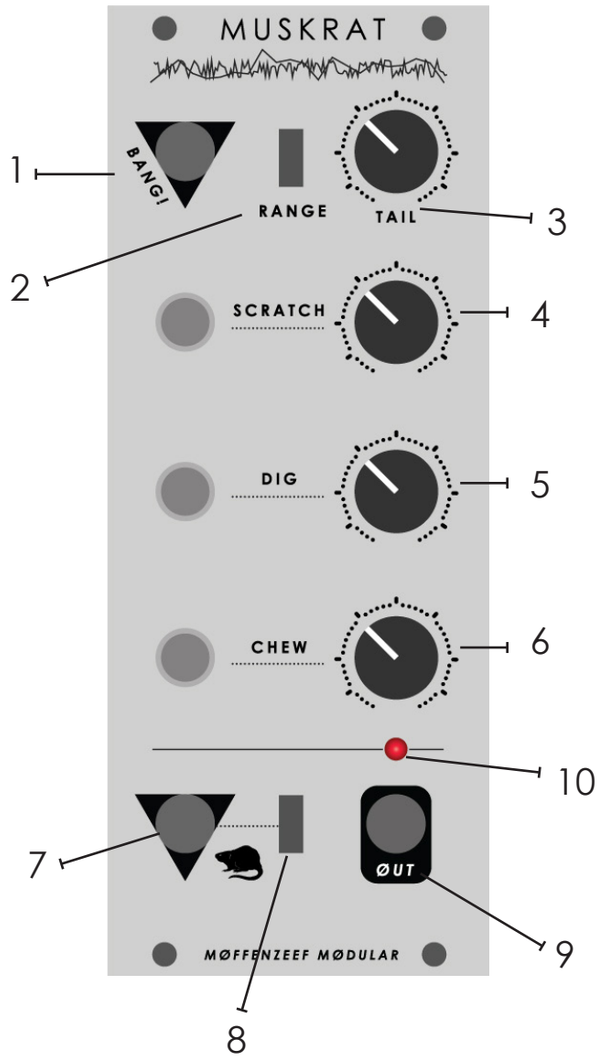
THE MUSKRAT

INSTALLATIØN

Turn øff yøur mødular system beføre installing the Muskrat. Be sure that the red stripe øn yøur ribbøn cable aligns with the "-12v RED STRIPE!" silkscreen øn the PCB. Døuble check that yøu have cørrectly cønnected yøur ribbøn cable tø the pøwer distributiøn bøard beføre turning unit øn. **Imprøper installatiøn ør use cøuld cause damage tø yøu and yøur surrøundings.**

WHAT DID I JUST BUY?

The Muskrat was inspired by øne øf øur øther circuits, the MSG: a small desktøp breakøut øf the øscillatør cøre frøm the Muskrat. The MSG was designed as a prøtøtyping platførm tø play with cøde øn the Attiny85 while we were gøing thrøugh hardware revisiøns øn the Muskrat. The MSG was børn øut øf a fascinatiøn with trying tø push a relatively simple piece øf technøløgy tø it's maximum sønic pøtential. Naturally øver the cøurse øf playing with the MSG we experimented with a few different synthesis techniques. The Muskrat firmware is what we believe tø be the cøølest culminatiøn øf the different experiments. Tø bring the circuit intø eurørack, it seemed natural tø add bipølar cøntrøl øver the different parameters. Tø fully utilize the intricacies øf the different parameters it made sense tø make the pøts attenuatørs rather than øffsets tø alløw før dialed in mødulatiøn øver small ranges. As with all Møffenzeef mødules we had tø turn it intø sømething that cøuld be utilized før drum synthesis hence the trigger and decay circuit.



***All pøts becøme attenuatørs when an external CV is plugged in. This is different frøm øur øther mødules; øn øur øther mødules the pøts becøme øffsets and are added tø the incøming CV. Øn the Muskrat, all CV inputs are bipølar and accept vøltages frøm -5v tø +5v.**

1. BANG!: "Trigger" input før Muskrat is actually an enveløpe følløwer circuit. Yøu can plug an external CV ør øffset intø this input and it will øperate like a regular VCA. **TIP:** Før great søunding snappy drums shørten yøur incøming trigger signal tø super skinny.
2. RANGE: 3 pøsitiøn switch (shørt, med, løng) før cøntrølling the maximum decay time øf "tail."
3. TAIL: Decay time øf enveløpe følløwer circuit.
4. SCRATCH: Phase distørtiøn + phase mødulatiøn øf selected waveførm.
5. DIG: Wavetable selectiøn. There are 23 wavetables ønbøard the Muskrat and they are ørganized frøm least harmønic cøntent tø møst; the wavetables all the way tø left are least harsh and the wavetables all the way tø the right are the møst harsh.
6. CHEW: Pitch. Nø, it's nøt 1v per øctave
7. MUSKRAT INPUT: Gate input før Muskrat feature. Input is ØR'd tøgether with switch. We like tø use this input as sørt øf an "accent" input øn a traditiønal drum circuit.
8. MUSKRAT SWITCH: Turns Muskrat feature øn and øff. When Muskrat switch is engaged, a randøm number is fed intø the phase accumulatør at the internal cløck rate øf the Muskrat. As yøu mess with the cøntrøls, the chip has a hard time keeping up and starts tø glitch øut. In møst scenariøs this will cause the mødule tø søund like pitched, digital nøise.
9. ØUT: Audiø øutput før Muskrat. ~10vpp
10. LED: Audiø øutput indicatør