

peak-to-peak voltage was measured again in the same way described earlier. This was found to be 4 ± 0.0001 volts.

Next, the FUNCTION button on the function generator was set for a square wave output and the amplitude of the signal was adjusted to be about 5 ± 0.01 volts, the vertical mode switch is turned to both and the TTL output provided a 3 to 4 volts peak to peak square wave output and is displayed on the second channel. The peak-to-peak voltage of the TTL square wave signal was measured and found to be 3.5 ± 0.01 V. Then the amplitude is changed on the function generator and it was discovered that a change in the amplitude would not change a TTL square wave signal.

This part of the experiment revealed that when the oscilloscope is set on DC, an offset displaces the signal, while the AC pulls the signal back to its original position.

There was addition of two signals that were 5 ± 0.01 volts peak-to-peak independently, and this addition came out to about 10 ± 0.001 Volts, there was a subtraction of these two signals that was measured to be roughly 0.1 ± 0.0001 volts. There was no telling why the result was not zero volts.

The period and frequency of sinusoidal signals were also measured. Counting your divisions and multiplying by the number of seconds per division measure the period. The frequency is just one divided by the period. The period and frequency measured while the range was set to 10kHz were 0.12 ± 0.1 ms and 8333 ± 0.01 Hz and 1.2 ± 0.0001 ms and 833 ± 0.0001 Hz when the range was set to 100Hz.

The triggering slope of the signal was also changed from positive to negative and it was observed that the signal looked like it was flipped upside down.