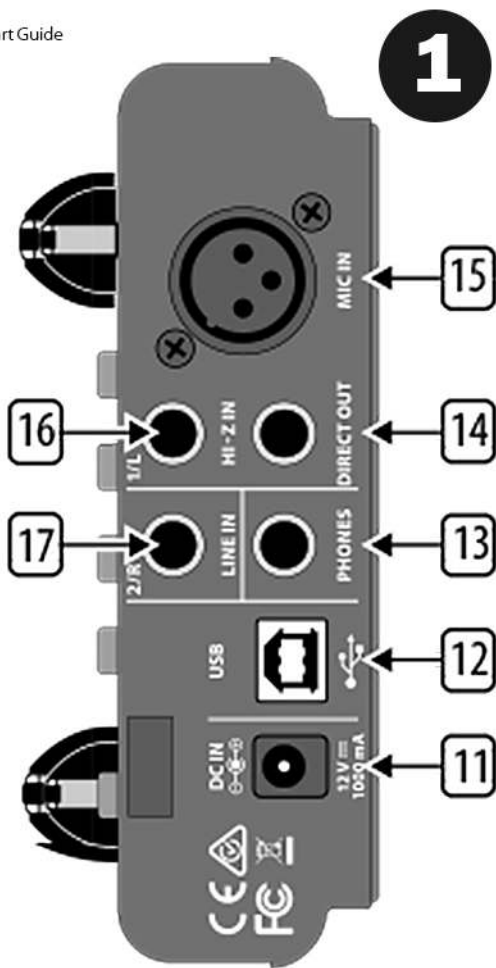
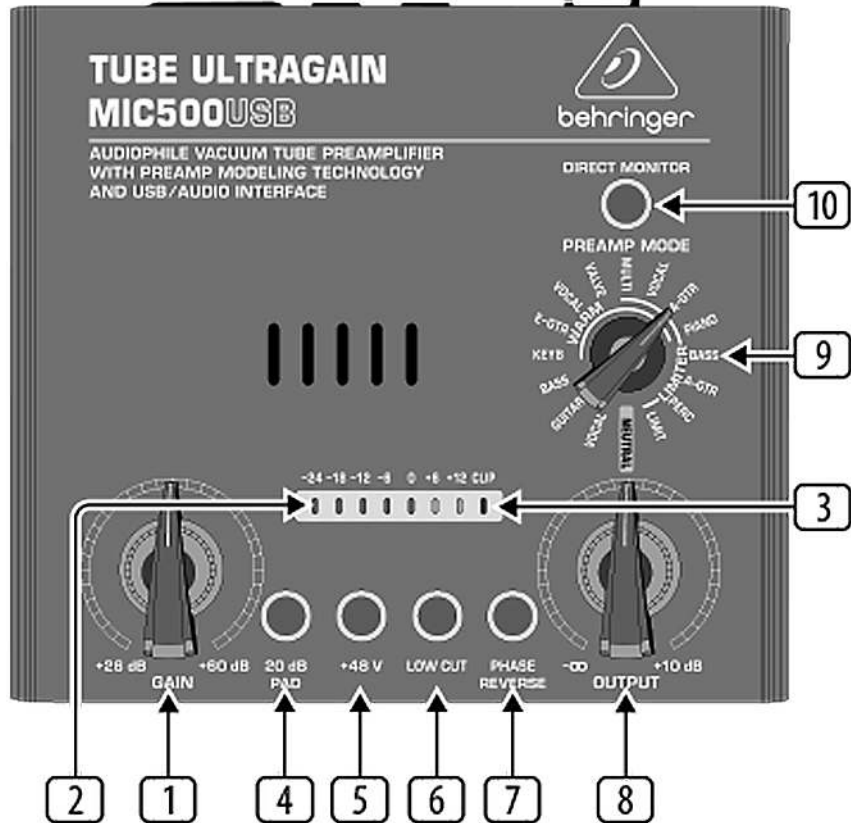


# TUBE ULTRAGAIN MIC500USB Controls



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# TUBE ULTRAGAIN MIC500USB Controls

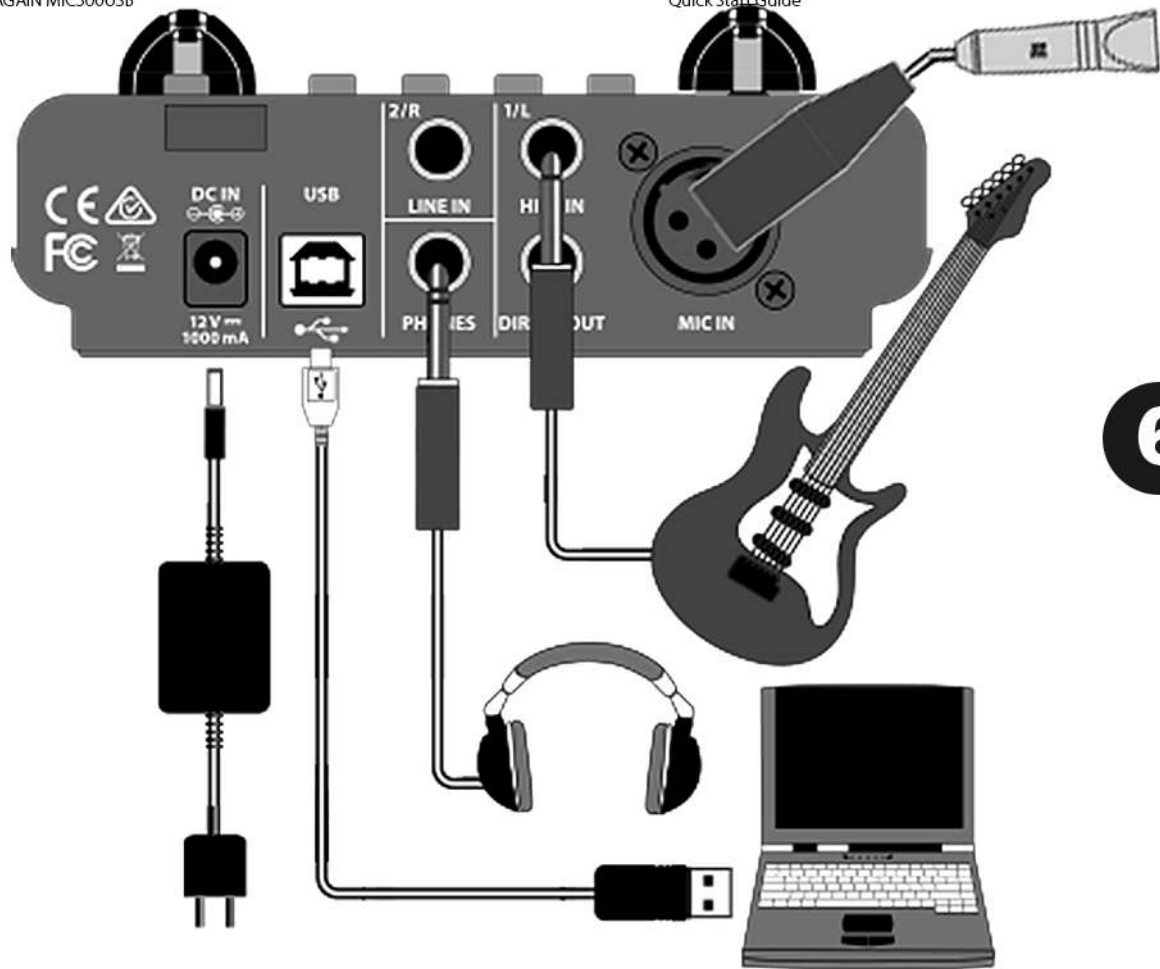
## Step 2: Controls

- The **GAIN** control allows you to control the gain from +26 to +60 dB to the input signal. This control should be set all the way to the left when connecting or disconnecting a sound source from the MIC500USB. When all connections are made, slowly start raising the gain control.
- We recommend using the **LED** meter to help adjust the gain. The LED chain displays the signal level of input channel 1/L after processing, in dB.
- Please make sure that the **CLIP LED** never lights up continuously. It should light up only at peak signals, but it should never be on all the time.
- The **20 dB PAD** switch reduces the input sensitivity of input channel 1/L by 20 dB (switch pressed). The appropriate setting depends on the equipment connected. No matter what your application is, the clip LED warns you to reduce the gain setting to avoid distortion.
- This **+48 V** switch activates the phantom power supply for the XLR input. Phantom power supply is required for operating condenser microphones. Dynamic microphones require no phantom power. Read and follow the recommendations of your microphone manufacturer, as some microphones can be damaged by phantom power.
- Press the **LOW CUT** switch to eliminate undesired subsonic noise, such as floor rumble, from input channel 1/L.
- The **PHASE REVERSE** switch reverses the input 1/L signal phase by 180°. It only affects IN 1/L (MIC or Hi-Z) signals, not IN 2/R LINE. Use this function in a multi-microphone setup if you detect phase cancellations in specific frequency bands.
- The **OUTPUT** control governs the PHONES output level within a range from -∞ to +10 dB. If the control is turned all the way to the left, there is no output signal at all. The more the control is turned to the right, the higher the output level.
- The **PREAMP MODE** rotary switch gives you a wide selection of preamp presets for input channel 1/L signals. 16 presets with different sound color from WARM over LIMITER to NEUTRAL are available.
- The **DIRECT MONITOR** switch allows you to monitor in headphones a mono mix of input channel 1/L and 2/R, merged with the stereo playback coming from USB. Set the OUTPUT control to minimum before putting on the headphones,

and then adjust as required. If the switch is not selected, then the headphones will play only the audio playback from a computer, via the USB connection. If no USB is connected (or no audio application running), you need to press the DIRECT MONITOR switch to listen to the analog inputs (stand alone mode).

- Use the **POWER SUPPLY CONNECTOR** to hook up the enclosed power supply unit.
- Connect to the **USB** port of a computer. The device is class-compliant and no drivers are required. However you can use a 3rd party ASIO driver (ASIO4ALL) to reduce audio latency while live recording on your computer. Set your digital audio workstation (DAW) to recognize the device as an audio input and output. Two channels of audio can be sent to the computer: One channel is the signal from the MIC or IN 1/L (after all the controls, gain, modes, and the tube section). The other channel is the input signal from IN 2/R (LINE). Two channels of audio can be received from a computer and monitored on the PHONES output (independent of the position of the DIRECT MONITOR switch).
- The **PHONES** output allows you to listen to the stereo signal from a computer, and (if the DIRECT MONITOR switch is on) listen to a mono mix of input channels 1/L and 2/R. Set the OUTPUT control to minimum before putting on the headphones, and then adjust as required.
- The balanced ¼" **TRS DIRECT OUTPUT** can be connected to a mixer, recording system or power amp. This is the line-level output of the IN 1/L (MIC or Hi-Z) audio signals after having passed through the preamplifier and tube section. The output contains no audio from IN 2/R LINE, or from the computer.
- Ideally, the balanced XLR **MIC IN** should be used to connect a microphone.
- The MIC500USB's **MIC** and **HI-Z** inputs should never be used simultaneously!
- The ¼" **TRS 1/L HI-Z IN** can be used to connect your electric guitar, for example. This input is wired parallel to the XLR input.
- This balanced ¼" **TRS 2/R LINE IN** can be used to connect a line-level balanced audio source. The audio passes directly to an analog to digital converter and is then sent to a computer via the USB port. The source can be monitored directly in the headphones by pressing the DIRECT MONITOR switch (adjust the OUTPUT knob to suit). Any audio coming into this input is not affected by the other controls, switches, modes, or the tube section.

## TUBE ULTRAGAIN MIC500USB Hook-up



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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.

18. Do not install in a confined space, such as a book case or similar unit.

19. Do not place naked flame sources, such as lighted candles, on the apparatus.

20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed-of at a battery collection point.

21. Use this apparatus in tropical and/or moderate climates.

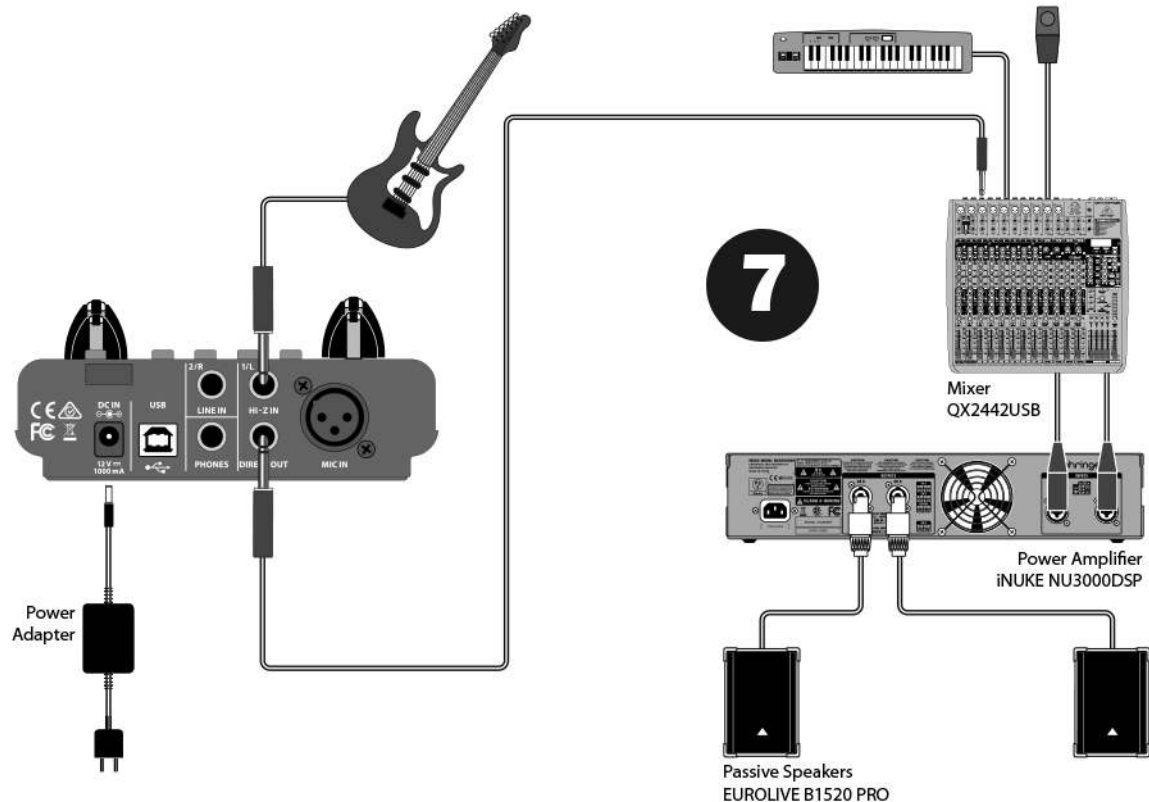
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# TUBE ULTRAGAIN MIC500USB Hook-up



## EN Specifications

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## Input

Type	1 x XLR (mic) 1 x 1/4" TRS (line) 1 x 1/4" TRS (Hi-Z) 2 channels from USB
Input impedance	Mic in: 3 k $\Omega$ balanced / 1.5 k $\Omega$ unbalanced Instrument in: 800 k $\Omega$
Maximum input level	Mic: +1 dBu / line: +22 dBu Hi-Z: +12 dBu with pad
Phantom power	+48 V switchable, mic input

## Output

Type	1 x 1/4" TRS, direct output 1 x 1/4" TRS stereo, headphone output 2 channels to USB
Output impedance	Direct out: 480 $\Omega$ balanced, 240 $\Omega$ unbalanced Headphone out: 24 $\Omega$ min
Maximum output level	+22 dBu direct output +22 dBu headphone output

## Controls

Gain	Variable (+26 dB to +60 dB)
Output	Variable (- $\infty$ to +20 dB)
Preamp mode control	Selection of various preamp models for microphone and instruments

## Switches

20 dB Pad	Level attenuation (20 dB)
+48 V	+48 V phantom power
Low cut	High-pass filter (cut-off frequency 90 Hz)
Phase reverse	Phase reverse (180°)
Direct monitor	Headphone mono mix of Mic/Hi-Z preamp out and Line in

## Indicators

Input level LEDs	-24, -18, -12, -6, 0, +6, +12, clip (dB)
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## System Data

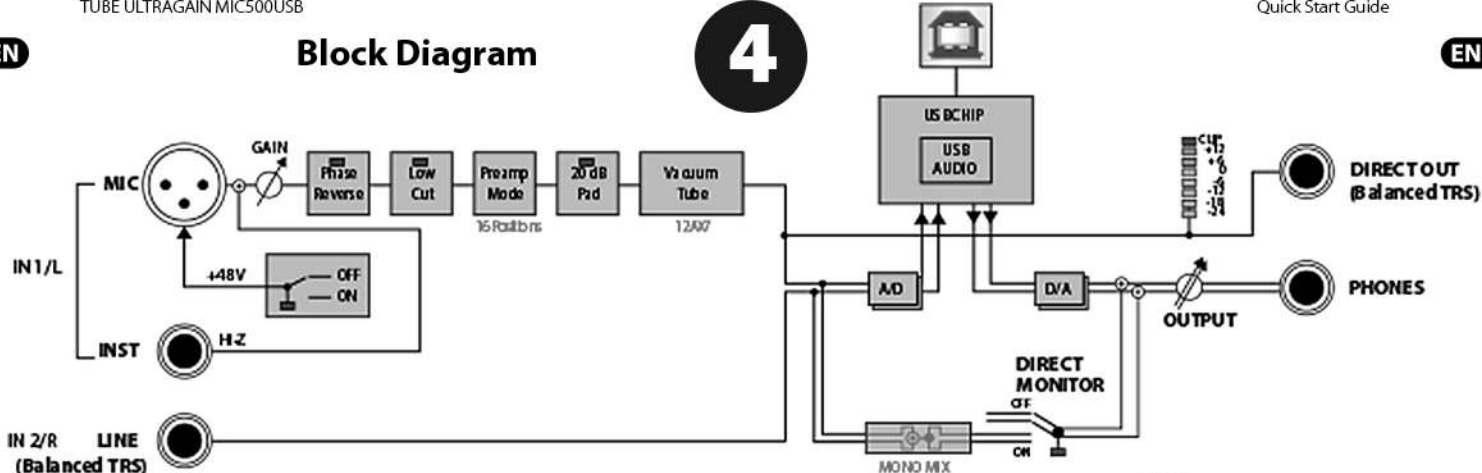
Signal-to-noise ratio	90 dB, A-weighted @ -20 dBu input level
Frequency response (headphones out, direct monitor)	10 Hz – 71 kHz (+0/-3 dB) (mic input) 10 Hz – 71 kHz (+0/-3 dB) (Hi-Z input) 10 Hz – 65 kHz (+0/-3 dB) (line input)

## Computer Bus Connectivity

Type	USB 2.0, type B
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## Block Diagram

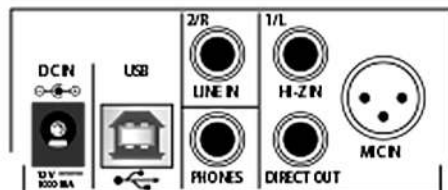
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## Power Supply / Voltage

Voltage	12V DC, 1000 mA power adapter
Power consumption	7 W
<b>Power adapter model</b>	<b>Part number</b>
EU (230 V, 50 Hz)	G81-00001-42340 or G81-00001-46363
UL (120 V, 60 Hz)	G81-00001-38882 or G81-00001-44352
UK (240 V, 50 Hz)	G81-00001-44344 or G81-00001-46368
SAA (240 V, 50 Hz)	G81-00000-71382
AR (220 V, 50 Hz)	G81-00000-71385
BR (110/220 V, 60 Hz)	G81-00000-71384

Rear View



## Dimensions / Weight

Dimensions (H x W x D)	62 x 135 x 132 mm (2.4 x 5.3 x 5.2")
Weight (without power adaptor)	0.7 kg (1.54 lbs)