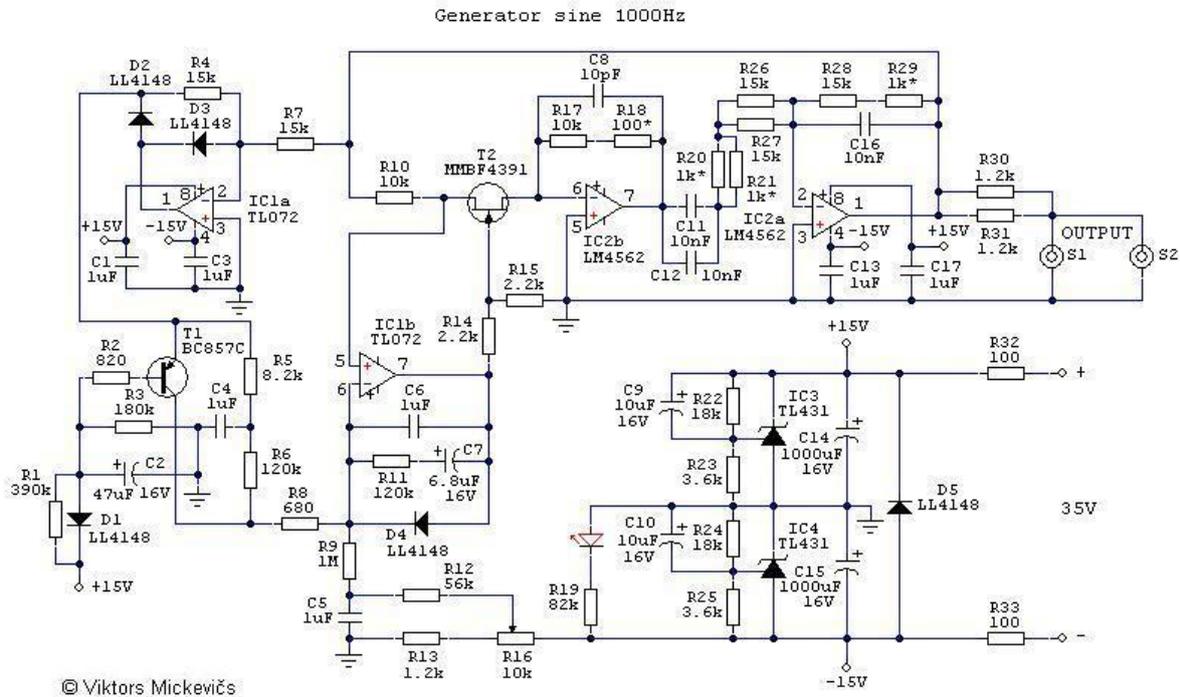


Hi to everyone.

I am author of this generator from ebay. Thanks to all, who trust and buy this. I designed this generator especially for best performance/cost ratio. Cause of many people ask me about schematic, then now I post it to this forum:



Symmetrized FET in AGC is the "heart" of this generator.

Improvement, which I made not long ago for better performance, is simple. I replaced all main resistors in signal chain from 1206 Yageo cermet type to 0204 Vishay metal film. When I made 10kHz version, I observed some peculiarity in working, and in final I discovered, that resistors was not so good. And I was very impressed, when in 1kHz model distortions falls down after resistors replacement.

Excuse me, if there are some mistakes in my english.

Victor

Source: <https://www.diyaudio.com/forums/equipment-and-tools/205304-low-distortion-audio-range-oscillator-21.html#post3116055>

# Low distortion oscillator tests measurement circuits

A low-distortion oscillator is necessary for testing today's ADCs (analog-to-digital converters) that have resolution higher than 20 bits. Low-distortion amplifiers with THD (total-harmonic distortion) of -120 dB or less also need such an oscillator for testing. Commercially available distortion meters offer many measurement functions, but even the best have a THD measurement limit somewhere around -115 dB (Ref 1). Several low-distortion oscillator designs have been published, but they have also have THD of -120 dB or slightly better (Refs. 2, 3, 4). At JanasCard, we've developed an oscillator with THD below -140 dB that we use for in-house testing.

The oscillator in **Figure1** uses an inverted Wien-bridge topology with amplitude stabilization through an LED-driven *CdS* (cadmium-sulfide) photocell isolator. IC<sub>1</sub> and IC<sub>2</sub> are low noise, high linearity LME49710 audio amplifiers from Texas Instruments, key components of the oscillator. These amplifiers have nonlinearity below 0.1 ppm in inverting mode (Ref. 5). IC<sub>1</sub> acts as an inverter with gain -1. IC<sub>2</sub>, in conjunction with R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, C<sub>1</sub>, C<sub>2</sub>, and C<sub>3</sub>, forms a band-pass filter that sets the oscillator's resonant frequency to 2kHz. The design uses a Wien bridge with values R, C, R/2, and 2C because it the oscillator needs an inverting gain of -1.

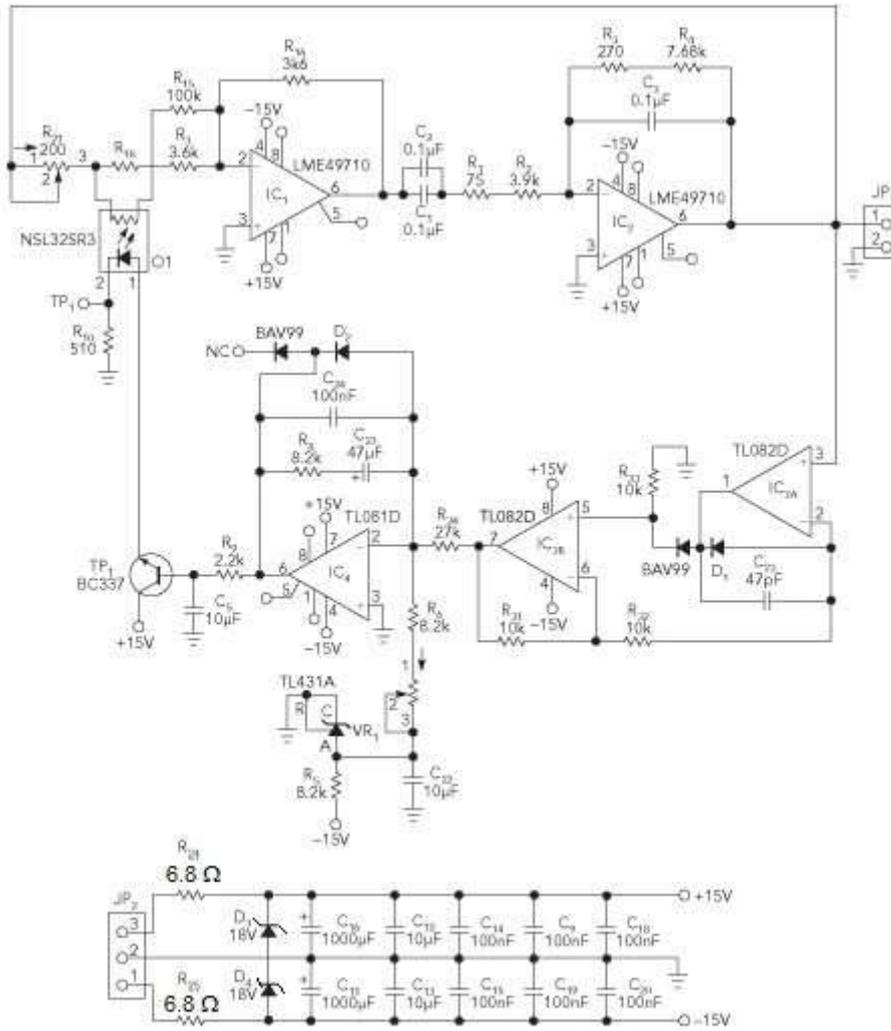


Figure 1. An oscillator with better than -140 dB of distortion uses a Wien-bridge circuit.

Source: <https://www.edn.com/low-distortion-oscillator-tests-measurement-circuits/>