

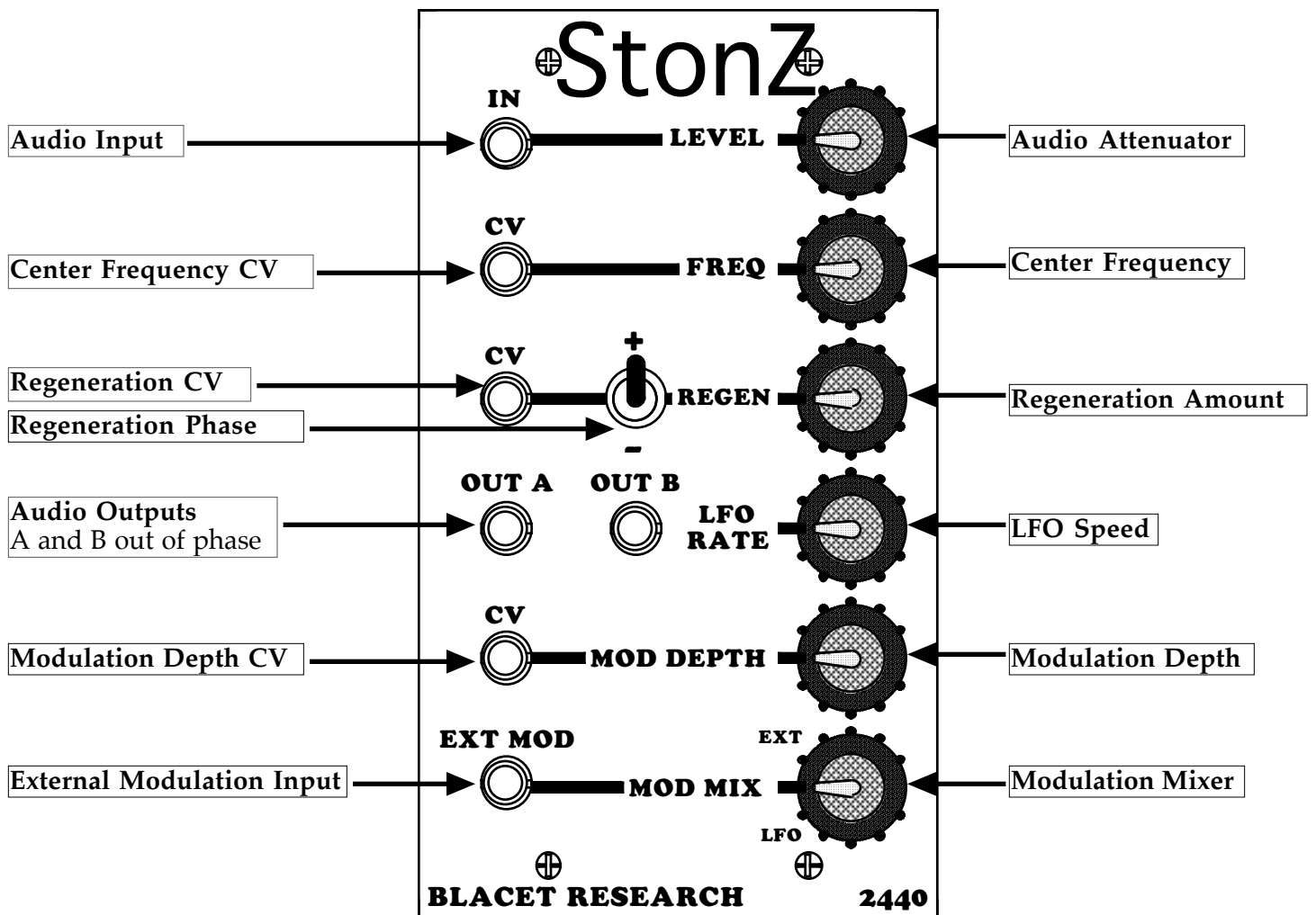
# Introduction

The StonZ 2440 is a classic four stage phase shifter, enhanced with voltage controlled functions such as center frequency, regeneration and modulation depth. A wide range low frequency oscillator (LFO) is built in. External modulation may be applied to the Frequency jack or the Ext Mod jack, which is mixable with the internal LFO.

Regeneration is phase switchable, allowing a "classic" sound as well as an extra bright phasing effect. The regeneration control allows self oscillation at maximum rotation.

Two out of phase outputs allow stereo imaging with the classic "moving sound" effect.

This design offers lower noise and larger signal handling than traditional circuitry.



## Controls and Operation

**IN Jack, LEVEL Pot:** Audio input and attenuator pot. Maximum gain is unity.

**FREQ CV Jack and Pot:** Sets the center frequency of the phasing effect. Typically, use 0-10V. Negative voltages will cancel the effect (unless biased with the pot) but allow the unprocessed signal through the module.

**Regeneration CV Jack, Phase Switch (+/-), and Pot:** Controls the “bite” or regeneration of the phaser. As the pot is rotated more toward FCW, the amplitude of the phaser output will increase and self oscillation will occur. Adjust the Level pot or Regen pot if unwanted distortion occurs.

The phase switch controls the feedback phase in the regeneration circuit. A “+” setting results in a common classic phasing effect, while a “-” setting selects a bright sounding effect.

**OUT A, OUT B Jacks:** The StonZ has two out of phase audio outputs for stereo use.

**MOD DEPTH CV Jack and Pot:** The modulation depth can be voltage controlled or set by the pot. The source of modulation voltage is the output of the Modulation Mixer. See below.

**EXT MOD Jack and Pot:** External modulation can be applied to this jack. Typically, use 0-10V. Negative voltages may cancel the effect but allow the unprocessed signal through the module. Note that modulation voltages are internally mixed with the Frequency voltage.

The pot mixes the internal LFO and external modulation. With the pot FCCW, only the LFO will modulate the phaser. With the pot at FCW, only the external modulation will be present.

**Power Input Connector J8:** This PCB connector requires a source of regulated +15Vdc and -15Vdc power to run the module. Use a Blacet PS500 supply or the equivalent.

**Connections to J8 should be made only when the power supply is OFF and the connector must be positioned correctly on the pins.** As using the wrong supply can cause damage to the unit, please contact us if you have any questions! Do not attempt to use “wall warts” to power the module.

## Safety Information

The use of any audio equipment requires some care to avoid potential damage to the hearing of the operator or their audience. Even short term exposure to high audio levels can lead to temporary hearing loss and ringing in the ears. Repeated exposure can eventually lead to permanent hearing problems.

Your ears have to last you all your life; take a few precautions to keep them happy so that you can enjoy music even when you are older!

- When using mid to high volume levels, be aware that the ear will lose sensitivity at some point, causing you to turn up the volume to compensate. In an extended session, this can happen repeatedly, until the volume is quite high and potentially dangerous.
- Break up sessions into half hour segments; avoid “all night” jams.
- Take breaks often and choose a maximum volume setting for your amp or mixer.
- Try using very, very low volumes as a break.
- Music can sound quite different at low levels; use low volumes for initial setup and routine practice, saving high levels for final mixes.
- If your music starts to sound “painful”, it’s most likely causing hearing damage as well!

## Specifications

Front Panel Size: 5.25 x 3" W

Module Depth: 5"

Phase Shift Stages: 4

CV Range: 0-10V

Signal Level: 10V p-p typ

Power: +/-15 Vdc @+65/-57 mA