

LAW OF SUPERPOSITION

In [physics](#) and systems theory, the **superposition principle**, also known as **superposition property**, states that, for all linear systems, the net response at a given place and [time](#) caused by two or more stimuli is the sum of the responses which would have been caused by each stimulus individually. (Wikipedia)

"The LAW is strictly true only when the [amplitudes](#) are exceedingly small. When the disturbance of the air by a sounding body is so violent that the law no longer holds good, secondary waves are formed, which correspond to the [harmonic](#) tones of the sounding body." See [Law of Cycles](#)

*"When two tones are rendered so intense as to exceed the limits of the **law of superposition**, their secondary waves combine to produce [RESULTANT TONES](#)."* See [Law of Cycles](#)

"[Resultant tones](#) are of two kinds; the one class corresponding to rates of [vibration](#) equal to the difference of the rates of the two primaries; the other class corresponding to the rates of vibration equal to the sum of the two primaries. The former are called [DIFFERENCE TONES](#); the latter [SUMMATION TONES](#)." [Tyndall, John; Sound.] See [Law of Cycles](#)

See [Additive and Subtractive Frequency and Amplitude Modulation - AM and FM](#).

See Also

[Harmonic](#)

[Law of Cycles](#)

[Overtone](#)

[Overtone series](#)

[superposition](#)

[1.23 - Power of Harmonics through Summation Tones](#)

[9.9 - Sympathy or Harmony Between Harmonics or Overtones](#)