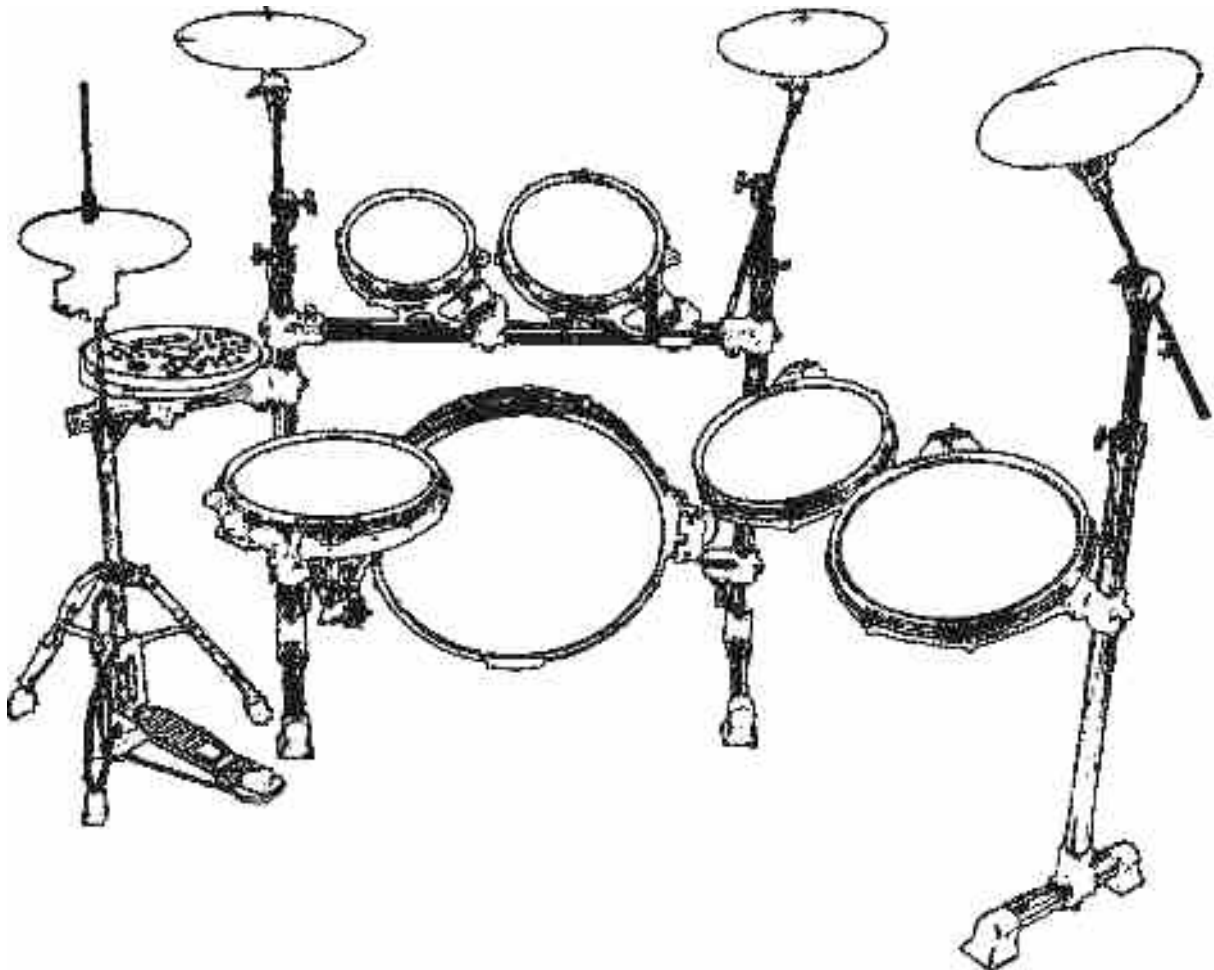# Traps DRUMS

E500 DIGITAL DRUM
USER'S MANUAL

(fully expanded kit shown)

Congratulations!

Thank you for purchasing this digital drum module. The drum module 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 *Traps* 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 a car during the day time).
- Excessive humidity.

Power Supply

- Make sure to sure use the suitable AC adaptor, and also make sure the AC outlet voltage at your country matches the input voltage specified on the 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 and more serious damage.

Cleaning

- Clean the unit witha 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 (vinyl 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.

HI HAT ASSEMBLY

A
CLUTCH
CENTRAL BAR
'TUBE
SWITCH
MAIN STAND

Unpack the Hi hat
and switch from the box

B

Assemble main stand

C

Ensure the stand is together
at the base.

D

E

Screw central bar
into the main stand.

F

Remove acoustic
cymbal cup (sometimes
this is already removed)

G

Slide tube on to
stand.

H

Tighten tube in place.

I

Place switch on
tube

J

Plug blue lead
marked 'Hi Hat
Control' into
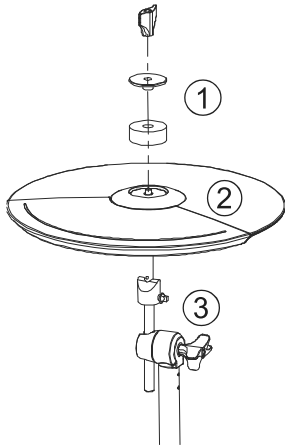switch.

K

Place cymbal on stand so it rests on switch

L

Tighten Clutch screw

Connect
cymbal to
white lead

Crash and Ride Installation

1. Remove the wing nut, washer and felt pad

2. Put the cymbal pad into the rod, then attach parts re-
moved in the stet 1. Fasten the wing nut but not too
tightly. It allows the pad a little bit wobbling like real acous-
tic cymbal.

3.Adjust the angle of the rod then tighten the wing nut.

Snare Installation

1. Fit the snare basket onto the drum rack and
open the 3 arms.
2. Place snare into basket
3. Tighten black plastic nut as the bottom of the
snare basket
4. Tilt to suit your playing position.

Tom Installation

1. Insert the tom into the tom installation L-
Rod, then tighten the wing nut.
2. Adjust the angle of the L-Rod then
tighten the wing nut.

Sound module Installation
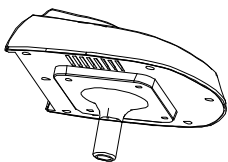
1. Insert rod of the supporting board to the clamp, then tighten the wing nut.

Finalizing the Installation

After install all components, fine adjust the arm, clamps and rods to the best
positionyou like finally.

Electronic Connection

Please refer to the SOUND MODULE Chapter for electronic connection.

When opening the box, lay out the following components.
You will find :-
2 x Uprights, 2 x feet tubes,
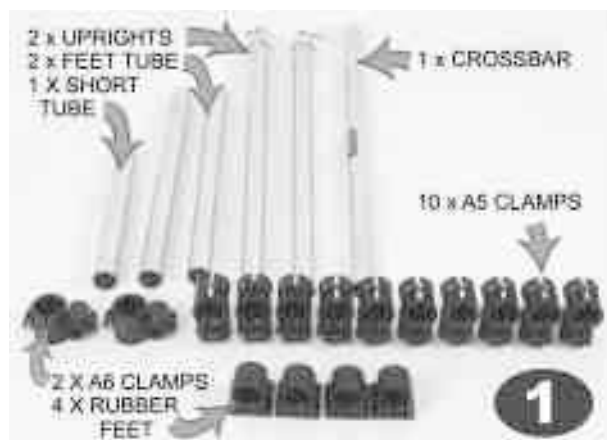1 x long crossbar, 1 x short tube,
2 x A6 clamps & 10 x A5 Clamps

Lay out the parts as shown below. This will help when assmbling.
Note how the clamps are positioned on the uprights and where the 2 A6 clamps are positioned on the tubes.

Start placing the clamps on the tubes as shown above, it is best to tighten the clamps a little so they are firm but still slide so you can make adjustments later.
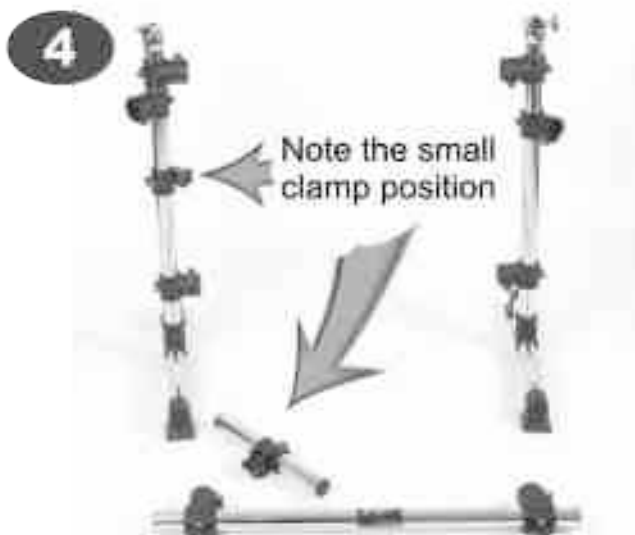
Place the uprights in the assembled feet.
Note how the top clamps and the two clamps at the bottom face inwards. This is so the Crossbar and Bass drum will fit easily later.

5 Fix crossbar as shown

Fit the Cross bar so that the Traps Label is showing forward and that the 2 clamps for the 10" and 12" Drums are on the tube.
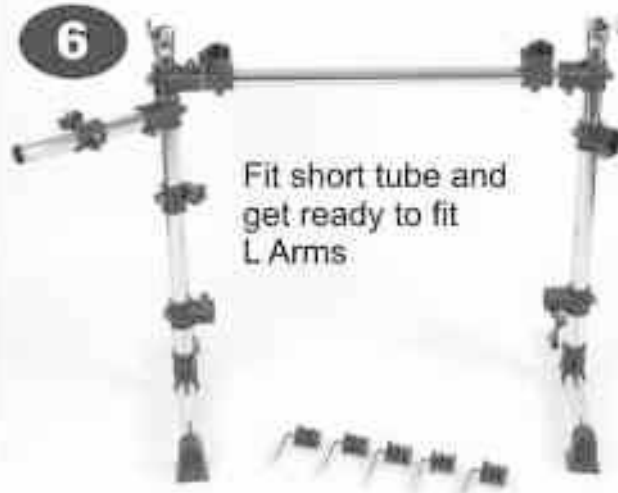
6 Fit short tube and get ready to fit L Arms

Clamp the last piece of tube on the left side of the rack as shown, this is for the module later.

Unpack the 5 L Arms from the box.

7 Fix the 5 L Arms as circled but leave loose to adjust later

Slide the L Arms into the clamps as shown, tighten slightly but leave so they still move enough to make adjustments later.
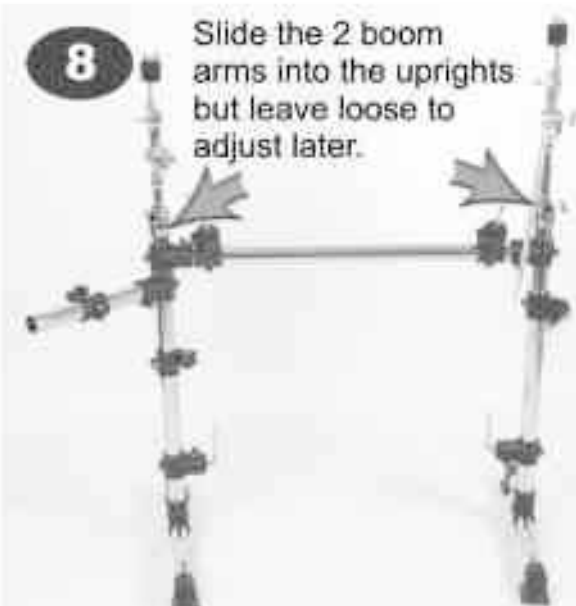
8 Slide the 2 boom arms into the uprights but leave loose to adjust later.

Unpack the 2 cymbal boom arms and slide them into the uprights.
Note that the top of the boom comes out and tilts too.

Fit the Bass Drum onto the 2 L arms on the uprights, tighten the clamps and securing screws.
NOTE: Stick the teardrop pad to the head where the beater strikes

Fit the 12" Snare to the basket and the 10", 12" and 14" Tom to the L arms as shown.
Tighten the clamps and drums when they are how you want them.

Fit the Module in the A6 Clamp on the tube on the left. Once in the right place tighten the clamps.

Bring the assembled Hi Hat Stand, switch and cymbal into the kit.
See over for instructions on assembling the Hi Hat stand.

IMPORTANT:- PLEASE MAKE SURE ALL THE MESH DRUM HEADS ARE TIGHTENED, FAILURE TO DO SO WILL REDUCE TRIGGERING QUALITY AND COULD DAMAGE THE SENSOR

With the Hi Hat in place check the position of the drums

Unpack the Wiring harness and connect to the drums and cymbals.

Parts remaining will include a rubber strip. This is for use with the bass pedal on acoustic kits.

Contents

The digital drum is a top grade drum product for all professional drum players. It is easy for performing, tuition, recording or etc. It can be performed freely with almost 700 drum voices and 220 songs of High quality! Also, you can use SD card to store your own songs or USB MIDI function to connect the computer.

Features

- **Maximum Polyphony:** 64

- **Drum Voices:**
  Drum Voices: 674 (Drums, Percussion, SFX...) +18 Hi-Hat Combinations
  General MIDI Backing Voices: 128 GM Instruments

- **Drum Kits:**
  Drum Kits: 99 (40 Preset Kits + 59 User Kits)

- **Mixer:**
  Drum volume / ACMP Volume / SD Card MIDI Volume / Click Volume

- **Effect Type:**
  Reverb
  4-Band Master EQ

- **Sequencer:**
  Preset song: 120
  User song: 100
  Song Parts: 7 (Drum, Percussion, Part 1-Part 5)
  Play Modes: One Shot/ Loop /Tap/Hit
  Tempo: 30-280
  Resolution: 192 ticks per quarter note
  Metronome Function
  Part Mute Function

- **Click**:
  Click Voice/ Time signature / Tempo / Interval / Volume

- **MIDI function**:
  MIDI IN / MIDI OUT/MIDI THRU (soft), USB MIDI

- **SD Card:**
  Save/Load Kits, Songs and User Settings
  Play Standard MIDI Files (up to 16 channels)
  Update Operating Firmware

- **Hardware:**
  Sturdy 4-Legged Drum Rack with All Mounting Hardware
  Kick Pad_
  11" Dual-Zone Snare Pad
  9" Dual-Zone Tom Pads x3
  11" Dual-Zone Floor Tom Pad
  9" Kick pad
  Dual-Zone Crash Pads with Choke x2
  14" Dual-Zone Ride Pad with Bell and Choke
  Dual-Zone Hi-Hat Pad with Choke
  Hi-Hat Controller Pedal

- **IO Port:**
  Phone, MIDI IN/OUT, USB MIDI, AUX IN/OUT

Panel Controls

Front Panel
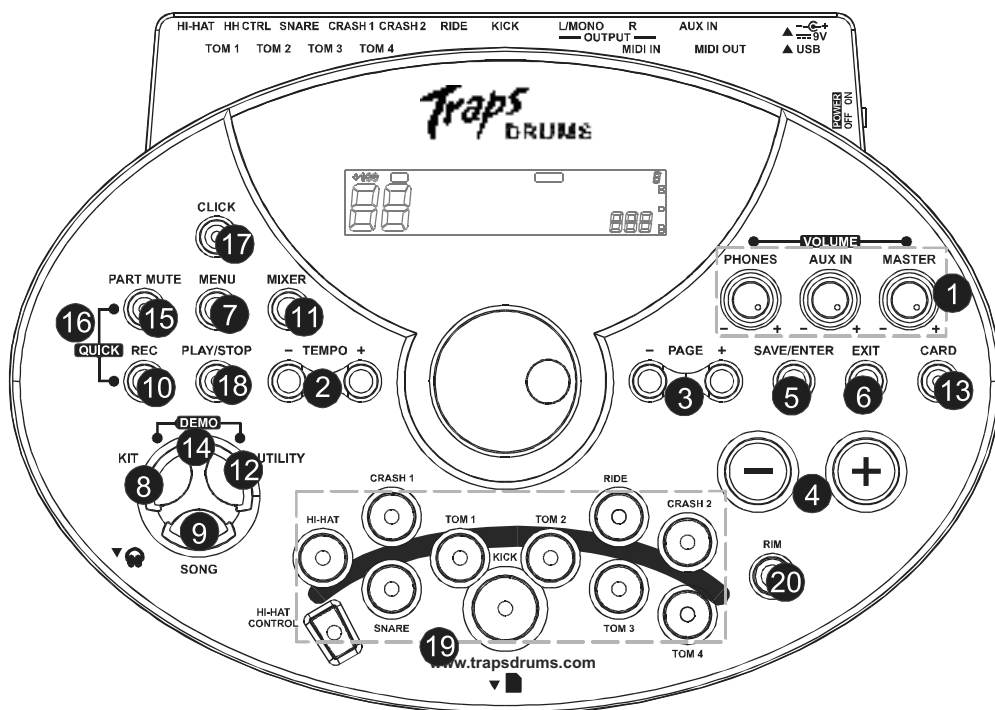
1 **[MASTER] / [AUX]/ [PHONES] buttons**
Mater Volume, Aux In volume,
phone volume Knobs

2 **[TEMPO+] / [TEMPO-] buttons**
Adjust current tempo of Song, Click. etc;
Press [TEMPO+] and [TEMPO -] buttons
simultaneously to reset to default tempo.

3 **[PAGE+]/ [PAGE-] buttons**
Page Buttons, Scroll through the menu pages,
or move the cursor left/right when naming;

4 **[+]/ [-] buttons**
Increase or decrease the current parameter.

5 **[SAVE/ENTER] button**
Enters the Save menu when available; enter the
current folder or confirm current operation;

6 **[EXIT] button**
Exit from the current sub-menu back to the
superior level menu;

7 **[MENU] button**
Enter current mode's menu to set parameter;
Hold [MENU] button then press [PART MUTE] or
[CLICK] buttons, would enter mute or click setting
menu.

8 **[KIT] button**
Enter Kit Mode to select a Kit

9 **[SONG] button**
Enter Song Mode to select a song

10 **[REC] button**
Enter the Record menu

11 **[MIXER] button**
Enter MIXER menu, adjust master volume
including Kit volume, Accompaniment volume,
Card midi volume or Click volume.

12 **[UTILITY] button**
Adjust the parameters of global setup,
such as sensitivity, curve, Effect, MIDI setup, etc

13 **[CARD] button**
Enter SD card menu, load, delete, play or
format the SD card;

14 **[UTILITY] + [KIT] buttons**
Enter DEMO mode and start to play demo.

15 **[PART MUTE] button**
Part mute switch

16 **[REC] + [PART MUTE] buttons**
Quick record for quickly recording drum part

17 **[CLICK] button**
Click switch

18 **[PLAY/STOP] button**
Control the play of a song or a Card midi, or
start/stop recording

19 **Pad select buttons and indicators (11)**
These buttons can play the pad voices of the current kit.
In KIT Menu /Mixer/UTILITY menu, they select the pad
to be edited and the indicators show the current selected
pad. In SONG/DEMO/Card mode, the indicators will display
which pads are being played by the drum track.

20 **[RIM] button**
Allows access to the second voice for dual-zone triggers
(Snare, Hi-Hat, Tom, etc.)

Rear Panel
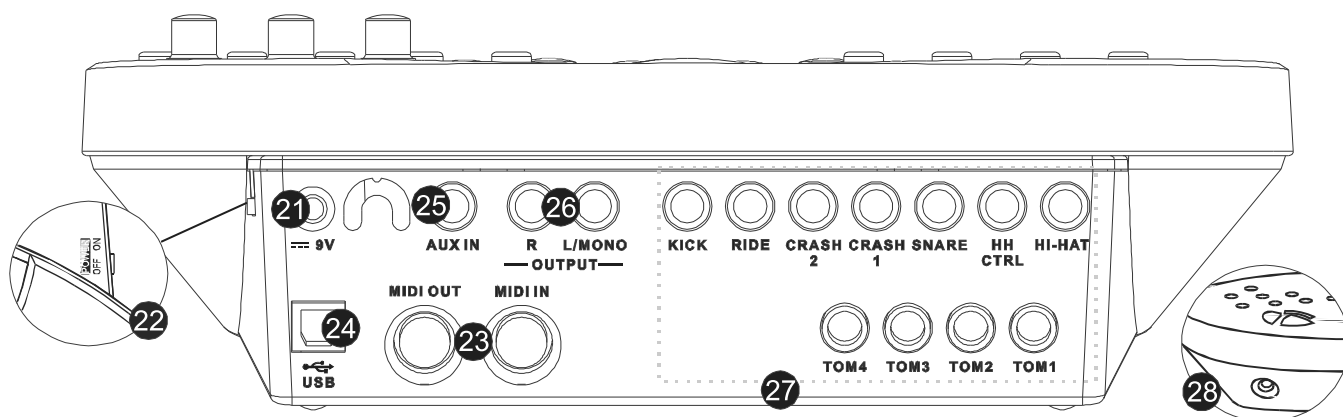
21 DC input
Connection for the DC 9V power adapter.

22 Power switch
This switch turns power on and off.

23 MIDI IN and MIDI OUT
These ports allow communication with other products equipped with a MIDI interface. Please see the MIDI section of the advanced manual for details.

24 USB port
This port is used to connect to a computer (MIDI In/Out via USB).

25 AUX IN
This stereo input jack is for an external sound source such as an MP3 or CD player.

26 Line output jacks
Stereo output connection to an audio system or drum amplifier.

27 Pad input jacks
Input connections for Kick, Snare, Tom, Cymbal pads and Hi-Hat control pedal.

28 Phone jack
This stereo jack is used to connect headphones.

Setup

Caution!

To prevent electric shock and damage to the device, make sure the power is switched OFF on the drum and all related device before making any connection.

Connect the Pads and the Pedals

Using the provided cables, connect each Trigger input jack on the rear panel of the module, and make sure each pad is connected to its corresponding Trigger input jack.

Note:
1. The voice of hi-hat pad hitting is controlled by hi-hat pedal. Similar to a real drum kit, the hi-hat pad functions as an 'open hi-hat' when the pedal is stepped. When the pedal is released, it functions as a 'closed hi-hat'.
2. The valid striking area of a cymbal pad (ride crash or hi-hat) is near the edge of the pad which is different from

(Kit shown with full options)
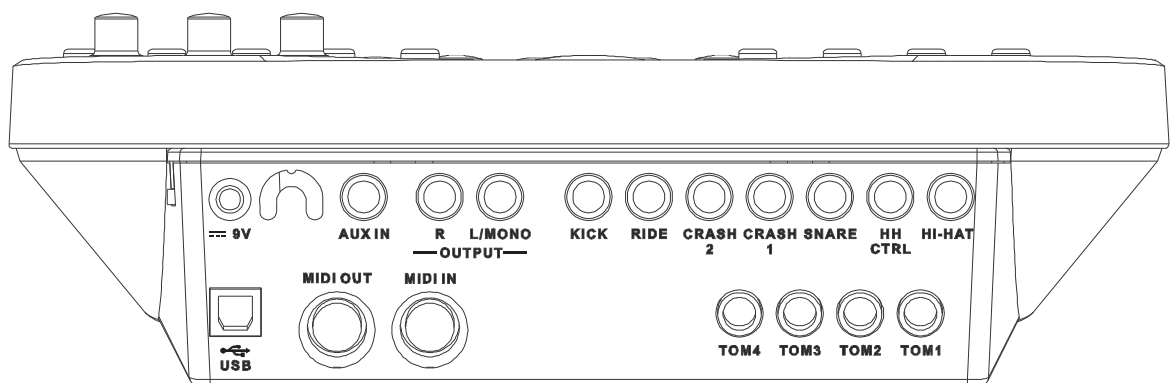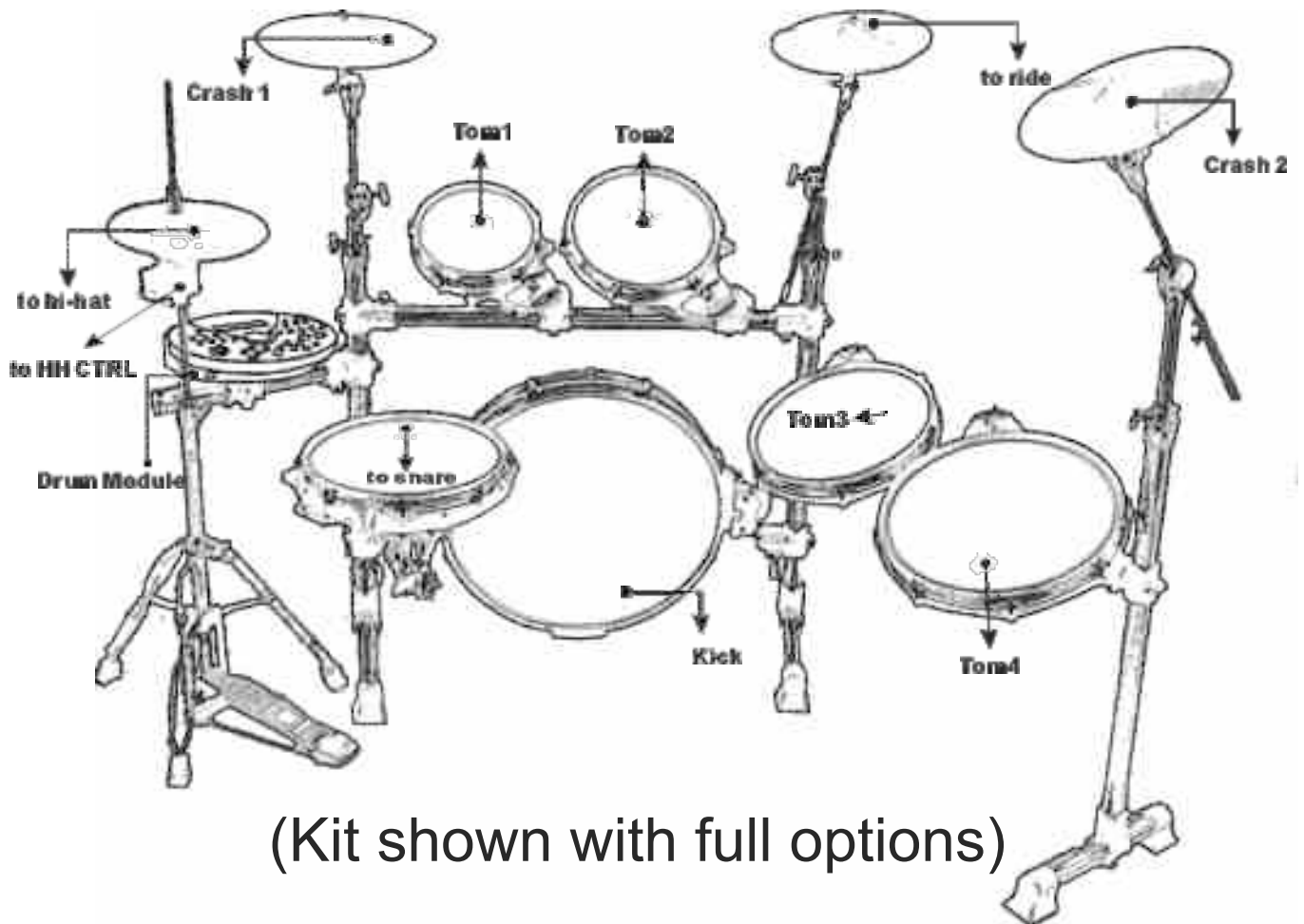
Connect a MIDI and USB device

This is for you want to use an external sound module or MIDI sequencer.

The drum will output all the MIDI codes generated by hitting pads or stepping pedal via the MIDI output or USB port.
But clicking and the MIDI codes in songs are excluded.
The USB are only for MIDI messages.
MIDI clocks will be sent automatically after power-on.

MIDI device

MIDI Data ➡
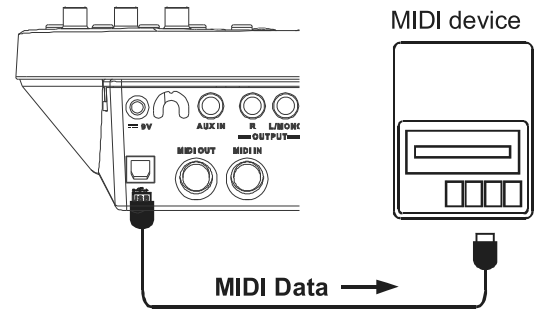
Connect a audio equipment

1. When you want to listen to the voices with an amplifier, connect amplifiers with the Output L/MONO and R jacks on the rear panel. (For monaural playback, use the L/MONO jack; for stereo playback, connect both L/MONO and R jacks.)

2. The volume is adjusted with the VOLUME knob.

Amplifier   Amplifier
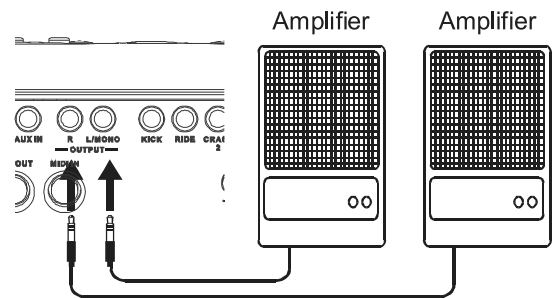
Connect a CD player, etc.(Aux. In jack)

1. The audio output of a CD player, or other audio source, to connect with the AUX IN jack on the rear panel can be mixed with the sound of the drum. This function is convenient that lets you play along with a favourite song.

2. The volume of the external signal is adjusted with the VOLUME knob.

CD player or similar
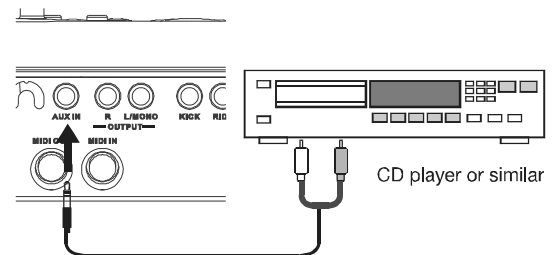
Connect Headphones

An optional set of stereo headphones can be connected with the PHONES jack located on the side of the drum module.

* Adjust the volume to a comfortable level.
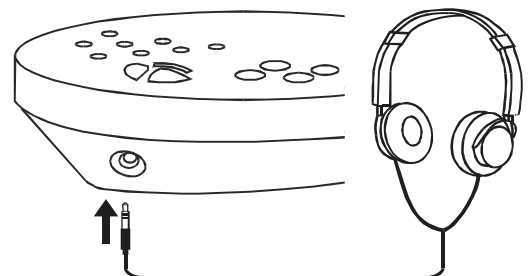
Connect the Power supply jack

Make sure the power is switched OFF and connect the power adaptor with the DC IN jack on the rear panel.

Note:
1. To protect the speakers, amplifier and the drum module from damage, rotate the volume knob to the minimum volume level before switching the power ON.
2. Make sure the power is switched OFF when connecting drum module with external devices.

8
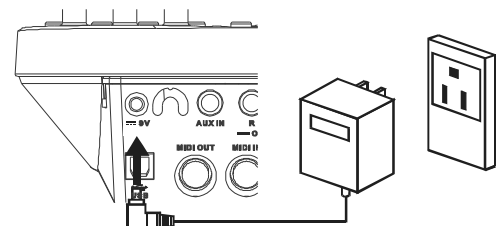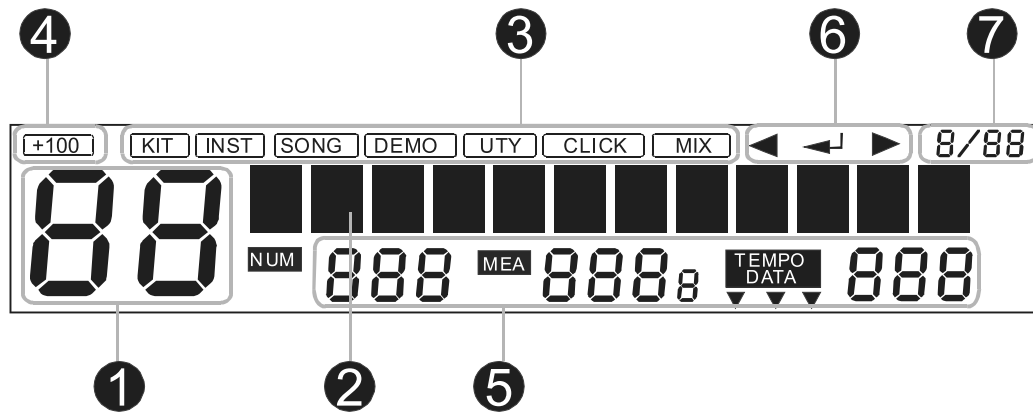
❶ **Current Kit index**

❷ **Main Display** : A dot matrix that allows displaying variable size fonts and icons.
The main part of this dot matrix is used to display the current kit or song name, and all the various menus. In all menus, the current selected field is highlighted (inverted, on black background).

❸ **Mode icon:** The top line of the LCD display current mode icon.("KIT" icon is always lightened)

❹ **Current Kit index**

❺ **Song num, Measure, beat, Tempo**
（In menu pages, when selecting voice or song or group, the icon "DATA" is lightened, indicates the current voice or song's index）

For instance:
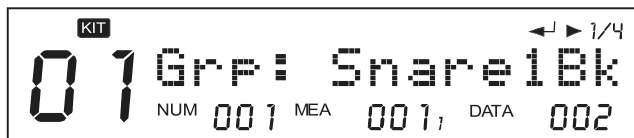
❻ **These icons indicate that the [PAGE-] / [SAVE/ENTER] / [PAGE+] is valid**

❼ **The current time signature**

Quick Start

POWER ON

Connect the DC 9V power adapter to the Drum Module, and then set the power switch to the "ON" position.

DEMO

Press **[KIT]** button and **[UTILITY]** button simultaneously to enter Demo Mode:
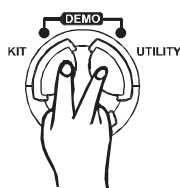
Press **[+]/[-]** buttons to select a Demo to play; use **[PLAY/STOP]** button control the play.
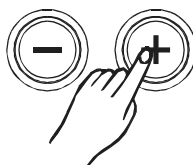
BASIC OPERATION

Enter Menu

1. Press **[MENU]** button to enter current menu (refer to current mode, for instance : KIT mode, Song mode, etc)

2. Hold **[MENU]** button and then press **[PART MUTE]** or **[CLICK]** button to enter Mute Menu or Click Setting Menu.
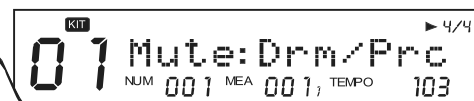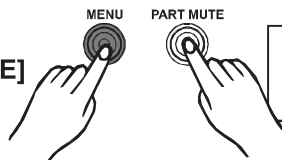
Exit Menu

Press **[EXIT]** button to Exit from the current sub-menu back to the superior level menu;
Or press the correspond buttons (such as [KIT] or [Song] .etc) to immediately enter another menu.

Exit Menu

Adjust Value
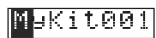
1. Select the parameter to be adjusted referring to the LCD icon" ◄↵► "
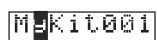
   ([Page -] / [SAVE/ENTER] / [PAGE +] is valid):
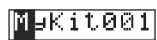
2. Adjust the value using [+]/[-] buttons or DIAL;
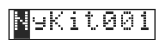
 Rename

 Operating guide   LCD display
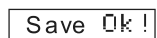
	`MyKit001`	
[PAGE+]	`MyKit001`	Move the cursor right
[PAGE-]	`MyKit001`	Move the cursor left
[+]	`NyKit001`	Change the character（see ASCII list）
[-]	`MyKit001`	Change the character
[SAVE/ENTER]	`Save Ok!`	Rename succeed!

KIT

The digital drum has 99（including 40 Preset Kits + 59 User Kits）Kits for you to select.

Selecting KIT

1.Enter KIT Mode
Press the **[KIT]** button to enter KIT mode. The Kit indicator " KIT " is lightened and the LCD displays the current Kit number and Kit name like below:
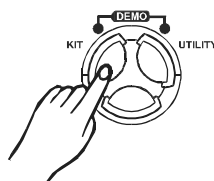
Press the **[+]/[-]** button or use the DIAL to select a Kit (next or previous one);
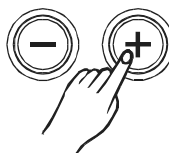
Press the **[PAGE+]/[PAGE-]** button to quickly skip through Kit groups(Preset Kits, User Kits).Like below(Table 1.1):

>>Table 1.1

Operating guide		LCD display
[KIT]	Acoust-1	enter KIT mode
[PAGE+]	MyKit001=U=	select user kit
[+]	Acoust-2	select next kit
[-]	Acoust-1	select previous kit

2. Selecting Pad

The digital drum has 10 Pad triggers and 1 pedal controller, see Table 1.2 as below:

>> **Table 1.2**

PAD NUM	TRIG NUM	NAME	MIDI Note
1	1	KICK	36
2	2	SNARE	38
	3	SNARE R	40
3	4	TOM1	48
	5	TOM1 R	50
4	6	TOM2	45
	7	TOM2 R	47
5	8	TOM3	43
	9	TOM3 R	58
6	10	TOM4	41
	11	TOM4 R	39
7	12	RIDE	51
	13	RIDE R	59
	14	RIDE Bell	53
8	15	CRASH1	49
	16	CRASH1 R	55
9	17	CRASH2	57
	18	CRASH2 R	52
10	19	O HIHAT	46
	20	O HIHAT R	26
	21	Half Open HIHAT	23
	22	Half Open HIHAT R	24
	23	C HIHAT	42
	24	C HIHAT R	22
CTRL	25	P HIHAT	44
	26	Splash	21

The current pad to be edited can be selected either by pressing its Pad Select button or by striking the pad itself.

NOTE:
- How to select C HIHAT(C HIHAT R): Press [HH CONTROL] + [HI-HAT] simultaneously;
- When using Pad Select button, some of the pad trigger can't be selected, for example: RIDE BELL, Half Open HIHAT, Half Open HIHAT R, Splash.

3. Pad Select button LED

Pad Selected	Pad Select indicator
RIDE BELL	[RIDE] sparkling
Half Open HIHAT	[HI-HAT] lighten, [HH CONTROL] sparkling
Half Open HIHAT R	[HI-HAT] lighten, [HH CONTROL] sparkling, [RIM] lighten
C HIHAT	[HI-HAT] lighten, [HH CONTROL] lighten
C HIHAT R	[HI-HAT] lighten, [HH CONTROL] lighten, [RIM] lighten

Editing KIT

1.Editing Pad voices

In Kit menu, Press [MENU] button to edit Pad Voices of the current kit. All parameters of the Pad, as voices, volume, pan, decay, pitch .etc can be adjusted.

MENU

```
KIT
01 🗒VOICE                          ↵ ► 4/4
    Num  001  MEA  0011  TEMPO     103
```

>>Table 1.3

Operating guide	LCD display	
[KIT]	`Acoust-1`	— Eenter Kit menu
[MENU]	`🗒VOIC`	— Eenter Kit menu
[SAVE/ENTER]	`Grp:Kick1Bk`	
[PAGE+]	`Voc:dwkick`	
[PAGE+]	`Volume:120`	See Table 1.4 Pad trigger Parameter set.
[+]	`Volume: 121`	
[-]	`Volume:120`	
[PAGE+]	`🗒Pattern:OFF`	— Pad Pattern set（default:OFF）
[+]	`🗒 Pattern:ON`	— set pad pattern ON
[SAVE/ENTER]	`Grp:DrumLoop`	
[PAGE+]	`Sne: Fusion1`	Parameter set ,see
[PAGE+]	`Retrie:ST/SP`	Table 1.4
[+]	`Retrie: ReST`	
[PAGE+]	`🗒EXCHANG`	— Exchange kit order
[SAVE/ENTER]	`◄--► MyKit001`	
[SAVE/ENTER]	`EXCHANGE OK!`	
[PAGE+]	`🗒RENAME`	— KIT RENAME

NOTE:

EXCHANGE and RENAME menu can't be seen when it's Preset Kits.

>>Table 1.4

PARAMET	EREXPLAIN	PARA RANGE ([+]/[-])	DEFAULT
Grp*	Pad voice group	(See detail below)	(according to different Pad triggers)
Voc*	Voice index/ HH combi group index	1~674 (See detail below)	
Volume	Volume	0~127	
Pan	Pan	L8~R8/Center	
Pitch	Pitch	-8~+8	
Decay	Decay	0~-5	
RvbLevel	Reverb Level	0~127	
MidiNote*	Pad note (MIDI out)	(See detail below)	
Duration	Pad note length(MIDI out)	0.0s~0.8s	
StartVol	Pad voice start volume	0~127	

Explain Details:

Grp:
a)Pad voice group
 --8 common Voice group:
 "Kick1Bk","Snare1Bk","Tom1Bk","Ride1Bk","Crash1Bk","Hihat","Percusn","SFX1"

 --1 HH Combi group:
 "HH_Combi" (just can be selected when current Pad Trigger is No.19~26,see Table 1.2);

b)Adjust HH Combi group parameter

 The digital drum has 18 HH Combi group, see detail on Appendix.
 See operation table below (Table 1.5):

>>Table 1.5

Operating guide	LCD display	
[KIT]	`Acoust-1`	—— Enter Kit mode
[MENU]	`VOICE`	—— Enter Kit menu
	...select a Pad trigger...	
[SAVE/ENTER]	`Grp:HH combi`	
[PAGE+]	`Standard A`	—— Select a HH Combi group(1~18)
[PAGE+]	`Volume:100`	—— Adjust current Hi-hat triggers' volume

NOTE:
● After selecting HH Combi group, you can adjust the parameter of all the hi-hat pad together,including O HIHAT,O HIHAT R,HO HIHAT,HO HIHAT R,C HIHAT,C HIHAT R,P HIHAT, Splash;

● Distinguishingly, Hi-Hat Pedal volume (including P HIHAT and Splash), can be adjusted separately; Close hi-hat volume (including C HIHAT and C HIHAT R), can be adjusted separately;

● In menu "Grp: snare1Bk" as below, the "DATA: 002 " icon indicate current Voice group index:

`01 Grp: Snare1Bk    ↵ ▶4/4`
`Num 001 MEA 001,  DATA 002`
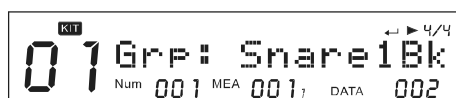
Voc:

The digital drum has up to 674 Drum voices.
Press the **[+]/[-]** button or use the DIAL to select a drum voice; when another voice group is selected, the menu "Grp: " Will refresh simultaneously.

NOTE:
In the menu as below, the "DATA: 290 " icon indicate current Voice index:

```
 KIT
07  Voc: jazztom3          ↵ ►4/4
    Num 001  MEA 001₁  DATA  290
```

MIDI note:
Define: Adjust the midi note of each pad triggers sending out through MIDI OUT Port.

For each Pad trigger's default MIDI Note, see "Table 1.2".

If current midi note parameter has been selected by another trigger, LCD displays "!" to suggest you to adjust it.

2. Pad Pattern Setting
Define: when Pad Pattern Function is "On", you can play a pattern by triggering a pad.
>>Table 1.6

Operating Guide   Lcd Display

[KIT] | Acoust-1 | — Enter Kit mode

[MENU] | ▤ VOIC | — Eenter Kit menu

[PAGE+] | Pattern: OFF | — Pad Pattern OFF

[+] | Pattern: ON | — [+]/[-] to ON/OFF

  [SAVE/ENTER] | Grp: DrumLoop |

  [PAGE+] | Sng: Fusion1 | see Table 1.7 for detail

  [PAGE+] | Retrig:ST/SP |

  [+] | Retrig: ReST |

>>Table 1.7

ARAMETER	EXPLAIN	PARA RANGE ([+]/[-])	DEFAULT
Pattern*	Pad Pattern switch	OFF/ON	OFF
Grp*	Pad pattern group	DrumLoop/1 Shot/ PercLoop/HIT/TAP/ UserSong	DrumLoop
Sng*	Pad pattern index	1~220	1
Retrig*	retrigger mode	ST/SP、ReST	ST/SP
VelCtrl*	velocity control volume	OFF/ON	OFF
Volume	Volume	0~127	100
X'Pose	Pad pattern's transpose	-12~12	0
RstTime*	reset time	OFF/0.1s~4.0s(unit 0.1s)	4.0s
DrumVoc*	Whether drum voice sound	OFF/ON	ON

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Explain Details:

Pattern:
At most 7 pads can use Pad pattern (Hit or Tap types) simultaneously.

Grp、Sng:
All the Songs (including Preset Songs, User Songs) can be selected for pad pattern;
Use the DIAL or press the [+]/[-] button to select a song you like; when another song group is selected, the menu"Grp:"will refresh simultaneously.

VelCtrl:
Define: Choose that whether you want to use the velocity that you trigger the pad to control the volume of the pad pattern's play.
ON: Control the volume of the pad pattern's play by trigger velocity
OFF: do NOT Control the volume of the pad pattern's play by trigger velocity, but use the default volume (adjusted in the next menu"volume:").

Restrig and RstTime:
When you select the Song of type...
Loop or 1shot: "RstTime" menu displays invalid ("---");
Tap: "Retrig" menu displays invalid("---");
Hit: RstTime and Retrig menu all display invalid ("---");

DrumVoc:

Define: Choose that whether sound drum voice when pad pattern is ON.
ON: Default setting. When triggering the pad, sound the pad pattern also with drum voice;
OFF: When triggering the pad, just sound the pad pattern.

3. Exchange Kit Order

1)Select a Kit:
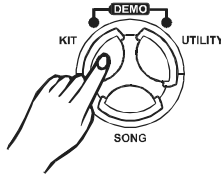
2)Press the **[MENU]** button, and the **[PAGE+]/**
[PAGE-] button, enter the menu
displayed"EXCHANGE"

3)Press the **[SAVE/ENTER]** button to set exchange
position, then press the **[EXIT]** button to go
back to the menu displayed" EXCHANGE"

NOTE:

When exchange operation is done, LCD displays "EXCHANGE OK!" temporarily, 2 seconds later, LCD shows the KIT mode
automatically, and original Kit is selected.(as "MyKit001" in this example).

---

4. Rename
1)Select a Kit:
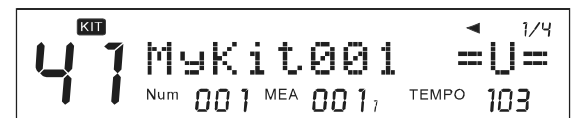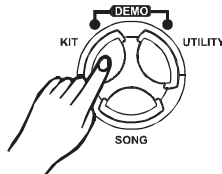
2)Press the**[MENU]** button, then press
[PAGE+]/[PAGE-] button, enter the menu
displayed "RENAME":
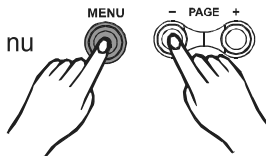
3)Press the **[SAVE/ENTER]** button to enter the
rename operation, see the basic operation
Rename in detail.

§**Saving User Kit**
Select a user Kit, for example "MyKit001":

```
 KIT                          ◄  4/4
4 1  MyKit001  =U=
    Num 001 MEA 001  TEMPO 103
```

Press the **[SAVE/ENTER]** button to enter the saving page, with the operation as below (Table 1.10):

>>Table 1.10

Operating guide	LCD display	
[SAVE/ENTER]	`Sav▶MyKit001`	save to local (see Table 1.9)
└── [+]	`Sav▶MyKit002`	[+]/[-] to select a Kit
[PAGE+]	`CurKit▶Card`	Save current Kit to SD card
└─┬[SAVE/ENTER]	`MyKit001`	Rename operation
└[SAVE/ENTER]	`SAVE OK!`	(display temporarily)
	If card is error, see detail on Table 9.3	
[PAGE+]	`AllKits▶Card`	Save all user kits to SD card
└─┬[SAVE/ENTER]	`ALL_KITS`	Rename Operation
└[SAVE/ENTER]	`SAVE OK!`	(display temporarily)
	If card is error, see detail on Table 9.3	

NOTE:
When saving Kits to SD card, The digital drum will automatically save it (them) on local at the same time, although SD card saving is failed (for example "No Card!" or "Card error!". etc).

Master Kit volume, Accompaniment Volume (=Master Song play volume), Click Volume and Card MIDI Volume can be balanced together in the drum module mixer menu.

§**Master Volume**
Press the **[MIXER]** button to enter mixer menu:

Press the**[PAGE+]** button constantly to select "SongpVol", "ClickVol" or "CardVol";
Then press the**[+]/[-]** button to adjust each volume, see Table 2.1:

>> Table 2.1

Operating guide	LCD display	
[MIXER]	KITVol:100	Master Kit Volume
└── [+]	KITVol: 111	Adjust volume
[PAGE+]	SongVol:110	Master Accompaniment Volume
└── [+]	SongVol:111	Adjust volume
[PAGE+]	CardVol:110	Card Midi volume
[PAGE+]	ClickVol:110	Click volume

● **Inner Volume**

--In the menu page"KITVol: 110", press the [SAVE/ENTER] button to enter kit inner volume page, showing current pad trigger's volume. You can adjust the value using [+]/[-] or DIAL.

The adjustments of the inner volume equals to the operation in KIT MENU. Don't forget to save current Kit before you select another Kit or power down this digital drum.

--In the menu page"SongVol: 110", press the [SAVE/ENTER] button to enter Song inner volume page, showing current song parts' volumes. You can adjust the value using [+]/[-] or DIAL.

The adjustments of the inner volume equals to the operation in SONG MENU. Don't forget to save current Song before you select another Song or turn off this digital drum.

>>**Table 2.2**

Operating guide   LCD display

[MIXER]   `KITVol:100` ── Master Kit Volume

   [SAVE/ENTER]   `TrigVol:100`

                                  Adjust trigger's volume

   [+]   `TrigVol:101`

[PAGE+]   `AcmpVol:100` ── Master Accompaniment Volume

   [SAVE/ENTER]   `DrumVol:100`

                                  Adjust Song parts' volume

   [PAGE+]   `PercVol:100`

[PAGE+]   `ClickVol:100` ── Click volume

[PAGE+]   `CardVol:100` ── Card Midi volume

>>**Table 2.3**

PARA	Secondary PARAE	Explain	Value	RangeDefault
KITVol		Master Kit Volume	0~127	100
	TrigVol	Current trigger volume	0~127	--
AcmpVol		Master Accompaniment Volume	0~127	100
	DrumVol	Current Song Drum volume	0~127	--
	PercVol	Current Song Percussion volume	0~127	--
	Part1Vol	Current Song Part1 volume	0~127	--
	Part2Vol	Current Song Part2 volume	0~127	--
	Part3Vol	Current Song Part3 volume	0~127	--
	Part4Vol	Current Song Part4 volume	0~127	--
	Part5Vol	Current Song Part5 volume	0~127	--
ClickVol		Click volume	0~127	100
CardVol		Card Midi volume	0~127	100

NOTE:
ClickVol in mixer menu equals to the "ClickVol " in Click menu.

SONG

- The digital drum comes with 220 songs. Preset (Internal) Songs (Songs 1-120)、User Songs (Songs 121-220).
- The digital drum is sequencer organizes music into seven parts. The Drum Kit part is used to record/play back what is played on the pads. Additionally, Percussion part, Part 1, Part 2, Part 3, Part 4 and Part 5 are the 6 backing instrument parts (backing parts). The collective performance of these 7 parts is called a song.

Song Choosing

1. Press **[SONG]**, and the SONG screen appears: Song Number, Song Name, Beat, Measure Number-Current Beat, New User Song("*" indicates a new User song);
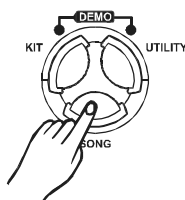
2. Press **[+] / [-]** or DIAL to select the Song.
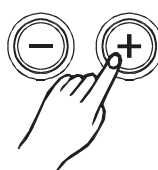
3. Press **[PAGE+] / [PAGE-]** to select the song category.

SONG CATEGORY:
Pattern Loop, 1 Shot, Percussion Loop, Hit, Tap, User Song

>>**Table 3.1**

Operating guideL	LCD display	
[SONG]	Fusion 1	— Preset Song Name(1st Song of Pattern Loop)
[PAGE+]	Latin jz4	— (1st Song of 1 Shot)
[PAGE+]	World2	— (1st Song of Percussion Loop)
[PAGE+]	Choru t1	— (1st Song of Hit)
[PAGE+]	Bass tp1	— (1st Song of Tap)
[PAGE+]	MySng001 *=U=	— User Song Name (1st Song of User)

Song Playing Back

1. Press **[PLAY/STOP]** to play a song,[PLAY/STOP] lights.(During playback of a song, you can have the pads' buttons corresponding to the drums being played in the percussion part light up.)
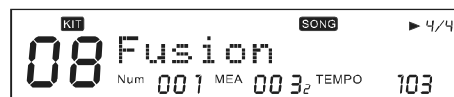
2. During playback of a song, press **[PLAY/STOP]** to stop playback of the song, and return to the beginning of the song,[PLAY/STOP] light goes out.
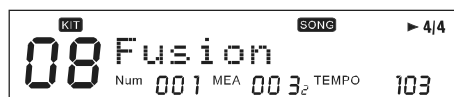
Adjusting Song Acmp Volume

Adjust background volume of the song to balance the Kit volume.
（refer to MIXER)

Adjusting Temporarily Tempo
You can temporarily change the tempo of a song while playback is in progress. The song returns to its preset tempo when a different song is selected.（refer to Song Editing）

Song Editing

1.On song screen, press **[MENU]** to enter the screen of song editing:

MIXER

```
01  SET UP          SONG    ►4/4
    Num  001  MEA  001₁  TEMPO  103
```

2. Press **[PAGE+]/[PAGE-]**,switch setting menus.

– PAGE +

```
01  PART :     DRUM      SONG    ►4/4
    Num  001  MEA  001₁  TEMPO  103
```
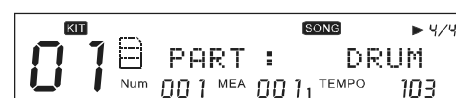
>>Table 3.2

Operating guide	LCD display	
[MENU]	SET UP	——— Song Whole Settings
[PAGE+]	PART DRUM	——— Drum Part Settings
[+]	PART:PERC	
[+]	PART:PART1	
[+]	PART:PART2	
[+]	PART:PART3	
[+]	PART:PART4	
[+]	PART:PART5	
[PAGE+]	ERASE:DRUM	——— Only User Songs use the function
[+]	ERASE:PERC	
[+]	ERASE:PART1	
[+]	ERASE:PART2	
[+]	ERASE:PART3	
[+]	ERASE:PART4	
[+]	ERASE:PART5	
[+]	ERASE:ALL	

Whole Settings(SET UP)

1.On"目SET UP" screen , Press **[SAVE/ENTER]**
   to enter the screen of whole settings:

2.Press**[PAGE+]/[PAGE-]**, switch setting menus.

>>Table 3.3

Operating Guide	Lcd Display	
[SAVE/ENTER]	Tempo:103	—— SONG playback rate
[PAGE+]	T-Sig:4/4	—— SONG Beat
[PAGE+]	Mode:1 SHOT	—— SONG playback mode
[PAGE+]	Pre Count:0	—— measures before playback of a song begins
[PAGE+]	Kit Link:ON	—— Kit Synchronizing
[PAGE+]	Tap Sync:OFF	—— Tap continuous playback

3.Press **[+]/[-]** or DIAL to edit Tempo/Time Sig/
   Mode/Pre Count/ Kit Link/ Tap Sync
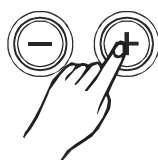
>>Table 3.4

Parameter	Brief Explain	Range	Default Value
Tempo*	SONG playback rate	30-280	--
T-Sig*	SONG Beat	0-9/2,0-9/4,0-9/8,0-9/16	/
Mode*	SONG playback mode	Loop/1 Shot/TAP/HIT	/
Pre Count*	measures before playback of a song begins	0、1、2	0
Kit Link*	SONG Kit Synchronizing	OFF/ON	ON
Tap Sync*	Tap continuous playback	OFF/ON	OFF

NOTE:
The parameters of Pre Count, Kit Link, Tap Sync are global settings,
can not be saved to a user song.

Parameters Explanations:

If during playback of a song, the parameters edited become effective at once.

TEMPO
You can temporarily change the tempo of a song while playback is in progress.
The song returns to its preset tempo when a different song is selected.

T-Sig
For the preset songs, this parameter shows the current song's default value; for the user songs, the default value is 4/4;It can not be changed.

1. Each Song has its own mode as default.

2. If current song is the type of Loop/1Shot, the parameter can be changed and the modification takes effect at real time; If current song is the type of TAP/HIT, the parameter can't be changed.

Mode
1. Each Song has its own mode as default.
2. If current song is the type of Loop/1Shot, the parameter can be changed and the modification takes effect at real time; If current song is the type of TAP/HIT, the parameter can't be changed.

Pre Count

This is an auxiliary function available when "LOOP" and "1 SHOT" are specified as the Play Mode for the song. You can have a count sound (click) inserted before playback of a song begins.
0:
Playback begins without a count-in.
1:
Playback begins after a 1-measure count-in.
2:
Playback begins after a 2-measure count-in.

Kit Link

This is an auxiliary function available when "LOOP" and "1 SHOT" are specified as the Play Mode for the song.
ON: While selecting song, the kit selection would be changed according to the kit selection of the drum part of current song.
-During playback of a song, the function will be become effective at once while switched from "OFF"to "ON".
-If you want to change some other kit for your performance, you can simply enter Kit mode to select a new kit.
OFF: While you are selecting songs, the kit selection won't be changed with the songs.

Tap Sync

This is an auxiliary function available when"TAP" and "HIT" are specified as the Play Mode for the song. In Tap and HIT playback, if one sound is set to play before the previous sound has finished playing, this setting allows you to either have the previous sound stop and the subsequent sound start playing (ON) or have the two sounds layered (OFF).
ON: The previous sound continues to play to the end, while the subsequent sound is superimposed on it.
OFF: The previous sound stops while in progress, and the subsequent sound starts playing.

Part Settings(Drum/Perc/PART1~Part5)

```
┌────────────────────────────────┐
│ KIT                    ↵ ►  4/4 │
│ 01 ▯PART:  DRUM                 │
│    Num 001 MEA 001₁  TEMPO 103  │
└────────────────────────────────┘
```

==Drum/Perc Part==
1. On song menu screen , select corresponding part, then press **[SAVE/ENTER]** to enter the screen of part settings:

SAVE/ENTER

```
┌────────────────────────────────┐
│ KIT                       ►  4/4 │
│ 01 Kit:  Kit001                 │
│    Num 001 MEA 001₁  DATA  001  │
└────────────────────────────────┘
```

2, Press **[PAGE+]/[PAGE-]**,switch setting menu:

– PAGE +

```
┌────────────────────────────────┐
│ KIT                       ►  4/4 │
│ 01 Volume: 100                  │
│    Num 001 MEA 001₁  DATA  001  │
└────────────────────────────────┘
```

>>Table 3.5

Operating guide	LCD display	
[PAGE+]	PART: DRUM	Part Setting
[SAVE/ENTER]	KIT: Kit001	Kit Number applied for drum/perc part
[PAGE+]	Volume: 100	Part Volume
[PAGE+]	Reverb:64	Part Reverb

3. Press **[+]/[-]** or DIAL to adjust settings of the corresponding parameters.

>>Table 3.6

Parameter	Brief Explain	Range	Default Value
Kit Set	Kit Number applied for drum part	1-109 （include GM KIT） 1-99（if programmed with Local Kit） 100-109(if programmed with GM Kit)	--
Volume	Part Volume	0~127	100
Reverb	Part Reverb	0~127	64

==Part1~Part5 ==

1. On song menu screen, select corresponding part, then press **[SAVE/ENTER]** to enter the screen of part settings:

SAVE/ENTER

```
┌────────────────────────────────┐
│ KIT  SONG                 ►  4/4 │
│ 01 Voc: GrandPno                │
│    Num 001 MEA 001₁  DATA  001  │
└────────────────────────────────┘
```

2. Press **[PAGE+]/[PAGE-]** switch setting menu:

– PAGE +

```
┌────────────────────────────────┐
│ KIT  SONG              ◄ ► 4/4  │
│ 01 Volume:   100                │
│    Num 001 MEA 001₁  TEMPO 103  │
└────────────────────────────────┘
```
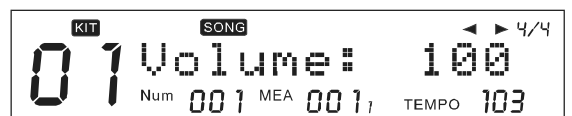
3. Press **[+]/[-]** or DIAL to adjust settings of the corresponding parameters.
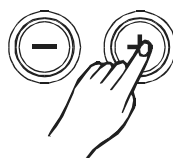
>>Table 3.7

Operating guide	LCD display	
[SAVE/ENTER]	`Voc:GrandPno`	—— Voice applied for part1~part5
[PAGE+]	`Volume:100`	—— Part volume
[PAGE+]	`Reverb: 64`	—— Part reverb
[PAGE+]	`Pan: Center`	—— Part pan

>>Table 3.8

Parameter	Brief Explain	Range	Default
Voc*	Voice applied for part1~part5	detailed instructions below	--
Volume	Part volume	0~127	100
Reverb	Part reverb	0~127	64
Pan	Part pan	L8~Center~R8	Center

Parameters Explanations:

Voc:
Each preset song has its default voice.

NOTE:
While setting this parameter, "DATA:" displayed in right bottom of the LCD shows the number of the current voice.

Erase

Attention: This is an auxiliary function available when song category is User Song.

1. Select erase function, press **[SAVE/ENTER]** to enter setting screen of erase function:

2. Press **[+]/[-]** or DIAL to select the part to be erased; in addition, you can select "ALL" to erase the whole user song. After select the part to be erased, press **[SAVE/ENTER]**
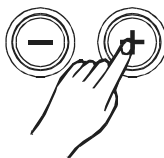
3. Press **[SAVE/ENTER]** for make sure. When you have finished deleting the song, the completed screen appears.

4. Press **[EXIT]** to cancel the operation, return to screen of "Erase: XXXX".

Saving Song

The digital drum allow you to edit preset song and save to user song for using; conveniently. Also allow to save current user song and all user songs to SD card.

NOTE:
Not only on SONG screen, but also in the deeper menu of song editing, press [SAVE/ENTER] will enter Song Save screen.

Saving Preset Song

Editing one parameter of the preset song, effects will be done at once; but after switch song, parameters edited just now will be lost. For saving these editings, you can save the preset song edited to user song. Select a preset song, press [SAVE/ENTER],It's will let you save current song to user song
(The digital drum will select the first empty user song as default user song memory slot, "*"appears ahead of the user song's name）:

NOTE:
Picture below,"DATA: 121"displayed on LCD right bottom show current song number.
Before song save:（For example, current selected song is the first song of user song category.）

After complete song saving:
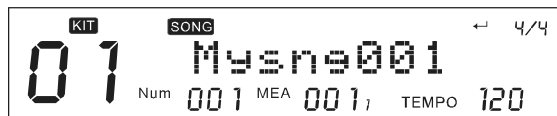
>>Table 3.9

Operating guide	LCD display
[SAVE/ENTER]	Sv▶×MySng005
[+]	Sv▶×MySng006 — Select the destination song
[-]	Sv▶×MySng005
[SAVE/ENTER]	MySng005 —— Enter Rename
[SAVE/ENTER]	Save Ok ! —— Save Ok（temporarily display）
	MySng005 —— Return to song screen

NOTE:
After you have edited the parameters, and did not save the song before powering off, the unsaved changes would be lost.

Saving user Song
You can edit user songs and save, also can save to SD card.
Select one user song, press **[SAVE/ENTER]**:
For example, select first user song "MySng001":

== EACH SONG SAVING ==

If user song edited, press **[SAVE/ENTER]**:
If no identified SD card, you can save song to local, reference operation as follows:

>>Table 3.10

Operating guide	LCD display	
[SAVE/ENTER]	`Sv▸xMySng001`	—— Select save position
[+]	`Sv▸xMySng002`	—— Select user song
[-]	`Sv▸xMySng001`	
[SAVE/ENTER]	`MySng001`	—— Rename（refer to "Rename"）
[SAVE/ENTER]	`Save Ok!`	—— Save Ok（temporarily display）
	`MySng001`	—— Return to song screen

If exist identified SD card, you need enter menu to select file type for saving(CurSng/AllSngs) and saving position（Local/Card）:

>>Table 3.11

Operating guide	LCD display	
[SAVE/ENTER]	`Sv ▸xMySng001`	—— Select save position（Local/Card）Save to local
[+]	`Sv ▸x MySng002`	—— Select user song
[-]	`Sv ▸x MySng001`	
[PAGE+]	`CurSng▸ Card`	—— Current song save to sd card
[PAGE+]	`AllSngs▸Card`	—— All songs save to sd card
[SAVE/ENTER]	`MySng001`	—— Rename（refer to "Rename"）
[SAVE/ENTER]	`SaveOk!`	—— Save OK（temporarily display）
	`MySng001`	—— Return to song mode

> **NOTE:**
> Once current song is saved to SD card, it will be saved to local automatically.; If there is not enough memory on SD card,new song also will be saved to local; If local and SD card both have not enough space for saving, then show hints and cancel the operation of saving.

==All User Song Saving==

First, be sure that you insert available SD card in the card slot; Refer to table 3.11, select "AllSngs ▸Card "and make sure for saving.

MUTE

MUTE ON:
Press and hold the **[MENU]** button, then press **[PART MUTE]]** button, enter the Mute
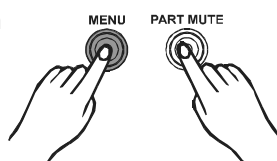
When mute on, the **[PART MUTE]** led is lighten. In SONG mode, press the [PART MUTE] button, you can mute Song parts (drum, percussion, part1~part5);

In Card mode, press **[PART MUTE]** button, you can mute each SD card MIDI channel (Channel 1~ Channel 16);

MUTE OFF:
When Mute on, press **[PART MUTE]** button to shut down mute function; [PART MUTE] led is dark.

Setting MUTE

§Mutea part of Song

1.If it plays Song when pressing **[PLAY/STOP]** button, (whatever in KIT mode, UTILITY menu etc.),

press and hold **[MENU]** button, then press **[PART MUTE]** button to choose the parts for mute of current song.
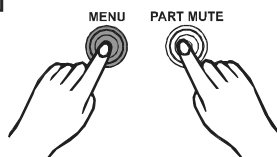
2. Then press **[+]/[-]** button to switch the mute part, see Table 4.1 in detail:

>>**Table 4.1**

Operating guide	LCD display	
[MENU]+[PART MUTE]	Mute:SneDrum	——Mute drum part (default set)
[+]	Mute: Acmp	——Mute percussion part and part1~Part5
[+]	Mute:Drum/Perc	——Mute drum and percussion parts
[+]	Mute: Part1	——Mute part1
[+]	Mute: Part2	——Mute part 2
[+]	Mute: Part3	——Mute part 3
[+]	Mute: Part4	——Mute part 4
[+]	Mute: Part5	——Mute part 5
[+]	Mute:AllPart	——Mute all parts(part1~ part 5)

Mute a channel of the MIDI file

1.When browsing the SD card, press and hold [MENU] button, then press [PART MUTE] to
select the settings of the mute option. You can select any of the 16 channels to be muted when
the part mute function is enabled.

```
 ⌧KIT                              ►   4/4
 07  CH1:        Mute
     Num 001 MEA 001♪  TEMPO 103
```

2.You can press [PAGE+]/[PAGE-] buttons to select any of the 16 channels ,and press
[+]/[-] buttons to set it muted when the part mute function is enabled. (default setting:
Ch10 :Mute; other channels are "Play")

>>Table 4.2

Operating guide	LCD display	
[CARD]	SONG1.MID	
[MENU]+[PART MUTE]	Ch1: Mute	
└──[+]	CH1: Play	── Use [+] or [-] to switch Mute/Play
[PAGE+]	CH2: Play	
[PAGE+]	CH3: Play	
	.....	
[PAGE+]	CH16:Play	

RECORD

100 user songs can be recorded, each song has 7 record tracks (Drum + Percussion + Part1~Part5), in which Part1~Part 5 can only be recorded by MIDI IN.

Record a New Song

1. Select a new song (ahead of the song's name, there is a "*" icon), then press the **[REC]** button to enter record menu.
   The click would be started automatically. The **[REC]** button is lightened;
   At this time, if SYNC start is ON, **[PLAY/STOP]** button would spark;
   if not, **[PLAY/STOP]** button would be darken.
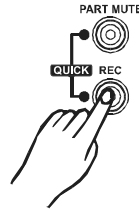
2. Choose "QUICK RECORD" (without any setting step, you can immediately start recording) or common "RECORD".
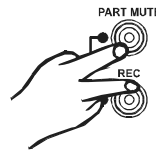
QUICK RECORD

Without any setting step, you can immediately start recording drum. In Quick Record, what you record is what you hear (without click sound), it can't be quantized or other setting.

1. Press **[REC]** button and **[PART MUTE]** button simultaneously to enter recording statement.
a) If current song is a NEW song, start to record its drum part;
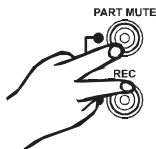
b) If current mode is not the song mode (for example KIT mode or UTILITY menu .etc), assign a NEW song automatically to start drum part recording;
c) If there is drum part already in current user song, then delete original drum part and record new.

2. In Quick Record, SYNC start is always ON, trigger the pads to start recording; or you can press [PLAY/STOP] button to start too. In recording statement, the [REC] button and [PLAY/STOP] button both are lightened; LCD displays "Recording…

3. In recording statement, press [REC] button to enter rehearsing statement, in which nothing can be recorded but time is passing. At this time, the [REC] button is sparking, [PLAY/STOP] button is lightened; LCD displays "-Rehearsing-". Press [REC] button again to go on recording, back to recording statement.

4. Press [PLAY/STOP] button again to stop recording. "

RECORD

1.Start Recording

==Recording Drum/Percussion parts==

In record waiting statement, press **[PLAY/STOP]** button or trigger the pads (when SYNC Start is ON) to start recording. LCD displays" Recording…", the measure and beat icons would refresh . At this time, [REC] button and [PLAY/STOP] button both would be lightened.

> *NOTE:*
> ● CLICK sounds could not be recorded.
> ● In recording statement, you could not adjust the tempo value, and tempo changes can not be recorded too.

== Recording Part1~Part5==

1)Link MIDI keyboard (or other MIDI equipment such as computer) to the MIDI IN port of the digital drum;
2)Press [PLAY/STOP] button to start recording. The midi channel 12~16 would be recorded to corresponding part.

MIDI Channel	Part	Note
12	Part1	
13	Part2	
14	Part3	
15	Part4	
16	Part5	

3)Stop recording
   In recording statement, press [PLAY/STOP] button or [EXIT] button to stop recording. The [REC] button and [PLAY/STOP] button are putting out.

4)Playback
   After recording stops, it would enter SONG Mode automatically; press [PLAY/STOP] button to playback the song you just recorded.

> *NOTE:*
> ● In recording statement, press [REC] button to enter rehearsing statement, in which nothing can be recorded but time is passing. At this time, the [REC] button is sparking, [PLAY/STOP] button is lightened; LCD displays "-Rehearsing-"
> ● Only 1 drum or percussion part can be recorded at one time, other parts (part1~part5) can be recorded simultaneously.

Recording Based on preset song

1.Select a preset song (for example 021),
press **[REC]** button, the digital drum indicates
saving it to a user song, it would select the first
new user song to be the destination (if there is
no new user song, select the very first user song):

REC

```
KIT    SONG                              ↵  4/4
01 Sv▶×Mysng001
Num 001  MEA 001₁   DATA    121
```

LCD icon "NUM: 021" indicates that the original
song index is 021;

2.Press **[+]/[-]** buttons to select a proper user song;

– PAGE +

```
KIT    SONG                              ↵  4/4
01 Sv▶ ×Mysng003
Num 001  MEA 001₁   DATA    123
```

3.Press **[SAVE/ENTER]** button to confirm to
enter rename menu, see Rename;

SAVE/ENTER

```
KIT    SONG                              ▶  4/4
01 Mysng003
Num 124  MEA 001₁   TEMPO   120
```

4.Then, LCD displays "Save Ok!" temporarily;2
seconds later, LCD displays record menu as below:

```
KIT    SONG                              ▶  4/4
01 Part:       Drum
Num 124  MEA 001₁   TEMPO   120
```
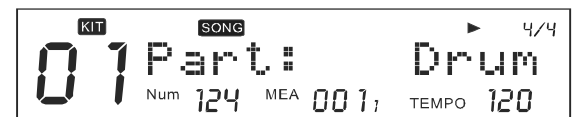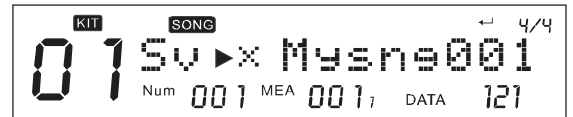
5.The click would be started automatically.
The [REC] button is lightened; at this time, if SYNC start if ON, [PLAY/STOP] button would spark; if not,
[PLAY/STOP] button would be darken.

6.Choose "QUICK RECORD"(without any setting step, you can immediately start recording) or common "RECORD".

Setting record

Press **[REC]** button to enter to record setting
page.

PART MUTE

QUICK REC
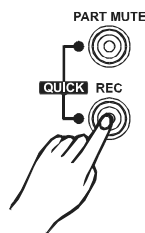
>>Table 5.1

Operating guide   LCD display

[REC]   `Part:Drum`

[PAGE+]   `TimeSig:4/4`

       [+]   `TimeSig:5/4` ⎱
                                             Adjust time signature
       [-]   `TimeSig:4/4` ⎰

[PAGE+]   `Tempo:  120`

            …see Table 5.2…

>>Table 5.2

PARAMETER	EXPLAIN	PARA RANGE([+]/[-])	DEFAULT
Part*	Select record part	Drum/Perc	Drum
TimeSig	record time signature	1-9/2,1-9/4,1-9/8,1-9/16	4/4
Tempo	tempo	30~280	120
Mode*	record mode	New/Overdub	Overdub
Loop*	loop length	OFF/ALL/1~99	OFF
Qntize*	Quantize resolution	OFF/8/8T/16/16T/32/32T/64	OFF
Sync-ST	synchronous start	OFF/ON	OFF
Precount	Set pre-count measure	0~2	0

Explain Details:

Part
record drum or percussion part(Part1~Part5 should also be recorded if ch12~ch15 of
 MIDI IN have notes)

NOTE:
● When select the part Perc whose original voice is GM KIT, you are just allowed to record by the New mode. The menu of Mode should select the parameter "New"automatically, and you can't change theparameter.

Mode
- refer to Drum/Percussion parts:
Overdub: record based on the original part(揚 art:? ;
New: delete the original part and record a new one.

- refer to Part1~Part5:
Always record based on the original Parts.

Loop
OFF: 1 shot;
1~99: loop 1 ~ 99 measures;
All: Loop all measure (it appears only when current song is not a new one);

Qntize
1. Quantize all the parts which are being recorded, including drum, percussion, part1 ~part5;
2. Refer to note on : quantize the note starting position but not note length;
3. Refer to controllers: NOT quantize
4. The error information during record

Click ON/OFF

You can switch the click sound on and off by pressing [CLICK]. [CLICK] lights while the click sound is set to be played.

> *NOTE:*
> In DEMO,[CLICK] is invalid.

Click Settings

Holding down **[MENU]** and pressing **[CLICK]** enter the screen of click settings:

> *NOTE:*
> During click playing, entering the menu of click settings will not interrupt playback of click.
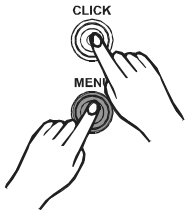
2.Press **[Page+]/[Page-]** to switch menu of click settings.

>>Table 6.1

Operating guide	LCD display	
[Menu]+[Click]	`ClickVol:110` —	Click whole volume
[PAGE+]	`TimeSig: 4/4` —	Click time signature
[PAGE+]	`Interval:1/4` —	Click playback Interval
[PAGE+]	`Voc: Voice` —	Click voice

3.Press **[+] / [-]** or DIAL to adjust parameters.

>>Table 6.2

ARAMET	EREXPLAIN	PARA RANGE ([+]/[-])	DEFAULT
ClickVol	Click whole volume	0-127	110
TimeSig*	Click time signature	0-9/2,0-9/4,0-9/8,0-9/16	4/4
Interval	Click playback Interval	1/2,3/8,1/4,1/8,1/12,1/16	1/4
Voc	Click voice	Voice/Metro/Claves/Sticks/Cowbell/Click	Voice

Parameters Explanation:

TimeSig:
Specify the time signature of the click sound. When the beats per measure is set to "0,"no accent is added to the first beat. The metronome click sound then plays at a fixed volume.

> *NOTE:*
> During playback of a song, time signature can not be edited.

SAVE

ALL User Kits, user Songs and Global Setup (including click, pad, and mixer setting .etc) can be saved in SD Card.
see the default saving path:

>>Table 7.1

File Type	Format	Saving Path
user Kit	*.KIT	..Root\MY_EDRUM\
All user Kits	*.KIT	..Root\MY_EDRUM\
user Song	*.MID	..Root\MY_EDRUM\
All user Song	*.SNG	..Root\MY_EDRUM\
Global Setup	*.SET	..Root\MY_EDRUM\

● **Saving user Kit**
Refer to "Saving user Kit"

● **Saving user Song**
Refer to "Saving user Song"

● **Saving Global Setup**
Be sure that your SD Card is inserted and valid.
Press **[UTILITY]** button to enter Global Setup
saving page
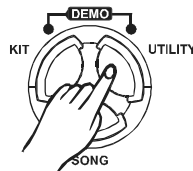
>>Table 7.2

Operating guide	LCD display	
[UTILITY]	TRIGGER	—— Enter UTILITY menu
[PAGE+]	Effect	
[PAGE+]	MIDISET	
[PAGE+]	SAVEGLOBAL	—— Rename（**page 12**）
[SAVE/ENTER]	My_Setup	—— See Rename（**page 12**）
[SAVE/ENTER]	SAVEOK!	—— Save succeed! (displays temporarily)

UTILITY

The trigger detection parameters, reverb effect, EQ, MIDI set up, reset to factory default can be set in UTILITY menu.
Press **[UTILITY]** button to enter the utility menu:
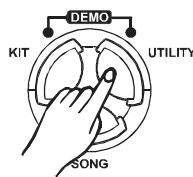
>>Table 8.1

Operating Guide	LCD display	
[UTILITY]	目TRIGGER	—— Trigger detection parameters
[SAVE/ENTER]	Type: --	—— Trigger type
[PAGE+]	Sensitive:1	—— Sensitivity
[+]	Sensitive:2	—— Change value
[PAGE+]	目EFFECT	—— Reverb and EQ
[PAGE+]	目MIDI SET	—— MIDI set up
[PAGE+]	目SAVE GLOBAL	—— Save global settings to SD card.
[PAGE+]	目RESET	—— Set global settings to factory default.

Trigger

You can set the parameters of each drum pad and cymbals in the Trigger menu. During the setting, you can select each trigger by hitting the corresponding trigger or use the drum buttons on the panel.
Here are the parameters for triggers:

>>Table 8.2

Item	Explain	Parameter([+]/[-])	Default
Sensitive*	Sensitivity	1~48	--
Thresh*	Threshold	0~120	--
Curve*	Trigger curve	Normal/Exp1/Exp2/Log1/Log2/Loud/	Normal
Retrig-C*	Retrigger cancel	0~50	--
X-Talk*	Cross talk	0~20	--
Scan-T*	Scan time	2ms~20ms	--
Rjct-T	Rejection time	0.0s~2.0s	--
Mask-T*	Mask time	0.01s~1.0s	--
Rim-Sens*	Rim sensitivity	1~24	1
Splash-S*	Splash sensitivity	20~200	80

Explain Details:

Sensitivity
Adjust the sensitivity of the pad to regulate the pad response. Higher settings result in higher sensitivity, so that the pad will produce a loud volume even when struck softly.
You can also adjust the sensitivity of the splash in SPLASH SENSITIVITY.

Threshold
This setting allows a trigger signal to be received only when the pad is struck harder than a specified force. This can be used to prevent a pad from sounding in response to extraneous vibrations from another pad.

Curve (Trigger curve)
This setting allows you to control the relation between the velocity (striking force) and changes in volume (the dynamic curve.) Adjust this curve until the response feels as natural as possible.

Retrig-C (Retrigger cancel)
Playing snare drum pads and other devices with commercially available acoustic drum triggers attached may result in altered waveforms, which may also cause inadvertent sounding. This occurs in particular at the decaying edge of the waveform. Retrigger Cancel detects such distortion in and prevents retriggering from occurring. Although setting this to a high value prevents retriggering, it then becomes easy for sounds to be omitted when the drums played fast (roll etc.). Set this to the lowest value possible while still ensuring that there is no retriggering.

X-Talk(Cross talk)
When two pads are mounted on the same stand, the vibration produced by hitting one pad may trigger the sound from another pad unintentionally (This is called crosstalk.) You can avoid this problem by adjusting Crosstalk Cancel on the pad that is sounding inadvertently. If the value is set too high, then when two pads are played simultaneously, the one that is struck less forcefully will not sound. So be careful and set this parameter to the minimum value required to prevent such crosstalk. With a setting of "0", crosstalk prevention does not function.

Scan-T (Scan time)
Since the rise time of the trigger signal waveform may differ slightly depending on the characteristics of each pad or acoustic drum trigger (drum pickup), you may notice that identical hits (velocity) may produce sound at different volumes. If this occurs, you can adjust the "SCAN TIME" so that your velocity of playing can be detected more precisely. As the value is set higher, the time it takes for the sound to be played increases.

Mask-T (Mask time)
On a kick pad, for example, if the beater bounces back and strikes the pad a second time immediately after the intended stroke − or, like with acoustic drums if you leave the bass drum beater against the head − it can cause a single strike to "double trigger" (two sounds instead of the intended one). The Mask Time setting helps to prevent such problems. Oncea pad has been hit, any additional trigger signals occurring within the specified "MASKTIME" will be ignored. When set to a high value, it then becomes easy for sounds to be omitted when the kick is struck repeatedly in rapid succession. Set this to as low a value as you can.

Rim-Sens
When select Snare/Tom1~Tom4 or the trigger rims, the parameter displays the rim sensitivity; if not, it displays"---"

Splash-S
When select P HIHAT or Splash, the parameter displays the splash sensitivity; if selected otherI nvalid triggers, it displays"---"

Effect

You can set the Reverb effect and the 4 band EQ parameters in the "Effect" menu.

>>Table 8.3

Item	Explain	Parameters	Default
Reverb	Master reverb switch	OFF/ON	According to current KIT
RvbTyp	Reverb type	SRoom/MRoom/LRoom/Hall1/ Hall2/Plate/Delay/P.Dely	
EQSwitch	4 band EQ master switch	OFF/ON	
EQLow	EQ low band	-12dB~12dB	
EQL.Mid	EQ low middle band	-12dB~12dB	
EQH.Mid	EQ high middle band	-12dB~12dB	
EQHigh	EQ high band	-12dB~12dB	

MIDI Settings

You can connect The digita drum to other MIDI device thru standard MIDI cable or to PC thru USB cable.

Note:

If you want to save all the effects for current kit, see "Saving KIT".

>>Table 8.4

Item	Explain	Default
Local*	ON: Output both local sound and MIDI data. OFF: Mute the localsound output, only output MIDI data.	ON
SoftThru	ON: Forward all input MIDI data to MIDI out. OFF: MIDI output only local MIDI data.	OFF
GM Mode	ON: The input program change of MIDI channel 10 is processed as GM kit selection. OFF: The input program change of MIDI channel 10 is processed as local kit selection.	ON

Reset

You can reset only global menu parameter settings of the digital drum to factory default, or reset also all user songs and user kits.

>>Table 8.5

Item	Explain
Reset Para	Reset only global menu parameter settings (MIXER, UTILITY trigger settings, CLICK, Song setup, etc.).
ResetAll	Reset the global menu parameters and all user songs, user kits. After the operation, this digital drum would show back the main screen.

SD Card

Explore the files in a SD card

1. Press the **[CARD]** button, the button would be lightened, and the root folder of the card would be opened. You'll see the folders and the supported files in the folder.
   *the digital drum can support *.MID, *.KIT, *.SNG, *.SET files.

```
CARD
```

```
KIT
01  My_EDRUM              ↵◄   4/4
   Num  001  MEA 001;   TEMPO  103
```

2. By pressing the **[+]/[-]** button or using the DIAL, you can browse through the files in a folder.
   The files are sorted according to their types and their names.

```
KIT
01  My_EDRUM2             ↵◄   4/4
   Num  001  MEA 001;   TEMPO  103
```
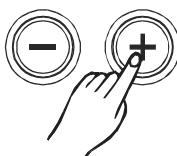
3. By pressing the **[PAGE+]** or **[PAGE-]** button, you can jump to the first file of the next file type.

4. When a folder (⌷) is selected, you can press **[SAVE/ENTER]** button to enter the folder.

```
SAVE/ENTER
```

Enter the folder

Note:
- If there's no folders or supported files in current directory, "No File!!" would be shown and you can use [EXIT] button to exit to the last directory you were browsing.
- The digital drum supports SD card from 16M to 2G, it supports FAT16 and FAT32. does not support a SD card which contains more than 1 partition, in this case, only the first partition can be opened and browsed.
- We strongly recommend use the SD card formatted by the digital drum.

Playback MIDI files in a SD card

Play back

1. When a MIDI file is selected, its initial tempo and time signature would be set in less than 1 sec if the playback is not started. Press the **[PLAY/STOP]** button, the playback will start.

```
PLAY/STOP
```

```
KIT
01  SONG.MID              ◄ ►  4/4
   Num  001  MEA 001;   TEMPO  103
```

2. During the playback, press [PLAY/STOP] again can stop the playback.

Note:

You can set up the file loop rule in the MENU of card.

The digital drume can support SMF 0 & 1(the amount of track should be less than 32). PPQN <= 1024. The maximum file size is 542 Kbytes.

Mute a channel of the MIDI file

When browsing the SD card, press and hold **[MENU]** button, then press **[PART MUTE]** to select the settings of the mute option. You can select any of the 16 channels to be muted when the part mute function is enabled.

```
[KIT]
01  CH1:          ►    4/4
    Num 001 MEA 001;  TEMPO 120
              Mute
```

>>Table 9.1

Operating guide	LCD display	Explain

[CARD] `SONG1.MID`

[MENU]+[PART MUTE] `CH1: Mute`

       [+] `CH1: Play` —— Use [+] or [-] to change value

[PAGE+] `CH2: Play`

[PAGE+] `CH3: Play`

. . . . .

[PAGE+] `CH16:Play`

File operations

You can easily delete a file, load back your previous settings, format the card or even put your favorite song into the digital drum as a user song by using the SD card menu.

1. Press **[MENU]** button when browsing the card to open the card menu.

```
[KIT]
01  [ ]LOAD       ◄    4/4
    Num 001 MEA 001;  TEMPO 120
```

2. Use **[PAGE+]** or **[PAGE-]** to select operations, as shown in table 9.2:

```
[KIT]
01  [ ]DELETE     ◄    4/4
    Num 001 MEA 001;  TEMPO 120
```

>>Table 9.2

Operation		Parameters	Default
LOAD	Load current file	--	--
DELETE	Delete current file	--	--
LOOP	Select loop mode of the playback.	☐/1	☐
PRECOUNT	Set the pre-count of playback	0, 1, 2	0
FORMAT	Format the card	--	--

Note:
"Load"and" Delete" are shown only when the current selected item is a file (not folder).

Load

You can load a MIDI file to be a user song, or load back the setting of the KITs (*.KIT), all user songs (*.SNG), or your global setting (*.SET).
E.g. if you want to load a MIDI file to be a user song, after you've selected the "Load" in the card menu:

1. Press **[SAVE/ENTER]** button, you'll be asked to select the type of the user song after the MIDI file is loaded. Use **[+], [-]** or DIAL to select among 1 Shot, Loop, Tap and Hit:

SAVE/ENTER

```
 KIT                            ↵ ◄      4/4
 □□      LdType:  1shot
 □       Num 001  MEA 001;   TEMPO 120
```

2. Press **[SAVE/ENTER]** to confirm your selection, you will be asked to select the user song memory slot which should be used to save the new song. If there's a "*" before the name of the selection, it means it's empty and it's safe to save the new song into it without worrying about losing your previous data.

SAVE/ENTER

```
 KIT                               ◄      4/4
 □□      Ld      MySng001
 □       Num 001  MEA 001;   TEMPO 120
```

3. Press **[SAVE/ENTER]** to confirm your selection. If you have selected a user song memory slot which is not empty, we will ask you to confirm the over write operation. You can use **[SAVE/ENTER]** to confirm or use **[EXIT]** to go back to the last step and change your selection.

SAVE/ENTER

```
 KIT                               ◄      4/4
 □□      OverWrite?
 □       Num 001  MEA 001;   TEMPO 120
```

45

4.If you confirm the selection, the MIDI file would be loaded to the selected user song memory slot, and you will see "Song Loaded!"

Note:

Only MIDI files smaller than 32 Kbytes can be loaded.
The load user song function support SMF 1 only, and up to 7 channels of the MIDI file can be used in the 1 shot or loop type user song. For tap or hit type, only 1 channel can be used.
Here's the table for the available channel:
1 Shot / Loop:

MIDI Channel	Part	Note
10	Drum	Set controller 0 to select bank as 127 to use internal KIT,otherwise GM kit would be used.
11	Percussion	
12	Part 1	
13	Part2	
14	Part3	
15	Part4	
16	Part5	

Tap / Hit:
Only the first of channel 12~16 in the MIDI file would be used.
Error information when loading a file：

LCD displays	explain
NoUsableData	There's no usable notes in the MIDI file.
FileError	File error.
FileTooBig	The MIDI file is larger than 32 Kbytes.
No Space	the user data space is full

(Note: If you load the MIDI file to a user song which is not empty, the original User Song would be deleted even when displays "No Space" .)

Delete

1.Select "Delete" in card menu, press **[SAVE/ENTER]**, we will ask you to confirm the operation.

1.Press **[SAVE/ENTER]** to confirm or press **[EXIT]** to abort. After the deletion, the display will go back to the folder you were browsing. If there are no supportable files in the folder,a "No File!!" would be shown.

Loop
The playback would loop through all the MIDI files in current folder.
1: The playback would loop for the current MIDI file only.

Format

1. Select "Format" in card menu, press **[SAVE/ENTER]**, we will ask you to confirm the operation.

```
 KIT                                      ◄    4/4
01 Format card
    Num  001  MEA 001₁   TEMPO  120
```

2. Press **[SAVE/ENTER]** to confirm or press **[EXIT]** to abort.

Note:

After format, all previous data in the card will be erased. Please make sure that you have back up all the important information in the card. DD508 support FAT16 and FAT32 only, some SD card with small capacity (under 32M) may be using FAT12, in this case, the card would be formatted into FAT16.

The error information during a card operation

You may see some error information during a card operation. They are caused by the hardware or file system error of the SD card.

>>**Table 9.3**

LCD Display	Explain
No Card!	The card is not properly inserted into the card slot.
Card Locked!	The card is found protected/locked during save/delete or format.*
Card Error!	A fatal error occurred during reading or writing the card.**
FS Error!	The file system of the card is not supported.***

*   Please take out the card, unlock the card and try again.
**   The fatal error can be caused bya damaged card, poor contact, etc. Please clean the metal connection part of the card and try again.
*** The digital drum can support only FAT16 and FAT32.

NUM	94I name	Full Name
1	StdBd1	Standard Kick1
2	StdBd2	Standard Kick2
3	ClascBd1	Classic Kick1
4	ClascBd2	Classic Kick2
5	RockBd1	Rock Kick1
6	RockBd2	Rock Kick2
7	RockBd3	Rock Kick3
8	RoomBd1	Room Kick1
9	RoomBd2	Room Kick2
10	JazzBd1	Jazz Kick1
11	JazzBd2	Jazz Kick2
12	BandBd1	Big Band Kick1
13	BandBd2	Big Band Kick2
14	CamcoBd1	Camco Kick1
15	CamcoBd2	Camco Kick2
16	FunkBd1	Funk Kick1
17	FunkBd2	Funk Kick2
18	FunkBd3	Funk Kick3
19	HipopBd1	Hiphop Kick1
20	HipopBd2	Hiphop Kick2
21	HipopBd3	Hiphop Kick3
22	HipopBd4	Hiphop Kick4
23	1969Bd	1969 Kick
24	1971Bd	1971 Kick
25	1976Bd	1976 Kick
26	PwrBd	Pwrbd Kick
27	R&BBd	BdR&B Kick
28	VoiceBd	Voice Kick
29	AcBd1	Acoust Kick1
30	AcBd2	Acoust Kick2
31	AcBd3	Acoust Kick3
32	AcBd4	Acoust Kick4
33	AcBd5	Acoust Kick5
34	AcBd6	Acoust Kick6
35	AcBd7	Acoust Kick7
36	AcBd8	Acoust Kick8
37	AcBd9	Acoust Kick9
38	AcBd10	Acoust Kick 10
39	AcBd12	Acoust Kick 12
40	AcBd13	Acoust Kick 13
41	AcBd15	Acoust Kick 15
42	AcBd16	Acoust Kick 16
43	AcBd17	Acoust Kick 17
44	AcBd18	Acoust Kick 18
45	AcBd19	Acoust Kick 19
46	AcBd20	Acoust Kick 20
47	AcBd22	Acoust Kick 22
48	AcBd23	Acoust Kick 23
49	AcBd24	Acoust Kick 24
50	AcBd26	Acoust Kick 26
51	AcBd27	Acoust Kick 27
52	AcBd28	Acoust Kick 28
53	AcBd29	Acoust Kick 29
54	AcBd30	Acoust Kick 30
55	HouseBd1	House Kick1
56	HouseBd2	House Kick2
57	HouseBd3	House Kick3
58	HouseBd4	House Kick4
59	StepBd	Step Kick
60	TechBd	Teckno Kick
61	DrBsBd	Drum Bass Kick
62	JunkydBd	Junkyard Kick
63	NoiseBd	Noise Kick
64	IndBd	Industry
65	LowfiBd	Lowfi Kick
66	DiscoBd	Disco Kick
67	808Bd	808 Kick
68	909Bd	909 Kick
69	ElBd1	Electron Kick1
70	ElBd2	Electron Kick2
71	ElBd3	Electron Kick3
72	ElBd4	Electron Kick4
73	ElBd5	Electron Kick5
74	ElBd6	Electron Kick6
75	ElBd7	Electron Kick7
76	ElBd8	Electron Kick8
77	ElBd9	Electron Kick9
78	ElBd10	Electron Kick 10
79	ElBd11	Electron Kick 11
80	ElBd12	Electron Kick 12
81	ElBd13	Electron Kick 13
82	ElBd14	Electron Kick 14
83	ElBd15	Electron Kick 15
84	ElBd16	Electron Kick 16
85	ElBd17	Electron Kick 17

86	ElBd18	Electron Kick 18
87	ClasSn1	Classic Snare1
88	ClasSnR1	Classic Snare Rim1
89	ClasSn2	Classic Snare2
90	ClasSnR2	Classic Snare Rim2
91	AcSn	Acoust Snare
92	AcSnR	Acoust Snare Rim
93	StdSn1	Standard Snare1
94	StdSnR1	Standard Snare Rim1
95	StdSn2	Standard Snare2
96	StdSnR2	Standard Snare Rim2
97	StdSn3	Standard Snare3
98	RockSn1	Rock Snare1
99	RockSnR1	Rock Snare Rim1
100	RockSn2	Rock Snare2
101	RockSn3	Rock Snare3
102	RoomSn1	Room Snare1
103	RoomSn2	Room Snare2
104	RoomSn3	Room Snare3
105	JazzSn1	Jazz Snare1
106	JazzSnR1	Jazz Snare Rim1
107	JazzSn2	Jazz Snare2
108	JazzSnR3	Jazz Snare Rim3
109	JzLtSn	Jazz latin Snare
110	BigBdSn	Big Band Snare
111	CamoSn	Camco Snare
112	CamoSnR	Camco Snare Rim
113	BrushSn1	Brush Snare1
114	BrushSn2	Brush Snare2
115	BrushSnR	Brush Snare Rim
116	FunkSn1	Funk Snare1
117	FkStick	Funk Stick
118	FunkSn	Funk Band Snare
119	FunkSnR	Funk Band Snare Rim
120	FunkSnS	Funk Band Snare Stick
121	FusionSn	Fusion Snare
122	FusnSnS	Fusion Snare Stick
123	SnareS	Snare Stick
124	PwrSn	Pwrbd Snare
125	RingoSn	Ringo Snare
126	RingoSn	Ringo Snare Rim
127	HipopSn1	Hiphop Snare1
128	HipopSn2	Hiphop Snare2

129	506Sn1	506 Snare1
130	506SnR1	506 Snare Rim1
131	506Sn2	506 Snare2
132	506SnR3	506 Snare Rim3
133	1969Sn	1969 Snare
134	1969SnR	1969 Snare Rim
135	1971Sn	1971 Snare
136	1971SnR	R1971 Snare Rim
137	1976Sn	1976 Snare
138	1976SnR	R1976 Snare Rim
139	R&BSn	R&B Snare
140	R&BSnS	R&B Snare Stick
141	LowfiSn	Lowfi Snare
142	LowfiSnS	SLowfi Snare Stick
143	VoiceSn	voices Snare
144	VoiceSnR	voices Snare Rim
145	AcSn1	Acoust Snare1
146	AcSn2	Acoust Snare2
147	AcSn3	Acoust Snare3
148	AcSn4	Acoust Snare4
149	AcSn5	Acoust Snare5
150	AcSn6	Acoust Snare6
151	AcSn7	Acoust Snare7
152	HouseSn1	House Snare1
153	HouseSn2	House Snare2
154	HouseSn3	House Snare3
155	StepSn	Step Snare
156	StepSnS	Step Snare Stick
157	TechSn1	Teckno Snare1
158	TechSn2	Teckno Snare2
159	808Sn	808 Snare
160	909Sn	909 Snare
161	InSn	Industry Snare
162	InSnS	Industry Snare Stick
163	DrBsSn1	Drum Bass Snare1
164	DrBsSn2	Drum Bass Snare2
165	JySn	Junkyard Snare
166	JySnS	Junkyard Snare Stick
167	Noise	SnNoise Snare
168	606Sn	TR606 Snare
169	ElSn1	Electronic Snare1
170	ElSn2	Electronic Snare2
171	ElSn3	Electronic Snare3

172	ElSn4	Electronic Snare4	215	ClsTmR1b	Classic Tom Rim 1b
173	ElSn5	Electronic Snare5	216	ClsTm2b	Classic Tom 2b
174	ElSn6	Electronic Snare6	217	ClsTmR2b	Classic Tom Rim 2b
175	ElSn7	Electronic Snare7	218	ClsTm3b	Classic Tom 3b
176	ElSn9	Electronic Snare9	219	ClsTmR3b	Classic Tom Rim 3b
177	ElSn10	Electronic Snare 10	220	ClsTm4b	Classic Tom 4b
178	ElSn12	Electronic Snare 12	221	ClsTmR4b	Classic Tom Rim 4b
179	ElSn13	Electronic Snare 13	222	ClsTm5b	Classic Tom 5b
180	ElSn14	Electronic Snare 14	223	ClsTmR5b	Classic Tom Rim 5b
181	ElSn15	Electronic Snare 15	224	ClsTm6b	Classic Tom 6b
182	ElSn16	Electronic Snare 16	225	ClsTmR6b	Classic Tom Rim 6b
183	ElSn17	Electronic Snare 17	226	CamcoTm1	Camco Tom1
184	ElSn18	Electronic Snare 18	227	CamcoTm2	Camco Tom2
185	ElSn19	Electronic Snare 19	228	CamcoTm3	Camco Tom3
186	ElSn20	Electronic Snare 20	229	CamcoTm4	Camco Tom4
187	ElSn21	Electronic Snare 21	230	CamcoTm5	Camco Tom5
188	ElSn22	Electronic Snare 22	231	CamcoTm6	Camco Tom6
189	ElSn23	Electronic Snare 23	232	AcTm1	Acoust Tom1
190	ElSn24	Electronic Snare 24	233	AcTmR1	Acoust Tom Rim1
191	ElSn25	Electronic Snare 25	234	AcTm2	Acoust Tom2
192	ElSn26	Electronic Snare 26	235	AcTmR2	Acoust Tom Rim2
193	ElSn27	Electronic Snare 27	236	AcTm3	Acoust Tom3
194	ElSn28	Electronic Snare 28	237	AcTmR3	Acoust Tom Rim3
195	ElSn29	Electronic Snare 29	238	AcTm4	Acoust Tom4
196	ElSn30	Electronic Snare 30	239	AcTmR4	Acoust Tom Rim4
197	ElSn31	Electronic Snare 31	240	AcTm5	Acoust Tom5
198	ElSn32	Electronic Snare 32	241	AcTmR5	Acoust Tom Rim5
199	ElSn33	Electronic Snare 33	242	AcTm6	Acoust Tom6
200	ElSn34	Electronic Snare 34	243	AcTmR6	Acoust Tom Rim6
201	ElSn35	Electronic Snare 35	244	StdTm1	Standard Tom1
202	ClsTm1a	Classic Tom 1a	245	StdTm2	Standard Tom2
203	ClsTmR1a	Classic Tom Rim 1a	246	StdTm3	Standard Tom3
204	ClsTm2a	Classic Tom 2a	247	StdTm4	Standard Tom4
205	ClsTmR2a	Classic Tom Rim 2a	248	StdTm5	Standard Tom5
206	ClsTmR3a	Classic Tom 3a	249	StdTm6	Standard Tom6
207	ClsTmR3a	Classic Tom Rim 3a	250	RockTm1	Rock Tom1
208	ClsTm4a	Classic Tom 4a	251	RockTm2	Rock Tom2
209	ClsTmR4a	Classic Tom Rim 4a	252	RockTm3	Rock Tom3
210	ClsTm5a	Classic Tom 5a	253	RockTm4	Rock Tom4
211	ClsTmR5a	Classic Tom Rim 5a	254	RockTm5	Rock Tom5
212	ClsTm6a	Classic Tom 6a	255	RockTm6	Rock Tom6
213	ClsTmR6a	Classic Tom Rim 6a	256	RoomTm1	Room Tom1
214	ClsTm1b	Classic Tom 1b	257	RoomTm2	Room Tom2

258	RoomTm3	Room Tom3
259	RoomTm4	Room Tom4
260	RoomTm5	Room Tom5
261	RoomTm6	Room Tom6
262	Timpani	Timpani
263	FunkTm1	Funk Tom1
264	FunkTm2	Funk Tom2
265	FunkTm3	Funk Tom3
266	FusnTm1	Fusion Tom1
267	FusnTm2	Fusion Tom2
268	FusnTm3	Fusion Tom3
269	1969 Tm1	1969 Tom1
270	1969 Tm2	1969 Tom2
271	1969 Tm3	1969 Tom3
272	1971 Tm1	1971 Tom1
273	1971 Tm2	1971 Tom2
274	1971 Tm3	1971 Tom3
275	1976 Tm1	1976 Tom1
276	1976 Tm2	1976 Tom2
277	1976 Tm3	1976 Tom3
278	Hiphp Tm1	Hiphop Tom1
279	Hiphp Tm2	Hiphop Tom2
280	Hiphp Tm3	Hiphop Tom3
281	Hiphp Tm4	Hiphop Tom4
282	Hiphp Tm5	Hiphop Tom5
283	Hiphp Tm6	Hiphop Tom6
284	JazzTm1a	Jazz Tom 1a
285	JazzTm2a	Jazz Tom 2a
286	JazzTm3a	Jazz Tom 3a
287	JazzTm1b	Jazz Tom 1b
288	JazzTm2b	Jazz Tom 2b
289	JazzTm3b	Jazz Tom 3b
290	JazzTm4b	Jazz Tom 4b
291	JazzTm5b	Jazz Tom 5b
292	JazzTm6b	Jazz Tom 6b
293	BshTm1a	Brush Tom 1a
294	BshTm2a	Brush Tom 2a
295	BshTm3a	Brush Tom 3a
296	BshTm4a	Brush Tom 4a
297	BshTm5a	Brush Tom 5a
298	BshTm6a	Brush Tom 6a
299	BshTm1b	Brush Tom 1b
300	BshTmR1b	Brush Tom Rim 1b

301	BshTm2b	Brush Tom 2b
302	BshTmR2b	Brush Tom Rim 2b
303	BshTm3b	Brush Tom 3b
304	BshTmR3b	Brush Tom Rim 3b
305	BshTm4b	Brush Tom 4b
306	BshTmR4b	Brush Tom Rim 4b
307	BshTm5b	Brush Tom 5b
308	BshTmR5b	Brush Tom Rim 5b
309	BshTm6b	Brush Tom 6b
310	BshTmR6b	Brush Tom Rim 6b
311	TomRim	Tom Rim
312	606Tm1	TR606 Tom1
313	606Tm2	TR606 Tom2
314	606Tm3	TR606 Tom3
315	606Tm4	TR606 Tom4
316	606Tm5	TR606 Tom5
317	606Tm6	TR606 Tom6
318	808Tm1	808 Tom1
319	808Tm2	808 Tom2
320	808Tm3	808 Tom3
321	808Tm4	808 Tom4
322	808Tm5	808 Tom5
323	808Tm6	808 Tom6
324	ElTm1	Electronic Tom1
325	ElTm2	Electronic Tom2
326	ElTm3	Electronic Tom3
327	ElTm4	Electronic Tom4
328	ElTm5	Electronic Tom5
329	ElTm6	Electronic Tom6
330	StepTm1	Step Tom1
331	StepTm2	Step Tom2
332	StepTm3	Step Tom3
333	909Tm1	909 Tom1
334	909Tm2	909 Tom2
335	909Tm3	909 Tom3
336	JyTm1	Junkyard Tom1
337	JyTm2	Junkyard Tom2
338	JyTm3	Junkyard Tom3
339	NoiseTm1	Noise Tom1
340	NoiseTm2	Noise Tom2
341	NoiseTm3	Noise Tom3
342	VoiceTm1	Voices Tom1
343	VoiceTm2	Voices Tom2

344	VoiceTm3	Voices Tom3	387	ClsCr2	Classic Crash2
345	IndTm1	Industry Tom1	388	ClsCr3	Classic Crash3
346	IndTm2	Industry Tom2	389	ClsCr4	Classic Crash4
347	IndTm3	Industry Tom3	390	Splash	Splash
348	Std20Rd	Standard 20" Ride	391	SplashBl	Splash Bell
349	Std22Rd	Standard 22" Ride	392	RockCr	Rock Crash
350	StdRdBl	Standard Ride Bell	393	RkSplash	Rock Splash
351	RockRd	Rock Ride	394	JzSplash	Jazz Splash
352	RockBl	Rock Bell	395	JzSpBl	Jazz Splash Bell
353	DryRdBl	Dry Ride Bell	396	BshCr	Brush Crash
354	VintgRd	Vintage Ride	397	CrystlCr	Crystal Crash
355	60'sRd	60's Ride	398	CryCrBl	Crystal Crash Bell
356	ClnPopRd	Clean Pop Ride	399	China2	China2
357	PopRdBl	Clean Pop Ride Bell	400	ChinaLow	China Low
358	LightRd	Light Flat Ride	401	OrHit1	Orchestra Hit1
359	FlatRd	Flat Ride	402	OrHit2	Orchestra Hit2
360	TechRd1	Teckno Ride1	403	OrHitBl	Orchestra Hit Bell
361	TechRd2	Teckno Ride2	404	DrBsCr1	Drum Bass Crash1
362	JyBreak	Junkyard Break	405	DrBsCr2	Drum Bass Crash2
363	JyMetal	Junkyard Metal	406	China3	China3
364	ClsRd	Classic Ride	407	606Cr1	TR 606 Cymbal1
365	ClsRdBl	Classic Ride Bell	408	606Cr2	TR 606 Cymbal2
366	AcRd	Acoustic Ride	409	808Cr1	TR 808 Cymbal1
367	AcRdBl	Acoustic Ride Bell	410	808Cr2	TR 808 Cymbal2
368	JazzRd	Jazz Ride	411	909Cr1	TR 909 Cymbal1
369	JazzRdBl	Jazz Ride Bell	412	909Cr2	TR 909 Cymbal2
370	BrshRd	Brush Ride	413	JyCr1	Junkyard Cymba11
371	BrshRdBl	Brush Ride Bell	414	JyCr2	Junkyard Cymba12
372	MuteRdBl	Mute Ride Bell	415	EfCr1	Cymbal Effect1
373	RideEg1	Ride Edge1	416	EfCr2	Cymbal Effect2
374	RideEg2	Ride Edge 2	417	LaserRay	Laser Ray
375	60'sRdR	60's Ride Rim	418	DriveBy	Drive By
376	ClPopRdR	Clean Pop Ride Rim	419	IndShort	Industrial Short
377	SkyRdR	Sky Ride Rim	420	IndLong	Industrial Long
378	ClsCrBl1	Classic Crash Bell1	421	StdHats1	Standard Hats1
379	ClsCrBl2	Classic Crash Bell2	422	StdHats2	Standard Hats2
380	StdCr1	Standard Crash1	423	StdHOpB	OpenStandard HHB
381	ClsChina	Class China	424	StdHOpRB	Standard HH Open RimB
382	StdCr2	Standard Crash2	425	RockHOp	Rock HH Open
383	StdCrBl1	Standard Crash Bell1	426	PopHOp	Pop HH Open
384	StdCrBl2	Standard Crash Bell2	427	PopHOpR	Pop HH Open Rim
385	China1	China1	428	BrshHOp	Brush HH Open
386	ClsCr1	Classic Crash1	429	60'sHOp	60's HH Open

430	MiniHOp	Mini HH Open	473	JyHCs	Junkyard HH Close
431	MiniHOpR	Mini HH Open Rim	474	NoiceHCs	Noices HH Close
432	ClsHOpA	Classic HH OpenA	475	BrshHCs	Bass HH Close
433	ClsHOpB	Classic HH OpenB	476	StdHPdA	Standard HH PadA
434	CamcoHOp	Camco HH Open	477	StdHPdB	Standard HH PadB
435	VoiceHOp	Voice HH Open	478	RockHPd	Rock HH Pad
436	HouseHOp	House HH Open	479	PopHpd	Pop HH Pad
437	606HOp	TR 606 HH Open	480	BrshHPd	Brush HH Pad
438	808HOp	TR 808 HH Open	481	60'sHPd	60's HH Pad
439	909HOp	TR 909 HH Open	482	MiniHPd	Mini HH Pad
440	JyHOp	Junkyard HH Open	483	ClsHPdA	Classic HH PadA
441	NoiseHOp	Noise HH Open	484	ClsHPdB	Classic HH PadB
442	BassHOp	Bass HH Open	485	CamcoHPd	Camco HH Pad
443	StdHfOp	Standard HH Half Open	486	VoiceHPd	Voices HH Pad
444	RockHfOp	Rock HH Half Open	487	HouseHPd	House HH Pad
445	PopHfOp	Pop HH Half Open	488	606HPd	TR 606 HH Pad
446	PopHfR	Pop HH Half Rim	489	808HPd	TR 808 HH Pad
447	BrshHfOp	Brush HH Half Open	490	JyHPd	Junkyard HH Pad
448	60'sHfOp	60's HH Half Open	491	NoiceHPd	Noices HH Pad
449	MiniHfOp	Mini HH Half Open	492	BrshHPd	Bass HH Pad
450	MiniHfR	Mini HH Half Rim	493	Splashed	Splashed
451	ClsHfRA	Classic HH Half Rima	494	PopSPd	Pop Splashed
452	ClsHfRB	Classic HH Half RimB	495	MiniSPd	Mini Splashed
453	CamHfOp	Camco HH Half Open	496	ClsSPdA	Classic SplashedA
454	JyHfR	Junkyard HH Half Rim	497	ClsSPdB	Classic Splashedb
455	StdHCsA	Standard HH CloseA	498	Mute	Mute
456	StdHCsB	Standard HH CloseB	499	MetronBl	MetronomeBell
457	RockHCs	Rock HH Close	500	MetronCl	MetronomeClick
458	PopHCs	Pop HH Close	501	Scratch	Scratch
459	PopHCsR	Pop HH Close Rim	502	ScratchP	ScratchPush
460	BrshHCs	Brush HH Close	503	DJ Efx	DJEFX
461	60'sHCs	60's HH Close	504	HiQZap	HiQZap
462	MiniHCs	Mini HH Close	505	DingBl	DingBell
463	MiniHCsR	Mini HH Close Rim	506	Finge Snp	FingerSnaps
464	ClsHCsA	Classic HH CloseA	507	StdClap	StandardClap
465	ClsHCsB	Classic HH CloseB	508	Tambour	Tambourine
466	ClsHCsRB	Classic HH Close RimB	509	Vibraslp	Vibraslap
467	CamcoHCs	Camco HH Close	510	AgogoLo	AgogoLow
468	VoiceHCs	Voices HH Close	511	AgogoHi	AgogoHigh
469	HouseHCs	House HH Close	512	BellTree	BellTree
470	606HCs	TR 606 HH Close	513	BongoHi	BongoHigh
471	808HCs	TR 808 HH Close	514	BongoLo	BongoLow
472	909HCs	TR 909 HH Close	515	Shaker	Shaker

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516	CgslpLo	Conga SlapLow
517	CgslpHi	Conga Slap High
518	ElectCgL	Elect Conga Low
519	OpCga	Open Conga
520	Cgaslp	Conga Slap
521	CowBl	Cow bell
522	TimbHi	Timbale Hi
523	TimbLo	Timbale Low
524	TimpHi	Timpani High
525	TimpLo	Timpani Low
526	OpTblHi	Open Tabla High
527	OpTblLo	Open Tabla Low
528	SlpTbl	Slap Tabla
529	MuTblslp	Mute Tablaslap
530	Cabasa	Cabasa
531	Maracas	Maracas
532	Whistle	Short Whistle
533	GuiroS	Guiro Short
534	GuiroL	Guiro Long
535	Claves	Claves
536	Woodbk	Wood block
537	CuicaMut	Cuica Muted
538	CuicaOp	Cuica Open
539	TriaMut	Triangle Muted
540	TriaOp	Triangle Open
541	SleighBl	Sleigh Bells
542	WindCh	WindChimes
543	Castanet	Castanets
544	SurdoMut	SurdoMuted
545	SurdoOpn	SurdoOpen
546	LotusDrm	LotusDrum
547	Cowbell1	Cowbell1
548	Cowbell2	Cowbell2
549	Cowbell3	Cowbell3
550	Cowbell4	Cowbell4
551	Cowbell5	Cowbell5
552	Cowbell6	Cowbell6
553	Cowbell7	Cowbell7
554	Cowbell8	Cowbell8
555	Cowbell9	Cowbell9
556	Cowbel10	Cowbell 10
557	Cowbel11	Cowbell 11
558	Tabla1	Tabla 001
559	Tabla2	Tabla 002

560	Tabla3	Tabla003
561	Tabla4	Tabla004
562	Tabla5	Tabla005
563	Tabla6	Tabla006
564	FX1	FX1
565	FX2	FX2
566	FX3	FX3
567	FX4	FX4
568	FX5	FX5
569	FX6	FX6
570	FX7	FX7
571	FX8	FX8
572	FX9	FX9
573	FX10	FX 10
574	FX11	FX 11
575	FX12	FX 12
576	FX13	FX 13
577	FX14	FX 14
578	FX15	FX 15
579	FX16	FX 16
580	FX17	FX 17
581	FX18	FX 18
582	FX19	FX 19
583	FX20	FX 20
584	FX21	FX 21
585	FX22	FX 22
586	FX23	FX 23
587	FX24	FX 24
588	FX25	FX 25
589	FX26	FX 26
590	FX27	FX 27
591	FX28	FX 28
592	FX29	FX 29
593	FX30	FX 30
594	FX31	FX 31
595	FX32	FX 32
596	FX33	FX 33
597	FX34	FX 34
598	FX35	FX 35
599	FX36	FX 36
600	FX37	FX 37
601	FX38	FX 38
602	FX39	FX 39
603	FX40	FX 40

604	FX41	FX 41	649	Fx6	Fx006
605	FX42	FX 42	650	Fx7	Fx007
606	FX43	FX 43	651	Fx8	Fx008
607	FX44	FX 44	652	Fx9	Fx009
608	FX45	FX 45	653	Fx10	Fx010
609	FX46	FX 46	654	Fx11	Fx011
610	FX47	FX 47	655	Fx12	Fx012
611	FX48	FX 48	656	Fx13	Fx013
612	FX49	FX 49	657	Fx14	Fx014
613	FX50	FX 50	658	Fx15	Fx015
614	FX51	FX 51	659	Fx16	Fx016
615	FX52	FX 52	660	Fx17	Fx017
616	FX53	FX 53	661	One	One
617	FX54	FX 54	662	Two	Two
618	FX55	FX 55	663	Three	Three
619	FX56	FX 56	664	Four	Four
620	FX57	FX 57	665	Five	Five
621	FX58	FX 58	666	Six	Six
622	FX59	FX 59	667	Seven	Seven
623	FX60	FX 60	668	Eight	Eight
624	FX61	FX 61	669	Nine	Nine
625	FX62	FX 62	670	Ti	Ti
626	FX63	FX 63	671	Ta	Ta
627	FX64	FX 64	672	Ei	Ei
628	FX65	FX 65	673	An	An
629	FX66	FX 66	674	E	E
630	FX67	FX 67	675	StandrdA	StandrdA
631	FX68	FX 68	676	StandrdB	StandrdB
632	FX69	FX 69	677	Rock	Rock
633	FX70	FX 70	678	Pop	Pop
634	DJ1	DJ 001	679	Brush	Brush
635	DJ2	DJ 002	680	Vintage	Vintage
636	DJ3	DJ 003	681	Mini	Mini
637	DJ4	DJ 004	682	ClassicA	ClassicA
638	DJ5	DJ 005	683	ClassicB	ClassicB
639	DJ6	DJ 006	684	Jazz	Jazz
640	DJ7	DJ 007	685	Prog	Prog
641	DJ8	DJ 008	686	Voice	Voice
642	DJ9	DJ 009	687	House	House
643	DJ10	DJ 010	688	808	808
644	Fx1	Fx001	689	909	909
645	Fx2	Fx002	690	Junk	Junk
646	Fx3	Fx003	691	Dirty	Dirty
647	Fx4	Fx004	692	Bass	Bass
648	Fx5	Fx005			

KIT LIST

NUM	NAME	NUM	NAME
1	Acoust-1	21	DrumBass
2	FunkBand	22	Funk
3	Pwrbd	23	HipHop-1
4	Std-2	24	HipHop-2
5	Acoust-2	25	House-1
6	Fusion	26	House-2
7	Camco	27	Vintage
8	JzBrush	28	Junkyard
9	Room	29	M-box
10	Rock	30	Step
11	PopRock	31	Industry
12	Jazz	32	Lowfi
13	Brush	33	Metal
14	Songo	34	Electron
15	197 1's	35	JzLatin
16	Timbals	36	Noise
17	O school	37	Std-1
18	Tr606	38	R&B
19	Disco	39	Magic
20	909	40	Teckno

SONG LIST

Number	Group	LCD Name	Name
1	Pattern Loop	Fusion1	Fusion1
2		Hiphop	Hiphop
3		16Bt Pop	16 Beat Pop
4		Dance1	Dance1
5		LtinDan1	Latin Dance1
6		Rock1	Rock1
7		Ltin Jz1	Latin Jazz1
8		Funk1	Funk1
9		LtinPop1	Latin Pop1
10		60'sRock	60's Rock
11		BigBand1	Big Band1
12		D N'B1	Drum N'Bass1
13		Ballad1	Ballad1
14		Swing1	Swing1
15		Pop1	Pop1
16		Funk2	Funk2
17		Ltin Jz2	Latin Jazz2
18		Pop Fuk1	Pop Funk1
19		Ltin Rk1	Latin Rock1
20		BigBand2	Big Band2
21		Pop Bald	Pop Ballad
22		Pop Fuk2	Pop Funk2
23		3/4 Jazz	3/4 Jazz
24		Pop Bosa	Pop Bossa
25		Samba1	Samba1
26		6/8Bald1	6/8Ballad1
27		Fusion2	Fusion2
28		Jazz1	Jazz1
29		Gtr Bosa	Guitar Bossa
30		BreakBt1	Break Beat1
31		World1	World1
32		Funk3	Funk3
33		Ltin Jz3	Latin Jazz3
34		LtinPop2	Latin Pop2
35		Reggae1	Reggae1
36		Fusion3	Fusion3
37		Swing2	Swing2
38		Pop Shuf	Pop Shuffle
39		Ballad2	Ballad2
40		Piano Rk	Piano Rock
41		Blues1	Blues1
42		R&B1	R&B1

43		Funk4	Funk4
44		Mambo	Mambo
45		LtinDan2	Latin Dance2
46		D N'B2	Drum N'Bass2
47		Pop Rk	Pop Rock
48		Punk	Punk
49		Fusion4	Fusion4
50		BreakBt2	Break Beat2
51		Dance Rk	Dance Rock
52		Funk5	Funk5
53		Fusion5	Fusion5
54		Reggae2	Reggae2
55		Couty Bl	Country Blues
56		Pop2	Pop2
57		Dance2	Dance2
58		R&B2	R&B2
59		R N'R1	Rock N'Roll1
60		Boogie1	Boogie1
61		Beguine	Beguine
62		NewAge	New Age
63		16Beat	16 Beat
64		Metal1	Metal1
65		6/8Bald2	6/8 Balla2
66		Dance3	Dance3
67		8Beat	8 Beat
68		Blues2	Blues2
69		Disco1	Disco1
70		Arabic1	Arabic1
71		House	House
72		Arabic2	Arabic2
73		R N'R2	Rock N'Roll2
74		Piano Bt	Piano 8 Beat
75		Rock2	Rock2
76	1 Shot	Ltin Jz4	Latin Jazz4
77		Country	Country
78		BigBand3	Big Band3
79		Slow Fs	Slow Fusion
80		Moden Jz	Modern Jazz
81		D N'B3	Drum N'Bass3
82		Reggae3	Reggae3
83		Funk6	Funk6
84		Funk7	Funk7
85		Swing3	Swing3

86		Disco2	Disco2
87		Boogie2	Boogie2
88		Metal2	Metal2
89		HardRock	Hard Rock
90		Latin1	Latin1
91	Percussion	World2	World2
92	Loop	Latin2	Latin2
93		Bossa	Bossa
94		Samba2	Samba2
95		3/4Pop	3/4 Pop
96		Pop3	Pop3
97		Jazz2	Jazz2
98		Reggae4	Reggae4
99		Reggae5	Reggae5
100		Ltin Rk2	Latin Rock2
101	HIT	Choru T1	Choru Piano Tap1
102		Fifths	Fifths Tap
103		Brigh T1	Brightenss Tap1
104		Atmosphe	Atmosphere
105		Choru T2	Choru Piano Tap2
106	TAP	Bass Tp1	Bass Tap1
107		Syn Str	Synth String Tap
108		Brigh T2	Brightenss Tap2
109		Bass Tp2	Bass Tap2
110		Pad Tap1	Pad Tap1
111		Vibrapho	Vibraphone
112		Bass Tp3	Bass Tap3
113		Rain Tap	Rain Tap
114		Pizz Str	Pizzcato Strings
115		Bass Tp4	Bass Tap4
116		Crystal	Crystal
117		Xylophon	Xylophone
118		Bass Tp5	Bass Tap5
119		Pad Tap2	Pad Tap2
120		Glock Tp	Glockenspiel Tap

DEMO LIST

Demo No.	NAME
1	FUSION
2	WORLD

ASCII CHARAC TER LIST

!	#	$	%	&	`	(	)	+	=
_	-	,	;	@	0	1	2	3	4
5	6	7	8	9	A	B	C	D	E
F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y
Z	a	b	c	d	e	f	g	h	i
j	k	l	m	n	o	p	q	r	s
T	u	v	w	x	y	z			