

ABSTRACT

Elektronika Communication Laboratory is one of the laboratory in IT Telkom. This laboratory has successfully designed a set of lab kit that consists of a Oscillator kit, Mixer kit, filter kit, Power Amplifiers kit and Phase Lock Loop kit. However, there are some constraints on the project include the need for a tool to support the Function Generator 2 MHz and the market there is no institution that sells small 2 Mhz Function Generator can be taken with a lighter load and at a price that is still affordable. Therefore, the final project wants to make "Design and Realization of Function Generator 2 MHz Maximum Frequency"

Tool will be designed consists of input-out, power supply, function generator block, block sinusoidal signal converter, frequency control and Vpp. The working principle of this device when the device is given a portion of the current power supply will be processed by the oscillator IC NE-566. IC NE-566 can generate signals up to 1 MHz. Therefore for lab kit is required for maximum signal IC 2 MHz then the multiplier needed or commonly called the (adjusted) to a maximum value of 2 MHz frequency in accordance with the provisions of kit. IC NE-566 can produce the output signal in the form of signals and signal triangular square. To obtain a sinusoidal signal can be obtained by converting the triangular signal with the help of a sinusoidal signal converter block. In its application and frequency output amplitude sinusoidal signal this tool can be set by the potentiometer

This design is the result of a function generator can produce a maximum output signal with a frequency of 2MHz. Output output can be divided into three types namely-shaped phase sinusoidal wave, square wave and triangular wave in accordance with defined specifications. sinusoidal output signal type B is best because it can maintain duty form a stable cycle phase $\pm 50\%$. T This tool can only be set in amplitude between 2.5 Volt range – 4.8Volt and it supports the tool so that it can be used for practical as it is compatible with existing lab kit.

Keywords:, Function Generator, sinusoidal, frequency, amplitude