

M I C R O T U B E S 9 0 0

OWNER'S MANUAL



# DESCRIPTION

The Microtubes 900™ is a 900W amplifier equipped with an **all analog preamplifier** and a Class D Power Module. The first thing you will notice from the Microtubes 900 is its unusual control layout:

On the right side you'll find the **clean section** which is the foundation of your tone.

It features **Gain** and **Master** controls an active **4 band EQ**. Along with **Low** and **Treble** controls you will find **Low Mids** and **Hi Mids** control, each knob with their own **3-way frequency switch**.

On the left side you will find the **Microtubes® Engine** which acts as an extra channel that can bring your clean tone to the next level by helping you **cut through the mix** while adding anything from subtle tube break up, harmonics and natural compression to obliterating distortion.

The **Microtubes Engine™** can be engaged via the front panel or our own digitally controlled Intelligent Footswitch™ (jack on rear panel). Besides engaging the Microtubes circuitry you can hold the actuator to **Mute** the amplifier.

We equipped the power module with some unique control over the power output and minimum speaker loads:

The standard mode will deliver **900W RMS at 4 Ω/500W at 8Ω**. If you select the **2Ω Mode** via the **rear panel switch** the amplifier will deliver **900W at 2Ω/500W at 4Ω and 350W at 8Ω**.

This feature allows for maximum power adaptability. It doesn't matter the cabinet configuration or power requirements, the Microtubes 900 will deliver accordingly.

# FEATURES

## FRONT PANEL

**INPUT** : Connect your instrument via a standard ¼" mono cable.

**PASSIVE/ACTIVE** : Switch from passive to active mode. Some active basses can have a hotter signal output which can make the amp distort early (feel free to use it on Passive mode even with active basses if such additional distortion is desired).

**MICROTUBES**: Turns on or off the Microtubes Engine™ to add natural compression, organic harmonic enhancement, and saturation ranging from mild overdrive to high gain bass rage.

The Microtubes Engine operates before the clean section (you can therefore use the 4 Band Active EQ for additional tone shaping in addition to the Tone knob described below).

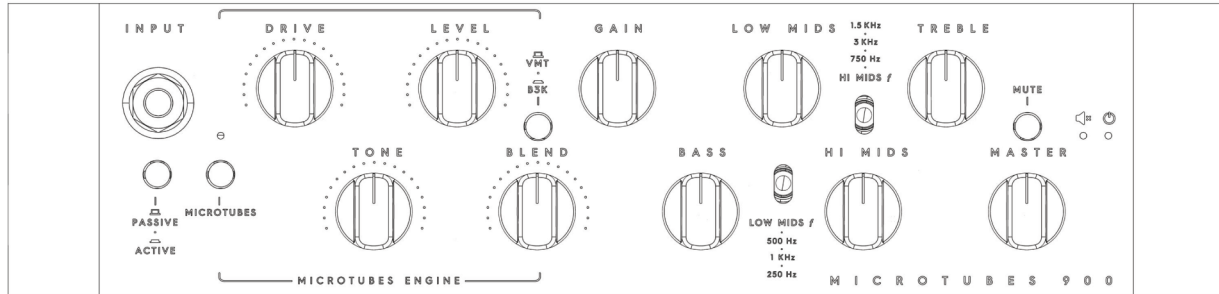
**DRIVE** : Controls the amount of distortion that the Microtubes Engine will deliver. It will change from a soft warm overdrive to a massive modern distorted tone.

**TONE** : Controls the high harmonic content of the Microtubes Engine via a variable low pass filter: crank it up for additional attack and definition or dim it down for a smoother sound. This is handy if running bright clean EQ settings or cabinets with tweeters.

**LEVEL** : Controls the Microtubes Engine's output volume.

**BLEND** : Mixes between the Clean signal and the Distortion signal (Microtubes Engine).

**B3K/VMT** : Selects between two overdrive voicings: B3K mode will deliver an aggressive, percussive sound while the VMT will bring up the mids for a warmer, more neutral character.



**GAIN** : Changes the volume of the signal the Active 4 Band EQ. You can set it low prior to ensuring the cleanest operation possible or set it higher for more aggressive growl.

**BASS** : +12dB at 80Hz. Changes the low content of the signal.

**LOW MIDS** : +12dB of the selected frequency via the LOW MIDS *f* switch (described below). Changes the lower mid content of the signal.

**LOW MIDS *f*** : Use this switch to change the frequency of the low mid band from 250Hz, 500Hz or 1kHz.

**HI MIDS** : +12dB of the selected frequency via the HI MIDS *f* switch (described below). Changes the higher mid content of the signal.

**HI MIDS *f*** : Use this switch to change the frequency of the hi mid band from 750Hz, 1.5kHz and 3kHz.

**TREBLE** : +12dB at 5kHz. Changes the high content of the signal.

**MASTER** : Controls the overall volume of the amplifier.

**MUTE** : Mutes the amplifier.

# FEATURES

## BACK PANEL

**SPEAKER OUTPUT** : Connects the amplifier to your cabinet. This Speakon combo jack allows for either Speakon or ¼" speaker cable operation.

**WARNING:** Do not use an instrument cable with this jack. Using an instrument cable can damage your amplifier.

**MIN - LOAD** : Press when using a 2Ω load. You can use this control to lower the output if your 4Ω cabinet is not able to handle more than 500W (you can also get 350W with an 8Ω cabinet in this configuration).

**PRE AMP OUT** : This output connects the preamp to a different power amp.

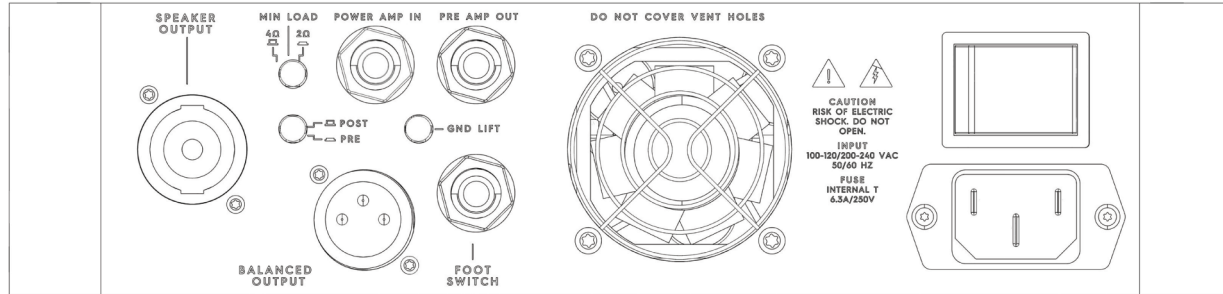
**POWER AMP IN** : Use this input to connect a different preamp to the power amp. (master volume will be disabled)

**POST - PRE** : Selects what signal will be delivered by the DI output. Selecting PRE, sends a clean copy of your input bass signal. Selecting POST delivers a signal processed by the preamp of the amp (gain, distortion, eq, master, etc.)

**GROUND LIFT** : Lifts the ground of the DI XLR output. If a ground noise in you DI signal is experienced, try changing the setting of this control.

**BALANCED OUTPUT:** Connects the Microtubes 900 preamplifier to balanced equipment (mic preamp, console, recorder, compressor, audio interface, etc.) via a standard XLR jack.

**FOOTSWITCH** : The Footswitch allows you to remotely engage and disengage the Microtubes Engine. Hold the footswitch to Mute the amplifier. The VMT/B3K push button will remain operational with the Intelligent Footswitch plugged in.



Use a regular mono instrument cable to connect the amplifier to the footswitch.

Remove the cable from the footswitch jack in the rear panel if you want to control the amp from the front panel.

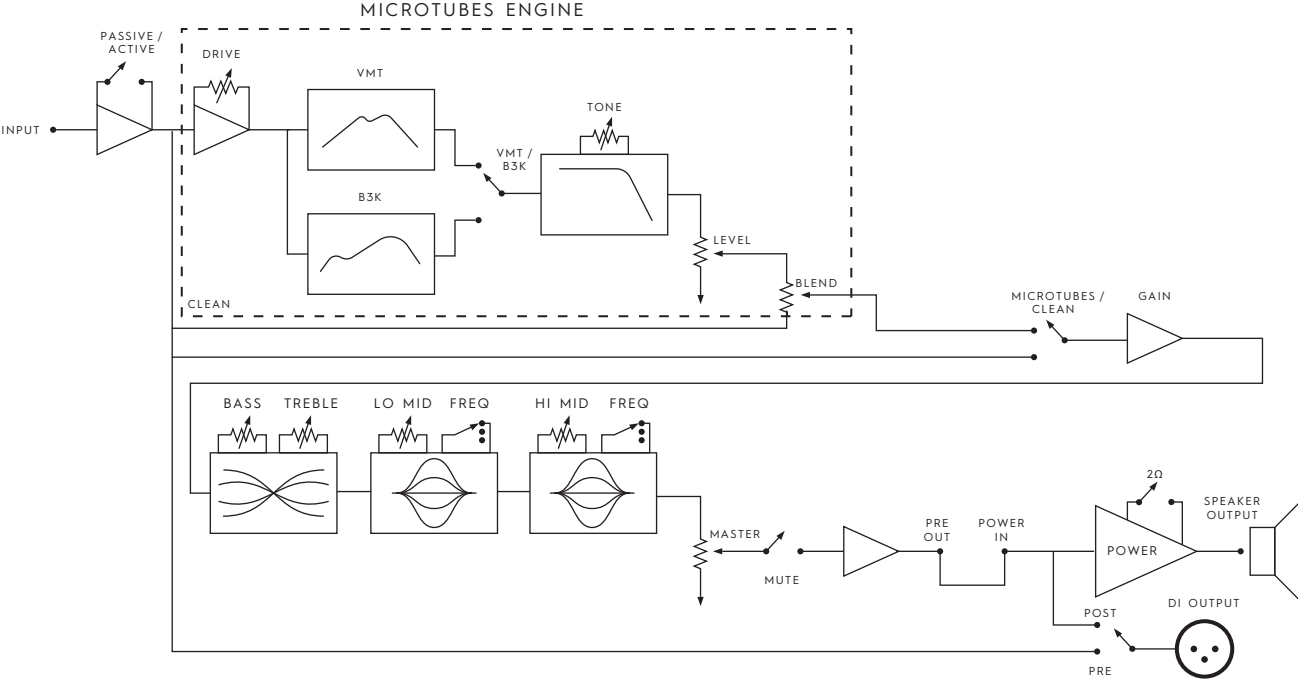
The Microtubes 900 will only work with our proprietary Intelligent Footswitch (included with the amplifier). A generic Footswitch will not work with the Microtubes 900.

**FAN** : The fan forces air inside out the amp to help the heatsink system to cool the amp. Be sure to never cover the vent holes.

**AC SOCKET** : Connects the power cord to the amplifier.

**AC POWER ON/OFF** : Turns the amplifier on or off.

# BLOCK DIAGRAM





# WARNING

- Do not open the amp. No user serviceable parts inside the amplifier.
- Make sure the voltage selector switch on the left side panel is set properly (115V/230V) before plugging the amplifier on the AC outlet.
- Never use the amp at a high moisture environment or near liquids.
- The Microtubes 900 can deliver more than 115 db of power. Exposure to this level of sound can damage your hearing. Use proper hearing protection if you will be exposed.
- The Microtubes 900 can deliver more than 900 Watts. Be sure that your speaker cabinet is able to handle that power. You can reduce the output of the amp by selecting the 2Ω mode on the rear panel (by the Speakon output jack).
- Do not cover the vent holes. The Fan and vent holes are part of the cooling system of the amp. Covering the vent holes can produce overheating of the power amp damaging it.
- Do not use an instrument cable as speaker cable. An Instrument cables are not design to deliver power signals going from the amplifier to the speaker.

For more information, frequently asked questions (FAQ) and troubleshooting, please visit: <http://www.darkglass.com/microtubes900-faq>

## EMC / EMI

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 residential installations.

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. 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 to 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.

# WARRANTY AND SPECS

## WARRANTY

Please register for your warranty at <http://mypedal.darkglass.com>. The Microtubes 900 is under warranty to the original owner for a period of three years against manufacturing defects.

If you experience a problem with the unit, please contact [support@darkglass.com](mailto:support@darkglass.com) to receive a Return Authorization number or for information on the nearest authorized repair center. A copy of your original receipt must be included with all warranty repairs. You are responsible for all shipping charges. The unit must be shipped to us freight prepaid. We will return the unit freight collect. Darkglass Electronics Oy is not responsible for shipping damage either to or from our service center. Claims must be filed with the carrier.

Repairs outside the EU please contact your local dealer or distributor for your country's specific warranty period and repair procedures. Darkglass, Microtubes and Microtubes Engine are registered trademarks of Darkglass Electronics Oy, Hernesaarenranta 3L, 00150 Helsinki, Finland.

## SPECIFICATIONS

**Input Impedance:**  $1M\Omega$

**Minimum Load Impedance:**  $4\Omega$  ( $2\Omega$  in  $2\Omega$  mode)

**Maximum Power Output:** 900 Watts RMS @  $4\Omega$  (1kHz full blast 2 min max) 20%THD (450 Watts RMS @  $8\Omega$ )

**Power Amp Input Impedance:**  $1M\Omega$

**Power Amp Input Level:** 1500 mV RMS 1200mV RMS at 2 ohm mode

**Pre-Amp Output Impedance:**  $1k\Omega$

**Pre-Amp Output Level:** 1200 mV

**Maximum Power Consumption:** approx. 700VA

**Forced-air cooled**

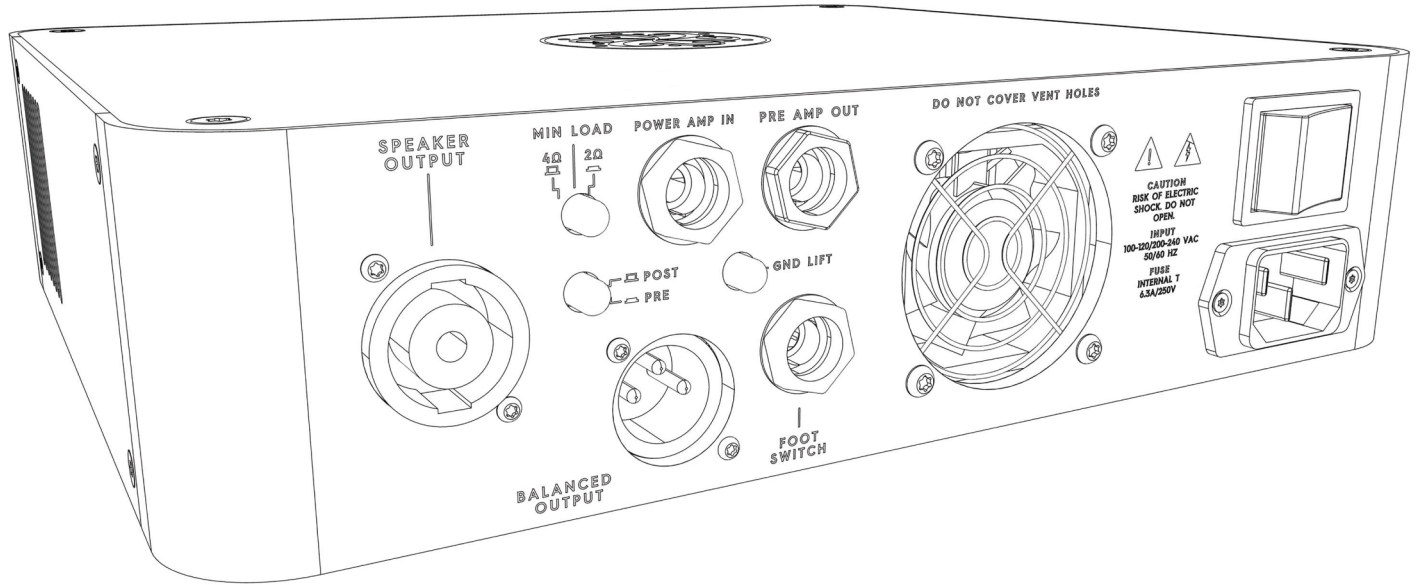
**AC Input Power:** 100-250 VAC (Via selector switch on left side panel).

**Cycles:** 50/60 Hz

**Dimensions:** 26.7cm l x 7cm h 25.5 w (10.5"l x 2.75" h x 10"w)

**Weight:** 2.9Kg (6.39Lbs)

**Built and Engineered in Helsinki, Finland.**





# Darkglass Electronics

*Your vision, our gear.*

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