

## 4 CHANNELS ADAPTER FOR THE OSCILLOSCOPE

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### ABSTRACT

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This report is going to introduce the adapter which can see the 4 waveforms of different kinds of the signals at the same time on the screen of the oscilloscope. At the classy oscilloscope, it is equipped with the function to see more than one signals at the same time which at most showing 2 waveforms. If there are 2 adapters of the same type, 8 waveform can be seen.

Meanwhile, there are oscilloscopes with only single channel. For this type of oscilloscopes, it is best assisted by this adapter. Furthermore, this 4 channels adapter can be switched to 2 channels. It is used according to the situation.

The concept of this adapter is simple. The input signals are fetched by 4 op-amps and therefore goes through an analog switch whereby the method goes by the switching method. It is possible to see 4 kinds of input signals at the same time by switching then at the short period of time. Besides, the numbers of channels are selected by flip flop and logic gates. Apart from this, every position and gain of the input signals can be varied to the favorable positions and gains.