User Manual



PRO MIXER VMX200USB

Professional 2-channel ultra low-noise DJ mixer

Thank you

With the BEHRINGER PRO MIXER VMX200USB, you have purchased an absolutely state-of-the-art DJ mixer. Its extensive features, i.e. beat counter and effects loop, 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 VMX200USB 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 into creating a DJ mixer that offers up-todate features and technology to give you a true cutting edge for your performances. Fully optimized for dance club applications and DJ systems, the VMX200USB 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 VMX200USB's features and functions, you'll be able to get the most out of this exciting product.

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Important Safety Instructions



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality commercially-available speaker cables with ¼" TS 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.



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.



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.

A 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.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- B Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or groundingtype 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.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Use only attachments/accessories specified by the manufacturer.
- 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.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- 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.
- Image: The apparatus shall be connected to a MAINS socket outletwith a protective earthing connection.
- Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.





The following instructions will give you a brief run-down on the terminology and functions of the VMX200USB. 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.

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. 4

2. Front Panel



Fig. 2.1 Front view of the PRO MIXER VMX200USB

2.1 Input channels 1 and 2

- 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. A second switch on the rear panel (see 29) enables the phono input pair to be switched to line level, allowing 2 line-level units to be connected and selected via the PHONO/LINE-USB switch. 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.
- 2 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.
- Each of the two input channels is equipped with a 3-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.
- The CHANNEL fader adjusts the final channel volume. The ULTRAGLIDE fader is VCA-controlled (VCA = Voltage-Controlled Amplifier) to ensure smooth operation and long life.
- The CURVE switch underneath the channel fader enables you to select between three fade modes: SOFT, MID and SHARP. In SOFT mode the fader controls the volume in a linear, continuous manner. Run a track through on of the VMX200USB's channels and pull the fader down slowly: the volume will decrease gradually. In SHARP mode the fader takes on a more logarithmic effect, reducing the volume faster towards the lower end of the fader range, even if you move the fader smoothly. MID mode is a combination of the SOFT and SHARP modes.

2.2 Mic channel

- The mic section is equipped with a 2-BAND (HIGH and LOW) EQUALIZER with standard (not kill) characteristics, allowing you to fine-tune your microphone signal and adapt it to your overall sound.
- The *LEVEL* control adjusts the volume of the microphone signal. The *ON* switch puts you "on air" (or off).

2.3 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.

- B The *LEVEL* control determines the volume of the headphones signal.
- In the MIX control lets you fade between channels 1 and 2 when the MODE switch (see below) is set to STEREO.
- It the MODE switch is set to SPLIT, the channels are strictly separated: channel 1 will be heard on the left side, channel 2 on the right. In this mode, the MIX control has no influence on the PFL signal.
- Image: The LEVEL METER displays the level of the signal selectedvia the MAIN/PFL button.
- The *MAIN/PFL* button allows you to route either the main or the 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 VMX200USB.
- In PFL mode, the channel 1 signal is displayed on the left side of the LEVEL METER, and channel 2 on the right.

2.4 Main out section

- Image: The main out section also has a LEVEL control to adjustthe output level.
- The PRO MIXER VMX200USB is equipped with a talkover function, which works very simply: if you speak into the microphone while a track is running, the volume of the music is automatically reduced, so that your voice is always "in front". The *TALK* control allows you to determine how much the music volume is lowered (max. -24 dB).

2.5 🕮 3D surround function

The built-in XPQ effect widens the stereo image and adds life and transparency to your sound—an easy way to put a unique final polish on your music and turn your performance into an incomparable experience. The *SURROUND* control determines the intensity of the effect, which can be turned on and off via the *ON* button.

2.6 Beat counter

The PRO MIXER VMX200USB'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.

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The tempo of the track is shown in the respective channel's *DISPLAY* ^[16]. 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 ^[17]: 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 ^[18] 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 ^[19]. 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 2 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 ^[20] 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.

2.7 Crossfader section

- The CROSSFADER is used to fade between channels
 1 and 2. Like the channel faders, the crossfader section is equipped with a 45-mm VCA-controlled ULTRAGLIDE fader.
- The REVERSE switch enables you to invert the direction of the crossfader, so that you can quickly switch from channel 1 to channel 2. This effect is created by simply pushing the REVERSE switch down (*TAP*)—as soon as it is released, it returns to its original position and your crossfade setting (and your music) is at it was before. Pressed upwards, the switch locks into the reversed position (*HOLD*). To reset it, simply push it downwards.
- The CROSSFADER CURVE control in the crossfader section is similar to the CURVE switches in channels 1 and 2 (see 5). The control allows you to fade between the various crossfader curve modes.
- 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.
- 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 VMX200USB's audio connections are located on the rear panel and supplied as RCA connectors.



Fig 3.1: Rear view of the PRO MIXER VMX200USB

- The *PHONO* inputs for channel 1 and 2 are primarily intended for turntable connection (see *PHONO/LINE-USB* switch below).
- The *LINE* inputs may be used for connecting tape decks, CD or MD players etc.
- 28 The GND connection allows grounding of a turntable.
- The PHONO/LINE switch allows you to set the input sensitivity of the PHONO inputs to line level, so that they can also be used for connection of tape decks, CD or MD players etc.
- The VMX200USB is equipped with an effects loop for external effects devices. The SEND output sends the PFL signal to a connected device, e.g. a reverb unit.
- The resulting effect signal can be input to the MAIN OUT section via the RETURN input. The effect level must be adjusted on the external effects unit. The RETURN input can also be used as an extra input for connection of an additional signal source (e.g. sampler)—also in this case the level must be set on the external device.
- If an external effects unit is connected via the VMX200USB's effect loop, the selected PFL signal is sent to the unit. If you change the PFL section setting,



e.g. to pre-listen to another channel, that signal will be sent to the effects unit—the effect signal of a different track will be mixed to your MAIN OUT signal. Remember: the effects unit gets its signal from the PFL section (see 30).

- Use the AMP output to connect the VMX200USB to an amplifier. The level is controlled by the LEVEL control in the MAIN OUT 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.
- 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.
- M The POWER ON switch turns on the PRO MIXER.

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- I 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 230 V and 115 V by rotating the fuse holder.
- Note: To operate the unit at 115 V, you must install a fuse with the double ampere rating.
- In 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 guality. Thanks to its generously proportioned power supply, this will never happen to your VMX200USB: The sound will always be clear, transparent and powerful.
- 3 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 www.behringer.com.
- Image: 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 www.behringer.com.

Limited Warranty

§ 1 Warranty

1 This limited warranty is valid only if you purchased the product from a BEHRINGER authorized dealer in the country of purchase. A list of authorized dealers can be found on BEHRINGER's website www.behringer.com under "Where to Buy", or you can contact the BEHRINGER office closest to you.

2 BEHRINGER* warrants the mechanical and electronic components of this product to be free of defects in material and workmanship if used under normal operating conditions for a period of one (1) year from the original date of purchase (see the Limited Warranty terms in § 4 below), unless a longer minimum warranty period is mandated by applicable local laws. If the product shows any defects within the specified warranty period and that defect is not excluded under § 4, BEHRINGER shall, at its discretion, either replace or repair the product using suitable new or reconditioned product or parts. In case BEHRINGER decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period, i.e., one (1) year (or otherwise applicable minimum warranty period) from the date of purchase of the original product.

3 Upon validation of the warranty claim, the repaired or replacement product will be returned to the user freight prepaid by BEHRINGER.

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

PLEASE RETAIN YOUR SALES RECEIPT. IT IS YOUR PROOF OF PURCHASE COVERING YOUR LIMITED WARRANTY. THIS LIMITED WARRANTY IS VOID WITHOUT SUCH PROOF OF PURCHASE.

§ 2 Online registration

Please do remember to register your new BEHRINGER equipment right after your purchase at www.behringer.com under "Support" and kindly read the terms and conditions of our limited 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 Return authorization number

1 To obtain warranty service, please contact the retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may contact the BEHRINGER distributor for your country listed under "Support" at www.behringer.com. If your country is not listed, please check if your problem can be dealt with by our "Online Support" which may also be found under "Support" at www.behringer.com. Alternatively, please submit an online warranty claim at www.behringer.com BEFORE returning the product. All inquiries must be accompanied by a description of the problem and the serial number of the product. After verifying the product's warranty eligibility with the original sales receipt, BEHRINGER will then issue a Return Materials Authorization ("RMA") 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.

Shipments without freight prepaid will not be accepted.

§ 4 Warranty Exclusions

This limited warranty does not cover consumable parts including, but not limited to, fuses and batteries. Where applicable, BEHRINGER warrants the valves or meters contained in the product to be free from defects in material and workmanship for a period of ninety (90) days from date of purchase.

-			
AUDIO INPUTS			
Mic input	40 dB gain, servo-balanced		
Phono inputs 1 and 2	40 dB gain @ 1 kHz, unbalanced		
Line inputs 1 and 2	0 dB Gain, unbalanced		
Return	0 dB Gain, unbalanced		
AUDIO OUTPUTS			
Main Out	max. +21 dBu @ +10 dBu (Line In)		
Tape Out	typically 0 dBu		
Send	typically 0 dBu		
Headphones	typically 125mW @ 1 % T	THD	
EQUALIZER (+/-8 dB)			
Stereo Low	+12 dB/-32 dB @ 50 Hz		
Stereo Mid	+12 dB/-32 dB @ 1,2 Hz		
Stereo High	+12 dB/-32 dB @ 10 kHz		
Mic Low	+12 dB/-12 dB @ 50 Hz		
Mic High	+12 dB/-12 dB @ 10 kHz		
USB			
Audio	Stereo In/Out		
Connector	Туре В		
Converter	16-bit		
Sample rate	48 kHz		
GENERAL			
Signal-to-noise ratio (S/N)	> 86 dB (Line)		
Crosstalk	> 77 dB (Line)		
Distortion (THD)	< 0,06 %		
Frequency response	20 Hz - 20 kHz		
Input gain adjustment	-20 dB - +9 dB		
POWER SUPPLY			
AC voltage	USA/Canada	120 V ~, 60 Hz,	
	U.K./Australia	fuse T 400 mA L 240 V ~, 50 Hz,	
		fuse T 250 mA L	
	Europe	230 V ~, 50 Hz, fuse T 250 mA L	
DIMENSIONS AND WEIGHT			
Dimensions (H x W x D)	approx. 3 ½" (88 mm) x 8" (203 mm) x 11" (280 mm)		

4. Specifications

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.

approx. 2.5 kg (5 lbs. 8 oz)

Weight

2 This limited warranty does not cover the product if it has been electronically or mechanically modified in any way. 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. This limited warranty does not cover any such modification/adaptation, regardless of whether it was carried out properly or not. Under the terms of this limited warranty, BEHRINGER shall not be held responsible for any cost resulting from such a modification/adaptation.

3 This limited warranty covers only the product hardware. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the product. Any such software is provided "AS IS" unless expressly provided for in any enclosed software limited warranty.

4 This limited warranty is invalid if the factory-applied serial number has been altered or removed from the product.

5 Free inspections and maintenance/repair work are expressly excluded from this limited 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, guitar strings, illuminants and similar parts.

 Damage/defects caused by the following conditions are not covered by this limited 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.
- damage/defects caused by acts of God/Nature (accident, fire, flood, etc) or any other condition that is beyond the control of BEHRINGER.

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

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

Products which do not meet the terms of this limited warranty will be repaired exclusively at the buyer's expense. BEHRINGER or its authorized service center 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.

10 Authorized BEHRINGER dealers do not sell new products directly in online auctions. Purchases made through an online auction are on a "buyer beware" basis. Online auction confirmations or sales receipts are not accepted for warranty verification and BEHRINGER will not repair or replace any product purchased through an online auction.

§ 5 Warranty transferability

This limited warranty is extended exclusively to the original buyer (customer of authorized 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.

§ 6 Claim for damage

Subject only to the operation of mandatory applicable local laws, BEHRINGER shall have no liability to the buyer under this warranty for any consequential or indirect loss or damage of any kind. In no event shall the liability of BEHRINGER under this limited warranty exceed the invoiced value of the product.

§ 7 Limitation of liability

This limited warranty is the complete and exclusive warranty between you and BEHRINGER. It supersedes all other written or oral communications related to this product. BEHRINGER provides no other warranties for this product.

§ 8 Other warranty rights and national law

This limited warranty does not exclude or limit the buyer's statutory rights as a consumer in any way.

² The limited warranty regulations mentioned herein are applicable unless they constitute an infringement of applicable mandatory local laws.

It is warranty does not detract from the seller's obligations in regard to any lack of conformity of the product and any hidden defect.

§9 Amendment

Warranty service conditions are subject to change without notice. For the latest warranty terms and conditions and additional information regarding BEHRINGER's limited warranty, please see complete details online at www.behringer.com.

* BEHRINGER Macao Commercial Offshore Limited of Rue de Pequim No. 202-A, Macau Finance Centre 9/J, Macau, including all BEHRINGER group companies

Legal Disclaimer

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