

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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Asadullah Shah



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24. SUBTRACTOR OR DIFFERENTIAL AMPLIFIER

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24.0 Abstract:

Differential amplifiers are also known as sub-tractor circuits. Basically, all op-amps are "Differential Amplifiers" due to their input configuration but by connecting one voltage signal onto one input terminal and another voltage signal onto the other input terminal the resultant output voltage will be proportional to the "Difference" between the two input voltage signals of V_1 and V_2 . Then differential amplifiers amplify the difference between two voltages making this type of circuit a sub-tractor unlike a summing amplifier which adds or sums together the input voltages. This type of operational amplifier circuit is commonly known as a **Differential Amplifier** configuration and is shown in Figure 24.2.

24.1 Differential amplifier:

The function of a Subtractor is to provide an output proportional to or equal to the difference of two input signals: