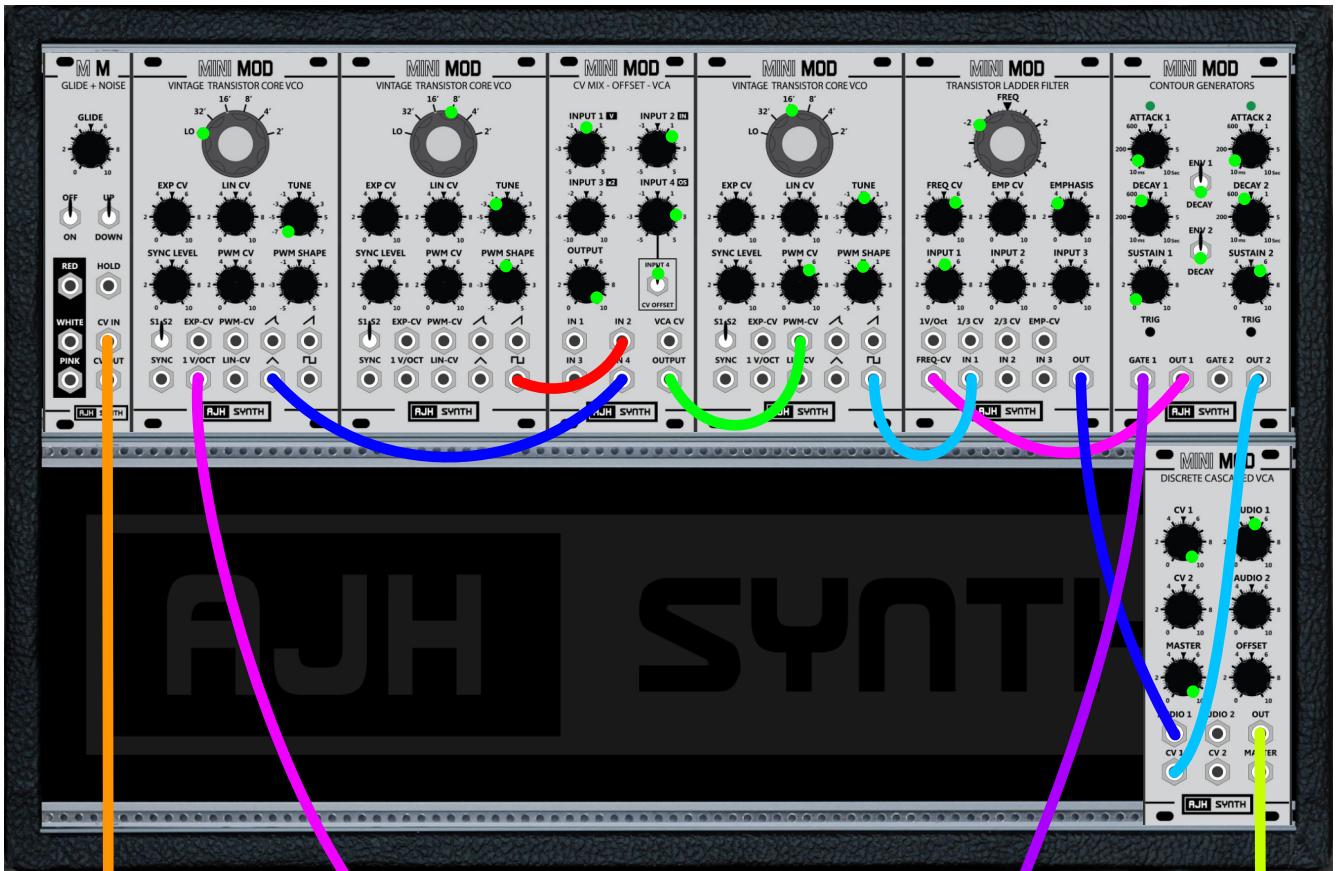


## Audio Rate PWM



Controller CV

Nothing

Controller Gate

Audio Out

Green dots show approximate pot and switch positions. Pots and switches that do not have green dots are not used in this patch, and should be left at their zero or off positions.

In the video I'm using the Glide + Noise MkII module to access the CV bus, allowing me to control VCOs 2 and 3 from one input/cable, otherwise you will need to use a multiple or stacking cables to connect the keyboard/sequencer to VCOs 2 and 3, as is usual with a fully modular synth.

An unconnected cable (nothing at the other end) is connected to the 1V/Oct input of VCO 1 in order to disable the CV BUS from changing its pitch. If you are not using the CV BUS to control VCOs 2 and 3 then you do not need to connect this cable.

VCO 2 will need careful fine-tuning to get its frequency at a point where it complements VCO 3, which it is modulating. The desired point will be when the sound from VCO 3 becomes comparatively smooth, rather than a coarse, beating timbre.

The CV MIX module is key here for combining the 2 modulation VCOs. You could use any 2 channels, but bear in mind that 3 has a higher gain level, 1 becomes a bi-polar voltage source that can be added to the output if nothing is connected to that channel, and 4 can be used as an offset to the output when its switch is down.

VCA: In the video I use a Muting Mixer as final output VCA, so in the diagram I show the Discrete Cascaded VCA being used for the benefit of those who have one, but in either case set master to full then gradually increase the input level.

Modules used from top-left to bottom-right: Glide + Noise (for bus board access - optional), VCO 1 & 2, CV MIX, VCO 3, Transistor Ladder Filter, Contour Generators, Discrete Cascaded VCA (or Muting Mixer).

For more information on modules and user manuals visit <https://AJHSynth.com>

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