

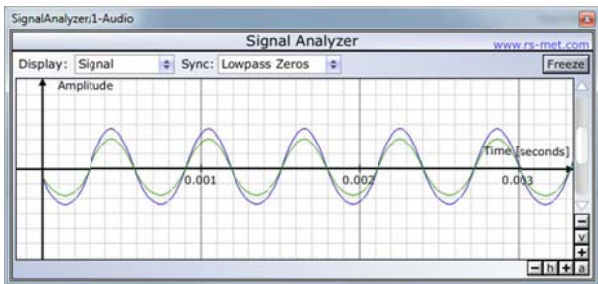
L-1 QUAD VCA-MIXER

Trimming

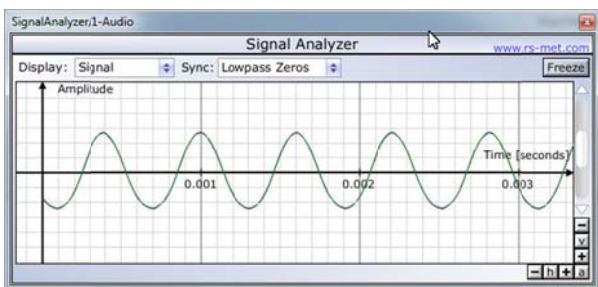
1. Gain

Set level to max. Split 1kHz sine into two, connect one to IN1, connect first channel of analyzer to OUT1, adjust gain of VCA with associated 100K trimmer to desired level.

Connect second part of sine to IN2, connect second channel of analyzer to OUT2, adjust gain equal to OUT1. Repeat with OUT3 and OUT4.



Before



After

Download free Signal Analyzer here <http://rs-met.com/freebies.html>

2. Distortion symmetry. (only for THAT2181)

This is from THAT Corp.:

The "best" setting for the VCA trim is to minimize the second harmonic distortion on a middle-level, middle-frequency sine wave. In a system that swings up to 10V rms, we'd typically use from a 1 to 3V (rms) sine wave at 1kHz, measure the THD at the output, and adjust the trim for minimum distortion. Another way to set it is for minimum DC feedthrough. To use this method, you first measure the DC output after the VCA's current-to-voltage converter opamp at a low gain setting (like -60dB). Mostly, this measures the offset voltage of the opamp in your circuit. Then, set the VCA for a high gain (e.g., 20dB) and adjust the trim to achieve the same DC level as the previous reading. This will give you a very similar setting as with the distortion method, but usually a little different.

Another, perhaps simpler approach is to use one of our 2180-series VCAs, which are already pre-trimmed by us.

If distortion and accurate DC performance is not an issue for your application, I'd leave the out the trim entirely.