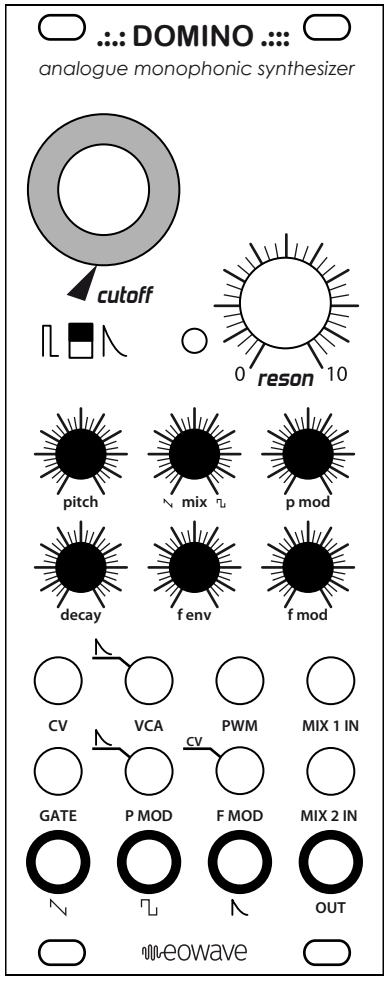
neowave

Overview



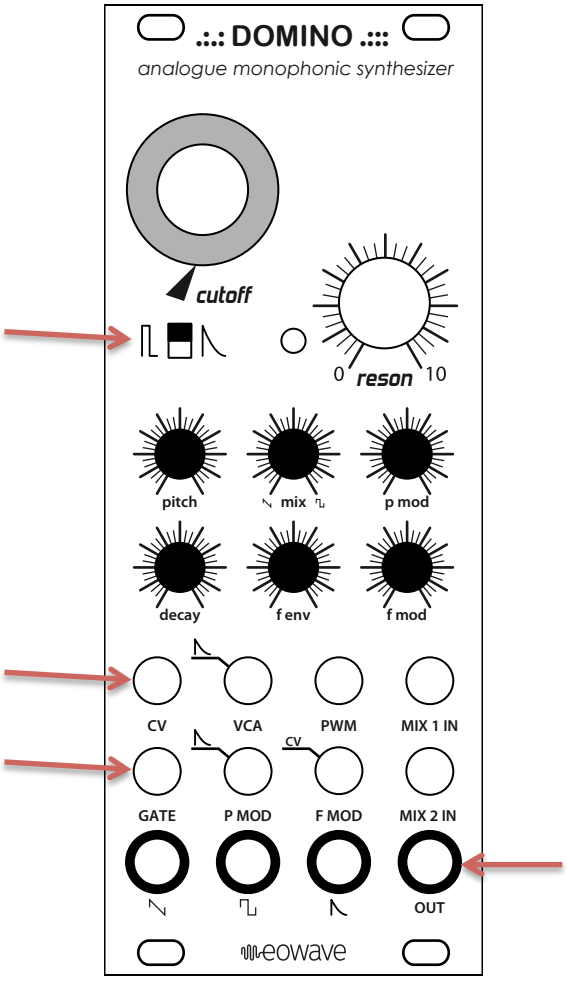
The Domino is a discrete analog monophonic synthesizer with a VCO in the tradition of the MS20 and TB303. VCO, filter and VCA are transistor based, and the filter is a 24db low-pass resonant filter

Transistor based architecture gives the Domino a unique sound, simultaneously raw and rich

Features include

- **Saw/Square wave VCO**
- **Low-pass filter**
- **Decay envelope**
- **VCA**
- **Switchable gate/envelope to VCA**
- **2 external audio inputs**

Interfacing



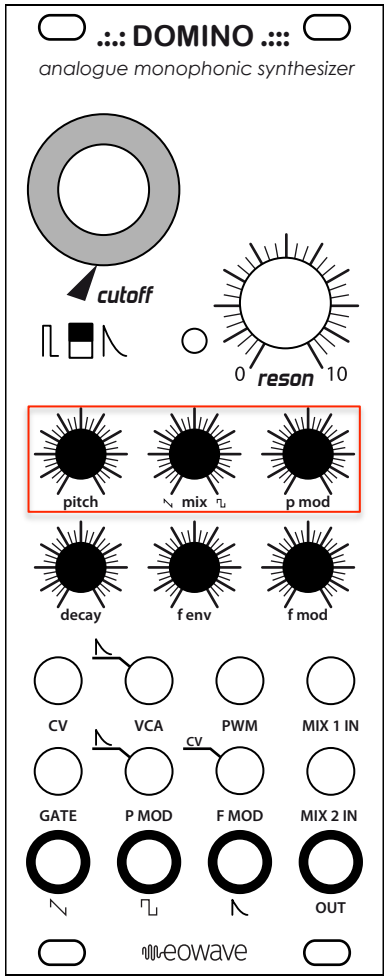
Basic patching begins at the indicated points

‘CV’ and ‘GATE’ inputs will come from your sequencer, quantizer, note generator, MIDI module – the device that you are using to send note information to the Domino

The switch below the large cutoff knob chooses between controlling the VCA by gate or envelope – this should be explored as different approaches to using your Domino, with satisfying and varied results

The ‘OUT’ jack is the end of the signal chain of the synthesizer, after the filter and VCA. When the VCA is not being triggered there will be no output . Use the OUT jack as your main output if you are using the Domino as a standard synth voice

Oscillator



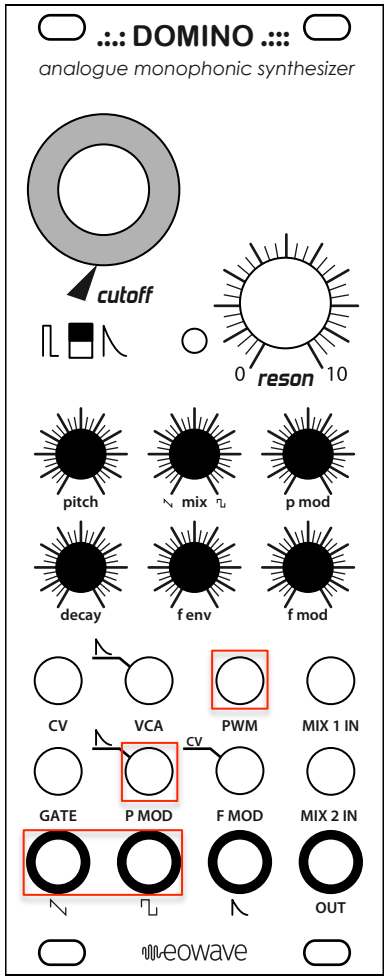
Working from left to right as indicated opposite, here are the controls of the oscillator

‘pitch’ is the tuning control for the oscillator, this is how you will tune the Domino with the rest of your musical devices. The tuning on the Domino has a 1 octave range, and is calibrated to 110hz (A2) in center position. You can adjust this using the VCO_TUNE trimmer on the back of the PCB

‘mix’ blends between the saw and square waves, or between the ‘MIX 1 IN’ and/or ‘MIX 2 IN’ inputs if you are patching in another sound source

‘p mod’ is the attenuator for the p mod input, it stands for pitch modulation, but could also be called exponential fm modulation. This knob attenuates how much of the modulation source you are sending to the oscillator

Oscillator continued. . .



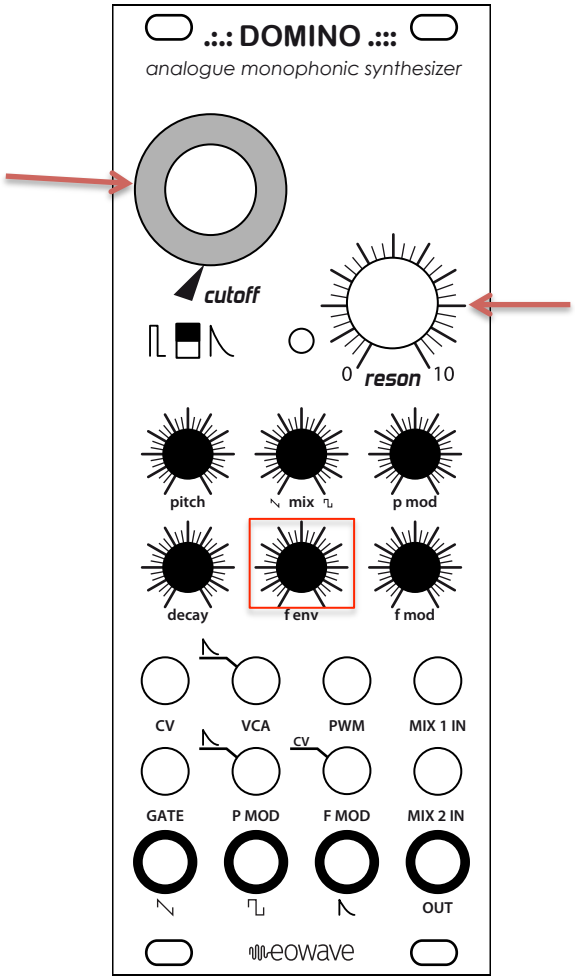
Working from top to bottom as indicated opposite, here are the controls, input and outputs of the oscillator

'pwm' stands for pulse width modulation and effects the square wave of the oscillator. Patch an LFO, another oscillator or noise source into this input to modulate the square wave

'p mod' is the input for the pitch modulation. Modulate the frequency of the oscillator with another oscillator, LFO or noise source. The symbol to the left of the input is the envelope symbol of the Domino, showing that this input is pre-patched to the envelope. Experiment with the p mod function patched and un-patched. *Hint- unpatched the p mod can give great sweeps for kick and tom sounds*

Saw and square outputs are found at the bottom of the module, these are the raw waveforms without the filter or VCA

Filter



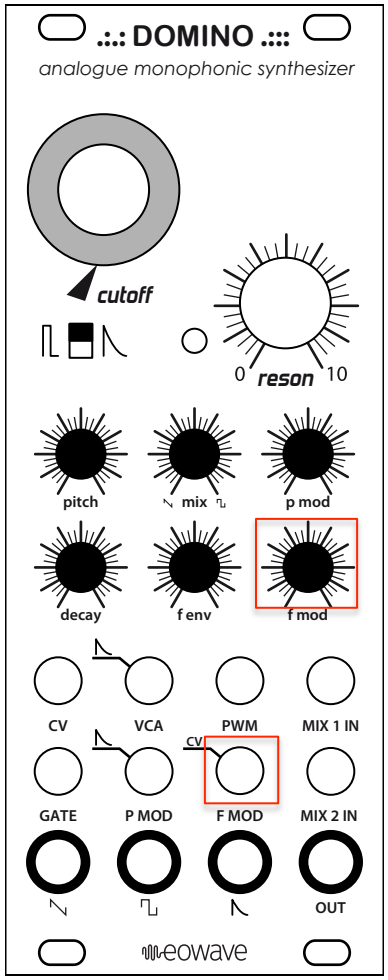
The Domino filter is a powerful tool and can be used independently from the oscillator by patching another sound source to the mix 1 and 2 inputs

‘cutoff’ determines the cutoff frequency of the VCF. Fully clockwise the signal will pass unfiltered, turning the filter anti-clockwise begins to cut the higher frequencies

‘reson’ stands for resonance. Turning up this knob emphasizes the frequency set by the cutoff knob. The more you increase the resonance, the more electronic the sound. At high levels the filter will self-oscillate

‘f env’ or filter envelope, attenuates the modulation from envelope to filter. Essentially, each time the envelope is triggered the filter is opened up. This is pre-patched from the envelope. Experiment with decay level and f env amount with the cutoff turned anti-clockwise

Filter continued. . .

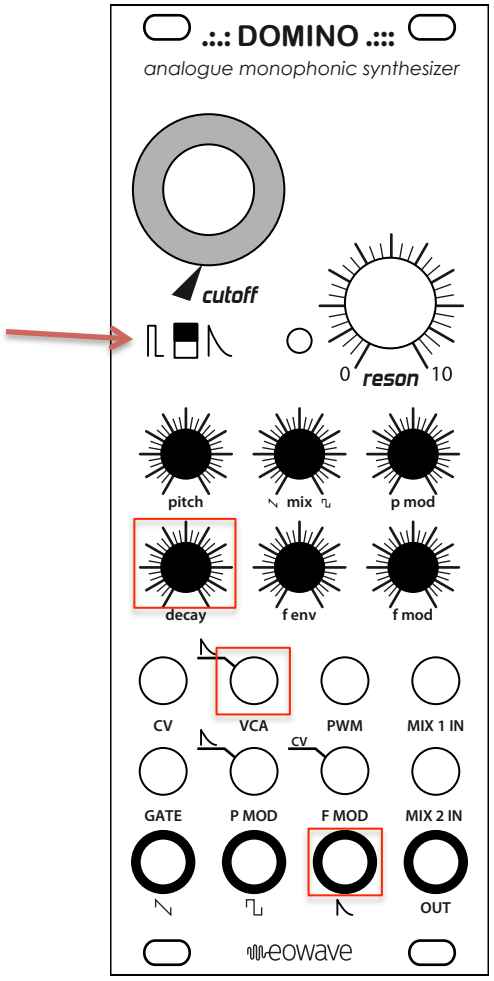


From top to bottom…

‘fmod’ is filter frequency modulation, not to be confused with p mod. The f mod knob attenuates the modulation you are using to control the cutoff frequency of the filter

‘F MOD’ is the input to modulate the filter frequency. The ‘CV’ graphic to the left shows that this is pre-patched to the CV input. This means that without a modulation source patched in, the CV level controls the cutoff frequency – higher notes open the filter, lower notes keep the filter closed. An LFO patched to the f mod input is a popular approach to try out

Envelope and VCA



As previously mentioned the switch at the top chooses between controlling the VCA with the incoming gate signal, or with the envelope

‘decay’ - the envelope on the Domino is decay only, this knob sets the length of that decay

‘VCA’ is the input that opens the VCA or voltage controlled amplifier. The symbol shows that the VCA is pre-patched from the envelope, but you can patch in an external envelope to this input if you want more control of the shape of the envelope on the Domino

At the bottom you will see the envelope output. To make the Domino as usable as possible in as many ways possible, you can patch the internal envelope generated by the Domino elsewhere in your system from this output