ZLOB DUAL VCO calibration

before you start trimming voct stuff, set the hf trim for both oscillators as low as possible. meaning fully counter clockwise, which is going to be quite a few turns on a 25 turner. you should hear a tiny click when it reaches its minimum. now make sure the oscillator you are trimming is in exponential mode(switch down) and the fine tuner/attenuator panel control is fully clock wise. there are different ways of setting the tracking with midi controllers and frequency counters but this is my method.

the main thing is you need something that can spit out reliable stable dc voltages to test the various octaves. i use pressure points coming out the sequenced outputs, and i set each step to 0v, 1v, 2v, 3v, 4v, 5v and measure those with a multimeter. i assume you could do the same with most sequencers. then i plug those voltages into the cv in on the oscillator and set it to a low pitch around 70-100 hz(the note C for example, but it can be any note) with 0v in. i use a free guitar tuner app on my phone that also measures hertz. so, then i start cycling through the 5 voltages ensuring each octave is double the hertz(ie the same note an octave higher).

you will notice between 0v and 1v that the notes might be off from each other, turn the voct trimmer so they are closer. the first pass of trimming will be a rough one, as once we reach 5v you will need to start injecting the voltage from the hf trim back into the circuit. once you reach the 5th octave you will notice the pitch to be around a step or so off from your target note. turn the hf trim to the right to tune up.

now return to 0v, you might notice the original target pitch has changed so tune that back to where it was with the frequency panel control. now repeat going through the octaves and trimming with the voct trimmer(you will notice the 1st and 3rd octaves will be a couple cents off from the target note, this is normal) get as close as you can. once you reach 5v you will most likely need to adjust the hf trim again.

you will have to repeat this process several times to reach the equilibrium between the voct trimmer and hf trim.