

LFE360° Low-Pass Filter

Software Audio Processors

User's Guide



LFE 360° Low-Pass Filter

The **LFE 360°** is a very steep *Low Pass Filter* designed to filter the audio in your LFE channel similarly to what the usual encoders will do to it. The Filter has about 60dB per octave roll off from the Frequency set.

The **LFE360°** has a mono component and a 5.1 multichannel component which will affect only the .1 channel and pass the others on without any processing.

The Frequency commonly used is 120Hz as suggested by one of the leading encoding providers. Sometimes 80Hz can be used. Because the filter is very strong it may create some peak growth and clipping if the input is quite hot. Sometimes there may be a pop when engaging the filter. If further clipping is apparent after the filter is engaged, you have a *Gain* control and you can use a *Trim* control to reduce the *Gain* by the overshoot amount or adjust the gain manually. It will control only the *Gain* of the LFE channel even in the Multichannel component.

You can use the LFE filter to preview how the encoder's LFE filter will affect your audio, or apply it on to the master.

It is recommended to insert the 5.1 channel component just before the M360 Manager. This way it will filter the LFE and the Sub signal will only be affected by the sub Low Pass filter and not the LFE filter.

LFE – Low Frequency Effects Channel

The LFE is the channel known as .1 (point one). The channel's name allegedly stands for Low Frequency Effects and some say Low Frequency Enhancement. In the Film soundtrack industry it was used for sound effects such as dinosaur footfalls, explosions, earthquakes and other lovely effects that are supposed to make you feel as if the earth really is shaking under your seat and add spice to the on-screen drama.

Nowadays the LFE channel is still used the same way in Film soundtracks, but in music production it is sometimes mistaken to be the channel that is played back by the Subwoofer. While it is usually played back by the Subwoofer, using it to provide a Split reproduction for the Low frequency material in the other channels is usually something that is done in real time during playback by the playback system. Playback systems vary in quality and specs so it is wise to leave the Bass Management job to happen in playback.

LFE 360° Controls and Displays

FREQUENCY: 20Hz to 250Hz. Default:120Hz.



This selects the cutoff *frequency* above which the filter will roll off with its steep response

GAIN: 0.0 to –12dB. Default: 0.0dB



TRIM: Click to *trim*.

The Gain control can reduce the gain down to –12 dB. The intended application is clip prevention. The Trim control located under the LFE output meter will update with the amount of overshoot and will reduce the *Gain* by the indicated amount.