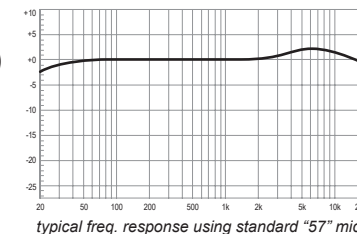
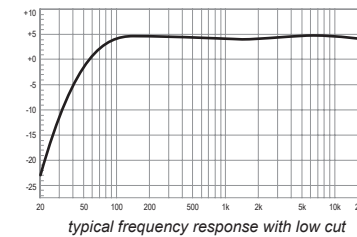
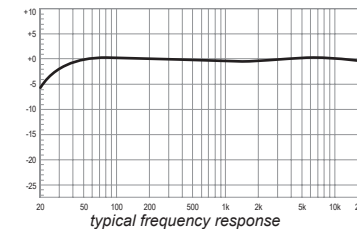


Congratulations and thank you for purchasing the z501.

This module was designed to inspire you and elevate the quality of your recordings and to make it possible to reach your sonic goals faster and with ease. We really went out of our way to bring you this refined quality and extremely clean Swedish design using only the highest quality components and we also did rigorous testing protocols on every unit to make sure it will perform perfectly in every situation, in the studio, on the road or in a mobile recording environment. Special attention was paid to ergonomics and also the visual language to make sure that there will always be effective readability and visual feedback supporting you in the most focus demanding and dynamic situations, to find the right control fast makes you work better and saves time. We are confident to say that our product is top tier. As any other of our devices, this one requires very little care and just a little bit of attention to our recommendations regarding maintenance. Please spend a couple of minutes to read this manual so you can get the most out of the product. Remember and implement these few recommendations for handling the product and you'll be able to enjoy it for many years to come.

We hope you will enjoy this product just as much as we enjoyed designing and making it

Description	1 x 1 Mic/Line Preamp. Chassis: Aluminium, Black
Inputs	1, Balanced Mic or Line Selectable Impedance 1.2K Ω Balanced, 600 Ω Unbalanced Phantom 48VDC Low Cut Filter 75Hz/12dB Line Input Level 1V (0dBV) Balanced = = 2V (+6dBV) Balanced Output, Maximum Input 8V (+15dBV) Mic Input Level 6-60dB Gain Maximum Input 40mV (-27dBV)
Outputs	1, Balanced Line Impedance 300 Ω Balanced, 150 Ω Unbalanced Line Output Level 1V (0dBV) In = 2V (+6dBV) Maximum Output 6V (15dBV)
Controls	Input Gain Control Output Level Control Output Limiter Threshold Adjust
Indicators	Input Signal Green, 25mV On Threshold Input Peak Red, -3dB Before Clip Limiter Yellow, Output Limiter Activation
Electrical	Frequency Response 20Hz - 20kHz (\pm 1dB) THD 0.06% & 1kHz Signal to Noise 105dBV
Power	Current required from +16V and -16V Power Consumption 120mA Max Dimensions: 1U in 500 series rack Weight: 376 gr 13,3 oz



FROM CLEAN TO EXTREME

LIMITED WARRANTY

Visit www.zutagroup.com for more information and to register. Warranty void if not registered within 14 days of original purchase

Meta4 AB, Datavägen 25
436 32 ASKIM, Sweden
www.zutagroup.com

Hot Swapping reduces the products lifespan. The warranty does not cover damage caused by Hot Swapping



By affixing the CE marking to a product, a manufacturer declares that the product meets all the legal requirements for CE marking and can be sold throughout the EEA.



This product complies with the (2012/19/EU) WEEE Directive. The affixed product label indicates that **you must not discard this** electrical/electronic product **in domestic household waste**.



Keep away from rain or moisture. No dripping or splashing. No objects filled with liquids should be placed on or near the product.



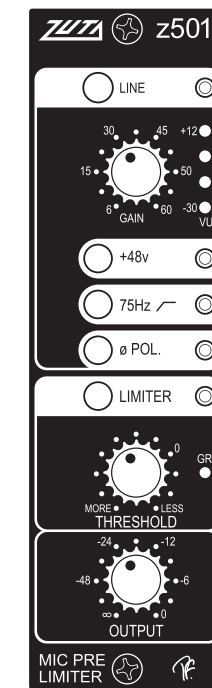
No user serviceable parts inside Refer all servicing to qualified service personnel.

SAFETY INFORMATION

- Pollution Degree 2
- Maximum Relative Humidity: <80%
- Operation temperature range: 10 °C to 35 °C
- Ordinary Protection: This equipment should not be exposed to dripping or splashing.
- Avoid placing objects filled with liquids, such as vases or glasses, on this equipment.
- Storage and transportation temperature range -25 °C to 45 °C
- Equipment suitable for continuous operation



z501 MIC PRE LIMITER

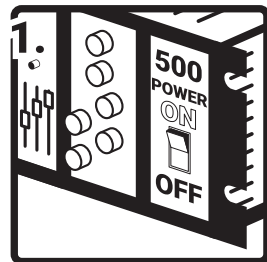


INSTALLING THE MODULE

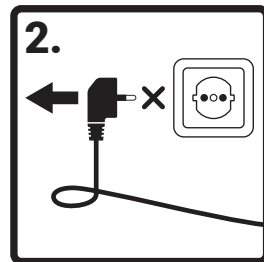
1. Power off
 2. Unplug the 500 series rack frame from it's power supply. Visually inspect the slot you intend to use to make sure it is clean and undamaged. Before touching the z501 module with your hands, make sure you electrostatically discharge yourself by touching the 500 series rack.
 3. Align the card edge connector with the card slot. Firmly and evenly push the module into place until it is positively seated in the slot.
- Use the two supplied screws to mount the front panel to the 500 series rack.
 - Plug in and turn on the power supply to the rack frame.
- The module will automatically power up.



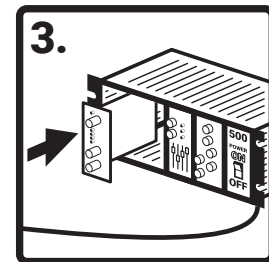
CAUTION



POWER OFF



UNPLUG



MOUNT

Legendary Ted Fletcher's MIC PRE & LIMITER with multi gain-stage design

The silky smooth top end combined with the natural and warm sound reproduction of the source material will never sound harsh with the z501. The limiter is extremely smooth but yet very fast and effective in moderate settings. But when used in extreme settings it will give you a sound with a burly character. In light settings the Limiter reacts like a soft clip to protect the signal from distorting and overloading the AD/DA converters or the tape recorders alike. Since the unit is designed with a multi gain-stage topology, every gain-stage is used to raise the gain in small amounts, leaving a tremendous amount of headroom. The result is a very smooth sounding Mic Pre with a lush and warm sound character. Perfect choice if you are looking for a natural reproduction of the source material, the result will be a very musical and warm soundscape. The z501 is especially well suited for smooth vocals. When serving as the Mic Pre choice for the overhead mics for the drum kit it can tame even harsh cymbals. When used on a string ensemble it will bring out the details without sounding brittle and thin when replayed. It actually shines in every situation and if a distorted sound character is preferred just add a distortion unit to color the sound after the z501 in the signal chain. This will give you the aggressive cut through sound when needed but with the full frequency spectra in the foundation of the recorded source, resulting in a massive sound.

LINE switch: switches between line and mic input level signal.

GAIN CONTROL Use the gain control to trim the level of the amplification of the input signal. Too little, and you won't be able to hear anything, but too much and your signal might go into clipping. Always follow the LED indicators for the signal level and make sure that you are always below the red zone, or the red zone only light up occasionally. To do fine-tuning and compress some peak values, use the limiter (explained below).

+48V Power supply for condenser microphones, turn this switch on ONLY for this type of input devices.

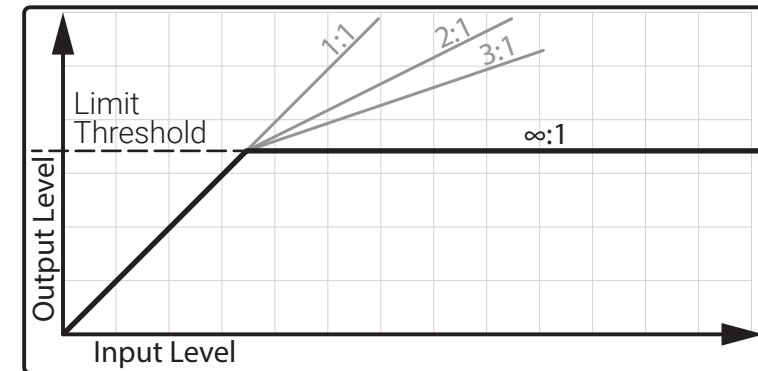
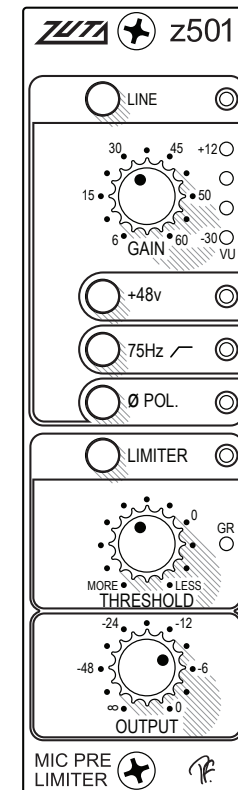
75Hz This high pass filter is excellent for taming low frequencies from a mic, but depending on your application, you can use this function on any input you want.

Ø POLARITY Regular function which rotates the signal for 180 degrees. Important – not to be confused with phase shifting, this function only reverses the poles of the output signal. For example, if you are recording a snare drum with two microphones, one on top and one under the snare drum, you must rotate the polarity on one of the microphones so the two signals don't cancel each other out.

LIMITER - a type of compressor designed for a specific purpose to limit the level of a signal. The graph below shows a limiting ratio of infinity to one, i.e. there is no gain at all above the threshold.

THRESHOLD Turning the THRESHOLD from MORE to LESS increases the value for the signal level at which the limiter will be active when the LIMITER is ON.

OUTPUT Attenuating the output level



BASIC OPERATIONS

Before connecting any type of input device, first make sure that the gain control is set to minimum. Also, make sure that the settings on the module are switched properly for the type of your input device (see functions below). Turn the output level to 12 o'clock and add gain until you can clearly hear the input signal. After this, you can use the various controls to achieve the sound you like!