

BMC-Mini Bass Management Controller

The M&K BMC Mini Bass Management Controller provides complete bass management, allowing for the proper integration of a subwoofer into any system configuration from mono through 2 channel stereo to full 5.1 channel monitoring.

The BMC MINI accepts inputs from 5 full-range channels and a limited-bandwidth LFE subwoofer channel and redirects the bass content of the main channels (low-pass filtered at 80 Hz) plus the LFE channel to one or more subwoofers. To the five main channels, it delivers a signal high-pass filtered at 80 Hz.



WHY BASS MANAGEMENT IS NEEDED

Engineers mixing multi-channel audio (2 channel stereo, Dolby Surround, 5.1 Dolby Digital, DTS, and other surround-sound formats) are faced with numerous challenges when trying to accurately monitor complex and dynamic material, and determine how this material will sound in its intended playback space. These issues include reproducing up to 5 or more channels of full range audio, plus an optional Low Frequency Effects channel (LFE), all of which have a bandwidth to 10Hz or below, with very high dynamic range, and achieving consistent bass response from all the channels throughout the control room monitoring area.

Due to unavoidable room modes, five or more correctly placed full range speakers, (in even the most perfectly designed studio) will produce dramatically different low frequency characteristics at the mix position. This is especially true for the very crucial center channel speaker. Variations of 10 to 20 dB may be measured at frequencies below 80 Hz.

When the bass from all the channels is redirected into a single, PROPERLY placed subwoofer, then each and all of the multiple channels exhibits the identical bass response at the listening position, and gives surprisingly even coverage in virtually every control room.

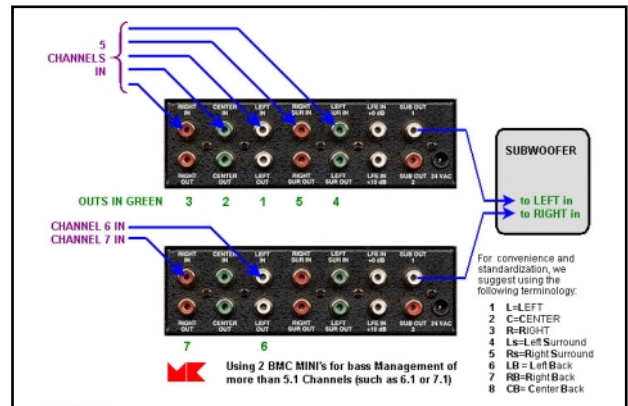
By combining a carefully designed low frequency acoustic rolloff of all the main speakers, including the surrounds, and a matching 2nd order electronic filter in the M&K Bass Management Controller, M&K achieves all the theoretical benefits of a 4th order Linkwitz-Riley filter. In addition, to further create a seamless bass managed system, we use only non-ported sealed cabinet designs on all our speakers and subwoofers, eliminating ported speaker phase anomalies which would prohibit smooth transitions at the bass managed crossover frequency.

Another good reason for using bass management in the control room is that even the least expensive Dolby Digital consumer decoder, found in millions of homes, has bass management built in, allowing the bass from all channels to be fed to a single subwoofer. Also, all Home THX systems utilize an 80 Hz bass management system. Monitoring with proper bass management in the professional control room insures proper playback translation into the "home theater" environment and into larger spaces such as motion picture theaters.

Bass Management psychoacoustically works because the ear-brain mechanism cannot detect direction at low frequencies, but takes its directional cues from the harmonics of the low frequency sound. In the monitoring process, frequencies below 80 Hz are redirected to the subwoofer. Frequencies above 80Hz are sent to the desired speaker. During the hearing process, our hearing mechanism integrates the sound into the correct spatial auditory image.

The BMC Mini is available in two versions. The BMC Mini 80 has a crossover frequency of 80 Hz, and the BMC Mini 120 has a crossover frequency of 120 Hz. The 80 Hz version should with used for the majority of M&K speaker models. The 120 Hz version is specifically designed to be used with M&K Xenon and MP Series products, and can also be used with K Series products. No adjustments or settings are necessary; the crossover frequencies are fixed within the design of your unit.

More information on the procedures for setting up Subwoofers, Bass Management Systems, and Surround Sound Systems may be found on our website, www.mksound.com; or contact the factory for personal assistance and recommendations.



30th anniversary

M&K SOUND

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