

What is MIDI?

The letters MIDI stand for Musical Instrument Digital Interface, which is the name of a worldwide standard for digital signals and connectors that makes it possible to exchange musical data between musical instruments and computers (machines) produced by different manufacturers. MIDI compatible equipment can exchange keyboard key press, key release, tone change, and other data as messages. Though you do not need any special knowledge about MIDI to use this keyboard as a stand-alone unit, MIDI operations require a bit of specialized knowledge. This section provides you with an overview of MIDI that will help to get you going.

MIDI Connections

MIDI messages are send out through the MIDI OUT terminal of one machine to the MIDI IN terminal of another machine over a MIDI cable. To send a message from this keyboard to another machine, for example, you must use a MIDI cable to connect the MIDI OUT terminal of this keyboard to the MIDI IN terminal of the other machine. To send MIDI messages back to this keyboard, you need to use a MIDI cable to connect the other machine's MIDI OUT terminal to the MIDI IN terminal of this keyboard.

To use a computer or other MIDI device to record and playback the MIDI data produced by this keyboard, you must connect the MIDI IN and MIDI OUT terminals of both machines in order to send and receive data.



- ① Computer or other MIDI device
- To use the MIDI THRU function of a connected computer, sequencer, or other MIDI device, be sure to turn this keyboard's LOCAL CONTROL off (page E-54).

MIDI Channels

MIDI allows you to send the data for multiple parts at the same time, with each part being sent over a separate MIDI channel. There are 16 MIDI channels, numbered 1 through 16, and MIDI channel data is always included whenever you exchange data (key press, pedal operation, etc.). Both the sending machine and the receiving machine must be set to the same channel for the receiving unit to correctly receive and play data. If the receiving machine is set to Channel 2, for example, it receives only MIDI Channel 2 data, and all other channels are ignored.



This keyboard is equipped with multi-timbre capabilities, which means it can receive messages over all 16 MIDI channels and play up to 16 parts at the same time. Keyboard and pedal operations performed on this keyboard are sent out by selecting a MIDI channel (1 to 16) and then sending the appropriate message.

General MIDI

As we have already seen, MIDI makes is possible to exchange musical data between devices produced by different manufacturers. This musical data does not consist of the notes themselves, but rather information on whether a keyboard key is pressed or released, and the tone number. If tone number 1 on a keyboard produced by Company A is PIANO while tone number 1 on a Company B's keyboard is BASS, for example, sending data from Company A's keyboard to Company B's keyboard produces a result entirely different from the original. If a computer, sequencer or other device with auto accompaniment capabilities is used to produce music data for the Company A keyboard which has 16 parts (16 channels) and then that data is sent to the Company B keyboard which can receive only 10 parts (10 channels), the parts that cannot be played will not be heard. The standard for the tone numbering sequence, the number of pads, and other general factors that determine the sound source configuration, which was arrived at by mutual consultations by manufacturers, is called General MIDI. The General MIDI standard defines the tone numbering sequence, the drum sound numbering sequence, the number of MIDI channels that can be used, and other general factors that determine the sound source configuration. Because of this, musical data produced on a General MIDI sound source can be played back using similar tones and identical nuances as the original, even when played on another manufacturers sound source.

This keyboard conforms with General MIDI standards, so it can be connected to a computer or other device and used to play back General MIDI data that has been purchased, downloaded from the Internet, or obtained from any other source.

Changing MIDI Settings

You can use this keyboard in combination with an external sequencer, synthesizer, or other MIDI device to play along with commercially available General MIDI software. This section tells you how to make the MIDI settings required when connecting to an external device.

TRANSPOSE/TUNE/MIDI Button

Each press of the TRANSPOSE/TUNE/MIDI button cycles through a total of 12 setting screens: the transpose screen, the tuning screen, and 10 MIDI setting screens. If you accidentally pass the screen you want to use, keep pressing the TRANSPOSE/TUNE/MIDI button until the screen appears again. Also note that leaving a setting screen is automatically cleared from the display if you do not perform any operation for about five seconds.

GM MODE (Default: Off)

on

This keyboard plays General MIDI data from a computer or other external device. MIDI IN CHORD JUDGE cannot be used when GM MODE is turned on.

oFF

MIDI IN CHORD JUDGE can be used.

 Press the TRANSPOSE/TUNE/MIDI button until the GM MODE screen appears. *Example:*

When GM MODE is turned off



2. Use the [+] and [–] or [0] and [1] buttons to turn the setting on and off. *Example:*



KEYBOARD CHANNEL

The keyboard channel is the channel used to send MIDI messages from this keyboard to an external device. You can specify one channel from 1 to 16 as the keyboard channel.

 Press the TRANSPOSE/TUNE/MIDI button until the KEYBOARD CHANNEL screen appears.

🛙¦Keybd Ch

2. Use the [+], [–], and the number buttons to change the channel number. *Example:*

To specify channel 4

រឹ។Keybd Ch

NAVIGATE CHANNEL (Default: 4)

When MIDI messages are received from an external device for play on this keyboard, the navigate channel is the channel whose note data appears on the display and is used to light keyboard keys. You can select one channel from 1 to 8 as the navigate channel. Since this setting lets you use the data on any channel of commercially available MIDI software to light the keyboard keys, you can analyze how different parts of an arrangement are played. Press the TRANSPOSE/TUNE/MIDI button until the NAVIGATE CHANNEL screen appears.

2. Use the [+], [–], and the number buttons [1] through [8] to change the channel number. *Example:*

To specify channel 2



NOTE_

- The navigate channel automatically changes to 1 whenever you turn MIDI IN CHORD JUDGE.
- To turn off specific sounds before playing back MIDI data that is being received

Navigate channel on/off

- While playing MIDI data, press the RIGHT/ TRACK 2 button.
 - This cuts the sound of the navigate channel, but keyboard keys continue to light in accordance with the channel's data as it is received. Press the RIGHT/TRACK 2 button again to turn the channel back on.

Next lower channel from navigate channel on/off

- While playing MIDI data, press the LEFT/ TRACK 1 button.
 - This cuts the sound of the channel whose number is one less than the navigate channel, but keyboard keys continue to light in accordance with the channel's data as it is received. Press the LEFT/TRACK 1 button again to turn the channel back on.

Example:

If the navigate channel is channel 4, the above operation turns off channel 3. If the navigate channel is channel 1 or 2, the above operation turns off channel 8.

MIDI IN CHORD JUDGE (Default: Off)

on

When a chord specification method is selected by the MODE switch, chords are specified by the keyboard channel note data input from the MIDI IN terminal.

oFF

MIDI IN CHORD JUDGE is turned off.

 Press the TRANSPOSE/TUNE/MIDI button until the MIDI IN CHORD JUDGE screen appears.

off Chord

 Use the [+] and [-] or [0] and [1] buttons to turn the setting on and off.

Example:

To turn MIDI IN CHORD JUDGE on

on Chord

NOTE.

 MIDI IN CHORD JUDGE automatically turns off whenever you change the navigate channel to any channel besides 01.

LOCAL CONTROL (Default: On)

This setting determines whether or not the keyboard and sound source of this keyboard are connected internally. When recording to a computer or other external device connected to this keyboard's MIDI IN/OUT terminal, it helps if you turn LOCAL CONTROL off.

on

Anything played on the keyboard is sounded by the internal sound source and simultaneously output as a MIDI message from the MIDI OUT terminal.

oFF

Anything played on the keyboard is output as a MIDI message from the MIDI OUT terminal, without being sounded by the internal sound source. Turn LOCAL CONTROL off whenever you are using the MIDI THRU function of a computer or other external device. Also note that the no sound is produced by the keyboard if LOCAL CONTROL is turned off and no external device is connected.

 Press the TRANSPOSE/TUNE/MIDI button until the LOCAL CONTROL screen appears. *Example:*

When LOCAL CONTROL is on

on Local

2. Use the [+] and [–] or [0] and [1] buttons to turn the setting on and off. *Example:*

To turn LOCAL CONTROL off

off Local



LOCAL CONTROL On

Notes played on the keyboard are sounded by the internal sound source and output as MIDI messages from the MIDI OUT terminal.

LOCAL CONTROL Off

Notes played on the keyboard are output as MIDI messages from the MIDI OUT terminal, but not sounded directly by the internal sound source. The MIDI THRU terminal of the connected device can be used to return the MIDI message and sound it on this keyboard's sound source.

MIDI

ACCOMP MIDI OUT (Default: Off)

on

Auto Accompaniment is played by the keyboard and the corresponding MIDI message is output from the MIDI OUT terminal.

oFF

Auto Accompaniment MIDI messages are not output from the MIDI OUT terminal.

 Press the TRANSPOSE/TUNE/MIDI button until the ACCOMP MIDI OUT screen appears. *Example:*

When ACCOMP MIDI OUT is off

off AcompOut

 Use the [+] and [–] or [0] and [1] buttons to turn the setting on and off.

Example:

To turn ACCOMP MIDI OUT on

an AcompOut

TOUCH CURVE (Default: 0)

0

Normal touch curve

1

Louder than normal tone, even when little pressure is used to press keyboard keys. When touch response is turned off, sound is produced at a louder volume than normal.

 Press the TRANSPOSE/TUNE/MIDI button until the TOUCH CURVE SELECT screen appears.

C Touch

 Use the [+] and [-] or [0] and [1] buttons to change the setting. *Example:*

To select touch curve 1

l Touch

SUSTAIN/ASSIGNABLE JACK

SUS (sustain)

Specifies a sustain^{*1} effect when the pedal is depressed.

SoS (sostenuto)

Specifies a sostenuto^{*2} effect when the pedal is depressed.

SFt (soft)

Specifies reduction of the sound's volume when the pedal is depressed.

rHy (rhythm)

Specifies the START/STOP button operation when the pedal is depressed.

 Press the TRANSPOSE/TUNE/MIDI button until the SUSTAIN/ASSIGNABLE JACK screen appears.

Example:

When sustain is currently set

585 Jack

 Use the [+] and [-] or [0], [1], [2], and [3] buttons to change the setting.

Example:

To select rhythm

r HY Jack

*1. Sustain

With piano tones and other sounds that decay, the pedal acts as a damper pedal, with sounds being sustained longer when the pedal is depressed. With organ tones and other continuous sounds, notes played on the keyboard continue to sound until the pedal is released. In either case, the sustain effect is also applied to any notes that are played while the pedal is depressed.

*2. Sostenuto

This effect performs the same way as sustain, except that it is applied only to notes that are sounding already when the pedal is depressed. It does not affect notes that are played after the pedal is depressed.



SOUND RANGE SHIFT (Default: On)

on

Shifts low range tones one octave lower and "072 PICCOLO" one octave higher.

oFF

Plays low range tones and "072 PICCOLO" at their normal levels.

 Press the TRANSPOSE/TUNE/MIDI button until the SOUND RANGE SHIFT screen appears.

on Shift

2. Use the [+] and [–] or [0] and [1] buttons to change the setting.

Example:

To turn SOUND RANGE SHIFT off

off Shift

Messages

There is a wide variety of messages defined under the MIDI standard, and this section details the particular messages that can be sent and received by this keyboard. An asterisk is used to mark messages that affect the entire keyboard. Messages without an asterisk are those that affect only a particular channel.

NOTE ON/OFF

This message sends data when a key is pressed (NOTE ON) or released (NOTE OFF).

A NOTE ON/OFF message include a note number (to indicate note whose key is being pressed or released) and velocity (keyboard pressure as a value from 1 to 127). NOTE ON velocity is always used to determine the relative volume of the note. This keyboard does not receive NOTE OFF velocity data.

Whenever you press or release a key on this keyboard, the corresponding NOTE ON or NOTE OFF message is sent from the MIDI OUT terminal.



NOTE

 The pitch of a note depends on the tone that is being used, as shown in the "Note Table" on page A-1. Whenever this keyboard receives a note number that is outside its range for that tone, the same tone in the nearest available octave is substituted.

PROGRAM CHANGE

This is the tone selection message. PROGRAM CHANGE can contain tone data within the range of 0 to 127. A PROGRAM CHANGE message is sent out through this keyboard's MIDI OUT terminal whenever you manually change its tone number. Receipt of a PROGRAM CHANGE message from an external machine changes the tone setting of this keyboard.

NOTE.

 This keyboard supports 128 tones in the range 0 to 127. However, Channel 10 is a percussion-only channel, and Channels 0, 8, 16, 24, 25, 32, 40, 48, and 62 correspond to the nine drum set sounds of this keyboard.

PITCH BEND

This message carries pitch bend information for smoothly sliding the pitch upwards or downwards during keyboard play. This keyboard does not send pitch bend data, but it can receive such data.

CONTROL CHANGE

This message adds effects such as vibrato and volume changes applied during keyboard play. CONTROL CHANGE data includes a control number (to identify the effect type) and a control value (to specify the on/off status and depth of the effect).

The following is a list of data that can be sent or received using CONTROL CHANGE.

Effect	Control Number
\star Modulation	1
★ Volume	7
★ Pan	10
★ Expression	11
Hold 1	64
Sostenuto	66
Soft Pedal	67
RPN*	100 / 101
Data Entry	6/38

★ indicates receive-only messages

* RPN stands for Registered Parameter Number, which is a special control change number used when combining multiple control changes. The parameter being controlled is selected using the control values of control numbers 100 and 101, and then settings are made using the control values of DATA ENTRY (control numbers 6 and 38). This keyboard uses RPN to control this keyboard's pitch bend sense (pitch change width in accordance with bend data) from another external MIDI device, transpose (this keyboard's overall tuning adjusted in halftone units), and tune (this keyboard's overall fine tuning).

NOTE_

 Sustain (control number 64), sostenuto (control number 66), and soft (control number 67) effects applied using the foot pedal are also applied.

ALL SOUND OFF

This message forces all sound being produced over the current channel to turn off, regardless of how the sound is being produced.

ALL NOTES OFF

This message turns off all note data sent from an external device and currently being sounded on the channel.

• Any notes being sustained using a sustain pedal or sostenuto pedal continue to sound until the next pedal off.

RESET ALL CONTROLLERS

This messages initializes pitch bend and all other control changes.

SYSTEM EXCLUSIVE*

This message is used to control system exclusives, which are tone fine adjustments that are unique to a particular machine. Originally, system exclusives were unique to a particular model, but now there are also universal system exclusives that are applicable to machines that are different models and even produced by different manufacturers.

The following are the system exclusive messages supported by this keyboard.

GM SYSTEM ON ([F0][7E][7F][09][01][F7])

GM SYSTEM ON is used by an external machine to turn on this keyboard's GM system. GM stands for General MIDI.

 GM SYSTEM ON takes more time to process than other messages, so when GM SYSTEM ON is stored in the sequencer it can take more than 100msec until the next message.

GM SYSTEM OFF ([F0][7E][7F][09][02][F7])

GM SYSTEM OFF is used by an external machine to turn off this keyboard's GM system.

Troubleshooting

Problem	Possible Cause	Action	See Page
No keyboard Sound	1. Power supply problem.	 Correctly attach the AC adaptor, make sure that batteries (+/-) are facing correctly, and check to make sure that batteries are not dead. 	Pages E-13, E-14
	2. Power is not turned on.	2. Press the POWER button to turn on power.	Page E-18
	3. Volume setting is too low.	3. Use the VOLUME slider to increase volume.	Page E-18
	4. The MODE switch is in the CASIO CHORD or FINGERED position.	4. Normal play is not possible on the accompaniment keyboard while the MODE switch is set to CASIO CHORD or FINGERED. Change the MODE switch setting to NORMAL.	Page E-22
	5. LOCAL CONTROL is off.	5. Turn on LOCAL CONTROL.	Page E-54
	 MIDI data has changed the VOLUME and EXPRESSION settings to 0. 	6. Adjust both parameters.	Page E-57
Any of the following symptoms while using battery power.	Low battery power	Replace the batteries with a set of new ones or use the AC adaptor.	Pages E-13, E-14
 Dim power indicator 			
 Instrument does not turn on 			
 Display that is flickering, dim, or difficult to read 			
 Abnormally low speaker/ headphone volume 			
 Distortion of sound output 			
 Occasional interruption of sound when playing at high volume 			
 Sudden power failure when playing at high volume 			
 Flickering or dimming of the display when playing at high volume 			
 Continued sound output even after you release a key 			
• A tone that is totally different from the one that is selected			
 Abnormal rhythm pattern and Song Bank play 			
 Dimming of keyboard lights when notes sound 			
• Loss of power, sound distortion, or low volume when playing from a connected computer or MIDI device			
Auto Accompaniment does not sound.	Accompaniment volume is set to 000.	Use the ACCOMP VOLUME button to increase the volume.	Page E-27
Sound output does not change when key pressure is varied.	Touch response is turned off.	Press the TOUCH RESPONSE button to turn it on.	Page E-49



Troubleshooting

Problem	Possible Cause	Action	See Page
Key light stays on.	Keyboard is waiting for play of the correct note during Step 1 or Step 2 play.	 Press the lit key to continue with Step 1 or Step 2 play. Press the START/STOP button to quit Step 1 or Step 2 play. 	Pages E-33, E-34 Pages E-33, E-34
Keys are lit though no sound is being produced.	Power on alert is reminding you that power was left on without any operation being performed.	Press any button or keyboard key to restore power to normal.	Page E-14
When playing with another MIDI instrument, keys or tunings do not match.	Transpose or tuning is set to a value other than 00.	Use the TRANSPOSE/TUNE/MIDI button to display the applicable setting screens and set both transpose and tuning to 00.	Pages E-49, E-50
Cannot record Auto Accompaniment or rhythm.	Track other than Track 1 is selected as the recording track.	Use the track select buttons to select Track 1. (Track 2 is melody track.)	Page E-37
When playing General MIDI data with a computer, playback notes do not match those produced when lit keys are pressed.	Wrong SOUND RANGE SHIFT setting	Use the TRANSPOSE/TUNE/MIDI button to display the SOUND RANGE SHIFT screen and correct the setting.	Page E-56
Playing on the keyboard produces an unnatural sound when connected to a computer.	The computer's MIDI THRU function is turned on.	Turn off the MIDI THRU function on the computer or turn off LOCAL CONTROL on the keyboard.	Page E-54
Cannot record chord accompaniment data on a computer.	ACCOMP MIDI OUT is turned off.	Turn on ACCOMP MIDI OUT.	Page E-55

Specifications

Model:	LK-73
Keyboard:	73 standard-size keys, 6 octaves (with touch response on/off)
Key Light System:	Can be turned on and off (up to 10 keys can be lit at the same time)
Tones:	137 (128 General MIDI tones + 9 drum tones); with layer and split
Rhythm Instrument Tones:	61
Polyphony:	24 notes maximum (12 for certain tones)
Auto Accompaniment Rhythm Patterns: Tempo: Chords: Rhythm Controllers: Accomp Volume:	100 Variable (216 steps, ↓= 40 to 255) 3 fingering methods (CASIO CHORD, FINGERED, FULL RANGE CHORD) START/STOP, INTRO, NORMAL/FILL-IN, VAR/FILL-IN, SYNCHRO/ENDING 0 to 127 (128 steps)
3-step Lesson: Playback:	3 lessons (Step 1, 2, 3) Repeat play of a single tune
Song Bank Number of Tunes: Controllers:	100 PLAY/PAUSE, STOP, FF, REW, LEFT/TRACK 1, RIGHT/TRACK 2
Musical Information Function:	Tone, Auto Accompaniment, Song Bank numbers and names; staff notation, tempo, metronome, measure and beat number, step lesson display, chord name, dynamic mark, fingering, octave mark, pedal operation
Metronome: Beat Specification:	On/Off 1 to 6
Song Memory Songs: Recording Tracks: Recording Methods: Memory Capacity:	2 2 Real-time, step Approximately 5,200 notes (total for two songs)
MIDI:	16 multi-timbre receive, GM Level 1 standard
Other Functions Transpose: Tuning:	25 steps (-12 semitones to +12 semitones) 101 steps (A_4 = approximatery 440Hz ±50Cents)
Terminals MIDI Terminals: Sustain/Assignable Terminal: Headphone/Output Terminal: Output Impedance: Output Voltage: Power Jack:	IN, OUT Standard jack (sustain, sostenuto, soft, rhythm start/stop) Stereo standard jack 100Ω 4V (RMS) MAX 9V DC



Power Supply:	2-way
Batteries:	6 D-size batteries
Battery Life:	Approximately 5 hours continuous operation on manganese batteries
AC Adaptor:	AD-5
Auto Power Off:	Turns power off approximately 6 minutes after last key operation. Enabled under battery power only, can be disabled manually.
Speaker Output:	3W + 3W
Power Consumption:	9V 7.7W
Dimensions:	116.2 × 42.1 × 14.2 cm (45 13 / ₁₆ × 16 9 / ₁₆ × 5 5 / ₈ inch)
Weight:	Approximately 8.7 kg (19.2 lbs)(without batteries)

Design and specifications are subject to change without notice.

Care of your keyboard



Avoid heat, humidity or direct sunlight.

Do not overexpose the instrument to direct sunlight, or place it near an air conditioner, or in any extremely hot place.

Do not use near a TV or radio.

This instrument can cause video or audio interference with TV and radio reception. If this happens, move the instrument away from the TV or radio.

Do not use lacquer, thinner or similar chemicals for cleaning.

Clean the keyboard with a soft cloth dampened in a weak solution of water and a neutral detergent. Soak the cloth in the solution and squeeze until it is almost dry.



Extreme heat can cause figures on the LCD screen to become dim and difficult to read. This condition should correct itself when the keyboard is brought back to normal temperature.

NOTE

· You may notice lines in the finish of the case of this keyboard. These lines are a result of the molding process used to shape the plastic of the case. They are not cracks or breaks in the plastic, and are no cause for concern.

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Appendix/Apéndice

Note Table

Tabla de notas

(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		(1)	(2)	(3)	(4)
000	24	Α	A0 - C8	010	12	A	C4 - C6)20	24	A	C2 - C7	030	24	A	E2 - D6] [0)40	24	Α	G3 - C7
001	24	A	A0 - C8	011	24	A	F3 - F6	()21	12	A	F3 - F6	031	24	A	E2 - D6	c)41	24	А	C3 - C6
002	12	A	A0 - C8	012	24	A	C3 - C6	()22	24	A	C4 - C6	032	24	A	E1 - G3	C)42	24	А	C2 - C5
003	12	A	A0 - C8	013	24	A	F4 - C7	()23	12	A	F3 - F6	033	24	A	E1 - G3	C)43	24	А	E1 - G3
004	24	A	E1 - G7	014	24	A	C4 - F5	()24	24	A	E2 - C6	034	24	A	E1 - G3	0)44	24	Α	E1 - C7
005	24	A	E1 - G7	015	12	A	C4 - C6	()25	24	A	E2 - C6	035	24	A	E1 - G3	0)45	24	A	E1 - C7
006	24	A	F2 - F6	016	12	A	C2 - C7	()26	24	A	E2 - D6	036	24	A	E1 - G3)46	24	A	B0 - G7
007	24	A	04 00		12	A	02-07)27	24	A	E2 - D6	037	24	A	E1 - G3)47	24	A	C2 - A3
008	24	A			12				128	24	A	E2 - D6	038	24		E1 - G3)48 40	24	A	
009	24	A	05-08	019	12	A	AU - C8	Ľ)29	24	A	E2 - D6	039	24	A	E1-G3		949	24	A	EI-C/
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	((1)	(2)	(3)	(4)
050	24	Δ	C2 - C7	060	12	Δ	F2 - F5		070	24	Δ	A#1 - C5	080	12	Δ	A0 - C8		90	12	Δ	C2 - C7
051	12	A	C2 - C7	061	24	A	C2 - C7)71	24	A	D3 - G6	081	12	A	A0 - C8)91	12	A	C2 - C7
052	24	A	C3 - G5	062	12	A	C2 - C7	()72	24	В	D5 - C8	082	12	A	C2 - C7		92	12	A	C2 - C7
053	24	A	C3 - G5	063	12	A	C2 - C7	()73	24	A	C4 - C7	083	12	A	C2 - C7		93	12	А	C2 - C7
054	12	A	C3 - C6	064	24	A	F‡3 - D‡6	()74	24	A	C4 - C7	084	12	A	C2 - C7	c	94	12	А	C2 - C7
055	12	Α	C3 - C5	065	24	A	C#3 - G#5	()75	24	A	C4 - C7	085	12	Α	C2 - C7	c	95	12	Α	C2 - C7
056	24	A	A#3 - A#6	066	24	A	F‡2 - D‡5	(076	12	A	C4 - C7	086	12	A	C2 - C7	C	96	12	А	C2 - C7
057	24	A	A‡1 - D‡5	067	24	A	C#2 - G#4	()77	24	A	G3 - C6	087	12	A	A0 - C8	C)97	12	А	C2 - C7
058	24	A	F1 - G3	068	24	A	A#3 - G6	()78	24	A	C4 - C7	088	12	A	C2 - C7	C	98	12	А	C2 - C7
059	24	A	A\$3 - A\$5	069	24	A	E3 - A5	()79	24	A	C4 - C6	089	24	A	C2 - C7		99	12	A	C2 - C7
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		(1)	(2)	(3)	(4)									
(.,	(-/	(0)	(-)		(-/	(0)	(*/		`''	(-)	(0)	(")									
100	12	A	C2 - C7	110	12	A	G3 - C7	2	120	24	С	C4 - C5									
101	12	A	C2 - C7	111	24	A	C3 - C5		121	24	A	C4 - C5									
102	12	A	C2 - C7	112	24	A	C5 - C6	3	122	12	C	C4 - C5									
103	12	A	C2 - C7	113	24	A	C4 - C5	8	123	24	С	C4 - C5									
104	24	A	C3 - F5	114	12	A	E3 - E5	1	124	24	C	C4 - C5									
105	24	A	D3 - C6		24		C4 - C5		125	24		C4 - C5									
106	24	A	D3 - G5		24		C4 - C5	1	126	12		C4 - C5									
107	24	A		*11 <i>1</i> *144	24		04-05		127	24		04 - 05									
108	124			*118	212																
109	12	~	02-15		24		04-05														

NOTE

- 1. Tone number
- 2. Maximum polyphony
- 3. Range type
- 4. Recommended sound range for General MIDI
 - The meaning of each range type is described to the right.
 - The pitch of tones marked with an asterisk does not change, no matter which keyboard key is pressed.
 - Percussion sounds (tone numbers 128 to 136) have maximum polyphony of 12.
 - Turning on SOUND RANGE SHIFT (page E-56) causes range type B Tone (072 PICCOLO) to shift by one octave.

NOTA_

- 1. Número de sonido
- Polifonía máxima
- 3. Tipo de gama
- 4. Gama de sonido recomendado por la MIDI General
 - El significado de cada tipo de gama se describe a la derecha.
 - La altura tonal de los sonidos marcados con un asterisco no cambian, sin tener en cuenta qué tecla del teclado se presiona.
 - Los sonidos de percusión (números de sonido 128 a 136) tienen una polifonía máxima de 12.
 - Activando SOUND RANGE SHIFT (página S-56) ocasiona que el sonido (072 PICCOLO) de tipo de gama B se desplace en una octava.



Drum Assignment List ("←" Indicates the same sound as STANDARD SET)

asignación de batería (" \leftarrow " Indica el mismo sonido que STANDARD SET) de Lista

Key/Note number	Drumset 1 STANDARD SET	Drumset 2 ROOM SET	Drumset 3 POWER SET	Drumset 4 ELEC SET	Drumset 5 SYNTH SET	Drumset 6 JAZZ SET	Drumset 7 BRUSH SET	Drumset 8 ORCHESTRA SET	Drumset 9 VOICE SET
EH 27	HIGH Q	Ļ	Ļ	ţ	ţ	ţ	Ļ	CLOSED HI-HAT	ţ
E1 28	SLAP	ţ	ţ	ţ	ţ	ļ	ţ	PEDAL HI-HAT	ţ
E1 20	SCRATCH PUSH	ţ	ţ	ţ	ŧ	ļ	ţ	OPEN HI-HAT	Ţ
F#1 30	SCRATCH PULL	Ţ	ţ	Ŧ	Ļ	Ļ	ţ	RIDE CYMBAL 1	Ţ
G1 31	STICKS	Ţ	ţ	Ţ	ţ	ţ	ţ	ţ	ţ
AJ1 32	SQUARE CLICK	Ţ	ţ	Ţ	ţ	Ţ	Ţ	ţ	Ţ
A1 33	METRONOME CLICK	Ţ	ţ	Ţ	ţ	Ţ	ţ	ţ	Ţ
BJ1 34	METRONOME BELL	Ţ	ţ	Ť	ţ	Ţ	ţ	ţ	Ţ
B1 35	ACOUSTIC BASS DRUM	POWER BASS DRUM 2	POWER BASS DRUM 2	POWER BASS DRUM 2	SYNTH BASS DRUM 2	JAZZ BASS DRUM 2	JAZZ BASS DRUM 2	JAZZ BASS DRUM 1	SYNTH BASS DRUM 1
C2 36	BASS DRUM	POWER BASS DRUM 1	POWER BASS DRUM 1	ELEC BASS DRUM	SYNTH BASS DRUM 1	JAZZ BASS DRUM 1	JAZZ BASS DRUM 1	CONCERT BASS DRUM	VOICE BASS DRUM
C#2 37	SIDE STICK	Ļ	Ļ	Ļ	SYNTH RIM SHOT	Ţ	Ļ	Ť	SYNTH RIM SHOT
D2 38	ACOUSTIC SNARE 1	ROOM SNARE 1	POWER SNARE 1	ELEC SNARE	SYNTH SNARE 1	JAZZ SNARE 1	BRUSH TAP	CONCERT SNARE	VOICE SNARE
Ek2 39	HAND CLAP	Ŧ	Ť	Ŧ	ţ	Ŧ	BRUSH SLAP	CASTANETS	t
E2 40	ACOUSTIC SNARE 2	ROOM SNARE 2	POWER SNARE 2	DANCE SNARE	SYNTH SNARE 2	JAZZ SNARE 2	BRUSH SWIRL	CONCERT SNARE	SYNTH SNARE 1
F2 41	LOW FLOOR TOM	ROOM LOW FLOOR TOM	ROOM LOW FLOOR TOM	ELEC LOW FLOOR TOM	SYNTH LOW FLOOR TOM	ţ	ţ	TIMPANI F	SYNTH LOW FLOOR TOM
F#2 42	CLOSED HI-HAT	÷	Ļ	ŧ	SYNTH CLOSED HI-HAT 1	Ŧ	Ļ	TIMPANI F#	VOICE CLOSED HI-HAT
G2 43	HIGH FLOOR TOM	ROOM HIGH FLOOR TOM	ROOM HIGH FLOOR TOM	ELEC HIGH FLOOR TOM	SYNTH HIGH FLOOR TOM	Ŧ	+	TIMPANI G	SYNTH HIGH FLOOR TOM
AI2 44	PEDAL HI-HAT	ţ	+	Ŧ	SYNTH CLOSED HI-HAT 2	ţ	+	TIMPANI A ⁵	VOICE PEDAL HI-HAT
A2 45	LOW TOM	ROOM LOW TOM	ROOM LOW TOM	ELEC LOW TOM	SYNTH LOW TOM	ţ	ţ	TIMPANI A	SYNTH LOW TOM
BI2 46	OPEN HI-HAT	ţ	ţ	ţ	SYNTH OPEN HI-HAT	ţ	ţ	TIMPANI B ⁵	VOICE OPEN HEHAT
B2 47	LOW MID TOM	ROOM LOW MID TOM	ROOM LOW MID TOM	ELEC LOW MID TOM	SYNTH LOW MID TOM	Ť	Ť	TIMPANI B	SYNTH LOW MID TOM
C3 48	HIGH MID TOM	ROOM HIGH MID TOM	ROOM HIGH MID TOM	ELEC HIGH MID TOM	SYNTH HIGH MID TOM	ţ	ţ	TIMPANI C	SYNTH HIGH MID TOM
C#3 49	CRASH CYMBAL 1	Ť	t	Ŧ	SYNTH CYMBAL	Ŧ	t	TIMPANI C#	SYNTH CYMBAL
D3 50	HIGH TOM	ROOM HIGH TOM	ROOM HIGH TOM	ELEC HIGH TOM	SYNTH HIGH TOM	ţ	Ť	TIMPANI D	SYNTH HIGH TOM
E3 51	RIDE CYMBAL 1	Ļ	Ļ	Ļ	Ļ	ţ	Ţ	TIMPAN E	Ţ
E2 37	CHINESE CYMBAL	Ļ	Ļ	REVERSE CYMBAL	+	Ţ	Ţ	TIMPANIE	Ţ
F3 53	HIDE BELL	ţ	Ļ	ŧ	Ļ	ţ	Ţ	I MHAN F	Ŧ
-#3 54		ţ	ţ	ŧ	Ļ	ŧ	ţ	ţ	ŧ
G3 33 AIA E6					EVALEN COMPETI		L	1	
AN 70	CONDECE								
A0 0/ BL3 58	VIBRA-SI AP	. []		. +			. +		. +
B3 59	RIDE CYMBAL 2	Ļ	Ļ	Ļ	Ļ	ļ	Ţ	CONCERT CYMBAL 1	Ļ
01 50	HIGH BONGO	Ļ	Ļ	Ļ	Ļ	Ļ	ţ	÷	ţ
C4 00 C#4 61	LOW BONGO	Ļ	Ļ	Ļ	Ļ	Ļ	Ļ	Ļ	Ļ
D4 62	MUTE HIGH CONGA	ţ	ţ	t	SYNTH MUTE HIGH CONGA	ţ	Ť	ţ	SYNTH MUTE HIGH CONGA
EJ4 63	OPEN HIGH CONGA	t	ţ	Ť	SYNTH OPEN HIGH CONGA	ţ	t	ţ	SYNTH OPEN HIGH CONGA
E4 64	LOW CONGA	Ļ	Ļ	t	SYNTH LOW CONGA	ţ	Ŧ	Ŧ	SYNTH LOW CONGA
F4 65	HIGH TIMBALES	ţ	ţ	t	ţ	ţ	ţ	ţ	ţ
F#4 66	LOW TIMBALES	ţ	ţ	Ŧ	ţ	Ŧ	ţ	ţ	Ţ
G4 67	HIGH AGOGO	Ţ	ţ	Ŧ	ţ	Ŧ	ţ	ţ	Ŧ
A4 68	LOW AGOGO	Ļ	Ļ	ţ	Ļ	ţ	1	1	ţ
A4 69 514 70	CABASA	ŧ.	ŧ.	Į.		ŧ.	ŧ.	ŧ.	
B4 71 B44 /U		t i		t ;	STNIH MAHAUAS	+		t :	STNIE MARAUAS
C5 72 C#E 70									
D5 74	I ONG GUIRO	. +		t t		ţ	ţ	- +	- t
ELS 75	CLAVES	Ļ	Ļ	Ļ	SYNTH CLAVES	Ļ	Ļ	Ļ	SYNTH CLAVES
E5 76	HIGH WOOD BLOCK	Ļ	Ļ	Ŧ	Ļ	Ļ	Ļ	Ļ	t t
CC 77	LOW WOOD BLOCK	Ļ	Ļ	Ļ	ŧ	Ļ	Ļ	Ļ	Ļ
ro // F#5 78	MUTE CUICA	ţ	ţ	ţ	ŧ	ţ	ţ	ţ	Ŧ
G5 79	OPEN CUICA	ţ	ţ	ţ	ţ	Ļ	Ļ	Ļ	ţ
AJ5 80	I MUTE TRIANGLE	Ŧ	Ļ	Ŧ	ļ	Ŧ	ţ	Ŧ	Ţ
A5 81	OPEN TRIANGLE	Ļ	÷	Ļ	Ļ	Ļ	+	+	Ļ
BI-5 82	SHAKER	Ļ	Ŧ	Ļ	Ŧ	Ţ	+	Ŧ	Ļ
B5 83	JINGLE BELL	Ļ	ţ	Ŧ	Ŧ	Ţ	Ļ	Ŧ	Ţ
C6 84	BELL TREE	ţ	ţ	t	ţ	ţ	Ţ	Ţ	t
C#6 85	CASIANEIS	ţ,	Į.	+ .	ţ.	±	↓ .	↓.	ŧ.
L10 80 F16 87	ODEN SURDO					+ +	1 1	1 1	+ +
E6 88								APPI ALISE	- 1
								1000	



Fingered Chord Chart

Cuadro de acordes Fingered







Rhythm List

Lista de ritmos

POPS I	25 EURO BEAT	JAZZ/FUSION	75 MAMBO
 00 POP 1 01 WORLD POP 02 SOUL BALLAD 1 03 POP SHUFFLE 	 26 RAP 27 TRANCE 28 FUNK 29 VERY FUNKY 	 50 BIG BAND 51 JAZZ VOICES 52 SLOW SWING 53 SWING 1 	 76 RHUMBA 77 CHA-CHA-CHA 78 MARENGUE 79 BOLERO
 04 POP BALLAD 05 POP 2 06 BALLAD 07 FUSION SHUFFLE 08 POP 3 09 SOUL BALLAD 2 POPS II 	30 ROCK WALTZ 31 SLOW ROCK 1 32 SLOW ROCK 2 33 SOFT ROCK 1 34 SOFT ROCK 2 35 SOFT ROCK 3 36 FOLKIE POP	54 SWING 2 55 FOX TROT 56 MODERN JAZZ 57 ACID JAZZ 58 LATIN FUSION 59 JAZZ WALTZ EUROPEAN	 REGGAE REGGAE PUNTA CUMBIA PASODOBLE RUMBA CATALANA SEVILLANA
 10 16 BEAT 1 11 16 BEAT 2 12 16 BEAT 3 13 8 BEAT 1 14 8 BEAT 2 15 8 BEAT 3 16 POP 4 17 DANCE POP 18 POP FUSION 19 POP WALTZ DANCE/FUNK	 37 POP ROCK 1 38 60'S SOUL 39 POP ROCK 2 ROCK I 40 ROCK 1 41 ROCK 2 42 POP ROCK 3 43 RIFF ROCK 44 HEAVY METAL 45 50'S ROCK 	 60 POLKA 1 61 POLKA 2 62 MARCH 1 63 MARCH 2 64 SLOW WALTZ 65 VIENNESE WALTZ 66 WALTZ 67 FRENCH WALTZ 68 SERENADE 69 TANGO 	 87 SKA 88 TEX-MEX 89 FOLKLORE VARIOUS I 90 COUNTRY 91 BLUEGRASS 92 TOWNSHIP 93 FAST GOSPEL 94 SLOW GOSPEL 95 RAI
 20 JUNGLE 21 RAVE 22 TECHNO 23 GROOVE SOUL 24 DISCO 	 46 TWIST 47 NEW ORLNS R&R 48 CHICAGO BLUES 49 R&B 	 70 BOSSA NOVA 1 71 BOSSA NOVA 2 72 SAMBA 1 73 SAMBA 2 74 JAZZ SAMBA 	96 ADANI 97 BALADI 98 ENKA 99 STR QUARTET

· · · · · · · · · · · · · · · · · · ·	

	2			
Func	tion	Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16*+ 1-16	1-16 1-16	* ¹ Hold in memory as long as the power is supplied
Mode	Default Messages Altered	Mode 3 X **********	Mode 3 X **********	
Note Number:	True voice	24 - 96 *********	0-127 12 - 108*²	*2 See Note Table on page A-1.
Velocity	Note ON Note OFF	O 9nH v = 1-127 X 9nH v = 0	0 9nH v = 1-127 X 9nH v = 0,8nH v = XX	XX = no relation
After Touch	Key's Ch's	××	X 0*3	
Pitch Bender	.	×	0	
Control Change	6,38 6,38 10 11 64 65 67	× 0 × × × × 0 × *5 0 *5 *5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Modulation Data entry Volume Pan Expression Hold1 Sostenuto Soft pedal

	100, 101 120 121	$^{*}_{^{*}}$ X X	0 0 0	RPN LSB, MSB All sound off Reset all controller
Program Change:	True #	O 0-127 ********	O 0-127 *********	
System Exclu	usive	0*6 0	O* ⁶	
System Common	: Song Pos : Song Sel : Tune	×××	×××	
System Real Time	: Clock : Commands	0 0	××	
Aux : Lo : All Messages : Ac : Re	cal ON/OFF I notes OFF :tive Sense :set	× × × ×	×00×	
Remarks		 *3 Modulation and after touch five the touch five the time of tim	or each channel are the same eff send/receive, and PITCH BEND SI issignable terminal setting 7E] [7F] [09] [01] [F7] GM OFF	ect. ENSE, RPN Null receive : [F0] [7E] [7F] [09] [02] [F7]
Mode 1 : OMNI Mode 3 : OMNI	ON, POLY OFF, POLY	Mode 2 : OMNI Mode 4 : OMNI	ON, MONO OFF, MONO	O : Yes X : No



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