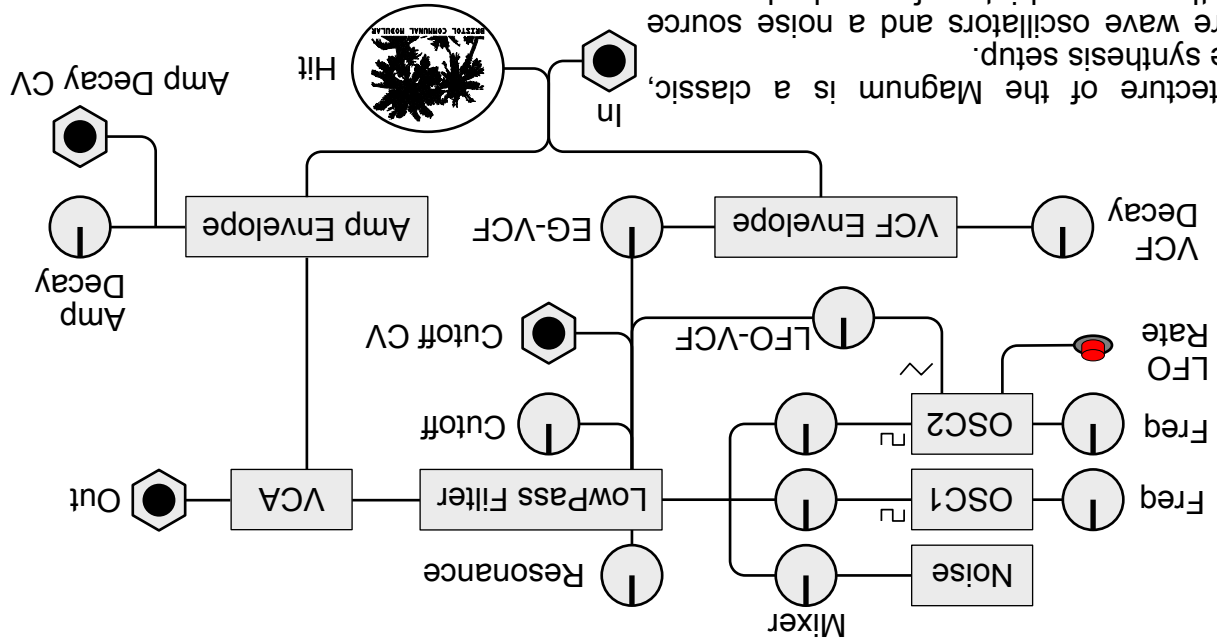


There are two envelopes, one to modulate the filter cutoff and one to open the amplifier. The envelopes are both triggered at the same time either by sending a pulse to the In jack, or hitting the lower section of the faceplate where the piezo sensor is.

The architecture of the Magnum is a classic, subtractive synthesis setup. Two square wave oscillators and a noise source are mixed then passed into a four pole, low pass filter, with variable cutoff frequency and resonance. The filter output is then sent to a Voltage Controlled Amplifier and out.



Jumpers

There are two jumpers on the magnum which slightly change how it works.

The **Output Level** jumper sets the output to be either modular or line level. If you're using the magnum standalone then line level is a lower volume that may play better with other gear.

The **piezo normalling** jumper sets whether a jack plugged into the IN socket disconnects the piezo or not.

Power

The Magnum needs a +12v and -12v dual supply, and draws about 30ma of power on each rail. This should easily be provided by your eurorack system.

If you have one of the separate enclosures then there should be a small power board in the bottom that allows it to run of a 12 volt wall wart adapter. If you use a different adapter from the original one then make sure it's a centre positive, 12 volt DC one. Otherwise you might make some magic smoke.

Thanks

The Brunswick club for helping support us.
Thonk and Pusherman for donations.
Clacktronics for the synare schematic that started this.
Befaco for open-sourcing their schematics so that we could learn from them.

The magnum project is fully open-source and licensed under a CC BY-NC-SA 4.0 International License.
You can find all the files for it and anything else we do at: <https://github.com/bristol-communal-modular>

MAGNUM PERCUSSION INSTRUMENT



The Magnum P.I. is our recreation of the Star Synare 3, updated to work well in a eurorack modular system or as a standalone instrument.

The synare was a staple in a lot of post punk, dub and disco production in the 70s through the 80s.

You can hear it in loads of tunes by Joy Division, Scientist, The Cure, Depeche Mode, the iconic Jah Shaka sound system scene in the film Babylon(1980) and a tonne of disco tunes too. Once you start noticing the Synare hits you won't stop finding them.

We've found that the Magnum has some pretty interesting sounds it can make beyond just the standard disco pew and weird snare, so it's worth spending time tweaking it.

These are some example patches to use as a starting point,
and a blank entry to write down your own.

