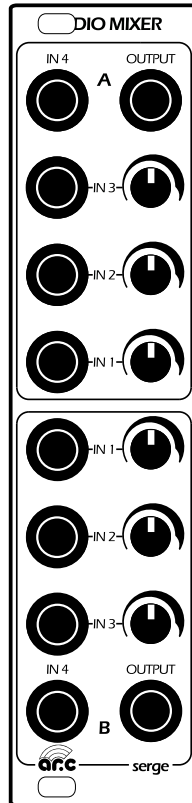# ar.c

SERGE AUDIO MIXER

⚠ Power Warning

This instrument is intended for use in the eurorack modular system. Please use all precautions and correct orientation when connecting this module to your enclosure and power supply.

Due to the extremely varied nature of the eurorack ecosystem, no warranty can be extended for damage caused by faulty or overloaded power supplies, incorrect orientation of power connections, etc. For more information on the eurorack technical standards, please visit the Dopefer website at: www.doepfer.de

⚙ Specifications

Module Width:..6hp

Mounting Depth:...................................38mm

Current Draw:
    +12V..10mA
    -12V..5mA
    +5V..0mA

Manufactured by ARC in the
United States of America
(c)2017 ARC www.analogueresearch.com

🔍 Introduction

ARC's Serge Audio Mixer (SAM) is an officially licensed eurorack implementation of the original mixer module designed by Serge Tcherepnin for his Serge Modular Music System in the 1970s.

The SAM module is available in two versions with slightly differing electronics. The SAM MC version is built using LM741 (metal can) op-amps. The SAM RC is built with an RC4136 quad op-amp. The output of the MC version is 180 degrees shifted from the input. This can lead to phase cancellation in some applications. The RC versions uses an additional op-amp stage to shift the output another 180 degrees, keeping the inputs and output in phase. Historically the LM741 was the original Serge mixer op-amp, later redesigned to use an RC4136 to address potential phase cancellation. ARC offers both to give the synthesist a palette to choose from.

🔍 Audio Mixer Submodule

The SAM features two identical 4:1 audio signal mixer submodules.

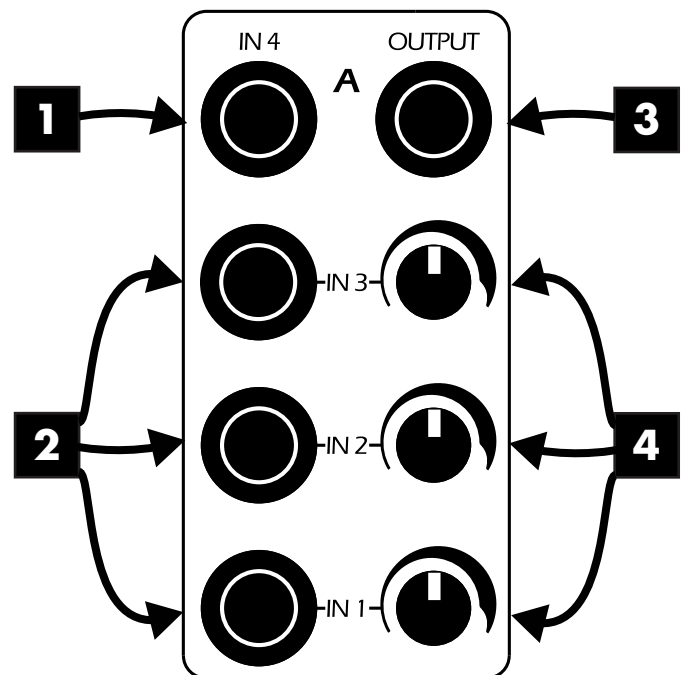## **1** Unattenuated Audio Input

Unity gain AC coupled input.

2 Audio Input

Audio signal input with related attenuator.

3 Output

Mixed audio signal output.

4 Attenuator

The potentiometers attenuate the related input signal.

❓ Hints & Tips

The submodules can function independently as two 4:1 mixers, or the output of channel A can be patched to an input of channel B to create a 7:1 mixer as needed.