



What is SHOCwave?

SHOCwave (Sub Harmonic Octave Creation) is an algorithm created for the KICKER KXA and KXMA amplifiers. SHOCwave will restore low frequencies that have been lost in data compression or from older recordings. You can turn this feature on/off and also adjust the intensity of its impact.

How does SHOCwave work?

SHOCwave uses the music being input to determine what sub-bass frequencies to restore. More specifically, it measures the frequencies 40Hz – 160Hz from the music, lowers those frequencies one octave (cuts in half), and creates a user-variable amplitude (or power) at the new frequency.

Example: an 80Hz note in the music will yield a 40Hz note from SHOCwave. The amplitude of that 40Hz note is adjustable from -12db up to 0db. Using this technology, we can amplify frequencies that were previously inaudible in the original recording.

How is it different than Bass Boost?

Bass Boost has a set center frequency and amplitude, regardless of the signal into the amplifier. Even though some amplifiers allow the user to adjust the center frequency and amplitude of Bass Boost, these settings do not change song-to-song based on the music being played. Once Bass Boost is set, you get what you get, so to speak. SHOCwave works dynamically. It uses the music being played to determine which sub-bass frequencies to restore and at what amplitude.

Precautions?

SHOCwave measures frequencies 40Hz-160Hz to work its magic. So the user must ensure the amplifier is receiving at least those frequencies without roll-off from a crossover (ie. head unit). For example, if the head unit's subwoofer output has a built-in 80Hz low-pass filter, SHOCwave's capabilities will be severely hindered. Similarly, if your signal contained only mid/high-range frequencies, SHOCwave would not work at all.

As with any time you boost the signal, gain on the amplifier should be reduced accordingly. Bass Boost and SHOCwave are great tools to have in your belt. However, much like salt and pepper, they should be used with a light touch.