Drums
Millenium

MPS-850

User Manual

E-Drum Module

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1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under *www.thomann.de*.

1.1 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 document.

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.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious 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

Drum modules are intended to be used for converting digital trigger signals from drum pads to various percussion sounds. Use the unit only as described in this 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!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.

WARNING!

Possible hearing damage due to high volumes on speakers or headphones!

With speakers or headphones connected, the device can produce volume levels that may cause temporary or permanent hearing impairment. Over an extended period of time, even levels that seem to be uncritical can cause hearing damage. 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!

Damage to the device if operated in unsuitable ambient conditions!

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the “Technical specifications” chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

NOTICE!

Damage to the external power supply due to high voltages!

The device is powered by an external power supply. The external power supply can be damaged if it is operated with the incorrect voltage or if high voltage peaks occur. In the worst case, excess voltages can also cause a risk of injury and fires. Make sure that the voltage specification on the external power supply matches the local power grid before plugging in the power supply. Only operate the external power supply from professionally installed mains sockets that are protected by a residual current circuit breaker (FI). Ensure that the power cord plug is easily accessible at all times if it is the only device to safely disconnect the device from the mains supply. As a precaution, disconnect the power supply from the power grid when storms are approaching or it the device will not be used for a longer period.

NOTICE!

Possible staining due to plasticiser in rubber feet!

The plasticiser contained in the rubber feet of this product may react with the coating of the floor and cause permanent dark stains after some time. If necessary, use a suitable mat or felt slide to prevent direct contact between the product’s rubber feet and the floor.

3 Features

- 550 voices
- 30 pre-programmed drum kits
- 20 user kits
- 100 pre-programmed songs
- 2 user songs
- Quick record
- Metronome
- Equalizer per kit
- Pitch, reverb, compressor
- Flexible assignment of pad voices
- 6 fader for the volume control of individual pads
- Reverb effect, voice tuning
- Individual adjustment of accompaniment and drum track
- Connections for headphones, AUX, USB and MIDI
- Operating system: Windows® 8 and later, Mac OS X® 10.8 and later

4 Installation

Setup, connecting pads and pedals

Setup and assembly of the pads and pedals are described in detail in the enclosed assembly instructions. Finally check that all cables between the pads and the e-drum module have been properly connected.

Connecting the power supply

Use the Y cable to connect the supplied power supply to the *[9 V]* 9-V port of the e-drum module and to the hi-hat controller. Then plug the mains plug into the socket.

Connecting headphones

Connect your stereo headphones to the *[PHONES]* output of the drum module.

Connecting audio devices

Connect the inputs of your amplifier or active monitor to the *[OUTPUT]* sockets of the drum module. If you are using a mono amplifier, connect its input to the *[L/MONO]* output socket of the module.

Connecting a CD or MP3 player

Connect a CD or MP3 player to the *[AUX IN]* input socket of the drum module.

Connecting MIDI devices

Connect external MIDI devices to the *[MIDI OUT]* or *[MIDI IN]* socket of the drum module.

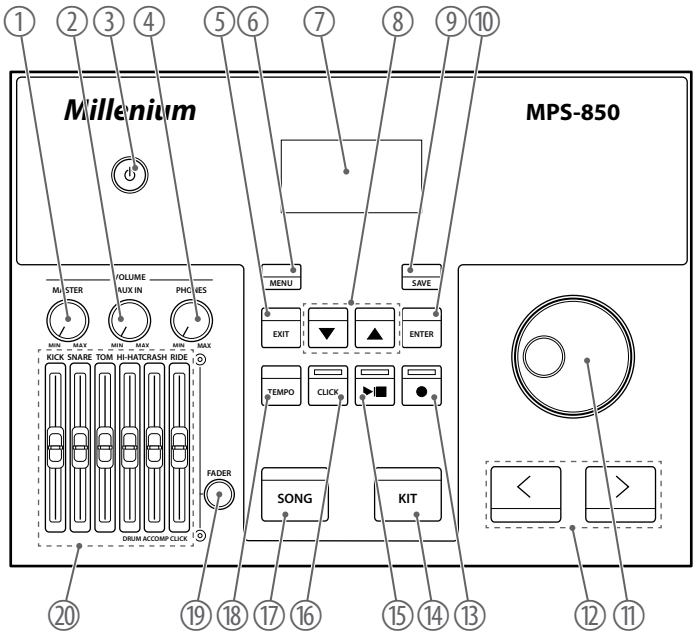
Connecting USB devices

Connect external MIDI devices or your computer to the *[USB MIDI]* USB port of the drum module.

Use a current operating system still supported by the provider to avoid technical difficulties.

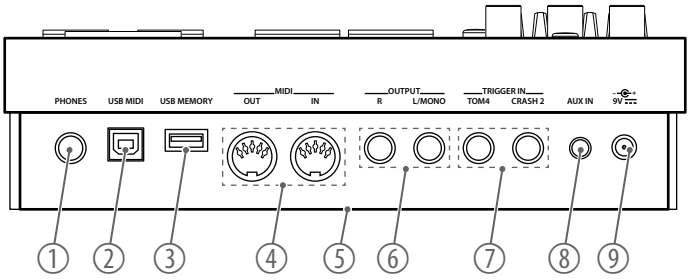
5 Connections and controls

Front panel



1	*[VOLUME – MASTER]* | Control for the master volume
2	*[VOLUME – AUX IN]* | Control for the volume of the signal from the AUX input
3	*[POWER]* | Main switch. Turns the device on and off.
4	*[VOLUME – PHONES]* | Volume control for the headphone output of the device
5	*[EXIT]* | Button for closing and exiting an open menu
6	*[MENU]* | Button for opening the selection menu
7	Display
8	▲/▼ | Arrow buttons for selecting an option
9	*[SAVE]* | Button for saving settings
10	*[ENTER]* | Button for confirming a selection or setting
11	Jog wheel for selecting a drum kit and setting values quickly
12	*[<] / [>]* | Arrow buttons for selecting a drum kit and setting values quickly
13	● | Button for activating the recording function
14	*[KIT]* | Button for opening the *'KIT'* menu
15	▶/■ | Button for starting and stopping the playback of songs
16	*[CLICK]* | Button for turning the metronome on and off
17	*[SONG]* | Button for opening the *'SONG'* menu
18	*[TEMPO]* | Button for adjusting the metronome and playback speed
19	*[FADER]* | Button for switching the fader assignment
20	Fader with switchable assignment for adjusting the volume of individual pads

Rear panel



1	*[PHONES]* | Connection socket for headphones
2	*[USB MIDI]* | Connection socket for an external MIDI device with a USB interface
3	*[USB MEMORY]* | Connection for a USB storage medium
4	*[MIDI OUT | IN]* | Connection sockets for an external MIDI device
5	Multi-pin socket (sub D) for connecting the pads (on the bottom of the device)
6	*[OUTPUT R | L / MONO]* | Output for external audio devices
7	*[TRIGGER IN – TOM 4]/[TRIGGER IN – CRASH2]* | Connection sockets for tom 4 or crash 2
8	*[AUX IN]* | Input for external audio devices such as MP3 or CD players
9	*[9 V]* | Connection socket for the plug-in power supply for power supply

6 Operating

6.1 Functions

Turning on and off

Check all cable connections for correct seat before turning on.

Before switching on, turn the [VOLUME – MASTER] volume control to minimum.

Use the *[POWER]* main switch to turn the drum module on or off.

Automatic shutoff

If the device is not in use, it shuts off automatically after an adjustable time.

Use the Utility menu (*Chapter 6.10 'Utility menu' on page 20*) to disable automatic shutoff.

Adjusting the volume

Turn the *[VOLUME – MASTER]* volume control to set the desired overall volume for the drum set.

Resetting to factory defaults

To reset the entire drum module to factory settings, turn it off first. Then hold down the *[<]* and *[>]* simultaneously and additionally press *[POWER]* until the display shows *'Factory Resetting…'* .

6.2 Selecting and adjusting drum kits

A drum kit is a compilation in which a certain sound (voice) and several sound parameters are assigned to each pad. Selecting different drum kits lets you customise the sound of your drum kit in seconds to the desired music genre. In addition to the 30 pre-programmed drum kits you can also create, customise and save 20 user drum kits.

The drum kit list is available for download on the product page at www.thomann.de.

Selecting a drum kit

To select a specific drum kit, proceed as follows:

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Use the arrow buttons (*[<]* / *[>]*) or the jog wheel to select the desired kit.
   The setting is automatically stored.

Assigning a voice

The voice list is available for download on the product page at www.thomann.de.

To programme a specific voice for a pad, proceed as follows:

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'VOICE'* and press *[ENTER]*.
   ⇨ The display shows the voice list.
3. Hit the respective pad to activate it.
   ⇨ The display shows the name of the currently assigned voice.
4. Use the arrow buttons (*[<] / [>]*) or the jog wheel to select the desired voice.
   The setting is automatically stored.

6.3 Playing the drum kit

The lifespan of the bass drum pad's mesh head skin is significantly extended by using the black plastic side of the bass drum beater. When using the felt side however, the abrasion and a possible tearing of the mesh head skin is significantly accelerated.

The bass drum beater can be turned 180 degrees by loosening the locking screw.

Like on an acoustic drum kit, the pads respond to different playing techniques and dynamics. All pads are velocity sensitive. Some voices change their timbre depending on the punch used.

- Drums
  With the snare drum we distinguish between head and rimshot.
  - Head
    Strike the head only.
  - Rimshot
    Simultaneously strike the head and the rim or only the rim of the pad.
- Cymbals
  We distinguish the following cymbal zones:
  - Bow
    Play in the area between the edge and the bell of the cymbal.
  - Bell
    Play the bell area of the cymbal.
  - Edge
    Play at the edge of the cymbal.
  - Choke
    Choke play is possible with crash and ride cymbals but not with the hi-hat. To do so, stop the sound of the crash and ride cymbals with the hand at the edge of the cymbal immediately after hitting it.

- Hi-hat
  With the hi-hat we distinguish between hi-hat pedal change, open hi-hat, closed hi-hat, hi-hat pedal and splash.
  – Hi-hat pedal change
    When the pedal is pressed in different positions, the voice changes when the hi-hat pad is hit (similar to an acoustic drum kit).
  – Open hi-hat
    Strike the hi-hat pad without pressing the pedal.
  – Closed hi-hat
    Strike the hi-hat pad with fully pressed pedal.
  – Hi-hat pedal
    Press the hi-hat controller pedal to generate a closed sound without striking the hi-hat pad.
  – Splash
    Play the hi-hat with fully pressed pedal and then open it suddenly.

6.4 Modifying drum kits

Selecting a drum kit

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[KIT]* again to go to the user kits section.

Customising a drum kit

You can assign a specific sound to each individual trigger of the drum kit and set multiple sound parameters.

1. Select the desired drum kit with the arrow buttons (*[<] / [>]*). The selected drum kit is immediately active.
2. Use the arrow buttons (▲/▼) to select the parameter you want to change.
3. Use the arrow buttons (*[<] / [>]*) or the jog wheel to change the parameter value.

Parameter, display	Meaning	Value range
'KIT NAME'	Drum kit selection	Preset: 1…30 User: 31…50
'VOLUME'	Volume of the pads of the drum kit	0…16
'EQ HIGH'	Boosting/attenuation of the high equalizer frequencies	–12 dB…12 dB
'EQ MID'	Boosting/attenuation of the mid-level equalizer frequencies	–12 dB…12 dB
'EQ LOW'	Boosting/attenuation of the low equalizer frequencies	–12 dB…12 dB

Customising voice parameters

Voice parameters always relate only to a single pad. For example, if you change the volume of the snare drum, the other pads are not affected.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'VOICE'* and press *[ENTER]*.
   ⇨ The display shows the voice list.
3. Use the arrow buttons (*[<] / [>]*) or the jog wheel to select the pad or play the pad whose parameters you want to adjust.
4. Use the arrow buttons (▲/▼) to select the parameter you want to change.
5. Use the arrow buttons (*[<] / [>]*) or the jog wheel to change the parameter value.

Parameter, display	Meaning	Value range
'TRIGGER'	Trigger	KICK, SNARE, SN-R, TOM1, T1-R…
'VOICE NAME'	Voice assigned to the trigger. Voices U01…U99 can be loaded from a USB flash drive.	1…550, U01…U99
'VOLUME'	Volume	0…16
'PAN'	Trigger position within the stereo signal (panorama right/left)	–8…8
'PITCH'	Pitch	–8…8
'REVERB'	Reverb	0…16
'DECAY'	Decay	–5…0
'PAD SONG'	Pattern, style	1…100, Off

Customising and saving user kits

The existing preset kits can be used as a basis for user kits. The user kits can then be stored in the device memory.

1. Press *[SAVE]*.
   ⇨ *'Rename Kit'* and the number and name of the first user kit appear on the display.
2. Change the name as desired. Change the letter on which the cursor is currently located with the jog wheel, and move the cursor with the arrow buttons (*[<] / [>]*).
3. To save, select the *'SAVE'* option. To cancel, select the *'CANCEL'* option.
4. Use the arrow buttons (*[<] / [>]*) or the jog wheel to select a user kit. Press *[ENTER]*.
   ⇨ The display briefly shows *'SAVE OK!'*. The changes to the settings take immediately effect.

Any unsaved changes will be discarded when another kit is selected or the device is turned off.

6.5 Playing, customising and accompanying songs

Selecting a style

Your digital drum module features a total of 100 pre-programmed songs with different styles: 70 patterns, 6 hits, 24 taps and 2 user songs. You can play the songs and accompany them on the drum module. A song contains a drum part (containing the rhythm in which you play the pads) and an accompaniment part (percussion and melody). The volume of both parts can be adjusted separately.

The song list is available for download on the product page at www.thomann.de.

1. Press *[SONG]*.
   ⇨ The name and number of the current song appear in the display.
2. Use the arrow buttons (▲/▼) to select the parameter you want to change.
3. Use the arrow buttons (*[<]* / *[>]*) to change the parameter value.
4. Press ▶/■ to play and stop the songs.

Parameter, display	Meaning	Value range
'NUMBER'	Number of the song.	■ 1…60: Patterns ■ 61…70: Percussion Loops ■ 71…76: Hits ■ 77…100: Taps ■ 101…102: User songs
'ACCOM VOL'	Accompaniment volume	0…16
'DRUM VOL'	Drum kit volume	0…16

Song playback from USB flash drive

The drum module first displays the music files recognized in the *'SONG'* directory on the USB flash drive. But you can switch to any other directory on the medium. From each directory, the first 99 music files are displayed.

Requirements for the music files:

- MIDI: SMF 0, track number less than 16, PPQN 480 maximum, file size 128 kB maximum.
- WAV: Bit rate 1536 kbit/s maximum, sampling frequency 48 kHz maximum
- MP3 Bit rate 320 kbit/s maximum, sampling frequency 48 kHz maximum

If you want to play music files that do not meet these requirements, an error message will appear in the display.

1. Press *[SONG]*.
   ⇨ The name and number of the current song appear in the display.
2. Press *[SONG]* again.
   ⇨ The display shows the list of WAV, MP3 or MIDI files detected on the USB flash drive.
3. Use the arrow buttons (▲/▼/*[<]* / *[>]*) to navigate in the list.
4. Press *[MENU]* to open the *'SONG'* menu.
   Use the arrow buttons (▲/▼) to select the *'USB FOLDER'* option in order to switch to another directory on the USB flash drive. Confirm with *[ENTER]*.
5. Press ▶/■ to play and stop the songs.

6.6 Metronome function

Press *[CLICK]* to turn the click on and off again. The indicator LED of the button flashes while the click is running.

Settings

1. Use the arrow buttons (▲/▼) to select the parameter you want to change.
2. Use the arrow buttons (*[<]* / *[>]*) or the jog wheel to change the parameter value.

All changes are immediately effective. Exit the settings menu by pressing the *[CLICK]* button again.

Parameter, display	Meaning	Value range
'TIME SIGNATURE'	Emphasis on beats	0…9/2, 0…9/4, 0…9/8, 0…9/16
'VOLUME'	Click volume	0…16
'INTERVAL'	Beats per measure	1/2, 3/8, 1/4, 1/8, 1/12, 1/16
'NAME'	Name and number of the corresponding click voice	METRO, CLAVES, STICKS, COWBELL, CLICK, VOICE
'OUTPUT'	Click output for headphones only or also for the line output	PHONES, ALL (PHONES+OUTPUT)

The click volume is also influenced by the *[RIDE/CLICK]* fader. The click is only audible if this fader is not set to zero.

Changing the tempo

1. Press *[TEMPO]*.
2. Use the arrow buttons (*[<]* / *[>]*) or the jog wheel to change the click tempo.
3. Confirm with *[ENTER]* or wait three seconds to reactivate the originally set tempo.

6.7 Fader

The drum module offers six separate faders that can be used to directly adjust the volume of individual pads, the song, or the click. The faders have double assignment. To change from one assignment to another, press *[FADER]*. The two indicator LEDs next to the faders indicate which assignment is currently set.

Fader label	Assignment 1	Assignment 2
[KICK]	Kick drum	–
[SNARE]	Snare	–
[TOM]	Tom 1, 2, 3, 4	–
[HI-HAT]	Hi-hat	Drum module
[CRASH]	Crash 1, 2	Accompaniment
[RIDE/CLICK]	Ride	Click

6.8 Recording functions

This feature allows you to use the drum module for recording. You can record your own drum track with or without an accompanying song. The recording can be stored in one of the two user songs as a MIDI file directly in the drum module or stored in an MP3 file on a USB flash drive.

Recording preparation

1. Before recording, set the parameters as desired: Tempo, kit, emphasis on beats, beats per measure and song as accompaniment.
2. Press ●.
   ⇨ The display shows *'REC'*.
3. If no USB flash drive is connected, you can use the arrow buttons (*[<]* / *[>]*) to choose whether to save the recording as user song 1 or 2.

Starting and stopping recording

1. When the device is ready to record (the display shows *'REC'*), press ▶/■ or play a pad.

   From the 'SONG' and 'KIT' menus, you can switch directly to recording standby. To do so, just press ●.

   ⇨ While recording is in progress, the indicator LED of the ● button lights up and the display shows *'RECORDING'*.

2. To stop recording, press ▶/■.

6.9 Trigger settings

Adjusting trigger settings

The touch responsiveness can be adjusted to your needs and preferences by the settings of this menu.

1. Press *[KIT]*.

   ⇨ The display shows the kit list.

2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the *'TRIGGER'* option and press *[ENTER]*.

   ⇨ The display shows the list of trigger parameters.

3. Use the arrow buttons (▲/▼) to select the parameter you want to change.

4. Strike the pad whose parameter you want to modify.

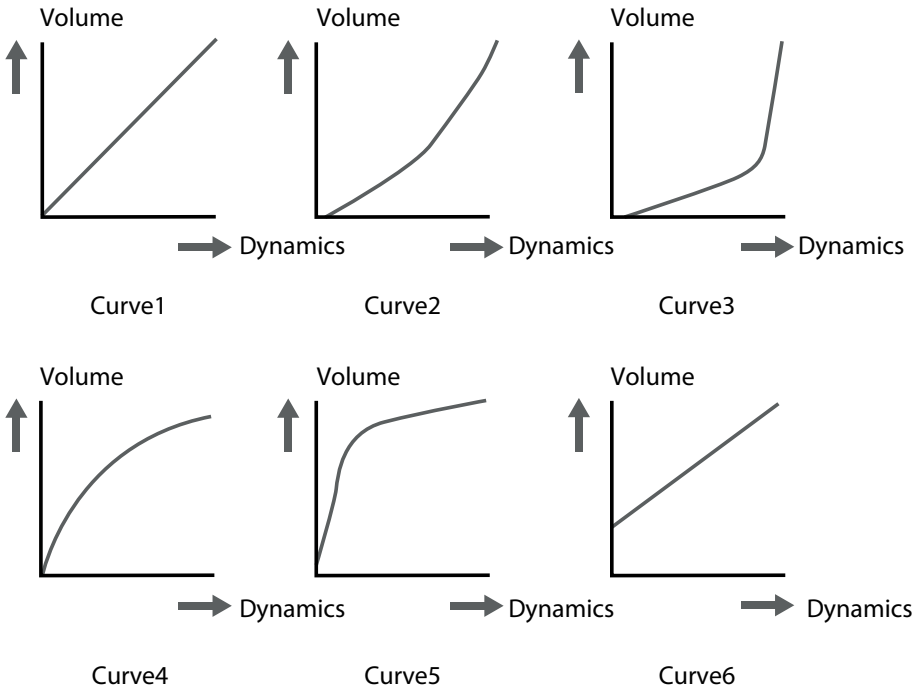
5. *For non-changeable parameters, the display shows '–'*

   Use the arrow buttons (*[<]* / *[>]*) or the jog wheel to change the parameter value. Please note the information in the table below.

6. Press *[EXIT]* to save the changes and to exit the menu.

Parameter, display	Meaning	Value range
'SENSITIVITY'	Volume behaviour of a pad regardless of the actual strike intensity. The higher the value, the higher the volume when playing, and vice versa.	1…16
'RIM SEN'	Touch sensitivity of the rim trigger (snare and toms).	1…16
'HEAD-RIM-ADJ'	Ratio of touch sensitivity of head and rim.	1…16
'THRESHOLD'	Threshold value, that determines from what tough intensity a trigger generates a sound. The higher the value, the less sensitive the trigger responses to vibrations of other pads.	1…16
'XTALK'	If multiple pads are mounted on a rack, vibrations can be transmitted to other pads when you hit a trigger and unintentionally trigger sounds. This crosstalk can be avoided by the appropriate setting. The value should be set as low as possible.	1…16

Parameter, display	Meaning	Value range
'CURVE'	The trigger curve regulates the velocity, i.e., the ratio between the punch and volume. Use the *'Curve 1'* setting for the most natural ratio between punch and volume. With *'Curve 2'* or *'Curve 3'*, a strong strike will cause a bigger change. With *'Curve 4'* or *'Curve 5'*, a light strike will cause a bigger change. With the *'Curve 6'* setting, the volume changes less upon a change of the strike. High volumes are already reached at a relatively low strike intensity. The figure below shows the various options schematically.	1…6
'RETRIG CANCEL'	The process of generating multiple sounds in a row when a pad is played is known as "double triggering". This effect can be caused, among other things, by irregular waveforms, specifically in the decaying of the trigger. With this parameter, these distortions can be suppressed. The higher the value is, the higher the likelihood that rapidly successive strikes - such as in a drum roll - are no longer detected. So the value should be set as low as possible.	1…16
'MIDI NOTE'	Assigned MIDI note	0…127
'SPLASH SENS'	Touch sensitivity of the splash trigger. The higher the value, the less sensitive the trigger responses.	1…6



6.10 Utility menu

Adjusting device settings

In this menu, you can change various settings of the device.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'UTILITY'* and press *[ENTER]*.
   ⇨ The display shows the list of utility parameters.
3. Use the arrow buttons (▲/▼) to select the parameter you want to change.
4. Use the arrow buttons (*[<] / [>]*) or the jog wheel to change the parameter value. Please note the information in the table below.
5. Press *[EXIT]* to save the changes and to exit the menu.

Parameter, display	Meaning	Value range
'GM MODE'	Defines the processing of programme change commands. *'ON'*: Programme change commands for MIDI channel 10 are processed as selection (GM kit). *'OFF'*: Programme change commands for MIDI channel 10 are processed as selection (local kit).	ON, OFF
'LOCAL CTRL'	*'ON'*: Drum module and MIDI sound are present on the output. *'OFF'*: Drum module is muted, only MIDI sound.	ON, OFF
'L-R EXCHANGE'	Left-handed kit Allows adjustment of the stereo panorama alignment of the individual trigger signals without the need to rearrange cables. *'ON'*: the panning of the triggers (e.g. snare, tom1-4, crash1-2 etc.) is reversed. The sound direction in the left-handed headphones is adjusted. The assignment of drums and cymbals remains unchanged.	ON, OFF
'AUTO POWER'	Defines the behaviour of the automatic shutoff: ■ *'30'*: automatic shutoff after 30 minutes ■ *'60'*: automatic shutoff after 60 minutes ■ *'OFF'*: Automatic shutoff disabled	30, 60, OFF

6.11 Compression

Adjusting compression settings

In this menu, you can adjust the compression setting of the device to your requirements.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'COMPRESS'* and press *[ENTER]*.
   ⇨ The display shows the list of compression parameters.
3. Use the arrow buttons (▲/▼) to select the parameter you want to change.
4. Use the arrow buttons (*[<]* / *[>]*) or the jog wheel to change the parameter value. Please note the information in the table below.
5. Press *[SAVE]* to store the changes.

Parameter, display	Meaning	Value range
'THRESHOLD'	Threshold value for compression	0…16
'GAIN'	Compression intensity	0…16

6.12 USB flash drive functions

A USB flash drive can be used to save or play sound files (as songs) or kit settings.

The USB flash drive must have a capacity of at least 4 GB and at most 64 GB and be formatted as a FAT file system.

Formatting the USB flash drive

Formatting erases all data on the USB flash drive irretrievably.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'USB'* and press *[ENTER]*.
   ⇨ The display shows the *'USB MEMORY'* menu.
3. Use the arrow buttons (▲/▼) to select the *'FORMAT'* option.
   ⇨ A confirmation prompt appears on the display.
4. Confirm with *[ENTER]* or press *[EXIT]* to exit the menu.

Loading a sample from the USB flash drive and saving it as a user voice

Samples stored on the USB flash drive can be loaded into the drum module and saved there as a user voice. The user voices can be used in the same way as the supplied voices. The maximum sample size is 15 MB. It must be stored as a WAV file (mono) with a resolution of 16 bits and a sampling frequency of a maximum of 48 kHz in the *'Voice'* folder on the USB flash drive.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'USB'* and press *[ENTER]*.
   ⇨ The display shows the *'USB MEMORY'* menu.
3. Use the arrow buttons (▲/▼) to select the *'SAMPLE LOAD'* option. Confirm with *[ENTER]*.
   ⇨ The display shows the list of WAV files detected on the USB flash drive.
4. Use the arrow buttons (▲/▼) to select a file. Confirm with *[ENTER]*.
   ⇨ The display shows *'Load to User Voice'* .
5. Confirm with *[ENTER]*.
   ⇨ The sample is being loaded. This can take about a minute, depending on the file size.

Storing kit settings on the USB flash drive

The settings you have made for a kit can be saved on the USB flash drive and used again later.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'USB'* and press *[ENTER]*.
   ⇨ The display shows the *'USB MEMORY'* menu.
3. Use the arrow keys (▲/▼) to select the *'KIT SAVE'* option. Confirm with *[ENTER]*.
   ⇨ The display shows the list of the kits (01…99). If there is no name next to a kit number, then no kit has yet been saved for this number.
4. Use the arrow buttons (▲/▼) to select a kit. Confirm with *[ENTER]* or press *[EXIT]* to exit the menu.
   ⇨ The kit is saved.

Loading kit settings from a USB flash drive

The settings for a kit stored on the USB flash drive can be loaded.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the option *'USB'* and press *[ENTER]*.
   ⇨ The display shows the *'USB MEMORY'* menu.
3. Use the arrow keys (▲/▼) to select the *'KIT LOAD'* option. Confirm with *[ENTER]*.
   ⇨ The display shows the list of the kits (01…99). If there is no name next to a kit number, then no kit has yet been saved for this number.
4. Use the arrow buttons (▲/▼) to select a kit. Confirm with *[ENTER]*.
   ⇨ The display shows *'Load to User __?'*.
5. Use the arrow keys (*[<] / [>]*) or the jog wheel to select the number of the user kit under which the settings are to be stored in the drum module.
   Confirm with *[ENTER]* or press *[EXIT]* to exit the menu.
   ⇨ The kit is being loaded. This can take about a minute, depending on the file size.

6.13 Reset to defaults

The settings of the drum module can be reset to factory defaults, separated into kits, songs, pad trigger settings, and voices.

1. Press *[KIT]*.
   ⇨ The display shows the kit list.
2. Press *[MENU]*. Use the arrow buttons (▲/▼) to select the *'FACTORY SET'* option and press *[ENTER]*.
   ⇨ The display shows the *'FACTORY SET'* menu.
3. Use the arrow buttons (▲/▼) to select one of the following options: *'KIT'* (reset the settings in the kits section), *'SONG'* (reset user songs), *'VOICE'* (reset user voices), *'PAD SETTING'* (reset trigger pad settings) or *'ALL'* (reset all settings). Confirm with *[ENTER]* or exit the menu with *[EXIT]*.
   ⇨ The display shows *'Reset OK!'*.

7 MIDI implementation

Function		Transmitted	Recognized	Remarks
Basic channel	Default	Ch 10	1-16	
	Changed	No	No	
Mode	Default	No	No	
	Messages	No	No	
	Altered	********	********	
Note number		0…127	0…127	
	True voice	********	0…127	
Velocity	Note ON	Yes (99H, V=1…127)	0…127	
	Note OFF	Yes (99H, V=0)	0…127	
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
	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		Yes	Yes	
System exclusive		No	Yes	
System common	Song Position	No	No	
	Song Select	No	No	
	Tune	No	No	

Function		Transmitted	Recognized	Remarks
System real time	Clock	Yes	No	START and STOP only
	Command	Yes	No	
Aux messages	Local ON/OFF	No	No	
	All Notes OFF	No	No	
	Active Sense	Yes	No	
	System reset	No	No	

8 Technical specifications

Input connections	Power supply	Connector socket for power adapter
	USB port	USB MIDI
		USB memory
	Combined trigger connection	1 × D-sub plug connector
	Tom pad	1 × 6.35-mm jack socket
	Crash pad	1 × 6.35-mm jack socket
	AUX in	1 × 3.5-mm jack socket
	MIDI	MIDI socket
Output connections	Line out (R/L mono)	2 × 6.35-mm jack socket
	Headphones	1 × 6.35-mm jack socket
	MIDI	MIDI socket
Timbres	550	
Styles	70 patterns, 6 hits, 24 taps	
Effects	Reverb, pitch, compressor	
Drum kits	30 preset kits, 20 user kits	
Demo and practise songs	100 pre-programmed songs, 2 user songs	
Equalizer	Pro kit	
MIDI sounds	128 (The MIDI lists are available for download on the product page at *www.thomann.de*.)	
Power supply	External power adapter, 100 - 240 V ~ 50/60 Hz	
Operating voltage	9 V ⎓ / 0.5 A, centre positive	
Operating system	Windows® 8 and later, Mac OS X® 10.8 and later	
Dimensions (W × H × D)	249 mm × 76 mm × 186 mm	
Weight	0.93 kg	
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	20%…80% (non-condensing)

Further information

Rack included	Yes
Seat included	No
Bass drum pedal included	Yes
Headphones included	No
Mesh head pads	Yes
Pads in stereo	Yes
Number of direct outputs	0

9 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

10 Cleaning

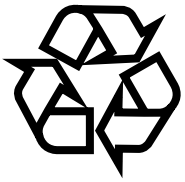
Device components

Clean the device components that are accessible from the outside regularly. The cleaning frequency depends on the operating environment: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the device components.

- Clean with a dry soft cloth.
- Stubborn dirt can be removed with a slightly dampened cloth.
- Never use solvents or alcohol for cleaning.

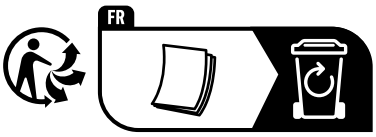
11 Protecting the environment

Disposal of the packing material



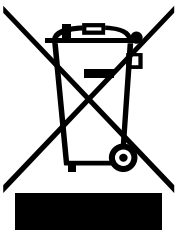
Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging.



Observe the disposal note regarding documentation in France.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. If in doubt, consult your local waste management facility. You can also return the device to a retailer if they offer to take the device back for free or if they are legally obliged to do so. When disposing of the device, comply with the rules and regulations that apply in your country. You can also return your old device to Thomann GmbH at no charge. Check the current conditions on *www.thomann.de*.

Proper disposal protects the environment as well as the health of your fellow human beings. This is because the proper handling of old devices negates the potential negative effects of hazardous substances, and because it conserves resources by recycling them.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

If your old device contains personal data, delete those data before disposing of it.