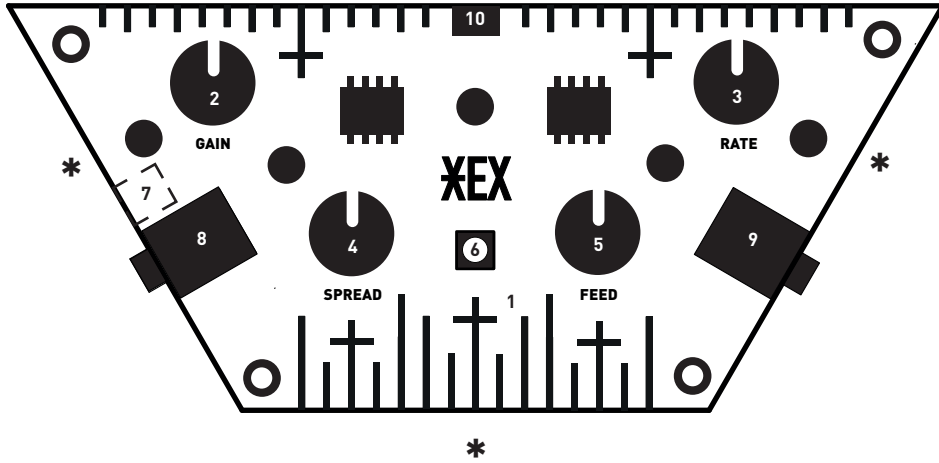




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FEATURES

- 1. Touch pads | 2. Gain | 3. Rate | 4. Spread | 5. Feed | 6. Push button | 7. Header pins | 8. 3,5 mm input | 9. 3,5 mm output | 10. USB C power port |

Put HEX next to a wall, mark dots where the * show. Hammer the 3 nails into the marked spots and voila, you've built yourself an improvised HEX mount.

PERFORM

Lag is a real-time sound processing device. The signal sent through the left jack input (8), goes through the GAIN (2) stage and is fed into the circular buffer delay line.

There are four potentiometers dedicated to sound manipulation. GAIN (2), RATE (3), SPREAD (4) and FEED (5) settings can be adjusted to turn your sounds into thick drones, bit crushed chaos, pitch shifted copies, junglist stutter, etc. RATE controls the sampling speed and overall delay time, while SPREAD is used to adjust the separation between the read & write "tape heads" within the circular buffer. The FEED potentiometer can also push the device to self-oscillation mode, enabling standalone usage.

Touch the golden touch pads (1) to additionally manipulate the DELAY and SPREAD parameters for manual vibrato-like effects and expressive sound design.

Push button (6) can be used to achieve the freeze/stutter effect. The stereo output jack (9) outputs two versions of the signal - 50% and 100% wet.

SECONDARY MODE

Lag also has a pitch-shifter mode which can be accessed by turning the SPREAD potentiometer fully clockwise and pressing the push button. In this setting, RATE controls the sampling speed and SPREAD adjusts the pitch-shifting frequency. FEED still controls the feedback, producing granular-like pitch shifted swells.

I / O

There is a triple header row next to the input jack for interfacing with external control voltages. The top pin is connected to GND, the middle to SPREAD and the bottom to RATE potentiometer. Both SPREAD and RATE expect a unipolar signal 0-5V.

POWER

HEX can be powered via the USB C socket (10) using a USB power adapter/power bank.

DISCLAIMER and WARNINGS

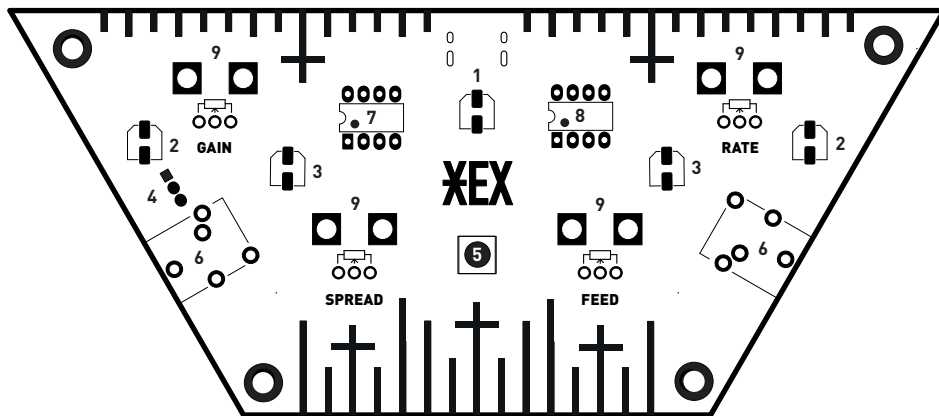
1. Read these instructions. 2. Keep these instructions. 3. Heed all warnings. 4. Follow all instructions. 5. Do not use this apparatus near water. 6. Clean only with dry cloth. 7. Install in accordance with the manufacturer's instructions. 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. 9. Touch pads on the instrument are able to output a low current, therefore the device is unsuitable for individuals with implantable cardioverter-defibrillators (ICD), pacemakers, heart diseases and small children. 11. Power the device only using 5-volt USB C power adapters and cables. 12. Protect the power cable from being walked on or pinched particularly at plugs and connectors at the point where they exit from the device. 13. When interfacing with other devices, follow the manual and check external devices input and output voltage (CV and audio signals). 14. Unplug this device during lightning storms or when unused for long periods of time. 15. When replacing parts, disconnect the device from power sources and unplug all attached cables. Contact the manufacturer for information about recommended substitute part selection. When repairs are undertaken by anyone but the manufacturer, the latter is absolved of all responsibilities. 16. Correct disposal of this product: this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection centre licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service. 17. Do not place naked flame sources, such as lighted candles, on the device. 18. This apparatus may be used in tropical and moderate climates up to 45°C. 19. Children must use this product under adult supervision.

COMPONENTS

1. 47uF capacitor / 1x
2. 10uF capacitor / 2x
3. 1uF capacitor / 2x
4. Header pins / 1x
5. Push button / 1x
6. 3.5mm jack / 2x
7. NE5532 chip / 1x
8. ATTINY85 chip / 1x
9. Potentiometers + knobs / 4x
10. Nuts + bolts / 4x
11. PCB + wooden base / 1x

ASSEMBLE

You will need a soldering iron, solder, pliers, tweezers and some patience. Before you begin the process, make sure you are working on a clean, well-lit surface. Be careful with the components, some of them are very small: take them out of the packaging one at a time, when needed. Most of the tiny SMD components are marked with numbers that match the numbers printed on the PCB. If you are new to soldering (SMD), we recommend watching some online tutorials beforehand. For the assembly video, visit our website. In any case, take it slow, go step by step and enjoy the process of building your own HEX. It's like a puzzle that you can use and play with afterwards. Oh, and if you have any questions, do not hesitate to contact us. Have fun!



- Solder the 47uF capacitor / 1x *
- Solder the 10uF capacitor / 2x *
- Solder the 1uF capacitor / 2x *
- Solder the 3 pin header on the bottom of the PCB / 1x (align to indent on the wooden base)
- Solder the push button / 1x
- Solder 3.5mm jack / 2x
- Solder the NE5532 chip / 1x *
- Solder the ATTINY85 chip / 1x *
- Solder potentiometers / 4x - (do not put the knobs on before you are finished with the whole process)
- When finished soldering, check if all of the solders are well connected to the components.
- Clip all of the excess steel leads on the bottom side and see if it fits the wooden base.
- Drive in the nuts and tighten the bolts.
- Set potentiometers to central position and attach the knobs.

HEX lag is a digital sound processing instrument with signal modulating potentiometers and an interactive tactile surface for direct sound manipulation. It digitally simulates analogue bucket brigade delay chips (typical of chorus, flanger and karplus-strong), but also enables pitch-shifting, downsampling, etc.

* For the correct alignment observe printed graphics on the PCB.