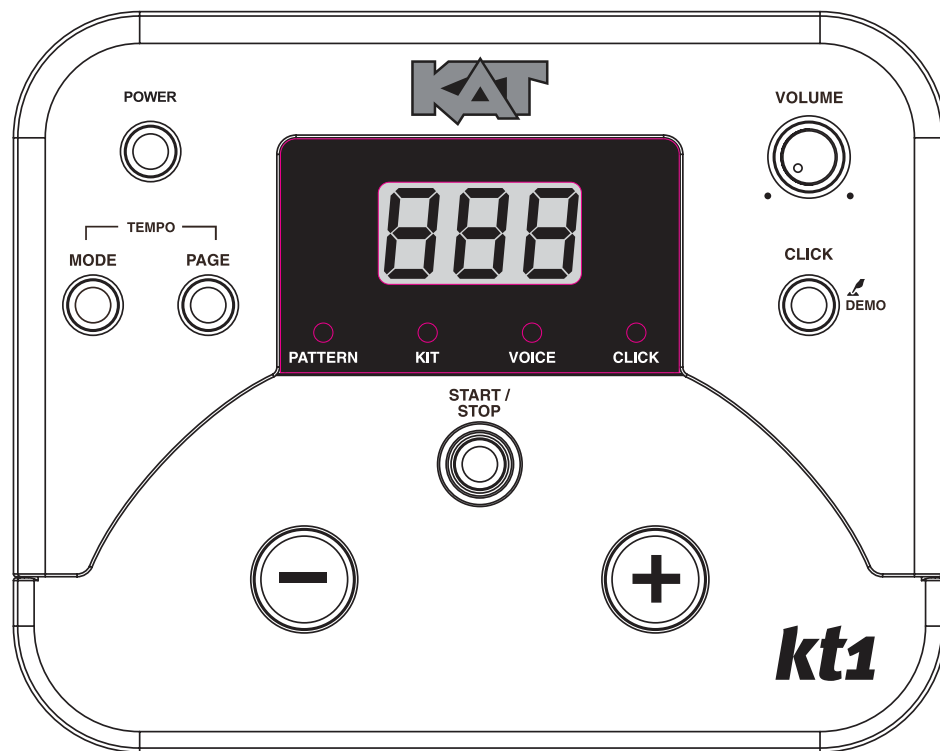




kt1

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.

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Panel Description

Front Panel

1. POWER BUTTON

Press the [POWER] button to turn the power on and off.

2. [MODE] BUTTON

Press [mode] button to select the mode from PATTERN, KIT, VOICE, CLICK.

3. [PAGE] BUTTON

Press [page] button to browse the menu pages of current selected mode.
Press both [mode] and [page] buttons, the 3-digit LED will display the tempo page, it will temporarily display for 3 seconds, then press [+] or [-] to adjust the volume.

4. 3-DIGIT LED DISPLAY

3-digit LED and LED indicators

5. MASTER VOLUME KNOB

Control the volume of phone and line out.
Turn it clockwise to increase the volume and counter-clockwise to decrease the volume.

6. [CLICK] BUTTON

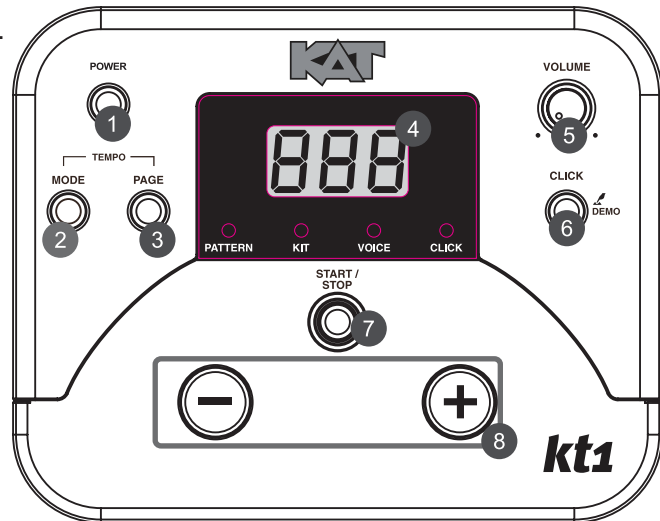
Press [click] button to start/stop the click.
Hold on the [click] button 2 seconds to enter the demo mode and play the demo.

7. START/STOP Button

Start or stop playing.

8. [+]/[-] BUTTON

Press [+]/[-] button to adjust the parameters.



Rear Panel

9. POWER SUPPLY JACK (DC IN 9V)

Connect an AC adaptor to this jack.

10. USB PORT

Connect to computer. Note that the USB port will only transmit MIDI message between the computer and module.

11. MIDI OUT JACK

Connect with external sound module.

12. LINE OUTPUT JACKS (R, L/MONO)

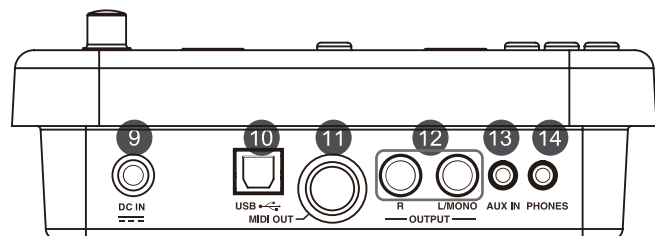
Made up of right channel output and left channel output which is also used as mono line output.

13. AUX IN

Connect with external sound source.

14. PHONES JACK

Connect a pair of stereo headphones to this jack.
(Connect the headphones will not mute the output jack.)



Caution!

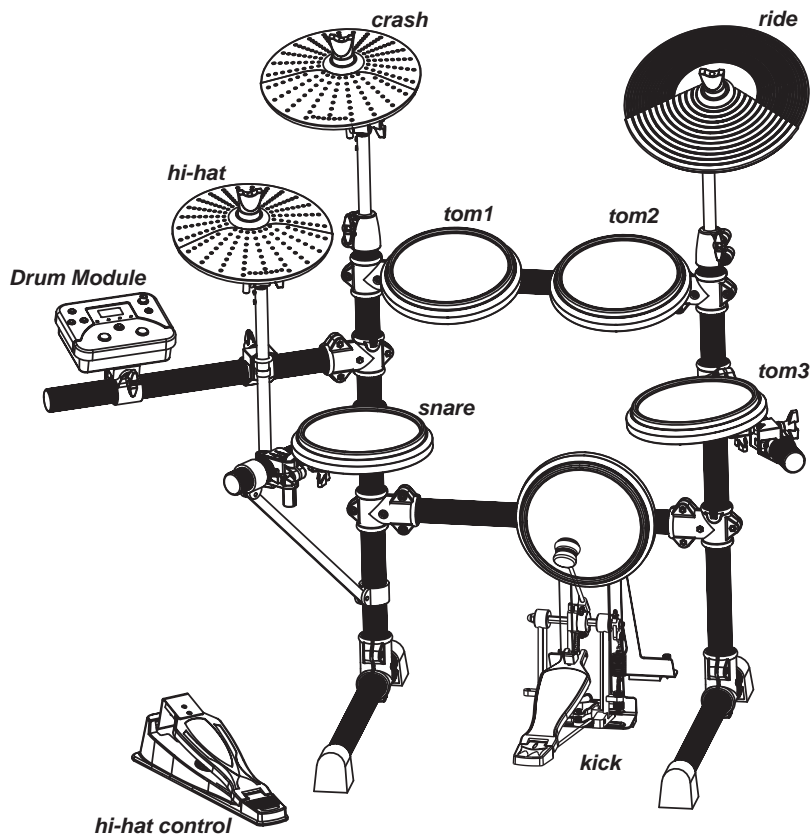
To prevent electric shock and damage to the device, make sure the power is switched OFF on the drum and all related devices before making any connection.

Connecting Pads and Pedals

Using the provided cable harness, connect the pads, cymbals, and pedal using the assignments listed on each cable. (See the below illustration for reference)

Note:

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

**Note:**

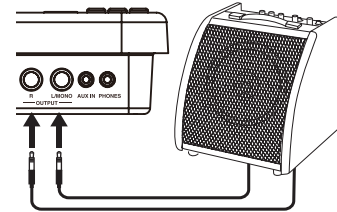
For details on assembling the drum stand, attaching the digital drum and connecting pads, refer to the Assembly Instructions.

Bass drum pedal NOT included with some models.

Connections

Connecting Audio Equipment

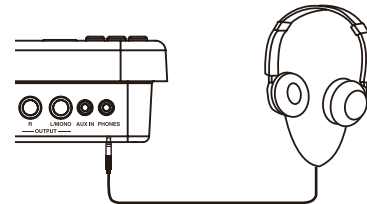
1. When you want to listen to the sounds with an amplifier, connect amplifier with the 1/4-inch Output L/MONO and R jacks on the rear panel. (For monaural playback, use the L/MONO jack; for stereo playback, connect both L/MONO and R jacks.)
2. The volume is adjusted with the VOLUME knob.



Connecting Headphones

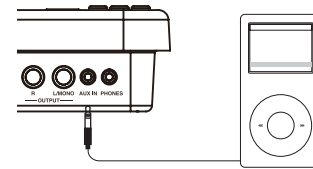
An optional set of stereo headphones can be connected with the PHONES jack located on the rear panel of the drum module.

- * Adjust the volume to a comfortable level.



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

1. Use the audio output of a CD player, or other audio source, to connect with the AUX IN jack on the rear panel. This audio can be mixed with the sound of the drums. This function will allow you to play along with your favorite song.
2. The volume of the external signal is adjusted with the VOLUME knob.

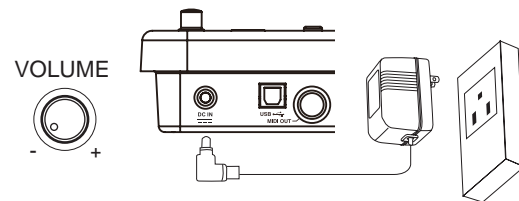


Connect the power supply jack

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

Note:

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



Connecting a Computer

MIDI stands for Musical Instrument Digital Interface, this is a world-wide standard communication interface that enables electronic musical instruments and computers (of all brands) to communicate with each other so that MIDI command and other data can pass between them. This exchange of information makes it possible to create a system of MIDI instruments and devices that offer far greater versatility and control than is available with isolated instruments. Whether you interface with computers, sequencers, expanders or other controllers, your musical horizons will be greatly enhanced.

MIDI connection

MIDI OUT: This terminal transmits data from this instrument to other MIDI devices.

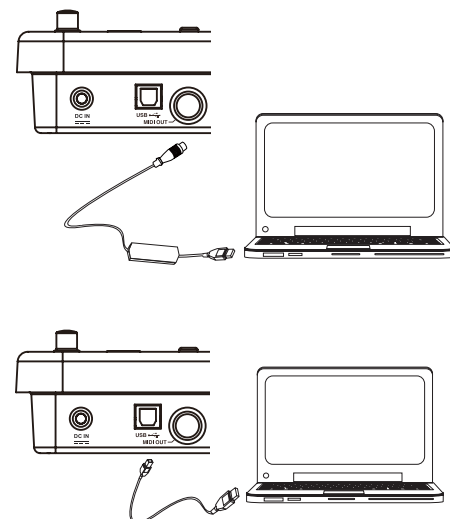
USB connection

The USB connector allows you to connect the module directly to your computer. It can be connected without driver installation under the Windows XP/Vista/Windows 7 and MAC OSX environment.

The module will be recognized as 'USB Audio device' to receive and transmit MIDI messages through a single USB cable, USB transmits MIDI and USB only for MIDI messages (MIDI via USB).

Note:

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

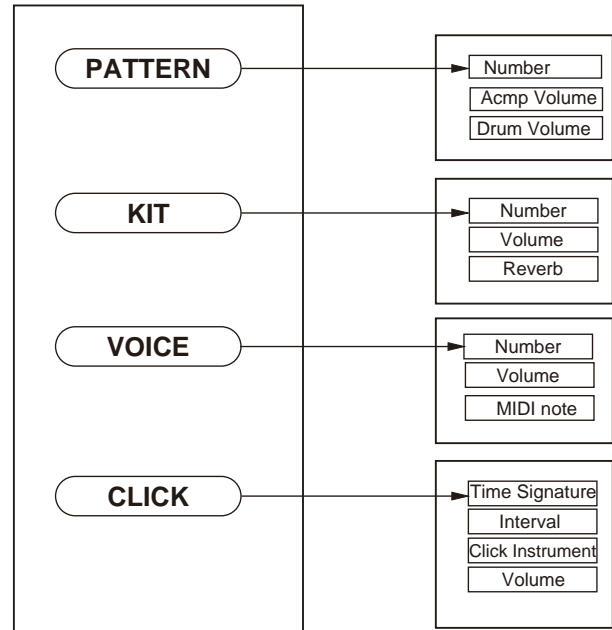


Menu

Menu tree

In the main menu there are 4 menu items

- PATTERN
- DRUM KIT
- VOICE
- CLICK



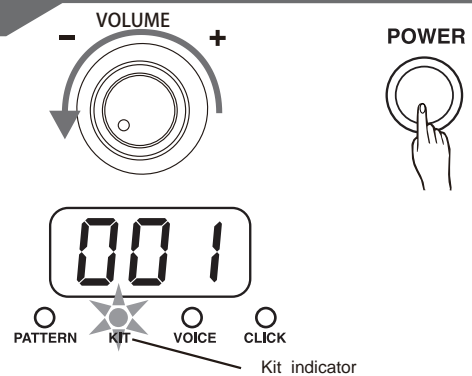
Operation

- Press [MODE] button to change the mode.
- Press [PAGE] button to select the page of current mode.
- Press [+] / [-] button to adjust the parameters.

Power ON

- After confirming all connections have been completed, rotate the volume knob to the left (minimum volume level) before turning the power on.
- Press and hold the [POWER] button for 2 seconds to turn the power on.
- Display shows the kit's number and its indicator lights up.

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. To disable the automatic power-off function, press the [START/STOP] button and then turn on the power. The 3-digit LED will display "POF".



Set the main volume

- While hitting a pad, gradually rotate the volume knob until a comfortable volume level is reached.



Pattern

In pattern mode, there are 3 pages:

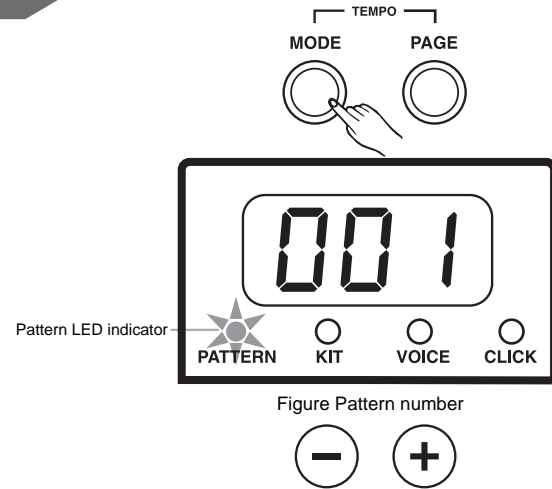
1. Pattern number (1- 40, default 1)
2. Pattern accompaniment volume (0-32)
3. Pattern drum volume (0-32)

Select a pattern

In pattern mode, Pattern number (001-040, default 001)

1. Press the [MODE] button to select the pattern mode, the pattern LED indicator will light up, the 3-digit-LED will display the pattern number (001)

2. Press [+] or [-] button to adjust the value.
Range: (001 to 040)

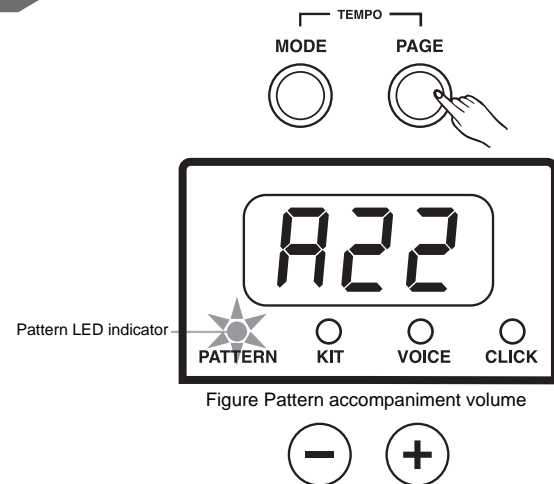


Adjust the accompaniment volume

In pattern mode, pattern accompaniment volume (0-032)

1. Press [MODE] button to select the pattern mode, the pattern LED indicator will light up.
2. Press [PAGE] button to select the accompaniment volume page, the 3-digit-LED will display the accompaniment volume (A22).

3. Press [+] or [-] button to adjust the value.
Range: (0 to 32).

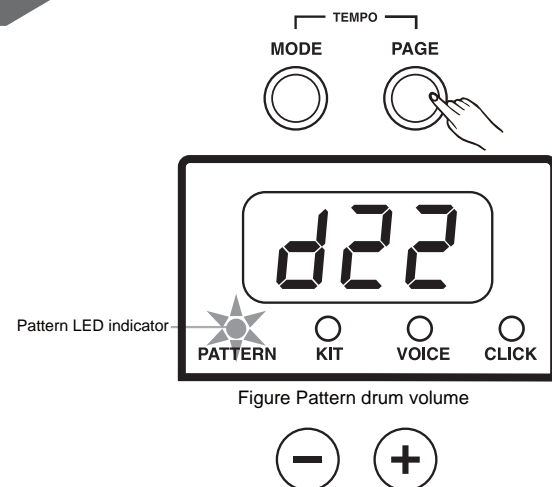


Adjust the drum volume

In pattern mode, pattern drum volume (0-032)

1. Press [MODE] button to select the pattern mode, the pattern LED indicator will light up.
2. Press [PAGE] button to select the drum volume page, the 3-digit-LED will display the drum volume (d22).

3. Press [+] or [-] to adjust the value.
Range: (0 to 32)



Drum Kit

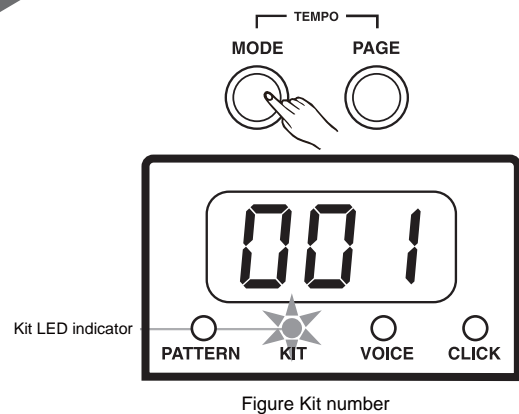
In kit mode, there are 3 pages:

1. kit number (001-010, default 1).
2. kit volume (0-32).
3. kit reverb: (on/off, default on).

Select a kit

In kit mode, kit number (001-010, default 1).

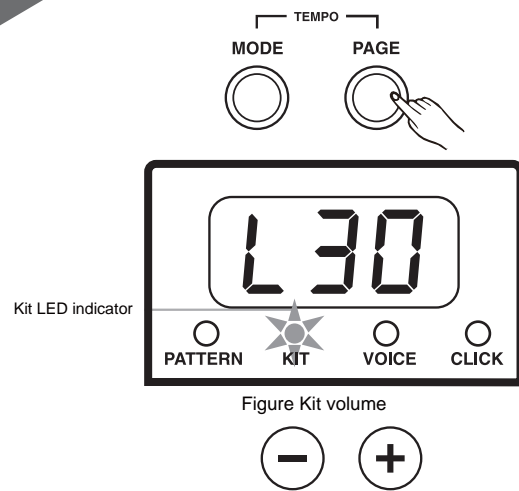
1. Press [MODE] button to select the kit mode, the kit LED indicator will light up, the 3-digit-LED will display the kit number (001).
2. Press [+] or [-] to adjust the value.
Range: (001-010).



Adjust the kit volume

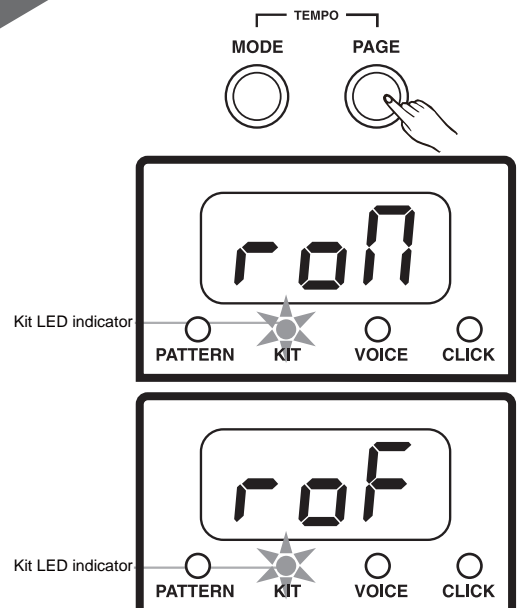
In kit mode, kit volume (0-32).

1. Press the [MODE] button to select the kit mode, the kit LED indicator will be lighted.
2. Press the [PAGE] button to select the kit volume page, the 3-digit-LED will display the kit volume (L30).
3. Press [+] or [-] to adjust the value (Automatic save).
Range: (0 to 32).



Switch reverb on/off

1. Press [MODE] button to select the kit mode, the kit LED indicator will light up.
2. Press the [PAGE] button to select the kit reverb page, reverb effect can be turned on or off by pressing button [+] or [-].



Voice

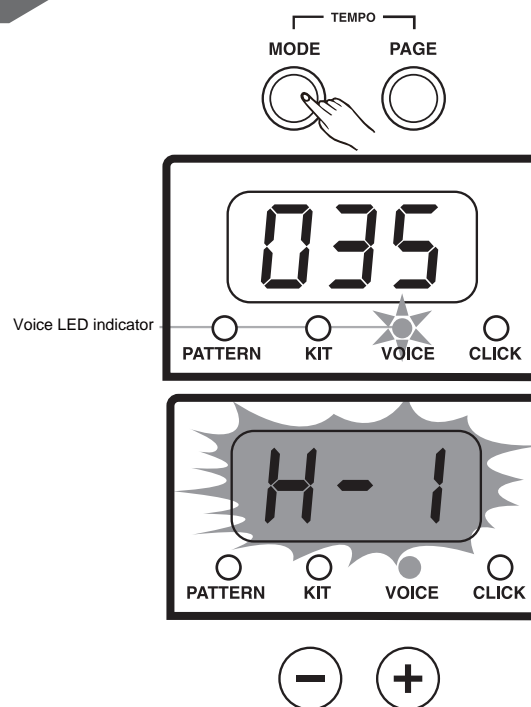
In voice mode, there are 3 pages:

1. Voice number: (1-158).
2. Voice volume: (0-32).
3. MIDI note: (0-99).

Select the voice

In voice mode, voice number: (1-158).

1. Press [MODE] button to select the voice mode, the voice LED indicator will light up, strike a drum pad, the 3-digit-LED will display the voice number.



2. Press [+] or [-] to adjust the value (Automatic save).
Range: (001 to 158).

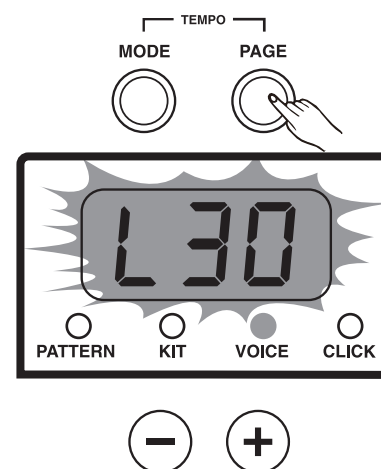
NOTE:

When you select a voice for the hi-hat drum pad, you only can select the hi-hat group voices, from group 1-group 11 (Automatic save), the display is: (H-I).

Adjust the voice volume

In voice mode, voice volume: (0-32).

1. Press [MODE] button to select the voice mode, the voice LED indicator will light up.
2. Press [PAGE] button to select the voice volume page, strike a drum pad, the 3-digit-LED will display the voice volume (L30).
3. Press [+] or [-] to adjust the value (Automatic save).
Range: (0 to 32).

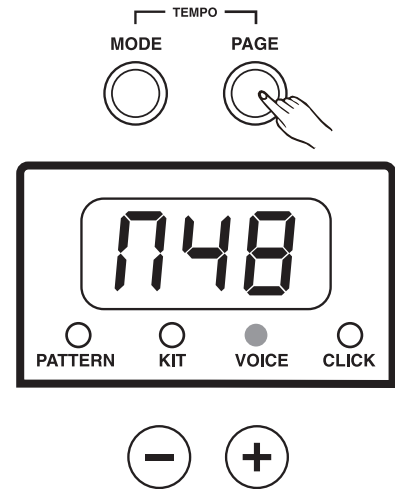


Voice

Adjust the midi note

In voice mode, midi note: (0-99).

1. Press [MODE] button to select the voice mode, the voice LED indicator will light up.
2. Press [PAGE] button to select the midi note page, strike a strike a drum pad, the 3-digit-LED will display the midi note (n48).
3. Press [+] or [-] to adjust the value (Automatic save). Range: (0 to 99).



THE DEFAULT MIDI NOTE:

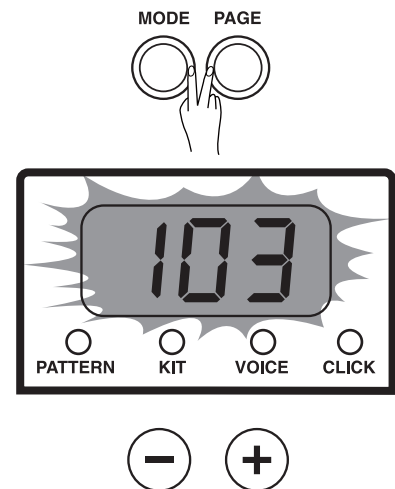
| NO. | NAME | NOTE |
|-----|-------------|------|
| 1 | CRASH | 49 |
| 2 | TOM 1 | 48 |
| 3 | TOM 2 | 45 |
| 4 | TOM 3 | 43 |
| 5 | RIDE | 51 |
| 6 | KICK | 36 |
| 7 | SNARE | 38 |
| 8 | HIHAT CLOSE | 42 |
| 9 | HIHAT OPEN | 46 |
| 10 | HIHAT PEDAL | 44 |

Tempo

The tempo range is 30-280

Adjust the tempo

1. Press both [MODE] and [PAGE] buttons, the 3-digit-LED will display the tempo page, it will temporarily display for 3 seconds.



2. Press [+] or [-] to adjust the value.

Click

In click mode, there are 4 pages:

1. Time signature: (1/4-7/4,3/8,6/8).
2. Interval: (1/4,1/8,1/12,1/16,1/24, default 1/4).
3. Instrument: (1-5, default 1).
4. Click volume: (0-32).

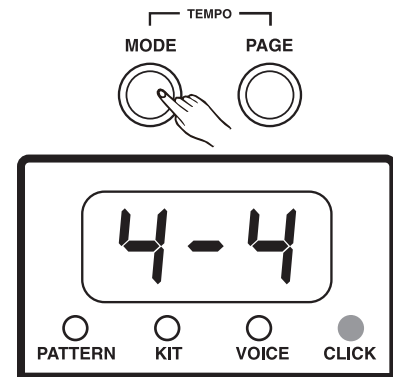
Adjust the click time signature

In click mode, time signature: (1/4-7/4,3/8,6/8).

1. Press [MODE] button select the click mode, the click LED indicator will light up.
2. Press [PAGE] button select the click time signature page, the 3-digit-LED will display the click time signature (4-4).
3. Press [+] or [-] to adjust the value. Range: (1/4-7/4 or 3/8 or 6/8).

Note:

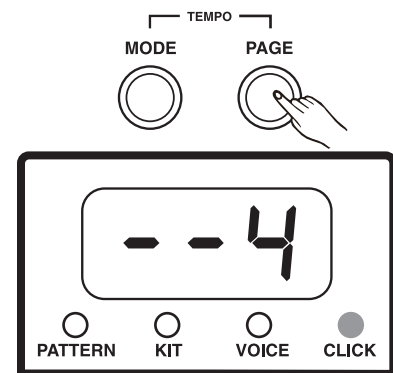
The click time signature will follow the pattern, when pattern is playing, it cannot be edited.



Adjust the click interval

In click mode, interval: (1/4,1/8,1/12,1/16,1/24, default 1/4).

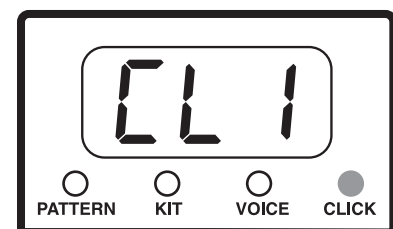
1. Press [MODE] button to select the click mode, the click LED indicator will light up.
2. Press [PAGE] button to select the click interval page, the 3-digit-LED will display the click interval (--4).
3. Press the [+] or [-] button to adjust the value. Range: (--4 to -24).



Adjust the click instrument

In click mode, instrument: (1-5, default 1).

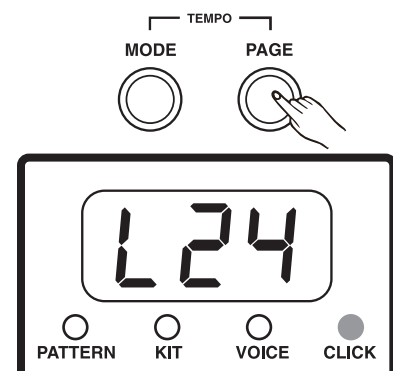
1. Press [MODE] button to select the click mode, the click LED indicator will light up.
2. Press [PAGE] button to select the click instrument page, the 3-digit-LED will display the click instrument (CL1).
3. Press [+] or [-] to adjust the value. Range: (CL1 to CL5).



Adjust the click volume

In click mode, click volume: (0-32).

1. Press [MODE] button to select the click mode, the click LED indicator will light up.
2. Press [PAGE] button to select the click volume page, the 3-digit-LED will display the click volume (L24).
3. Press [+] or [-] to adjust the value. Range: (0 to 32)



Restore the factory presets

Restoring the factory presets can be implemented by following operations:

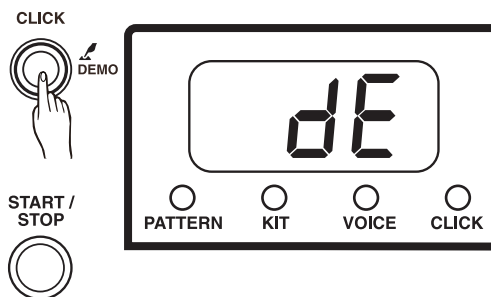
Turn on the power with both [+] and [-] held down.

This function will replace the current settings of the following parameters back to their default preset values:

Kit volume, voice number, voice volume and MIDI note.

Play the demo

1. Hold down on the [CLICK] button for 2 seconds to enter the demo and play the demo, the 3-digit-LED will display the demo "dE".



2. Press [START/STOP] button to stop the demo playing.

Play the pattern

1. Press [START/STOP] button to play the pattern.
2. Press [START/STOP] button again to stop the pattern.



Play the click

1. Press the [CLICK] button to start the click, the click indicator will flash with the beat.
2. Press the [CLICK] button again to stop the click.



Specifications

Drum Pad

4 drum pads , 3 cymbal pads , 1 hi-hat control pedal , 1 kick pedal

Preset Drum kits

10 preset kits

Drum Instrument

158

Preset Pattern

40

Controls

MIDI OUT, POWER BUTTON, USB, PHONES, START/STOP,PATTERN, KIT, VOICE, CLICK, MODE, PAGE, DEMO, TEMPO, VOLUME, + / -

KIT Configuration

Snare: 8" single zone pad.
Tom1~tom3: 8" single zone pad.
Ride:12" single zone cymbal.
Crash:10" single zone cymbal with choke.
Hihat: 10" single zone cymbal.

Display

LED display

Connections

PHONES
AUX IN
OUTPUT (R & L/MONO)
MIDI OUT
USB
ON/OFF

Power Supply

AC adaptor

Preset Drum KIT list

| No. | Name |
|-----|-------------|
| 001 | Standard 1 |
| 002 | Live |
| 003 | Power Rock |
| 004 | New Country |
| 005 | Rock |
| 006 | Jazz Brush |
| 007 | Latin |
| 008 | Beat Box |
| 009 | Old Skool |
| 010 | House |

Drum Instrument List

| No. | Name | No. | Name | No. | Name | No. | Name |
|--------------|-----------------|------------|--------------------|--------------|-------------------|-------------------|---------------------|
| Kick | | 32 | Electronic Snare 1 | 64 | Camco Tom 5 | 95 | Rock Crash 3 |
| 1 | Standard Kick 1 | 33 | Electronic Snare 2 | 65 | Camco Tom 6 | 96 | Splash |
| 2 | Standard Kick 2 | 34 | 808 Snare | 66 | 808 Tom 1 | 97 | Brush Carsh |
| 3 | Room Kick | 35 | House Snare 1 | 67 | 808 Tom 2 | 98 | 808 Crash |
| 4 | Rock Kick 1 | 36 | House Snare 2 | 68 | 808 Tom 3 | 99 | Drum & Bass Crash 1 |
| 5 | Rock Kick 2 | 37 | HipHop Snare 1 | 69 | 808 Tom 4 | HiHat | |
| 6 | Classic Kick | 38 | Teckno Snare | 70 | 808 Tom 5 | 100 | Standard HH Open 1 |
| 7 | Acoustic Kick 1 | Tom | | 71 | 808 Tom 6 | 101 | Standard HH Open 2 |
| 8 | Acoustic Kick 2 | 39 | Acoustic Tom 1 | 72 | Electronic Tom 1 | 102 | Jazz HH Open |
| 9 | Acoustic Kick 3 | 40 | Acoustic Tom 2 | 73 | Electronic Tom 2 | 103 | Rock HH Open 1 |
| 10 | Big Band Kick | 41 | Acoustic Tom 3 | 74 | Electronic Tom 3 | 104 | Rock HH Open 2 |
| 11 | Camco Kick 1 | 42 | Jazz Tom 1 | 75 | Electronic Tom 4 | 105 | Classic HH Open |
| 12 | Camco Kick 2 | 43 | Jazz Tom 2 | 76 | Electronic Tom 5 | 106 | Pop Hi-hat Open |
| 13 | Hiphop Kick | 44 | Jazz Tom 3 | 77 | Electronic Tom 6 | 107 | Brush HH Open |
| 14 | Funk Kick | 45 | Fusion Tom 1 | 78 | Tom Rim | 108 | Electronic HH Open |
| 15 | Jazz Kick | 46 | Fusion Tom 2 | Ride | | 109 | 808 HH Open |
| 16 | Power Kick | 47 | Fusion Tom 3 | 79 | Standard 20" Ride | 110 | Noise Hi-hat Open |
| 17 | Electron Kick | 48 | Classic Tom 1 | 80 | Classic Ride 1 | 111 | Standard HH Close 1 |
| 18 | 808 Kick | 49 | Classic Tom 2 | 81 | Classic Ride 2 | 112 | Standard HH Close 2 |
| 19 | House Kick | 50 | Classic Tom 3 | 82 | Standard 22" Ride | 113 | Jazz HH Close |
| 20 | HipHop Kick 1 | 51 | Classic Tom 4 | 83 | Brush Ride | 114 | Rock HH Close 1 |
| 21 | HipHop Kick 2 | 52 | Classic Tom 5 | 84 | 808 Ride | 115 | Rock HH Close 2 |
| Snare | | 53 | Classic Tom 6 | 85 | Teckno Ride 1 | 116 | Classic HH Close |
| 22 | Classic Snare | 54 | Brush Tom 1 | 86 | Teckno Ride 2 | 117 | Pop Hi-hat Close |
| 23 | Jazz Snare | 55 | Brush Tom 2 | 87 | Flat Ride | 118 | Brush HH Close |
| 24 | Standard Snare | 56 | Brush Tom 3 | Crash | | 119 | Electronic HH Close |
| 25 | Room Snare 1 | 57 | Brush Tom 4 | 88 | Classic Crash 1 | 120 | 808 HH Close |
| 26 | Room Snare 2 | 58 | Brush Tom 5 | 89 | Classic Crash 2 | 121 | Noise Hi-hat Close |
| 27 | Funk Snare | 59 | Brush Tom 6 | 90 | Standard Crash 1 | 122 | Standard HH Pedal 2 |
| 28 | Acoust Snare | 60 | Camco Tom 1 | 91 | Standard Crash 2 | 123 | Standard HH Pedal 1 |
| 29 | Camco Snare | 61 | Camco Tom 2 | 92 | Standard Crash 3 | 124 | Jazz HH Pedal |
| 30 | Brush Snare | 62 | Camco Tom 3 | 93 | Rock Crash 1 | 125 | Rock Hi-hat Pedal 1 |
| 31 | Power Snare | 63 | Camco Tom 4 | 94 | Rock Crash 2 | 126 | Rock Hi-hat Pedal 2 |
| | | | | | | 127 | Classic HH Pedal |
| | | | | | | 128 | Pop Hi-hat Pedal |
| | | | | | | 129 | Brush HH Pedal |
| | | | | | | 130 | Electronic HH Pedal |
| | | | | | | 131 | 808 HH Pedal |
| | | | | | | 132 | Noise Hi-hat Pedal |
| | | | | | | Percussion | |
| | | | | | | 133 | Hi Bongo |
| | | | | | | 134 | Low Bongo |
| | | | | | | 135 | Mute Hi Conga |
| | | | | | | 136 | Open Hi Conga |
| | | | | | | 137 | Low Conga |
| | | | | | | 138 | High Timbale |
| | | | | | | 139 | Low Timbale |
| | | | | | | 140 | High Agogo |
| | | | | | | 141 | Low Agogo |
| | | | | | | 142 | Short Whistle |
| | | | | | | 143 | Long Whistle |
| | | | | | | 144 | Short Guiro |
| | | | | | | 145 | Long Guiro |
| | | | | | | 146 | Hi Wood Block |
| | | | | | | 147 | Low Wood Block |
| | | | | | | 148 | Mute Cuica |
| | | | | | | 149 | Open Cuica |
| | | | | | | 150 | Mute Triangle |
| | | | | | | 151 | Open Triangle |
| | | | | | | 152 | Jingle Bell |
| | | | | | | 153 | Bell tree |
| | | | | | | 154 | Mute Surdo |
| | | | | | | 155 | Open Surdo |
| | | | | | | 156 | DJ 1 |
| | | | | | | 157 | DJ 2 |
| | | | | | | 158 | DJ 3 |

Preset Pattern List

| No. | Name | Tempo |
|-----|-----------------|-------|
| 001 | Fusion 1 | 92 |
| 002 | BigBand1 | 160 |
| 003 | Modern Pop | 136 |
| 004 | HipHop | 110 |
| 005 | Latin Jazz 1 | 130 |
| 006 | Funk 1 | 120 |
| 007 | Electronic&Funk | 116 |
| 008 | Funk 2 | 112 |
| 009 | Pop Funk 1 | 112 |
| 010 | Fusion 2 | 112 |
| 011 | Funk 3 | 120 |
| 012 | Fusion 3 | 103 |
| 013 | Fusion 4 | 116 |
| 014 | Pop Funk 2 | 106 |
| 015 | R&B | 86 |
| 016 | Drum & Bass 1 | 168 |
| 017 | Break Beat | 108 |
| 018 | Dance | 130 |
| 019 | Drum & Bass 2 | 170 |
| 020 | Latin Dance | 126 |

| No. | Name | Tempo |
|-----|---------------|-------|
| 021 | Swing | 172 |
| 022 | Latin Jazz 2 | 126 |
| 023 | Big Band 2 | 152 |
| 024 | 3/4 Jazz | 120 |
| 025 | Jazz | 150 |
| 026 | 6/8 Ballad | 96 |
| 027 | Pop Ballad | 80 |
| 028 | Pop Bossa | 120 |
| 029 | 16Beat Pop | 120 |
| 030 | Pop Shuffle | 86 |
| 031 | Samba | 236 |
| 032 | Mambo | 126 |
| 033 | Latin Rock | 136 |
| 034 | Latin Pop | 126 |
| 035 | Guitar Bossa | 84 |
| 036 | Country Blues | 128 |
| 037 | Rock | 100 |
| 038 | Reggae | 78 |
| 039 | 60's Rock | 120 |
| 040 | Blues | 96 |
| | Demo Funk | 100 |

GM Backing Instrument List

| NO. | NAME |
|----------------|-----------------------|
| 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 | Harpichord |
| 8 | Clavi |
| MALLET | |
| 9 | Celesta |
| 10 | Glockenspiel |
| 11 | Music Box |
| 12 | Vibraphone |
| 13 | Marimba |
| 14 | Xylophone |
| 15 | Tubular Bells |
| 16 | Dulcimer |
| ORGAN | |
| 17 | Drawbar Organ |
| 18 | Percussive Organ |
| 19 | Rock Organ |
| 20 | Church Organ |
| 21 | Reed Organ |
| 22 | Accordion |
| 23 | Harmonica |
| 24 | Tango Accordion |
| GUITAR | |
| 25 | Nylon Guitar |
| 26 | Steel Guitar |
| 27 | Jazz Guitar |
| 28 | Clean Guitar |
| 29 | Muted Guitar |
| 30 | Overdriven Guitar |
| 31 | Distortion Guitar |
| 32 | Guitar Harmonics |
| BASS | |
| 33 | Acoustic Bass |
| 34 | Finger Bass |
| 35 | Pick Bass |
| 36 | Fretless Bass |
| 37 | Slap Bass 1 |
| 38 | Slap Bass 2 |
| 39 | Synth Bass 1 |
| 40 | Synth Bass 2 |
| STRINGS | |
| 41 | Violin |
| 42 | Viola |

| | |
|-------------------------|--------------------|
| 43 | Cello |
| 44 | Contrabass |
| 45 | Tremolo Strings |
| 46 | Pizzicato Strings |
| 47 | Orchestral Harp |
| 48 | Timpani |
| STRINGS ENSEMBLE | |
| 49 | Strings Ensemble 1 |
| 50 | Strings Ensemble 2 |
| 51 | Synth Strings 1 |
| 52 | Synth Strings 2 |
| 53 | Choir Aahs |
| 54 | Voice Oohs |
| 55 | Synth Voice |
| 56 | Orchestra Hit |
| BRASS | |
| 57 | Trumpet |
| 58 | Trombone |
| 59 | Tuba |
| 60 | Muted Trumpet |
| 61 | French Horn |
| 62 | Brass Section |
| 63 | Synth Brass 1 |
| 64 | Synth Brass 2 |
| REED | |
| 65 | Soprano Sax |
| 66 | Alto Sax |
| 67 | Tenor Sax |
| 68 | Baritone Sax |
| 69 | Oboe |
| 70 | English Horn |
| 71 | Bassoon |
| 72 | Clarinet |
| PIPE | |
| 73 | Piccolo |
| 74 | Flute |
| 75 | Recorder |
| 76 | Pan Flute |
| 77 | Blown Bottle |
| 78 | Shakuhachi |
| 79 | Whistle |
| 80 | Ocarina |
| LEAD | |
| 81 | Lead1 (square) |
| 82 | Lead2 (sawtooth) |
| 83 | Lead3 (calliope) |
| 84 | Lead4 (chiff) |
| 85 | Lead5 (charang) |

| | |
|----------------------|---------------------|
| 86 | Lead6 (voice) |
| 87 | Lead7 (fifths) |
| 88 | Lead8 (bass & Lead) |
| PAD | |
| 89 | Pad1 (newage) |
| 90 | Pad2 (warm) |
| 91 | Pad3 (Polysynth) |
| 92 | Pad4 (choir) |
| 93 | Pad5 (bowed) |
| 94 | Pad6 (metallic) |
| 95 | Pad7 (halo) |
| 96 | Pad8 (sweep) |
| EFFECTS | |
| 97 | FX1 (rain) |
| 98 | FX2 (soundtrack) |
| 99 | FX3 (crystal) |
| 100 | FX4 (atmosphere) |
| 101 | FX5 (brightness) |
| 102 | FX6 (goblins) |
| 103 | FX7 (echoes) |
| 104 | FX8 (sci-fi) |
| ETHNIC | |
| 105 | Sitar |
| 106 | Banjo |
| 107 | Shamisen |
| 108 | Koto |
| 109 | Kalimba |
| 110 | Bagpipe |
| 111 | Fiddle |
| 112 | Shanai |
| PERCUSSIVE | |
| 113 | Tinkle Bell |
| 114 | Agogo |
| 115 | Steel Drums |
| 116 | Wood Block |
| 117 | Taiko Drum |
| 118 | Melodic Tom |
| 119 | Synth Drum |
| 120 | Reverse Cymbal |
| SOUND EFFECTS | |
| 121 | Guitar Fret Noise |
| 122 | Breath Noise |
| 123 | Seashore |
| 124 | Bird Tweet |
| 125 | Telephone Ring |
| 126 | Helicopter |
| 127 | Applause |
| 128 | Gunshot |

GM Drum Kit List

| Note No. | Standard 1(bank 0) | Standard 2(bank 4) | Room (bank 8) | Rock (bank 16) | Funk (bank 17) |
|----------|-------------------------|-------------------------|--------------------|--------------------|-------------------|
| 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 | Funk Bass Drum 1 |
| 36-C2 | Standard 1 Bass Drum | Standard 2 Bass Drum | Room Bass Drum 2 | Rock Bass Drum 2 | Funk Bass Drum 2 |
| 37-C#2 | Side Stick | <- | <- | <- | <- |
| 38-D2 | Standard 1 Snare | Standard 2 Snare | Room Snare | Rock Snare | Funk Snare |
| 39-D#2 | Hand Clap | <- | <- | <- | <- |
| 40-E2 | Standard 1 Snare Rim | Standard 2 Snare Rim | Room Snare Rim | Rock Snare Rim | Funk Snare Rim |
| 41-F2 | Standard 1 Tom 6 | Standard 2 Tom 6 | Room Tom 6 | Rock Tom 6 | Funk Tom 6 |
| 42-F#2 | Standard 1 Hi-hat Close | Standard 2 Hi-hat Close | Room Hi-hat Close | Rock Hi-hat Close | Funk Hi-hat Close |
| 43-G2 | Standard 1 Tom 5 | Standard 2 Tom 5 | Room Tom 5 | Rock Tom 5 | Funk Tom 5 |
| 44-G#2 | Standard 1 Hi-hat Pedal | Standard 2 Hi-hat Pedal | Room Hi-hat Pedal | Rock Hi-hat Pedal | Funk Hi-hat Pedal |
| 45-A2 | Standard 1 Tom 4 | Standard 2 Tom 4 | Room Tom 4 | Rock Tom 4 | Funk Tom 4 |
| 46-A#2 | Standard 1 Hi-hat Open | Standard 2 Hi-hat Open | Room Hi-hat Open | Rock Hi-hat Open | Funk Hi-hat Open |
| 47-B2 | Standard 1 Tom 3 | Standard 2 Tom 3 | Room Tom 3 | Rock Tom 3 | Funk Tom 3 |
| 48-C3 | Standard 1 Tom 2 | Standard 2 Tom 2 | Room Tom 2 | Rock Tom 2 | Funk Tom 2 |
| 49-C#3 | Standard 1 Crash 1 | Standard 2 Crash 1 | Room Crash 1 | Rock Crash 1 | Funk Crash 1 |
| 50-D3 | Standard 1 Tom 1 | Standard 2 Tom 1 | Room Tom 1 | Rock Tom 1 | Funk Tom 1 |
| 51-D#3 | Standard 1 Ride | Standard 2 Ride | Room Ride | Rock Ride | Funk 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 | Funk 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. | Electronic (bank 24) | 808 (bank 25) | House (bank 28) | Jazz (bank 32) | Brush (bank 40) |
|----------|-------------------------|-------------------|--------------------|-------------------|-------------------|
| 27 – D#1 | <- | <- | <- | <- | <- |
| 28 E1 | <- | <- | <- | <- | <- |
| 29 – F1 | <- | <- | <- | <- | <- |
| 30 – F#1 | <- | <- | <- | <- | <- |
| 31 – G1 | <- | <- | <- | <- | <- |
| 32 – G#1 | <- | <- | <- | <- | <- |
| 33 – A1 | <- | <- | <- | <- | <- |
| 34 – A#1 | <- | <- | <- | <- | <- |
| 35 – B1 | Electronic Bass Drum 1 | 808 Bass Drum 1 | House Bass Drum 1 | Jazz Bass Drum 1 | Brush Bass Drum 1 |
| 36 – C2 | Electronic Bass Drum 2 | 808 Bass Drum 2 | House Bass Drum 2 | Jazz Bass Drum 2 | BrushBass Drum 2 |
| 37 – C#2 | <- | <- | <- | <- | <- |
| 38 – D2 | Electronic Snare | 808 Snare | House Snare | Jazz Snare | Brush Snare |
| 39 – D#2 | <- | <- | House Hand Clap | <- | <- |
| 40 – E2 | Electronic Snare Rim | 808 Snare Rim | House Snare Rim | Jazz Snare Rim | Brush Snare Rim |
| 41 – F2 | Electronic Tom 6 | 808 Tom 6 | House Tom 6 | Jazz Tom 6 | Brush Tom 6 |
| 42 – F#2 | Electronic Hi-hat Close | 808 Hi-hat Close | House Hi-hat Close | Jazz Hi-hat Close | <- |
| 43 – G2 | Electronic Tom 5 | 808 Tom 5 | House Tom 5 | Jazz Tom 5 | Brush Tom 5 |
| 44 – G#2 | Electronic Hi-hat Pedal | 808 Hi-hat Pedal | House Hi-hat Pedal | Jazz Hi-hat Pedal | <- |
| 45 – A2 | Electronic Tom 4 | 808 Tom 4 | House Tom 4 | Jazz Tom 4 | Brush Tom 4 |
| 46 – A#2 | Electronic Hi-hat Open | 808 Hi-hat Open | House Hi-hat Open | Jazz Hi-hat Open | <- |
| 47 – B2 | Electronic Tom 3 | 808 Tom 3 | House Tom 3 | Jazz Tom 3 | Brush Tom 3 |
| 48 – C3 | Electronic Tom 2 | 808 Tom 2 | House Tom 2 | Jazz Tom 2 | Brush Tom 2 |
| 49 – C#3 | <- | 808 Crash 1 | <- | <- | Brush Crash 1 |
| 50 – D3 | Electronic Tom 1 | 808 Tom 1 | House Tom 1 | Jazz Tom 1 | Brush Tom 1 |
| 51 – D#3 | <- | <- | <- | Jazz Ride | Brush Ride |
| 52 – E3 | <- | <- | <- | <- | <- |
| 53 – F3 | <- | <- | <- | <- | <- |
| 54 – F#3 | <- | <- | <- | <- | <- |
| 55 – G3 | <- | <- | <- | <- | <- |
| 56 – G#3 | <- | <- | <- | <- | <- |
| 57 – A3 | <- | 808 Crash 2 | <- | Chinese Cymbal 2 | Brush 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 | <- | <- | <- | <- | <- |

MIDI Implementation Chart

| Function | Transmitted | Recognized | Remarks |
|--------------------------|----------------|----------------|-----------------------|
| Basic Default | Ch 10 | 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 | x | ○ | |
| System Exclusive | x | ○ | |
| System : Song Position | x | x | |
| Common : Song Select | x | x | |
| : Tune | x | x | |
| System : Clock | ○ | x | Start \ Stop |
| Real Time: Commands | ○ | x | |
| Aux : Local On/off | x | x | |
| : All Notes Off | x | x | |
| Messages: Active Sensing | x | x | |
| : Reset | ○ | x | |

○: YES X: NO

