# VTS MkII

## Vintage Tube Saturation

# OPERATING

# INSTRUCTIONS

Pro audio design

Thank you for choosing the **MCAudioLab VTS MkII** Tube Saturation

For further information or support, visit our website or contact us.

Enjoy recording with your new preamp.

**Table of Contents**

# 1. Introduction

The **VTS MkII** by **MCAudioLab** is a Class-A  analog tube saturation module designed to bring authentic, warm, and rich analog sound to your recordings.

By incorporating a tube circuit, the VTS MkII provides harmonic richness and depth, offering unparalleled tone-shaping flexibility.

Whether you are mixing vocals, guitars, or drums, this device adds a natural-sounding saturation that enhances both technical and creative aspects of your production.

## 2. Product Features

**Authentic Analog Saturation:** Provides vintage analog tube warmth and harmonic richness.

**Adjustable Saturation Control:** Drive, Tube Load, and Output controls for precise tonal shaping.

**LED Metering:** Dual LED meters for real-time monitoring of output and tube load levels.

**True Analog Circuitry:** No digital processing for a natural, full-bodied sound.

**500 Series Compatibility:** Ideal for both professional and home studio.

**True Bypass:** Allows for A/B comparisons or temporary signal removal.

## 3. Installation and Setup

1. Insert the module into 500-Series Lunchbox:
The VTS MkII is designed for use in a 500-series rack or lunchbox (sold separately). Ensure that the lunchbox is not powered on while inserting the module.

2. Connect Power:
The VTS MkII draws power from the 500-series rack. Ensure the rack is properly powered.
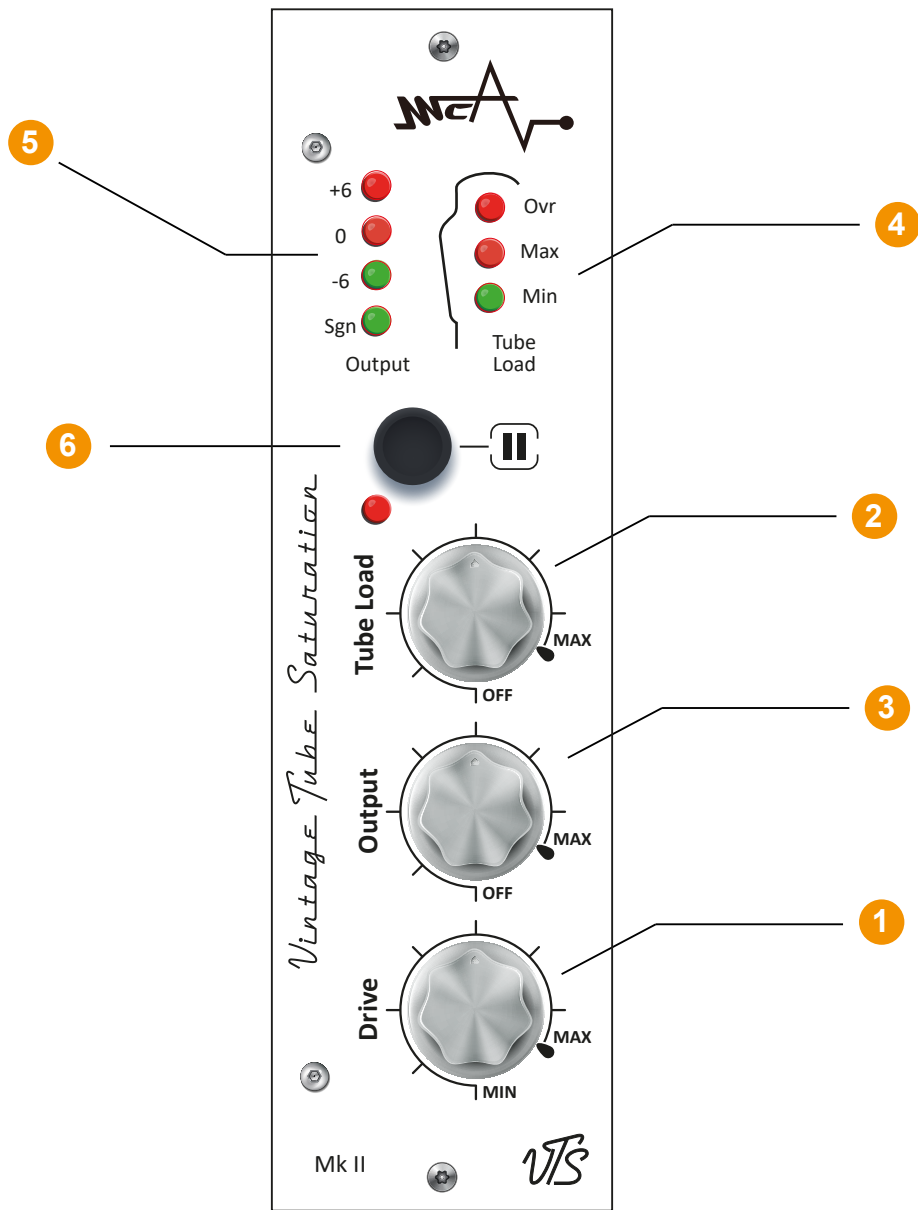
3. Initial Setup:
Once installed in the 500 Series rack, power on the rack. The VTS MKII will power up automatically.

## 4. Maintenance
The VTS MkII is built with durable components designed to withstand the rigors of both studio and live environments. To ensure optimal performance:

• Regularly Check Connections: Ensure all cables are securely connected to avoid signal loss or distortion.

• Keep Clean: Periodically dust the unit to avoid accumulation on the controls and electronic parts. Use a dry cloth to wipe the exterior. Use a soft brush to dust the circuits.

# VTS MkII Front Panel Controls and Indicators

## 5. Front Panel Controls and Indicators

The VTS MKII features three main controls that allow you to sculpt the saturation effect precisely to your needs.

**①** **Drive:** Controls the amount of input signal being fed into the tube preamp. Turning this knob clockwise increases the signal and leads to more saturation.

**②** **Tube Load:** Determines the depth of saturation. It allows you to dial in everything from subtle warmth to heavy distortion. This control directly influences the harmonic content and the overall feel of your sound.

**③** **Output:** Adjusts the final output signal level. This ensures that your mix stays balanced while maintaining the desired amount of saturation.

**④** **Tube Load Meter:** Indicates the saturation level, showing when the signal approaches preset limits.

**⑤** **Output Meter:** Displays the final output signal level.

**⑥** **True Bypass**
The VTS MKII features a True Bypass switch, which allows you to temporarily remove the unit from the signal path. This is useful for A/B testing your sound, comparing the effect with and without saturation, or troubleshooting your setup.

## 6. Setting Up the VTS MkII

Start by setting up the VTS MkII with all controls turned fully counterclockwise (minimum position). This ensures that the device begins in a neutral state.

### a. Adjusting the Drive Control
Rotate the Drive control clockwise until the **'Min'** light on the Tube Load meter lights up. This ensures that the VTS MkII operates in a linear mode without saturation.

### b. Setting the Output Level
Now, adjust the Output control to your desired level. The VTS MkII will output signal without any saturation at this stage.

## Adding Saturation

### a. Increase Drive for Saturation
To introduce saturation, follow these steps:   Rotate the Drive control clockwise further until you see the **'Max'** LED on the Tube Load meter flashing in response to volume peaks. This indicates that the VTS will add harmonic distortion (mainly second harmonic) to the signal.

### b. Adjusting Output Level
If the output volume is too high, decrease the Output control counterclockwise.
The Output level does not affect the saturation but only controls the final signal level.

c. **The 'Max' LED** indicates the maximum signal amplitude the tube can handle to produce saturation and primarily even harmonics.

d. **Control Saturation Depth**

Adjust the Tube Load control clockwise to add more saturation and control the amount of saturation. If the signal exceeds the 'Max' level (when continuing to increase the Drive control), valve overload will occur on top of the saturation. The **'Ovr'** LED on the Tube Drive meter lights up. This results in additional harmonic distortion, specifically third-order harmonics, blending with the main saturation. If the signal controlled by the Drive reaches the 'Ovr' level, the VTS MkII is used as a saturation unit and harmonic enhancer for both second and third-order harmonics.

e. **Understanding the Tube Load Control**

The Tube Load control determines the overall saturation of the VTS MkII and works in conjunction with the level set by the Drive control, as long as the input signal remains within the visible Min-Max range on the Tube Load meter. Adjusting this will give you finer control over the saturation characteristics.

## Monitoring the Output Level

Monitor the output level using the Output Meter. The 0dB level corresponds to +4dBu, which is the standard professional studio level. Levels of ±6dB indicate levels that are above or below the 0dB reference level. The **'Sgn'** LED indicates the presence of a minimum output signal.

This system allows for precise control of both saturation and overall signal levels, ensuring that you can tailor the VTS MkII's performance to your exact needs.

Adjust both the Drive and Tube Load controls while watching these two meters to fine-tune the saturation effect for consistent and optimal results.

## 7. Specifications

- Saturation Type: Class-A Analog Tube Saturation
- Inputs: Transformerless input for clear, wideband signal
- Outputs: Transformerless output for transparent signal flow
- Three Controls Only: Drive, Tube Load, Output
- Dual LED meters: for Output and Tube Load
- Bypass: True Bypass switch
- Compatibility: 500 Series rack format - 1 module/slot space
- Power Requirements: Powered by 500 Series rack

## 8. Warranty Information

This product is available both as a DIY kit and pre-assembled.
The warranty applies if the product is purchased fully assembled only. If purchased as a kit, the warranty does not cover any parts or the assembled product once it has been fully constructed by the user.
To ensure the product's proper functionality and longevity, we strongly recommend following the assembly instructions carefully.
Any damage resulting from improper assembly, misuse, or modifications will not be covered under warranty.
Please retain your proof of purchase for any warranty inquiries.

## Conclusion

The **MCAudioLab VTS MkII** is a powerful tool for any sound engineer or producer seeking to enhance their recordings with authentic analog tube saturation.

With intuitive controls, real-time LED monitoring, and high-quality analog circuitry, the VTS MkII offers a level of sound shaping that digital plugins simply cannot match.

Whether you're mixing, mastering, or performing live, the VTS MkII will bring warmth, depth, and professional-grade quality to your productions.

For any technical assistance or inquiries, please contact MCAudioLab support.