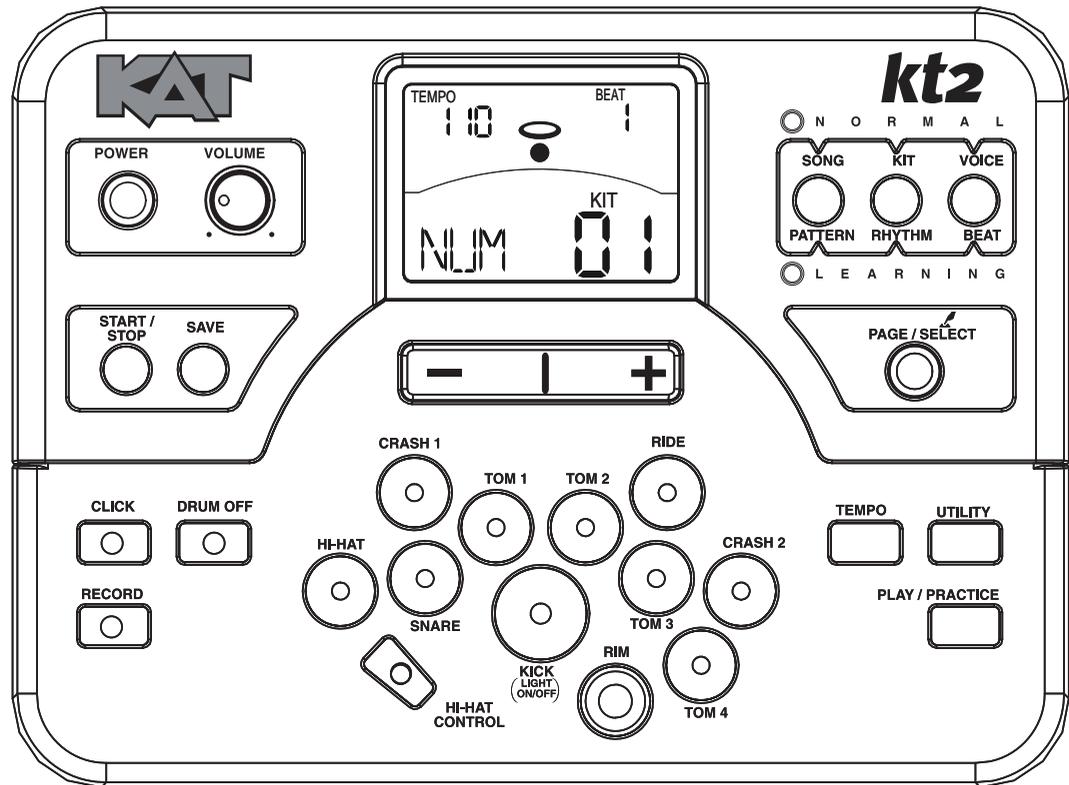




# kt2

Digital Drum Set



## Owner's Manual



# INFORMATION FOR YOUR SAFETY!

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:  
 (1) this device may not cause harmful interference, and  
 (2) this device must accept any interference received, including interference that may cause undesired operation.

## FCC COMPLIANCE NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not used in accordance with the instructions, may cause harmful interference to radio communications and there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna, increase the separation between the equipment and receiver, connect the equipment into an outlet on a circuit different from that of the receiver. Consult the dealer or an experienced radio/TV technician if help is needed with interference.

NOTE: FMIC will not be responsible for unauthorized equipment modifications that could violate FCC rules, and/ or void product safety certifications.

### CAUTION

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

### CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## PRECAUTIONS

### PLEASE READ CAREFULLY BEFORE PROCEEDING

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

#### Power Supply

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

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

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

#### Connections

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

#### Location

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

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

#### Interference with other electrical devices

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

#### Cleaning

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

#### Handling

Do not apply excessive force to the switches or controls.

Do not let paper, metallic, or other objects into the instrument. If this happens, unplug the AC adaptor from the wall outlet. Then have the instrument inspected by qualified service personnel.

Disconnect all cables before moving the instrument.

# Contents

## Panel & Display Description

Front Panel.....	4
Rear & Side Panel.....	5
Display.....	5

## Quick Start

### Setup

Connecting Pads and Pedals.....	6
---------------------------------	---

### Connections

Connecting Audio Equipment.....	7
Connecting a set of Headphones.....	7
Connecting an MP3/CD Player.....	7
Connecting a Computer.....	7
Connecting a Midi Keyboard.....	7
Power Supply.....	7

### Performing

Selecting a Drum Kit.....	8
Playing the Pads.....	8
Adjusting the Sensitivity of a Pad.....	9
Using the Metronome/Click Feature.....	9
Adjusting the Tempo.....	9

### Editing and Saving a Drum Kit

Adjusting the Volume of a Drum Kit.....	10
Switching Reverb On/Off and Setting EQ.....	10
Selecting the Drum Instrument of the Pad.....	10
Adjusting the Volume, Pan and Pitch of the Pad.....	10
Setting the Pads to Play Songs.....	10
Saving the Edited Kit.....	10

### Playing Along with Songs

Selecting and Playing Back a Song.....	11
Adjusting the Volume of the Accompaniment and Drum....	11
Muting the Drums in Songs.....	11
Using the Pads to Play Songs.....	11

### Recording Your Performance

Recording Your Performance Quickly.....	12
Playing Back Your Recorded Performance.....	12
Making the Settings for Recording.....	12

### Practicing with Patterns

Selecting a Pattern and Practicing with it.....	13
Scoring Your Practice.....	13
Playing Back Your Recorded Practice.....	13

## Advanced Use

### Creating Your Own Drum Kit

About the Drum Kits.....	14
Selecting a Drum Kit.....	14
Overall Drum Kit Setting.....	14
Selecting the Pad to Edit.....	14
About the Drum Instruments.....	15
Selecting Instruments.....	15
Drum Instrument Setting.....	15

Settings for Other Functions.....	15
Saving to a User Drum Kit.....	15

### Making the Settings for Pads

About Settings of Pads.....	16
Adjusting the Pad Sensitivity.....	17
Setting the Pad Threshold.....	17
Eliminating Crosstalk between Pads.....	17
Selecting the Pad Curve.....	17
Setting Rim Sensitivity on Pads.....	18
Adjusting the Hi-Hat Pedal Splash Sensitivity.....	18
Saving Settings of Pads.....	18

### Setting the Metronome

About Click.....	19
Switching the Click On/Off.....	19
Adjusting the Click Tempo.....	19
Setting the Time Signature.....	19
Setting the Interval.....	19
Adjusting the Click Volume.....	19
Selecting the Click Sound.....	19

### Playing Back Songs

About Songs.....	20
Selecting a Song.....	20
Playing Back a Song.....	20
Adjusting the Accompaniment Volume.....	20
Adjusting the Drum Volume.....	20
Muting the Drums in Songs.....	20

### Recording a Song

About Recording.....	21
Recording Pad Performances.....	21
Recording Performances Accompanied with a Song.....	21
Playing Back Your Recorded Performance.....	21
Recording Standby.....	21

### Practicing in Learning Mode

About Learning Mode.....	22
Practicing with Beats.....	22
Practicing with Rhythms.....	23
Practicing with Patterns.....	23
Recording and Scoring Your Practice.....	24
Playing Back Your Recorded Practice.....	24

### Making the Setting for MIDI

About MIDI.....	25
Making the MIDI Settings.....	25
Connecting with an External Sound Device.....	26
Using the digital drum as a Sound Module.....	26

## Appendices

Prompt Messages.....	27
Troubleshooting.....	27
Specifications.....	28
Kit/Voice/Song/Pattern/Parameter List.....	29
MIDI Implementation Chart.....	39

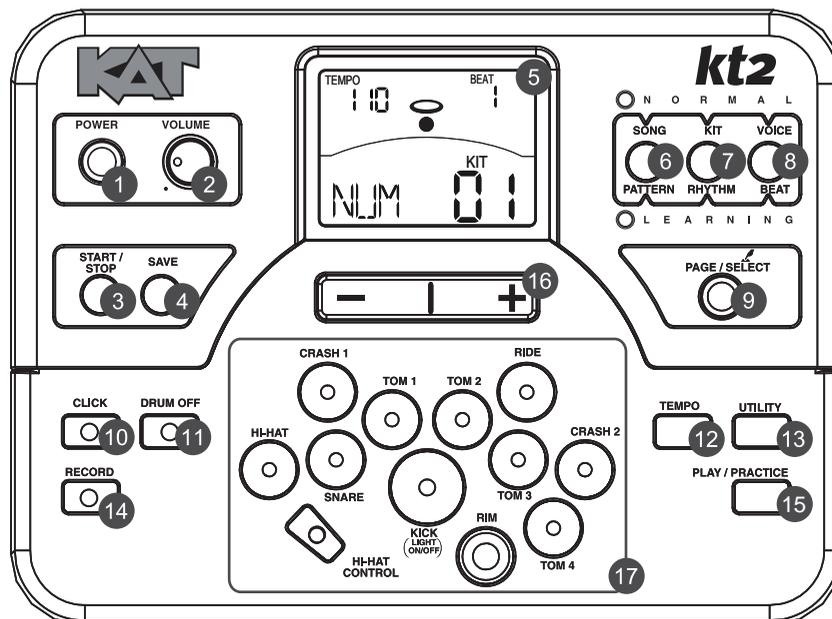
QUICK START

ADVANCED USE

APPENDICES

# Panel Description

## Front Panel



### 1. POWER Button

This Button turns the power on and off.

### 2. VOLUME Knob

Adjust the volume of phone and line output.

### 3. START/STOP Button

Start or stop playing.

### 4. SAVE Button

This button is used to save the current kit settings in a user kit and save the trigger settings under the Utility menu pages.

### 5. LCD Display

Please refer to the LCD Display section.

### 6. SONG/PATTERN Button

Enter the Song menu in NORMAL mode or enter the Pattern Practice menu in LEARNING mode.

### 7. KIT/RHYTHM Button

Enter the Kit menu in NORMAL mode or enter the Rhythm Practice menu in LEARNING mode.

### 8. VOICE/BEAT Button

Enter the Voice menu in NORMAL mode or enter the Beat Practice menu in LEARNING mode.

### 9. PAGE/SELECT Button

Scroll through the menu pages. Press and hold it for 1 second to switch modes between NORMAL and LEARNING.

### 10. CLICK Button

Turn the metronome on or off and enter the Click menu in NORMAL mode.

### 11. DRUM OFF Button

Mute the drum part of the pattern.

### 12. TEMPO Button

Adjust the current tempo.

### 13. UTILITY Button

Enter the Utility menu in NORMAL mode.

### 14. RECORD Button

Enter the Record menu in NORMAL mode.

### 15. PLAY/PRACTICE Button

Play back your recording in NORMAL mode. Start practicing following sample practice patterns in LEARNING mode. Press and hold it for 1 second to play back your practice in LEARNING mode.

### 16. + Button and - Button

Press the [ + ] button increases and press [ - ] button decreases the current parameter.

### 17. Pad Select Buttons

These buttons play the pad voices of the current kit. In Voice menu and Utility menu, they select the pad to be edited.

## Panel Description

### Rear Panel & Side Panel

#### 18. PHONES Jack(1/8")

This stereo jack is used to connect headphones to the unit.

#### 19. AUX IN Jack(1/8")

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

#### 20. LINE OUTPUT Jacks(1/4")

Stereo output connection to an audio system or drum amplifier.

#### 21. CRASH 2 Jack(1/4")

Input connection for Crash 2.

#### 22. TOM 4 Jack(1/4")

Input connection for Tom 4.

#### 23. MIDI Connectors (IN, OUT)

These ports allow communication with other products equipped with a MIDI interface.

#### 24. USB Connector

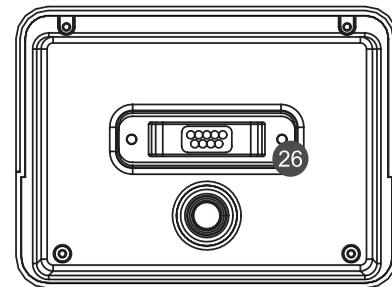
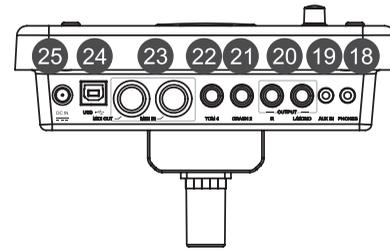
This port is used to connect to a computer (MIDI In/Out via USB).

#### 25. DC IN Jack

Connect the included DC 9V power adaptor.

#### 26. PAD Connectors

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



### Display

#### 1. Tempo/Measure

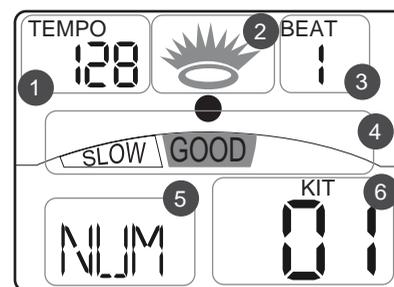
#### 2. Hitting Indicator

#### 3. Beat Count

#### 4. Indicators for Learning

#### 5. Indicators for Menus (Such as UTILITY, REC, etc.)

#### 6. Current Mode and Parameter Display



# Setup

## Caution!

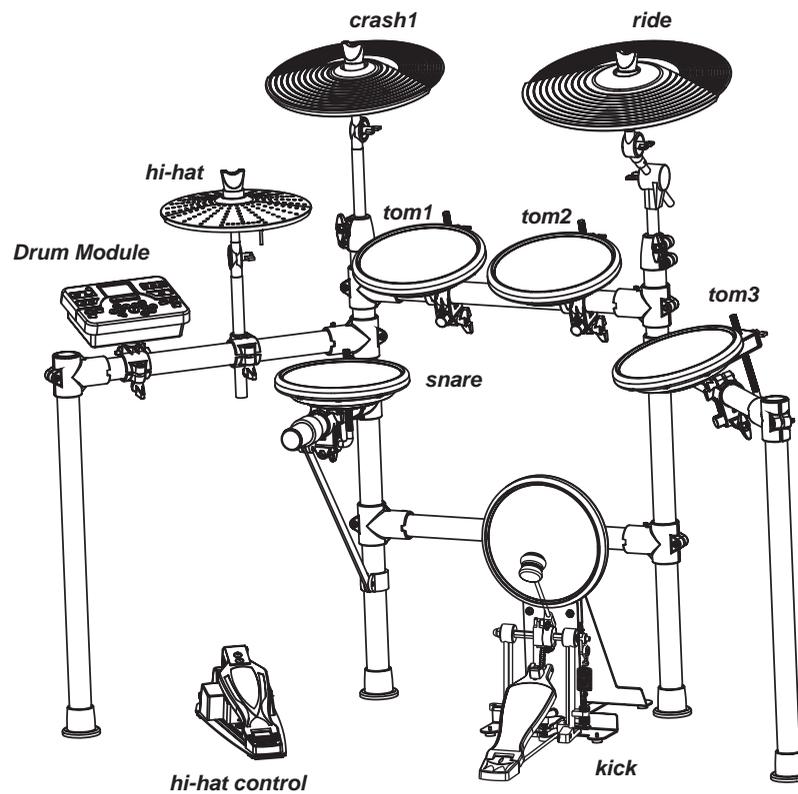
To prevent electric shock and damage to the device, make sure the power is switched OFF on the drum and all related device before making any connection.

## Connecting Pads and Pedals

**Standard:** KICK, SNARE, TOM1-3, CRASH1, RIDE, HIHAT, HIHAT CONTROL PEDAL

**Extended:** CRASH2, TOM4

Using the provided cable harness, connect with kick, snare, tom1~tom3, ride, crash, hi-hat, hi-hat control triggers. Snare, tom, crash1, crash2 and ride pads are stereo input and support double triggering; crash1, crash2, ride support choke. Hi-hat control pedal is stereo input.



## Note:

For details on assembling the drum stand, attaching the digital drum and connecting pads, refer to the Assembly Instructions.

Bass drum pedal NOT included on some models.

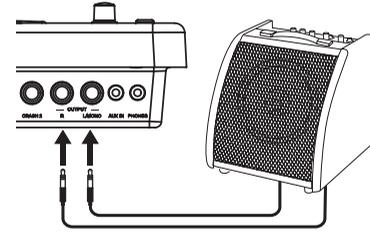
# Connections

## Connecting Audio Equipment

When using an amplifier, connect the Output L/MONO and R jacks on the rear panel to the input of the amplifier.

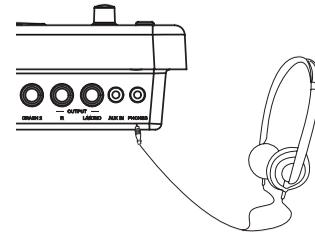
### Note:

For mono playback, use the L/MONO jack.  
For stereo playback, connect both L/MONO and R jacks.  
The line output volume is controlled by the VOLUME knob.



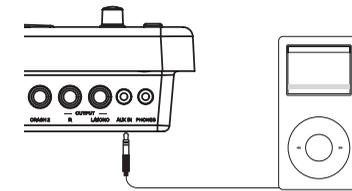
## Connecting a set of Headphones

An optional set of stereo headphones can be connected to the PHONES jack located on the side of the drum module. The headphones output volume is controlled VOLUME knob, too.



## Connecting an MP3/CD Player

Connect the audio output of an MP3/CD player or other audio source to the stereo AUX IN jack on the rear panel. The input signal is mixed with the drum signal, allowing you to play along.



## Connecting a Computer

### ■ Via the USB Connector

This receives and transmits MIDI messages.

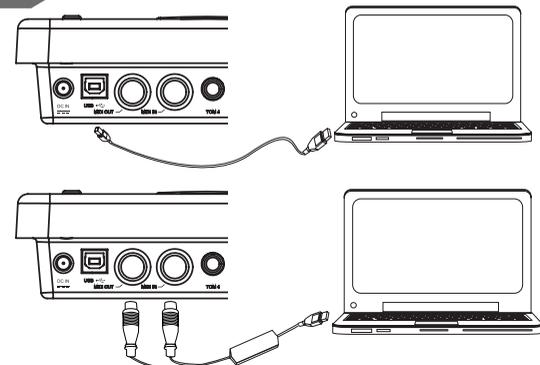
### ■ Via the MIDI Connectors

#### MIDI IN Connector

This receives MIDI messages transmitted from an external MIDI device or a computer.

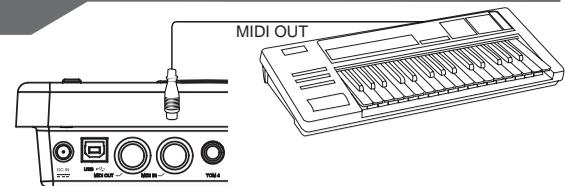
#### MIDI OUT Connector

Pad performance data is transmitted from this connector to connected computer or MIDI device.



## Connecting a Midi Keyboard

If you're using an external MIDI keyboard or pads to control the digital drum, make connections as shown. Here, it is used as a sound module.

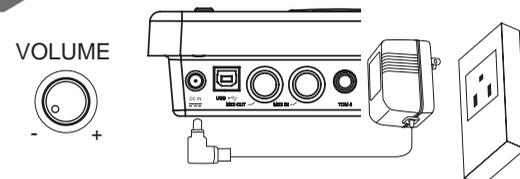


## Power Supply

Make sure the power is turned OFF. Connect the power adaptor to the DC IN jack on the side panel. After confirming that all connections have been completed, rotate the volume knob to the left (minimum volume level) before powering on the module. Press the [POWER] button to turn on the module. The KIT indicator on LCD will light up and the display will show kit number 001.

### Note:

Make sure the power is turned OFF when connecting the drum module with external devices.



### HINT

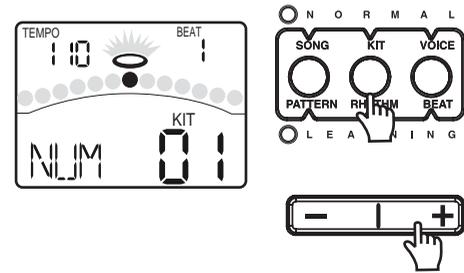
The module will automatically turn off if there aren't any operations for about 30 minutes except during playing song or metronome, record, MIDI in via USB port from computer and strike pads. Please press [UTILITY] button repeatedly and enter "POW" menu for the setting.

# Performing

## Selecting a Drum Kit

After powering up, the digital drum will be in KIT menu (KIT indicator ON ). The display should look like this:

- Use the [ - ] and [ + ] buttons to select the active kit.  
There are 45 kits in the digital drum:
  - 30 preset kits (Kits 01-30)
  - 15 user kits (Kits 31-45), the parameter display area will display as "U31~U45", with an additional letter "U".



- Pressing the Pad Select buttons allows you to preview the current kit (fixed velocity).
- Hit the pads to play the current kit.



## Playing the Pads

Similar to an acoustic drum kit, the digital drum responds differently to various playing techniques and dynamics. All the pads are velocity sensitive. And some voices change timbre depending on the striking force.

### Drum Pad Head or Rim shot

The digital drum pad detects head and rim shots (rim shots trigger the rim voice).

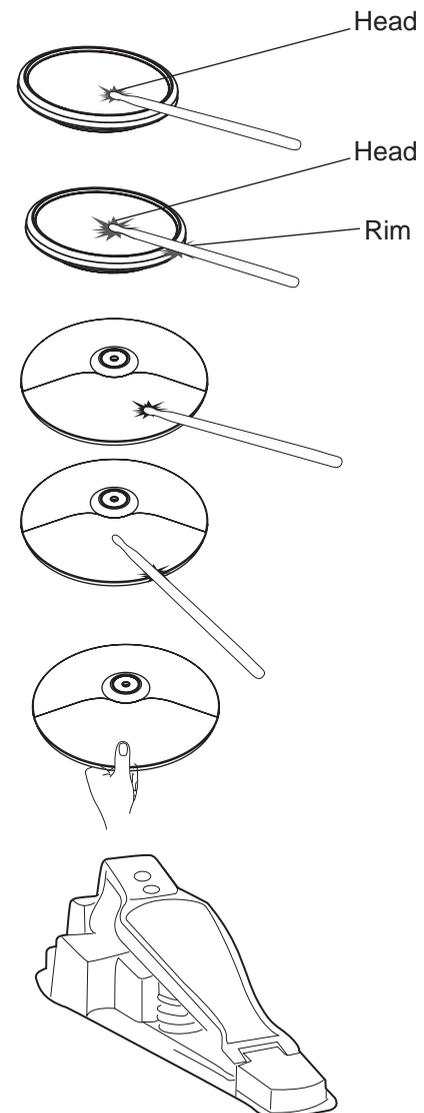
### Cymbal Bow shot and Rim shot

The digital drum cymbals detect bow and rim shot. Both Ride and Crash cymbals have cymbal choke. But hi-hat does not have the cymbal choke. Choking the crash/ride edge with the hand immediately after hitting the crash/ride mutes the crash/ride sound.

### Hi-Hat

The Hi-Hat sound varies depending on the position of the Hi-Hat pedal:

- Open Hi-Hat:** Strike the Hi-Hat pad without pressing the pedal.
- Half-Open Hi-Hat:** Strike the Hi-Hat pad with the pedal pressed halfway down.
- Closed Hi-Hat:** Strike the Hi-Hat pad with the pedal pressed completely down.
- Pedal Close:** Press the pedal completely down without striking the pad.
- Splash:** Press the pedal completely down and release it immediately.

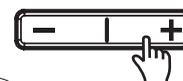
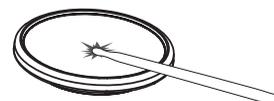
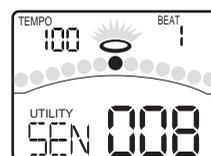


## Adjusting the Sensitivity of a Pad

You may wish to adjust the sensitivity of the pads according to your playing style and desired dynamic range.

1. Press the [UTILITY] button  
The UTILITY indicator appears.
2. Strike a pad or press a pad select button to select the one whose sensitivity is to be adjusted. The PAD indicator shows the current selected pad.
3. Press the [ - ] or [ + ] button to adjust the sensitivity.
4. Press the [SAVE] button to save the current setting.

For details on pad adjustments, refer to **Advanced Use**.



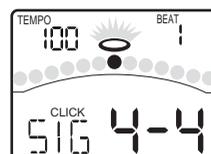
SAVE



## Using the Metronome/Click Feature

You can switch the click sound on and off by pressing [CLICK] button. When the click plays at the current Time Signature and Tempo (displayed in the top left corner of the LCD), the beat indicators will swing accordingly. You can set the time signature and interval, adjust the click volume and select the click sound in the CLICK menu.

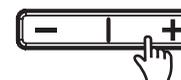
1. Press the [CLICK] button.  
Start the metronome with click sound.
2. Press the [PAGE] button to select the click menu pages and press the [ - ] or [ + ] button to adjust the parameters.
3. Press the [CLICK] button again.  
Stop the metronome and exit the click menu.



CLICK



PAGE/SELECT



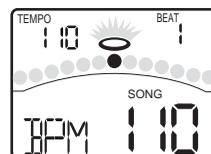
CLICK



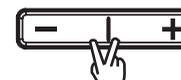
## Adjusting the Tempo

You can adjust the tempo of the Metronome, the current song, and the current learning pattern. The current tempo always displays in the top left corner of the LCD.

1. Press the [TEMPO] button.
2. Press the [ - ] or [ + ] button.  
Adjust the current tempo.
3. Press both [ - ] and [ + ] buttons at the same time, reset the current tempo to its default value.



TEMPO



### Note:

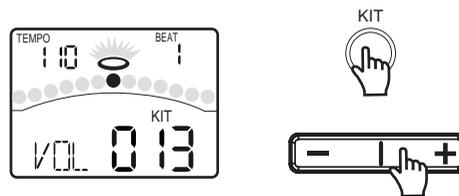
If there's no operation, it will return to the previous menu page automatically after 3 seconds.

# Editing and Saving a Drum Kit

In KIT menu, you can modify the parameters as you like and save to the selected user kit.

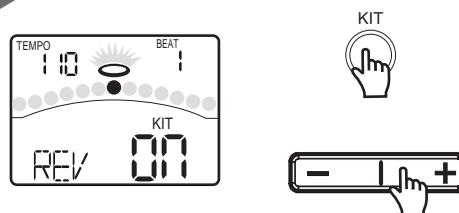
## Adjusting the Volume of a Drum Kit

1. Press the [KIT] or [PAGE] button.  
Select the Kit Volume page.
2. Press the [ - ] or [ + ] button.  
Adjust the kit volume.



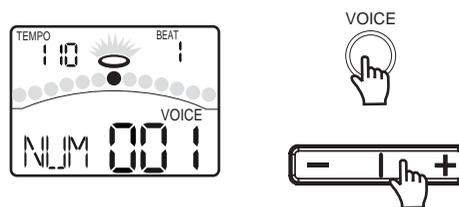
## Switching Reverb On/Off and Setting EQ

1. Press the [KIT] or [PAGE] button.  
Select the Global Reverb page and EQ pages.
2. Press the [ - ] or [ + ] button.  
Switch Reverb ON or OFF.  
Set the gain of three-band EQ (high, middle, low)



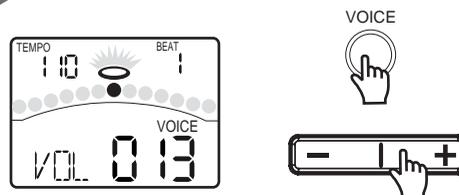
## Selecting the Drum Instrument of the Pad

1. Press the [VOICE] button.  
Select the Pad Voice page.
2. Press the [ - ] or [ + ] button.  
Select the drum instrument of the selected pad.  
Please refer to *Drum Instrument List*.



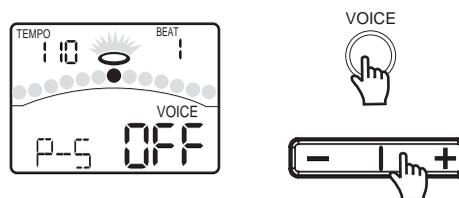
## Adjusting the Volume, Pan and Pitch of the Pad

1. Press the [VOICE] or [PAGE] button.  
Select the Pad Volume, Pad Pan, and Pad Pitch pages.
2. Press the [ - ] or [ + ] button.  
Adjust the corresponding parameter.



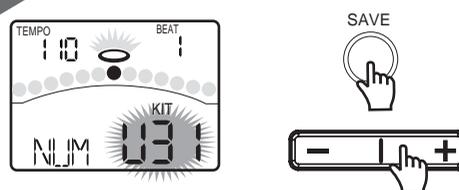
## Setting the Pads to Play Songs

1. Press the [VOICE] or [PAGE] button.  
Select the Pad Song and Song Number pages.
2. Press the [ - ] or [ + ] button.  
Switch the Pad Song function ON or OFF. Select the Song that begins playing when the following pad is struck.



## Saving the Edited Kit

1. Press the [SAVE] button.  
The number of user kit will be flashed.
2. Press the [ - ] or [ + ] button.  
Select a user kit to save your settings. (No. 31-45)
3. Press the [SAVE] button again.  
Save the setting to the selected user kit.



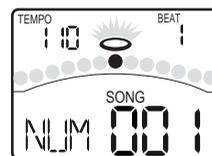
### HINT

If the edited kit isn't saved before selecting another kit, powering down the digital drum, the changes will be lost.

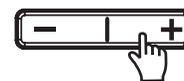
# Playing Along with Songs

## Selecting and Playing Back a Song

1. Press the [SONG] button.  
Switch to the SONG menu.
2. Press the [ - ] or [ + ] button.  
Select the active song. The digital drum has many kinds of songs. Please refer to Song list.
3. Press the [START/STOP] button.  
Start or stop playing back this selected song. When playing back this song, the PAD indicator will display which pads are being played by drum track.



SONG

START/  
STOP

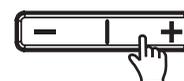
## Adjusting the Volume of the Accompaniment and Drum

In SONG menu, you can adjust the volume of drum or accompaniment track.

1. Press the [SONG] or [PAGE] button.  
Select the ACC Volume or Drum Volume page.
2. Press the [ - ] or [ + ] button.  
Adjust the corresponding volume.



SONG



## Muting the Drums in Songs

If you want to mute the drum track of the song, please press the [DRUM OFF] button. The [DRUM OFF] LED will turn on.

DRUM OFF



## Using the Pads to Play Songs

This function is available only with electric drum. When you strike the pads that have been set to Pad Song function, they will start the performance of the songs. If you don't know how to set this function, please return to previous page and review the part **“Setting the Pads to Play Songs”**.

### For Example :

- Kick:** You can play the bass-line (Tap group, refer to **Song List**) note by note with you kick drum.
- Crash:** The chords (Hit group, refer to **Song List**) progress when you strike the pad.

### HINT

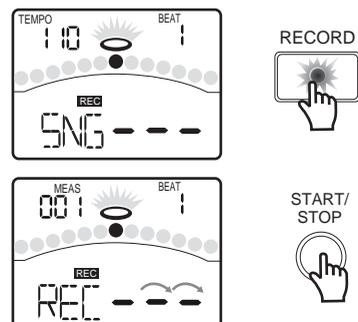
The sounds in the Tap song are played back one by one when you pressing the [START/STOP] button or hitting the "pad song" pad.

# Recording Your Performance

In RECORD menu, you can record pad performances and the song as accompaniment.

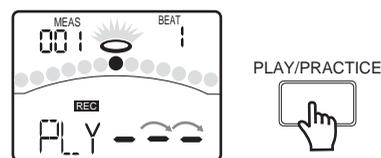
## Recording Your Performance Quickly

1. Press the [RECORD] button.  
The [RECORD] LED will flash. The Metronome will be turned on automatically.  
The display will show:
2. Press the [START/STOP] button or strike the pad.  
Recording will start.  
The [RECORD] LED will turn on.
3. Press the [START/STOP] button again, or press the [RECORD] button.  
Stop recording, the [RECORD] LED will turn off.  
Your performance has been recorded.



## Playing Back Your Recorded Performance

1. Press the [PLAY] button.  
Play back your recording.  
The display will show:
2. Press the [PLAY] button again.  
Stop playing back your performance.

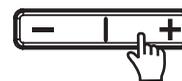


If you are not satisfied with your recording, please press the [RECORD] button to restart the recording progress.

## Making the Settings for Recording

You can make the settings for recording on Record Standby.

1. Press the [PAGE] button.  
Select the Record Setting pages.
2. Press the [ - ] or [ + ] button.  
Adjust the parameters about recording.  
For details on record setting, refer to **Advanced Use**.



# Practicing with Patterns

There are three types of patterns in LEARNING mode.

**Beat:** Snare Practice

**Rhythm:** Drum Practice

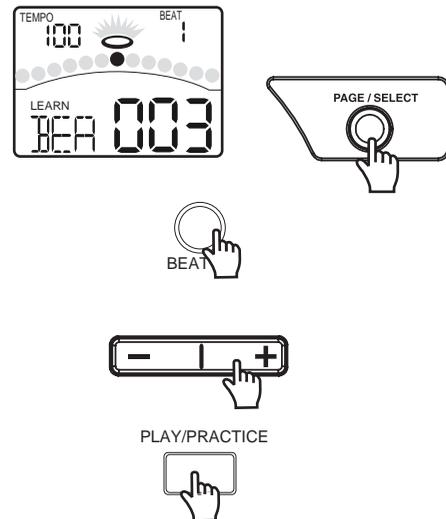
**Pattern:** Drum Practice with accompaniment

## Selecting a Pattern and Practicing with it

When you are in NORMAL mode, please press and hold the [PAGE/SELECT] button for 1 second. The LED of LEARNING mode will turn on. The display will show:

1. Press the [BEAT] button.  
Select the Beat Choosing page.
2. Press the [ - ] or [ + ] button.  
Select the beat which you want to practice.
3. Press the [PRACTICE] button.  
Start or stop playing the pattern with your practice. The PAD indicators will display which pads are being played by drum track.

If you want to select the Rhythm or Pattern, please follow the steps described above.

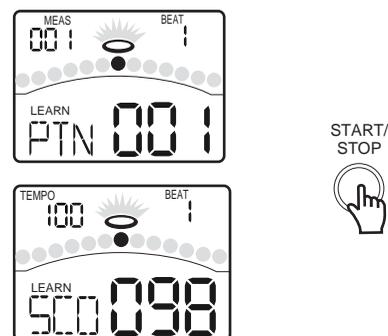


## Scoring Your Practice

If you want to check your progress, please press the [START/STOP] button. The display will show:

A measure count-in will be inserted before playing back the pattern so that you can practice in good time. Your practice will be recorded automatically. When finished playing back the pattern, the digital drum will score your practice automatically. The display will show the score.

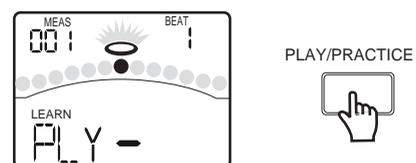
If you are not satisfied with your score, please press the [START/STOP] button and try again.



## Playing Back Your Recorded Practice

1. Press and hold the [PLAY/PRACTICE] button for 2 seconds.  
The display will show:  
You can listen to your recorded practice.

2. Press the [PLAY/PRACTICE] button again.  
Stop playing back the recorded practice.



# Creating Your Own Drum Kit

## About the Drum Kits

In KIT menu, you can select drum kits to play from the pads, and you can edit voices and their associated parameters, such as Pitch, Reverb Level, Volume, Pan, MIDI Note, etc.

There are 45 kits in the digital drum:

- 30 preset kits (Kits 01-30)
- 15 user kits (Kits U31-U45)

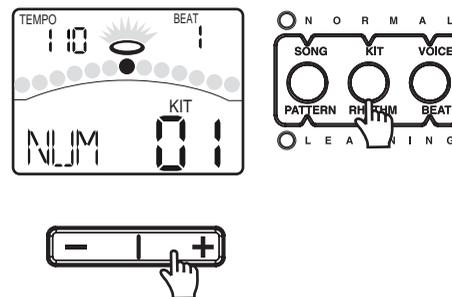
In addition, there are 11 General MIDI preset kits for MIDI/USB applications, and for MIDI file playback. Please refer to **GM Drum Kit List**. Each drum kit contains settings for up to 19 voices, assigned to the 10 pad inputs and 1 pedal controller:

Pad Settings		
Kick	Head1	
Snare	Head2	Rim2
Tom1	Head3	Rim3
Tom2	Head4	Rim4
Tom3	Head5	Rim5
Tom4	Head6	Rim6
Crash1	Head7	Rim7
Crash2	Head8	Rim8
Ride	Head9	Rim9
Hihat	Head10	
Pedal		

## Selecting a Drum Kit

If the digital drum is not yet in KIT menu, press the [KIT] button to enter it. The KIT indicator will light up, and the LCD will display the current kit number.

Press the [-] or [+] buttons to select a kit. When holding down [+], values increase rapidly. When holding down [-], values decrease rapidly.



## Overall Drum Kit Setting

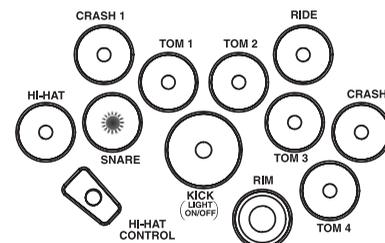
In KIT menu, you can set the overall kit parameters.

1. Press the [PAGE] or [KIT] button, select Kit volume page. The parameter adjusts the overall kit volume(0-32).
2. Press the [PAGE] or [KIT] button, select Reverb Switch page. The parameter toggles the global reverb Switch ON/OFF.
3. Press the [PAGE] or [KIT] button, select EQ gain page. These parameters adjust the three bands of Master EQ(-12dB-12dB).

Overall Kit Settings	
Kit	Volume
Global	Reverb on/off
	EQ High gain
	EQ Middle gain
	EQ Low gain

## Selecting the Pad to Edit

The current pad to be edited can be selected either by pressing its Pad Select button, or by striking the pad itself. The PAD indicator will light up to show which pad is currently selected. If the rim of a pad is selected, both the PAD indicator and the RIM indicator will turn on.



# Creating Your Own Drum Kit

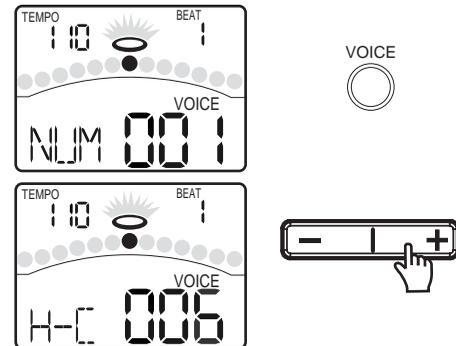
## About the Drum Instruments

The digital drum features 510 different drum instruments which are categorized into 9 separate groups, such as Acoustic Kick, Electric Kick, Acoustic Snare, Electric Snare, Percussion. You can individually adjust the volume, pan, pitch, reverb settings for instruments set to the pad.

## Selecting Instruments

If the digital drum is not yet in VOICE menu, press the [VOICE] button to enter it. The VOICE indicator will light up, and the LCD will display the current voice number.

1. Press the [ - ] or [ + ] buttons to change a pad's Individual voice (001-491).
2. If the selected pad is Hi-Hat, an additional option is available: Hi-Hat Combination (001-019).



## Drum Instrument Settings

1. Press the [PAGE] or [VOICE] button, select Pad Volume page. The parameter adjusts the volume of the pad.
2. Press the [PAGE] or [VOICE] button, select Pad Pan page. The parameter adjusts the pan of the pad.
3. Press the [PAGE] or [VOICE] button, select Pad Pitch page. The parameter adjusts the pitch of the pad.
4. Press the [PAGE] or [VOICE] button, select Pad Reverb page. The parameter adjusts the reverb level of the pad.

Drum Instrument Settings	
Voice Setting	Volume(0-32)
	Pan(-8-8)
	Pitch(-8-8)
	Reverb(0-16)
Settings for Other Functions	
MIDI	MIDI Note(0-127)
Others	Pad Song Switch(ON/OFF)
	Song Number(1-80)

## Settings for Other Functions

5. Press the [PAGE] or [VOICE] button, select Pad MIDI Note page. The parameter sets MIDI Note Number for each pad.
6. Press the [PAGE] or [VOICE] button, select Pad Song pages. The parameters sets pad song function ON and choose the song numbers.

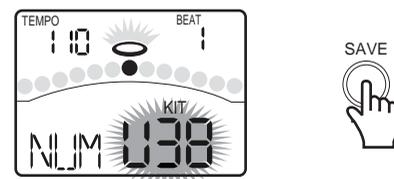
Press the [ - ] or [ + ] buttons to adjust the parameters.

### HINT

While editing Voice Number, Pitch, Pan, Volume, and Reverb, you can also preview the result of the current settings by pressing the Pad Select button to play the edited voice.

## Saving to a User Drum Kit

After change any kit parameter, please press the [SAVE] button to save the current settings to the user kit (No. 31-45). The number of user kit will be flashed. Press the [SAVE] button to save to user kit and return to Kit Select page.



# Making the Settings for Pads

## About Settings of Pads

If the digital drum is not yet in UTILITY menu, press the [UTILITY] button to enter it.

The UTILITY indicator will light up. You can use the [ - ] or [ + ] buttons to adjust parameters (as shown to the right ) for each pad as well as the rim sensitivity of the pad and the splash sensitivity of the Hi-Hat control pedal.

The current pad to be edited can be selected either by pressing its Pad Select button, or by striking the pad itself. The PAD indicator will light up to show which pad is currently selected. If the rim of a pad is selected, both the PAD indicator and the RIM indicator will turn on.

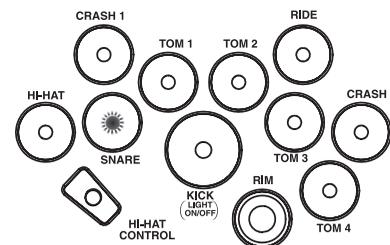
**Sensitivity:** Adjust the sensitivity of the pad to regulate the pad response. Higher settings result in higher sensitivity, so that the pad will produce a loud volume even when struck softly. You can also adjust the sensitivity of the splash in SPLASH SENSITIVITY.

**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.

**Crosstalk:** 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.

**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.

Pad Settings	
Pad	Sensitivity(1-16)
	Threshold(0-16)
	Crosstalk(1-16)
	Curve(1-6)
Special	Rim Sensitivity(1-16)
	Splash Sensitivity(1-9)
Auto Power off	Off, 30, 60

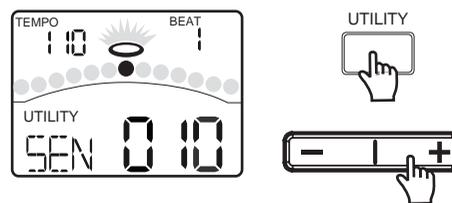


## Making the Settings for Pads

### Adjusting the Pad Sensitivity

Press the [PAGE] or [UTILITY] button, select Pad Sensitivity page. The display will show:

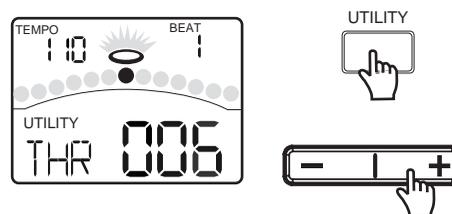
Changes how a pad responds to your playing. At higher sensitivities, the pad will generate a louder signal, even when you play softly. At lower sensitivities, the pad will generate a quieter signal, even if you play strongly. Adjust according to your playing style and desired dynamic range.



### Setting the Pad Threshold

Press the [PAGE] or [UTILITY] button, select Pad Threshold page. The display will show:

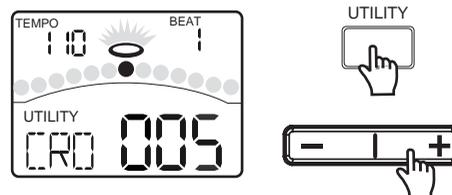
Changes how forcefully you must strike the pad to generate a trigger signal. Setting a high threshold requires hitting the pad very hard to get a sound. This can help cut out transient responses, such as vibrations from the kit or accidental pad taps that you don't intend to generate sounds. Setting a low threshold means even light touches will produce sound. Adjust according to environment and playing style.



### Eliminating Crosstalk between Pads

Press the [PAGE] or [UTILITY] button, select Pad Crosstalk page. The display will show:

When two pads are mounted close to each other, hitting one pad may trigger the sound from another pad unintentionally. This effect can be eliminated by setting this parameter to a higher value on the pad that is triggered unintentionally.



#### HINT

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.

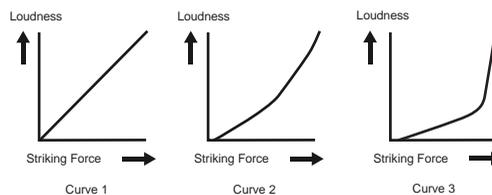
### Selecting the Pad Curve

Press the [PAGE] or [UTILITY] button, select Pad Curve page. The display will show:

Curve refers to how the trigger signal's dynamic response relates to your pad hit.

**Curve1:** The standard setting, this produces the most natural correspondence between playing dynamics and volume change.

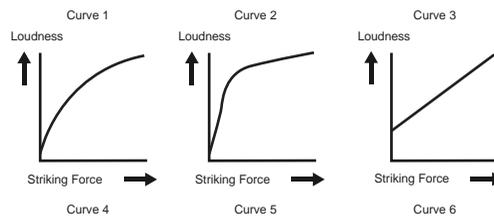
**Curve2, 3:** Compared to Curve1, strong dynamics produce a greater change.



## Making the Settings for Pads

**Curve4, 5:** Compared to Curve1, a soft playing produces a greater change.

**Curve6:** Very little dynamic response, making it easy to maintain strong volume levels. If using drum triggers, these settings help maintain stable levels.



### Setting Rim Sensitivity on Pads

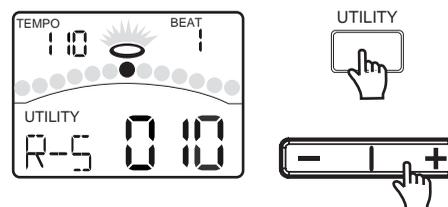
You can only set rim sensitivity on Snare, Tom1, Tom2, Tom3, Tom4. If you select the other pads, this page will not appear.

Press the [PAGE] or [UTILITY] button, select Pad Rim Sensitivity page. The display will show:

Same as the basic sensitivity feature, except that it relates specifically to playing the rim.

**Note:**

This parameter can be adjusted only on SNARE, TOM1, TOM2, TOM3, TOM4. If you select the other pads on this page, a horizontal line "---" appears, and you can't make the setting.



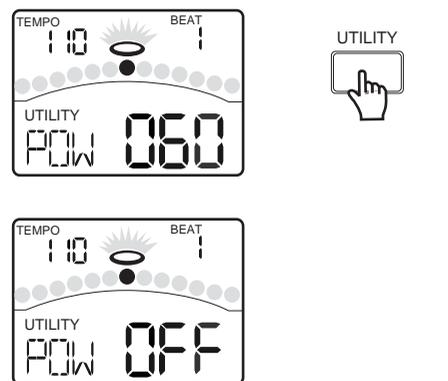
### Auto Power Off

Press the [PAGE] or [UTILITY] button to select the Auto Power Off setup page. The LCD will display

030 and 060:

If there aren't any operations for about 30 or 60 minutes except during playing song or metronome, record, MIDI in via USB port from computer and strike pads, the module will turn the power off automatically.

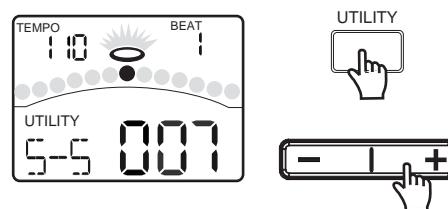
"OFF": Switch off the auto power off function.



### Adjusting the Hi-Hat Pedal Splash Sensitivity

Press the [PAGE] or [UTILITY] button, select Pedal Splash Sensitivity page. The display will show:

This Setting controls the sensitivity of the foot splash.

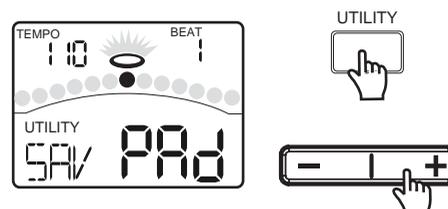


### Saving Settings of Pads

After adjusting the trigger settings (sensitivity, Threshold, crosstalk, curve, rim sensitivity, splash sensitivity), you can save them into memory. In UTILITY menu, press the [SAVE] button to store all pad settings.

**Note:**

1. If you turn off the power without saving, you will lose the trigger setting changes you have just made.
2. These parameters affect all kits.



# Setting the Metronome

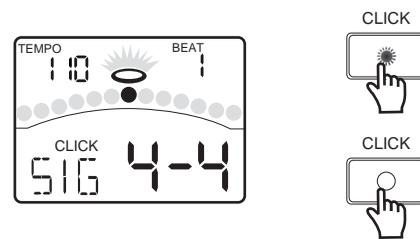
## About Click

The digital drum is equipped with a built-in metronome, which can be used by itself as a rhythm guide for practice, or in conjunction with the song playback or record functions. If the digital drum is not yet in CLICK menu, press the [CLICK] button to enter it. In CLICK menu, you can use the [-] or [+] button to adjust the parameters(as shown to the right).

Click Settings	
Time signature	0-9/2, 0-9/4, 0-9/8, 0-9/16
Interval	1-2, 3-8, 1-4, 1-8, 1-12, 1-16
Volume	0-32
Voice	1-5

## Switching the Click On/Off

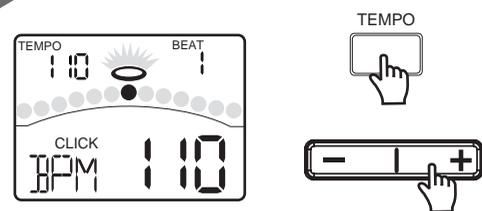
1. Press the [CLICK] button to start the metronome. The CLICK LED will blink accordingly. The metronome will play at the current Time signature and tempo (displayed in the left right corner of the LCD)
2. Press the [CLICK] button again to stop the metronome. The CLICK indicator will turn off.



## Adjusting the Click Tempo

Press the [TEMPO] button, and use the [-] and [+] buttons to adjust the current click tempo.

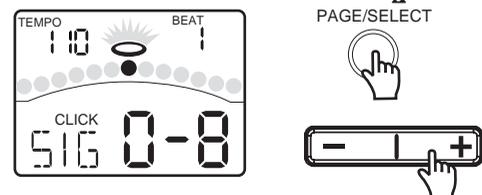
The current tempo always displays in the top left corner of the LCD.



## Setting the Time Signature

Press the [PAGE] button, select Click Time signature page. The display will show:

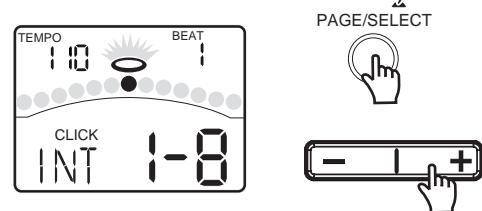
When the parameter is set to "0", such as 0-2,0-4,0-8,0-16, no accent is added to the first beat.



## Setting the Interval

Press the [PAGE] button, select Click Interval page. The display will show:

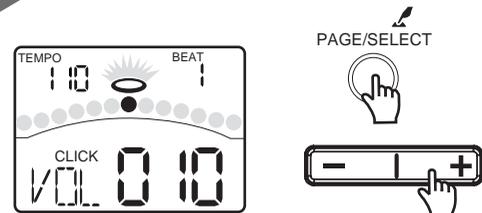
This parameter sets how the sound plays.



## Adjusting the Click Volume

Press the [PAGE] button, select Click Volume page. The display will show:

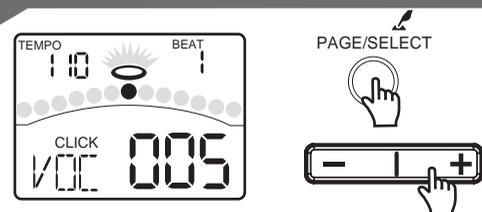
This parameter adjust the volume of the click sound.



## Selecting the Click Sound

Press the [PAGE] button, select Click Voice page. The display will show:

This parameter choose the sound for the click.



# Playing Back Songs

## About Songs

There are 80 preset songs in the digital drum:

- 50 Looped Patterns
- 10 Looped Percussion Patterns
- 5 Hit Songs
- 15 Tap Songs

Please refer to **Song List**. In SONG menu, you can select the song number and adjust the volume of the song's accompaniment and drum part.

### Song Settings

No.	Number(1-80)
	Accomp(0-32)
Mix	Drum(0-32)

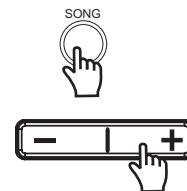
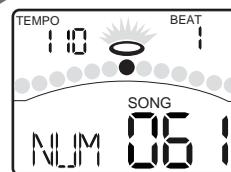
#### HINT

The sounds in the tap song are played back one by one in sequence each time [START] is pressed or hitting the pad which is functioned as "pad song".

## Selecting a Song

If the digital drum is not yet in SONG menu, press the [SONG] button to enter it. The SONG indicator will light up, and the LCD will Display the current song number.

Press the [ - ] or [ + ] button to select a song. When holding down [ + ], the song number increase rapidly. When holding down [ - ], it decrease rapidly.



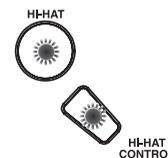
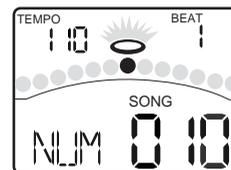
#### HINT

If the song number is switched while playing, the new song won't start until the end of the current bar.

## Playing Back a Song

Press the [START/STOP] button to start song playback. The LCD will display the current playing beat. Press the [START/STOP] button again, stop the song during playback. During song playback in SONG menu, the PAD indicators will show which pads of the drum track is triggering.

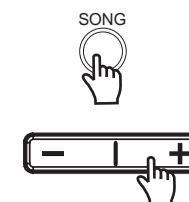
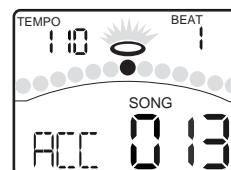
This function can be disabled or enabled by pressing the [KICK] button while in SONG menu.



## Adjusting the Accompaniment Volume

Press the [PAGE] or [SONG] button, select Song Accompaniment volume page. The display will show:

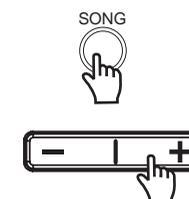
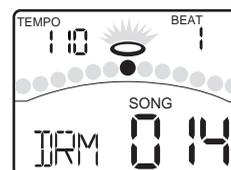
Use the [ - ] or [ + ] to adjust it. It will be restore to default value on the next power on.



## Adjusting the Drum Volume

Press the [PAGE] or [SONG] button, select Song Drum volume page. The display will show:

Use the [ - ] or [ + ] to adjust it. It will be restore to default value on the next power on.



## Muting the Drums in Songs

Press the [DRUM OFF] button to enable and disenable the drum mute function. When DRUM OFF is enabled, the LED will turn on.



# Recording a Song

## About Recording

In NORMAL mode, the digital drum allows you to quickly record your performance as you play the pads. There are two ways to start recording a new song:

Press the [START/STOP] button

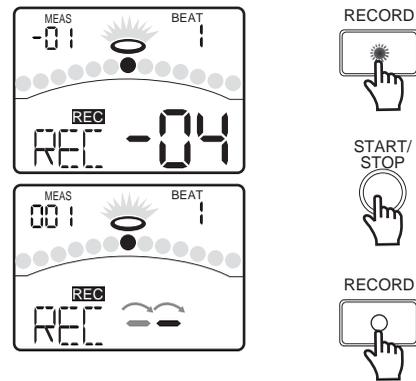
Hit any pad

On Recording Standby, you can use the [ - ] or [ + ] button to adjust the parameters(as shown to the right).

Record Settings	
Song Number	---/1-60
Kit	1-45
Tempo	30-280
Signature	1-9/2, 1-9/4, 1-9/8, 1-9/16
Interval	1-2, 3-8, 1-4, 1-8, 1-12, 1-16
Drum Off	---/ON/OFF
Pre Count	ON/OFF

## Recording Pad Performances

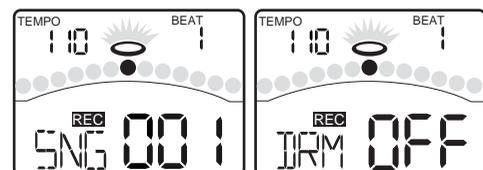
1. Press the [RECORD] button, enter recording standby. The [RECORD] LED will flash.
2. Press the [START/STOP] button or strike the pad. Recording will start. The RECORD LED will turn on. After Count-in, the display will show:  
Now you will record your performance.
3. Press the [START/STOP] button again, or press the [RECORD] button. Stop recording, the [RECORD] LED will turn off.



## Recording Performances Accompanied with a Song

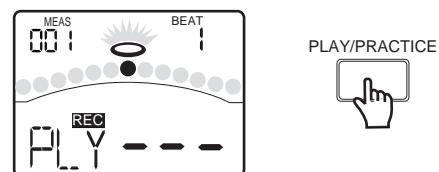
If you want to record your performance accompanied with a song, first set the parameters (Song Number and Drum off) before start to record. The display will be as shown to the right:

For details on setting, refer to Recording Standby. Recording operations are as mentioned above.



## Playing Back Your Recorded Performance

1. Press the [PLAY] button. Play back your recording. The display will show:
2. Press the [PLAY] button again. Stop playing back your performance.



## Recording Standby

Use the [PAGE] button to scroll through the various record parameters and the [ - ] or [ + ] button to adjust the value.

**Page1:**Setting the song accompanied or not

**Page2:**Selecting the drum kit that you want to record.

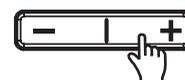
**Page3:**Setting the recording tempo

**Page4:**Setting the time signature

**Page5:**Setting the interval

**Page6:**Setting the drums in songs muted or not

**Page7:**Setting a measure count-in inserted or not before recording.



# Practicing in Learning Mode

## About Learning Mode

The LEARNING mode is a unique set of exercises specifically designed to help build speed, accuracy and stamina, as well as develop better drum skills.

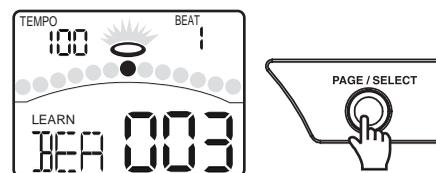
There are 42 practices in the digital drum:

- 20 Beats (Only Snare)
- 12 Rhythms (Only Drum, from Level1-Level6)
- 10 Patterns (from Level1-Level5)

You can select appropriate patterns to practice depending on your present skills.

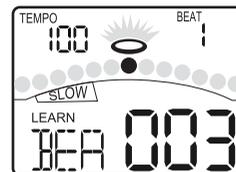
- There are 3 states in Learning mode:
- Follow me:** Practice with the selected pattern
  - Score:** Record and score your practice
  - Playback:** Play back your recorded practice

If the digital drum is not yet in LEARNING mode, press and hold the [PAGE/SELECT] button for 1 second. The LED of LEARNING mode will turn on. The display will show:

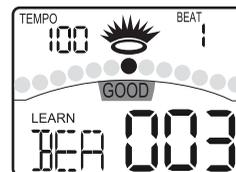


In this Learning Mode, after you press the [PRACTICE] or [START/STOP] to start practicing, your hitting accuracy will always be indicated in the middle of the display according to the current pattern.

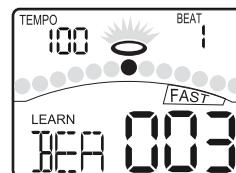
DRAGGING:



PERFECT:



RUSHING:

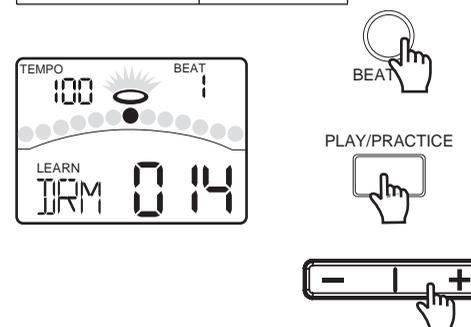


## Practicing with Beats

If the digital drum is not yet in BEAT menu, press the [BEAT] button to enter it. You can adjust the parameters (as shown to the right).

Beat	
Number	1-20
Drum Volume	0-32

1. Press the [ - ] or [ + ] button to select the beat.
2. Press the [PRACTICE] button to listen to the beat and follow it. Press it again to stop the beat.
3. Press the [BEAT] or [PAGE] button to select the Beat Drum volume page. Press the [ - ] or [ + ] button to adjust the drum volume of the beat.



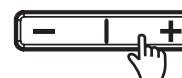
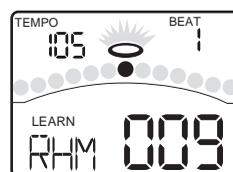
## Practicing in Learning Mode

### Practicing with Rhythms

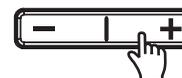
If the digital drum is not yet in RHYTHM menu, press the [RHYTHM] button to enter it. You can adjust the parameters (as shown to the right).

1. Press the [ - ] or [ + ] button to select the rhythm.
2. Press the [PRACTICE] button to listen to the rhythm and follow it. Press it again to stop the rhythm.
3. Press the [RHYTHM] or [PAGE] button to select the Rhythm Level page. Press the [ - ] or [ + ] button to select the level of the rhythm.
4. Press the [RHYTHM] or [PAGE] button to select the Rhythm Drum Volume page. Press the [ - ] or [ + ] button to adjust the drum volume of the rhythm.

Rhythm	
Number	1-12
Level	1-6
Drum Volume	0-32



PLAY/PRACTICE

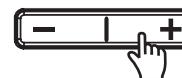
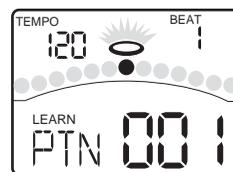


### Practicing with Patterns

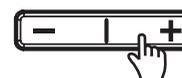
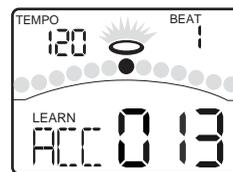
If the digital drum is not yet in Pattern menu, press the [PATTERN] button to enter it. You can adjust the parameters (as shown to the right).

1. Press the [ - ] or [ + ] button to select the pattern.
2. Press the [PRACTICE] button to listen to the pattern and follow it. Press it again to stop the pattern.
3. Press the [PATTERN] or [PAGE] button to select the Pattern Level page. Press the [ - ] or [ + ] button to select the level of the pattern.
4. Press the [PATTERN] or [PAGE] button to select the Pattern Accompany Volume page. Press the [ - ] or [ + ] button to adjust the accompaniment volume of the pattern.
5. Press the [PATTERN] or [PAGE] button to select the Pattern Drum Volume page. Press the [ - ] or [ + ] button to adjust the drum volume of the pattern.

Pattern	
Number	1-10
Level	1-5
Accompany Volume	0-32
Drum Volume	0-32



PLAY/PRACTICE



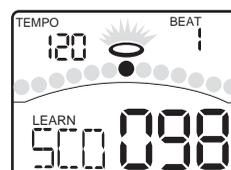
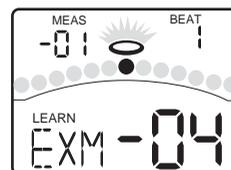
## Practicing in Learning Mode

### Recording and Scoring Your Practice

1. Press the [START/STOP] button, you can enter the score state. A measure count-in will be inserted before playing back the pattern so that you can practice in good time. When playing back the pattern, your performance will be recorded automatically. When finished playback, the digital drum will score your practice automatically.

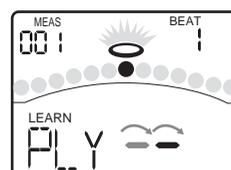
The display will show the score for 3 seconds.

2. Press the [START/STOP] button again to stop playing back the pattern and recording your practice during the playback



### Playing Back Your Recorded Practice

1. Press and hold the [PLAY/PRACTICE] button for 2 seconds, you can enter the playback state. The display will show:  
You will listen to your recorded practice.
2. Press the [PLAY/PRACTICE] button again. Stop playing back the recorded practice.



# Making the Settings for MIDI

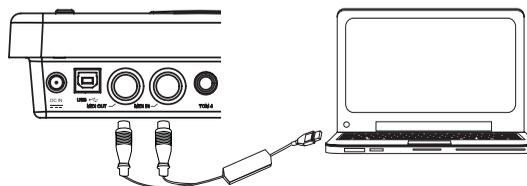
## About MIDI

MIDI (Musical Instrument Digital Interface) is a standard that allows performance data and other information to be exchanged among electronic musical instruments and computers. With a MIDI cable connecting MIDI connectors equipped device, you can play multiple instruments with a single keyboard, have multiple instruments perform in ensemble, program the settings to change kits automatically to match the performance as the song progress, and more.

### MIDI Connection

**MIDI IN:** This terminal receives MIDI data from an external MIDI device.

**MIDI OUT:** This terminal transmits data from the digital drum to other MIDI devices.



### USB Connection

The USB connector allows you to connect the digital drum directly to your computer. It can be connected without installing a driver in Windows XP/Vista/Win7 or MAC OSX environments. The digital drum will be recognized as a "USB Audio device" to receive and transmit MIDI messages through a single USB cable. The USB port is used only for MIDI messages (MIDI via USB)

### Note:

When the USB port is connected to a computer, all MIDI messages will be received and transmitted via USB.

## Making the MIDI Settings

If the digital drum is not yet in UTILITY menu, press The [UTILITY] button to enter it. Press the [PAGE] or [UTILITY] button, select Local mode pages. The display will show:

Press the [-] or [+] button, set local mode to ON or OFF.

### Local Mode

**Local OFF:** The pads and internal sequencer are disconnected from the digital drum's internal sound generator. Striking the pads does not cause sound to be produced by the internal sound generator.

**Local ON:** The pads and internal sequencer are connected to the digital drum's internal sound generator. Sounds are produced by the internal sound generator when the pads are struck.

### GM Mode

Press the [PAGE] or [UTILITY] button, select GM mode pages. The display will show:

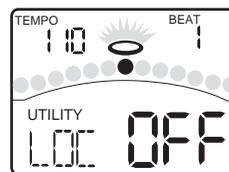
Press the [-] or [+] button, set GM mode to ON or OFF.

Refer to *Using the Digital Drum as a Sound Module*.

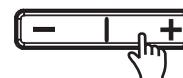
### Sync Mode

Press the [START/STOP] button to start or stop songs playback, the digital drum will transmit the MIDI system real-time Message: FA or FC.

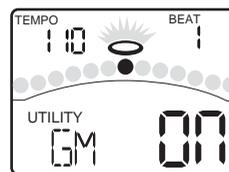
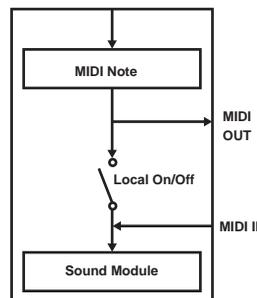
MIDI Settings	
Local on/off	ON/OFF
GM on/off	ON/OFF



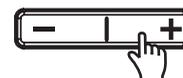
UTILITY



Trigger Input



UTILITY



START/STOP



## Making the Settings for MIDI

### Connecting with an External Sound Device

The digital drum transmission channel for the drum kit is fixed to Channel 10. It will output MIDI data generated by the triggers when hitting the pads or stepping on the Hi-Hat control pedal (Note ON/OFF, and Foot messages). Song playback data and metronome notes are not transmitted.

#### Recording Your Performance to an External Sequencer

1. Connect the MIDI OUT of the digital drum to the MIDI IN of your sequencer, and the MIDI OUT of your sequencer to the MIDI IN of the digital drum. If you are using a software sequencer on a computer, you can simply connect the USB port of the digital drum to a USB port of your computer using a single USB A-B cable.
2. Setup the active track of your sequencer on Channel 10. Activate **RECORD** on your sequencer.
3. Play the pads of your digital drum.
4. Stop recording. Locate your sequencer to the start of your recording.
5. Playback the recorded sequencer.

#### Setting MIDI Note Number to be Transmitted/Received by Each Pad

Each drum kit can have it's own set of MIDI note to be transmitted/received by each pad, useful for advanced purpose. Normally, you'll never need to change them, but if you want to change, please follow these step:

1. Press the [VOICE] button in NORMAL mode, enter the VOICE menu.
2. Press the [PAGE] or [VOICE] button, select Pad MIDI Note page.
3. Press the [ - ] or [ + ] button, change the MIDI Note Number for each pad. Hit the pad you wish to set or press the related Pad Select button.
4. Press the [SAVE] button twice to save to user kit.

Trigger	MIDI Note	Trigger	MIDI Note	Trigger	MIDI Note	Trigger	MIDI Note	Trigger	MIDI Note
Kick	36	Tom2	45	Tom4 R	39	Crash1 R	55	Hi-Hat HO	23
Snare	38	Tom2 R	47	Ride	51	Crash2	57	Hi-Hat C	42
Snare R	40	Tom3	43	Ride R	53	Crash2 R	52	Hi-Hat P	44
Tom1	48	Tom3 R	58	Crash1	49	Hi-Hat O	46	Splash	21
Tom1 R	50	Tom4	41						

### Using the Digital Drum as a Sound Module

Connecting an external keyboard or sequencer to the MIDI Input allows you to use the digital drum as a multi-part, polyphonic sound module to play various instrument parts in addition to your drums (for instance, Piano on Channel 1, Bass on Channel 2, Strings on Channel 3, etc). The voices on each MIDI channel are selected using MIDI Program Change messages (refer to **GM Backing Instrument List**).

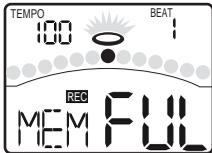
The MIDI system in the digital drum has 16 reception channels numbered from 1-16. Each of the channels is responsible for a voice. When the instrument receives MIDI information from an external device, the active channel is determined by the control message. Channel 10 is reserved for Drums. The digital drum has two options for Channel 10: GM ON or OFF, as selected in MIDI UTILITY menu.

- When GM Mode is ON, Channel 10 will play the GM percussion kits.
- When GM Mode is OFF, Channel 10 will play the digital drum internal kits.

#### Note:

For more information on received MIDI messages, refer to **MIDI implementation chart**.

# Prompt Messages

Display	Meaning	Action
	Resetting the digital drum has failed.	Please call your dealer for evaluation.
	There isn't data in the digital drum's memory.	Please record your performance, and then play it.
	The internal memory is full. You cannot record any data.	If you want to record another song, please restart recording and replace it.
	You didn't record your practice in the Learning mode.	Please press the [START/STOP] button to score your practice, and then play back your practice.

# Troubleshooting

Problem	Possible Cause and Solution
No Sound	<ol style="list-style-type: none"> <li>1) Rotate the [VOLUME] knob to be sure that the volume isn't down.</li> <li>2) Be sure that Local Mode should be set to "ON".</li> </ol>
No Sound from Pads	<ol style="list-style-type: none"> <li>1) Be sure that the pad is connected correctly.</li> <li>2) Be sure not set the volume of the pad is not set to 0.</li> </ol>
No Click Sound	<ol style="list-style-type: none"> <li>1) To be sure not set the volume of the click is not set to 0.</li> </ol>
Sound is Distorted	<ol style="list-style-type: none"> <li>1) Turn down the volume.</li> </ol>

# Specifications

## Maximum Polyphony

64

## Drum kits

Drum Kits: 45 (30 preset kits + 15 user kits)  
General MIDI Kits: 11 GM Kits

## Instruments

Drum Instruments: 510 (Drums, Percussion, SFX)  
19 Hi-Hat Combos

## Effect

Reverb, 3 Band Equalizer

## Sequencer

Normal: Song 80  
Learning: Beat 20, Rhythm 12, Pattern 10  
Resolution: 120 ticks per quarter note  
Recording Method: Real-time  
Maximum Note Storage: approx. 1600 Notes

## Tempo

30~280

## Display

Backlit Segment LCD

## Connectors

9 Trigger Input Jack, Phone Jack(1/8", stereo), Aux In Jack(1/8", stereo),  
2 External Trigger Input Jack(1/4", Tom4, Crash2), Output(1/4", L/Mono, R), USB, MIDI IN, MIDI OUT

## Control Buttons

Power on/off switch, Volume, Start/Stop, Save, Song, Kit, Voice, Page/Select, INC/DEC, Click, Drum off, Record, Tempo, Utility, Play/Practice

## Pad Select Buttons

12 Pad Select Buttons

## Kit Configuration

Snare: 9" dual zone pad.  
Tom1~tom3: 9" dual zone pad.  
Crash1: 12" dual zone cymbal with choke.  
Ride: 14" dual zone cymbal with choke.  
Hi-hat: 10" single zone cymbal without choke.

## Power Supply

DC 9V

## Dimensions

190(W) X 140(H) X 120(D) mm

## Weight

0.5 kg

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

# Drum Kit List

<b>NO.</b>	<b>PRESET KIT</b>	<b>NO.</b>	<b>DEFAULT USER KIT</b>
1	Standard 1	31	Standard 1
2	Pop Country	32	Pop Country
3	Standard 2	33	Standard 2
4	Funk 1	34	Funk 1
5	Funk 2	35	Funk 2
6	Fusion 1	36	Fusion 1
7	Power Rock	37	Power Rock
8	Jazz Brush	38	Jazz Brush
9	Rock	39	Rock
10	Pop Rock	40	Pop Rock
11	Fusion 2	41	Fusion 2
12	Vintage	42	Vintage
13	Latin Rock	43	Latin Rock
14	Arena Rock	44	Arena Rock
15	Banda	45	Banda
16	Ballad Rock		
17	Disco		
18	Prog Rock		
19	Mambo		
20	Songo		
21	Beat Box 1		
22	Hip Hop 1		
23	Electro House		
24	Break Beat		
25	DubStep 1		
26	Rap 1		
27	Old Skool		
28	Beat Box 2		
29	DubStep 2		
30	DrumNBass		

# Drum Instrument List

## NO. NAME

### KICK

1	Standard Kick 1
2	Standard Kick 2
3	Classic Kick 1
4	Classic Kick 2
5	Camco Kick 1
6	Camco Kick 2
7	Rock Kick 1
8	Rock Kick 2
9	Rock Kick 3
10	Room Kick 1
11	Room Kick 2
12	Jazz Kick 1
13	Jazz Kick 2
14	Big Band Kick 1
15	Big Band Kick 2
16	Funk Kick 1
17	Funk Kick 2
18	Funk Kick 3
19	HipHop Kick 1
20	HipHop Kick 2
21	HipHop Kick 3
22	HipHop Kick 4
23	1969 Kick
24	1971 Kick
25	1976 Kick
26	Power Kick
27	R&B Kick
28	Voice Kick
29	Acoustic Kick 1
30	Acoustic Kick 2
31	Acoustic Kick 3
32	Acoustic Kick 4
33	Orchestra Kick
34	Step Kick
35	Teckno Kick
36	Drum & Bass Kick
37	Junkyard Kick
38	Noise Kick
39	Industry Kick
40	Lowfi Kick
41	Disco Kick
42	808 Kick
43	909 Kick
44	House Kick 1
45	House Kick 2
46	Electronic Kick 1
47	Electronic Kick 2
48	Electronic Kick 3
49	Electronic Kick 4

50	Electronic Kick 5
51	Electronic Kick 6
52	Electronic Kick 7
53	Electronic Kick 8

### SNARE

54	Standard Snare 1
55	Standard Snare Rim 1
56	Standard Snare 2
57	Standard Snare Rim 2
58	Standard Snare 3
59	Standard Snare Rim 3
60	Standard Snare 4
61	Standard Snare Rim 4
62	R&B Snare
63	R&B Snare Stick
64	506 Snare
65	506 Snare Rim 1
66	506 Snare Rim 2
67	Classic Snare 1
68	Classic Snare Rim 1
69	Classic Snare 2
70	Classic Snare Rim 2
71	Acoustic Snare 1
72	Acoustic Snare Rim
73	Acoustic Snare 2
74	Rock Snare 1
75	Rock Snare Rim 1
76	Rock Snare 2
77	Room Snare 1
78	Room Snare 2
79	Room Snare 3
80	Steel Snare
81	Steel Snare Rim
82	Jazz Snare 1
83	Jazz Snare Rim 1
84	Jazz Snare 2
85	Jazz Snare Rim 2
86	Jazz Latin Snare
87	Big Band Snare
88	Camco Snare
89	Camco Snare Rim
90	Brush Snare 1
91	Brush Snare 2
92	Brush Snare Rim
93	Funk Snare
94	Funk Stick
95	Funk Band Snare
96	Funk Band Snare Rim
97	Funk Band Snare Stick
98	Fusion Snare
99	Fusion Snare Stick
100	Ringo Snare
101	Ringo Snare Rim
102	Snare Stick
103	Power Snare
104	HipHop Snare 1
105	HipHop Snare 2
106	1969 Snare
107	1969 Snare Rim
108	1971 Snare
109	1971 Snare Rim
110	1976 Snare
111	1976 Snare Rim
112	Step Snare
113	Step Snare Stick
114	House Snare 1
115	House Snare 2
116	House Snare 3
117	Teckno Snare 1
118	Teckno Snare 2
119	808 Snare
120	909 Snare
121	Drum & Bass Snare 1
122	Drum & Bass Snare 2
123	606 Snare
124	Electronic Snare 1
125	Electronic Snare 2
126	Electronic Snare 3
127	Electronic Snare 4
128	Electronic Snare 5
129	Noise Snare

### TOM

130	Classic Tom 1
131	Classic 1 Tom Rim 1
132	Classic Tom 2
133	Classic 1 Tom Rim 2
134	Classic Tom 3
135	Classic 1 Tom Rim 3
136	Classic Tom 4
137	Classic 1 Tom Rim 4
138	Classic Tom 5
139	Classic 1 Tom Rim 5
140	Classic Tom 6
141	Classic 1 Tom Rim 6
142	Acoustic Tom 1
143	Acoustic Tom Rim 1
144	Acoustic Tom 2
145	Acoustic Tom Rim 2
146	Acoustic Tom 3
147	Acoustic Tom Rim 3
148	Acoustic Tom 4
149	Acoustic Tom Rim 4
150	Acoustic Tom 5
151	Acoustic Tom Rim 5
152	Acoustic Tom 6
153	Acoustic Tom Rim 6
154	Standard Tom 1
155	Standard Tom Rim 1
156	Standard Tom 2
157	Standard Tom Rim 2
158	Standard Tom 3
159	Standard Tom Rim 3
160	Standard Tom 4
161	Standard Tom Rim 4
162	Standard Tom 5
163	Standard Tom Rim 5
164	Standard Tom 6
165	Standard Tom Rim 6
166	Camco Tom 1
167	Camco Tom 2
168	Camco Tom 3
169	Camco Tom 4
170	Camco Tom 5
171	Camco Tom 6
172	Rock Tom 1
173	Rock Tom 2
174	Rock Tom 3
175	Rock Tom 4
176	Rock Tom 5
177	Rock Tom 6
178	Standard Tom 1
179	Standard Tom 2
180	Standard Tom 3
181	Standard Tom 4
182	Standard Tom 5
183	Standard Tom 6
184	Room Tom 1
185	Room Tom 2
186	Room Tom 3
187	Room Tom 4
188	Room Tom 5
189	Room Tom 6
190	Funk Tom 1
191	Funk Tom 2
192	Funk Tom 3
193	Funk Tom 4
194	Funk Tom 5
195	Funk Tom 6
196	Fusion Tom 1
197	Fusion Tom 2
198	Fusion Tom 3

# Drum Instrument List

199	Fusion Tom 4	251	Step Tom 1	301	Teckno Ride 2	351	606 Crash
200	Fusion Tom 5	252	Step Tom 2	302	Jazz Ride Bell	352	Electronic Crash
201	Fusion Tom 6	253	Step Tom 3	303	Brush Ride	353	606 Hi-hat Open
202	1969 Tom 1	254	"Tom Rim"	304	Brush Ride Rim	354	Industrial Short
203	1969 Tom 2	255	606 Tom 1	305	Brush Ride Bell	355	Industrial Long
204	1969 Tom 3	256	606 Tom 2	306	Rock Ride 1	356	Standard Hi-hat Open 1
205	1969 Tom 4	257	606 Tom 3	307	Rock Ride 2	357	Standard Hi-hat Open 2
206	1971 Tom 1	258	606 Tom 4	308	Clean Pop Ride	358	Classic Hi-hat Open
207	1971 Tom 2	259	606 Tom 5	309	Ride Edge 1	359	Pop Hi-hat Open
208	1971 Tom 3	260	606 Tom 6	310	Ride Edge 2	360	Rock Hi-hat Open 1
209	1971 Tom 4	261	808 Tom 1	311	Mute Ride Bell	361	Rock Hi-hat Open 2
210	1976 Tom 1	262	808 Tom 2	312	Clean Pop Ride Bell	362	Jazz Hi-hat Open 1
211	1976 Tom 2	263	808 Tom 3	313	Flat Ride	363	Jazz Hi-hat Open 2
212	1976 Tom 3	264	808 Tom 4	314	60's Ride	364	Brush Hi-hat Open
213	1976 Tom 4	265	808 Tom 5	315	808 Ride	365	Mini Hi-hat Open
214	HipHop Tom 1	266	808 Tom 6	316	Voice Hi-hat Pedal	366	Junkyard Hi-hat Open
215	HipHop Tom 2	267	Noise Tom 1			367	Noise Hi-hat Open
216	HipHop Tom 3	268	Noise Tom 2		<b>CRASH</b>	368	Electronic Hi-hat Open
217	HipHop Tom 4	269	Noise Tom 3	317	Classic Crash 1	369	808 Hi-hat Open 1
218	HipHop Tom 5	270	Electronic Tom 1	318	Classic Crash Rim 1	370	808 Hi-hat Open 2
219	HipHop Tom 6	271	Electronic Tom 2	319	Classic Crash 2	371	909 Hi-hat Open
220	Jazz Tom 1	272	Electronic Tom 3	320	Classic Crash Rim 2	372	House Hi-hat Open
221	Jazz Tom 2	273	Electronic Tom 4	321	Classic Crash 3	373	606 Hi-hat Open
222	Jazz Tom 3	274	Electronic Tom 5	322	Standard Crash 1	374	Standard Half Open
223	Jazz Tom 4	275	Electronic Tom 6	323	Standard Crash Rim 1	375	Pop Half Open 1
224	Jazz Tom 5	276	909 Tom 1	324	Standard Crash 2	376	Pop Half Open 2
225	Jazz Tom 6	277	909 Tom 2	325	Standard Crash 3	377	Rock Half Open
226	Brush 1 Tom 1	278	909 Tom 3	326	Standard Crash 4	378	Classic Half Open Rim
227	Brush 1 Tom 2	279	909 Tom 4	327	Rock Crash 1	379	Jazz Half Open 1
228	Brush 1 Tom 3	280	Junkyard Tom 1	328	Rock Crash 2	380	Jazz Half Open 2
229	Brush 1 Tom 4	281	Junkyard Tom 2	329	Rock Crash 3	381	Brush Half Open
230	Brush 1 Tom 5	282	Junkyard Tom 3	330	Rock Crash 4	382	Mini Half Open
231	Brush 1 Tom 6			331	Rock Splash	383	Junkyard Half Open Rim
232	Brush 2 Tom Rim 1		<b>RIDE</b>	332	Splash	384	Standard Hi-hat Close 1
233	Brush 2 Tom 2	283	Standard 20" Ride	333	Brush Crash 1	385	Standard Hi-hat Close 2
234	Brush 2 Tom Rim 2	284	Standard 21" Ride	334	Brush Crash 2	386	Pop Hi-hat Close 1
235	Brush 2 Tom 3	285	Standard 22" Ride	335	China 1	387	Pop Hi-hat Close 2
236	Brush 2 Tom Rim 3	286	Standard Ride Bell	336	China 2	388	Rock Hi-hat Close 1
237	Brush 2 Tom 4	287	Standard 22" Ride Rim	337	China 3	389	Rock Hi-hat Close 2
238	Brush 2 Tom Rim 4	288	Junkyard Break	338	China 4	390	Classic Hi-hat Close
239	Brush 2 Tom 5	289	Junkyard Metal	339	Orchestra Crash	391	Jazz Hi-hat Close
240	Brush 2 Tom Rim 5	290	Dry Ride Bell	340	Orchestra Hit 1	392	Brush Hi-hat Close
241	Brush 2 Tom 6	291	Light Flat Ride	341	Orchestra Hit 2	393	Mini Hi-hat Close
242	Brush 2 Tom Rim 6	292	Classic Ride	342	HipHop Crash	394	Junkyard Hi-hat Close
243	Tom Rim 1	293	Classic Ride Rim	343	Junkyard Cymbal 1	395	Noise Hi-hat Close
244	Tom Rim 2	294	Classic Ride Bell	344	Junkyard Cymbal 2	396	Electronic Hi-hat Close
245	Tom Rim 3	295	Acoustic Ride	345	Cymbal Effect 1	397	808 Hi-hat Close 1
246	Tom Rim 4	296	Acoustic Ride Rim	346	Cymbal Effect 2	398	808 Hi-hat Close 2
247	Timpani 1	297	Acoustic Ride Bell	347	Drum & Bass Crash 1	399	909 Hi-hat Close
248	Timpani 2	298	Standard 19" Ride	348	808 Crash 1	400	House Hi-hat Close
249	Timpani 3	299	Vintage Ride	349	808 Crash 2	401	606 Hi-hat Close
250	Timpani 4	300	Teckno Ride 1	350	808 Crash 3	402	Standard Hi-hat Pedal 1

# Drum Instrument List

- 403 Standard Hi-hat Pedal 2
- 404 Classic Hi-hat Pedal
- 405 Pop Hi-hat Pedal
- 406 Rock Hi-hat Pedal 1
- 407 Rock Hi-hat Pedal 2
- 408 Jazz Hi-hat Pedal 1
- 409 Jazz Hi-hat Pedal 2
- 410 Brush Hi-hat Pedal
- 411 Mini Hi-hat Pedal
- 412 Junkyard Hi-hat Pedal
- 413 Noise Hi-hat Pedal
- 414 Electronic Hi-hat Pedal
- 415 808 Hi-hat Pedal 1
- 416 808 Hi-hat Pedal 2
- 417 House Hi-hat Pedal
- 418 606 Hi-hat Pedal
- 419 Standard Hi-hat Splash
- 420 Splash
- 421 Pop Splash
- 422 Rock Hi-hat Splash
- 423 Classic Splash 1
- 424 Classic Splash 2
- 425 Mini Splash
- 426 Mute

## PERCUSSION

- 427 Metronome Bell
- 428 Metronome Click
- 429 Scratch
- 430 Scratch Push
- 431 DJ FX
- 432 High Q Zap
- 433 Ding Bell
- 434 Finger Snaps
- 435 Standard Clap
- 436 Tambourine
- 437 Agogo High
- 438 Agogo Low
- 439 Bell Tree
- 440 Bongo High
- 441 Bongo Low
- 442 Shaker
- 443 Conga Slap High
- 444 Conga Slap Mid
- 445 Conga Low
- 446 Open Conga

- 447 Conga Slap
- 448 Cowbell
- 449 Timbale High
- 450 Timbale Low
- 451 Timpani High
- 452 Timpani Low
- 453 Open Tabla High
- 454 Open Tabla Low
- 455 Slap Tabla
- 456 Mute Slap Tabla
- 457 Maracas
- 458 Short Whistle
- 459 Short Guiro
- 460 Long Guiro
- 461 Claves
- 462 Wood Block 1
- 463 Wood Block 2
- 464 Muted Cuica
- 465 Open Cuica
- 466 Muted Triangle
- 467 Open Triangle
- 468 Open Surdo
- 469 Cowbell 1
- 470 Cowbell 2
- 471 Cowbell 3
- 472 Cowbell 4
- 473 Cowbell 5
- 474 Cowbell 6
- 475 DJ 1
- 476 DJ 2
- 477 DJ 3
- 478 DJ 4
- 479 DJ 5
- 480 DJ 6
- 481 DJ 7
- 482 DJ 8
- 483 DJ 9
- 484 DJ 10
- 485 FX 1
- 486 FX 2
- 487 FX 3
- 488 FX 4
- 489 FX 5
- 490 FX 6
- 491 FX 7

## HIHAT

- 492 Standard A
- 493 Standard B
- 494 Pop A
- 495 Pop B
- 496 Rock A
- 497 Rock B
- 498 Classic
- 499 Jazz A
- 500 Jazz B
- 501 Brush
- 502 Mini
- 503 Junk
- 504 Dirty
- 505 Electron
- 506 808 A
- 507 808 B
- 508 909
- 509 House
- 510 606

# GM Drum Kit List

Note No.	Standard 1 (bank 0)	Standard 2 (bank 4)	Room (bank 09)	Rock (bank 16)
27 – D#1	High Q	<-	<-	<-
28 E1	Slap	<-	<-	<-
29 – F1	Scratch Push	<-	<-	<-
30 – F#1	Scratch Pull	<-	<-	<-
31 – G1	Sticks	<-	<-	<-
32 – G#1	Square Click	<-	<-	<-
33 – A1	Metronome Click	<-	<-	<-
34 – A#1	Metronome Bell	<-	<-	<-
35 – B1	Acoustic Bass Drum	<-	Room Bass Drum 1	Rock Bass Drum 1
36 – C2	Standard 1 Bass Drum	Standard 2 Bass Drum	Room Bass Drum 2	Rock Bass Drum 2
37 – C#2	Side Stick	<-	<-	<-
38 – D2	Standard 1 Snare	Standard 2 Snare	Room Snare	Rock Snare
39 – D#2	Hand Clap	<-	<-	<-
40 – E2	Standard 1 Snare Rim	Standard 2 Snare Rim	Room Snare Rim	Rock Snare Rim
41 – F2	Standard 1 Tom 6	Standard 2 Tom 6	Room Tom 6	Rock Tom 6
42 – F#2	Standard 1 Hi-hat Close	Standard 2 Hi-hat Close	Room Hi-hat Close	Rock Hi-hat Close
43 – G2	Standard 1 Tom 5	Standard 2 Tom 5	Room Tom 5	Rock Tom 5
44 – G#2	Standard 1 Hi-hat Pedal	Standard 2 Hi-hat Pedal	Room Hi-hat Pedal	Rock Hi-hat Pedal
45 – A2	Standard 1 Tom 4	Standard 2 Tom 4	Room Tom 4	Rock Tom 4
46 – A#2	Standard 1 Hi-hat Open	Standard 2 Hi-hat Open	Room Hi-hat Open	Rock Hi-hat Open
47 – B2	Standard 1 Tom 3	Standard 2 Tom 3	Room Tom 3	Rock Tom 3
48 – C3	Standard 1 Tom 2	Standard 2 Tom 2	Room Tom 2	Rock Tom 2
49 – C#3	Standard 1 Crash 1	Standard 2 Crash 1	Room Crash 1	Rock Crash 1
50 – D3	Standard 1 Tom 1	Standard 2 Tom 1	Room Tom 1	Rock Tom 1
51 – D#3	Standard 1 Ride	Standard 2 Ride	Room Ride	Rock Ride
52 – E3	Chinese Cymbal 1	<-	<-	<-
53 – F3	Ride Bell	<-	Room Ride Bell	Rock Ride Bell
54 – F#3	Tambourine	<-	<-	<-
55 – G3	Splash Cymbal	<-	Room Splash Cymbal	Rock Splash Cymbal
56 – G#3	Standard 1 Cowbell	Standard 2 Cowbell	Room Cowbell	Rock Cowbell
57 – A3	Standard 1 Crash 2	Standard 2 Crash 2	Room Crash 2	Rock Crash 2
58 – A#3	Vibra-slap	<-	<-	<-
59 – B3	Ride Cymbal	<-	<-	<-
60 – C4	Hi Bongo	<-	<-	<-
61 – C#4	Low Bongo	<-	<-	<-
62 – D4	Mute Hi Conga	<-	<-	<-
63 – D#4	Open Hi Conga	<-	<-	<-
64 – E4	Low Conga	<-	<-	<-
65 – F4	High Timbale	<-	<-	<-
66 – F#4	Low Timbale	<-	<-	<-
67 – G4	High Agogo	<-	<-	<-
68 – G#4	Low Agogo	<-	<-	<-
69 – A4	Cabasa	<-	<-	<-
70 – A#4	Maracas	<-	<-	<-
71 – B4	Short Whistle	<-	<-	<-
72 – C5	Long Whistle	<-	<-	<-
73 – C#5	Short Guiro	<-	<-	<-
74 – D5	Long Guiro	<-	<-	<-
75 – D#5	Claves	<-	<-	<-
76 – E5	Hi Wood Block	<-	<-	<-
77 – F5	Low Wood Block	<-	<-	<-
78 – F#5	Mute Cuica	<-	<-	<-
79 – G5	Open Cuica	<-	<-	<-
80 – G#5	Mute Triangle	<-	<-	<-
81 – A5	Open Triangle	<-	<-	<-
82 – A#5	Shaker	<-	<-	<-
83 – B5	Jingle Bell	<-	<-	<-
84 – C6	Bell Tree	<-	<-	<-
85 – C#6	Castanets	<-	<-	<-
86 – D6	Mute Surdo	<-	<-	<-
87 – D#6	Open Surdo	<-	<-	<-

# GM Drum Kit List

Note No.	Funk (bank 17 )	Electronic (bank 24 )	808 (bank 25 )	House (bank 28 )
27 – D#1	<-	<-	<-	<-
28 E1	<-	<-	<-	<-
29 – F1	<-	<-	<-	<-
30 – F#1	<-	<-	<-	<-
31 – G1	<-	<-	<-	<-
32 – G#1	<-	<-	<-	<-
33 – A1	<-	<-	<-	<-
34 – A#1	<-	<-	<-	<-
35 – B1	Funk Bass Drum 1	Electronic Bass Drum 1	808 Bass Drum 1	House Bass Drum 1
36 – C2	Funk Bass Drum 2	Electronic Bass Drum 2	808 Bass Drum 2	House Bass Drum 2
37 – C#2	<-	<-	<-	<-
38 – D2	Funk Snare	Electronic Snare	808 Snare	House Snare
39 – D#2	<-	<-	<-	House Hand Clap
40 – E2	Funk Snare Rim	Electronic Snare Rim	808 Snare Rim	House Snare Rim
41 – F2	Funk Tom 6	Electronic Tom 6	808 Tom 6	House Tom 6
42 – F#2	Funk Hi-hat Close	Electronic Hi-hat Close	808 Hi-hat Close	House Hi-hat Close
43 – G2	Funk Tom 5	Electronic Tom 5	808 Tom 5	House Tom 5
44 – G#2	Funk Hi-hat Pedal	Electronic Hi-hat Pedal	808 Hi-hat Pedal	House Hi-hat Pedal
45 – A2	Funk Tom 4	Electronic Tom 4	808 Tom 4	House Tom 4
46 – A#2	Funk Hi-hat Open	Electronic Hi-hat Open	808 Hi-hat Open	House Hi-hat Open
47 – B2	Funk Tom 3	Electronic Tom 3	808 Tom 3	House Tom 3
48 – C3	Funk Tom 2	Electronic Tom 2	808 Tom 2	House Tom 2
49 – C#3	Funk Crash 1	<-	808 Crash 1	<-
50 – D3	Funk Tom 1	Electronic Tom 1	808 Tom 1	House Tom 1
51 – D#3	Funk Ride	<-	<-	<-
52 – E3	<-	<-	<-	<-
53 – F3	<-	<-	<-	<-
54 – F#3	<-	<-	<-	<-
55 – G3	<-	<-	<-	<-
56 – G#3	<-	<-	<-	<-
57 – A3	Funk Crash 2	<-	808 Crash 2	<-
58 – A#3	<-	<-	<-	<-
59 – B3	<-	<-	<-	<-
60 – C4	<-	<-	<-	<-
61 – C#4	<-	<-	<-	<-
62 – D4	<-	<-	808 Mute Hi Conga	<-
63 – D#4	<-	<-	808 Open Hi Conga	<-
64 – E4	<-	<-	808 Low Conga	<-
65 – F4	<-	<-	<-	<-
66 – F#4	<-	<-	<-	<-
67 – G4	<-	<-	<-	<-
68 – G#4	<-	<-	<-	<-
69 – A4	<-	<-	<-	<-
70 – A#4	<-	<-	808 Maracas	<-
71 – B4	<-	<-	<-	<-
72 – C5	<-	<-	<-	<-
73 – C#5	<-	<-	<-	<-
74 – D5	<-	<-	<-	<-
75 – D#5	<-	<-	808 Claves	<-
76 – E5	<-	<-	<-	<-
77 – F5	<-	<-	<-	<-
78 – F#5	<-	<-	<-	<-
79 – G5	<-	<-	<-	<-
80 – G#5	<-	<-	<-	<-
81 – A5	<-	<-	<-	<-
82 – A#5	<-	<-	<-	<-
83 – B5	<-	<-	<-	<-
84 – C6	<-	<-	<-	<-
85 – C#6	<-	<-	<-	<-
86 – D6	<-	<-	<-	<-
87 – D#6	<-	<-	<-	<-

# GM Drum Kit List

Note No.	Jazz (bank 32 )	Brush (bank 40 )	Orchestra (bank 48 )
27—D#1	<-	<-	Concert Hi-hat Close
28 E1	<-	<-	Concert Hi-hat Pedal
29—F1	<-	<-	Concert Hi-hat Open
30—F#1	<-	<-	Concert Ride
31—G1	<-	<-	<-
32—G#1	<-	<-	<-
33—A1	<-	<-	<-
34—A#1	<-	<-	<-
35—B1	Jazz Bass Drum 1	Brush Bass Drum 1	Concert Bass Drum 1
36—C2	Jazz Bass Drum 2	Brush Bass Drum 2	Concert Bass Drum 2
37—C#2	<-	<-	<-
38—D2	Jazz Snare	Brush Snare	Concert Snare 1
39—D#2	<-	<-	Castanets
40—E2	Jazz Snare Rim	Brush Snare Rim	Concert Snare 2
41—F2	Jazz Tom 6	Brush Tom 6	Timpani F
42—F#2	Jazz Hi-hat Close	<-	Timpani F#
43—G2	Jazz Tom 5	Brush Tom 5	Timpani G
44—G#2	Jazz Hi-hat Pedal	<-	Timpani G#
45—A2	Jazz Tom 4	Brush Tom 4	Timpani A
46—A#2	Jazz Hi-hat Open	<-	Timpani A#
47—B2	Jazz Tom 3	Brush Tom 3	Timpani B
48—C3	Jazz Tom 2	Brush Tom 2	Timpani C
49—C#3	<-	Brush Crash 1	Timpani C#
50—D3	Jazz Tom 1	Brush Tom 1	Timpani D
51—D#3	Jazz Ride	Brush Ride	Timpani D#
52—E3	<-	<-	Timpani E
53—F3	<-	<-	Timpani F
54—F#3	<-	<-	<-
55—G3	<-	<-	<-
56—G#3	<-	<-	<-
57—A3	Chinese Cymbal 2	Brush Crash 2	Concert Crash 1
58—A#3	<-	<-	<-
59—B3	<-	<-	Concert Crash 2
60—C4	<-	<-	<-
61—C#4	<-	<-	<-
62—D4	<-	<-	<-
63—D#4	<-	<-	<-
64—E4	<-	<-	<-
65—F4	<-	<-	<-
66—F#4	<-	<-	<-
67—G4	<-	<-	<-
68—G#4	<-	<-	<-
69—A4	<-	<-	<-
70—A#4	<-	<-	<-
71—B4	<-	<-	<-
72—C5	<-	<-	<-
73—C#5	<-	<-	<-
74—D5	<-	<-	<-
75—D#5	<-	<-	<-
76—E5	<-	<-	<-
77—F5	<-	<-	<-
78—F#5	<-	<-	<-
79—G5	<-	<-	<-
80—G#5	<-	<-	<-
81—A5	<-	<-	<-
82—A#5	<-	<-	<-
83—B5	<-	<-	<-
84—C6	<-	<-	<-
85—C#6	<-	<-	<-
86—D6	<-	<-	<-
87—D#6	<-	<-	<-

# GM Backing Instrument List

## PIANO

- 1 Acoustic Grand Piano
- 2 Bright Acoustic Piano
- 3 Electric Grand Piano
- 4 Honky-Tonk Piano
- 5 E.Piano 1
- 6 E.Piano 2
- 7 Harpsichord
- 8 Clavi

## MALLET

- 9 Celesta
- 10 Glockenspiel
- 11 Music Box
- 12 Vibraphone
- 13 Marimba
- 14 Xylophone
- 15 Tubular Bells
- 16 Dulcimer

## ORGAN

- 17 Drawbar Organ
- 18 Percussive Organ
- 19 Rock Organ
- 20 Church Organ
- 21 Reed Organ
- 22 Accordion
- 23 Harmonica
- 24 Tango Accordion

## GUITAR

- 25 Nylon Guitar
- 26 Steel Guitar
- 27 Jazz Guitar
- 28 Clean Guitar
- 29 Muted Guitar
- 30 Overdriven Guitar
- 31 Distortion Guitar
- 32 Guitar Harmonics

## BASS

- 33 Acoustic Bass
- 34 Finger Bass
- 35 Pick Bass
- 36 Fretless Bass
- 37 Slap Bass 1
- 38 Slap Bass 2
- 39 Synth Bass 1
- 40 Synth Bass 2

## STRINGS

- 41 Violin
- 42 Viola

- 43 Cello
- 44 Contrabass
- 45 Tremolo Strings
- 46 Pizzicato Strings
- 47 Orchestral Harp
- 48 Timpan

## STRINGS ENSEMBLE

- 49 Strings Ensemble 1
- 50 Strings Ensemble 2
- 51 Synth Strings 1
- 52 Synth Strings 2
- 53 Choir Aahs
- 54 Voice Oohs
- 55 Synth Voice
- 56 Orchestra Hit

## BRASS

- 57 Trumpet
- 58 Trombone
- 59 Tuba
- 60 Muted Trumpet
- 61 French Horn
- 62 Brass Section
- 63 Synth Brass 1
- 64 Synth Brass 2

## REED

- 65 Soprano Sax
- 66 Alto Sax
- 67 Tenor Sax
- 68 Baritone Sax
- 69 Oboe
- 70 English Horn
- 71 Bassoon
- 72 Clarinet

## PIPE

- 73 Piccolo
- 74 Flute
- 75 Recorder
- 76 Pan Flute
- 77 Blown Bottle
- 78 Shakuhachi
- 79 Whistle
- 80 Ocarina

## LEAD

- 81 Lead1 (square)
- 82 Lead2 (sawtooth)
- 83 Lead3 (calliope)
- 84 Lead4 (chiff)
- 85 Lead5 (charang)

- 86 Lead6 (voice)
- 87 Lead7 (fifths)
- 88 Lead8 (bass & Lead)

## PAD

- 89 Pad1 (newage)
- 90 Pad2 (warm)
- 91 Pad3 (Polysynth)
- 92 Pad4 (choir)
- 93 Pad5 (bowed)
- 94 Pad6 (metallic)
- 95 Pad7 (halo)
- 96 Pad8 (sweep)

## EFFECTS

- 97 FX1 (rain)
- 98 FX2 (soundtrack)
- 99 FX3 (crystal)
- 100 FX4 (atmosphere)
- 101 FX5 (brightness)
- 102 FX6 (goblins)
- 103 FX7 (echoes)
- 104 FX8 (sci-fi)

## ETHNIC

- 105 Sitar
- 106 Banjo
- 107 Shamisen
- 108 Koto
- 109 Kalimba
- 110 Bagpipe
- 111 Fiddle
- 112 Shanai

## PERCUSSIVE

- 113 Tinkle Bell
- 114 Agogo
- 115 Steel Drums
- 116 Wood Block
- 117 Taiko Drum
- 118 Melodic Tom
- 119 Synth Drum
- 120 Reverse Cymbal

## SOUND EFFECTS

- 121 Guitar Fret Noise
- 122 Breath Noise
- 123 Seashore
- 124 Bird Tweet
- 125 Telephone Ring
- 126 Helicopter
- 127 Applause
- 128 Gunshot

# Song List

No.	Name	Type	No.	Name	Type
1	Drum Intro	Loop	41	Mambo	Loop
2	Drum Main A	Loop	42	Latin Rock 1	Loop
3	Drum Main B	Loop	43	Latin Pop 2	Loop
4	R&B	Loop	44	Guitar Bossa	Loop
5	Modern Dance	Loop	45	Country Blues	Loop
6	Cool Jazz	Loop	46	Rock	Loop
7	Modern Pop	Loop	47	Reggae 1	Loop
8	Fusion 1	Loop	48	60's Rock	Loop
9	Funk 1	Loop	49	Blues	Loop
10	Big Band 1	Loop	50	World 1	Loop
11	Funk 2	Loop	51	World 2	Loop
12	Pop Funk 1	Loop	52	Latin	Loop
13	Fusion 2	Loop	53	Bossa	Loop
14	Funk 3	Loop	54	Samba 2	Loop
15	Fusion 3	Loop	55	3/4 Pop	Loop
16	Funk 4	Loop	56	Pop	Loop
17	Fusion 4	Loop	57	Jazz 2	Loop
18	Pop Funk 2	Loop	58	Reggae 2	Loop
19	Electronic&Funk	Loop	59	Reggae 3	Loop
20	Drum & Bass 1	Loop	60	Latin Rock 2	Loop
21	Break Beat	Loop	61	Fifths	Hit
22	Dance	Loop	62	Synth string	Hit
23	Drum & Bass 2	Loop	63	Brightness	Hit
24	Latin Dance 1	Loop	64	Atmosphere	Hit
25	Latin Dance 2	Loop	65	Chorused Piano	Hit
26	Swing 1	Loop	66	Bass Tap 1	Tap
27	Latin Jazz 1	Loop	67	Chorus Piano tap	Tap
28	Big Band 2	Loop	68	Brightness Tap	Tap
29	3/4 Jazz	Loop	69	Bass Tap 2	Tap
30	Jazz 1	Loop	70	Pad Tap 1	Tap
31	Latin Jazz 2	Loop	71	Vibraphone	Tap
32	Swing 2	Loop	72	Bass Tap 3	Tap
33	6/8 Ballad	Loop	73	Rain Tap	Tap
34	Pop Ballad	Loop	74	Pizzicato Strings	Tap
35	Pop Bossa	Loop	75	Bass Tap 4	Tap
36	16 Beat Pop	Loop	76	Crystal	Tap
37	Pop Shuffle	Loop	77	Xylophone	Tap
38	Ballad	Loop	78	Bass Tap 5	Tap
39	Samba 1	Loop	79	Pad Tap 2	Tap
40	Latin Pop 1	Loop	80	Glockenspiel Tap	Tap

# Pattern List

## BEAT

No.	Name	Kit Bank	Beat	Tempo	Measure
1	Beat 1	0	4/4	100	4
2	Beat 2	0	4/4	100	4
3	Beat 3	0	4/4	100	4
4	Beat 4	0	4/4	100	4
5	Beat 5	0	4/4	100	4
6	Beat 6	0	4/4	100	4
7	Beat 7	0	4/4	100	4
8	Beat 8	0	4/4	100	4
9	Beat 9	0	4/4	100	4
10	Beat 10	0	4/4	100	4
11	Beat 11	0	4/4	100	4
12	Beat 12	0	4/4	100	4
13	Beat 13	0	4/4	100	4
14	Beat 14	0	4/4	100	4
15	Beat 15	0	4/4	100	4
16	Beat 16	0	4/4	100	4
17	Beat 17	0	4/4	100	4
18	Beat 18	0	4/4	100	4
19	Beat 19	0	4/4	100	4
20	Beat 20	0	4/4	100	4

## RHYTHM

No.	Name	Kit Bank	Beat	Tempo	Measure
1	Funk 1	0	4/4	110	4
2	Funk 2	0	4/4	90	4
3	HipHop 1	0	4/4	90	4
4	HipHop 2	0	4/4	113	4
5	Jazz 1	0	4/4	157	4
6	Jazz 2	0	4/4	187	4
7	Latin 1	0	4/4	190	4
8	Latin 2	0	4/4	200	4
9	Pop Rock 1	0	4/4	105	4
10	Pop Rock 2	0	4/4	97	4
11	Rock	0	4/4	100	4
12	6/8 Pop Rock	0	6/8	125	4

## PATTERN

No.	Name	Kit Bank	Beat	Tempo	Measure
1	Funk	17	4/4	120	4
2	HipHop	25	4/4	110	4
3	Latin Jazz	40	4/4	130	8
4	6/8 Ballad	8	6/8	96	4
5	Bossanova	17	4/4	82	8
6	R&B	25	4/4	86	4
7	3/4 Jazz	40	3/4	120	10
8	Reggae	0	4/4	78	4
9	Rock	0	4/4	100	4
10	Fusion	0	4/4	103	4

# Parameter List

## NORMAL MODE

### KIT

Parameter	Abbreviation	Value
Kit Number	NUM	1—45
Kit Volume	VOL	0—32
Reverb	REV	ON / OFF
EQ High	EQH	-12 -- +12
EQ Middle	EQM	-12 -- +12
EQ Low	EQL	-12 -- +12

### SONG

Parameter	Abbreviation	Value
Song Number	NUM	1—80
Accomp Volume of Song	ACC	0—32
Drum Volume of Song	DRM	0—32

### UTILITY

Parameter	Abbreviation	Value
Pad Sensitivity	SEN	1—16
Pad Threshold	THR	0—16
Crosstalk	CRO	1—16
Curve	CUR	1—6
Rim Sensitivity	R-S	1—16
Splash Sensitivity	S-S	1—9
Local on/off	LOC	ON/OFF
GM on/off	GM	ON/OFF

### TEMPO

Parameter	Abbreviation	Value
TEMPO	BPM	30—280

### VOICE

Parameter	Abbreviation	Value
Voice Number	NUM/H-C	1—510/ 1—19
Voice Volume	VOL	0—32
Voice Pan	PAN	-8 -- +8
Voice Pitch	PIT	-8 -- +8
Voice Reverb	REV	0—16
MIDI Note	MID	0—127
Pad Song Switch	P-S	ON / OFF
Pad Song Number	P-N	1—80

### CLICK

Parameter	Abbreviation	Value
Signature	SIG	0—9/2, 0—9/4, 0—9/8, 0—9/16
Interval	INT	1—2, 3—8, 1—4, 1—8, 1—12, 1—16
Click Volume	VOL	0—32
Click Voice	VOC	1—5

### RECORD

Parameter	Abbreviation	Value
Song Number	SNG	---/1—60
Kit	KIT	1—45
Tempo	BPM	30—280
Signature	SIG	1—9/2, 1—9/4, 1—9/8, 1—9/16
Interval	INT	1—2, 3—8, 1—4, 1—8, 1—12, 1—16
Drum Off	DRM	---/ON/OFF
Pre Count	PRC	ON/OFF

## LEARNING MODE

### BEAT

Parameter	Abbreviation	Value
Beat Type	BEA	1--20
Drum Volume	DRM	0--32

### RHYTHM

Parameter	Abbreviation	Value
Rhythm Type	RHM	1--12
Level	LEV	1--6
Drum Volume	VOL	0--32

### PATTERN

Parameter	Abbreviation	Value
Pattern Type	PTN	1--10
Level	LEV	1--5
Accompany Volume	ACC	0--32
Drum Volume	DRM	0--32

# MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
Basic Default	10 ch	1-16	
Channel Changed	x	x	
Mode Default	x	x	
Mode Messages	x	x	
Mode Altered	*****	*****	
Note Number : True Voice	0-127 *****	0-127 0-127	
Velocity Note On	○99H,V=1-127	○	
Velocity Note Off	x (99H,V=0)	○	
After Key's	x	○	
Touch Ch's	x	x	
Pitch Bend	x	x	
Control Change			
0	x	○	Bank Select
1	x	○	Modulation
5	x	○	Portamento Time
6	x	○	Data Entry
7	x	○	Volume
10	x	○	Pan
11	x	○	Expression
64	x	○	Sustain Pedal
65	x	○	Portamento On/Off
66	x	○	Sostenuto Pedal
67	x	○	Soft Pedal
80	x	○	Reverb Program
81	x	○	Chorus Program
91	x	○	Reverb Level
93	x	○	Chorus Level
120	x	○	All Sound Off
121	x	○	Reset All Controllers
123	x	○	All Notes Off
Program Change : True Number	x xxxxxxx	○ 0-127	
System Exclusive	x	○	
System : Song Position	x	x	
Common : Song Select	x	x	
: Tune	x	x	
System : Clock	○	x	
Real Time : Commands	○	x	Start And Stop Only
Aux : Local On/off	x	x	
: All Notes Off	x	x	
Messages : Active Sensing	x	○	
: Reset	x	x	