

رقم التجربة:- (٢)

اسم التجربة:- The Clipper Circuits

الغرض من التجربة :-

1. To know how is the connection of the clipper circuits, and to know the response of each circuit on the Oscilloscope.
2. To know the application of each circuit.
3. Show that the output voltage variations when compared with the input voltage waveform.

الأجهزة والمعدات:-

1. Function generator.
2. 15k ohm resistor.
3. 1N4001 silicon rectifier diode.
4. Oscilloscope.
5. DC power supply.

المناقشة والاستنتاجات:-

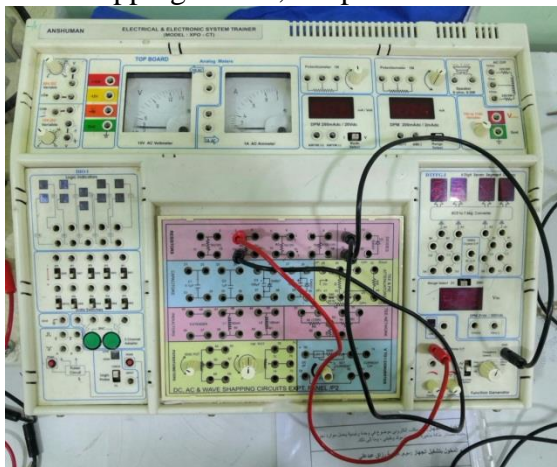
المناقشة :

1. Give some uses of the clipper circuits.
2. What are the parameters that the output voltage and current waveforms depend on it?
3. What is the property of the diode that the clipper circuits depend on it?
4. How does a positive clipper differ from a negative clipper?

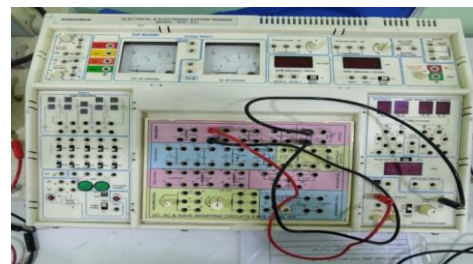
الاستنتاج :

In some practical situations, we need to limit the voltage of the Ac signal to a particular range, so, we need to use wave-shaping circuits which usually called clippers or sometimes limiters. In this experiment, we are going to construct these circuits and to watch its output signal practically. Clipper means that

there is a part of the input sinusoidal voltage wave will clip out from the output wave. Diodes can do this process because their ability to connect current in one direction and block it in another one. This process can clip a positive or negative part of the wave. We can use this process to clip of the noisy part of the sinusoidal wave that we don't use it in any circuit and especially in the T.V and radio circuits. And there are two types of the clipping circuit; the positive and the negative clipper circuits.



Positive Clipper Circuit



Negative Clipper Circuit