UMX25

U-CONTROL

User's Manual GB

Version 1.0 January 2006

BEHRINGER®

JUST LISTEN.

U-CONTROL UMX25

IMPORTANT SAFETY PRECAUTIONS

CAUTION
RISK OF ELECTRIC SHOCK!
DO NOT OPEN!
ATTENTION
RISQUE DE CHOC ELECTRIQUE!
NE PAS OUVRIR!

CAUTION: To reduce the risk of electric shock, do not remove the cover (or back). No user-serviceable parts inside; refer servicing to qualified personnel. Only qualified personnel may perform repairs.

WARNING: The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure—voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

DETAILED SAFETY INSTRUCTIONS:

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15) CAUTION - These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions unless you are qualified to do so.

U-CONTROL

The Ultimate Studio in a Box: 25-Key USB/MIDI Controller Keyboard with USB/Audio Interface, 50 Software Instruments and Ableton® Live Lite 4 BEHRINGER Edition

▲ Unleash your creativity and play 50 virtual instruments and synthesizers, take off with an unlimited number of sound creations. Download more free instrument plug-ins and host software from www.behringer.com

▲ Velocity-sensitive USB/MIDI keyboard featuring 25 full-size keys and unbeatable programming versatility, real-time control and playability

▲ USB/audio interface to connect your instruments and mixer, etc. to your computer for recording and playback

▲ Powerful DAW software Ableton® Live Lite 4 BEHRINGER Edition included

▲ Plug and play with Mac OS® X and Windows XP®

▲ 8 real-time rotary controls plus 10 assignable switches

▲ Freely assign MIDI control changes to the modulation wheel, volume fader and pedal port for ultimate flexibility

▲ Full 128 tone range via the octave shift function with multi-purpose LED status indication

▲ Separate MIDI Out allows controlling external samplers, synths and other equipment

▲ Runs via USB bus, batteries or a power adapter (not included)

▲ High-quality components and exceptionally rugged construction ensure long life

▲ Conceived and designed by BEHRINGER Germany

U-CONTROL UMX25

FOREWORD

Dear Customer,

welcome to the team of BEHRINGER users, and thank you very much for expressing your confidence in us by purchasing the U-CONTROL.

Writing this foreword for you gives me great pleasure, because it represents the culmination of many months of hard work delivered by our engineering team to achieve a very ambitious goal: With the UMX we present you our first keyboard which, thanks to its flexibility, can be used on stage as a master keyboard controller as well as a pure MIDI controller. The task of designing our new U-CONTROL certainly meant a great deal of responsibility, which we assumed by focusing on you, the discerning user and musician. Meeting your expectations also meant a lot of work and night shifts. But it was fun, too. Developing a product usually brings a lot of people together, and what a great feeling it is when all who participated in such a project can be proud of what they've achieved.

It is our philosophy to share our enjoyment with you, because you are the most important member of the BEHRINGER team. With your highly competent suggestions for new products you've made a significant contribution to shaping our company and making it successful. In return, we guarantee you uncompromising quality as well as excellent technical and audio properties at an extremely reasonable price. All of this will enable you to give free rein to your creativity without being hampered by budget constraints.

We are often asked how we manage to produce such high-quality devices at such unbelievably low prices. The answer is quite simple: it's you, our customers! Many satisfied customers mean large sales volumes enabling us to get better purchasing terms for components, etc. Isn't it only fair to pass this benefit on to you? Because we know that your success is our success too!

I would like to thank all of you who have made the U-CONTROL possible. You have all made your own personal contributions, from the developers to the many other employees at this company, and to you, the BEHRINGER user.

My friends, it's been worth the effort!

Thank you very much,

Uli Behringer

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U-CONTROL UMX25

1. INTRODUCTION

Thank you for showing your confidence in BEHRINGER products by purchasing the UMX25. The UMX25 is an extremely flexible master keyboard with a controller unit that can be used for a wide array of applications. Whether you need independent control of computer rack synthesizers, general MIDI sound modules or effects devices, or want to use the UMX25 for conveniently operating sequencing software or computer plug-ins – the UMX25 offers you tremendous ease of use and allows you to realize your ideas intuitively.

☞ **The following user's manual is intended to familiarize you with the unit's control elements, so that you can master all the functions. After having thoroughly read the user's manual, store it at a safe place for future reference.**

1.1 Before you get started

1.1.1 Shipment

The U-CONTROL was carefully packed at the assembly plant to assure secure transport. Should the condition of the cardboard box suggest that damage may have taken place, please inspect the unit immediately and look for physical indications of damage.

☞ **Damaged equipment should NEVER be sent directly to us. Please inform the dealer from whom you acquired the unit immediately as well as the transportation company from which you took delivery of the unit. Otherwise, all claims for replacement/repair may be rendered invalid.**

☞ **To assure optimal protection of your UMX25 during transport, we recommend utilizing a carrying case.**

☞ **Please always use the original packaging to avoid damage due to storage or shipping.**

☞ **Never let unsupervised children play with the B-CONTROL or with its packaging.**

☞ **Please dispose of all packaging materials in an environmentally-friendly fashion.**

1.1.2 Initial operation and power supply

Please make sure that the unit is provided with sufficient ventilation, and never place the UMX25 on top of an amplifier or in the vicinity of a heater to avoid the risk of overheating.

The power supply can be realized in different ways depending on the main application area: For the installation of the UMX25 in a studio environment, it is possible to connect the device directly to a free USB port of the computer using the USB cable provided (see fig. 1.1).

In case it is not possible to establish the power supply over USB (e.g. because of an overload of the host computer due to several USB devices connected), it is also possible to operate the UMX25 with three 1.5-Volt batteries (type "AA", see fig. 1.2).
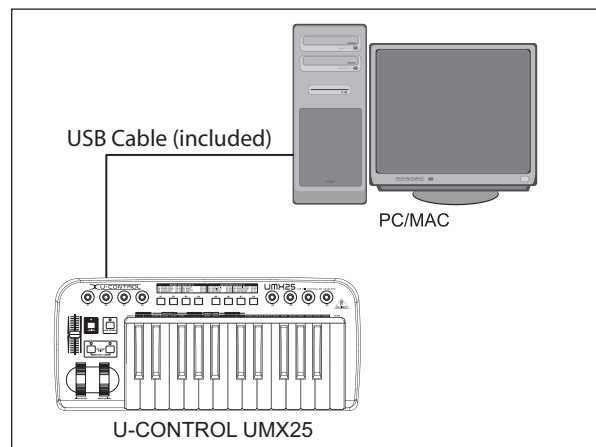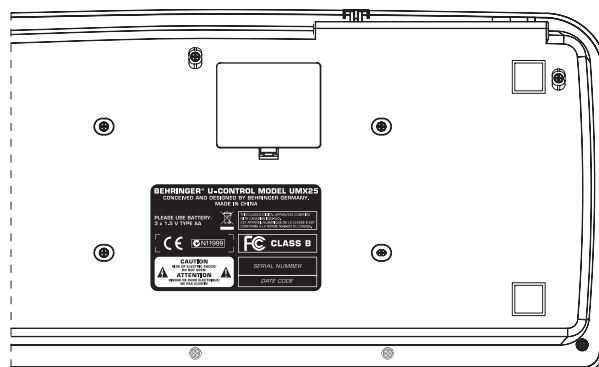

Fig. 1.1: Power supply via USB

Figure 1.2: The battery compartment on the bottom side of the UMX25

Open the battery compartment by pressing the shutter clamp carefully in the direction of the battery compartment, while pulling the cover of the compartment upwards.

Please note the following points when inserting the batteries:

▲ The +symbol of the batteries must *coincide* with the +symbol of the compartment! Incorrect polarity will damage the electronics!

▲ Do not mix old and new batteries! When you change the batteries, always change all 3 batteries at the same time.

▲ Do not use damaged batteries. The UMX25 could be damaged due to the leakage of chemicals.

▲ If you do not use the unit for an extended period of time, please remove the batteries from the compartment. Here again, the batteries could leak and damage the device.

After inserting the batteries, please close the battery compartment and make sure the shutter clamp snaps into place again.

If you do neither want to connect the power supply over USB nor operate the unit with batteries, there is yet another possibility to connect the UMX25 over an external power pack. Best suited here is the BEHRINGER POWERSUPPLY PSU-SB. If you use a different power supply, please observe the correct operational data (9 V DC; 100 mA) and correct polarity of the connector plug; you will find information about this above the DC input on the rear of the unit. Reverse polarity can damage the electronics.

U-CONTROL UMX25

1.1.3 Online registration

Please, do remember to register your new BEHRINGER equipment right after your purchase by visiting www.behringer.com (alternatively www.behringer.de) and kindly read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, our goal is to have it repaired as quickly as possible. To arrange for warranty service, please contact the retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may directly contact one of our subsidiaries. Corresponding contact information is included in the original equipment packaging (Global Contact Information/European Contact Information). Should your country not be listed, please contact the distributor nearest you. A list of distributors can be found in the support area of our website (www.behringer.com).

Registering your purchase and equipment with us helps us process your repair claims quicker and more efficiently.

Thank you for your cooperation!

1.2 System requirements

For USB operation, a current WINDOWS® PC or MAC® with a USB connection is sufficient. Both USB 1.1 and USB 2.0 are supported.

☞ **The UMX25 supports the USB MIDI compatibility of WINDOWS® XP and MAC OS X® operating systems.**

☞ **The UMX25 can also be operated as a stand-alone MIDI controller with no PC connected. Software control via MIDI is also possible, provided your computer has a MIDI interface.**

2. INTRODUCTION TO MIDI

2.1 MIDI control for beginners

Application possibilities for the UMX models are truly wide-ranging. We'll start with a couple of general explanations and examples that should quickly let you get a good understanding of MIDI basics.

The definition of the MIDI standard began in 1982 with the cooperation of various international companies (MIDI: **M**usical **I**nstruments **D**igital **I**nterface). At that time, musicians were looking for a possibility of managing the communication of electronic musical instruments of different makes with one another.

What exactly does the UMX25 do?

Simply put, this a remote control for all kinds of MIDI equipment. Using the faders, encoders and buttons, the foot pedal and the keyboard, an entire array of control instructions can be generated, which in turn can control the most diverse functions of external devices.

What kinds of equipment can I control with the UMX25?

You can basically control any device supporting the MIDI format. Both hardware and software MIDI devices are controlled in exactly the same way. The only difference is in the wiring.

Here are a couple of suggestions on how you can use your UMX25:

▲ Editing sound parameters of (virtual) synthesizers, sound samplers, GM/GS/XG sound generators

▲ Controlling parameters on effects equipment/software plug-ins such as effects processors, reverbs, compressors, equalizers etc.

▲ Remotely controlling software mixers (volume, panorama, mute functions, etc.)

▲ Remotely controlling transport functions (playback, forward, stop etc.) on sequencers, hard disk recorders, drum computers etc.

▲ Live control of volume and sound parameters on expanders

▲ Remotely controlling groove boxes, step sequencers, MIDI generators and other „live" software

▲ Program changes and volume control on sound generators (just like on a master keyboard)

▲ Can be used by band keyboardists, solo entertainers, organists, electronic music performers, DJs, sound engineers, home/project studio owners, theater technicians etc. alike

And how does it work?

Remote control is realized by assigning the individual control elements of the UMX25 to individual MIDI parameters. Whenever one of these control elements is operated, the UMX25 generates the control data assigned to this control element, which are then transferred to external devices over a data link. Thus, for example, the VOLUME/DATA fader is programmed ex works to send data controlling the volume level of a channel.

The data connection is usually a standard *MIDI cable* with a 5-pole DIN plug on each end. Such cables should not exceed a length of 15 meters. With the UMX25 there is one more data connection available: the USB cable to the host computer. Here, the cable should not exceed a length of 5 meters.

The data transmission takes place over 16 channels.

The control data generated by the individual control elements are also called *MIDI messages*, which can be divided into 3 major groups:

▲ *Channel Messages***:** Here, channel-specific control information is transmitted. An example of a channel message is the *note-on* instruction. As soon as a key is played on the keyboard of the UMX25, the device generates an instruction which contains the pitch, channel number and velocity. The receiving sound generator „knows" which tone has to be played.

▲ *System Messages:* These messages are not channel-specific but relate to the entire system to which they are sent. They are divided into 3 groups: *System Exclusive Messages* (for operating system backup, updates, management of memory contents); *System Real-Time Messages* (e.g. for remote control of other devices); *System Common Messages* (e.g. for the synchronization of several devices).

▲ *Control Messages:* Also known as *Control Changes* or *Controllers*, abbreviated as "CC… (*controller number*)". There are 128 controllers in total, which are numbered from 0 to 127. Controllers are partly channel-specific.

☞ **Please refer to the table 6.1 to find out which type of controller you are currently working with.**

☞ **MIDI data are only control data and contain no audible audio information! The data transmission takes place over 16 channels.**

What settings do I have to make? Where? How?

Basically, which control element generates which controller must be set on the UMX25, and how arriving controller commands should be interpreted must be set on the receiving device.

Regarding controller assignment, there are two possible principles:

▲ You use the preset controller configuration set in the factory (see fig. 3.1, 10). In this case, you only need to make the assignments on the receiving device.

▲ You use your own controller configuration set up in ASSIGN mode. How to assign controllers to the UMX25 is described in chapter 4 "OPERATION".

2.2 USB mode and stand-alone operation

The UMX25 can be operated as a USB interface or stand-alone device. The two modes are different with respect to the MIDI signal flow.

2.2.1 USB mode

When the UMX25 is linked via USB to a computer, the signal flow is as shown below (fig. 2.1).
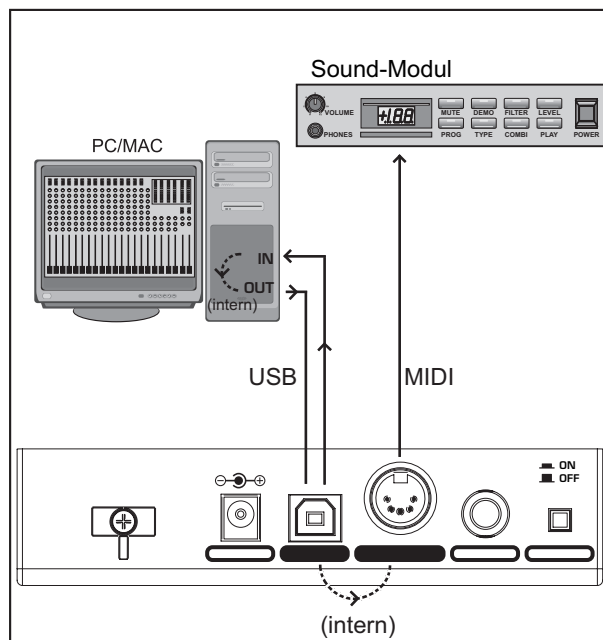

Fig. 2.1: Block diagram of MIDI signal flow

After the UMX25 has been connected to the host computer, a virtual MIDI IN and MIDI OUT interface is emulated.

MIDI data generated in the UMX25 are first sent over the USB interface to the host computer, where they are received at the emulated MIDI IN. A sequencer software running on the host computer receives the MIDI data via the MIDI IN and relays them to the emulated MIDI OUT – if all sequencer parameters are set properly. The data are then sent back to the UMX25 via the USB interfaces on the computer/UMX25, where they are looped through to the physical MIDI OUT (14). From here, the MIDI data are sent to the devices connected to the MIDI OUT.

The MIDI OUT connector 14 can also be used as a normal MIDI interface, independently of the sequencer software operating the UMX25.

2.2.2 Stand-alone operation

When the UMX25 is not linked via USB to a computer, it is automatically set to stand-alone mode. In this case, the UMX25 can only send out MIDI data from its MIDI OUT connector.

3. CONTROL ELEMENTS AND CONNECTIONS

☞ **The following factory settings refer to GLOBAL MIDI channel 1.**

1 The *keyboard* of the UMX25: 25 large, velocity-sensitive keys for maximum playing comfort. The keyboard not only provides for playing, but also functions as an encoder in the context of the assignment procedure.

2 The *MODULATION* wheel functions ex works as a conventional modulation wheel (MIDI CC 1). In ASSIGN mode, any MIDI controller can be assigned to it. When you release the MODULATION wheel, it retains its adjusted value.

3 The *PITCH BEND* wheel is normally used to change the pitch in real time. In this way, a sound can be "bent" upwards/downwards by several half-tones while playing. The specific amount of pitch bending applied to a sound can be set on the device controlled by the UMX25.

4 Ex works, the *VOLUME/DATA fader* controls the volume of the notes played on the keyboard (MIDI CC 7). In ASSIGN mode, it can be set to control any MIDI controller.

5 The *ASSIGN* button allows you to assign different functions to the various control elements.

The basic principle is always the same:

1) Press the ASSIGN button and **keep** it **pressed**. The status LED above the button lights up. The UMX25 signals that it has entered ASSIGN mode.

2) Select the control element to which you would like to assign a new MIDI function by operating it.

3) Release the ASSIGN button.

4) Depending on the choice you made, you may have to define an additional value range (see below for more details).

5) Press the **ENTER** button on the keyboard to confirm your assignments. To discard your assignments either press the **CANCEL** button or the ASSIGN button again. In either case the ASSIGN LED goes out and the UMX25 quits ASSIGN mode.

6 The *USER MEMORY* button is used to recall the internal memory. The internal memory contains all assignment information set in ASSIGN mode. Any changes that were made after USER MEMORY selection are automatically saved without further user prompts. The USER MEMORY is retained even after the unit is switched off.

7 The two OCTAVE SHIFT buttons are preset to shift the keyboard range by several octaves up or down. The associated LEDs help you identify the current octave setting (see table 3.1). Since the OCTAVE SHIFT buttons can also be assigned to any MIDI controller, we would like to refer you to chapters 4.2.8 and 4.2.9 for detailed information.

8 The eight high-resolution rotary controls *R1 – R8* generate continuous controller information. They are the controllers that are shown above the buttons in the table 10 . All rotary controllers can be assigned to any controller in ASSIGN mode.

9 The eight buttons *B1 - B8* generate switch controllers. Again, they are assigned to various functions ex factory (see table 10 on the device). Like the rotary controls the buttons can be freely assigned to any controller in ASSIGN mode.

10 The table shows the controller assignment preset at the factory.
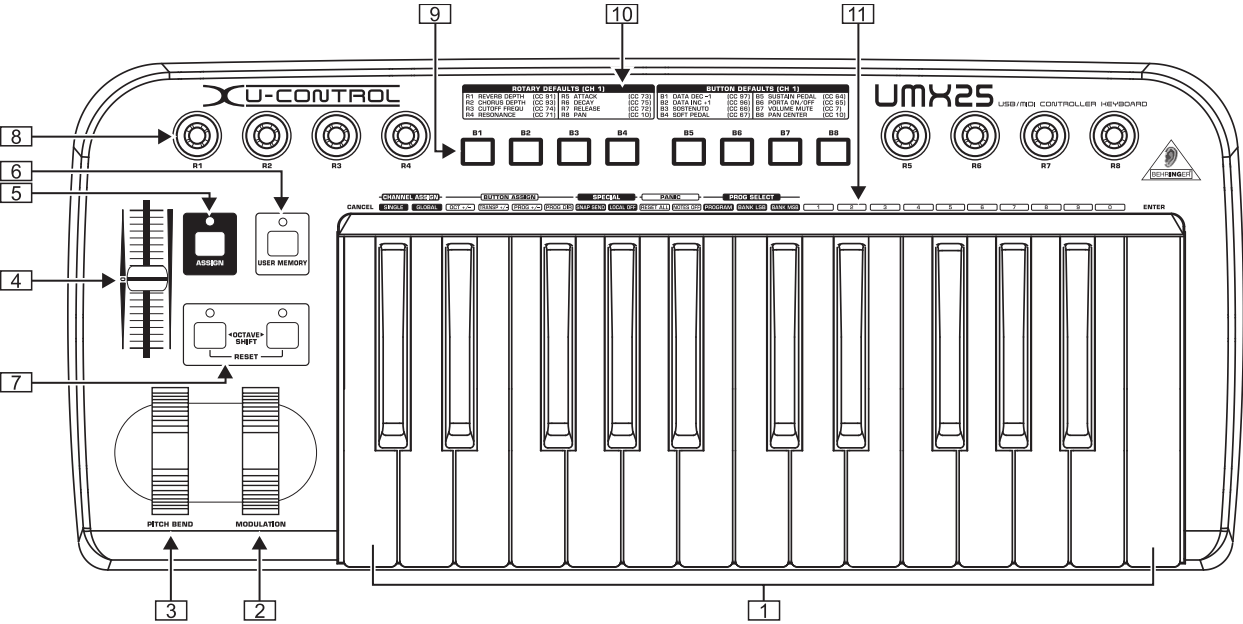
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Fig. 3.1: Top view

⑪ Keyboard legend: Informs you about the special functions performed by individual keys on the keyboard. The individual elements of the keyboard legend are described in detail in chapter "4 OPERATION".

Operation	Octave shift	LED
press once	Shift one octave up or down	LED on
press 2nd time	Shift 2 octaves up or down	flashing
press 3rd time	Shift 3 octaves up or down	flashing
press both buttons	Reset (all octave shifts are reversed)	LED off

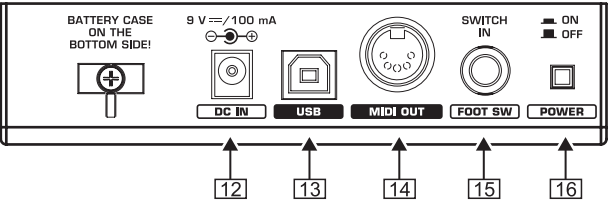*Table 3.1: LED activity depending on the OCTAVE SHIFT status*

Fig. 3.2: Rear panel connectors

⑫ Use this socket to supply the UMX25 with current from an external power supply unit (not included).

⑬ The *USB connector* of the UMX25. The connector (type B) on the device is connected using the cable supplied to a free slot on the host computer (where you will find a type A connector). It is compatible with the USB 1.1 and USB 2.0 standards.

⑭ In addition to the connection to the computer, you can use the MIDI OUT to connect additional MIDI devices, so that the UMX25 transforms into a fully-featured, easily accessible MIDI interface for your host computer.

⑮ Use the *FOOT SWITCH* connector to connect a sustain pedal. This interface is factory preset and assigned to the MIDI parameter "Foot Pedal" (CC 64), which represents a switch controller. When the pedal is pressed (and held) in normal Play mode, it generates a controller with the value 127. When the pedal is released, the controller falls back

to 0 (typical piano sustain pedal behavior). Apart from that the pedal assignment is the same as the button assignment, i.e. you can assign any MIDI controller to it.

⑯ The POWER switch is used to switch the unit on and off.

☞ **Please close all programs if you want to switch off the UMX25 while the computer is running or terminate the USB connection.**

4. OPERATION

This chapter gives you a detailed description of how to operate the UMX25. Please note: There is an explicit difference between **buttons** (see control elements, ⑨) and **keys** (control element, ①)! Do not mix them up!

4.1 PLAY MODE

After power-up the UMX25 enters Play mode. You can start playing, modify filter sweeps with the rotary controls, determine program changes intuitively, realize panorama changes, control soft synths, and so on…

4.1.1 The *FACTORY MEMORY*

The FACTORY MEMORY is the internal memory storing the basic settings of the UMX25. The most important feature of the FACTORY MEMORY is the controller map described in point ⑩ . These settings define a number of useful parameters and are automatically loaded when the device is switched on.

Assignments that are modified during a session, will be discarded when the unit is switched off. In order to save the modified assignments, the UMX25 has been provided with a *USER MEMORY*.

4.1.2 The USER MEMORY

Settings that are stored in the USER MEMORY, are stored permanently in the internal flash ROM and will be retained even after switching the unit off.

Change to the USER MEMORY by pressing button 6. When you access the USER MEMORY for the first time, it stores a copy of the FACTORY MEMORY settings. As soon as you make changes to the existing controller map, they are stored automatically without your intervention.

The following control element assignments including channel information can be permanently stored in the USER MEMORY:

- FOOT SWITCH connector

- OCTAVE SHIFT button

- VOLUME/DATA fader

- PITCH BEND wheel

- MODULATION wheel

- Rotary controls R1 - R8

- Buttons B1 - B8

4.2 ASSIGN MODE

As already mentioned in the preceding chapters, the ASSIGN mode is a powerful tool which allows you to re-configure the UMX25 to an extremely easy-to-use controller.

The fundamental logic of the assignment procedure was already presented in chapter "3. CONTROL ELEMENTS AND CONNECTIONS".

4.2.1 *GLOBAL CHANNEL* adjustment

MIDI channels are classified into two types: one GLOBAL CHANNEL and 15 additional SINGLE CHANNELS.

The GLOBAL MIDI CHANNEL is a factory setting and all MIDI instructions are sent over this channel: messages of various control elements as well as note-on and note-off messages. Please proceed as follows to modify the GLOBAL MIDI CHANNEL:

1) Press the ASSIGN button and **keep** it **pressed**.

2) Press the ⬛ GLOBAL button.

3) Release the ASSIGN button.

4) Now define the GLOBAL CHANNEL by entering a number between 1 and 16 using the number keys. If you enter a number greater than 16, your entry will be rejected.

Examples:
- If you want to enter channel 14, press keys ⬛ 1 and ⬛ 4 .

- To enter channel 7 press key ⬛ 7 .

5) In order to confirm your selection, press the **ENTER** key. To discard your assignments either press the **CANCEL** button or the ASSIGN button again. In either case the ASSIGN LED goes out.

☞ **Ex works the GLOBAL CHANNEL is set to channel 1.**

4.2.2 Individual channel assignment

The assignment of individual control elements to a certain channel is useful if you want to control external devices independently of one another.

Example:
You play synthesizer A over channel 2 from the keyboard, while synthesizer B is controlled on channel 5 by a sequencer software. Now you can control the filter frequency of device B in real time using one of the eight rotary controls, and at the same time continue playing device A without changes to the filter frequency.

1) Press the ASSIGN button and **keep** it **pressed**.

2) Operate the control element whose channel shall be set to differ from the GLOBAL CHANNEL. If it is a controller or a fader, move it briefly. If it is a button, press it once. Now the UMX25 "knows" which control element shall be assigned to a *SINGLE CHANNEL*.

3) Release the ASSIGN button.

4) Press the ⬛ SINGLE button.

5) Now define the SINGLE CHANNEL by entering a number between 1 and 16 using the number keys. If you enter a number greater than 16, your entry will be rejected.

Example:
- If you want to enter channel 11, press keys ⬛ 1 and ⬛ 1 .

- To enter channel 4 press key ⬛ 4 .

☞ **Special case: If you want to assign the control element to the GLOBAL CHANNEL again, please press the 0 key next to the ENTER key (instead of the number keys 1 to 9).**

6) To finalize your settings, press the ENTER button. To discard your assignments either press the CANCEL button or the ASSIGN button again. In either case the ASSIGN LED goes out.

☞ **The channel set-up of all control elements of the UMX25 is based on the GLOBAL CHANNEL. This means that a control element is *always* set to the GLOBAL CHANNEL until you assign a different channel to it. Whenever you change the GLOBAL CHANNEL you also change the channels assigned to the various control elements!**

4.2.3 GLOBAL CHANNEL assignment:

In comparison to the procedure described in the previous chapter, the advantage of the method shown here is that you have to press fewer buttons to make adjustments.

1) Press the ASSIGN button and **keep** it **pressed**.

2) Operate the control element whose GLOBAL CHANNEL shall be set.

3) Release the ASSIGN button.

4) Press the SINGLE-key.

5) Press the 0-key.

6) Press **ENTER** to confirm. Press **CANCEL** or the ASSIGN button again to discard your assignments. In either case the ASSIGN LED goes out.

4.2.4 The *PANIC* key combination

Imagine you have already worked several hours on a song and suddenly one of your sound modules produces a "hanging note". If you execute a PANIC instruction, a sound module receiving this instruction will be muted immediately.

1) Press the ASSIGN button and **keep** it **pressed**.

2) Press ⬛ RESET ALL or ⬛ NOTES OFF .

3) Release the ASSIGN button. The device automatically enters Play mode again.

☞ **The instruction chosen will be sent immediately after pressing one of the two buttons mentioned above.**

4.2.5 The *SNAPSHOT* instruction

The SNAPSHOT instruction transmits all parameters including their current values: all control element assignments as well as the current channel settings are sent out from the MIDI OUT connector and the USB output of the UMX25.

In this way it is possible to transmit the entire UMX25 mapping to a sequencer software at the beginning of a song. The song can then be played back with the final controller values adjusted for it. If the parameters of an external device have been changed, you can also use SNAPSHOT to correct the values.

1) Press the ASSIGN button and **keep** it **pressed**.

2) Press the ⬛ SNAP SEND button.

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3)   Release the ASSIGN button. The device automatically enters Play mode again.

☞ **The SNAPSHOT instruction is sent <u>immediately</u> after playing the keyboard.**

4.2.6 *LOCAL OFF*

The effect of LOCAL OFF is that any data entries made with the control elements will NOT be passed on to the MIDI OUT connector or the USB OUT. In LOCAL OFF mode you can, for example, re-adjust the rotary controls without sending any information to the external devices connected – which would normally be the case.

1)   Press the ASSIGN button and **keep** it **pressed**.

2)   Press the LOCAL OFF button.

3)   Release the ASSIGN button and adjust the control elements as required.

4)   Finalize your selection with **ENTER**, **CANCEL** or ASSIGN. In either case the ASSIGN LED goes out and the UMX25 enters Play mode again.

4.2.7 Control element assignment

In chapter 4.2.2 we described how to assign an individual *channel* to each control element. Here you will learn how to assign new *controllers*.

This procedure applies to the MODULATION wheel, the DATA/VOLUME fader, the rotary controls R1 – R8, the buttons B1 – B8 and to the optional sustain pedal connected to jack 15 .

1)   Press the ASSIGN button and **keep** it **pressed**.

2)   Move or press the corresponding controller or button respectively, or hold down the sustain pedal.

3)   Release the ASSIGN button.

4)   Press the number keys on the keyboard to enter the controller number of your choice. Only values between 0 and 127 can be entered. Higher values are ignored by the device.

Examples:
- To enter CC 14 press keys 1 and 4 .

- If you want to select CC 107, press 1 , 0 and 7 .

5)   Press **ENTER** to confirm. To discard your assignments either press the **CANCEL** button or the ASSIGN button again. In either case the ASSIGN LED goes out.

Please note **two special cases** with regard to a button or the sustain pedal:

☞ **If you assign CC 07 (Channel Volume) to a button, the channel volume "0" is sent each time you press the button. This will always mute the channel, which is a very interesting feature when playing live.**

☞ **If you use the controller CC 10 (Panorama) for the buttons or sustain pedal, pressing the control element will send out a value of 64. As a consequence, the channel will always be set to center position in the stereo panorama.**

4.2.8 Program and bank changes

The UMX25 provides three options to change programs on external devices. This is a very powerful function which allows you to fully exploit the multitude of functions of your sound modules.

Options a) and b) allow you to select any programs using a defined selection procedure. Option c) speeds up the procedure, so that you can select programs at the touch of a button.

a) If you are sure to select only one of 128 different programs, you can effect program changes in ASSIGN mode as shown below. However, if the number of 128 is exceeded, you will have to use the procedure described in section b).

1)   Press the SINGLE button and **keep** it **pressed**.

2)   Press the SINGLE key.

3)   Release the ASSIGN button.

4)   Now define the SINGLE CHANNEL by entering a number from 1 to 16 using the number keys. In order to assign the GLOBAL CHANNEL, please press the 0 instead.

5)   Press the PROGRAM button.

6)   Press the number keys on the keyboard to enter the program number of your choice. Only values between 0 and 127 can be entered. Higher values are ignored by the device.

Examples:
- To enter program 15, press keys 1 and 5

- If you want to select program 127, press 1 , 2 and 7 .

7)   Confirm your selection with **ENTER**. If you do not like the selected program, discard your selection with **CANCEL** or press the ASSIGN button again. In either case the ASSIGN LED goes out.

b) If you want to make a selection from more than 128 programs, please use the following program change procedure. In this case your programs will be organized in *banks*, which can be selected with a special MIDI instruction called *BANK SELECT*. Here's how it works:
The BANK SELECT instruction consists of two parts: one *MSB* part and one *LSB* part.

The MSB part describes a value range comprising 128 different values. On many devices this is the more important part of the BANK SELECT instruction.

The LSB part describes each of the 128 MSBs using 128 additional single steps. In both cases the numbering is from 0 to 127.

In total, the BANK SELECT instruction offers the enormous value range of 128 x 128 = 16,384 different values. In theory, this means that you could use external devices with as many different banks. Considering the fact that each single bank includes another 128 single programs, you get the unbelievably large number of 2,097,152 programs for you to organize.

1)   Press the ASSIGN button and **keep** it **pressed**.

2)   Press the SINGLE key.

3)   Release the ASSIGN button.

4)   Now define the SINGLE CHANNEL by entering a number from 1 to 16 using the number keys (as described in chapter 4.2.2). In order to assign the GLOBAL CHANNEL, please press 0 instead.

5)   Press the BANK MSB button. Press the number keys on the keyboard to enter the BANK MSB number of your choice. Only values between 0 and 127 can be entered. Higher values are ignored by the device.

The BANK MSB is now defined.

Examples:
- To enter MSB 14, press keys 1 and 4 .

- If you want to select MSB 107, press 1 , 0 and 7 .

6)   Now define the BANK LSB by pressing the BANK LSB button. Use the procedure described above to enter the BANK LSB value (see step 5). The entry follows the same rules as were described for the BANK MSB.

In steps 5 and 6 you have defined the bank from which the desired program will be selected. Now define the program itself:

8) Press the `PROGRAM` button followed by the number keys on the keyboard to enter the program number of your choice. Only values between 0 and 127 can be entered. Higher values are ignored by the device. That's all!

9) Confirm your selection with **ENTER**. To discard your assignments either press the **CANCEL** button or the ASSIGN button again. In either case the ASSIGN LED goes out.

Example:
You want to use the UMX25 to select preset #49 in bank #25 on an external device over channel 14. Since the bank number of sound modules is often smaller than 128, only the LSB is used to define the bank. The MSB is 0 in this case.

1) Press the ASSIGN button and keep it pressed.

2) Press the `SINGLE` button.

3) Release the ASSIGN button.

4) Define the MIDI channel by pressing keys `1` and `4`.

5) Press the `BANK MSB` button and then `0`.

6) Press the `BANK LSB` button and then keys `2` and `5` to select bank #25.

7) Define the program by pressing the `PROGRAM` button followed by keys `4` and `9` to select program #49.

8) Press the **ENTER** button.

c) Direct program selection using the *OCTAVE SHIFT* buttons.

1) Press the ASSIGN button and **keep** it **pressed**.

2) Press the one of the two OCTAVE SHIFT buttons to which you want to assign the program change function.

3) Release the ASSIGN button.

4) Press the `PROG DIR` button. Press the number keys on the keyboard to enter the preset number of your choice. Only values between 0 and 127 can be entered. Higher values are ignored by the device.

5) Confirm your selection with **ENTER**. To discard your assignments either press the **CANCEL** button or the ASSIGN button again. In either case the ASSIGN LED goes out.

☞ **If you have not yet assigned an individual MIDI channel to the OCTAVE SHIFT buttons (see chapter 4.2.2), the direct selection of programs always refers to the GLOBAL CHANNEL!**

☞ **As soon as you have assigned the direct program selection feature to one of the two OCTAVE SHIFT buttons, pressing both buttons simultaneously will do NOTHING at all!**

4.2.9 Other functions of the OCTAVE SHIFT buttons

After power-up, the OCTAVE SHIFT buttons are set to their initial state (see table 3.1 on page 7). In addition to the program change and octave shift functions already described, you can assign a few special functions to the OCTAVE SHIFT buttons in ASSIGN mode:

a) Transposition by single half-tones

b) Scrolling in program libraries

c) Various controller functions:

☞ **As soon as a function has been assigned to one of the two buttons, the second button automatically performs the same function – however with limited functionality:**

As long as you have not assigned a particular function to this button in ASSIGN mode, it will not send any data.

☞ **When you assign an individual MIDI channel to one of the two buttons, the second button will also be set to this channel. This also applies when you change back to the GLOBAL CHANNEL.**

a) Transposition by single half-tones:

1) Press the ASSIGN button and **keep** it **pressed**.

2) Press the `TRANSP +/-` button.

3) Release the ASSIGN button.

4) Confirm your selection with **ENTER**. To discard your assignments either press the **CANCEL** button or the ASSIGN button again.

Pressing the right-hand button transposes the pitch up by one half-tone, pressing the left-hand button transposes the pitch down by one half-tone. Pressing both buttons simultaneously cancels any transposition made before.

☞ **According to the MIDI standard, a keyboard comprises a maximum of 128 half-tones. When you reach the lower and upper limits of this range using the transpose function, any further key press will not raise or lower the pitch any more. This also applies to the transposition by octaves.**

b) Scrolling in program libraries:

Most sound modules allow you to store presets in a separate bank, often referred to as *user bank*. If the order of the songs to be played during a gig is fixed, you can use the user bank to store all sounds used in concert one after the other and concentrate entirely on your performance. Thanks to the OCTAVE SHIFT buttons you don't have to bother any more with searching sounds in your various sound modules.

1) Press the ASSIGN button and **keep** it **pressed**.

2) Press the `PROG +/-` button.

3) Release the ASSIGN button.

4) Confirm your selection with **ENTER**. To discard your assignments either press the **CANCEL** button or the ASSIGN button again.

Pressing the right-hand OCTAVE SHIFT button switches the presets up by one number on the external sound module, pressing the left-hand OCTAVE SHIFT button switches the presets down by one number. Pressing both buttons simultaneously switches back to preset #0 in the current bank.

Remember to assign the OCTAVE SHIFT buttons to an individual MIDI channel if you do not want to use the GLOBAL CHANNEL (see chapter 4.2.2).

c) Various controller functions:

Please note that the OCTAVE SHIFT buttons generate switch controller information if assigned to a controller: They always generate a value of 0 or 127.

☞ **Two exceptions: If you assign the OCTAVE SHIFT buttons to controller CC 07 (Channel Volume), pressing either of the two buttons generates the value 0. With controller CC 10 (Panorama), the value generated by pressing either of the buttons is 64.**

☞ **Please note that when a controller has been assigned, pressing both buttons simultaneously has no effect.**

1) Press the ASSIGN button and **keep** it **pressed**.

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2) Press the one of the two OCTAVE SHIFT buttons to which you want to assign a controller.

3) Release the ASSIGN button.

4) Press the number keys on the keyboard to enter the controller number of your choice (as described in chapter 4.2.1).

5) Confirm your selection with **ENTER**. To discard your assignments either press the **CANCEL** button or the ASSIGN button again. In either case the ASSIGN LED goes out.

Remember to assign the OCTAVE SHIFT buttons to an individual MIDI channel if you do not want to use the GLOBAL CHANNEL (see chapter 4.2.2).

4.2.10 *RANGE* definition

The RANGE parameter can be defined for the PITCH BEND wheel and the keyboard velocity.

a) PITCH BEND RANGE: Here you can define how moving the PITCH BEND wheel changes the pitch. Modify the PITCH BEND RANGE as described below:

1) Press the ASSIGN button and **keep** it **pressed**.

2) Move the PITCH BEND wheel.

3) Release the ASSIGN button.

4) Use the number keys to enter the number of half-tones by which the pitch shall be changed when moving the pitch bend wheel.

Examples:
- Press key 7 to define a pitch bend range of ±7 half-tones.

- Press keys 2 and 4 to define a pitch bend range of ±24 half-tones.

5) Confirm your selection with ENTER. To discard your assignments either press the CANCEL button or the ASSIGN button again.

b) keyboard velocity: Here you can determine the volume of a note depending on how fast you play a key on the keyboard. If no changes are made, the velocity is fixed to 110.

1) Press the ASSIGN button and **keep** it **pressed**.

2) Use the number keys to enter the keyboard velocity (see table 4.1).

3) Release the ASSIGN button.

4) Confirm your selection with **ENTER**. To discard your assignments either press the **CANCEL** button or the ASSIGN button again.

KEY	EFFECT ON KEY VEOLCITY
0	OFF: velocity value is fixed to 110. Change of key pressure has no effect on volume level.
1	SOFT: key pressure is very sensitive; low velocity changes create high changes in volume level
2	MEDIUM: key pressure is "normal"; (very) hard hit notes are (very) loud, (very) soft hit notes produce (very) low volume
3	HARD: key pressure is more unsusceptible compared to all other settings
4 bis 9	invalid input

Table 4.1: Effect of RANGE definition on keyboard velocity

4.2.11 The FACTORY RESET instruction

Please proceed as follows to reset all UMX25 settings to their factory defaults:

1) Press the ASSIGN button and **keep** it **pressed**.

2a) Press both OCTAVE SHIFT buttons for a **temporary FACTORY RESET**. All currently modified control elements will be reset to their factory defaults. However, the USER MEMORY remains as before and is not reset!

2b) Press keys ⌐8⌐, ⌐9⌐ and ⌐0⌐ *simultaneously* for a **complete FACTORY RESET**: Now not only the control elements of the FACTORY MEMORY but also those of the USER MEMORY will be overwritten.

3) Release the ASSIGN button. The ASSIGN LED stays on.

4) Confirm your selection with **ENTER**. If you do not want to RESET the unit, either press the **CANCEL** button or the ASSIGN button again.

5. SPECIFICATIONS

USB connections
Type	Type B; USB1.1

MIDI connections
Type	5-pin DIN plug OUT

CONTROL ELEMENTS
Controller	1 control wheel with center reset
	1 control wheel without center reset
	8 rotary knobs
	1 fader
Buttons	12 buttons
Keyboard	25 keys; velocity-sensitive

SWITCH PLUG
Foot pedal	1/4" -Monojack with automatic polarity recognition

POWER SUPPLY
USB	
Battery	3 x 1,5 Volt Mignon (Typ "AA")
Mains connection	2 mm (1/13") DC connection, Center negative
	9 V $=$, 200 mA DC, regulated; extern via:
China/Korea	PSU-SB-CN BEHRINGER 220 V~, 50 Hz
Europe	PSU-SB-EU BEHRINGER 230 V~, 50 Hz
Japan	PSU-SB-JP BEHRINGER 100 V~, 50/60 Hz
Australia	PSU-SB-SAA BEHRINGER 240 V~, 50 Hz
UK	PSU-SB-UK BEHRINGER 240 V~, 50 Hz
USA	PSU-SB-UL BEHRINGER 120 V~, 60 Hz
Power consumption	max. 0.9 W

DIMENSIONS/WEIGHT

Dimensions (W x H x L)	
	215 mm x 97 mm x 495 mm
Weight	2.24 kg

BEHRINGER is constantly striving to manintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.

6. APPENDIX

Standard MIDI Controller (CC) Numbers							
00	Bank Select	32	Bank Select LSB	64	Damper Pedal (Sustain)	96	Data Entry +1 (Increment)
01	Modulation	33	Modulation LSB	65	Portamento On/Off	97	Data Entry -1 (Decrement)
02	Breath Controller	34	Breath Controller LSB	66	Sostenuto On/Off	98	NRPN LSB
03	Controller 3 (undefined)	35	Controller 35 (undefined)	67	Soft Pedal On/Off	99	NRPN MSB
04	Foot Controller	36	Foot Controller LSB	68	Legato Footswitch	100	RPN LSB
05	Portamento Time	37	Portamento Time LSB	69	Hold 2	101	RPN MSB
06	Data Entry MSB	38	Data Entry LSB	70	Sound Controller 1 (Sound Variation)	102	Controller 102 (undefined)
07	Channel Volume (formerly Main Volume)	39	Channel Volume LSB (formerly Main Volume)	71	Sound Controller 2 (Resonance/Timbre)	103	Controller 103 (undefined)
08	Balance	40	Balance LSB	72	Sound Controller 3 (Release Time)	104	Controller 104 (undefined)
09	Controller 9 (undefined)	41	Controller 41 (undefined)	73	Sound Controller 4 (Attack Time)	105	Controller 105 (undefined)
10	Pan	42	Pan LSB	74	Sound Controller 5 (Cutoff Frequency/ Brightness)	106	Controller 106 (undefined)
11	Expression	43	Expression LSB	75	Sound Controller 6 (Decay Time)	107	Controller 107 (undefined)
12	Effect Control 1	44	Effect Control 1 LSB	76	Sound Controller 7 (Vibrato Rate)	108	Controller 108 (undefined)
13	Effect Control 2	45	Effect Control 2 LSB	77	Sound Controller 8 (Vibrato Depth)	109	Controller 109 (undefined)
14	Controller 14 (undefined)	46	Controller 46 (undefined)	78	Sound Controller 9 (Vibrato Delay)	110	Controller 110 (undefined)
15	Controller 15 (undefined)	47	Controller 47 (undefined)	79	Sound Controller 10 (undefined)	111	Controller 111 (undefined)
16	General Purpose 1	48	General Purpose 1 LSB	80	General Purpose 5	112	Controller 112 (undefined)
17	General Purpose 2	49	General Purpose 2 LSB	81	General Purpose 6	113	Controller 113 (undefined)
18	General Purpose 3	50	General Purpose 3 LSB	82	General Purpose 7	114	Controller 114 (undefined)
19	General Purpose 4	51	General Purpose 4 LSB	83	General Purpose 8	115	Controller 115 (undefined)
20	Controller 20 (undefined)	52	Controller 52 (undefined)	84	Portamento Control	116	Controller 116 (undefined)
21	Controller 21 (undefined)	53	Controller 53 (undefined)	85	Controller 85 (undefined)	117	Controller 117 (undefined)
22	Controller 22 (undefined)	54	Controller 54 (undefined)	86	Controller 86 (undefined)	118	Controller 118 (undefined)
23	Controller 23 (undefined)	55	Controller 55 (undefined)	87	Controller 87 (undefined)	119	Controller 119 (undefined)
24	Controller 24 (undefined)	56	Controller 56 (undefined)	88	Controller 88 (undefined)	120	All Sound Off
25	Controller 25 (undefined)	57	Controller 57 (undefined)	89	Controller 89 (undefined)	121	Reset All Controllers
26	Controller 26 (undefined)	58	Controller 58 (undefined)	90	Controller 90 (undefined)	122	Local Control On/Off
27	Controller 27 (undefined)	59	Controller 59 (undefined)	91	Effects 1 Depth (Reverb)	123	All Notes Off
28	Controller 28 (undefined)	60	Controller 60 (undefined)	92	Effects 2 Depth (Tremolo)	124	Omni Mode Off
29	Controller 29 (undefined)	61	Controller 61 (undefined)	93	Effects 3 Depth (Chorus)	125	Omni Mode On
30	Controller 30 (undefined)	62	Controller 62 (undefined)	94	Effects 4 Depth (Celeste/Detune)	126	Poly Mode Off/ Mono Mode On
31	Controller 31 (undefined)	63	Controller 63 (undefined)	95	Effects 5 Depth (Phaser)	127	Poly Mode On/ Mono Mode Off

Tab. 6.1: MIDI-Controller overview

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7. WARRANTY

§ 1 OTHER WARRANTY RIGHTS AND NATIONAL LAW

1. This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.

2. The warranty regulations mentioned herein are applicable unless they constitute an infringement of national warranty law.

§ 2 ONLINE REGISTRATION

Please do remember to register your new BEHRINGER equipment right after your purchase by visiting www.behringer.com (alternatively www.behringer.de) and kindly read the terms and conditions of our warranty carefully.

Registering your purchase and equipment with us helps us process your repair claims quicker and more efficiently.

Thank you for your cooperation!

§ 3 WARRANTY

1. BEHRINGER (BEHRINGER International GmbH including all BEHRINGER subsidiaries listed on the enclosed page, except BEHRINGER Japan) warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year* from the original date of purchase, in accordance with the warranty regulations described below. If the product shows any defects within the specified warranty period that are not excluded from this warranty as described under § 5, BEHRINGER shall, at its discretion, either replace or repair the product using suitable new or reconditioned parts. In the case that other parts are used which constitute an improvement, BEHRINGER may, at its discretion, charge the customer for the additional cost of these parts.

2. If the warranty claim proves to be justified, the product will be returned to the user freight prepaid.

3. Warranty claims other than those indicated above are expressly excluded.

§ 4 RETURN AUTHORIZATION NUMBER

1. To obtain warranty service, the buyer (or his authorized dealer) must call BEHRINGER (see enclosed list) during normal business hours **BEFORE** returning the product. All inquiries must be accompanied by a description of the problem. BEHRINGER will then issue a return authorization number.

2. Subsequently, the product must be returned in its original shipping carton, together with the return authorization number to the address indicated by BEHRINGER.

3. Shipments without freight prepaid will not be accepted.

§ 5 WARRANTY REGULATIONS

1. Warranty services will be furnished only if the product is accompanied by a copy of the original retail dealer's invoice. Any product deemed eligible for repair or replacement under the terms of this warranty will be repaired or replaced.

2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, BEHRINGER shall not be held responsible for any cost resulting from such a modification/adaptation.

3. Free inspections and maintenance/repair work are expressly excluded from this warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of faders, crossfaders, potentiometers, keys/buttons, tubes, guitar strings, illuminants and similar parts.

4. Damages/defects caused by the following conditions are not covered by this warranty:

▲ improper handling, neglect or failure to operate the unit in compliance with the instructions given in BEHRINGER user or service manuals.

▲ connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.

▲ damages/defects caused by force majeure or any other condition that is beyond the control of BEHRINGER.

5. Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the warranty.

6. If an inspection of the product by BEHRINGER shows that the defect in question is not covered by the warranty, the inspection costs are payable by the customer.

7. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. BEHRINGER will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, BEHRINGER will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.

§ 6 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of BEHRINGER.

§ 7 CLAIM FOR DAMAGES

Failure of BEHRINGER to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of BEHRINGER exceed the invoiced value of the product.

* Customers in the European Union please contact BEHRINGER Germany Support for further details.