**Pure sine wave generation for sine pulse width modulation (spwm) for Inverters**

*H-Bridge mosfets of inverters require spwm pulses at the gate terminals. Therefore by filtering at the output terminals of the H-Bridge using low pass LC filters we can arrive at an approximate pure sine wave .So in order to get a good sine output from an inverter, we have to create a close enough spwm pulses and this is possible only when we use a good sine wave oscillator.*

*One such oscillator which has the capability to create a pure sinusoid is a BUBBA oscillator. It’s basically built out of Op-amps and it’s economical and also not bulky since this oscillator does not require inductors. Not many people are aware of this. They still use the old oscillators like colpits or Hartley oscillators. The circuit diagram is given below:*

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***THE ABOVE CIRCUIT IS DESIGNED FOR A FREQUENCY OF 60 HZ.***

***Output sine wave can be taken at any point P1, P2, P3, P4 or P5. At the point P1, the amplitude is high but it contains more distortion. So, the output can be derived from point P5 because though it has lesser amplitude the distortion is almost negligible. Hence we get a pure sine wave from P5 and since the amplitude is lesser, one more op-amp acting as a non-inverting amplifier connected to P5 will do the job of increasing the amplitude.***

***Regarding the frequency of oscillation in a bubba oscillator is as follows:***

***RF1=RF2=RF3=RF4= R (ohms)***

***C1=C1=C3=C4= C (farads)***

***The frequency of the sine wave is given by,***

***(Hertz)***

***Choose R and C to get required f. LM348 op-amp chip is a good choice for this circuit.***

***This oscillator can be employed in circuits which require pure sine wave.***