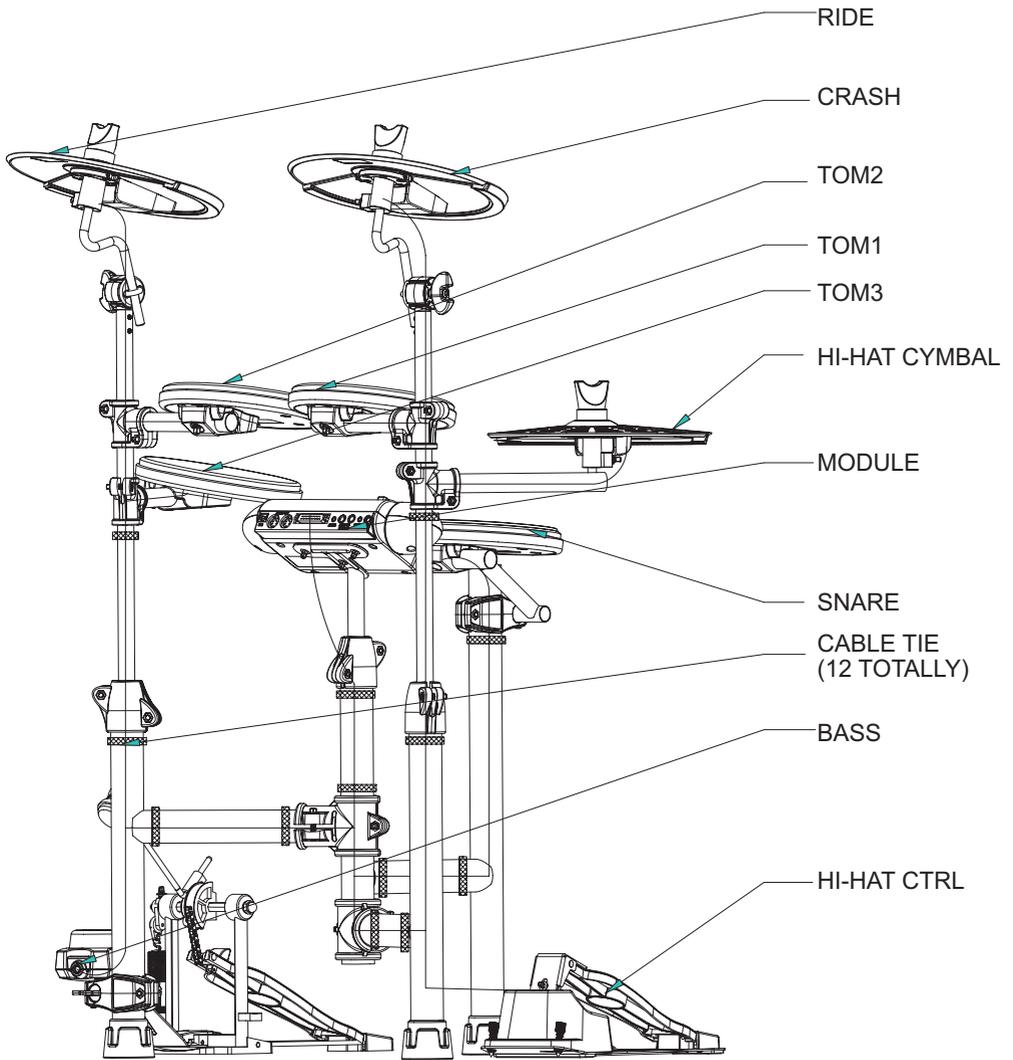
- 1) Put the pedal to the left floor.
- 2) Put the bass drum (with hammer) to the right floor.

Note: CSD120 pedal is used as bass drum. Each of the pedal can be used as bass drum.



### Connect the pads

- 1). Use the cable to connect the D-SUB connector of the module and the pad.
- 2). Use the cable tie to tie the cable ( 12 ties )



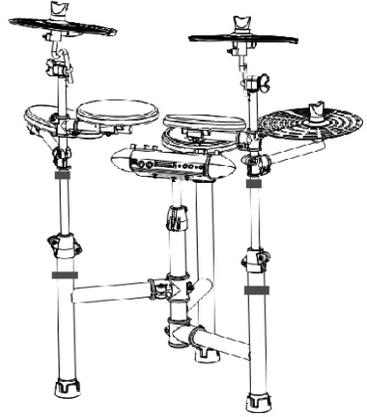
## 2. Fold the drum stand

### Arrange the pad cables

- 1). Turn off the power supply.
- 2). Disconnect all the cables with the module.
- 3). Disconnect all the cables with the pads.
- 4). Take out the cable ties.
- 5). Rearrange the cables and bind them onto the tubes.
- 6). Disassemble the module and assemble the screws into the module and put the module into the bag.
- 7). Put the pedal into the bag.

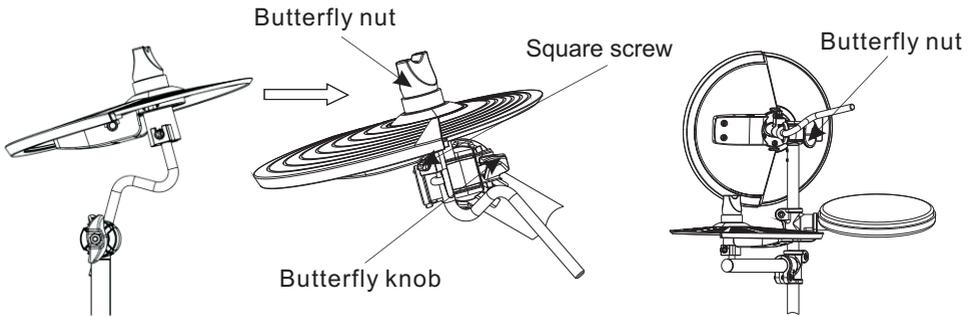
Note:

The model CSD130 needs to be disassembled the hammer and the bass drum stand and put them into the bag.



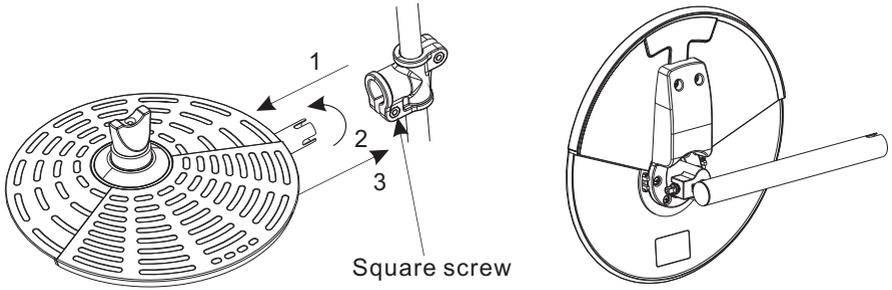
### Fold the CRASH

- 1). Loosen the butterfly nuts and knob.
- 2). Loosen the square screws.
- 3). Fold the CRASH as the figure below.
- 4). Tighten the square screw and properly tighten the butterfly nuts.

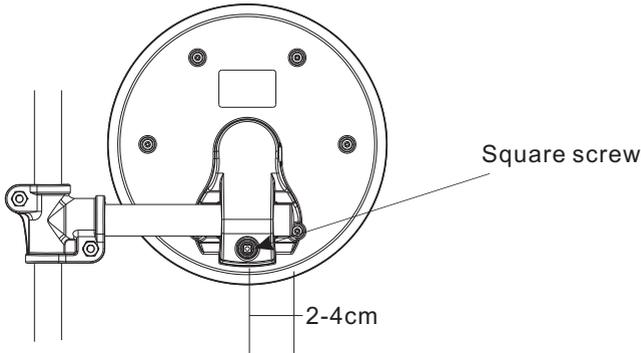


### Fold the Hi-Hat-CYMBAL and TOM1

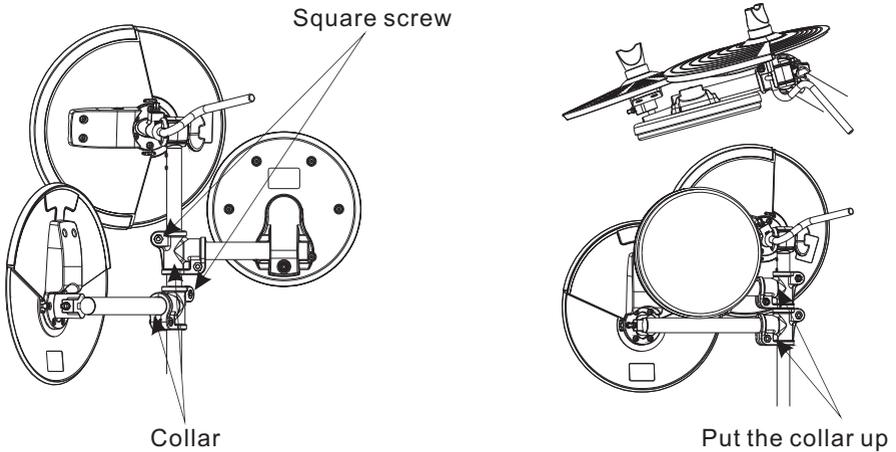
- 1). Loosen the square screws.
- 2). Take out as direction 1, rotate 90 degree as direction 2, and put in as direction 3.
- 3). Screw down (as the right figure).



- 4). Loosen the square screw on the back of TOM1.
- 5). Put the pad vertically and adjust the position according to the dimension in the figure.

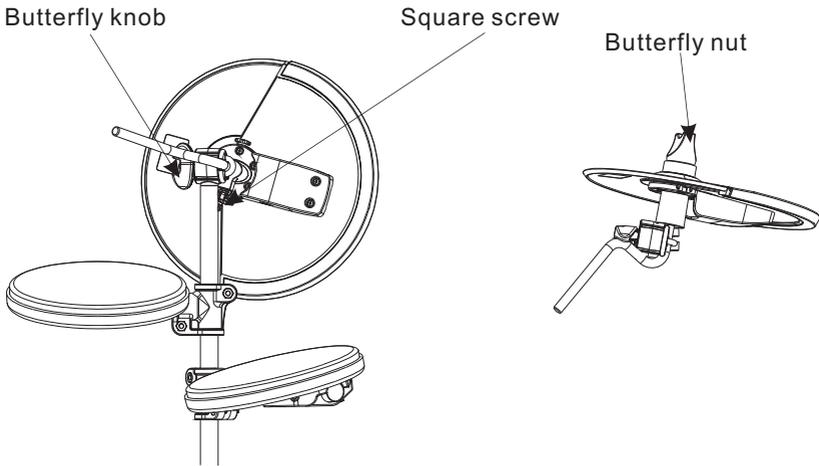


- 6). Loosen the square screw. Adjust Hi-Hat-CYMBAL & TOM1.
- 7). Put the collar up as the figure below.
- 8). Tighten the square screw.



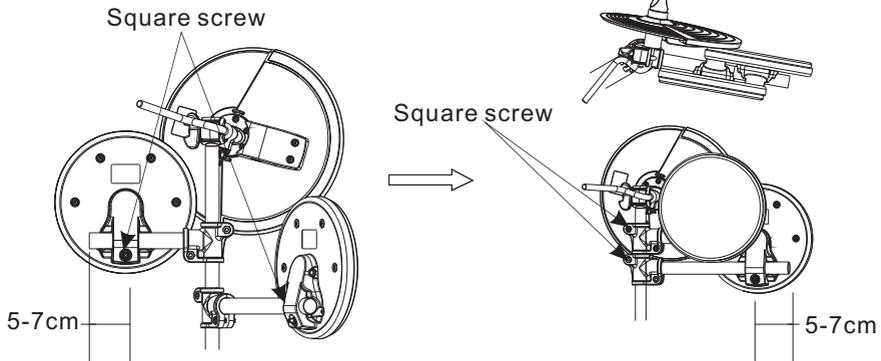
## Fold the RIDE

- 1) Loosen the butterfly knob and nut.
- 2) Loosen the square screw.
  - a. Fold the RIDE cymbal as the figure below.
  - b. Tighten the square screw. Tighten the butterfly nut & knob properly.



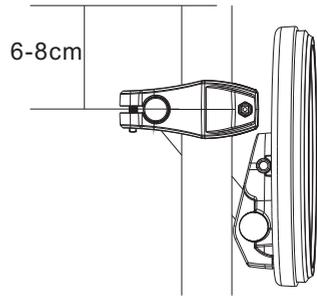
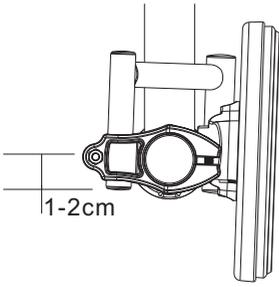
## Fold TOM2 and TOM3

- 1). Loosen the screws on the back of TOM2 and TOM3.
- 2). Put the pad vertically and adjust the pad position according to the dimension in the figure.
- 3). Loosen the square screw on the collar and adjust TOM2 & TOM3.
- 4). Put the collar closely as the figure.
- 5). Tighten the square screw.



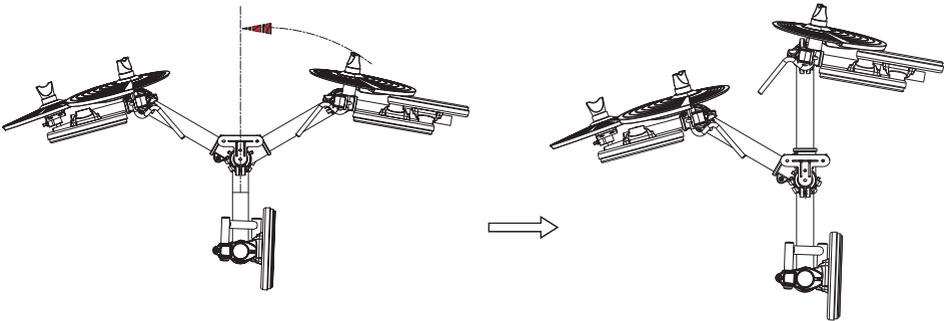
## Fold SNARE

- 1). Loosen the square screw on the clip.
- 2). Loosen the square screw on the back of SNARE.
- 3). Adjust SNARE to proper position as the figure below.
- 4). Tighten the square screw.

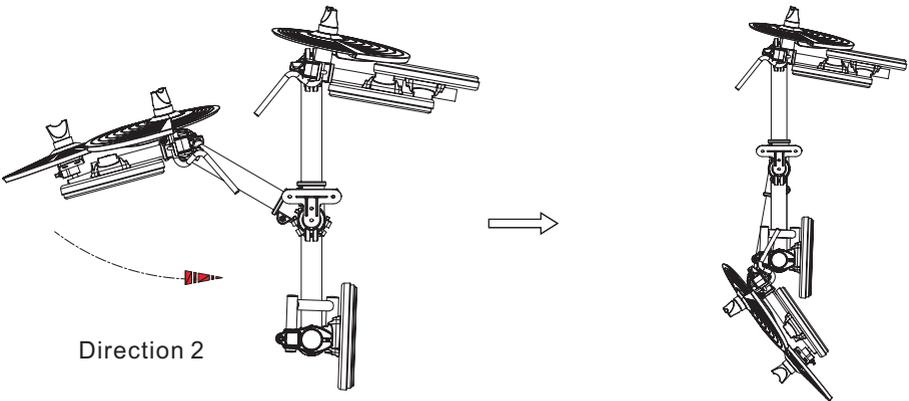


### Fold the whole set

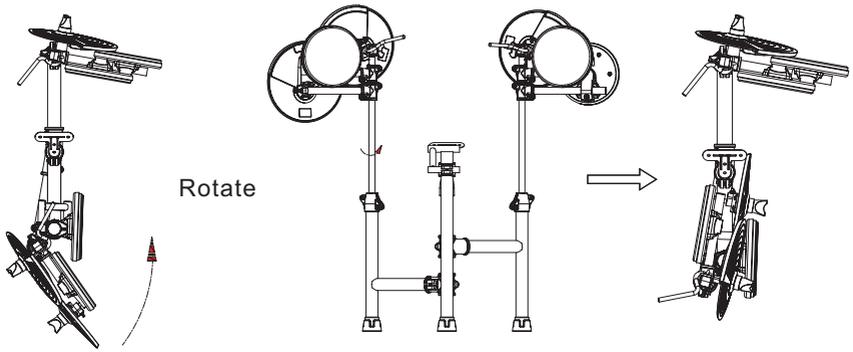
- 1). Loosen the square screw.
- 2). Rotate as the figure below and keep it stable while folding.



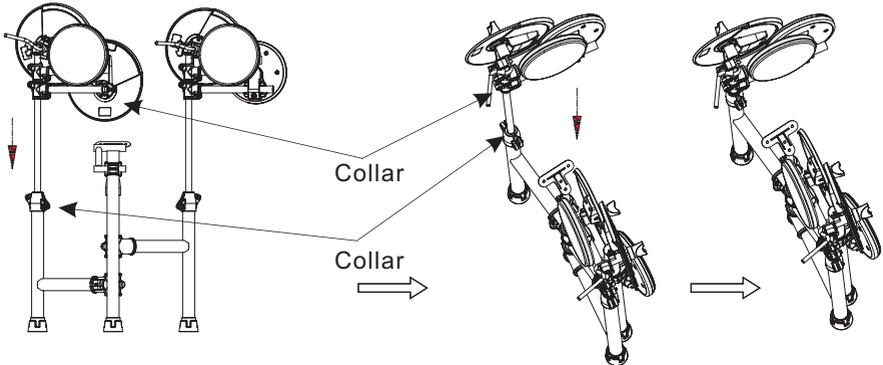
- 3). Rotate as the figure below and put the left and right part close.



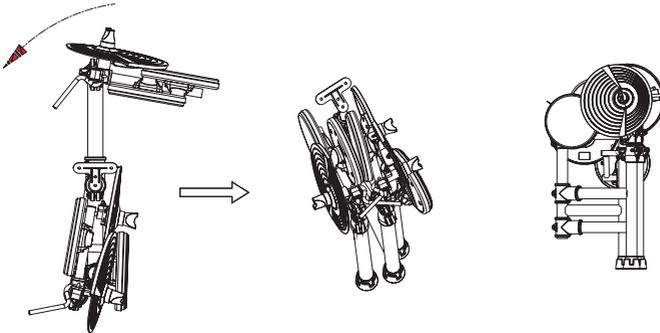
- 4). Rotate the supporting tube as the figure below.



5). Fold the supporting part and keep the collar up closely.



6). Rotate as the figure below and fold the whole set.



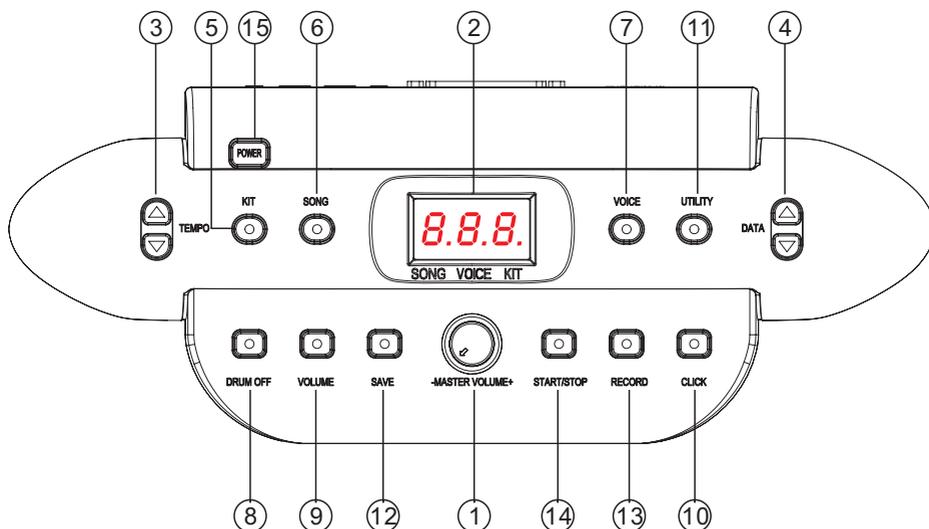
Note:

User can put the whole drum set into bag (Optional bag).

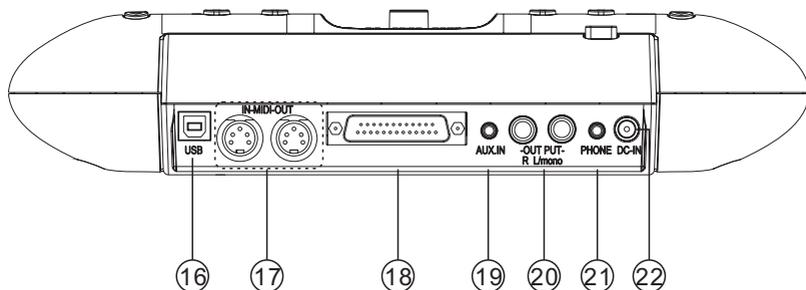


## 2. Module function

### Front panel

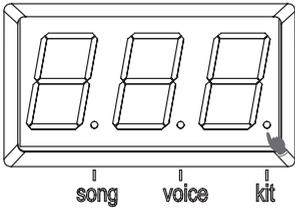


- ① -MASTER VOLUME+  
Adjusts the volume of earphone and line output.
- ② LED Display  
Displays the menu parameters.
- ③ -TEMPO+  
Enter into the tempo setting (holding the button to change value quickly).
- ④ -DATA+  
Adjusts the parameters, e.g. drum kit, Voice, etc (holding the button to change value quickly)
- ⑤ KIT REV ON/OFF  
Drum kit selection and reverb effect on/off.
- ⑥ SONG  
Selects DEMO SONG quickly.
- ⑦ VOICE VOL/PAN/TUN  
Sets up the voice, volume, pan and tune.
- ⑧ DRUM OFF  
Turns on/off the drum sound of DEMO SONG.
- ⑨ VOLUME  
Adjusts the accompaniment volume and percussion volume.
- ⑩ CLICK  
Turns on/off the metronome.
- ⑪ UTILITY  
Practical setting button.
- ⑫ SAVE  
Sets the drum kit and save to the user drum kit, or save the trigger in practical setting.
- ⑬ RECORD  
Records the drum sound.
- ⑭ START/STOP  
Starts/stops the instrument playing or the recording playing. Press once to start the Demo song playing, twice to start recording playing, a third time to stop.
- ⑮ POWER  
It turns on/off the power supply.

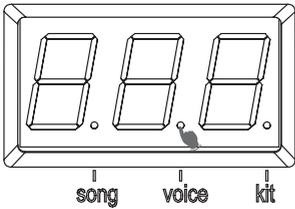


- ①⑥ USB interface  
Connects with PC to deliver MIDI signal.
- ①⑦ MIDI in/out port  
Connects with external MIDI devices (The drum MIDI signal outputs via MIDI OUT to external audio source. The external MIDI signal inputs to the drum via MIDI IN.)
- ①⑧ Trigger in connector  
Pad signal input connector.
- ①⑨ AUX IN  
External stereo input connector, e.g. MP3 or CD player.
- ①⑩ -OUTPUT- L/mono R  
The stereo output connector to connect with audio system or drum amp, L/R stereo output and L/mono output
- ①⑪ PHONE  
Stereo phone output connector.
- ①⑫ DC-In  
Power adaptor connector, 9V DC

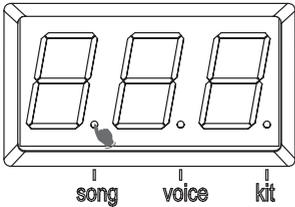
## LED Display



Drum kit LED lights up: the number means the drum kit number



Tone LED lights up: the number means the voice number.



the preset song LED lights up: the number means the preset song number.

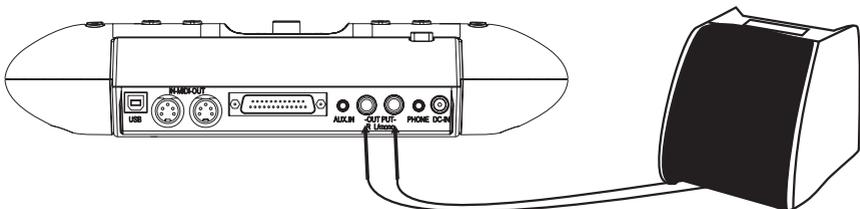
## 4. Connect with external devices

### Connecting with audio system or drum speaker cabinet

Connect one end with L/mono R, and the other end with audio system or drum amplifier, such as EDA series.

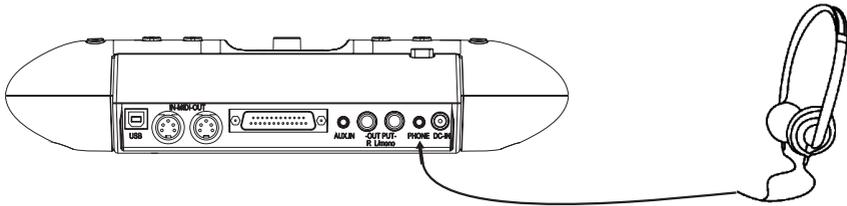
Note:

- 1). L/mono is only for the left channel output.
- 2). When connecting with stereo devices, it needs to connect L/mono and R connectors. The volume is controlled by the module volume knob and device volume knob.



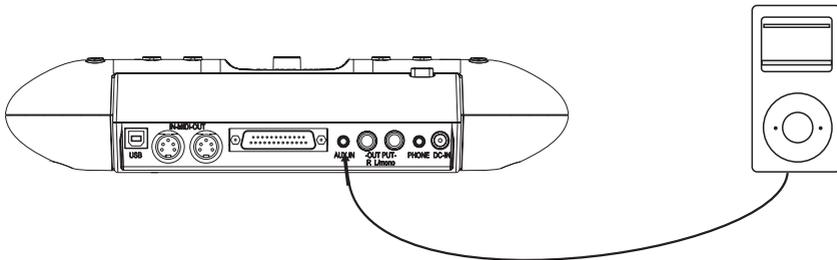
## Connect with Headphones

Connect the phone with 1/4" stereo connector on the module (if 1/8" phone is used, use an adaptor). The volume is controlled by the volume knob on the module.



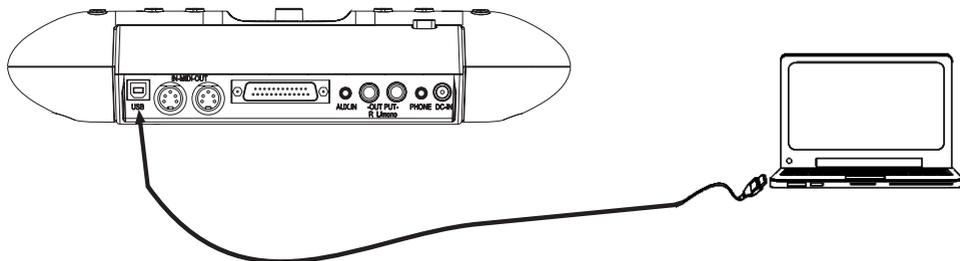
## Connect with MP3 or CD player

Connect the output of MP3 or CD player with AUX IN connector of the module. The input signal can be mixed with the drum signal. User can strike the pad according to the metronome click of input signal.

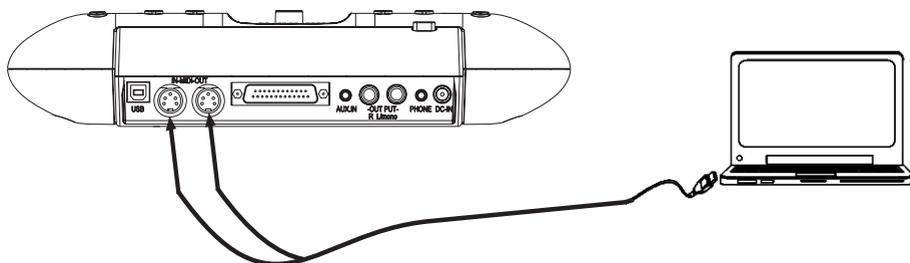


## Connect with PC

- 1). Connect PC via USB  
Receives and delivers MIDI signal.

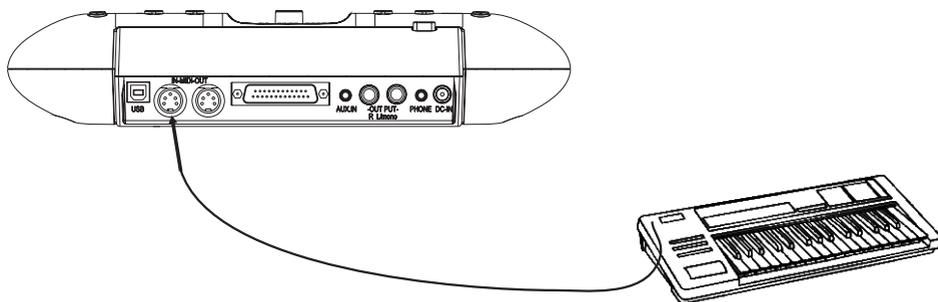


- 2). Connect PC via MIDI port  
MIDI IN: receives external MIDI signal.  
MIDI OUT: delivers pad signal to external MIDI device or PC.



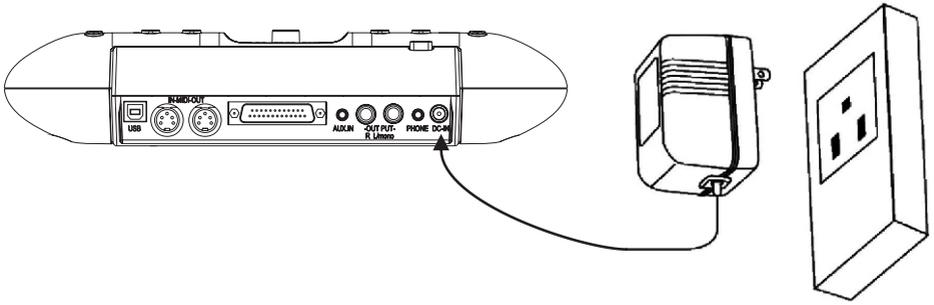
## Connect with MIDI keyboard

MIDI port: connect with the MIDI OUT connector of MIDI keyboard or external pads as the external audio source to control this digital drum.



## Power supply

- 1). Turn off the module power switch.
- 2). Connect the power supply with DC IN connector.
- 3). Confirm all the pads are correctly connected. Set the module volume to minimum, then turn on the power switch of the module. The display lights up and it enters into the drum kit menu.

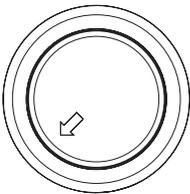


turn off the power switch before connecting with other devices.

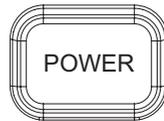
## 5. Operation

### Power switch

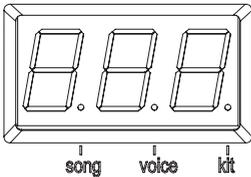
- 1). Confirm all the cables are connected well, then set the module volume to minimum, then turn on the power switch.



- MASTER VOLUME+



- 2). When the display lights up, enter into the module menu operation (enter into the drum kit menu when on).

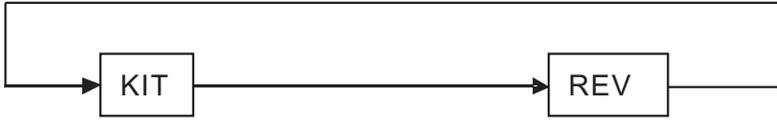


### Adjust the master volume

Strike the pads and adjust the volume knob for proper master volume.

## Select drum kit and reverb

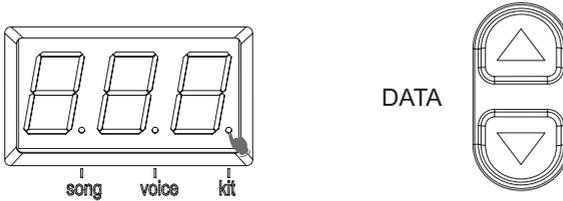
- 1). Press [KIT REV ON/OFF] key to enter into drum kit setting or to switch drum kit and reverb effect.



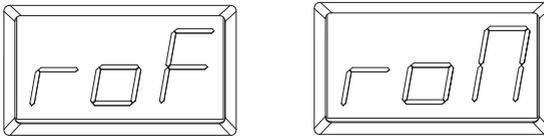
- 2). Press [KIT REV ON/OFF] key to enter into drum selection. The display shows drum kit number and the KIT LED lights up. Use [-DATA+] button to select drum kit.

Preset drum kit: KIT01---20

User drum kit: USER01---10

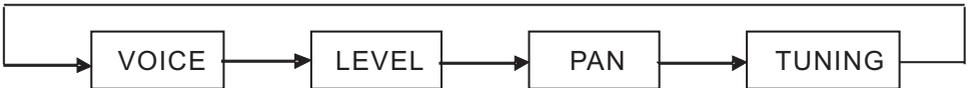


- 3). Press [KIT REV ON/OFF] button to enter into reverb setting. LED shows the reverb effect. Use [-DATA+] button to switch the reverb effect (use the reverb effect to make the sound fuller)



## Pad parameter setting

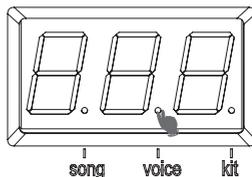
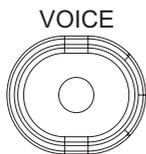
Press [VOICE VOL/PAN/TUN] key to enter into the pad parameter setting and then enter into voice, level, pan, tuning.



Voice: the module has 250 voices. Please refer to the voice list.

## Select pad voice

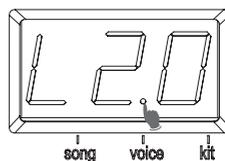
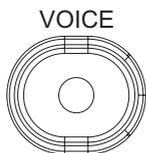
- 1) Press [VOICE VOL/PAN/TUN] button for the first time to enter into voice setting. The display shows the current pad voice and the voice LED lights up.



- 2). Strike the pad of which voice to be changed. Use [-DATA+] button to select the voice (voice Number:001-250` non-recycle)

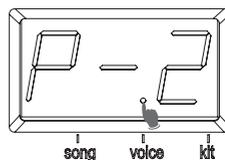
### Adjust pad volume

- 1). When adjusting the pad volume, press once again [VOICE VOL/PAN/TUN] button to enter Into pad volume setting. The first LED shows 『L』, and the other two LED shows the volume Value. VOICE LED lights up.
- 2). Strike the pad of which volume to be changed. Use [-DATA+] button to select the volume (00-32` non-recycle) .



### Pad pan

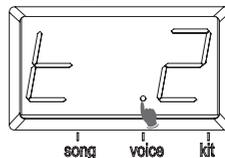
- 1). Press [VOICE VOL/PAN/TUN] button continuously to enter into the pan setting. The display displays letter “P” first and then the pan value. The VOICE LED lights up.
- 2). Strike the pad of which the pan to be adjusted. Use [-DATA+] button to adjust the pad pan ( $\pm 8$ , non-recycle) .



### Pad tuning

This function is used for tuning the pad

- 1). Press [VOICE VOL/PAN/TUN] button continuously to enter into pad tuning. The display displays letter “t” , and then the tuning value. VOICE LED lights up.
- 2). Strike the pad to be tuned. Use [-DATA+] button to adjust pad tuning ( $\pm 2$  , non-recycle) .



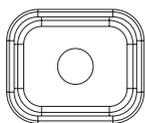
### Establish user drum kit

In the drum kit menu, user can select the preset drum kit to play, or user can select the pad voice and relative parameters, e.g. voice, volume, L/R pan, tuning.

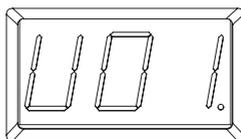
This module has 30 drum kits: Preset drum kits: KIT01---20

User drum kits: USER01---10

- 1). In the drum kit menu, press [SAVE] button to enter into user drum kit setting. Use [-DATA+] button to select the user drum kit (U01-U10<sup>^</sup> non-cycle) . During this process, the drum kit number flashes.
- 2). Press the pad parameter setting to change the pad tone/volume/pan/tune.
- 3). Press [SAVE] button once again to save the drum kit setting, and the former drum kits will be covered by the new drum kit. The drum kit number stops flashing.



SAVE



song voice kit

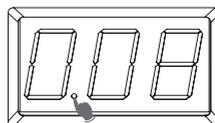
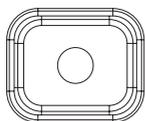
Note: if the drum kit number has been changed or the power fails before saving, the former drum kit parameters will be lost.

## Song setting

### Select song

- 1). Press [SONG] button to enter into song setting. The display shows the song number. SONG LED flashes once and then lights off.
- 2). Use [-DATA+] button to select the current song number (1-20, non-recycle) .

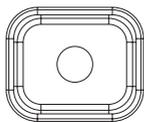
SONG



song voice kit

### Song playing

- 1). Press [START/STOP] button to play the selected song. During playing, change the song via [-DATA+] button.
- 2). After playing it stops automatically; during playing, press [START/STOP] button two times to stop playing. (Note: during playing, press [START/STOP] button one time to switch to play the recorded songs.)



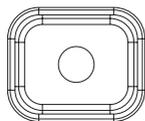
START/STOP

Note: during playing<sup>^</sup> user can send real time MIDI signal via MIDI OUT.

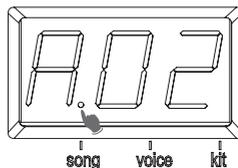
## Accompaniment volume

During playing, user can adjust the volume of accompaniment and of the drum sound.

- 1). Press [ACCOMP VOLUME] button to enter into accompaniment volume setting. The display shows letter "A" first, and the accompaniment volume value next. SONG LED lights up.
- 2). Use [-DATA+] button to adjust the accompaniment volume (0-32, non-recycle) .

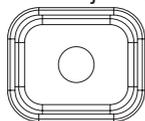


VOLUME

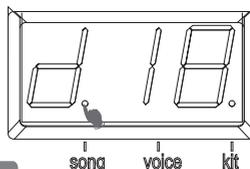


### Drum sound volume of the song

- 1). Press [ACCOMP VOLUME] button continuously to enter into the drum sound setting. The display shows letter “d” first, and the drum sound volume next. SONG LED lights up.
- 2). Use [-DATA+] button to adjust the drum sound volume of the song (0-32, non-recycle) .



VOLUME

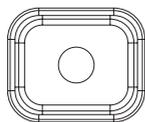


### Song tempo

During playing DEMO SONG, use [-TEMPO+] button to adjust the song tempo.

### Drum sound of the song (percussion)

Press [DRUM OFF] button to start/close the drum sound function. If “DRUM OFF” starts, the drum sound will be closed and “DRUM OFF” LED lights on.

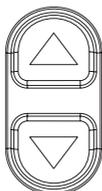


DRUM OFF

### Tempo setting and the metronome click

#### Tempo

- 1). Press [-TEMPO+] button to enter into the tempo setting to change the metronome click and song tempo (35-280, non-recycle) .
- 2). If the tempo has not been changed in 2 seconds, the module will return back to the former menu automatically.

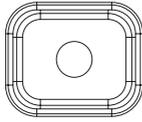


TEMPO

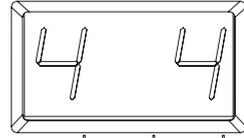
### Metronome

- 1). Press [CLICK] button to start/close the metronome voice. This module has two metronome voices: triangle and click. When the metronome starts, it offers the triangle voice. Press [CLICK] button twice it switches to click voice.
- 2). When the metronome counts the beats, the beats (2/4, 3/4, 4/4, 5/4, 6/8) is shown on The display. Use [-DATA+] button to change the beats (recycle).

3) Use the master volume knob to change the metronome volume.



CLICK



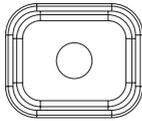
song voice kit

Note: during playing the songs, the metronome is closed.  
Press [CLICK] button to start metronome function.

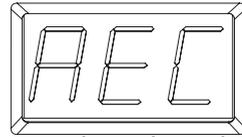
## 6. Record and replay

### Record quickly

- 1). Press [RECORD] button, and [RECORD] LED lights up and flashes. It shows “REC” .
- 2). Strike the pads to start recording or record only the drum sound of the song being played.
- 3). Press [RECORD] button to stop recording. [RECORD] LED lights off. The song or the user's performance has been recorded.



RECORD



song voice kit

Note:

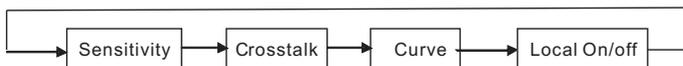
- 1). During recording, the metronome function will not automatically start. If user needs to start the metronome function, user can press [CLICK] button before recording instead of pressing it after recording.
- 2). The metronome sound can not be recorded.
- 3). If user is not satisfied with the recorded result, press [RECORD] to restart recording.  
(Note: this module supports the recording function, but not saving function. The recorded data will cover the former data, and all the data will not be saved after the module is powered off).

### Play the recorded song

- 1). Press [START/STOP] button twice to replay the recorded song, and meanwhile [START/STOP] button and [RECORD] LED lights up.
- 2). After replaying, [UTILITY] button and [RECORD] LED lights off.

## 7. Practical setting

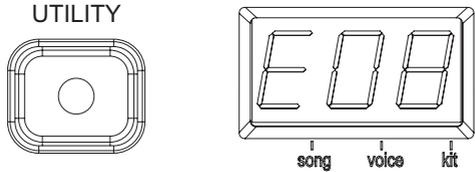
Press [UTILITY] button to enter into practical setting, then into the following menu gradually.



### Trigger sensitivity

- 1). Press [UTILITY] button to enter into the trigger sensitivity setting. The display shows letter 『E』 first, and the sensitivity level next.
- 2). Strike the pads to select proper sensitivity.

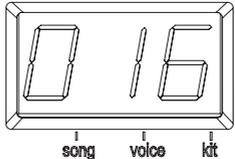
3). Use [-DATA+] button to adjust the trigger sensitivity (01-08,non-recycle) . The higher the value means higher sensitivity.



**Crosstalk rejection**

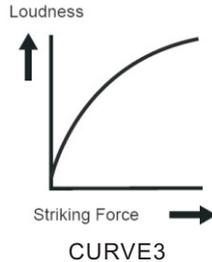
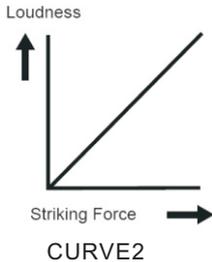
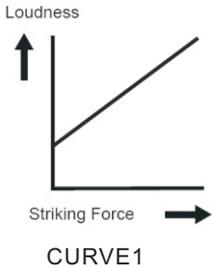
Strike a pad (trigger) and the vibration may cause crosstalk.

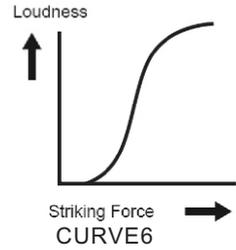
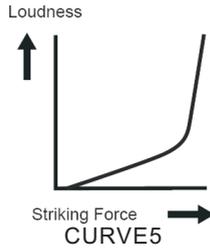
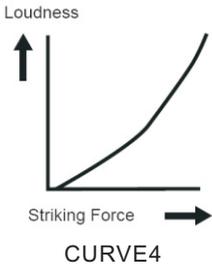
- 1). Press [SET UP] button continuously to enter into trigger sensitivity setting. The display shows letter 『O』 first and the crosstalk rejection level next.
- 2). Use [-DATA+] button to adjust the trigger sensitivity rejection level (01-16,non-recycle) . The higher value means higher rejection level.



**Trigger curve**

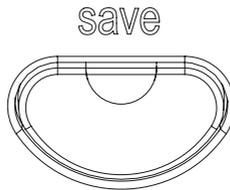
- 1). Press [SET UP] button continuously to enter into trigger curve setting. The display shows letter “CU” first and the trigger curve number next.
- 2). Use [-DATA+] button to select the trigger curve (1-6,non-recycle) . This will change the relation between force and the loudness.
- 3). CURVE 1: Small dynamic response. Select this curve and it delivers high but stable volume.  
 CURVE2: The standard setting to deliver natural signal.  
 CURVE3: Compared to CURVE2, low striking force causes big volume change.  
 CURVE4: Compared to CURVE2, comparatively high striking force causes comparatively big volume change.  
 CURVE5: Compared to CURVE2, comparatively high striking force causes very big volume change.  
 CURVE6: The striking force causes extreme volume change.





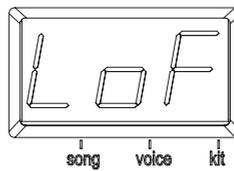
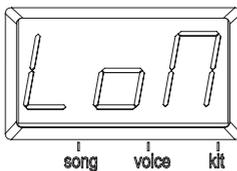
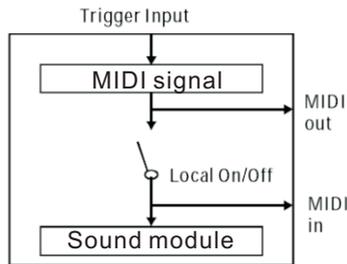
### Save the set-up

Press [SAVE] button to save the 3 setting mentioned above: sensitivity/crosstalk rejection/striking force.



### Local control

1). Press [SET UP] button to enter into the local setting. It shows the local control status: “Lon” for ON or “Lof” for OFF. Use [-DATA+] button to switch. Refer to the following figure for the local control setting:



Local control: used to control the connection of trigger detection and the audio source sequencer. In the default ON status, the two modules are connected. Striking the pad will generate sound and it outputs the relative MIDI signal. When this function is turned off, the audio source module will not be controlled by the trigger directly, but will controlled by the MIDI input signal.

## 8. Reset setting

Hold [TEMPO+] and [SET UP] button at the same time. It reset back to the factory setting:

All user drum kits: voice/volume/pan/tuning

Practical setting: sensitivity/crosstalk rejection/striking force curve

## 9. MIDI setting

This equipment is compatible with various MIDI devices and can be used as trigger device or audio source. It is also compatible with part of GM standard, and can be used with many audio sequencer softwares together.

### MIDI connection

MIDI IN: receives the external MIDI signal when connecting with external MIDI devices.

MIDI OUT: sends the external MIDI signal when connecting with external MIDI devices.

USB: the standard USB2.0 interface can be connected with standard USB MIDI device or PC.

The operation system has its driver without the need of repeated installation. It is compatible with computer system, e.g. XP, Win7, Vista, Mac OS X. After connection, the system recognizes this equipment as USB COMPOSITE DEVICE.

(USB is only used when connected with MIDI devices)

Note: when USB is connected with PC, all MIDI data can be sent or received via USB.

### Connect with external audio source equipment

This equipment can send its various information via channel 10, including: trigger notes, force, hi-hat pedal performance and status, etc.

(Note: the song replaying and metronome information can not be sent)

Use the external audio sequencer to record the performance

- 1). Connect external audio sequencer or PC via MIDI OUT or USB.
- 2). Set the equipment of channel 10 in the audio sequencer or in the sequence software, and then start recording.
- 3). Play the pads.
- 4). Stop the performance and recording, and listen to the performance.

### Used as audio source equipment

When connecting with external MIDI keyboard or audio sequencer via MIDI OUT or USB cable, it receives its MIDI output signal. At this time this equipment can play the effective signals. The output voice changes as the drum kit is switched. This equipment has most of the GM voices. User can establish user drum kits. Refer to MIDI List for MIDI information.

## MIDI LIST

MIDI IMPLEMENTATION CHART				
FUNCTION		TRANSMITTED	RECOGNIZED	REMARKS
Basic	Default	10 Ch	1~16	
Channel	Changed	x	x	
	Default	x	x	
Mode	Massages	x	x	
	Altered	x	x	
Note		*****	0~127	
Number:	True Voice	*****	0~127	
Velocity	Note On	○	○	
		99H,V=1~127		
Note Off		x	○	
after	Key's	x	x	
Touch	Ch's	x	x	
Pitch Bend				
Control	0	x	x	Bank Select
Change	1	x	x	Modulation
	5	x	x	Portamento Time
	6	x	○	Data Entry
	7	x	○	Volume
	10	x	○	Pan
	11	x	x	Expression
	64		○	Sustain Pedal
	65	x	x	Portamento On/Off
	66	x	x	Sostenuto Pedal
	67	x	x	Soft Pedal
	80	x	x	Reverb Program
	81	x	x	Chorus Program
	91	x	x	Reverb Level
	93	x	x	Chorus Level
	120	x	○	All Sound Off
	121	x	○	Reset All Controllers
	123	x	○	All Notes Off
Program		x	x	
Change	:True Number	x	x	
System Exclusive		x	x	
System	:Song Position	x	x	
Common	:Song Select	x	x	
	:Tune	x	x	
System	:Clock	○	x	
Real	:Comands	○	x	Start And Stop Only
Time				
Aux	:Local On/Off	x	○	
	:All Notes Off	x	x	
Message	:Active Sensing	x	x	
	:Reset	x	x	

## 10. Trouble shooting

Problem	Reason
No sound	Please confirm the volume knob is not turned off
Pad has no sound	1.confirm the pad connection is correct. 2.confirm the pad volume is not set to 0
Metronome has no sound	Confirm the metronome volume is not set to 0
DEMO SONG has no sound	Confirm the DEMO SONG volume is not set to 0

## 11. Audio source specification

Max polyphony:32

Drum kits:20 preset drum kits:KIT01---20

15 user drum kits:USER01---15

Voice: 250 voices (DRUMS, PERCUSSION ,SFX)

Effect: the reverb switch

Audio sequencer: DEMO SONG 20

Recording: real time recording, but can not be saved.

tempo: 035---280

Display: red or green

Connection: Phone stereo out connector (1/4"),AUX IN stereo connector (1/8"),

Audio output connector (1/4" L/mono R),

USB,MIDI IN/MIDI OUT

Power supply:DC 9V inner+ outer -

Dimension:246(L)\*154(W)\*127(H)

Weight:0.5Kg

( the specification is subject to change without prior notice.)

## 12. DRUM KIT LIST

NO.	PRESET DRUM KIT	NO.	USER DRUM KIT
1	POP1	1	POP1
2	POP2	2	POP2
3	POP3	3	POP3
4	ROCK1	4	ROCK1
5	ROCK2	5	ROCK2
6	ROCK3	6	ROCK3
7	FUNK1	7	FUNK1
8	FUNK2	8	FUNK2
9	FUNK3	9	FUNK3
10	LATIN1	10	LATIN1
11	LATIN2		
12	JAZZ1		
13	JAZZ2		
14	BRUSH		
15	ORCH		
16	DANCE1		
17	DANCE2		
18	EAST1		
19	EAST2		
20	PERCUSSION		

## 13.VOICE LIST

	NO.	NAME
KICK	1	KICK1
	2	KICK2
	3	KICK3
	4	JAZZBD2
	5	LTBD1
	6	POPKICK1
	7	POPKICK2
	8	POPKICK3
	9	POPKICK4
	10	POPKICK5
	11	POPKICK6
	12	POPKICK7
	13	ACKICK
	14	SYNBD02
	15	EKICK05
	16	NOISEBD
	17	EKICK01
	18	EKICK02
ACOUSTIC SNARE	19	BRSHSN1
	20	FNKSN1
	21	FNKSN2
	22	POPSN1
	23	HRDBT1
	24	JZSLP1
	25	JZSLP2
	26	ORCHSN3
	27	SDSTK3
	28	SNRIM
	29	HVSN
	30	TITESN1
	31	TITESN2
	32	TITESN3
	33	POPSN2
	34	TITESN4
	35	TITESN5
	36	TRDSN1
	37	SNCOMBO3
	38	SNCOMBO4
	39	SNCOMBO5
	40	SNCOMBO6

	41	SRSTD
	42	SRIMC4
	43	POPSN1
	44	POPSN2
	45	POPSN3
	46	POPSN4
	47	POPSN5
	48	POPSN5
ELECTRIC SNARE	49	SYNSN01
	50	ESN11
	51	ESN1
	52	ESN2
	53	ESN3
	54	ESN4
	55	ESN5
	56	ESN6
	57	ESN7
HI-HAT	58	CHH1
	59	CHH2
	60	CHH3
	61	CHH4
	62	CHH5
	63	CHH6
	64	CHH7
	65	CHH8
	66	LOOSHH1
	67	LOOSHH2
	68	LOOSHH3
	69	LOOSHH4
	70	OHHSTD
	71	OHIHAT1
	72	OHIHAT2
	73	OHIHAT3
	74	OHIHAT4
	75	OHIHAT5
	76	PHHJZ
	77	PHH2
	78	PHH3
	79	CHHPOP1
	80	CHHPOP2
	81	CHHPOP3
	82	CHHPOP4

EHH	83	EHH01
	84	EHH02
	85	EHH03
	86	EHH04
	87	EHH05
	88	EHH06
	89	EHH07
TOM	90	BRSH1
	91	BRSH2
	92	BRSH3
	93	TOM1
	94	TOM2
	95	TOM3
	96	TOM4
	97	TOM5
	98	TOM6
	99	TOM7
	100	TOM8
	101	TOM9
	102	TOMHSTD
	103	TOMMSTD
	104	TOMPOP1
	105	TOMPOP2
	106	TOMPOP3
	107	TOMPOP4
	108	TOMPOP5
	109	TOMPOP6
	110	808T1
	111	808T2
	112	808T3
	113	ETOM05
CYMBAL	114	CRASH1
	115	CRASH9
	116	CRSHJS1
	117	CRSHJS2
	118	CRSHSTD1
	119	CRSHSTD2
	120	LTCRSH1
	121	LTCRSH2
	122	LTCRSH3
	123	ORCCYM1
	124	ORCCYM2

	125	ORCCYM3
	126	ORCCYM4
	127	RBLLSTD
	128	RIDEBELL
	129	REVCYM1
	130	REVCYM2
	131	REVCYM3
	132	REVCYM4
	133	RIDEJZ1
	134	RIDEJZ2
	135	RIDESTD
	136	RIDE1
	137	RIDE2
	138	REVCYMBAL
	139	SPLSH1
	140	SPLSH2
	141	CRASHC1
	142	CNCYMBAL
	143	CRASHPOP1
	144	CRASHPOP2
	145	CRASHPOP3
	146	CRASHPOP4
	147	SPLASHC
	148	RIDELC2
	149	RIDEH1
	150	RIDEH2
	151	ECRASH1
	152	ECRASH2
	153	ECRASH3
	154	ECRASH4
	155	SPLASH
PERCUSSION	156	EMRCA1
	157	EMTRI
	158	ETRNGL1
	159	ETRNGL2
	160	EBELL1
	161	ECBSA2
	162	ETMBRIN1
	163	ETMBRIN2
	164	CABASA1
	165	CABASA2
	166	CHKR01
	167	CHKR02

	168	CHKR03
	169	CLAP1
	170	CLAP2
	171	CLAP3
	172	CLAP4
	173	COWBLL1
	174	COWBLL2
	175	COWBLL13
	176	COWBLL14
	177	COWBLL15
	178	HAGOGO1
	179	HAGOGO2
	180	HAGOGO3
	181	HIBNGO01
	182	HIBNGO02
	183	HTMBL1
	184	HTMBL2
	185	HTMBL3
	186	LOBNGO
	187	LOCNGA01
	188	LOCNGA02
	189	MHCNGA03
	190	MTRNGL
	191	OHCNGA01
	192	OHCNGA02
	193	OHCNGA03
	194	OHCNGA04
	195	OPNTRNGL
	196	TMBRN1
	197	TMBRN2
	198	TMBRN3
	199	TMBRN4
	200	TMBRN5
	201	VSLP03
	202	CNBGONG
	203	CNLCYMBL
	204	CNLDRM1
	205	CNLDRM2
	206	CNSCYMBL
	207	CNSDRM
	208	CNSGONG
	209	SUPRGNG
	210	TAIKO1
	211	TAIKO2

	212	TAIKO3
	213	TAIKO4
	214	TAIKOSD1
	215	TAIKOSD3
	216	CHIM1
	217	CHIM2
	218	STICK2
	219	TIM1
	220	TIM2
	221	TIM3
	222	TIM4
	223	TIM5
	224	TMPNS3
	225	BELLTREE
	226	High Q
	227	SLAP
	228	SCRATCH PUSH
	229	SCRATCH PULL
	230	STICKS
	231	CLIP
	232	METRONOME CLICK
	233	METRONOME BELL
	234	SHAKER
	235	JINGLEBELL
	236	CASTANETS
	237	MUTESURDO
	238	OPNSURDO
	239	L0TMBL1
	240	LAGOGO1
	241	MRCAS1
	242	SWHSL1
	243	LWHSL1
	244	SGUIRO
	245	LGUIRO
	246	CLV
	247	HWBLK
	248	LWBLK
	249	MCUICA
	250	OCUICA

## 14. GM PERCUSSION LIST

### GM Percussion

Note No.	Standard name	Voice No.	Voice Name
27 - D#1	High Q	226	High Q
28 E1	Slap	227	SLAP
29 - F1	Scratch Push	228	SCRATCH PUSH
30 - F#1	Scratch Pull	229	SCRATCH PULL
31 - G1	Sticks	230	STICKS
32 - G#1	Square Click	231	CLIP
33 - A1	Metronome Click	232	METRONOME CLICK
34 - A#1	Metronome Bell	233	METRONOME BELL
35 - B1	Acoustic Bass Drum	13	ACKICK
36 - C2	Bass Drum 1	1	KICK1
37 - C#2	Side Stick	41	SRSTD
38 - D2	Acoustic Snare	37	SNCOMBO3
39 - D#2	Hand Clap	169	CLAP1
40 - E2	Electric Snare	57	ESN7
41 - F2	Low Floor Tom	103	TOMMSTD
42 - F#2	Closed Hi Hat	60	CHH3
43 - G2	High Floor Tom	100	TOM8
44 - G#2	Pedal Hi-Hat	77	PHH2
45 - A2	Low Tom	93	TOM1
46 - A#2	Open Hi-Hat	70	OHHSTD
47 - B2	Low-Mid Tom	99	TOM7
48 - C3	Hi-Mid Tom	98	TOM6
49 - C#3	Crash Cymbal 1	118	CRSHSTD1
50 - D3	High Tom	95	TOM3
51 - D#3	Ride Cymbal 1	135	RIDESTD
52 - E3	Chinese Cymbal	142	CNCYMBAL
53 - F3	Ride Bell	127	RBLLSTD
54 - F#3	Tambourine	196	TMBRN1
55 - G3	Splash Cymbal	139	SPLSH1
56 - G#3	Cowbell	173	COWBLL1
57 - A3	Crash Cymbal 2	120	LTCRSH1
58 - A#3	Vibraslap	201	VSLP03
59 - B3	Ride Cymbal 2	136	RIDE1
60 - C4	Hi Bongo	181	HIBNGO01
61 - C#4	Low Bongo	186	LOBNGO
62 - D4	Mute Hi Conga	189	MHCNGA
63 - D#4	Open Hi Conga	191	OHCNGA01
64 - E4	Low Conga	187	LOCNGA01

65 - F4	High Timbale	183	HTMBL1
66 - F#4	Low Timbale	239	L0TMBL1
67 - G4	High Agogo	178	HAGOGO1
68 - G#4	Low Agogo	240	LAGOGO1
69 - A4	Cabasa	164	CABASA1
70 - A#4	Maracas	241	MRCAS1
71 - B4	Short Whistle	242	SWHSL1
72 - C5	Long Whistle	243	LWHSL1
73 - C#5	Short Guiro	244	SGUIRO
74 - D5	Long Guiro	245	LGUIRO
75 - D#5	Claves	246	CLV
76 - E5	Hi Wood Block	247	HWBLK
77 - F5	Low Wood Block	248	LWBLK
78 - F#5	Mute Cuica	249	MCUICA
79 - G5	Open Cuica	250	OCUICA
80 - G#5	Mute Triangle	190	MTRNGL
81 - A5	Open Triangle	195	OPNTRNGL
82 - A#5	Shaker	234	SHAKER
83 - B5	Jingle Bell	235	JINGLEBELL
84 - C6	Bell Tree	225	BELLTREE
85 - C#6	Castanets	236	CASTANETS
86 - D6	Mute Surdo	237	MUTESURDO
87 - D#6	Open Surdo	238	OPNSURDO

## 15.DEMO SONG LIST

NO.	SONG	TYPE
1	SONG01	SHUFFLE
2	SONG02	FUNK
3	SONG03	POP
4	SONG04	FUNK
5	SONG05	BOSSA NOVA
6	SONG06	WALTZ
7	SONG07	FOLK
8	SONG08	ROCK BLUES
9	SONG09	COUNTRY
10	SONG10	JAZZ
11	SONG11	HARD ROCK
12	SONG12	HAVEY METAL
13	SONG13	BLUE GRASS
14	SONG14	POP ROCK
15	SONG15	COUNTRY ROCK
16	SONG16	FOLK ROCK
17	SONG17	SMOOTH JAZZ
18	SONG18	FUSSION
19	SONG19	COUNTRY BLUES
20	SONG20	BLUES

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