

## Atmega control circuit for inverters

The inverter output is square wave. And its not like 10ms positive cycle 10ms negative cycle. they provide the pulse according to the load requirement with varying the duty cycle in the 10ms time for both positive and negative cycle. so there is not proper zero cross is there.

A very simple yet highly sophisticated modified sine wave inverter circuit is presented in the following post. The use of the PWM IC TL494 not only makes the design extremely economical with its parts count but also highly efficient and accurate.

Pin#10 and pin#9 are the two outputs of the IC which are arranged to work in tandem or in a totem pole configuration, meaning both the pinouts will never become positive together rather will oscillate alternately from positive to zero voltage, that is when pin#10 is positive, pin#9 will read zero volts and vice versa.

Thus as long as pin#13 is rigged with this +5V reference it allows the IC to produce alternately switching outputs, however if pin#13 is grounded the outputs of the IC is forced to switch in a parallel mode (single ended mode), meaning both the outputs pin10/9 will begin switching together and not alternately.

By default it must be connected to ground so that the IC generates a minimum period for the "dead time", however for achieving higher dead time periods, this pinout can be supplied with an external varying voltage from 0 to 3.3V which allows a linearly controllable dead time from 0 to 100%.

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