

# Understanding Basic Concept of Electrical and Electronic Systems

Asadullah Shah



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# **UNDERSTANDING BASIC CONCEPT OF ELECTRICAL AND ELECTRONIC SYSTEMS**

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**Editors**

Asadullah Shah



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# 7. OPERATION OF AN OSCILLOSCOPE

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## 7.0 Abstract:

The Oscilloscopes used to measure signals, the properties, and the attributes of the signals in time domain. Also the oscilloscopes can perform some simple arithmetic operations upon the signals. Addition of two signals is one of the operations that the oscilloscopes can perform upon two signals and display the resultant of the both. Also an Oscilloscope can perform Peak-to-peak value measurements, magnifications, pulse rise time measurements and other time and frequency measurements. In this experiment the students will learn such simple operations but yet very important for measurements of the physical quantities.

## 7.1 Math Operations

Your oscilloscope may also have operations to allow you to add waveforms together, creating a new waveform display. Analog oscilloscopes combine the signals while digital oscilloscopes mathematically create new waveforms. Subtracting waveforms is another math operation. Subtraction with analog oscilloscopes is possible by using the channel invert function on one signal and then use the add operation. Digital oscilloscopes typically have a subtraction operation available. Following Figure illustrates a third