



- Tilt EQ section to shape tonal balance with bypass switch
- 2 types of Saturation to add harmonics or coloration, saturation mode switch
- main output volume control, 5-dot LED VU meter (calibrated to +4 dBu)
- 3.5 mm stereo headphone output with independent volume control
- 3.5 mm inputs (L normalled to R), 1/4" TRS balanced outputs
- internal Mid/Side processing for Tilt EQ and Saturation circuits to keep a depth of stereo image

## ooots manual

01/07/19

Thank you for choosing knob.farm ooots!

### More than just an output module.

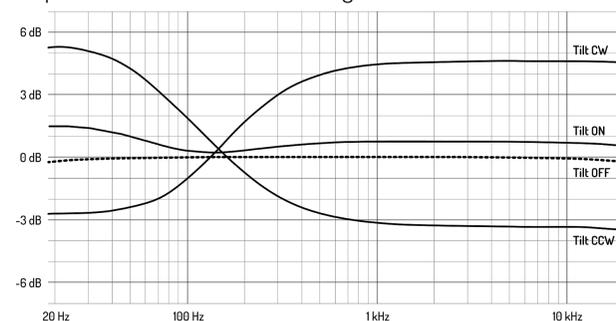
Ooots is a high quality creative master output module. While most Eurorack output modules only provide signal attenuation, Ooots expands the possibilities by adding Tilt EQ and Saturation sections with two different types of saturation. With the Tilt EQ section you can shape a tonal balance of your sound. By choosing one of the two types of Saturation circuit, you can gradually enrich your sound with harmonics or add colouring to your mix. Both of these circuits pass through the internal Mid/Side matrix, which is found in top-class mastering studio devices. Mid/Side processing allows to keep the depth and correctness of the stereo image while adding saturation and keep the frequencies balance in the channels during equalization. 5-dot LED VU meter helps you to monitor signal and indicates signal peaks. Built in headphone amplifier with independent volume control can drive almost any pair of headphones. With all this functionality and superb sound qualities, Ooots remains compact in size and is ideal for use in studio tasks and live performances.

### Installation

Turn off your modular system before installing. Connect 10-pin cable header to module power connector red stripe down (-12V is labeled with white flat line on the PCB). Connect another 16-pin cable header to power distribution board according to instructions on your case power supply. Double check! Mount module to the rails in your case and fixate it with the screws. Turn on your modular, you are ready to use ooots.

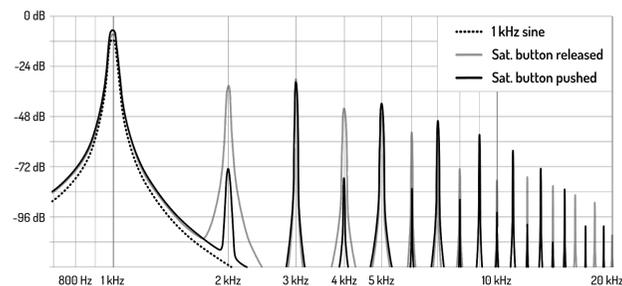
### Usage

**tilt** – Ooots is equipped with the Tilt style equalizer. With this versatile tone-shaping tool you can balance the sound with just one knob, focusing the mix at mid and high frequencies or shift to the low-end side. The filter of the tilt is shaped so when one end of the frequency spectrum goes down, the other end goes up, thus cutting frequencies in one end while boosting in the other.



The center frequency of this shape is fixed at around 150 Hz. The gain of the filter goes up to 4.5dB on each side. Turning the tilt knob fully clockwise boosts the high frequency and cuts the low frequency. Turning the tilt knob fully counter-clockwise boosts the low and cuts the high frequencies. You can completely bypass this circuit by switching off the corresponding button.

**sat** – analog saturation adds warmth and richness, enhance the loudness, makes sound fatter and even more musical. Turning the knob generates additional harmonics (THD) from subtle to ample distortion. There are two types of saturation with different sound character. When the sat. button is released – 2nd-order harmonics are generated, adding tube style coloration, warmth and fullness to sound. When the sat. button is pressed – mostly 3rd-order harmonics are generated, adding a tape style saturation, tightness and subtle compression to your mix. By turning knob fully counter-clockwise no additional harmonics are generated.



**volume** – this large knob controls the level of the main output and the 5-dot VU meter gives a visual indication and helps to monitor signal and peaks. The VU meter is calibrated to +4 dBu line level scale, red clipping light will inform you that the signal is above the recommended level.

**headphones** – ooots is equipped with a headphone amplifier with independent volume control, which you can also use as an additional auxiliary output. Depending on sensitivity and impedance of the headphones you use, the output signal can be very loud. CAUTION: turn up the volume smoothly, avoid listening at high volume to prevent hearing damage.

**inputs & outputs** – 3.5 mm inputs are AC-coupled, any DC offset is removed. Left input is normalled to right, so you can use mono signal and utilize only left input socket. Please note: since the signal pass through internal Mid/Side matrix using the ooots in dual mono mode (two different program material in different channels) crosstalks of the channels will occur when using saturation. 1/4" TRS sockets are the main balanced line level outputs.

### Module specifications

Width: 6 hp. Depth: 40 mm including power connector. Current draw max: +12V: 120 mA, -12V: 70mA . Reverse power protection.

**Warranty:** knob.farm gives full two year warranty from the date of purchase. The warranty does not apply to modules with visible signs of wear and tear as well as to damages due to abusive working conditions, wrong power supply voltages or improper shipping and handling.



web: <https://knob.farm>

support: [support@knob.farm](mailto:support@knob.farm)

social: [facebook.com/knob.farm](https://facebook.com/knob.farm)

all rights reserved. copyright © 2019 knob.farm

Support knob.farm by rating the module on [modulargrid.com](https://modulargrid.com)