# ХОН





### ХОН

- 3 Limited Warranty
- 4 Installation
- 5 Introduction/Overview
- 6 Panel Controls and Inputs/Outputs

### **Limited Warranty**

Make Noise warrants this product to be free of defects in materials or construction for a period of one year from the date of purchase (proof of purchase/invoice required).

Malfunction resulting from wrong power supply voltages, backwards or reversed eurorack bus board cable connection, abuse of the product, removing knobs, changing face plates, or any other causes determined by Make Noise to be the fault of the user are not covered by this warranty, and normal service rates will apply.

During the warranty period, any defective products will be repaired or replaced, at the option of Make Noise, on a return-to-Make Noise basis with the customer paying the transit cost to Make Noise.

Make Noise implies and accepts no responsibility for harm to person or apparatus caused through operation of this product.

Please contact technical@makenoisemusic.com with any questions, Return To Manufacturer Authorization, or any needs & comments.

http://www.makenoisemusic.com



**About This Manual:** Written by Walker Farrell and Tony Rolando Photos by Lewis Dahm

XOH Hardware Design: Tony Rolando

Special Thanks to the Beta Testers!

## **Electrocution hazard!**

Always turn the Eurorack case off and unplug the power cord before plugging or unplugging any Eurorack bus board connection cable. **Do not touch any electrical terminals when attaching any Eurorack bus board cable.** 

The Make Noise XOH is an electronic music module requiring 40mA of +12VDC and 40mA of -12VDC regulated voltage and a properly formatted distribution receptacle to operate. It is designed to be used within the Eurorack format modular synthesizer system.

Go to http://www.makenoisemusic.com/ for examples of Eurorack Systems and Cases.

To install, find necessary space in your Eurorack synthesizer case, confirm proper installation of included eurorack bus board connector cable on backside of module (see picture below), plug the bus board connector cable into the Eurorack style bus board, minding the polarity so that the RED stripe on the cable is oriented to the NEGATIVE 12 Volt line on both the module and the bus board. On the Make Noise 6U or 3U Busboard, the NEGATIVE 12 Volt line is indicated by the white stripe.



Please refer to your case manufacturers' specifications for location of the Negative supply.

#### **Overview**

XOH (miX Out Headphone) is a stereo mixer, headphone amplifier and output interfacing module for your modular synthesizer. We designed it to work well within our forthcoming stereophonic modular systems which feature our stereo modules such as the QPAS, X-PAN, Morphagene, Erbe Verb and Mimeophon.

XOH consists of two stereo input channels, Channel A and Channel B, each with independent Level control; and two identical stereo outputs containing the mix of ChA and ChB: a set of independent line level unity gain left and right outputs, and a TRS headphone output with level control.

The Left input of each stereo input channel is normalled to the Right input for Mono use. Just patch your MONO signal to the Left input and leave the Right input un-patched and you will get the signal patched in the Left channel in both the Left and Right outputs.

The ChA and ChB Level controls allow you to control the blend of two Stereo (or Mono) audio signals from your modular system. They allow XOH function as a simple 2 channel stereo mixer.

The Left and Right Line outputs are optimized for use as Line Level outputs so you do not need to worry about overdriving your Line Level destinations with the hot Modular Level signals typical of a euro-rack modular system. Typical Line Level inputs are the Line inputs on an audio interface, sampler, mixing console or digital recorder.

The Headphone Output Level sets the volume of the TRS Headphone/ Line output. It is clean up to about (3:00), where it will start to overload and clip. The OVL (overload) indicator lights to indicate this clipping. The Headphone Output is a Tip Ring Sleeve jack that provides a Stereo output on a single jack. This output uses the same high quality driver circuit found in the CV Bus and Rosie modules. This output is capable of driving loads typical of Headphones, long cables runs to a mixer, and just about any Line Level Input destination. It is also OK to use this output as a Mono Output by using a Tip Sleeve jack.



#### **XOH Panel Controls and Inputs/Outputs**

- 1. ChA Left Input. Expects modular level (~10V peak-to-peak) signal.
- 2. ChA Right Input. Normalled to ChA Left Input. Expects modular level (~10V peak-to-peak) signal.
- 3. ChA Level Control.
- 4. ChB Left Input. Expects modular level (~10V peak-to-peak) signal.
- 5. ChB Right Input. Normalled to ChB Left Input. Expects modular level (~10V peak-to-peak) signal.
- 6. ChB Level Control.
- 7. Left Line Level Output.
- 8. Right Line Level Output.
- 9. Headphone Output Level Control.
- 10. Headphone Output. Stereo headphone level output on TRS jack.