

I have to correct a statement I made last year about the similarity between the Oberheim OB-8 and the OB-Xa. I said there wasn't any significant difference in the signal path of the two. But this is only true concerning the active components, the signal levels and the architecture. There *is* in fact a difference in the coupling capacitors that can make a difference in the Low End. The coupling capacitors in the OB-Xa are larger than in the OB-8. The OB-8 has a high pass of about 8 Hz between VCO's and VCF, and another high pass of about 20 Hz between VCF and VCA. Though at first glance these corner frequencies seem to be pretty low, if you look at a sawtooth in the lowest octave, the sawtooth is more exponential than linear. And you can definitely hear the difference in an A-B test. So I made the following modifications in my OB-8:

(1) I shorted the capacitor between VCO's and VCF. This will cause the filter to be driven asymmetrically, with a dc offset, but this is just the same what is done in the SC Prophet 5 (which sounds even fater than OB-Xa, IMO). I *wanted* to go into the "Prophet sound direction"; but if you prefer the OB-Xa sound, you could add a larger elko instead (10 .. 22uF).

(2) I added a 10uF elko to the 100nF capacitor between VCF and VCA. As I have a positive DC-offset on the filter (see above), the anode of the elko is on the VCF side.

I was astonished how much the low end of my OB-8 was improved! Now sawtooths are linear even in the low octave. But there was a major drawback: The autotune routine failed on some oscillators now. I found that the autotune routine was time- optimized, and the larger capacitors produced slow transients that clamped the autotune comparator. A highpass response, that doesn't affect the signal path, was required:

(3) The autotune comparator was DC-coupled to the VCA-output of each voice. I simply put a 47nF capacitor into the line to the summing node, and everything was working well again.

So, this is another step to extend the sonic capabilities of this great synth!

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