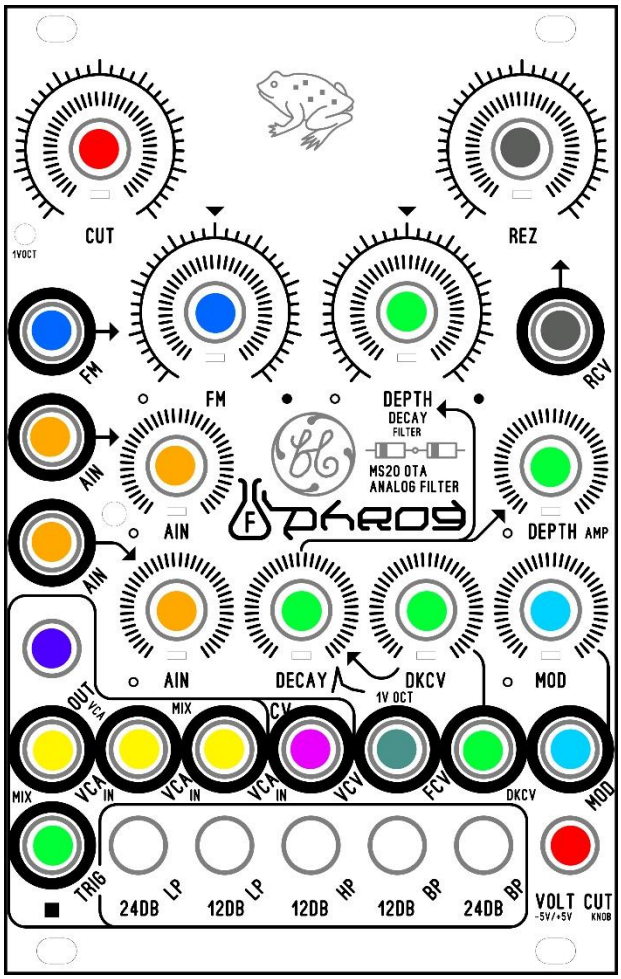
PHROGS ANALOG FILTER



Red Section: Cut off knob and the volt out put jack. The Cutoff uses +5V/-5V precision reference voltages to control the core circuit. I added what is called an op amp follower (buffer), and that is internally patched to the VOLT CUT out. Use the VOLT CUT out to control another filter, or (2) Phrog Filters. With that patch, when you turn the cutoff knob on the master module, the 'slave' filter will also react because you are sending out the reference voltage.

Blue's Section: FM and Mod. FM is a bi-polar CV for the cutoff. Mod is an attenuated CV for the cutoff. FCV is a 1V per octave direct CV for the cutoff. The small trimmer next to 'Cut' knob is used to calibrate the filter when in self-oscillation mode.

Orange Section: AIN. Audio inputs. Use these two inputs to mix down to audio signals. Patch your VCO's here.

Lime Green Section: There is an internal envelope with Decay control. DKCV is an attenuator, with CV input jack, used to control the tail length of the Decay by CV. There are two Depth controls: AMP and Filter. Depth Knob on the Filter is bi-polar. Depth on the AMP is for the VCA, it is attenuated (positive only). The Trigger input reacts to input sensitivity. If you attenuate the trigger signal, externally, and manually, the decay circuit reacts. You can create Velocity type patches like so.

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Yellow Section: Separate VCA circuit. This is an OTA based VCA, with a 3 channel mono mixer on the input stage. The inputs are direct. The gain stage on the inputs is not x1. I reduced the gain a bit so that you can comfortably mix signals, and you would not get clipping, since there are no level knobs. The Pink VCV (VCA CV) is used to externally patch an ADSR for example. If you do that and still want to use the internal Decay and trigger section, turn the Depth Amp knob fully counter clock wise to turn it off. The arrow graphics on the panel explains the patch.

Purple Out: This is the VCA output. You need to patch something into one of the VCA in jacks, and trigger the internal decay, and have the Depth Amp knob turned clockwise. Or you can use an external Envelope generator patched into VCV.

Grey Section: Rez and RCV input. This is Feedback resonance for the filter, with it's direct CV input jack. This is the flavor, and where the MS-20 sound comes from. I added more diodes on this section than the original stock design.

White Section: These are the filter outputs. Please be creative and patch more than one output into the VCA section. You can mix and match, all good. If you have (2) Phrog Modules. You can also mix and match from the other filter, and use the VOLT CUT output to control the sweep of the other filter (manually).

When you modulate the 'Master' filter module, the modulation will not travel through the VOLT CUT output. You would need to modulate both filter modules separately.

The entire signal path on the Phrog Module is mono. There are no stereo signals or jacks on this product.

PCB Stack. One level. Skiff Compatible.

Width: 16HP

Current: +65mA,-65mA

Red Stripe on Blue Lantern Module products indicate -12V. This refers to the ribbon cable color. Most of my product use slotted power headers. But some of the newer products don't have a slotted header. I use a white color stripe on the pcb to indicate how to connect the ribbon cable. I also label '-12V'.