



ANIMAL FACTORY
AMPLIFICATION

UNDERSTANDING AND CARING FOR YOUR ANIMAL OROBAS II EURORACK MODULE

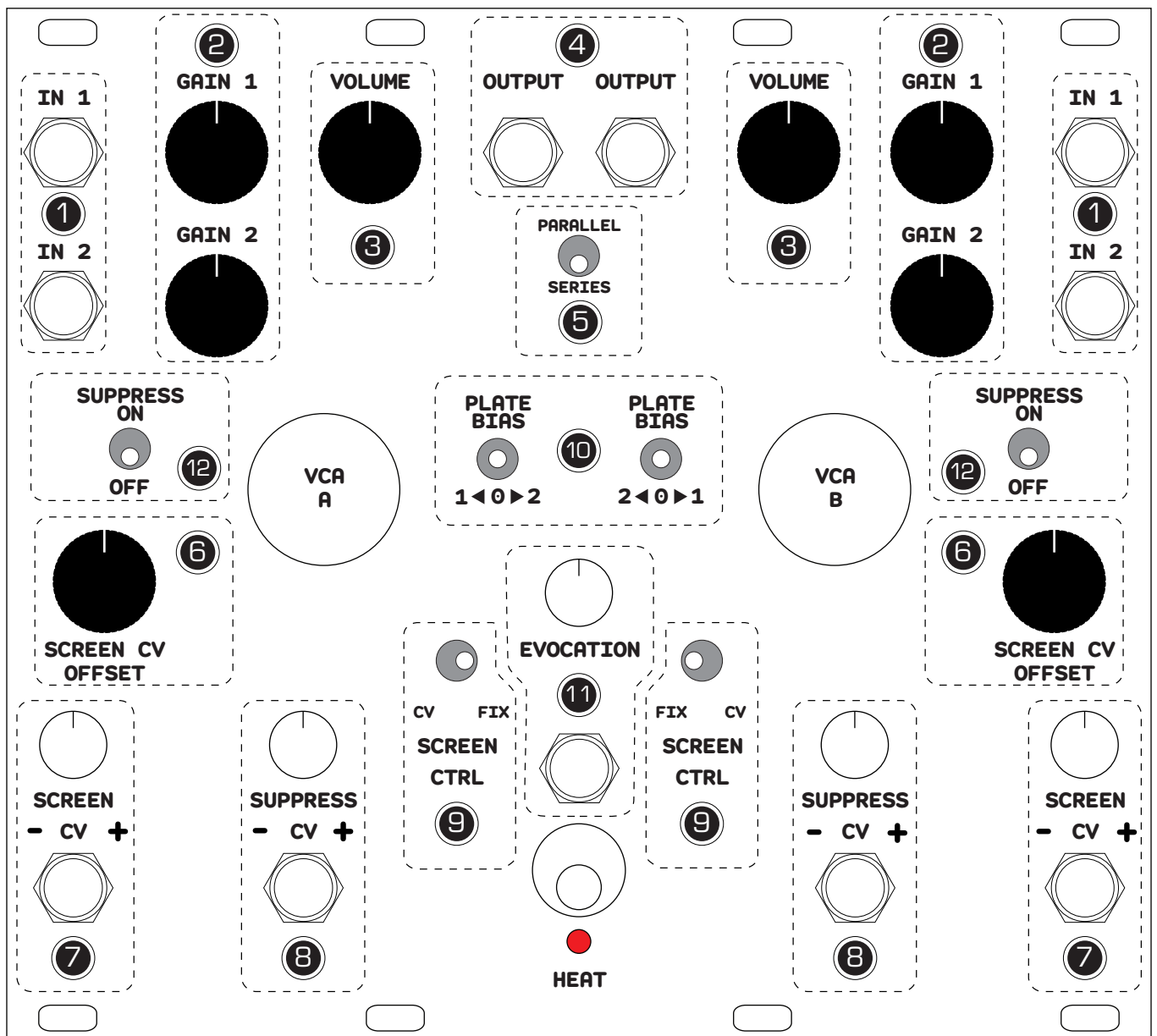
USER MANUAL

Congratulations!

You are now the proud human to this EF86 edition Orobas II module, a dual vacuum tube VCA/saturator like no other.

This module is the culmination of a journey we began around eight years ago, and is truly a labour of love.

While we can understand you would like to plug in and begin summoning sonic entities from other realms, we urge you to read this manual thoroughly and carefully to get the most out of it.



① **IN 1** and **IN 2** on each channel receive the audio signal. Please keep in mind that the Orobas is AC coupled and cannot process CV signals.

② **GAIN 1** and **GAIN 2** on each channel control the amount of audio signal that is sent to the VCA from **IN 1** and **IN 2** respectively.

③ **VOLUME** controls the final output signal of the corresponding VCA.

④ **OUTPUTS** can get **VERY** loud with maximum voltage swings well beyond 25V p-p for a 10V signal. Keep in mind that each channels output is phase-inverted relative to its inputs

⑤ In **PARALLEL** mode, **IN 1** of the **LEFT** channel is sent to **IN 1** on the **RIGHT** channel *only* if nothing is connected to the latter! This does not work in reverse.

In **SERIES** mode, the output of the **LEFT** channel is sent to **IN 1** (which goes to **GAIN 1**) on the **RIGHT** channel *only* if nothing is connected to the latter.

⑥ The **SCREEN CV OFFSET** sets the base level for the gain when the **SCREEN CTRL** switch (9) for that channel is set to **CV** mode . Even at the maximum setting, this will be quieter than the **FIX** setting.

⑦ **SCREEN CV** controls the pentode screen grid and thus the gain and distortion of each VCA. Adding **SCREEN CV** will increase gain and distortion. Use **SCREEN CV** carefully in tandem with input **GAIN** controls to dial in cleaner sounds.

⑧ **SUPPRESS CV** controls the suppressor grid. If you add a positive **CV**, it will have little to no effect. Adding a negative **CV** will decrease the gain or shut off the VCA. It is also receptive to audio signals and can be used as an additional input and may have strange interactions with **IN 1** and **IN 2**, causing faux-octave effects.

⑨ **SCREEN CTRL** will switch the behavior of the module between acting as a VCA on the **CV** setting and as a mixer/saturator on **FIXED**.

⑩ **PLATE BIAS** affects the headroom but will introduce very loud and unfortunately unavoidable pops into the sound. This is not intended to be a performance tool, but more of a “set and forget” switch.

⑪ **EVOCATION** is a **CV** controlled feedback loop that sends the output of the right channel to **IN 1** of the left channel.

It is extremely sensitive in **SERIES** mode, and you may need to attenuate **CV** signals.

In **PARALLEL** mode it is useful for cross modulations, adding harmonics, waveshaping and folding and other such niceties.

It only responds to unipolar **CV**. It is extremely interactive, and all other controls will affect it.

⑫ **SUPPRESS SWITCH** turns the suppress circuit (8) on or off.

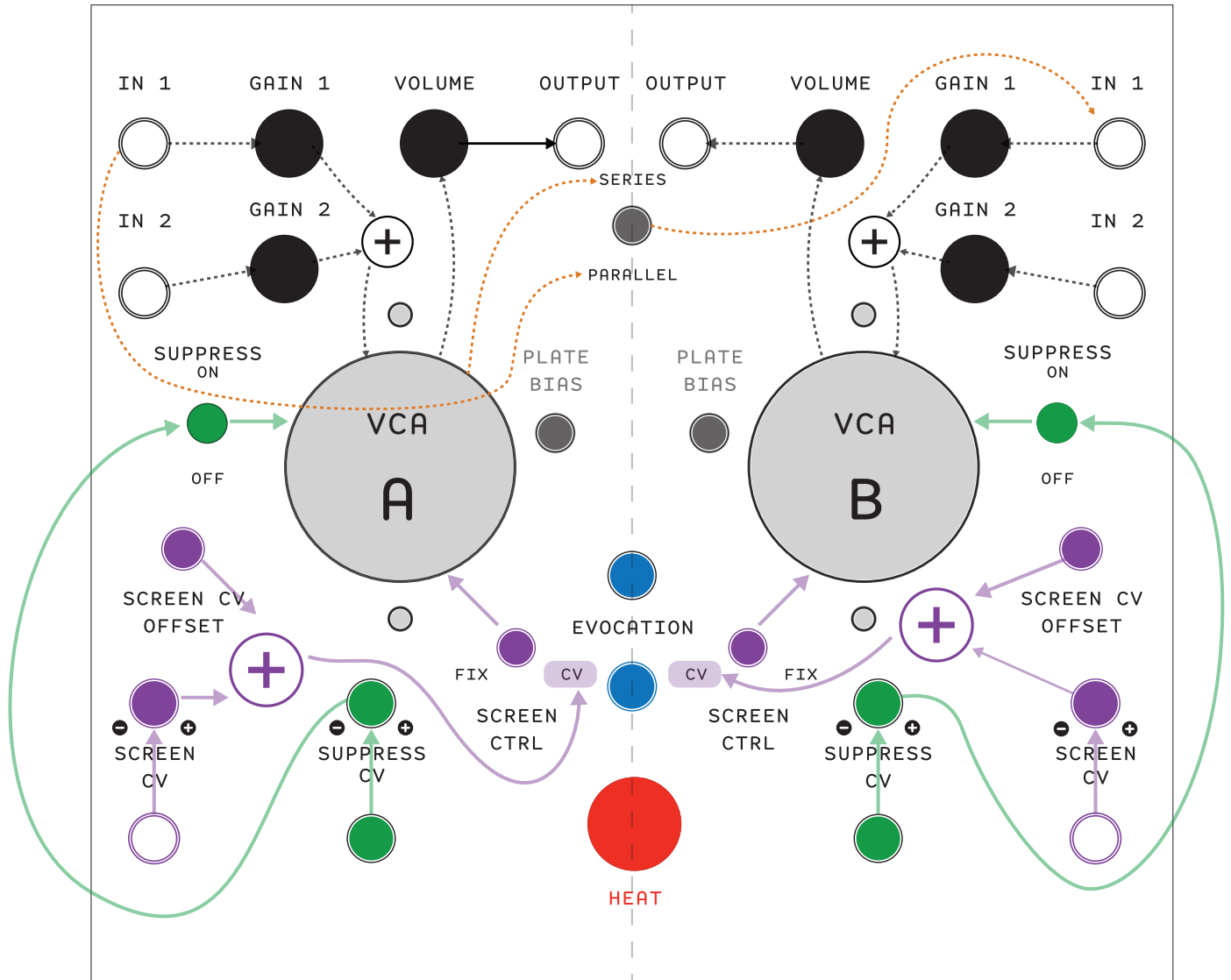


In order for the module to work at all, the provided 12V adapter **MUST** be connected to **HEAT!!!**

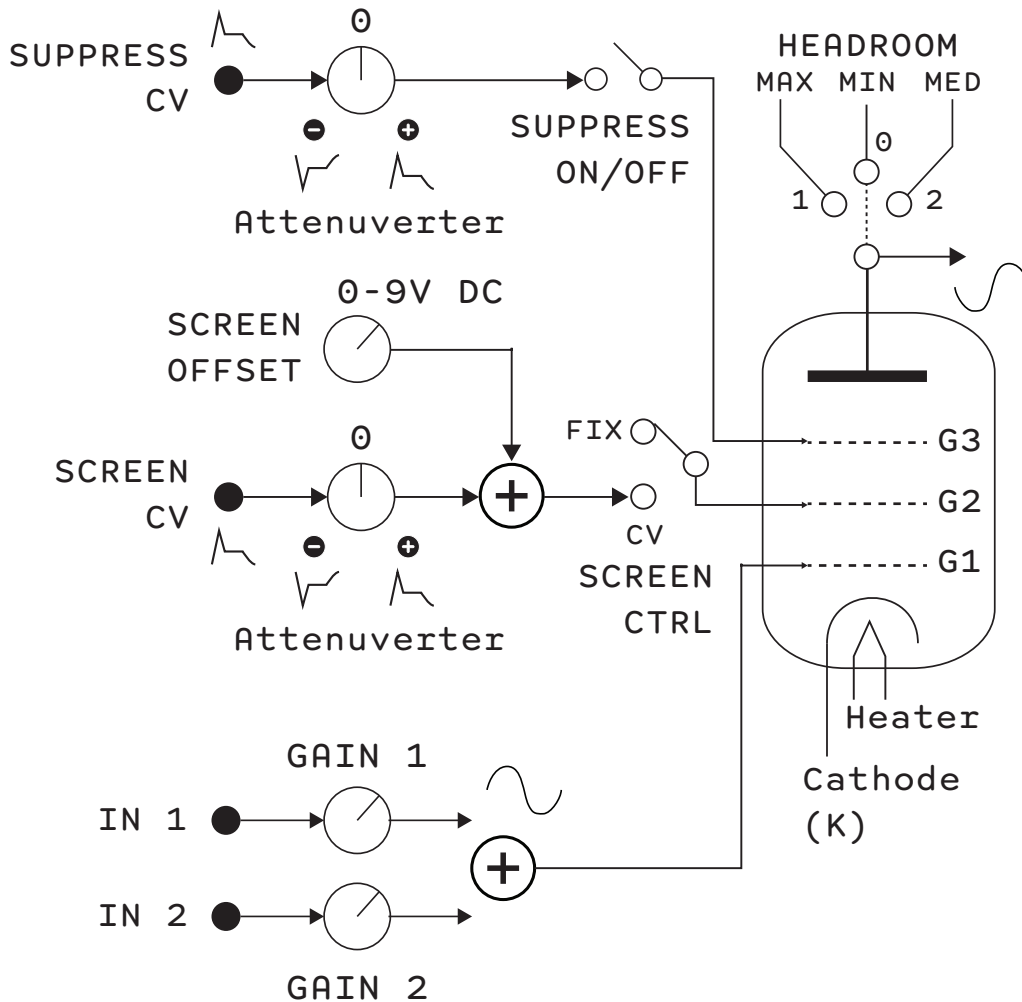
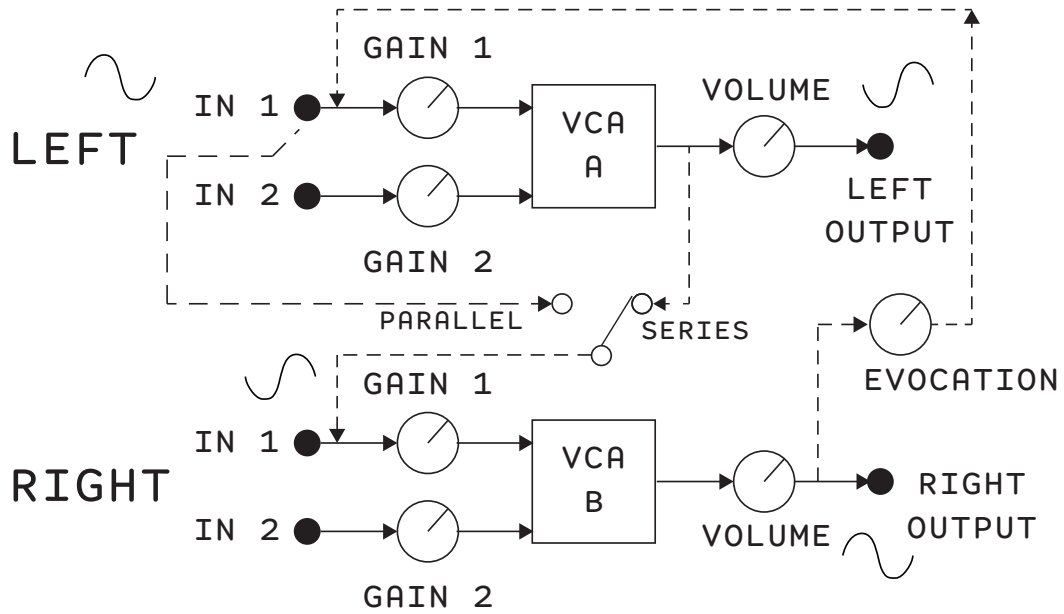
CHANNEL ROUTING

LEFT CHANNEL

RIGHT CHANNEL



SIGNAL FLOW



1. Insert a jumper on the QUAD header at the back of the module (with the module turned off) to use it as a dual output, 4 channel mono mixer/VCA.

2. Plug in the stereo output from a mixer send to the Orobas to get some parallel distortion processing going. (Note that the outputs are phase inverted!)

3. You may note that the SCREEN CV and SUPPRESS CV potentiometers sometimes light up with no CV connected - interestingly, the output of each channel is connected internally to the jack of these CV inputs for additional mayhem. This is only really audible on very high gain, some amount of feedback and utter devotion.

1. As the tubes are operated at approximately 65V and low current, the module is generally designed to be electrically safe. Nevertheless, we clearly recommend that rack power be turned off, the module be disconnected and no LEDs be visibly illuminated before handling the module.

2. Do not eat the Orobas.

3. Do not shower with the module.

4. Your cat may take offence to the sounds made by Orobas. This is normal. If you do not have a cat, please adopt a cat.

5. While it is safe to leave the heater adapter plugged in, it will be beneficial for tube life if you don't.

ENVIRONMENT

Do not dispose of any part of this module in household waste.

Electronics must be disposed of safely according to the electronics disposal norms in your country.

This module was constructed using lead-free solder and observes compliance with the RoHS directive.

All parts of our packaging are designed to use minimal or no plastic.

Please re-use the box and the velvet bag to keep other things safe.

TECHNICAL SPECIFICATIONS

Power Draw:
+12V – 146mA
– 12V – 94mA

Size: 28HP
Depth: 34mm



UPDATES TO THIS MANUAL / DEMO VIDEOS / PATCH NOTES

Follow this playlist for unboxing, demos and tips and tricks:

<https://youtube.com/playlist?list=PLlhXTShHrpcvyZaCtuQvie9ONz3B0iyVL>

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