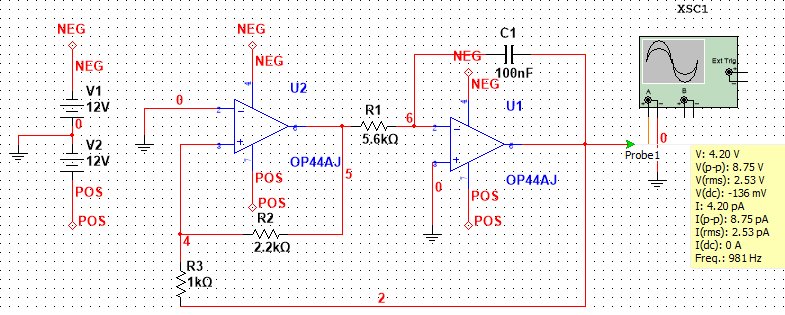
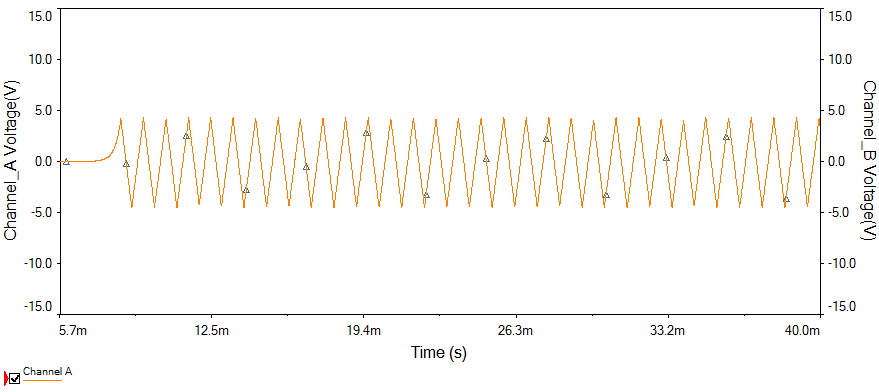
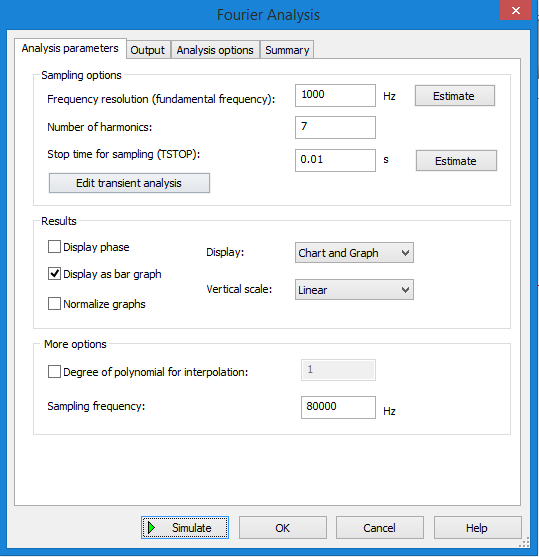
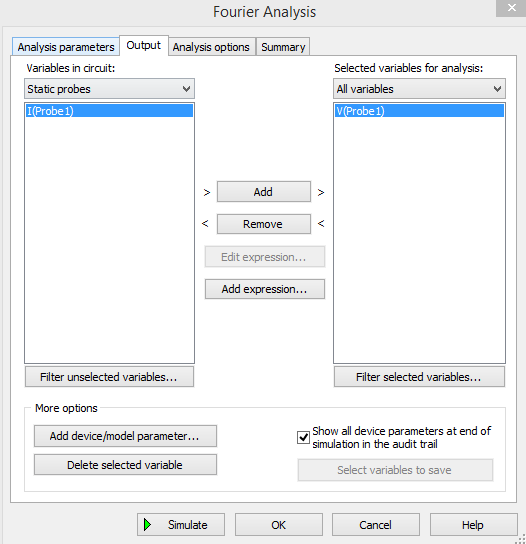
**Fourier analysis of waveforms**

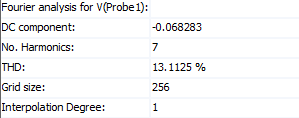
**Main Circuit**

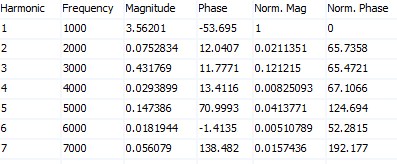


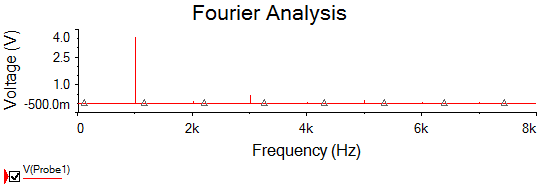




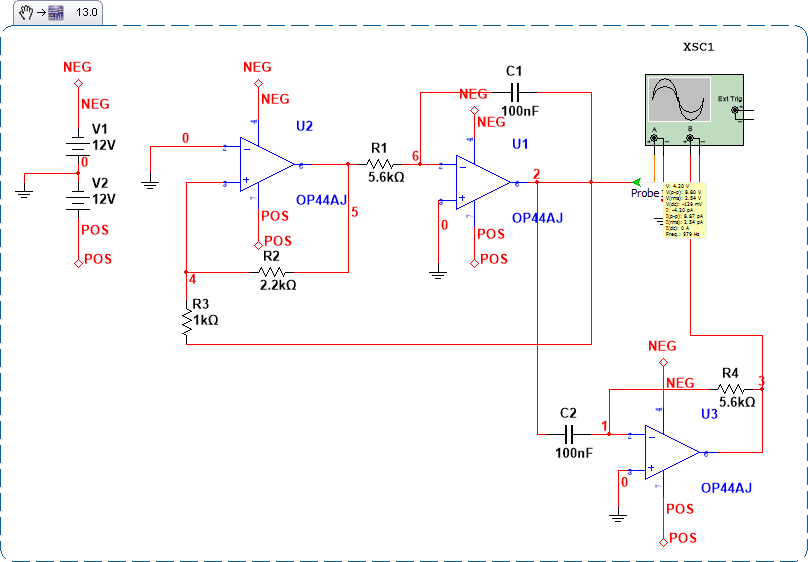


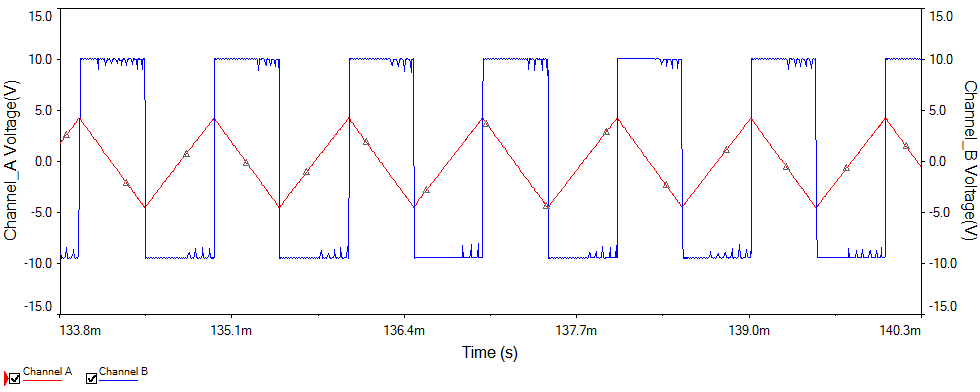


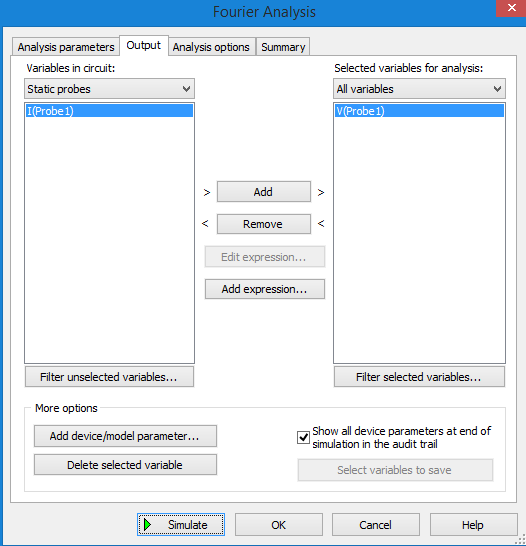


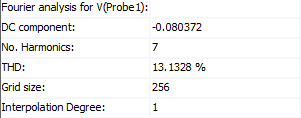


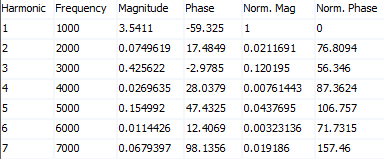
**Square wave from triangular wave using opamp as differentiator:**

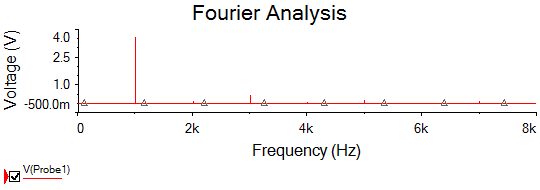








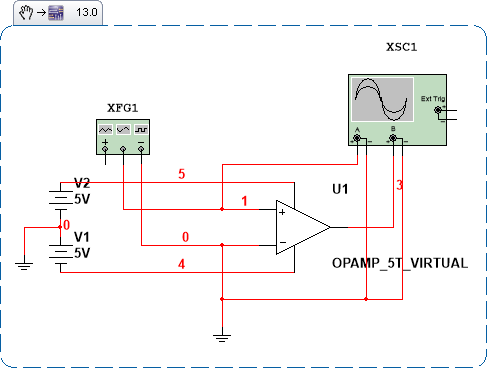


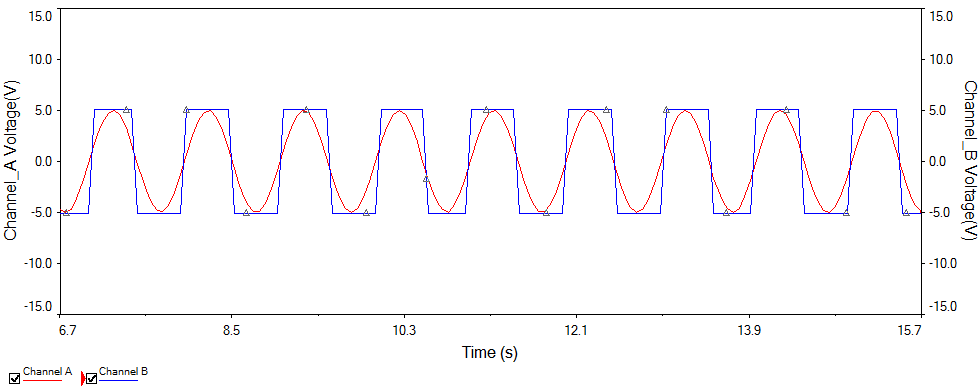


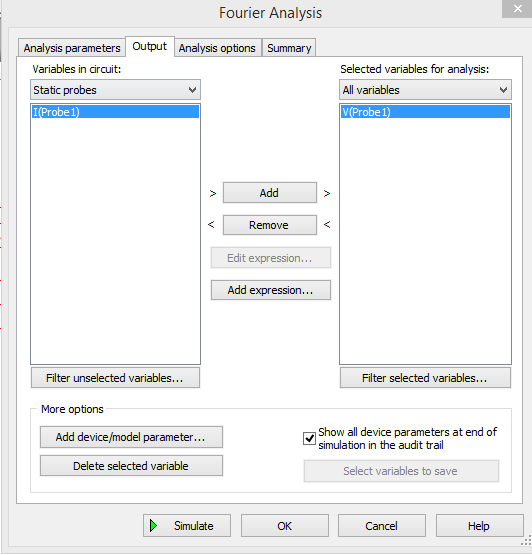
1. Is it possible to build a square waveform using multiple undistorted sinusoidal waveforms?

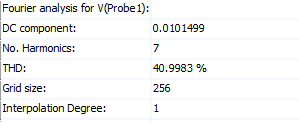
Ans: Sine wave can be converted to square wave by using op amp as comparator. In this configuration, opamp gives output HIGH when input goes above 0v and it gives output –HIGH when input goes below 0v.

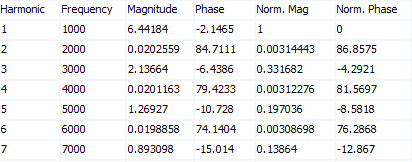
**Square wave from Sine wave using opamp as Comparator:**

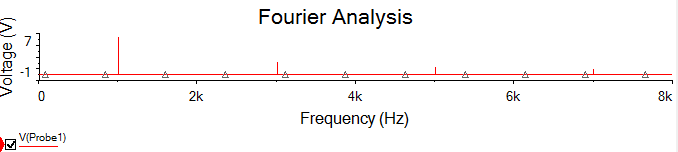












**Square wave using opamp:**

