

Drums
Millenium

MD-90

Mobile Drum

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1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under www.thomann.de.

1.1 Further information

On our website (www.thomann.de) you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.

Displays


Texts and values displayed on the device are marked by quotation marks and italics.

Examples: '24ch', 'OFF'.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – danger zone.

2 Safety instructions

Intended use

Mobile Drums are used to convert digital trigger signals from drum pads into various drum sounds. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety



DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard! Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke! Never let children unattended use electrical devices.



CAUTION!

Possible hearing damage

With loudspeakers or headphones connected, the device can produce volume levels that may cause temporary or permanent hearing impairment. Do not operate the device permanently at a high volume level. Decrease the volume level immediately if you experience ringing in your ears or hearing impairment.



NOTICE!

Operating conditions



This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations. Only operate the device within the ambient conditions specified in the chapter 'Technical specifications' of this user manual. Avoid heavy temperature fluctuations and do not switch the device on immediately after it was exposed to temperature fluctuations (for example after transport at low outside temperatures). Dust and dirt inside can damage the unit. When operated in harmful ambient conditions (dust, smoke, nicotine, fog, etc.), the unit should be maintained by qualified service personnel at regular intervals to prevent overheating and other malfunction.



NOTICE!

External power supply



The device is powered by an external power supply. Before connecting the external power supply, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly the user. Unplug the external power supply before electrical storms occur and when the device is unused for long periods of time to reduce the risk of electric shock or fire.



NOTICE!

Risk of fire due to incorrect polarity



Incorrectly inserted batteries may destroy the device or the batteries. Ensure that proper polarity is observed when inserting batteries.



NOTICE!

Possible damage by leaking batteries



Leaking batteries can cause permanent damage to the device. Take batteries out of the device if it is not going to be used for a longer period.



NOTICE!

Possible staining

The plasticiser contained in the rubber feet of this product may possibly react with the coating of your surface and after some time cause permanent dark stains. In case of doubt, do not put the rubber feet directly on the surface and use a suitable underlay if necessary, i.e. felt pads or similar.

3 Features

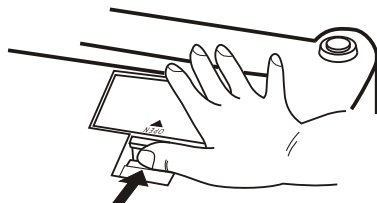
- seven velocity-sensitive drum pads, terminals for bass-drum pedal and hi-hat controller
- three-digit LED display
- headphones, USB and MIDI connection
- 45 drum kits, 5 user kits
- 265 percussion voices, 128 GM voices, 16 MByte voice data
- 80 styles
- 20 songs
- demo song
- recording track
- standby feature

4 Installation and starting up

Connecting the power supply	Connect the power supply unit to the 12 V input on the device, and then insert the power plug into the socket-outlet.
Connecting the pedals	Connect the bass drum pedal and the hi-hat controller to the corresponding inputs on the rear of the drum module.
Connecting headphones	Connect the headphone cable to the corresponding input on the rear of the drum module.
USB/MIDI interface	Connect your MIDI or USB device to the USB/MIDI interface on the rear of the drum module.

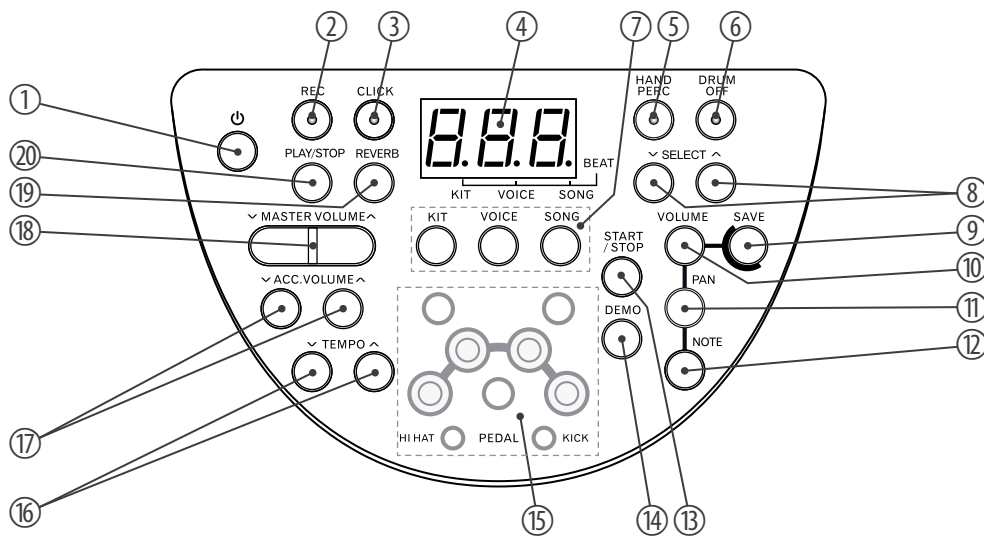
Changing the batteries

To insert or replace the batteries flip over the device, press lightly on the battery compartment cover and slide it in arrow direction. Take off the lid. Insert/replace the new batteries paying attention to the polarity markings and place the cover again into its original position until it locks.



5 Connections and controls

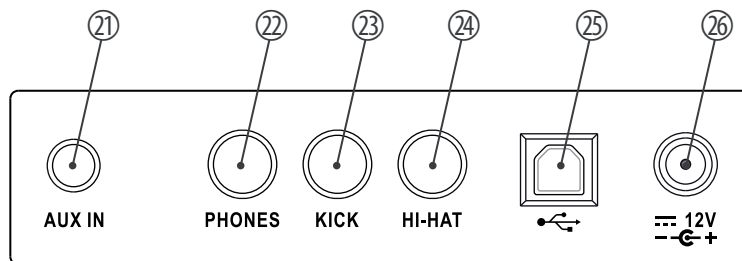
Front panel



1	<i>[POWER]</i> Main switch to turn the device on and off.
2	<i>[REC]</i> Button with LED indicator to turn the recording function on and off.
3	<i>[CLICK]</i> Button with LED indicator to turn the metronome function on and off.
4	Three-digit LED display The display shows all parameters of the respectively opened menu.
5	<i>[HAND PERC]</i> Button with LED indicator to activate the hand percussion mode.
6	<i>[DRUM OFF]</i> Button with LED indicator to mute the drum track.
7	<i>[KIT]</i> Button to open the KIT menu.
	<i>[VOICE]</i> Button to open the VOICE menu.

	<i>[SONG]</i> Button to open the SONG menu.
8	<i>[SELECT -/+]</i> Buttons to select parameters and to edit values.
9	<i>[SAVE]</i> Button to save current parameters as new user kit.
10	<i>[VOLUME]</i> Key to adjust the pad volume.
11	<i>[PAN]</i> Key to adjust the pan setting.
12	<i>[NOTE]</i> Button to assign MIDI notes.
13	<i>[START/STOP]</i> Button to start and stop song and style playback.
14	<i>[DEMO]</i> Button to start and stop demo song playback.

15	Indicator LEDs In practice mode, these LEDs briefly light up showing the pad that is being played.
16	[TEMPO -/+] Buttons to adjust the playback speed.
17	[ACC.VOLUME -/+] Buttons to adjust the volume of accompaniment tracks.
18	[MASTER VOLUME -/+] Buttons to adjust the overall volume.
19	[REVERB] Button to edit the reverb level.
20	[PLAY / STOP] Button to start and stop the recording track playback.

Rear panel

- | | |
|----|---|
| 21 | <i>[AUX IN]</i>
Input socket for connecting an audio device (e.g. MP3 or CD player). |
| 22 | <i>[PHONES]</i>
Socket for connecting headphones. |
| 23 | <i>[KICK]</i>
Socket for connecting the bass drum pedal. |
| 24 | <i>[HI HAT]</i>
Socket for connecting the hi hat controller. |

Connections and controls

- | | |
|----|---|
| 25 | USB port |
| 26 | Connection socket for the 12 V power supply unit. |

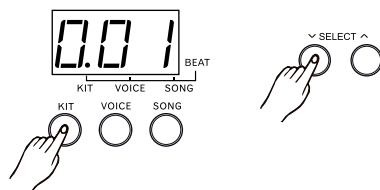
6 Operating

Switching on/off, standby

Turn on/off the device using the main switch on the rear panel.

The unit automatically switches to standby mode when you don't press any key or strike any pad for about 30 minutes. To turn the device on again after an automatic shutdown, press the main switch.

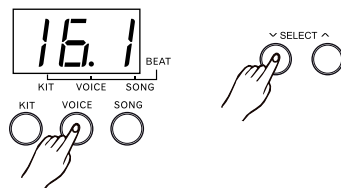
Drum kit



Upon switching on, the device activates the KIT menu by default. The default value is '001'.

Press **[KIT]** to enter the menu. The control LED of the button lights up and the three-digit LED display shows the current kit number. Then you can select the desired kit using the **[SELECT -/+]** buttons.

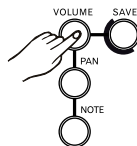
Pad voice



Press **[VOICE]** to enter the menu VOICE. The default value corresponds to the voice number that is assigned to the crash pad in the respective kit, e.g. '96' in kit '001'.

The control LED of the button lights up and the three-digit LED display shows the voice number that is assigned to the activated pad (activation by pressing a button or hitting the pad). Then you can select the desired voice using the **[SELECT -/+]** buttons.

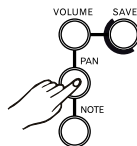
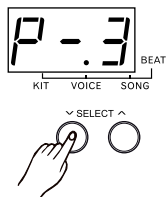
Pad volume



Press **[VOLUME]**, to open the menu **VOICE**.

The control LED of the button lights up and the three-digit LED display shows the current volume setting of the activated pad (activation by pressing a button or hitting the pad). Now you can adjust the volume using the **[SELECT -/+]** buttons.

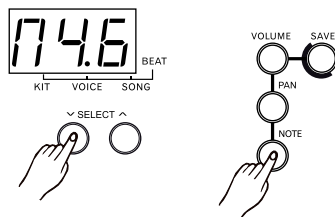
Pan setting



Press **[PAN]**, to open the menu **VOICE**.

The control LED of the button lights up and the three-digit LED display shows the assignment of the activated pad (activation by pressing a button or hitting the pad). Then you can adjust the position of the pad within the stereo panorama using the **[SELECT -/+]** buttons.

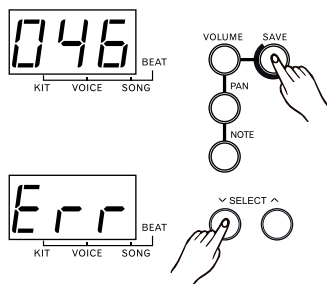
Assign a MIDI note



Press **[NOTE]**, to open the menu **VOICE**.

The control LED of the button lights up and the three-digit LED display shows the currently assigned MIDI note. Now you can assign any MIDI note using the **[SELECT -/+]** buttons.

Saving a kit



Press **[SAVE]**, to open the menu **SAVE**. You can now assign the current settings to a user kit number using the **[SELECT -/+]** buttons. During this process the display value flashes on the three-digit LED display.

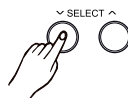
Press the **[SAVE]** button again to store the setting. When this is finished successfully, the user kit is automatically activated via the kit menu.

If an error occurs, the three-digit LED display shows **Err**.



Any unsaved changes will be discarded by the selection of another kit.

Song playback



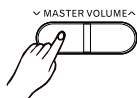
Press **[SONG]**, to open the menu SONG. The default value is '001'.

The control LED of the button lights up and the three-digit LED display shows the current song number. Then you can select the desired song using the **[SELECT -/+]** buttons.

The first 80 songs can be played as a loop. Use the **[START]** and **[STOP]** buttons to start or pause playback. If you skip during playback to the beginning of the following song, the current bar of the current song will be completed first.

For each song, the parameters 'tempo' and 'drum kit' are stored in the system. The corresponding values are loaded automatically when you play the song.

Volume level of device



In the main menu, the three-digit LED display shows the main volume in 'Lxx' format. Using the **[MASTER VOLUME -/+]** buttons you can adjust the volume stepwise from 0...9.

The set value is automatically saved.

Accompaniment track volume



In ACC.VOLUME menu, the three-digit LED display shows the accompaniment volume in 'Axx' format. Using the **[SELECT -/+]** buttons you can adjust the accompaniment volume stepwise from 0...9.

The set value is automatically saved.

Muting the drum track



Using the *[DRUM OFF]* button you can mute or unmute the drum track during the playback of songs. The control LED of the button lights up when this function is enabled.

Tempo



Press one of the *[TEMPO -/+]* buttons once to enter the TEMPO menu. Use the *[TEMPO -/+]* buttons to adjust the playback tempo (click and song) stepwise in a range of 30...280. To restore normal playback tempo press both buttons simultaneously.

Metronome



During song playback, the beat indicator (control LED) is automatically activated. Press the *[CLICK]* button once to enable a human voice counting. Press twice to enable the click sound. Press the *[CLICK]* button again to turn the metronome off.

Hand percussion



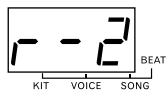
Use the *[HAND PERC]* button to enter the hand percussion mode (song number 5, kit number 21). The control LED of the button lights up when this function is enabled.

Demo song



Use the *[DEMO]* button to enter the demo mode. The three-digit LED display shows the value 'dE'. Use the *[START]* and *[STOP]* buttons to start or pause the playback of demo songs.

Reverb effect

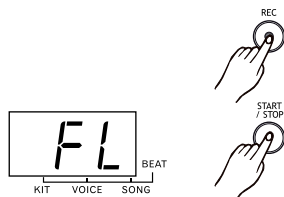


Use the *[REVERB]* button to enter the REVERB menu. The three-digit LED display shows the currently selected reverb level in 'Rxx' format. Use the *[SELECT -/+]* buttons to adjust the level stepwise as desired from 0...3.

The set value is automatically saved.

Recording

1. ▶ Prepare recording: Select a song and a drum kit. Determine the desired tempo and the settings for DRUM OFF and REVERB.
2. ▶ Start recording: Press *[REC]*. The control LED of the button starts flashing. Press *[START/STOP]* or hit a pad to start the recording. The control LED of the button goes out.
3. ▶ Stop recording: Press *[REC]* or *[START/STOP]*. The control LED of the button goes out. If the memory is used up the recording is automatically stopped and the three-digit LED display shows 'FL'



When starting the recording, the vocal voice counting of the metronome is automatically activated but will not be recorded. To turn the metronome off press the [CLICK] button.

Playback of recordings



Use the [PLAY/STOP] button to start or stop the playback of recordings.



When recording a new song, the previous recording will be overwritten. If the power supply is disconnected, the recorded track is deleted.

7 Technical specifications

Pads		Seven velocity-sensitive drum pads, terminals for bass-drum pedal and hi-hat controller
Drum kits		45 drum kits, 5 user kits
Voices		265 percussion voices, 128 GM , 16 MByte voice data
Songs		20, 1 demo song
Styles		80
Display		Three-digit LED display
Input connections	Power supply	Connection socket for the plug-in power supply
	AUX IN	3.5 mm phone socket
Output connections	Audio	USB 1.0/2.0 (MIDI IN/OUT)
	Headphones	1/4" jack socket
	Bass drum pedal	1/4" jack socket
	Hi-hat controller	1/4" jack socket
Power supply		external plug-in power supply, 100 - 240 V ~ 50/60 Hz or 6 C cells(C, LR14, 1,5 V)

Operating voltage		12 V $\overleftrightarrow{\text{DC}}$, 2000 mA, centre positive
Dimensions (W × H × D)		500 mm × 157 mm × 370 mm
Weight		3.3 kg
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non-condensing)

8 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

Please note these advices, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or 'just' in poor transmission quality!

Balanced and unbalanced transmission

Unbalanced transmission is mainly used in semi-professional environment and in hifi use. Instrument cables with two conductors (one core plus shielding) are typical representatives of the unbalanced transmission. One conductor is ground and shielding while the signal is transmitted through the core.

Unbalanced transmission is susceptible to electromagnetic interference, especially at low levels, such as microphone signals and when using long cables.

In a professional environment, therefore, the balanced transmission is preferred, because this enables an undisturbed transmission of signals over long distances. In addition to the conductors 'Ground' and 'Signal', in a balanced transmission a second core is added. This also transfers the signal, but phase-shifted by 180°.

Since the interference affects both cores equally, by subtracting the phase-shifted signals, the interfering signal is completely neutralized. The result is a pure signal without any noise interference.

1/4" TS phone plug (mono, unbalanced)



1	Signal
2	Ground, shielding

Three-pole 1/8" mini phone jack (stereo, unbalanced)



1	Signal (left)
2	Signal (right)
3	Ground, shielding

9 Protecting the environment

Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose these materials with your normal household waste, but make sure that they are fed to a recovery. Please follow the notes and markings on the packaging.

Disposal of batteries



Batteries must not be disposed of as domestic waste or thrown into fire. Dispose of the batteries according to national or local regulations regarding hazardous waste. To protect the environment, dispose of empty batteries at your retail store or at appropriate collection sites.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

10 Appendix

10.1 Voice list

No.	Name	No.	Name	No.	Name
KICK		12	Old School Kick	24	Magic Kick
1	22"Acoustic Kick	13	Lo-Fi Kick	SNARE	
2	22"Standard Kick	14	Junkyard Kick	25	14"Acoustic Snare
3	Brush Kick	15	Noise Kick	26	14"Standard Snare
4	Rock Kick	16	Drum & Bass Kick	27	14"Funk Snare
5	Jazz Kick	17	808 Kick	28	Brush Snare
6	Room Kick	18	909 Kick	29	14"Jazz Snare
7	Fushion Kick	19	Electronic Kick	30	14"Rock Snare
8	1970's Kick	20	Dance Kick	31	13"Damped Snare
9	Vintage Kick	21	FX Mix Kick	32	Orchestra Snare
10	HipHop Kick	22	Techno Kick	33	Orchestra Snare Rim
11	Reggae Kick	23	Electronic Kick 2	34	Room Snare

No.	Name	No.	Name	No.	Name
35	Fusion Snare	51	Noise Snare	66	Acoustic Tom 3
36	Big Band Snare	52	Drum & Bass Snare	67	Acoustic Tom 4
37	Vintage Snare	53	Techno Snare	68	Acoustic Tom 5
38	Live Snare	54	Techno Snare Rim	69	Acoustic Tom 6
39	Reggea Snare	55	Magic Snare	70	Brush Tom 1
40	R&B Snare 1	56	Acoustic Snare Stick	71	Brush Tom 2
41	808 Snare	57	Standard Snare Stick	72	Brush Tom 3
42	909 Snare	58	Brush Snare Stick	73	Brush Tom 4
43	R&B Snare 2	59	Rock Snare Stick	74	Brush Tom 5
44	Electronic Snare	60	Live Snare Stick	75	Brush Tom 6
45	Power Snare	61	Room Snare Stick	76	Jazz Tom 1
46	Dance Snare	62	Fusion Snare Stick	77	Jazz Tom 2
47	Old School Snare	63	Brush Swirl	78	Jazz Tom 3
48	House Snare	TOM		79	Jazz Tom 4
49	Lo-Fi Snare	64	Acoustic Tom 1	80	Jazz Tom 5
50	Junkyard Snare	65	Acoustic Tom 2	81	Jazz Tom 6

No.	Name	No.	Name	No.	Name
82	808 Tom 1	98	Electronic Tom 5	114	Junkyard Tom 3
83	808 Tom 2	99	Electronic Tom 6	115	Junkyard Tom 4
84	808 Tom 3	100	Power Tom 1	116	Junkyard Tom 5
85	808 Tom 4	101	Power Tom 2	117	Junkyard Tom 6
86	808 Tom 5	102	Power Tom 3	118	Noise Tom 1
87	808 Tom 6	103	Power Tom 4	119	Noise Tom 2
88	909 Tom 1	104	Power Tom 5	120	Noise Tom 3
89	909 Tom 2	105	Power Tom 6	121	Noise Tom 4
90	909 Tom 3	106	Lo-Fi Tom 1	122	Noise Tom 5
91	909 Tom 4	107	Lo-Fi Tom 2	123	Noise Tom 6
92	909 Tom 5	108	Lo-Fi Tom 3	124	Techno Tom 1
93	909 Tom 6	109	Lo-Fi Tom 4	125	Techno Tom 2
94	Electronic Tom 1	110	Lo-Fi Tom 5	126	Techno Tom 3
95	Electronic Tom 2	111	Lo-Fi Tom 6	127	Techno Tom 4
96	Electronic Tom 3	112	Junkyard Tom 1	128	Techno Tom 5
97	Electronic Tom 4	113	Junkyard Tom 2	129	Techno Tom 6

No.	Name	No.	Name	No.	Name
130	Magic Tom 1	144	16" Rock Crash Edge	159	Rock Hi-hat Open
131	Magic Tom 2	145	808 Crash	160	Fusion Hi-hat Close
132	Magic Tom 3	146	909 Crash	161	Fusion Hi-hat Open
133	Magic Tom 4	147	Electronic Crash	162	808 Hi-hat Close
RIDE		148	Brush Crash	163	808 Hi-hat Open
134	20" Funk Ride	149	Lo-Fi Crash	164	808 Hi-hat Pedal
135	808 Ride	150	China	165	808 Hi-hat Splash
136	Ride	151	Splash	166	909 Hi-hat Close
137	House Ride	HI-HAT		167	909 Hi-hat Open
138	Lo-Fi Ride	152	14" Acoustic Hi-hat Close	168	909 Hi-hat Pedal
139	Junkyard Ride	153	14" Acoustic Hi-hat Open	169	909 Hi-hat Splash
140	Noise Ride	154	14" Acoustic Hi-hat Edge Close	170	Dance Hi-hat Close
CRASH		155	14" Acoustic Hi-hat Edge Open	171	Dance Hi-hat Open
141	16" Acoustic Crash	156	14" Acoustic Hi-hat Pedal	172	Dance Hi-hat Pedal
142	16" Acoustic Crash Edge	157	14" Acoustic Hi-hat Splash	173	Dance Hi-hat Splash
143	16" Rock Crash	158	Rock Hi-hat Close	174	Lo-Fi Hi-hat Close

No.	Name	No.	Name	No.	Name
175	Lo-Fi Hi-hat Open	190	Mute Hi Conga	206	Vibraphone D3
176	Lo-Fi Hi-hat Edge	191	Open High Conga	207	Vibraphone Eb3
177	Lo-Fi Hi-hat Pedal	192	Low Conga	208	Vibraphone E3
178	Lo-Fi Hi-hat Splash	193	High Bongo	209	Vibraphone F3
PERCUSSION		194	Low Bongo	210	Vibraphone Gb3
179	Nan Bang	195	High Agogo	211	Vibraphone G3
180	Da Mu Yu	196	Low Agogo	212	Vibraphone Ab3
181	Xiao Bo	197	Claves	213	Vibraphone A3
182	Xiao Luo	198	Jingle Bell	214	Vibraphone Bb3
183	Peng Lin	199	Cowbell	215	Vibraphone B3
184	Maracas	200	Tambourine	216	Vibraphone C4
185	Metronome Bell	201	Cabasa	217	Vibraphone Db4
186	Vibra Slap	202	Long Guiro	218	Vibraphone D4
187	Synthesis Percussion	203	Short Guiro	219	Vibraphone Eb4
188	High Q	204	Vibraphone C3	220	Vibraphone E4
189	Low Q	205	Vibraphone Db3	221	Vibraphone F4

No.	Name	No.	Name	No.	Name
222	Vibraphone Gb4	237	Vibraphone A5	252	Orchestra Timp B2
223	Vibraphone G4	238	Vibraphone Bb5	253	Orchestra Timp C3
224	Vibraphone Ab4	239	Vibraphone B5	254	Orchestra Timp Db3
225	Vibraphone A4	240	Vibraphone C6	255	Orchestra Timp D3
226	Vibraphone Bb4	241	Orchestra Timp C2	256	Orchestra Timp Eb3
227	Vibraphone B4	242	Orchestra Timp Db2	257	Orchestra Timp E3
228	Vibraphone C5	243	Orchestra Timp D2	258	Orchestra Timp F3
229	Vibraphone Db5	244	Orchestra Timp Eb2	259	Orchestra Timp Gb3
230	Vibraphone D5	245	Orchestra Timp E2	260	Orchestra Timp G3
231	Vibraphone Eb5	246	Orchestra Timp F2	261	Orchestra Timp Ab3
232	Vibraphone E5	247	Orchestra Timp Gb2	262	Orchestra Timp A3
233	Vibraphone F5	248	Orchestra Timp G2	263	Orchestra Timp Bb3
234	Vibraphone Gb5	249	Orchestra Timp Ab2	264	Orchestra Timp B3
235	Vibraphone G5	250	Orchestra Timp A2	265	Orchestra Timp C4
236	Vibraphone Ab5	251	Orchestra Timp Bb2	265	Orchestra Timp C4

10.2 Kit list

No.	Name	No.	Name	No.	Name
1	Standard	15	Percussion 1	29	1970's
2	Hard Rock	16	Metal	30	HipHop
3	Ballad	17	Vibraphone	31	Big Band
4	Acoustic	18	Electronic	32	Old School
5	Funk Band	19	Reggae	33	R & B
6	Funk	20	Fusion 1	34	Magic
7	Jazz Brush	21	Drum & Bass	35	Live
8	Dance	22	Pop	36	House
9	Rock	23	Brush	37	Jazz Latin
10	Jazz	24	World	38	Fusion 2
11	808	25	Orchestra	39	Percussion 2
12	909	26	Ska	40	Techno
13	Latin	27	Songo	41	Vintage
14	Room	28	Lo-Fi	42	Junkyard

No.	Name	No.	Name	No.	Name
43	Noise	46	User 1 (Standard)	49	User 4 (Acoustic)
44	Studio 1	47	User 2 (Hard Rock)	50	User 5 (Funk Band)
45	Studio 2	48	User 3 (Ballad)		

10.3 Styles

No.	Name	No.	Name	No.	Name
1	Blues Funk	15	Fusion 6	29	Trance
2	Nu Jazz Funk	16	Cool Jazz	30	TripHop
3	Funk 1	17	Big Band 1	31	Drum'n'Bass
4	Funk 2	18	Big Band 2	32	Break Beat 1
5	Funk 3	19	Big Band 3	33	Dance Funk
6	Funk 4	20	Big Band 4	34	HipHop
7	Pop Funk 1	21	Swing	35	Dance 2
8	Pop Funk 2	22	Bebop	36	D'n'B 1
9	Retro Funk	23	3/4 Jazz	37	D'n'B 2
10	Fusion 1	24	Jazz	38	Break Beat 2
11	Fusion 2	25	Latin Jazz 1	39	Classic Rock
12	Fusion 3	26	Latin Jazz 2	40	Heavy Rock
13	Fusion 4	27	Dance 1	41	Rock Ballad
14	Fusion 5	28	Disco House	42	Rock'n'Roll

No.	Name	No.	Name	No.	Name
43	Punk	59	Latin Pop	75	8 Beat 2
44	Rock	60	Gtr Bossa	76	8 Beat Ballad 1
45	80's Metal	61	Latin Dance 1	77	8 Beat Ballad 2
46	Shuffle	62	Latin Dance 2	78	16 Beat Ballad 1
47	60's Rock	63	R&B 1	79	16 Beat Ballad 2
48	Samba 1	64	R&B 2	80	World
49	Bossa Nova	65	Jazzy Funk	81	Funk 1
50	Salsa	66	Blues	82	Funk 2
51	Ska	67	Country	83	Modern Jazz
52	Reggae 1	68	Country Pop	84	Big Band
53	Reggae 2	69	Country Blues	85	Swing
54	Reggae 3	70	Ballad 1	86	Slow Fusion
55	Latin Rock 1	71	Brit Pop	87	Country
56	Latin Rock 2	72	8 Beat Pop 1	88	Latin Jazz
57	Mambo	73	60's Pop	89	Reggae
58	Samba 2	74	8 Beat 1	90	Latin

No.	Name	No.	Name	No.	Name
91	Boogie	95	Hardrock	98	16 beat 1
92	Disco	96	8 beat 1	99	Funk 3
93	R'n'B	97	8 beat 2	100	Funk 4
94	Metal				

10.4 MIDI implementation

Function		Transmitted	Recognised	Remarks
Basic channel	Default	Ch 10	Ch 1...16	
	Changed	No	No	
Mode	Default	No	1	
	Messages	No	No	
	Altered	*****	No	
Note number	True voice	27...88	0...127	
		*****	0...127	

Function		Transmitted	Recognised	Remarks
Velocity	Note ON	Yes (9nH, V=1...127) No (9nH, V=0)	Yes (9nH, V=1...127) No (9nH, V=0; 8nH, V=0...127)	
	Note OFF	Yes (99H, V: 0)	Yes	
Aftertouch	Keys	No	No	
	Channels	No	No	
Pitch bender		No	Yes	
Control change	0	No	Yes	Bank select
	1	No	Yes	Modulation
	5	No	Yes	Portamento time
	6	No	Yes	Data entry
	7	No	Yes	Volume
	10	No	Yes	Pan
	11	No	Yes	Expression
	64	No	Yes	Sustain pedal
	65	No	Yes	Portamento ON/OFF

Function		Transmitted	Recognised	Remarks
	66	No	Yes	Sostenuto pedal
	67	No	Yes	Soft pedal
	80	No	Yes	Reverb program
	81	No	Yes	Chorus program
	91	No	Yes	Reverb level
	93	No	Yes	Chorus level
	120	No	Yes	All Sound Off
	121	No	Yes	Reset All Controllers
	123	No	Yes	All Notes Off
Program change		No	Yes	
	Variable range	No	0...127	
System exclusive		*****	Yes	
System common	Song Position	No	No	
	Song Select	No	No	
	Tune	No	No	
System real time	Clock	No	No	

Function		Transmitted	Recognised	Remarks
	Command	No	No	
Aux messages	Local ON/OFF	No	No	
	All Notes OFF	No	Yes	
	Active Sense	No	Yes	
	System reset	No	Yes	

- Mode 1: OMNI On, Poly
- Mode 2: OMNI On, Mono
- Mode 3: OMNI Off, Poly
- Mode 4: OMNI Off, Mono

