

## User Manual



# PRO MIXER VMX100USB

Professional 2-Channel DJ Mixer with USB/Audio Interface,  
BPM Counter and VCA Control

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## Thank you

With the BEHRINGER PRO MIXER VMX100USB, you have purchased an absolutely state-of-the-art DJ mixer. Its extensive features open the door to new and creative ways of working, while making it suitable for a variety of professional applications. At the same time, the VMX100USB is extremely easy to operate, allowing you to completely unfold your creativity.

Time waits for no one, and neither you nor we want to be left behind. That's why we invested months of research and development in creating a DJ mixer that offers up-to-date features and technology to give you a true cutting edge for your performances. Fully optimized for dance club applications and DJ systems, the VMX100USB promises full-blown DJ'ing fun—and success.

Let's be honest: nobody likes reading users' manuals. We know you want to plug in and get jammin', but please take the time to read the following instructions. We've kept them as short as possible, and it will be well worth the few minutes it takes you. Armed with a thorough understanding of the VMX100USB's features and functions, you'll be able to get the most out of this exciting product.

## EN Important Safety Instructions



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock.

Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



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.



### Caution

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.



### Caution

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.



### 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. Repairs have to be performed by qualified service personnel.

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. Use only 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. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product

should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.

## LEGAL DISCLAIMER

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## LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding MUSIC Group's Limited Warranty, please see complete details online at [music-group.com/warranty](http://music-group.com/warranty).

# 1. Introduction

- ◆ The following instructions will give you a brief run-down on the terminology and functions of the VMX100USB. After reading, please store this manual in a safe place for future reference.

## 1.1 Before you get started

Your PRO MIXER was carefully packed in the factory and the packaging is designed to protect the unit against rough handling. Nevertheless, we recommend that you carefully examine packaging and contents for any signs of physical damage which may have occurred during transit.

- ◆ If the unit is damaged, please do not return it to BEHRINGER, but notify your dealer and the shipping company immediately. Otherwise, claims for damage or replacement may not be granted. Shipping claims must be made by the consignee.
- ◆ If the unit needs to be shipped, please always use the original packaging to avoid damage.

- ◆ Never let unsupervised children play with the VMX100USB or with its packaging.
- ◆ Please dispose of all packaging materials in an environmentally-friendly fashion.

Please take care to always ensure adequate ventilation. Do not place the PRO MIXER near heating units or heat-generating devices in order to avoid overheating.



- ◆ We would like to point out that high volumes can permanently damage your sense of hearing and/or your headphone or speaker systems. Therefore, please turn the MAIN control in the MIC/MAIN section all the way to the left before turning on the mixer. And please exercise caution and common sense when setting volume levels.

## 2. Front Panel

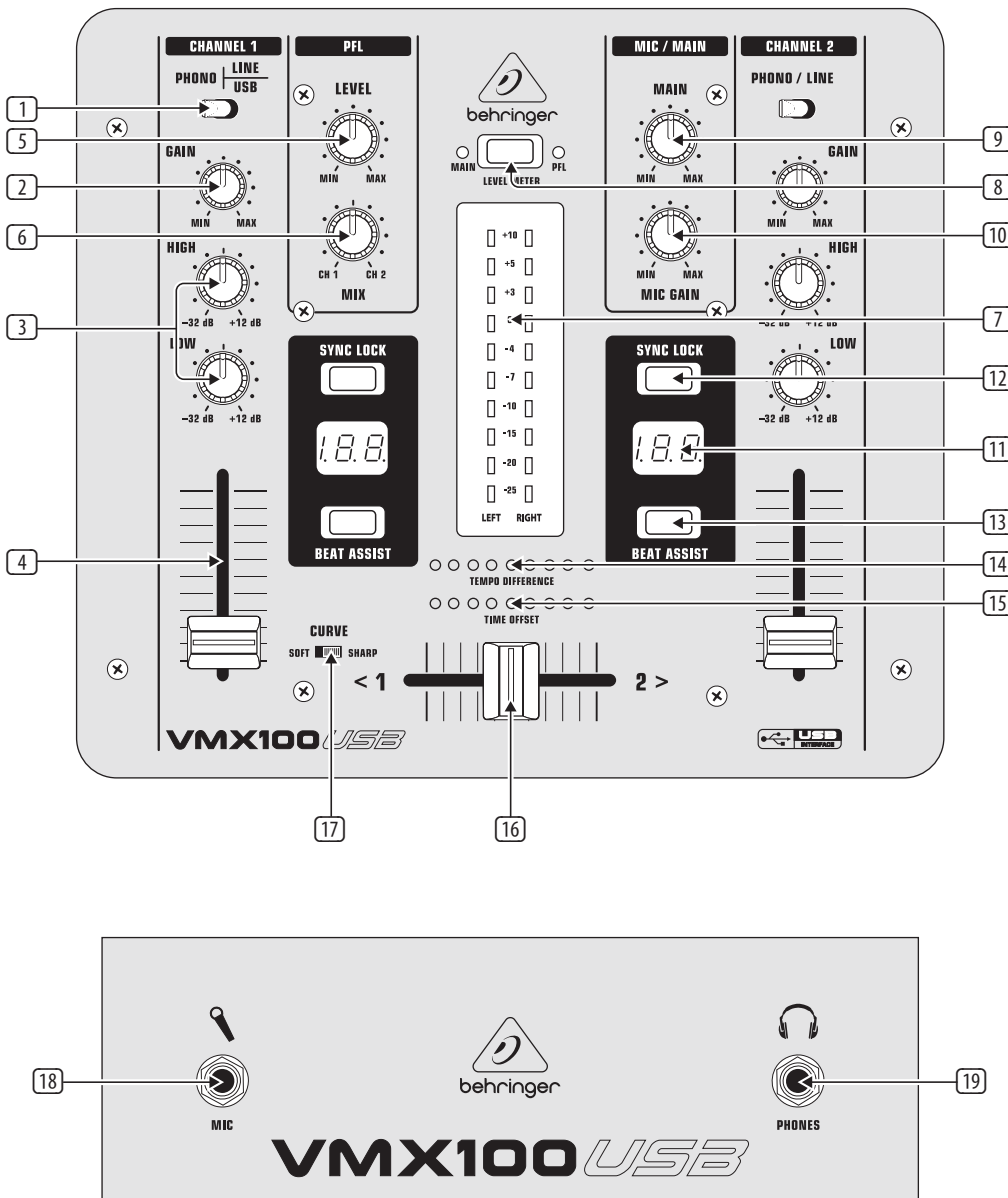


Fig. 2.1 Front view of the PRO MIXER VMX100USB

## 2.1 Input channels 1 and 2

- ❶ The **PHONO/LINE-USB** switch selects one of the input pairs on the respective channel. The “PHONO” setting (and inputs) are intended for turntables; for all other signal sources, i.e. a CD or MD player, use the “LINE” setting and inputs. Audio sent from a computer to the VMX via USB cable is routed to channel 1. This signal is mixed with the LINE input.
- ❖ **Never connect line-level equipment to the highly sensitive phono inputs! The output levels of phono cartridge systems are in the millivolt range, whereas CD and MD players, as well as tape decks, provide outputs levels in the volt range. In other words, the level of line signals is up to 100 times higher than phono output levels.**
- ❷ The **GAIN** control is used to adjust the input signal level.
- ❖ **The overall level of your signal is also effected by the EQ settings. It's a good idea to adjust the equalizer before you set the level with the GAIN control.**
- ❸ Each of the two input channels is equipped with a **2-BAND EQUALIZER** with kill characteristic. The maximum amount of attenuation (-32 dB) is much higher than the maximum boost (+12 dB), allowing entire frequency spectrums to be “removed” from a track.
- ❹ The **CHANNEL** fader adjusts the final channel volume.

## 2.2 PFL section (Pre Fader Listening)

The PFL signal is a pre-fader headphones signal, enabling you to pre-listen to a signal source without effecting the main signal.

- ❺ The **LEVEL** control determines the volume of the headphones signal.
- ❻ The **MIX** control lets you fade between channels 1 and 2.
- ❼ The **LEVEL METER** displays the level of the signal selected via the MAIN/PFL button (❸).
- ❽ The **MAIN/PFL** button allows you to route either the main or PFL signal to the display. Remember: “PFL” is your pre-listening or headphone signal and “MAIN” is the signal assigned to the outputs of the VMX100USB.
- ❖ **In PFL mode, the channel 1 signal is displayed on the left side of the LEVEL METER, and channel 2 on the right.**

## 2.3 Mic/Main section

- ❾ The **MAIN** knob controls the overall output volume.
- ❿ The **MIC LEVEL** control adjusts the volume of the microphone signal.

## 2.4 Beat counter

The PRO MIXER VMX100USB's built-in beat counter is an extremely useful feature, allowing smooth crossfades between two tracks—an important key to the success of your performance. The beat counter analyzes and displays the tempi of your tracks in BPM (Beats Per Minute). The beat counter sections of channel 1 and 2 are identical.

The tempo of the track is shown in the respective channel's Display (❶). In the case of multiple tempo changes, the display would change continuously, causing unnecessary confusion and rendering the function virtually useless. Enter the **SYNC LOCK** button (❷): with it, you can limit the range of possible tempo values within a song. Pressing this button once the counter has “caught” and displayed a realistic value will simplify things. The **BEAT ASSIST** button (❸) allows you to set the beat counter's tempo manually, similar to “tap tempo”. Pressing the button three times in time with the track will set the beat counter and its display at that tempo. The **BEAT ASSIST** and **SYNC LOCK** buttons are each equipped with an LED to show that the respective function is activated.

Once the tempo of the two tracks have been determined and locked with the **SYNC LOCK** or **BEAT ASSIST** buttons, the tempo difference between channel 1 and 2 will be depicted via the 9-segment **TEMPO DIFFERENCE** LED display (❹). It shows the degree of the tempo difference by a respective deflection to the right (channel 2 track is faster) or to the left (channel 1 track is faster). The center LED lights when the tempi are equal. The synchronization of channel 1 and 2 is shown in the **TIME OFFSET** LED display (❺) below the **TEMPO DIFFERENCE** display. When the center LED is lit, the tracks are in sync with each other. When the display moves to the left or right, the corresponding channel is running out of sync. The **TEMPO DIFFERENCE** and **TIME OFFSET** displays are only active when the tempi of both channels have been locked as explained above.

To exit the **SYNC LOCK** or **BEAT ASSIST** mode, simply press the **SYNC LOCK** key in both channels again.

## 2.5 Crossfader section

- ❶ The **CROSSFADER** is used to fade between channels 1 and 2.
- ❷ The **CURVE** switch, located on the left side of the **CROSSFADER**, enables you to select between two crossfade modes: **SOFT** and **SHARP**. In **SOFT** mode the crossfader fades between the channels in a linear, continuous manner. This mode is recommended for slower, smoother crossfades. In **SHARP** mode the crossfader takes on a more logarithmic effect, working faster towards the outer edges of the fader range. Use this mode for faster, “hard” crossfades.
- ❖ **Flipping the CURVE switch may cause a sudden change in volume. We recommend not changing this setting while a signal is present.**
- ❸ The **MIC INPUT** connector is a balanced ¼" TRS socket for microphone connection.
- ❖ **We strongly recommend the use of high-grade cables and connectors for the transmission of audio signals. Inferior quality materials cannot supply acceptable audio quality or corrosion protection.**
- ❹ The **HEADPHONES** socket allows you to connect your headphones for pre-listening (PFL signal). For best results, use headphones with an impedance rating of at least 32 Ohms.

### 3. Rear Panel

With the exception of MIC INPUT and HEADPHONES, all of the VMX100USB's audio connections are located on the rear panel and supplied as RCA connectors.

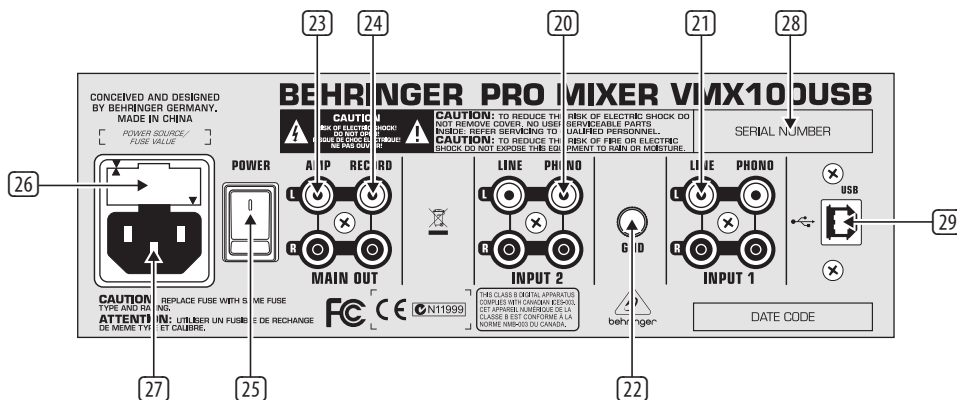


Fig 3.1: Rear view of the PRO MIXER VMX100USB

- 20 The **PHONO** inputs for channel 1 and 2 are only for turntable connection.
- 21 The **LINE** inputs may be used for connecting tape decks, CD or MD players etc.
- 22 The **GND** connection allows grounding of a turntable.
- 23 Use the **AMP** output to connect the VMX100USB to an amplifier. The level is controlled by the MAIN knob in the MIC/MAIN section.
- ◆ In order to avoid power-up thumps, which can damage your loudspeakers, please power up your amplifier last. There should be no signal present, e.g. no music playing, when you turn on your amp. In addition, we suggest that you set all volume-related controls to “zero” (down) before powering up your system. Following these precautions will save you from unpleasant and potentially dangerous surprises.
- 24 The **TAPE** output enables you to record your performance by connecting a tape deck, DAT recorder etc. Unlike the AMP output, the TAPE level is fixed, so that you have to adjust the input level on the recorder.
- 25 The **POWER ON** switch turns on the PRO MIXER.
- 26 **FUSE HOLDER/VOLTAGE SELECTOR.** Before you connect the equipment to an AC outlet, please be sure that the voltage displayed corresponds with your local AC voltage. If you should need to replace the fuse, be sure to replace it with one of the same type and value. Some units allow you to switch between 240 V and 120 V by rotating the fuse holder.
- ◆ To operate the unit at 120 V, you must install a fuse with the double ampere rating.
- 27 This is the socket for the power cable. The impulse behavior of any given amplifier circuit depends largely upon the power supply's inherent reserves. All mixers contain numerous operational amplifiers (op-amps) for processing line-level signals. Due to the restricted performance of their power supplies, many mixers show “stress symptoms” when used under extreme conditions, resulting in inferior audio quality. Thanks to its generously proportioned power supply, this will never happen to your VMX100USB: The sound will always be clear, transparent and powerful.
- 28 **SERIAL NUMBER.** Please take the time to fill out and return the warranty card within 14 days after the date of purchase. This will entitle you to all the benefits of our extended warranty. Alternatively, you can register online at [behringer.com](http://behringer.com).
- 29 The VMX has built-in USB connectivity, allowing stereo signals to be sent to and from the mixer and a computer. The audio sent from the mixer to a computer is identical to the TAPE OUT signal, which is the pre-fader MAIN signal. Audio being sent from a computer to the VMX can be selected with the Channel 1 PHONO/LINE-USB switch.

Connect a USB type B plug into the USB jack on the mixer, and the other end into a free USB port on your computer. There are no required drivers, but we recommend that PC users install the included ASIO driver. The driver can also be downloaded from [behringer.com](http://behringer.com).

## 4. Specifications

### Audio Inputs

Mic input	53 dB gain, servo-balanced
Phono inputs 1 and 2	40 dB gain @ 1 kHz, unbalanced
Line inputs 1 and 2	0 dB gain, unbalanced

### Audio Outputs

Main Out	max. +21 dBu @ +15 dBu (LINE IN)
Tape Out	typically 0 dBu
Headphones	typically 125 mW @ 1% THD

### Equalizer

Stereo Low	+12 dB/-32 dB @ 50 Hz
Stereo High	+12 dB/-32 dB @ 10 kHz

### General

Signal-to-noise ratio (S/N)	> 88 dB (Line)
Crosstalk	> 67 dB (Line)
Distortion (THD)	< 0.025%
Frequency response	20 Hz - 20 kHz
Input gain adjustment	-20 dB - +9 dB

### USB

Audio	Stereo In/Out
Connector	Type B
Converter	16-bit
Sample rate	48 kHz

### Power Supply

Mains voltages	
USA/Canada	120 V~, 60 Hz
Europe/U.K./Australia	230 V~, 50 Hz
Japan	100 V~, 50 - 60 Hz
General export model	120/230 V~, 50 - 60 Hz
Power consumption	max. 10 W
Fuse	100 - 120 V~: T 160 mA L 250 V 200 - 240 V~: T 80 mA L 250 V
Mains connection	Standard IEC receptacle

### Dimensions and Weight

Dimensions (H x W x D)	approx. 72 x 203 x 229 mm (2.8 x 8.0 x 9.0")
Weight	approx. 2 kg (4.4 lbs)

BEHRINGER is constantly striving to maintain 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.



# FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION



Responsible Party Name: **MUSIC Group Services NV Inc.**

Address: **5270 Procyon Street  
Las Vegas, NV 89118  
USA**

Phone Number: **+1 702 800 8290**

## PRO MIXER VMX100USB

complies with the FCC rules as mentioned in the following paragraph:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

### Important information:

Changes or modifications to the equipment not expressly approved by MUSIC Group can void the user's authority to use the equipment.





We Hear You