


Understanding Infrasonic Filters

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We are often asked about the Infrasonic Filter feature on many of our amplifiers. What is it? What is its purpose? This article was designed to answer these very questions.

By definition, the term “infrasonic” refers to “frequencies below audible range.” This means that an Infrasonic Filter is designed to filter out the frequencies below the audible range of human hearing. As you can probably imagine, this can be a very useful feature for your amplifier to have.

In ported enclosure applications, this feature allows for frequencies below the tuning frequency of the enclosure to be blocked. This is especially helpful in ported applications because the lower you go below the tuning frequency of the enclosure, the less the enclosure can control the subwoofer’s excursion.

When this happens, the column of air inside the port begins to unload and acts as if it were a giant hole in the enclosure. As the unloading occurs, this puts the subwoofer at serious risk of bottoming out. By turning on the Infrasonic Filter, you prevent these inaudible, lower frequencies from being reproduced, thus avoiding the unloading of air that could cause harm to your subwoofer.

When used with a ported enclosure, we always recommended turning the Infrasonic Filter on your amplifier on. In some cases, the filter has a fixed center frequency between 25-30 Hz. When this is the case, you would simply turn the filter on. In other cases, the Infrasonic Filter Frequency may be variable. If this is the case, we suggest setting the frequency to 5 Hz below the tuning frequency of the ported enclosure.

The Infrasonic Filter can also be useful in sealed subwoofer enclosure applications. If the sealed enclosure is the appropriate volume, you do not have the possibility of a port unloading at low frequencies. However, by ensuring the amplifier’s power and the subwoofer’s excursion are within the range of audible frequency, the Infrasonic Filter will reduce distortion and make the sealed subwoofer much more efficient.



Below is a list of JL Audio amplifiers that have the Infrasonic Filter feature. We highly recommend you consider one of these amplifiers to power a ported subwoofer system or if you intend to make a sealed subwoofer system more efficient.

MX300/1

MX500/1

XD600/1v2

XD1000/1v2

Slash 600/1v3

Slash 1200/1v3

HD750/1

HD1200/1